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NASDAQ[®]

Form 1

Amendment Number 5

September 23, 2005

PROCESSED

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EDWARD KNIGHT
EXECUTIVE VICE PRESIDENT

DIVISION OF MARKET REGULATION

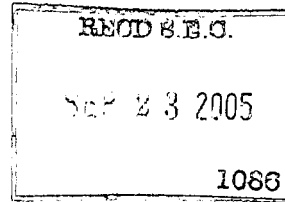


THE NASDAQ STOCK MARKET
9600 BLACKWELL ROAD
ROCKVILLE, MARYLAND 20850
P 301.978.8480 F 301.978.8471
edward.knight@nasdaq.com

SEP 23 2005

RECEIVED
SECURITIES AND EXCHANGE COMMISSION

September 23, 2005



Robert L.D. Colby
Acting Director
Division of Market Regulation
U.S. Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549-9303

Re: Amendment Number 5 to Form 1; File No. 10-131

Dear Mr. Colby:

On August 15, 2005, The Nasdaq Stock Market, Inc. ("Nasdaq") filed Amendment Number 4 to its Application on Form 1 to register as a national securities exchange pursuant to Section 6 of the Securities Exchange Act of 1934 (as amended, the "Act"). Amendment No. 4 superseded and replaced the original Application and intervening amendments, and reflects Nasdaq's proposal to create a new limited liability company, The NASDAQ Stock Market LLC ("NASDAQ LLC"), that would operate as a national securities exchange.

The purpose of Amendment No. 5 is simply to update several exhibits to Amendment No. 4 to reflect certain edits made following the date on which Amendment No. 4 was filed, and to supply several pages of text that were inadvertently omitted from Amendment No. 4. Specifically, Nasdaq is filing amended versions of the following exhibits:

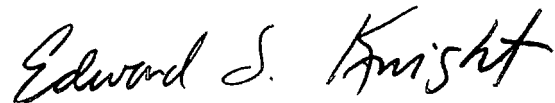
- (1) Certificate of Formation and Limited Liability Company Agreement of NASDAQ LLC, filed as Exhibit A, Tab 1 of Amendment No. 4;
- (2) By-Laws of NASDAQ LLC, filed as Exhibit A, Tab 2 of Amendment No. 4;
- (3) The proposed Rule 0100 Series of NASDAQ LLC, filed as Exhibit A, Tab 3 of Amendment No. 4;

- (4) The proposed Rule 1000 Series of NASDAQ LLC, filed as Exhibit A, Tab 4 of Amendment No. 4;
- (5) The proposed Rule 7000 Series of NASDAQ LLC, filed as Exhibit A, Tab 10 of Amendment No. 4;
- (6) The By-Laws of NASD Regulation, Inc., filed as Exhibit C, Tab 18 (B-1) of Amendment No. 4;
- (7) The Amended and Restated Articles of Incorporation of Microsoft Corporation, filed as Exhibit C, Tab 28 (A) of Amendment No. 4;
- (8) The Waive-In Membership Application Form of NASDAQ LLC, filed as Exhibit F, Tab 1 of Amendment No. 4;
- (9) The NASDAQ NTS Access Order Form and NASDAQ Services Agreement, filed as Exhibit F, Tab 9 of Amendment No. 4;
- (10) The Systems Description filed as Exhibit E, Tab 1 of Amendment No. 4;
- (11) Nasdaq FIX Specifications, filed as Exhibit E, Tab 3 of Amendment No. 4; and
- (12) Nasdaq CTCI Specifications, filed as Exhibit E, Tab 5 of Amendment No. 4.

The new versions of each exhibit should be substituted for the versions filed on August 15 when the Form 1 Application is posted on the SEC's website for public comment. For the convenience of your staff, we are filing three paper copies of the amendment and will also e-mail electronic versions of each of the documents.

If you have any questions, please call me at 301-978-8480, or John Yetter at 301-978-8497. Thank you for your continued assistance with regard to our application.

Sincerely,

Handwritten signature of Edward J. Knight in cursive script.

CERTIFICATE OF FORMATION

OF

THE NASDAQ STOCK MARKET LLC

This Certificate of Formation of The NASDAQ Stock Market LLC (the "Company"), dated as _____, 2005, is being duly executed and filed by _____, as an authorized person, to form a limited liability company under the Delaware Limited Liability Company Act (6 Del.C. §18-101, et seq.).

FIRST. The name of the limited liability company formed hereby is The NASDAQ Stock Market LLC.

SECOND. The address of the registered office of the Company in the State of Delaware is c/o The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, County of New Castle, Delaware 19801.

THIRD. The name and address of the registered agent for service of process on the Company in the State of Delaware is The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, County of New Castle, Delaware 19801.

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Formation as of the date first above written.

NAME:

Authorized Person

**LIMITED LIABILITY COMPANY AGREEMENT
OF
THE NASDAQ STOCK MARKET LLC**

This Limited Liability Company Agreement (together with the exhibit and schedules attached hereto, this "Agreement") of The NASDAQ Stock Market LLC (the "Company") is entered into by The Nasdaq Stock Market, Inc. ("Holding Company"). Capitalized terms used and not otherwise defined herein have the meanings set forth on Schedule A hereto.

WHEREAS, Holding Company desires to form a limited liability company pursuant to the Delaware Limited Liability Company Act, 6 Del. C. § 18-101, et seq., as amended from time to time (the "LLC Act"), by filing a Certificate of Formation of the Company with the office of the Secretary of State of the State of Delaware and entering into this Agreement.

NOW, THEREFORE, in consideration of the agreements and obligations set forth herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and intending to be legally bound, the parties hereto hereby agree as follows:

Section 1. Name.

The name of the limited liability company formed hereby is The NASDAQ Stock Market LLC.

Section 2. Principal Business Office.

The principal business office of the Company shall be located at One Liberty Plaza, New York, New York 10006 or such other location as may hereafter be determined by the Board of Directors.

Section 3. Registered Office.

The address of the registered office of the Company in the State of Delaware is c/o The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, County of New Castle, Delaware 19801.

Section 4. Registered Agent.

The name and address of the registered agent of the Company for service of process on the Company in the State of Delaware is The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, County of New Castle, Delaware 19801.

Section 5. Member.

The mailing address of the Member is set forth on Schedule B attached hereto. The Member was admitted to the Company as a member of the Company upon its execution of a counterpart signature page to this Agreement.

Section 6. Certificates.

_____, as an "authorized person" within the meaning of the LLC Act, has executed, delivered and filed the Certificate of Formation of the Company with the Secretary of State of the State of Delaware (such filing being hereby approved and ratified in all respects). Upon the filing of the Certificate of Formation with the Secretary of State of the State of Delaware, his powers as an "authorized person" ceased, and the Member, each Director and each Officer thereupon became the designated "authorized person" and shall continue as the designated "authorized person" within the meaning of the LLC Act. The Member, any Director or any Officer, as an authorized person within the meaning of the LLC Act, shall execute, deliver and file, or cause the execution, delivery and filing of, all certificates (and any amendments and/or restatements thereof) required or permitted by the LLC Act to be filed with the Secretary of State of the State of Delaware. The Member, any Director or any Officer shall execute, deliver and file, or cause the execution, delivery and filing of, any certificates (and any amendments and/or restatements thereof) necessary for the Company to qualify to do business in any other jurisdiction in which the Company may wish to conduct business.

The existence of the Company as a separate legal entity shall continue until the cancellation of the Certificate of Formation as provided in the LLC Act. Upon the cancellation of the Certificate of Formation in accordance with the LLC Act, this Agreement and the Company shall terminate.

Section 7. Purposes.

The Company is formed for the object and purpose of, and the nature of the business to be conducted and promoted by the Company is, engaging in any lawful act or activity for which limited liability companies may be formed under the LLC Act and engaging in any and all activities necessary or incidental to the foregoing. Without limiting the generality of the foregoing, the nature of the business or purposes to be conducted and promoted shall include (i) supporting the operation, regulation, and surveillance of the national securities exchange operated by the Company, (ii) preventing fraudulent and manipulative acts and practices, promoting just and equitable principles of trade, fostering cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, removing impediments to and perfecting the mechanisms of a free and open market and a national market system, and, in general, protecting investors and the public interest, (iii) supporting the various elements of the national market system pursuant to Section 11A of the Exchange Act and the rules thereunder, (iv) fulfilling the Company's self-regulatory responsibilities as set forth in the Exchange Act, and (v) supporting such other initiatives as the Board may deem appropriate.

Section 8. Powers.

The Company, and the Board of Directors and the Officers of the Company on behalf of the Company, (i) shall have and exercise all powers necessary, convenient or incidental to accomplish its purposes as set forth in Section 7 and (ii) shall have and exercise all of the powers and rights conferred upon limited liability companies formed pursuant to the LLC Act.

Section 9. Management.

(a) Board of Directors. The business and affairs of the Company shall be managed by or under the direction of a Board of Directors. Each Director is hereby designated as a "manager" within the meaning of the LLC Act. The Member may determine at any time in its sole and absolute discretion the number of Directors to constitute the Board. The authorized number of Directors may be increased or decreased by the Member at any time in its sole and absolute discretion, upon notice to all Directors, but no decrease in the number of Directors shall shorten the term of any incumbent Member Representative Director. The initial number of Directors shall be seventeen. Twenty percent (20%) of the Directors shall be Member Representative Directors. All Directors other than the Member Representative Directors shall be elected by the Member in the manner described in the By-Laws. Each Director elected, designated or appointed by the Member shall hold office until a successor is elected and qualified or until such Director's earlier death, resignation, expulsion or removal. Except for the initial Member Representative Directors appointed pursuant to this Agreement, the Member Representative Directors shall be elected in accordance with the By-Laws. Each Director shall execute and deliver an instrument accepting such appointment and agreeing to be bound by all the terms and conditions of this Agreement and the By-Laws. A Director need not be a member of the Company. The initial Directors designated by the Member and the initial Member Representative Directors are listed on Schedule C hereto.

(b) Powers. The Board of Directors shall have the power to do any and all acts necessary, convenient or incidental to or for the furtherance of the purposes described herein, including all powers, statutory or otherwise. The Board of Directors has the authority to bind the Company. To the fullest extent permitted by applicable law, the By-Laws, and this Agreement, the Board may delegate any of its powers to a committee appointed pursuant to Section 9(g) or to any officer, employee or agent of the Company.

(c) By-Laws. The Company, the Member and the Board of Directors hereby adopt the By-Laws of the Company in the form attached hereto as Exhibit A, as the same may be amended from time to time in accordance with the terms therein and in this Agreement (the "By-Laws"). The Board, each Officer and the Member shall be subject to the express provisions of this Agreement and of the By-Laws. In case of any conflict between the provisions of this Agreement and any provisions of the By-Laws, the provisions of this Agreement shall control.

(d) Meeting of the Board of Directors. The Board of Directors of the Company may hold meetings, both regular and special, within or outside the State of Delaware. Regular meetings of the Board may be held without notice at such time and at such place as shall from time to time be determined by the Board. Special meetings of the Board may be called by

the Chair of the Board, the Chief Executive Officer, or the President on not less than one day's notice to each Director by telephone, facsimile, mail, telegram or any other means of communication, and special meetings shall be called by the Chair of the Board, the Chief Executive Officer, the President or Secretary in like manner and with like notice upon the written request of at least one-third of the Directors.

(e) Quorum; LLC Acts of the Board. At all meetings of the Board, a majority of the Directors shall constitute a quorum for the transaction of business and, except as otherwise provided in any other provision of this Agreement, the act of a majority of the Directors present at any meeting at which there is a quorum shall be the act of the Board. If a quorum shall not be present at any meeting of the Board, the Directors present at such meeting may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present. Any action required or permitted to be taken at a meeting of the Board or any committee thereof may be taken without a meeting and without prior notice if written consents (including consents transmitted by electronic transmission), setting forth the action so taken, are executed by all members of the Board or committee, as the case may be.

(f) Electronic Communications. Members of the Board, or any committee designated by the Board, may participate in meetings of the Board, or any committee, by means of telephone conference or other communications equipment that allows all Persons participating in the meeting to hear each other, and such participation in a meeting shall constitute presence in person at the meeting. If all the participants are participating by telephone conference or other communications equipment, the meeting shall be deemed to be held at the principal place of business of the Company.

(g) Committees.

(i) The Board may designate one or more committees, each committee to consist of one or more of the Directors or other Persons. The By-Laws may establish the initial committees, which may be altered, eliminated or restructured by an amendment to the By-Laws. The Board may designate one or more Directors or other Persons as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee.

(ii) Except as otherwise provided by the By-Laws, members of a committee shall hold office for such period as may be fixed by a resolution adopted by the Board. Any member of a committee may be removed from such committee only by the Board. Vacancies in the membership of any committee shall be filled by the Board.

(iii) Each committee may adopt its own rules of procedure and may meet at stated times or on such notice as such committee may determine. Each committee shall keep regular minutes of its meetings and report the same to the Board when required.

(iv) Unless otherwise required by the By-Laws, a majority of a committee shall constitute a quorum for the transaction of business, and the vote of a majority of the members of such committee present at a meeting at which a quorum is present shall be an act of such committee.

(v) To the extent provided in the resolution of the Board, any committee that consists solely of one or more Directors shall have and may exercise all the powers and authority of the Board in the management of the business and affairs of the Company. Such committee or committees shall have such name or names as may be determined from time to time by resolution adopted by the Board. In the absence or disqualification of a member of a committee composed solely of Directors, the member or members thereof present at any meeting and not disqualified from voting, whether or not such members constitute a quorum, may unanimously appoint another member of the Board to act at the meeting in the place of any such absent or disqualified member.

(h) Compensation of Directors; Expenses. The Board shall have the authority to fix the compensation of Directors. The Directors may be paid their expenses, if any, of attendance at meetings of the Board and may be paid a fixed sum for attendance at each meeting of the Board, a stated salary as Director or other remuneration. No such payment shall preclude any Director from serving the Company in any other capacity and receiving compensation therefor. Members of special or standing committees may be allowed like compensation for attending committee meetings.

(i) Removal and Resignation of Directors. Unless otherwise restricted by law, any Director may be removed or expelled for cause by the Member, and may be removed by the Board of Directors in the manner provided by the By-Laws. Any vacancy caused by any such removal or expulsion may be filled in the manner provided in the By-Laws. Any Director may resign at any time either upon notice of resignation to the Chair of the Board, the Chief Executive Officer, the President or the Secretary. Any such resignation shall take effect at the time specified therein or, if the time is not specified, upon receipt thereof, and the acceptance of such resignation, unless required by the terms thereof, shall not be necessary to make such resignation effective.

(j) Directors as Agents. To the extent of their powers set forth in this Agreement, the Directors are agents of the Company for the purpose of the Company's business, and the actions of the Directors taken in accordance with such powers set forth in this Agreement shall bind the Company. Notwithstanding the last sentence of Section 18-402 of the LLC Act, except as provided in this Agreement or in a resolution of the Directors, a Director may not bind the Company.

Section 10. Officers.

(a) Except as provided herein, the Board may, from time to time as it deems advisable, select natural persons who are employees or agents of the Company and designate them as officers of the Company (the "Officers") and assign titles (including, without limitation,

President, Vice President, Secretary and Treasurer) to any such person. The initial Officers shall be appointed by the Member. The additional or successor Officers shall be chosen by the Board. Any number of offices may be held by the same person. The Board may appoint such other Officers and agents as it shall deem necessary or advisable who shall hold their offices for such terms and shall exercise such powers and perform such duties as shall be determined from time to time by the Board. The salaries of all Officers and agents of the Company shall be fixed by or in the manner prescribed by the Board. The Officers of the Company shall hold office until their successors are chosen and qualified. Any Officer may be removed at any time, with or without cause, by the Board. Any vacancy occurring in any office of the Company shall be filled by the Board. The initial Officers of the Company designated by the Member are listed on Schedule D hereto.

(b) Officers as Agents. The Officers, to the extent of their powers set forth in this Agreement or otherwise vested in them by action of the Board not inconsistent with this Agreement, are agents of the Company for the purpose of the Company's business, and the actions of the Officers taken in accordance with such powers shall bind the Company.

(c) Duties of Board and Officers. Except to the extent otherwise modified herein, each Director and Officer shall have a fiduciary duty of loyalty and care similar to that of directors and officers of business corporations organized under the General Corporation Law of the State of Delaware.

Section 11. Limited Liability.

Except as otherwise expressly provided by the LLC Act, the debts, obligations and liabilities of the Company, whether arising in contract, tort or otherwise, shall be the debts, obligations and liabilities solely of the Company, and neither the Member nor any Director shall be obligated personally for any such debt, obligation or liability of the Company solely by reason of being a Member or Director of the Company.

Section 12. Capital Contributions.

The Member has contributed to the Company the amounts set forth in the books and records of the Company.

Section 13. Additional Contributions.

The Member is not required to make any additional capital contribution to the Company. However, the Member may make additional capital contributions to the Company at any time upon the consent of such Member. To the extent that the Member makes an additional capital contribution to the Company, the Member shall revise the books and records of the Company. The provisions of this Agreement, including this Section 13, are intended to benefit the Member and, to the fullest extent permitted by law, shall not be construed as conferring any benefit upon any creditor of the Company (and no such creditor of the Company shall be a third-party beneficiary of this Agreement), and the Member shall not have any duty or obligation to

any creditor of the Company to make any contribution to the Company or to issue any call for capital pursuant to this Agreement.

Section 14. Allocation of Profits and Losses.

The Company's profits and losses shall be allocated to the Member.

Section 15. Distributions.

Distributions shall be made to the Member at the times and in the aggregate amounts determined by the Board. Notwithstanding any provision to the contrary contained in this Agreement, (i) the Company shall not be required to make a distribution to the Member on account of its interest in the Company if such distribution would violate the LLC Act or any other applicable law, and (ii) the Company shall not make a distribution to the Member using Regulatory Funds.

Section 16. Books and Records.

The Board shall keep or cause to be kept complete and accurate books of account and records with respect to the Company's business. The books of the Company shall at all times be maintained by the Board. The Member and its duly authorized representatives shall have the right to examine the Company books, records and documents during normal business hours. The Company, and the Board on behalf of the Company, shall not have the right to keep confidential from the Member any information that the Board would otherwise be permitted to keep confidential from the Member pursuant to Section 18-305(c) of the LLC Act. The Company's books of account shall be kept using the method of accounting determined by the Member. The Company's independent auditor shall be an independent public accounting firm selected by the Board.

Section 17. Reports.

The Board shall, after the end of each fiscal year, use reasonable efforts to cause the Company's independent accountants, if any, to prepare and transmit to the Member as promptly as possible any such tax information as may be reasonably necessary to enable the Member to prepare its federal, state and local income tax returns relating to such fiscal year.

Section 18. Other Business.

Unless otherwise restricted by law, the Member, and any Officer, Director, employee or agent of the Company and any Affiliate of the Member may engage in or possess an interest in other business ventures (unconnected with the Company) of every kind and description, independently or with others. The Company shall not have any rights in or to such independent ventures or the income or profits therefrom by virtue of this Agreement.

Section 19. Exculpation and Indemnification.

(a) Neither the Member nor any Officer, Director, employee or agent of the Company nor any employee, representative, agent or Affiliate of the Member (collectively, the "Covered Persons") shall be liable to the Company or any other Person who is bound by this Agreement for any loss, damage or claim incurred by reason of any act or omission performed or omitted by such Covered Person in good faith on behalf of the Company and in a manner reasonably believed to be within the scope of the authority conferred on such Covered Person by this Agreement, except that a Covered Person shall be liable for any such loss, damage or claim incurred by reason of such Covered Person's willful misconduct.

(b) To the fullest extent permitted by applicable law, a Covered Person shall be entitled to indemnification from the Company for any loss, damage or claim incurred by such Covered Person by reason of any act or omission performed or omitted by such Covered Person in good faith on behalf of the Company and in a manner reasonably believed to be within the scope of the authority conferred on such Covered Person by this Agreement, except that no Covered Person shall be entitled to be indemnified in respect of any loss, damage or claim incurred by such Covered Person by reason of such Covered Person's willful misconduct with respect to such acts or omissions; provided, however, that any indemnity under this Section 19 by the Company shall be provided out of and to the extent of Company assets only, and the Member shall not have personal liability on account thereof.

(c) To the fullest extent permitted by applicable law, expenses (including reasonable legal fees) incurred by a Covered Person defending any claim, demand, action, suit or proceeding shall, from time to time, be advanced by the Company prior to the final disposition of such claim, demand, action, suit or proceeding upon receipt by the Company of an undertaking by or on behalf of the Covered Person to repay such amount if it shall be determined that the Covered Person is not entitled to be indemnified as authorized in this Section 19.

(d) A Covered Person shall be fully protected in relying in good faith upon the records of the Company and upon such information, opinions, reports or statements presented to the Company by any Person as to matters the Covered Person reasonably believes are within such other Person's professional or expert competence and who has been selected with reasonable care by or on behalf of the Company, including information, opinions, reports or statements as to the value and amount of the assets, liabilities or any other facts pertinent to the existence and amount of assets from which distributions to the Member might properly be paid.

(e) To the extent that, at law or in equity, a Covered Person has duties (including fiduciary duties) and liabilities relating thereto to the Company or to any other Covered Person, a Covered Person acting under this Agreement shall not be liable to the Company or to any other Covered Person who is bound by this Agreement for its good faith reliance on the provisions of this Agreement or any approval or authorization granted by the Company or any other Covered Person.

(f) The foregoing provisions of this Section 19 shall survive any termination of this Agreement.

Section 20. Assignments.

The Member may not transfer or assign in whole or in part its limited liability company interest in the Company, except to an Affiliate of such Member.

Section 21. Dissolution.

(a) The Company shall be dissolved and its affairs shall be wound up upon the first to occur of the following: (i) the consent of the Member and a majority of the whole Board, (ii) the termination of the legal existence of the Member or the occurrence of any other event that terminates the continued membership of the Member in the Company unless the Company is continued without dissolution in a manner permitted by this Agreement or the LLC Act or (iii) the entry of a decree of judicial dissolution under Section 18-802 of the LLC Act.

(b) Notwithstanding any other provision of this Agreement, the Bankruptcy of the Member shall not cause the Member to cease to be a member of the Company and upon the occurrence of such an event, the Company shall continue without dissolution.

(c) In the event of dissolution, the Company shall conduct only such activities as are necessary to wind up its affairs (including the sale of the assets of the Company in an orderly manner), and the assets of the Company shall be applied in the manner, and in the order of priority, set forth in Section 18-804 of the LLC Act.

(d) The Company shall terminate when (i) all of the assets of the Company, after payment of or due provision for all debts, liabilities and obligations of the Company, shall have been distributed to the Member in the manner provided for in this Agreement and (ii) the Certificate of Formation shall have been canceled in the manner required by the LLC Act.

Section 22. Benefits of Agreement; No Third-Party Rights.

None of the provisions of this Agreement shall be for the benefit of or enforceable by any creditor of the Company or by any creditor of the Member. Nothing in this Agreement shall be deemed to create any right in any Person (other than Covered Persons and, to the extent provided in Article II of the By-Laws, Nasdaq Members) not a party hereto, and this Agreement shall not be construed in any respect to be a contract in whole or in part for the benefit of any third Person (other than the Covered Persons and, to the extent provided in Article II of the By-Laws, Nasdaq Members).

Section 23. Severability of Provisions.

Each provision of this Agreement shall be considered severable and if for any reason any provision or provisions herein are determined to be invalid, unenforceable or illegal under any existing or future law, such invalidity, unenforceability or illegality shall not impair the operation of or affect those portions of this Agreement which are valid, enforceable and legal.

Section 24. Entire Agreement.

This Agreement constitutes the entire agreement of the parties with respect to the subject matter hereof.

Section 25. Binding Agreement.

Notwithstanding any other provision of this Agreement, the Member agrees that this Agreement constitutes a legal, valid and binding agreement of the Member and is enforceable against the Member, in accordance with its terms.

Section 26. Governing Law.

This Agreement shall be governed by and construed under the laws of the State of Delaware (without regard to conflict of laws principles), all rights and remedies being governed by said laws.

Section 27. Amendments.

This Agreement may be modified, altered, supplemented or amended pursuant to a written agreement executed and delivered by the Member.

Section 28. Notices.

Any notices required to be delivered hereunder shall be in writing and personally delivered, mailed or sent by telecopy, electronic mail or other similar form of rapid transmission, and shall be deemed to have been duly given upon receipt (i) in the case of the Company, to the Company at its address in Section 2, (ii) in the case of the Member, to the Member at its address as listed on Schedule B attached hereto and (iii) in the case of either of the foregoing, at such other address as may be designated by written notice to the other party.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the undersigned, intending to be legally bound hereby,
has duly executed this Limited Liability Company Agreement as of the ____ day of
_____, 2005.

MEMBER:

THE NASDAQ STOCK MARKET, INC.

By: _____
Name:
Title:

SCHEDULE A

Definitions

A. Definitions

When used in this Agreement, the following terms not otherwise defined herein have the following meanings:

"LLC Act" has the meaning set forth in the preamble to this Agreement.

"Affiliate" has the meaning ascribed to that term in Rule 12b-2 of the General Rules and Regulations under the Exchange Act, as in effect on the date of this Agreement.

"Agreement" means this Limited Liability Company Agreement of the Company, together with the schedules attached hereto, as amended, restated, supplemented or otherwise modified from time to time.

"Bankruptcy" means, with respect to any Person, if (A) such Person (i) makes an assignment for the benefit of creditors, (ii) files a voluntary petition in bankruptcy, (iii) is adjudged a bankrupt or insolvent, or has entered against it an order for relief, in any bankruptcy or insolvency proceedings, (iv) files a petition or answer seeking for itself any reorganization, arrangement, composition, readjustment, liquidation or similar relief under any statute, law or regulation, (v) files an answer or other pleading admitting or failing to contest the material allegations of a petition filed against it in any proceeding of this nature, or (vi) seeks, consents to or acquiesces in the appointment of a trustee, receiver or liquidator of the Person or of all or any substantial part of its properties; or (B) (i) 120 days after the commencement of any proceeding against the Person seeking reorganization, arrangement, composition, readjustment, liquidation or similar relief under any statute, law or regulation, the proceeding has not been dismissed, or (ii) within 90 days after the appointment without such Person's consent or acquiescence of a trustee, receiver or liquidator of such Person or of all or any substantial part of its properties, the appointment is not vacated or stayed, or within 90 days after the expiration of any such stay, the appointment is not vacated. The foregoing definition of "Bankruptcy" is intended to replace and shall supersede and replace the definition of "Bankruptcy" set forth in Sections 18-101(1) and 18-304 of the LLC Act.

"Board" or "Board of Directors" means the Board of Directors of the Company.

"By-Laws" has the meaning set forth in Section 9.

"Certificate of Formation" means the Certificate of Formation of the Company filed with the Secretary of State of the State of Delaware on _____, 2005, as amended or amended and restated from time to time.

"Company" means The NASDAQ Stock Market LLC, a Delaware limited liability company.

"Covered Persons" has the meaning set forth in Section 19.

"Directors" means the Persons elected/appointed to the Board of Directors from time to time in accordance with this Agreement and the By-Laws, in their capacity as managers of the Company.

"Exchange Act" means the Securities Exchange Act of 1934, as amended.

"Member" means The Nasdaq Stock Market, Inc., as the sole member of the Company.

"Member Representative Director" means a Director who has been elected or appointed in accordance with the procedures established by Article II of the By-Laws.

"Nasdaq Member" means any registered broker or dealer that has been admitted to membership in the national securities exchange operated by the Company. A Nasdaq Member is not a member of the Company by reason of being a Nasdaq Member.

"Officer" means an officer of the Company described in Section 10.

"Person" means any individual, corporation, partnership, joint venture, limited liability company, limited liability partnership, association, joint stock company, trust, unincorporated organization or other organization, whether or not a legal entity, and any governmental authority.

"Regulatory Funds" means fees, fines, or penalties derived from the regulatory operations of the Company. "Regulatory Funds" shall not be construed to include revenues derived from listing fees, market data revenues, transaction revenues, or any other aspect of the commercial operations of the Company, even if a portion of such revenues are used to pay costs associated with the regulatory operations of the Company.

B. Rules of Construction

Definitions in this Agreement apply equally to both the singular and plural forms of the defined terms. The words "include" and "including" shall be deemed to be followed by the phrase "without limitation." The terms "herein," "hereof" and "hereunder" and other words of similar import refer to this Agreement as a whole and not to any particular Section, paragraph or subdivision. The Section titles appear as a matter of convenience only and shall not affect the interpretation of this Agreement. All Section, paragraph, clause, Exhibit or Schedule references not attributed to a particular document shall be references to such parts of this Agreement.

SCHEDULE B

Member

<u>Name</u>	<u>Mailing Address</u>	<u>Limited Liability Company Interest</u>
The Nasdaq Stock Market, Inc.	One Liberty Plaza New York, New York 10006	100%

SCHEDULE C

INITIAL DIRECTORS (Excluding Member Representative Directors)

INITIAL MEMBER REPRESENTATIVE DIRECTORS

SCHEDULE D

INITIAL OFFICERS

TITLE

EXHIBIT A

BY-LAWS

BY-LAWS OF THE NASDAQ STOCK MARKET LLC

These By-Laws have been established as the By-laws of The NASDAQ Stock Market LLC, a Delaware limited liability company (the "Company"), pursuant to the Limited Liability Company Agreement of the Company, dated as of _____, 2005 (as amended from time to time, the "LLC Agreement"), and, together with the LLC Agreement, constitute the limited liability company agreement of the Company within the meaning of the LLC Act (as defined in the LLC Agreement). In the event of any inconsistency between the LLC Agreement and these By-Laws, the provision of the LLC Agreement shall control.

Capitalized terms used and not otherwise defined herein shall have the meanings ascribed to them in the LLC Agreement.

Article I DEFINITIONS

When used in these By-Laws, unless the context otherwise requires, the terms set forth below shall have the following meanings:

- (a) "Act" means the Securities Exchange Act of 1934, as amended.
- (b) "affiliate" has the meaning ascribed to that term in Rule 12b-2 of the General Rules and Regulations under the Act, as in effect on the date of the LLC Agreement.
- (c) "Board" or "Board of Directors" means the Board of Directors of the Company.
- (d) "broker" shall have the same meaning as in Section 3(a)(4) of the Act.
- (e) "Commission" means the Securities and Exchange Commission.
- (f) "Company Member" means the means The Nasdaq Stock Market, Inc., as the sole member of the Company.
- (g) "day" means calendar day.
- (h) "dealer" shall have the same meaning as in Section 3(a)(5) of the Act.
- (i) "Director" means the Persons elected or appointed to the Board of Directors from time to time in accordance with the LLC Agreement and these By-Laws, in their capacity as managers of the Company.
- (j) "Election Date" means a date selected by the Board for the election of Member Representative Directors.
- (k) "Executive Representative" shall have the same meaning as in the Nasdaq Rules.

(l) "Industry Director" means a Director (excluding any two officers of the Company, selected at the sole discretion of the Board, amongst those officers who may be serving as Directors (the "Staff Directors")), who (i) is or has served in the prior three years as an officer, director, or employee of a broker or dealer, excluding an outside director or a director not engaged in the day-to-day management of a broker or dealer; (ii) is an officer, director (excluding an outside director), or employee of an entity that owns more than ten percent of the equity of a broker or dealer, and the broker or dealer accounts for more than five percent of the gross revenues received by the consolidated entity; (iii) owns more than five percent of the equity securities of any broker or dealer, whose investments in brokers or dealers exceed ten percent of his or her net worth, or whose ownership interest otherwise permits him or her to be engaged in the day-to-day management of a broker or dealer; (iv) provides professional services to brokers or dealers, and such services constitute 20 percent or more of the professional revenues received by the Director or 20 percent or more of the gross revenues received by the Director's firm or partnership; (v) provides professional services to a director, officer, or employee of a broker, dealer, or corporation that owns 50 percent or more of the voting stock of a broker or dealer, and such services relate to the director's, officer's, or employee's professional capacity and constitute 20 percent or more of the professional revenues received by the Director or member or 20 percent or more of the gross revenues received by the Director's or member's firm or partnership; or (vi) has a consulting or employment relationship with or provides professional services to the Company or any affiliate thereof or to the NASD (or any predecessor) or has had any such relationship or provided any such services at any time within the prior three years.

(m) "Industry member" means a Nasdaq Listing and Hearing Review Council member, Nasdaq Review Council member, or member of any other committee appointed by the Board who (i) is or has served in the prior three years as an officer, director, or employee of a broker or dealer, excluding an outside director or a director not engaged in the day-to-day management of a broker or dealer; (ii) is an officer, director (excluding an outside director), or employee of an entity that owns more than ten percent of the equity of a broker or dealer, and the broker or dealer accounts for more than five percent of the gross revenues received by the consolidated entity; (iii) owns more than five percent of the equity securities of any broker or dealer, whose investments in brokers or dealers exceed ten percent of his or her net worth, or whose ownership interest otherwise permits him or her to be engaged in the day-to-day management of a broker or dealer; (iv) provides professional services to brokers or dealers, and such services constitute 20 percent or more of the professional revenues received by the Director or 20 percent or more of the gross revenues received by the Director's firm or partnership; (v) provides professional services to a director, officer, or employee of a broker, dealer, or corporation that owns 50 percent or more of the voting stock of a broker or dealer, and such services relate to the director's, officer's, or employee's professional capacity and constitute 20 percent or more of the professional revenues received by the Director or member or 20 percent or more of the gross revenues received by the Director's or member's firm or partnership; or (vi) has a consulting or employment relationship with or provides professional services to the Company or any affiliate thereof or to the NASD (or any predecessor) or has had any such relationship or provided any such services at any time within the prior three years.

(n) "investment banking or securities business" means the business, carried on by a broker or dealer, of underwriting or distributing issues of securities, or of purchasing securities and offering the same for sale as a dealer, or of purchasing and selling securities upon the order and for the account of others.

(o) "List of Candidates" means the list of candidates for Member Representative Director positions to be elected by Nasdaq Members on an Election Date.

(p) "Member Nominating Committee" means the Member Nominating Committee appointed pursuant to these By-Laws.

(q) "Member Representative Director" means a Director who has been elected or appointed after having been nominated by the Member Nominating Committee or by a Nasdaq Member pursuant to these By-Laws. A Member Representative Director may, but is not required to be, an officer, director, employee, or agent of a Nasdaq Member.

(r) "Member Representative member" means a Nasdaq Listing and Hearing Review Council member, Nasdaq Review Council member, or member of any other committee appointed by the Board who has been elected or appointed after having been nominated by the Member Nominating Committee pursuant to these By-Laws.

(s) "NASD" means the National Association of Securities Dealers, Inc. and its affiliates.

(t) "Nasdaq Member" means any registered broker or dealer that has been admitted to membership in the national securities exchange operated by the Company. A Nasdaq Member is not a member of the Company by reason of being a Nasdaq Member.

(u) "Nominating Committee" means the Nominating Committee of the Board appointed pursuant to these By-Laws.

(v) "Non-Industry Director" means a Director (excluding Staff Directors) who is (i) a Public Director; (ii) an officer or employee of an issuer of securities listed on the national securities exchange operated by the Company; or (iii) any other individual who would not be an Industry Director.

(w) "Non-Industry member" means a Nasdaq Listing and Hearing Review Council member, Nasdaq Review Council member, or member of any other committee appointed by the Board who is (i) a Public member; (ii) an officer or employee of an issuer of securities listed on the national securities exchange operated by the Company; or (iii) any other individual who would not be an Industry member.

(x) "person associated with a Nasdaq Member" or "associated person of a Nasdaq Member" means any partner, officer, director, or branch manager of a Nasdaq member (or person occupying a similar status or performing similar functions), any person directly or indirectly controlling, controlled by, or under common control with such Nasdaq member, or any employee of such Nasdaq member, except that any person

associated with a Nasdaq member whose functions are solely clerical or ministerial shall not be included in the meaning of such term for purposes of these By-Laws.

(y) "Public Director" means a Director who has no material business relationship with a broker or dealer, the Company or its affiliates, or the NASD.

(z) "Public member" means a Nasdaq Listing and Hearing Review Council member, Nasdaq Review Council member, or member of any other committee appointed by the Board who has no material business relationship with a broker or dealer, the Company or its affiliates, or the NASD.

(aa) "Record Date" means a date selected by the Board for the purpose of determining the Nasdaq Members entitled to vote for the election of Member Representative Directors on an Election Date.

(bb) "registered broker or dealer" means any registered broker or dealer, as defined in Section 3(a)(48) of the Act, that is registered with the Commission under the Act.

(cc) "Rules" or "Nasdaq Rules" means the rules of the Company set forth in the rule manual maintained by the Company, as adopted by the Board, as hereafter amended or supplemented.

(dd) "statutory disqualification" shall have the same meaning as in Section 3(a)(39) of the Act.

Article II **ANNUAL ELECTION OF MEMBER REPRESENTATIVE DIRECTORS AND OTHER ACTIONS BY NASDAQ MEMBERS**

Section 1. Record and Election Date

(a) The Member Representative Directors shall be elected to the Board on an annual basis.

(b) For each annual election of Member Representative Directors, the Board shall select a Record Date and an Election Date. The Record Date shall be at least 10 days but not more than 60 days prior to the Election Date. Notice of the Election Date shall be sent by the Company at least 10 days but no more than 60 days prior to the Election Date to the Nasdaq Members who were Nasdaq Members on the Record Date, by any means, including electronic transmission, as determined by the Board or committee thereof. The Member Nominating Committee shall create a list of one or more candidates for each Member Representative Director position (the "List of Candidates") on the Board to be elected on the Election Date, and the Company shall send the List of Candidates to Nasdaq Members with the notice of the Election Date.

(c) An additional candidate may be added to the List of Candidates by any Nasdaq Member that submits a timely and duly executed written nomination to the Secretary of the Company. To be timely, a Nasdaq Member's notice shall be delivered to the Secretary at the principal executive offices of the Company not later than the close of

business on the 90th day nor earlier than the close of business on the 120th day prior to the first anniversary of the preceding year's Election Date (provided, however, that in the event that the Election Date is more than 30 days before or more than 70 days after such anniversary date, notice by the Nasdaq Member must be so delivered not earlier than the close of business on the 120th day prior to such Election Date and not later than the close of business on the later of the 90th day prior to such Election Date or the tenth day following the day on which public announcement of such Election Date is first made by the Company). Such Nasdaq Member's notice shall set forth: (i) as to the person whom the Nasdaq Member proposes to nominate for election as a Member Representative Director, all information relating to that person that is required to be disclosed in solicitations of proxies for election of directors in an election contest, or is otherwise required, in each case pursuant to Regulation 14A under the Exchange Act and the rules thereunder (and such person's written consent to be named in the List of Candidates as a nominee and to serving as a Director if elected); (ii) a petition in support of the nomination duly executed by the Executive Representatives of 10% or more of all Nasdaq Members; and (iii) the name and address of the Nasdaq Member making the nomination. The Company may require any proposed nominee to furnish such other information as it may reasonably require to determine the eligibility of such proposed nominee to serve as a Member Representative Director.

Section 2. Voting

With respect to the election of Member Representative Directors, each Nasdaq Member shall have the right to cast one vote for each Member Representative Director position to be filled; provided, however, that any such vote must be cast for a person on the List of Candidates. The votes may not be cumulated. The votes shall be cast by written ballot, electronic transmission or any other means as set forth in a notice to the Nasdaq Members sent by the Company prior to the Election Date. Only votes received prior to 5:00 p.m. Eastern Time on the Election Date shall count for the election of a Member Representative Director. The Persons on the List of Candidates who receive the most votes shall be elected to the Member Representative Director positions.

Section 3. Filling of Vacancies

If a Member Representative Director position shall become vacant prior to the expiration of such person's term, or if an increase in the size of the Board results in the creation of a new Member Representative Director position, the Company Member shall elect a Person from a list of candidates prepared by the Member Nominating Committee to fill such vacancy, except that if the remaining term of office for the vacant Director position is less than six months, no replacement shall be required.

Section 4. Member Meetings

The Company shall not be required to hold meetings of the Nasdaq Members.

Article III BOARD OF DIRECTORS

Section 1. Selection

Whenever any Director position other than a Member Representative Director position becomes vacant, whether because of death, disability, disqualification, removal, or resignation, the Nominating Committee shall nominate, and the Company Member shall select, a person satisfying the classification (Industry, Non-Industry, or Public Director), if applicable, for the directorship as provided in Article III, Section 2 to fill such vacancy.

Section 2. Qualifications

(a) The number of Non-Industry Directors, including at least one Public Director and at least one issuer representative (or if the Board consists of ten or more Directors, at least two issuer representatives), shall equal or exceed the sum of the number of Industry Directors and Member Representative Directors to be elected under the terms the LLC Agreement. A Director may not be subject to a statutory disqualification.

(b) A Director shall be removed immediately upon a determination by the Board, by a majority vote of the remaining Directors, (a) that the Director no longer satisfies the classification for which the Director was elected; and (b) that the Director's continued service as such would violate the compositional requirements of the Board set forth in Article III, Section 2(a). If the term of office of a Director terminates under this Section, and the remaining term of office of such Director at the time of termination is not more than six months, during the period of vacancy the Board shall not be deemed to be in violation of Article III, Section 2(a) by virtue of such vacancy.

Section 3. Regulation

(a) The Board may adopt such rules, regulations, and requirements for the conduct of the business and management of the Company, not inconsistent with law, the LLC Agreement or these By-Laws, as the Board may deem proper. A Director shall, in the performance of such Director's duties, be fully protected, to the fullest extent permitted by law, in relying in good faith upon the books of account or reports made to the Company by any of its officers, by an independent certified public accountant, by an appraiser selected with reasonable care by the Board or any committee of the Board or by any agent of the Company, or in relying in good faith upon other records of the Company.

(b) In light of the unique nature of the Company and its operations and in light of the Company's status as a self-regulatory organization, the Board, when evaluating any proposal, shall, to the fullest extent permitted by applicable law, take into account all factors that the Board deems relevant, including, without limitation, to the extent deemed relevant, (i) the potential impact thereof on the integrity, continuity and stability of the national securities exchange operated by the Company and the other operations of the Company, on the ability to prevent fraudulent and manipulative acts and practices and on investors and the public, and (ii) whether such would promote just and equitable principles of trade, foster cooperation and coordination with persons engaged in

regulating, clearing, settling, processing information with respect to and facilitating transactions in securities or assist in the removal of impediments to or perfection of the mechanisms for a free and open market and a national market system.

Section 4. Committees

(a) Upon request of the Secretary of the Company, each prospective committee member who is not a Director shall provide to the Secretary such information as is reasonably necessary to serve as the basis for a determination of the prospective committee member's classification as an Industry, Member Representative, Non-Industry, or Public Committee member. The Secretary of the Company shall certify to the Board each prospective committee member's classification. Such committee members shall update the information submitted under this subsection at least annually and upon request of the Secretary of the Company, and shall report immediately to the Secretary any change in such information.

(b) The term of office of a committee member shall terminate immediate upon a determination by the Board, by a majority vote of the Directors, (i) that the committee member no longer satisfies the classification for which the committee member was selected; and (ii) that the committee member's continued service as such would violate the compositional requirements of such committee set forth in these By-Laws. If the term of office of a committee member terminates under this Section, and the remaining term of office of such committee member at the time of termination is not more than six months, during the period of vacancy the relevant committee shall not be deemed to be in violation of the compositional requirements of such committee set forth in these By-Laws by virtue of such vacancy.

Section 5. Committees Composed Solely of Directors

(a) The Board may appoint an Executive Committee, which shall, to the fullest extent permitted by Delaware law and other applicable law, have and be permitted to exercise all the powers and authority of the Board in the management of the business and affairs of the Company between meetings of the Board. The number of Non-Industry Directors on the Executive Committee shall equal or exceed the number of Industry Directors on the Executive Committee. The percentage of Public Directors on the Executive Committee shall be at least as great as the percentage of Public Directors on the whole Board, and the percentage of Member Representative Directors on the Executive Committee shall be at least as great as the percentage of Member Representative Directors on the whole Board. An Executive Committee member shall hold office for a term of one year.

(b) The Board may appoint a Finance Committee. The Finance Committee shall advise the Board with respect to the oversight of the financial operations and conditions of the Company, including recommendations for Company's annual operating and capital budgets and proposed changes to the rates and fees charged by Company. A Finance Committee member shall hold office for a term of one year.

(c) The Board shall appoint a Management Compensation Committee. The Management Compensation Committee shall consider and recommend compensation policies, programs, and practices for employees of the Company. A majority of Management Compensation Committee members shall be Non-Industry Directors. The Chief Executive Officer shall be an ex-officio, non-voting member of the Management Compensation Committee. A Management Compensation Committee member shall hold office for a term of one year.

(d) The Board shall appoint an Audit Committee.

- (i) The Audit Committee shall consist of four or five Directors, none of whom shall be officers or employees of the Company. A majority of the Audit Committee members shall be Non-Industry Directors. The Audit Committee shall include two Public Directors. A Public Director shall serve as Chair of the Committee. An Audit Committee member shall hold office for a term of one year.
- (ii) The Audit Committee shall perform the following primary functions, as well as such other functions as may be specified in the charter of the Audit Committee: (A) provide oversight over the Company's financial reporting process and the financial information that is provided to the Company Member and others; (B) provide oversight over the systems of internal controls established by management and the Board and the Company's legal and compliance process; (C) select, evaluate and, where appropriate, replace the Company's independent auditors (or nominate the independent auditors to be proposed for ratification by the Company Member); and (D) direct and oversee all the activities of the Company's internal audit function, including but not limited to management's responsiveness to internal audit recommendations.
- (iii) No member of the Audit Committee shall participate in the consideration or decision of any matter relating to a particular Nasdaq Member, company, or individual if such Audit Committee member has a material interest in, or a professional, business, or personal relationship with, that Nasdaq Member, company, or individual, or if such participation shall create an appearance of impropriety. An Audit Committee member shall consult with the General Counsel of the Company to determine if recusal is necessary. If a member of the Audit Committee is recused from consideration of a matter, any decision on the matter shall be by a vote of a majority of the remaining members of the Audit Committee.
- (iv) The Audit Committee shall have exclusive authority to: (A) hire or terminate the head of the Company's Internal Audit Department;

(B) determine the compensation of the head of the Internal Audit Department; and (C) determine the budget for the Internal Audit Department. The Internal Audit Department and its head shall report directly to the Audit Committee. The Audit Committee may, in its discretion, direct that the Internal Audit Department also report to senior management of the Company on matters the Audit Committee deems appropriate and may request that senior management of the Company perform such operational oversight as necessary and proper, consistent with preservation of the independence of the internal audit function. The Internal Audit Department and its head may also be employees of the Company Member, and may serve in a similar capacity with respect to the Company Member.

(e) The Board shall appoint a Regulatory Oversight Committee. The Committee shall oversee the adequacy and effectiveness of Nasdaq's regulatory and self-regulatory organization responsibilities; assess Nasdaq's regulatory performance; and assist the Board and other committees of the Board in reviewing the regulatory plan and the overall effectiveness of Nasdaq's regulatory functions. The Regulatory Oversight Committee shall consist of three members, each of whom shall be a Public Director and an "independent director" as defined in Nasdaq Rule 4200.

Section 6. Committees Not Composed Solely of Directors

(a) The Board shall appoint a Nasdaq Listing and Hearing Review Council and a Nasdaq Review Council as provided in Articles V and VI of the By-Laws.

(b) The Board shall appoint a Nominating Committee and a Member Nominating Committee. The Member Nominating Committee shall nominate candidates for each Member Representative Director position on the Board that is to be elected by Nasdaq Members or the Company Member under the terms of the LLC Agreement and these By-Laws, and shall nominate candidates for appointment by the Board for each vacant or new position on the Nasdaq Listing and Hearing Review Council, the Nasdaq Review Council, or other committee that is to be filled with a Member Representative member under the terms of these By-Laws. The Nominating Committee shall nominate candidates for all other vacant or new Director positions on the Board, and candidates for all other vacant or new positions on the Nasdaq Listing and Hearing Review Council or the Nasdaq Review Council.

(i) The Nominating Committee shall consist of no fewer than six and no more than nine members. The number of Non-Industry members on the Nominating Committee shall equal or exceed the number of Industry members on the Nominating Committee. If the Nominating Committee consists of six members, at least two shall be Public members. If the Nominating Committee consists of seven or more members, at least three shall be Public members. No officer or employee of the Company shall serve as a member of

the Nominating Committee in any voting or non-voting capacity. No more than three of the Nominating Committee members and no more than two of the Industry members shall be current Directors.

- (ii) A Nominating Committee member may not simultaneously serve on the Nominating Committee and the Board, unless such member is in his or her final year of service on the Board, and following that year, that member may not stand for election to the Board until such time as he or she is no longer a member of the Nominating Committee.
 - (iii) The Member Nominating Committee shall consist of no fewer than three and no more than six members. All members of the Member Nominating Committee shall be a current associated person of a current Nasdaq Member.
 - (iv) Members of the Nominating Committee and the Member Nominating Committee shall be appointed annually by the Board and may be removed by a majority vote of the Board.
 - (v) The Secretary shall collect from each nominee for Director such information as is reasonably necessary to serve as the basis for a determination of the nominee's classification as an Industry, Member Representative, Non-Industry, or Public Director, if applicable, and the Secretary shall certify to the Nominating Committee or the Member Nominating Committee each nominee's classification, if applicable. Directors shall update the information submitted under this subsection at least annually and upon request of the Secretary, and shall report immediately to the Secretary any change in such information.
- (c) The Board shall appoint a Quality of Markets Committee.
- (i) The Quality of Markets Committee shall have the following functions: (A) to provide advice and guidance to the Board on issues relating to the fairness, integrity, efficiency, and competitiveness of the information, order handling, and execution mechanisms of the national securities exchange operated by the Company from the perspective of investors, both individual and institutional, retail firms, market making firms, Nasdaq-listed companies, and other market participants; and (B) to advise the Board with respect to national market system plans and linkages between the facilities of the Company and other markets.
 - (ii) The Quality of Markets Committee shall include broad representation of participants in the national securities exchange operated by the Company, including investors, market makers, integrated retail firms, and order entry firms. The Quality of

Markets Committee shall include a number of Member Representative members that is equal to at least 20 percent of the total number of members of the Quality of Markets Committee. The number of Non-Industry members of the Quality of Markets Committee shall equal the sum of the number of Industry members and Member Representative members.

- (iii) At all meetings of the Quality of Markets Committee, a quorum for the transaction of business shall consist of a majority of the Quality of Markets Committee, including not less than 50 percent of the Non-Industry members. If at least 50 percent of the Non-Industry members (A) are present at or (B) have filed a waiver of attendance for a meeting after receiving an agenda prior to such meeting, the requirement that not less than 50 percent of the Non-Industry members be present to constitute the quorum shall be waived.

(d) The Board shall appoint a Market Operations Review Committee, which shall exercise the functions specified in the Nasdaq Rules, in accordance with procedures specified therein. The Market Operation Review Committee shall include a number of Member Representative members that is equal to at least 20 percent of the total number of members of the Market Operations Review Committee. No more than 50 percent of the members of the Market Operations Review Committee shall be engaged in market making activity or employed by a Nasdaq Member firm whose revenues from market making activity exceed 10 percent of its total revenues.

(e) The Board shall appoint an Arbitration and Mediation Committee, or shall cause the Company to enter into an agreement with a self-regulatory organization that provides regulatory services pursuant to which such self-regulatory organization shall appoint an Arbitration and Mediation Committee on the Company's behalf.

- (i) The Arbitration and Mediation Committee shall advise the Board on the development and maintenance of an equitable and efficient system of dispute resolution that will equally serve the needs of public investors and Nasdaq Members, shall monitor rules and procedures governing the conduct of dispute resolution, and shall have such other powers and authority as are necessary to effectuate the purposes of the Nasdaq Rules.
- (ii) The Arbitration and Mediation Committee shall consist of no fewer than 10 and no more than 25 members, and shall have at least 50 percent Non-Industry members.
- (iii) At all meetings of the Arbitration and Mediation Committee, a quorum for the transaction of business shall consist of a majority of the Arbitration and Mediation Committee, including not less than 50 percent of Non-Industry committee members. If at least 50 percent of the Non-Industry committee members (A) are present at

or (B) have filed a waiver of attendance for a meeting after receiving an agenda prior to such meeting, the requirement that not less than 50 percent of the Non-Industry committee members be present to constitute the quorum shall be waived.

(f) The Board shall appoint a Market Regulation Committee, or shall cause the Company to enter into an agreement with a self-regulatory organization that provides regulatory services pursuant to which such self-regulatory organization shall appoint a Market Regulation Committee on the Company's behalf.

- (i) The Market Regulation Committee shall advise the Board on regulatory proposals and industry initiatives relating to quotations, execution, trade reporting, and trading practices; advise the Board in its administration of programs and systems for the surveillance and enforcement of rules governing Nasdaq Members' conduct and trading activities in the national securities exchange operated by the Company; provide a pool of attorney panelists for hearing panels under the Nasdaq Rules; participate in the training of hearing panelists on issues relating to quotations, executions, trade reporting, and trading practices; and review and recommend to the Nasdaq Review Council changes to Nasdaq's Sanction Guidelines. The Market Regulation Committee shall not have any involvement in deciding whether or not to institute disciplinary proceedings.
- (ii) The Market Regulation Committee shall have at least 50 percent Non-Industry members.
- (iii) At all meetings of the Market Regulation Committee, a quorum for the transaction of business shall consist of a majority of the Market Regulation Committee, including not less than 50 percent of the Non-Industry committee members. If at least 50 percent of the Non-Industry committee members (A) are present at or (B) have filed a waiver of attendance for a meeting after receiving an agenda prior to such meeting, the requirement that not less than 50 percent of the Non-Industry committee members be present to constitute the quorum shall be waived.

Section 7. Conflicts of Interest; Contracts and Transactions Involving

Directors

(a) A Director or a member of the Nasdaq Listing and Hearing Review Council, the Nasdaq Review Council, or any other committee shall not directly or indirectly participate in any adjudication of the interests of any party if that Director or Nasdaq Listing and Hearing Review Council member, Nasdaq Review Council member, or other committee member has a conflict of interest or bias, or if circumstances otherwise exist where his or her fairness might reasonably be questioned. In any such case, the Director or Nasdaq Listing and Hearing Review Council member, Nasdaq

Review Council member, or other committee member shall recuse himself or herself or shall be disqualified.

(b) No contract or transaction between the Company and one or more of its Directors or officers, or between the Company and any other corporation, partnership, association, or other organization in which one or more of its Directors or officers are directors or officers, or have a financial interest, shall be void or voidable solely for this reason if: (i) the material facts pertaining to such Director's or officer's relationship or interest and the contract or transaction are disclosed or are known to the Board or the committee, and the Board or committee in good faith authorizes the contract or transaction by the affirmative vote of a majority of the disinterested Directors, even though the disinterested Directors be less than a quorum; or (ii) the material facts are disclosed or become known to the Board or committee after the contract or transaction is entered into, and the Board or committee in good faith ratifies the contract or transaction by the affirmative vote of a majority of the disinterested Directors, even though the disinterested Directors be less than a quorum.

Section 8. Compensation of Board, Council, and Committee Members

The Board may provide for reasonable compensation of the Chair of the Board, the Directors, Nasdaq Listing and Hearing Review Council and Nasdaq Review Council members, and the members of other committees. The Board may also provide for reimbursement of reasonable expenses incurred by such persons in connection with the business of the Company.

Article IV OFFICERS, AGENTS, AND EMPLOYEES

Section 1. Delegation of Duties of Officers

The Board may delegate the duties and powers of any officer of the Company to any other officer or to any Director for a specified period of time and for any reason that the Board may deem sufficient.

Section 2. Resignation and Removal of Officers

(a) Any officer may resign at any time upon notice of resignation to the Board, the Chief Executive Officer, the President, or the Secretary. Any such resignation shall take effect upon receipt of such notice or at any later time specified therein. The acceptance of a resignation shall not be necessary to make the resignation effective.

(b) Any officer of the Company may be removed, with or without cause, by the Board. Such removal shall be without prejudice to the contractual rights of the affected officer, if any, with the Company.

Section 3. Chair of the Board

The Chair of the Board shall preside at all meetings of the Board at which the Chair is present. The Chair shall exercise such other powers and perform such other duties as may be assigned to the Chair from time to time by the Board.

Section 4. Chief Executive Officer

The Chief Executive Officer shall, in the absence of the Chair of the Board, preside at all meetings of the Board at which the Chief Executive Officer is present. The Chief Executive Officer shall be the chief executive officer of the Company and shall have general supervision over the business and affairs of the Company. The Chief Executive Officer shall have all powers and duties usually incident to the office of the Chief Executive Officer, except as specifically limited by a resolution of the Board. The Chief Executive Officer shall exercise such other powers and perform such other duties as may be assigned to the Chief Executive Officer from time to time by the Board.

Section 5. President

The President shall, in the absence of the Chair of the Board and the Chief Executive Officer, preside at all meetings of the Board at which the President is present. The President shall have general supervision over the operations of the Company. The President shall have all powers and duties usually incident to the office of the President, except as specifically limited by a resolution of the Board. The President shall exercise such other powers and perform such other duties as may be assigned to the President from time to time by the Board.

Section 6. Vice President

The Board shall elect one or more Vice Presidents. In the absence or disability of the President or if the office of President becomes vacant, the Vice Presidents in the order determined by the Board, or if no such determination has been made, in the order of their seniority, shall perform the duties and exercise the powers of the President, subject to the right of the Board at any time to extend or restrict such powers and duties or to assign them to others. Any Vice President may have such additional designations in such Vice President's title as the Board may determine. The Vice Presidents shall generally assist the President in such manner as the President shall direct. Each Vice President shall exercise such other powers and perform such other duties as may be assigned to such Vice President from time to time by the Board, the Chief Executive Officer or the President. The term "Vice President" used in this Section shall include the positions of Executive Vice President, Senior Vice President, and Vice President.

Section 7. Chief Regulatory Officer

An officer of the Company with the position of Executive Vice President or Senior Vice President shall be designated as the Chief Regulatory Officer of the Company. The Chief Regulatory Officer shall have general supervision of the regulatory operations of the Company, including responsibility for overseeing the exchange's surveillance, examination, and enforcement functions and for administering any regulatory services agreements with another self-regulatory organization to which the Company is a party. The Chief Regulatory Officer shall meet with the Regulatory Oversight Committee of the Company in executive session at regularly scheduled meetings of such committee, and at any time upon request of the Chief Regulatory

Officer or any member of the Regulatory Oversight Committee. The Chief Regulatory Officer may also serve as the General Counsel of the Company.

Section 8. Secretary

The Secretary shall act as Secretary of all meetings of the Board at which the Secretary is present, shall record all the proceedings of all such meetings in a book to be kept for that purpose, shall have supervision over the giving and service of notices of the Company, and shall have supervision over the care and custody of the books and records of the Company. The Secretary shall be empowered to affix the Company's seal, if any, to documents, the execution of which on behalf of the Company under its seal is duly authorized, and when so affixed, may attest the same. The Secretary shall have all powers and duties usually incident to the office of Secretary, except as specifically limited by a resolution of the Board. The Secretary shall exercise such other powers and perform such other duties as may be assigned to the Secretary from time to time by the Board, the Chief Executive Officer or the President.

Section 9. Assistant Secretary

In the absence of the Secretary or in the event of the Secretary's inability or refusal to act, any Assistant Secretary, approved by the Board, shall exercise all powers and perform all duties of the Secretary. An Assistant Secretary shall also exercise such other powers and perform such other duties as may be assigned to such Assistant Secretary from time to time by the Board or the Secretary.

Section 10. Treasurer

The Treasurer shall have general supervision over the care and custody of the funds and over the receipts and disbursements of the Company and shall cause the funds of the Company to be deposited in the name of the Company in such banks or other depositories as the Board may designate. The Treasurer shall have supervision over the care and safekeeping of the securities of the Company. The Treasurer shall have all powers and duties usually incident to the office of Treasurer except as specifically limited by a resolution of the Board. The Treasurer shall exercise such other powers and perform such other duties as may be assigned to the Treasurer from time to time by the Board, the Chief Executive Officer or the President.

Section 11. Assistant Treasurer

In the absence of the Treasurer or in the event of the Treasurer's inability or refusal to act, any Assistant Treasurer, approved by the Board, shall exercise all powers and perform all duties of the Treasurer. An Assistant Treasurer shall also exercise such other powers and perform such other duties as may be assigned to such Assistant Treasurer from time to time by the Board or the Treasurer.

Article V NASDAQ LISTING AND HEARING REVIEW COUNCIL

Section 1. Appointment and Authority

The Board shall appoint a Nasdaq Listing and Hearing Review Council. The Nasdaq Listing and Hearing Review Council may be authorized to act for the Board in a manner consistent with these By-Laws and the Rules with respect to listing decisions. The Nasdaq Listing and Hearing Review Council also shall consider and make recommendations to the Board on policy and rule changes relating to issuer listings. The Board may delegate such other powers and duties to the Nasdaq Listing and Hearing Review Council as the Board deems appropriate.

Section 2. Number of Members and Qualifications

(a) The Nasdaq Listing and Hearing Review Council shall consist of no fewer than eight and no more than 18 members, of which not more than 50 percent may be engaged in market-making activity or employed by a Nasdaq Member whose revenues from market-making activity exceed ten percent of its total revenues. The Nasdaq Listing and Hearing Review Council shall include at least five Non-Industry members (including at least two Public members), and a number of Member Representative members that is equal to at least 20 percent of the total number of members of the Nasdaq Listing and Hearing Review Council.

(b) As soon as practicable following the appointment of members, the Nasdaq Listing and Hearing Review Council shall elect a Chair from among its members. The Chair shall have such powers and duties as may be determined from time to time by the Nasdaq Listing and Hearing Review Council. The Board, by resolution adopted by a majority of Directors then in office, may remove the Chair from such position at any time for refusal, failure, neglect, or inability to discharge the duties of Chair.

Section 3. Nomination Process

The Secretary of the Company shall collect from each nominee for the office of member of the Nasdaq Listing and Hearing Review Council such information as is reasonably necessary to serve as the basis for a determination of the nominee's qualifications and classification as an Industry, Member Representative, Public, or Non-Industry member, and the Secretary shall certify to the Nominating Committee or the Member Nominating Committee (as applicable) each nominee's qualifications and classification. After appointment to the Nasdaq Listing and Hearing Review Council, each member shall update such information at least annually and upon request of the Secretary, and shall report immediately to the Secretary any change in such information.

Section 4. Term of Office

(a) Except as otherwise provided in this Article, each Nasdaq Listing and Hearing Review Council member shall hold office for a term of three years or until a successor is duly appointed and qualified, except in the event of earlier termination from office by reason of death, resignation, removal, disqualification, or other reason.

(b) The Nasdaq Listing and Hearing Review Council shall be divided into three classes. The term of office of those of the first class shall expire in January 2006, the term of office of those of the second class shall expire in January 2007, and the term of office of those of the third class shall expire in January 2008.

(c) No member may serve more than two consecutive terms, except that if a member is appointed to fill a term of less than one year, such member may serve up to two consecutive terms following the expiration of such member's initial term.

Section 5. Resignation

A member of the Nasdaq Listing and Hearing Review Council may resign at any time upon written notice to the Board. Any such resignation shall take effect at the time specified therein, or if the time is not specified, upon receipt thereof, and the acceptance of such resignation, unless required by the terms thereof, shall not be necessary to make such resignation effective.

Section 6. Removal

Any or all of the members of the Nasdaq Listing and Hearing Review Council may be removed from office at any time for refusal, failure, neglect, or inability to discharge the duties of such office by majority vote of the Board.

Section 7. Disqualification

Notwithstanding Article V, Section 4, the term of office of a Nasdaq Listing and Hearing Review Council member shall terminate immediately upon a determination by the Board, by a majority vote, (a) that the member no longer satisfies the classification (Industry, Member Representative, Public, or Non-Industry) for which the member was elected; and (b) that the member's continued service as such would violate the compositional requirements of the Nasdaq Listing and Hearing Review Council set forth in Article V, Section 2. If the term of office of a Nasdaq Listing and Hearing Review Council member terminates under this Section, and the remaining term of office of such member at the time of termination is not more than six months, during the period of vacancy the Nasdaq Listing and Hearing Review Council shall not be deemed to be in violation of Article V, Section 2 by virtue of such vacancy.

Section 8. Filling of Vacancies

If a position on the Nasdaq Listing and Hearing Review Council becomes vacant, whether because of death, disability, disqualification, removal, or resignation, the Nominating Committee or the Member Nominating Committee (as applicable) shall nominate, and the Board shall appoint a person satisfying the qualifications for the position as provided in Article V, Section 2(a) to fill such vacancy, except that if the remaining term of office for the vacant position is not more than six months, no replacement shall be required.

Section 9. Quorum and Voting

At all meetings of the Nasdaq Listing and Hearing Review Council, a quorum for the transaction of business shall consist of a majority of the Nasdaq Listing and Hearing Review Council, including one Non-Industry member and one Member Representative member. In the absence of a quorum, a majority of the members present may adjourn the meeting until a quorum is present.

Section 10. Meetings

The members of the Nasdaq Listing and Hearing Review Council may participate in a meeting through the use of a conference telephone or other communications equipment by means of which all persons participating in the meeting may hear one another, and such participation in a meeting shall constitute presence in person at such meeting for all purposes.

Article VI NASDAQ REVIEW COUNCIL

Section 1. Appointment and Authority

The Board shall appoint a Nasdaq Review Council. The Nasdaq Review Council may be authorized to act for the Board in a manner consistent with these By-Laws and the Nasdaq Rules with respect to an appeal or review of a disciplinary proceeding, a statutory disqualification proceeding, or a membership proceeding; a review of an offer of settlement, a letter of acceptance, waiver, and consent, and a minor rule violation plan letter; the exercise of exemptive authority; and such other proceedings or actions as may be authorized by the Nasdaq Rules. The Nasdaq Review Council also may consider and make recommendations to the Board on policy and rule changes relating to business and sales practices of Nasdaq Members and associated persons and enforcement policies, including policies with respect to fines and other sanctions. The Board may delegate such other powers and duties to the Nasdaq Review Council as the Board deems appropriate.

Section 2. Number of Members and Qualifications

The Nasdaq Review Council shall consist of no fewer than 12 and no more than 14 members. The Nasdaq Review Council shall include a number of Member Representative members that is equal to at least 20 percent of the total number of members of the Nasdaq Review Council. The number of Non-Industry members, including at least three Public members, shall equal or exceed the sum of the number of Industry members and Member Representative members. As soon as practicable following the appointment of members, the Nasdaq Review Council shall elect a Chair from among its members. The Chair shall have such powers and duties as may be determined from time to time by the Nasdaq Review Council. The Board, by resolution adopted by a majority of Directors then in office, may remove the Chair from such

position at any time for refusal, failure, neglect, or inability to discharge the duties of Chair.

Section 3. Nomination Process

The Secretary of the Company shall collect from each nominee for the office of member of the Nasdaq Review Council such information as is reasonably necessary to serve as the basis for a determination of the nominee's qualifications and classification as an Industry, Member Representative, Non-Industry, or Public member, and the Secretary shall certify to the Nominating Committee or the Member Nominating Committee (as applicable) each nominee's qualifications and classification. After appointment to the Nasdaq Review Council, each member shall update such information at least annually and upon request of the Secretary, and shall report immediately to the Secretary any change in such information.

Section 4. Term of Office

(a) Except as otherwise provided in this Article, each Nasdaq Review Council member shall hold office for a term of three years or until a successor is duly appointed and qualified, except in the event of earlier termination from office by reason of death, resignation, removal, disqualification, or other reason.

(b) The Nasdaq Review Council shall be divided into three classes. The term of office of those of the first class shall expire one year after the date of their appointment, the term of office of those of the second class shall expire two years after the date of their appointment, and the term of office of those of the third class shall expire three years after the date of their appointment. After the expiration of the term of office of those in the first class, members shall be appointed for terms of three years to replace those whose terms expire.

(c) No member may serve consecutive terms, except that if a member is appointed to fill a term of less than one year, such member may serve a single three-year term following the expiration of such member's initial term.

Section 5. Resignation

A member of the Nasdaq Review Council may resign at any time upon written notice to the Board. Any such resignation shall take effect at the time specified therein, or if the time is not specified, upon receipt thereof, and the acceptance of such resignation, unless required by the terms thereof, shall not be necessary to make such resignation effective.

Section 6. Removal

Any or all of the members of the Nasdaq Review Council may be removed from office at any time for refusal, failure, neglect, or inability to discharge the duties of such office by majority vote of the Board.

Section 7. Disqualification

Notwithstanding Article VI, Section 4, the term of office of a Nasdaq Review Council member shall terminate immediately upon a determination by the Board, by a majority vote, (a) that the member no longer satisfies the classification (Industry, Member Representative, Non-Industry, or Public) for which the member was elected; and (b) that the member's continued service as such would violate the compositional requirements of the Nasdaq Review Council set forth in Article VI, Section 2. If the term of office of a Nasdaq Review Council member terminates under this Section, and the remaining term of office of such member at the time of termination is not more than six months, during the period of vacancy the Nasdaq Review Council shall not be deemed to be in violation of Article VI, Section 2 by virtue of such vacancy.

Section 8. Filling of Vacancies

If a position on the Nasdaq Review Council becomes vacant, whether because of death, disability, disqualification, removal, or resignation, the Nominating Committee or the Member Nominating Committee (as applicable) shall nominate, and the Board shall appoint a person satisfying the qualifications for the position as provided in Article VI, Section 2 to fill such vacancy, except that if the remaining term of office for the vacant position is not more than six months, no replacement shall be required.

Section 9. Quorum and Voting

At all meetings of the Nasdaq Review Council, a quorum for the transaction of business shall consist of a majority of the Nasdaq Review Council, including not less than 50 percent of the Non-Industry members of the Nasdaq Review Council and at least one Member Representative member of the Nasdaq Review Council. In the absence of a quorum, a majority of the members present may adjourn the meeting until a quorum is present.

Section 10. Meetings

The members of the Nasdaq Review Council may participate in a meeting through the use of a conference telephone or other communications equipment by means of which all persons participating in the meeting may hear one another, and such participation in a meeting shall constitute presence in person at such meeting for all purposes.

Section 11. Review Subcommittee

The Nasdaq Review Council shall appoint a Review Subcommittee to determine whether disciplinary and membership proceedings decisions should be called for review by the Nasdaq Review Council under the Nasdaq Rules and to perform any other function authorized by the Nasdaq Rules. The Review Subcommittee shall be composed of no fewer than two and no more than four members of the Nasdaq Review Council. The number of Non-Industry members of the Review Subcommittee shall equal or exceed the sum of the number of Industry members and Member Representative members of the

Review Subcommittee, and the Review Subcommittee shall include at least one Member Representative member. At all meetings of the Review Subcommittee, a quorum for the transaction of business shall consist of not less than 50 percent of the members of the Review Subcommittee, including not less than 50 percent of the Non-Industry members of the Review Subcommittee and one Member Representative member of the Review Subcommittee.

Article VII MISCELLANEOUS PROVISIONS

Section 1. Waiver of Notice

(a) Whenever notice is required to be given by law, the LLC Agreement or these By-Laws, a waiver thereof by the Person or Persons entitled to such notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the Board, or members of a committee, need be specified in any waiver of notice.

(b) Attendance of a Person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened.

Section 2. Execution of Instruments, Contracts, etc.

(a) All checks, drafts, bills of exchange, notes, or other obligations or orders for the payment of money shall be signed in the name of the Company by such officer or officers or Person or Persons as the Board, or a duly authorized committee thereof, may from time to time designate. Except as otherwise provided by law, the Board, any committee given specific authority in the premises by the Board, or any committee given authority to exercise generally the powers of the Board during intervals between meetings of the Board may authorize any officer, employee, or agent, in the name of and on behalf of the Company, to enter into or execute and deliver deeds, bonds, mortgages, contracts, and other obligations or instruments, and such authority may be general or confined to specific instances.

(b) All applications, written instruments, and papers required by any department of the United States government or by any state, county, municipal, or other governmental authority may be executed in the name of the Company by any officer of the Company, or, to the extent designated for such purpose from time to time by the Board, by an employee or agent of the Company. Such designation may contain the power to substitute, in the discretion of the person named, one or more other persons.

Article VIII AMENDMENTS; EMERGENCY BY-LAWS

Section 1. By the Company Member or Board

These By-Laws may be altered, amended, or repealed, or new By-Laws may be adopted, (i) by the written consent of the Company Member, or (ii) at any regular or special meeting of the Board by a resolution adopted by the Board.

Section 2. Emergency By-Laws

The Board may adopt emergency By-Laws subject to repeal or change by action of the Company Member which shall, notwithstanding any different provision of law, the LLC Agreement, or these By-Laws, be operative during any emergency resulting from any nuclear or atomic disaster, an attack on the United States or on a locality in which the Company conducts its business or customarily holds meetings of the Board, any catastrophe, or other emergency condition, as a result of which a quorum of the Board or a committee thereof cannot readily be convened for action. Such emergency By-Laws may make any provision that may be practicable and necessary under the circumstances of the emergency.

Article IX EXCHANGE AUTHORITIES

Section 1. Rules

To promote and enforce just and equitable principles of trade and business, to maintain high standards of commercial honor and integrity among Nasdaq Members, to collaborate with governmental and other agencies in the promotion of fair practices and the elimination of fraud, and in general to carry out the purposes of the Company and of the Act, the Board is hereby authorized to adopt such rules and such amendments thereto as it may, from time to time, deem necessary or appropriate. If any such rules or amendments thereto are approved by the Commission or otherwise become effective as provided in the Act, they shall become effective Nasdaq Rules as of the date of Commission approval or effectiveness under the Act. The Board is hereby authorized, subject to the provisions of these By-Laws and the Act, to administer, enforce, interpret, issue exemptions from, suspend, or cancel any Rules adopted hereunder.

Section 2. Disciplinary Proceedings

(a) The Board is authorized to establish procedures relating to disciplinary proceedings involving Nasdaq Members and their associated persons.

(b) The Board is authorized to impose appropriate sanctions applicable to Nasdaq Members, including censure, fine, suspension, or expulsion from membership, suspension or bar from being associated with all Nasdaq Members, limitation of activities, functions, and operations of a Nasdaq Member, or any other fitting sanction, and to impose appropriate sanctions applicable to persons associated with Nasdaq Members, including censure, fine, suspension, or barring a person associated with a Nasdaq Member from being associated with all Nasdaq Members, limitation of activities, functions, and operations of a person associated with a Nasdaq Member, or any other fitting sanction, for:

(i) a breach by a Nasdaq Member or a person associated with a Nasdaq Member of any covenant with the Company or its members;

(ii) violation by a Nasdaq Member or a person associated with a Nasdaq Member of any of the terms, conditions, covenants, and provisions of the By-Laws, the Rules, or the federal securities laws, including the rules and regulations adopted thereunder;

(iii) failure by a Nasdaq Member or person associated with a Nasdaq Member to: (A) submit a dispute for arbitration as may be required by the Rules; (B) appear or produce any document in the Nasdaq Member's or person's possession or control as directed pursuant to the Rules; (C) comply with an award of arbitrators properly rendered, where a timely motion to vacate or modify such award has not been made pursuant to applicable law or where such a motion has been denied; or (D) comply with a written and executed settlement agreement obtained in connection with an arbitration or mediation submitted for disposition; or

(iv) failure by a Nasdaq Member or person associated with a Nasdaq Member to adhere to any ruling, order, direction, or decision of or to pay any sanction, fine, or costs imposed by the Board or any entity to which the Board has delegated its powers.

Section 3. Membership Qualifications

(a) The Board shall have authority to adopt rules and regulations applicable to applicants seeking to become Nasdaq Members, Nasdaq Members, and persons associated with applicants or Nasdaq Members, establishing specified and appropriate standards with respect to the training, experience, competence, financial responsibility, operational capability, and such other qualifications as the Board finds necessary or desirable.

(b) The Board may from time to time make such changes in such rules, regulations, and standards as it deems necessary or appropriate.

(c) Uniform standards for regulatory and other access issues, such as admission to membership and conditions to becoming a Nasdaq market maker, shall be promulgated and applied on a consistent basis, and the Company shall institute safeguards to ensure fair and evenhanded access to all of its services and facilities.

Section 4. Fees, Dues, Assessments, and Other Charges

The Board shall have authority to fix and levy the amount of fees, dues, assessments, and other charges to be paid by Nasdaq Members and issuers and any other persons using any facility or system that the Company operates or controls; provided, however, that such fees, dues, assessments, and other charges shall be equitably allocated

among Nasdaq Members and issuers and any other persons using any facility or system that the Company operates or controls.

Section 5. Authority to Take Action Under Emergency or Extraordinary Market Conditions

The Board, or such person or persons as may be designated by the Board, in the event of an emergency or extraordinary market conditions, shall have the authority to take any action regarding:

(a) the trading in or operation of the national securities exchange operated by the Company or any other organized securities markets that may be operated by the Company, the operation of any automated system owned or operated by the Company, and the participation in any such system or any or all persons or the trading therein of any or all securities; and

(b) the operation of any or all offices or systems of Nasdaq Members, if, in the opinion of the Board or the person or persons hereby designated, such action is necessary or appropriate for the protection of investors or the public interest or for the orderly operation of the marketplace or the system.

GENERAL PROVISIONS

TABLE OF CONTENTS

- 0100. GENERAL PROVISIONS
 - 0110. Adoption and Application of Rules
 - 0111. Adoption of Rules
 - 0112. Effective Date
 - 0113. Interpretation
 - 0114. Reserved
 - 0115. Applicability
 - 0120. Definitions
 - 0121. Definitions in By-Laws
 - 0122. Contractual Authority
 - 0130. Regulation of Nasdaq and Its Members
 - 0140. Fingerprint-Based Background Checks of Nasdaq Employees and Independent Contractors

GENERAL PROVISIONS

0100. GENERAL PROVISIONS

0110. Adoption and Application of Rules

0111. Adoption of Rules

The following provisions are adopted pursuant to the By-Laws of Nasdaq.

0112. Effective Date

The Rules shall become effective as provided in the By-Laws.

0113. Interpretation

The Rules shall be interpreted in such manner as will aid in effectuating the purposes and business of Nasdaq, and so as to require that all practices in connection with the investment banking and securities business shall be just, reasonable and not unfairly discriminatory.

0114. Reserved

0115. Applicability

(a) These Rules shall apply to all members and persons associated with a member. Persons associated with a member shall have the same duties and obligations as a member under these Rules.

(b) A member or person associated with a member, who has been expelled, canceled or revoked from membership or from registration or who has been barred from being associated with all members, shall cease to have any privileges of membership or registration. A member or person associated with a member who has been suspended from membership or registration shall also cease to have any privileges of membership or registration other than those under the Code of Procedure as set forth in the Rule 9000 Series. In neither case shall such a member or person associated with a member be entitled to recover any admission fees, dues, assessments or other charges paid to Nasdaq.

(c) A member or person associated with a member who has been suspended from membership or from registration shall be considered as a non-member during the period of suspension for purposes of applying the provisions of these Rules which govern dealings between members and non-members. However, such member or person associated with a member shall have all of the obligations imposed by the rules of the Corporation.

0120. Definitions

When used in these Rules, unless the context otherwise requires:

(a) “Act”

The term “Act” means the Securities Exchange Act of 1934, as amended.

(b) “Association” or “NASD”

The terms “Association” and “NASD” mean, collectively, the National Association of Securities Dealers, Inc. and its subsidiaries.

(c) “By-Laws”

The term “By-Laws” means the By-Laws of Nasdaq.

(d) “Code of Procedure”

The term “Code of Procedure” means the procedural rules contained in the Rule 9000 Series.

(e) “Commission” or “SEC”

The terms “Commission” or “SEC” mean the Securities and Exchange Commission (SEC), established pursuant to the Act.

(f) “Regulatory Contract”

The term “Regulatory Contract” means the regulatory services agreement between Nasdaq and NASD Regulation, an affiliate of NASD, pursuant to which NASD Regulation has agreed to perform certain regulatory functions on behalf of Nasdaq.

(g) “Customer”

The term “customer” shall not include a broker or dealer.

(h) “Security”

Unless the context requires otherwise, the term “security” shall mean a security listed on Nasdaq or traded on Nasdaq pursuant to unlisted trading privileges.

(i) “Member” or “Nasdaq Member”

The terms “member” or “Nasdaq Member” mean any registered broker or dealer that has been admitted to membership in Nasdaq. A Nasdaq Member is not a member of

Nasdaq within the meaning of the Delaware Limited Liability Company Act by reason of being admitted to membership in Nasdaq.

(j) “Nasdaq Regulation”

The term “Nasdaq Regulation” means the Department of Nasdaq that supervises and administers the regulatory functions of Nasdaq, including the administration of any regulatory services agreements with another self-regulatory organization to which Nasdaq is a party.

(k) “Nasdaq”

The term “Nasdaq” means The NASDAQ Stock Market LLC.

(l) “NASD Regulation”

The term “NASD Regulation” means NASD Regulation, Inc.

(m) “Nasdaq Review Council”

The term “Nasdaq Review Council” means the committee authorized and directed to act for the Board of Directors of Nasdaq in a manner consistent with the Rules and By-Laws of Nasdaq with respect to (1) an appeal or review of a disciplinary proceeding; (2) a statutory disqualification decision; (3) a review of a membership proceeding; (4) a review of an offer of settlement, a letter of acceptance, waiver, and consent, and a minor rule violation plan letter; (5) the exercise of exemptive authority; and (6) such other proceedings or actions authorized by the Rules of Nasdaq.

(n) “Person”

The term “person” shall include any natural person, partnership, corporation, association, or other legal entity.

(o) “Rules” or “Rules of Nasdaq”

The term “Rules” or “Rules of Nasdaq” means the numbered rules set forth in the Nasdaq Manual beginning with the Rule 0100 Series, as adopted by the Nasdaq Board of Directors pursuant to the By-Laws of the Nasdaq, as hereafter amended or supplemented, and also includes the By-Laws and the Limited Liability Company Agreement of The NASDAQ Stock Market LLC.

0121. Definitions in Nasdaq By-Laws

Unless the context otherwise requires, or unless otherwise defined in these Rules, terms used in the Rules and interpretive material, if defined in the Nasdaq By-Laws, shall have the meaning as defined in the Nasdaq By-Laws.

0130. Regulation of Nasdaq and Its Members

Nasdaq and NASD Regulation, an affiliate of NASD, are parties to the Regulatory Contract pursuant to which NASD Regulation has agreed to perform certain functions described in these Rules on behalf of Nasdaq. Nasdaq Rules that refer to Nasdaq Regulation, Nasdaq Regulation staff, Nasdaq staff, and Nasdaq departments should be understood as also referring to NASD staff, NASD Regulation staff, and NASD departments acting on behalf of Nasdaq pursuant to the Regulatory Contract.

Notwithstanding the fact that Nasdaq has entered into the Regulatory Contract with NASD Regulation to perform some of Nasdaq's functions, Nasdaq shall retain ultimate legal responsibility for, and control of, such functions.

In addition, Nasdaq has incorporated by reference certain NASD rules. Nasdaq members shall comply with these rules and interpretations as if such rules and interpretations were part of Nasdaq's rules.

0140. Fingerprint-Based Background Checks of Employees and Independent Contractors

(a) In order to enhance the physical security of the facilities, systems, data, and information of Nasdaq and its affiliates (collectively, the "Nasdaq Entities"), it shall be the policy of the Nasdaq Entities to conduct a fingerprint-based criminal records check of (i) all prospective and current employees of the Nasdaq Entities, (ii) all prospective and current independent contractors who have or are anticipated to have access to facilities of the Nasdaq Entities for ten business days or longer, and (iii) all prospective and current temporary employees who have or are anticipated to have access to facilities of the Nasdaq Entities for ten business days or longer. The Nasdaq Entities shall apply this policy in all circumstances where permitted by applicable law.

(b) The Nasdaq Entities shall submit fingerprint cards obtained pursuant to the foregoing policy to the Attorney General of the United States or his or her designee for identification and processing. The Nasdaq Entities shall at all times maintain the security of fingerprint cards and information received from the Attorney General or his or her designee.

(c) The Nasdaq Entities shall evaluate information received from the Attorney General or his or her designee in accordance with the terms of a written fingerprint policy and provisions of applicable law. A felony or serious misdemeanor conviction will be a factor in considering whether to hire a prospective employee, take adverse employment action with respect to a current employee, or deny prospective or current independent contractors or temporary employees access to facilities of the Nasdaq Entities.

(d) A prospective employee who refuses to submit to fingerprinting shall be denied employment by the Nasdaq Entities, and a prospective independent contractor or temporary employee who refuses to submit to fingerprinting shall be denied access to

facilities of the Nasdaq Entities. A current employee, independent contractor, or temporary employee who refuses to submit to fingerprinting will be terminated following notice and being given three opportunities to submit.

MEMBERSHIP AND REGISTRATION RULES

TABLE OF CONTENTS

- 1000. MEMBERSHIP, REGISTRATION AND QUALIFICATION REQUIREMENTS
 - 1001. Nasdaq Regulatory Contract with NASD Regulation
 - 1002. Qualifications of Nasdaq Members and Associated Persons
 - IM-1002-1. Filing of Misleading Information as to Membership or Registration
 - IM-1002-2. Status of Sole Proprietors and Registered Representatives Serving in the Armed Forces
 - IM-1002-3. Failure to Register Personnel
 - IM-1002-4. Branch Offices and Offices of Supervisory Jurisdiction
 - 1010. Membership Proceedings
 - 1011. Definitions
 - 1012. General Provisions
 - 1013. New Member Application and Interview
 - 1014. Department Decision
 - 1015. Review by the Nasdaq Review Council
 - 1016. Discretionary Review by Nasdaq Board
 - 1017. Application for Approval of Change in Ownership, Control, or Business Operations
 - 1018. [RESERVED]
 - 1019. Application to Commission for Review
 - 1020. Registration of Principals
 - 1021. Registration Requirements
 - 1022. Categories of Principal Registration
 - IM-1022-1. [RESERVED]
 - IM-1022-2. Limited Principal--General Securities Sales Supervisor
 - 1030. Registration of Representatives
 - 1031. Registration Requirements
 - 1032. Categories of Representative Registration
 - 1040. Registration of Assistant Representatives
 - 1041. Registration Requirements for Assistant Representatives
 - 1042. Restrictions for Assistant Representatives
 - 1043. [RESERVED]
 - 1050. Research Analysts
 - 1060. Persons Exempt from Registration
 - 1070. Qualification Examinations and Waiver of Requirements
 - 1080. Confidentiality of Examinations
 - 1090. Foreign Members
 - 1100. Foreign Associates
 - 1110. [RESERVED]
 - 1120. Continuing Education Requirements
 - 1130. Reliance on Current Membership List
 - 1140. Electronic Filing Rules
 - 1150. Executive Representative

1000. MEMBERSHIP, REGISTRATION AND QUALIFICATION REQUIREMENTS

1001. Nasdaq Regulatory Contract with NASD Regulation

Nasdaq and NASD Regulation, an affiliate of NASD, are parties to the Regulatory Contract, pursuant to which NASD Regulation has agreed to perform certain functions described in the Rule 1000 Series on behalf of Nasdaq. Nasdaq Rules that refer to the Nasdaq Regulation, Nasdaq Regulation staff, Nasdaq staff, and Nasdaq departments should be understood as also referring to NASD staff, NASD Regulation staff and NASD departments acting on behalf of Nasdaq pursuant to the Regulatory Contract.

Notwithstanding the fact that Nasdaq has entered into the Regulatory Contract with NASD Regulation to perform some of Nasdaq's functions, Nasdaq shall retain ultimate legal responsibility for, and control of, such functions. In addition, Nasdaq has incorporated by reference certain NASD rules. Nasdaq members shall comply with these rules and interpretations as if such rules and interpretations were part of Nasdaq's rules.

1002. Qualifications of Nasdaq Members and Associated Persons

(a) Persons Eligible to Become Nasdaq Members and Associated Persons of Nasdaq Members.

(1) Any registered broker or dealer shall be eligible for membership in Nasdaq, except such registered brokers or dealers as are excluded under paragraph (b).

(2) Any person shall be eligible to become an associated person of a Nasdaq member, except such persons as are excluded under paragraph (b).

(b) Ineligibility of Certain Persons for Membership or Association

(1) Subject to such exceptions as may be explicitly provided elsewhere in the Nasdaq Rules, no registered broker or dealer shall be admitted to membership, and no Nasdaq member shall be continued in membership, if such broker, dealer, or Nasdaq member fails or ceases to satisfy the qualification requirements established by the Nasdaq Rules, or if such broker, dealer, or Nasdaq member is or becomes subject to a statutory disqualification, or if such broker, dealer, or Nasdaq member fails to file such forms as Nasdaq may require in accordance with such process as Nasdaq may prescribe.

(2) Subject to such exceptions as may be explicitly provided elsewhere in the Nasdaq Rules, no person shall become associated with a Nasdaq member, continue to be associated with a Nasdaq member, or transfer association to another Nasdaq member, if such person fails or ceases to satisfy the qualification requirements established by the Nasdaq Rules, or if such person is or becomes subject to a statutory disqualification; and no broker or dealer shall be admitted to

membership, and no Nasdaq member shall be continued in membership, if any person associated with it is ineligible to be an associated person under this subsection.

(c) **Payment of Fees, Dues, Assessments, and Other Charges by Members and Associated Persons**

(1) Fees, dues, assessments, and other charges shall be called and payable by members and associated persons as determined by Nasdaq from time to time

(2) Each Nasdaq member or associated person shall promptly furnish all information or reports requested by Nasdaq in connection with the determination of the amount of fees, dues, assessments, or other charges owed.

(d) **Reinstatement of Membership or Registration.** Any membership or registration suspended or canceled under the Nasdaq Rules may be reinstated by Nasdaq upon such terms and conditions as are permitted under the Act and the Nasdaq Rules; provided, however, that any applicant for reinstatement of membership or registration shall possess the qualifications required for membership or registration in Nasdaq.

(e) **Membership in a Registered Securities Association or Another Registered Exchange.** As a condition to maintaining membership in Nasdaq, members shall at all times maintain membership in a registered securities association or another registered exchange. Nasdaq members that transact business with customers shall at all times be members of the NASD.

IM-1002-1. Filing of Misleading Information as to Membership or Registration

The filing with Nasdaq of information with respect to membership or registration as a Registered Representative which is incomplete or inaccurate so as to be misleading, or which could in any way tend to mislead, or the failure to correct such filing after notice thereof, may be deemed to be conduct inconsistent with just and equitable principles of trade and when discovered may be sufficient cause for appropriate disciplinary action.

IM-1002-2. Status of Sole Proprietors and Registered Representatives Serving in the Armed Forces

Any Registered Representative of a member who volunteers or is called into the Armed Forces of the United States shall be placed, after proper notification to Nasdaq, upon inactive status and need not be re-registered by such member upon his or her return to active employment with the member.

Any member (Sole Proprietor) who temporarily closes his or her business by reason of volunteering or being called into the Armed Forces of the United States, shall be placed, after proper notification to the Executive Office, on inactive status until his or her return to active participation in the investment banking and securities business.

A Registered Representative who is placed on inactive status as set forth above shall not be included within the definition of "Personnel" for purposes of calculating any dues or assessments that must be paid by members.

Any member placed on inactive status as set forth above shall not be required to pay any dues or assessments during the pendency of such inactive status and shall not be required to pay any admission fee that is otherwise required upon return to active participation in the investment banking and securities business.

A Registered Representative who is placed on inactive status as set forth above shall not be required to complete either of the Regulatory or Firm Elements of the continuing education requirements set forth in Rule 1120 during the pendency of such inactive status.

IM-1002-3. Failure to Register Personnel

The failure of any member to register an employee, who should be so registered, as a Registered Representative may be deemed to be conduct inconsistent with just and equitable principles of trade and when discovered may be sufficient cause for appropriate disciplinary action.

IM-1002-4. Branch Offices and Offices of Supervisory Jurisdiction

Each member is under a duty to insure that its membership application with Nasdaq is kept current at all times by supplementary amendments to its original application and that any offices other than the main office are properly designated and registered, if required, with Nasdaq.

Each member must designate to Nasdaq those offices of supervisory jurisdiction, including the main office, and must register those offices which are deemed to be branch offices in accordance with the standards set forth in Nasdaq Rule 3010.

1010. Membership Proceedings

1011. Definitions

Unless otherwise provided, terms used in the Rule 1000 Series shall have the meaning as defined in Rule 0120.

(a) "Applicant"

The term "Applicant" means a person that applies for membership in Nasdaq under Rule 1013 or a member that files an application for approval of a change in ownership, control, or business operations under Rule 1017.

(b) "Associated Person"

The term "Associated Person" means any partner, officer, director, or branch manager of a Nasdaq member or Applicant (or person occupying a similar status or performing similar functions), any person directly or indirectly controlling, controlled by, or under common control with such Nasdaq member or Applicant, or any employee of such Nasdaq member or Applicant, except that any person associated with a Nasdaq member or Applicant whose functions are solely clerical or ministerial shall not be included in the meaning of such term for purposes of the Nasdaq Rules.

(c) "Department"

The term "Department" means the Nasdaq Membership Department located within Nasdaq Regulation.

(d) "Director"

The term "Director" means a member of the Nasdaq Board.

(e) "Interested Nasdaq Staff"

The term "Interested Nasdaq Staff" means an employee who directly participates in a decision under Rule 1014 or 1017, an employee who directly supervises an employee with respect to such decision, an employee who conducted an investigation or examination of a member that files an application under Rule 1017, and the head of the Department.

(f) "investment banking or securities business"

The term "investment banking or securities business" means the business, carried on by a broker or dealer, of underwriting or distributing issues of securities, or of purchasing securities and offering the same for sale as a dealer, or of purchasing and selling securities upon the order and for the account of others.

(g) "material change in business operations"

The term "material change in business operations" includes, but is not limited to:

- (1) removing or modifying a membership agreement restriction;
 - (2) market making, underwriting, or acting as a dealer for the first time;
- and
- (3) adding business activities that require a higher minimum net capital under SEC Rule 15c3-1;

(h) "Nasdaq Board"

The term "Nasdaq Board" means the Board of Directors of Nasdaq.

(i) "principal place of business"

The term "principal place of business" means the executive office from which the sole proprietor or the officers, partners, or managers of the Applicant direct, control, and coordinate the activities of the Applicant, unless the Department determines that the principal place of business is where: (1) the largest number of Associated Persons of the Applicant are located; or (2) the books and records necessary to provide information and data to operate the business and comply with applicable rules are located.

(j) "registered broker or dealer"

The term "registered broker or dealer" means any registered broker or dealer, as defined in Section 3(a)(48) of the Act, that is registered with the Commission under the Act.

(k) "Representative"

The term "Representative" means an Associated Person of a registered broker or dealer, including assistant officers other than principals, who is engaged in the investment banking or securities business for the member including the functions of supervision, solicitation or conduct of business in securities or who is engaged in the training of persons associated with a broker or dealer for any of these functions are designated as representatives. As provided in Rule 1031, all Representatives of Nasdaq Members are required to be registered with Nasdaq, and Representatives that are so registered are referred to herein as "Registered Representatives."

(k) "sales practice event"

The term "sales practice event" means any customer complaint, arbitration, or civil litigation that has been reported to the Central Registration Depository, currently is required to be reported to the Central Registration Depository, or otherwise has been reported to Nasdaq.

(l) "Subcommittee"

The term "Subcommittee" means a subcommittee of the Nasdaq Review Council that is constituted pursuant to Rule 1015 to conduct a review of a Department decision issued under the Rule 1010 Series.

(m) "statutory disqualification"

The term "statutory disqualification" shall have the meaning set forth in Section 3(a)(39) of the Act.

1012. General Provisions

(a) Filing by Applicant or Service by Nasdaq

(1) An Applicant may file an application or any document or information requested under the Rule 1010 Series by first-class mail, overnight courier, or hand delivery. If the Department and the Applicant agree, the Applicant also may file a requested document or information by facsimile.

(2) Nasdaq shall serve a notice or decision issued under the Rule 1010 Series by first-class mail on the Applicant or its counsel, unless a Rule specifies a different method of service.

(3) Service by Nasdaq or filing by an Applicant shall be deemed complete as follows:

(A) Service or filing by first-class mail shall be deemed complete on the date of postmark;

(B) Service or filing by overnight courier shall be deemed complete on the date of delivery to the overnight courier as specified in the airbill;

(C) Service or filing by hand delivery shall be deemed complete on the date of receipt as evidenced by a date stamp; and

(D) Service or filing by facsimile shall be deemed complete on the date specified in the document and on the written confirmation of transmission.

(b) Lapse of Application

(1) Absent a showing of good cause, an application filed under Rule 1013 or 1017 shall lapse if an Applicant fails to:

(A) respond fully within 60 days after service of an initial written request for information or documents under Rule 1013, within 30 days after service of an initial written request for information or documents under Rule 1017, within 30 days after service of a subsequent written request for information or documents under Rule 1013 or 1017, or within such other time period agreed to by the Department and the Applicant;

(B) appear at or otherwise participate in a scheduled membership interview pursuant to Rule 1013(b) or 1017(f); or

(C) file an executed membership agreement under Rule 1014(d) or Rule 1017(g)(4) within 25 days after service of the agreement, or within such other period agreed to by the Department and the Applicant.

(2) If an Applicant wishes to continue to seek membership or approval of a change in ownership, control, or business operations, then the Applicant shall be

required to submit a new application under Rule 1013 or 1017, respectively, and any required fee. Nasdaq shall not refund any fee for a lapsed application.

(c) Ex Parte Communications

(1) The prohibitions against ex parte communications shall become effective when Nasdaq staff has knowledge that an Applicant intends to file a written request for review by the Nasdaq Review Council under Rule 1015.

(2) Unless on notice and opportunity for an Applicant and Interested Nasdaq Staff to participate, or to the extent required for the disposition of ex parte matters as authorized by the Nasdaq Rules:

(A) an Applicant, a counsel or representative of an Applicant, or an Interested Nasdaq Staff shall not make or knowingly cause to be made an ex parte communication relevant to the merits of a membership proceeding under the Rule 1010 Series to a Director, a member of the Nasdaq Review Council or a Subcommittee thereof, or a Nasdaq employee who is participating or advising in a decision of such a person with respect to that proceeding; and

(B) a Director, a member of the Nasdaq Review Council or a Subcommittee thereof, or a Nasdaq employee who is participating or advising in the decision of such a person with respect to a membership proceeding shall not make or knowingly cause to be made to an Applicant, a counsel or representative of the Applicant, or an Interested Nasdaq Staff an ex parte communication relevant to the merits of that proceeding.

(3) A Director, a member of the Nasdaq Review Council or a Subcommittee thereof, or a Nasdaq employee participating or advising in the decision of such a person, who receives, makes, or knowingly causes to be made a communication prohibited by this paragraph shall place in the record of the membership proceeding:

(A) all such written communications;

(B) memoranda stating the substance of all such oral communications; and

(C) all written responses and memoranda stating the substance of all oral responses to all such communications.

(d) Recusal or Disqualification

A Director or a member of the Nasdaq Review Council or a Subcommittee thereof shall not participate in a matter governed by the Rule 1010 Series as to which that person has a conflict of interest or bias, or if circumstances otherwise exist where his or

her fairness might reasonably be questioned. In such a case, the person shall recuse himself or shall be disqualified as follows:

(1) The Chair of the Nasdaq Board shall have authority to direct the disqualification of a Director, and a majority of the Directors of the Nasdaq Board excluding the Chair shall have authority to direct the disqualification of the Chair of the Nasdaq Board.

(2) The Chair of the Nasdaq Review Council shall have authority to direct the disqualification of a member of the Nasdaq Review Council or a member of a Subcommittee appointed pursuant to Rule 1015, and the Vice Chair of the Nasdaq Review Council shall have authority to direct the disqualification of the Chair of the Nasdaq Review Council.

(e) Computation of Time

(1) Calendar Day

In the Rule 1010 Series, "day" means calendar day.

(2) Formula

In computing a period of time under the Rule 1010 Series, the day of the act, event, default, or lapse from which the period of time designated begins to run shall not be included. The last day of the period so computed shall be included unless it is a Saturday, Sunday, or Federal holiday, in which event the period runs until the end of the next day that is not a Saturday, Sunday, or Federal holiday. Intermediate Saturdays, Sundays, and Federal holidays shall be excluded from the computation when the period prescribed is ten days or less.

(f) Similarity of Membership Names

(1) No person or firm shall be admitted to or continued in membership in Nasdaq if such person or firm has a name that is identical to the name of another Nasdaq member appearing in the membership role of Nasdaq or a name so similar to any such name as to tend to confuse or mislead.

(2) No Nasdaq member may change its name without prior approval of Nasdaq.

(g) Resignation of Nasdaq Members

Membership in Nasdaq may be voluntarily terminated only by formal resignation. Resignations of Nasdaq members must be filed via electronic process or such other process as Nasdaq may prescribe and addressed to Nasdaq. Any Nasdaq member may resign from Nasdaq at any time. Such resignation shall not take effect until 30 days after receipt thereof by Nasdaq and until all indebtedness due Nasdaq from such Nasdaq

member shall have been paid in full and so long as any complaint or action is pending against the Nasdaq member under the Nasdaq Rules. Nasdaq, however, may in its discretion declare a resignation effective at any time.

(h) Retention of Jurisdiction

A resigned Nasdaq member or a Nasdaq member that has had its membership canceled or revoked shall continue to be subject to the filing of a complaint under the Nasdaq Rules based upon conduct that commenced prior to the effective date of the Nasdaq member's resignation from Nasdaq or the cancellation or revocation of its membership. Any such complaint, however, shall be filed within six years after the effective date of resignation, cancellation, or revocation.

(i) Transfer and Termination of Membership

(1) Except as provided hereinafter, no member of Nasdaq may transfer its membership or any right arising therefrom; the membership of a corporation, partnership, or any other business organization that is a member of Nasdaq shall terminate upon its liquidation, dissolution, or winding up; and the membership of a sole proprietorship that is a Nasdaq member shall terminate at death, provided that all obligations of membership under the Nasdaq Rules have been fulfilled.

(2) The consolidation, reorganization, merger, change of name, or similar change in any corporate Nasdaq member shall not terminate the membership of such corporate Nasdaq member, provided that the Nasdaq member or surviving corporation, if any, shall be deemed a successor to the business of the corporate Nasdaq member, and the Nasdaq member or the surviving organization shall continue in the investment banking or securities business, and shall possess the qualifications for membership in Nasdaq. The death, change of name, withdrawal of any partner, the addition of any new partner, reorganization, consolidation, or any change in the legal structure of a partnership Nasdaq member shall not terminate the membership of such partnership Nasdaq member, provided that the Nasdaq member or surviving organization, if any, shall be deemed a successor to the business of the partnership Nasdaq member, and the Nasdaq member or surviving organization shall possess the qualifications for membership in Nasdaq. If the business of any predecessor Nasdaq member is to be carried on by an organization deemed to be a successor organization by Nasdaq, the membership of such predecessor Nasdaq member shall be extended to the successor organization subject to the notice and application requirements of the Nasdaq Rules and the right of Nasdaq to place restrictions on the successor organization pursuant to the Nasdaq Rules; otherwise, any surviving organization shall be required to satisfy all of the membership application requirements of the Nasdaq Rules.

(j) Registration of Branch Offices.

(1) Each branch office of a member of Nasdaq shall be registered with and listed upon the membership roll of Nasdaq, and shall pay such dues, assessments, and other charges as shall be fixed from time to time under the Nasdaq Rules.

(2) Each member of Nasdaq shall promptly advise Nasdaq via electronic process or such other process as Nasdaq may prescribe of the opening, closing, relocation, change in designated supervisor, or change in designated activities of any branch office of such Nasdaq member not later than 30 days after the effective date of such change.

1013. New Member Application and Interview

(a) Filing of Application

(1) Where to File

An Applicant for Nasdaq membership shall file its application with the Department in accordance with this Rule.

(2) Contents

The application shall include:

(A) a copy of the Applicant's current Form BD;

(B) an original Nasdaq-approved fingerprint card for each Associated Person who will be subject to SEC Rule 17f-2 and for whom a fingerprint card has not been filed with another self-regulatory organization;

(C) Reserved

(D) a check for such fee as may be required under the Nasdaq Rules;

(E) business information that describes the Applicant's operations and that includes:

(i) a trial balance and computation of net capital, each of which has been prepared as of a date that is within 30 days before the filing date of the application;

(ii) Reserved

(iii) an organizational chart;

(iv) the intended location of the Applicant's principal place

of business and all other offices, if any, whether or not such offices would be required to be registered under the Nasdaq Rules, and the names of the persons who will be in charge of each office;

(v) a list of the types of securities to be offered and sold and the types of retail or institutional customers to be solicited;

(vi) Reserved

(vii) Reserved

(viii) the number of markets to be made, if any, the type and volatility of the products, and the anticipated maximum inventory positions;

(ix) Reserved

(x) any plan to distribute or maintain securities products in proprietary positions, and the risks, volatility, degree of liquidity, and speculative nature of the products; and

(xi) Reserved

(xii) a description of the communications and operational systems the Applicant will employ to conduct business with customers or other members and the plans and procedures the Applicant will employ to ensure business continuity, including: system capacity to handle the anticipated level of usage; contingency plans in the event of systems or other technological or communications problems or failures that may impede customer usage or firm order entry or execution; system redundancies; disaster recovery plans; system security; disclosures to be made to potential and existing customers who may use such systems; and supervisory or customer protection measures that may apply to customer use of, or access to, such systems;

(F) a copy of any decision or order by a federal or state authority or self-regulatory organization taking permanent or temporary adverse action with respect to a registration or licensing determination regarding the Applicant or an Associated Person;

(G) Reserved

(H) documentation of any of the following events, unless the event has been reported to the Central Registration Depository:

(i) a regulatory action against or investigation of the

Applicant or an Associated Person by the Commission, the Commodity Futures Trading Commission, a federal, state, or foreign regulatory agency, or a self-regulatory organization that is pending, adjudicated, or settled;

(ii) an investment-related civil action for damages or an injunction against the Applicant or an Associated Person that is pending, adjudicated, or settled;

(iii) an investment-related customer complaint or arbitration that is required to be reported on Form U-4;

(iv) a criminal action (other than a minor traffic violation) against the Applicant or an Associated Person that is pending, adjudicated, or that has resulted in a guilty or no contest plea; and

(v) a copy of any document evidencing a termination for cause or a permitted resignation after investigation of an alleged violation of a federal or state securities law, a rule or regulation thereunder, a self-regulatory organization rule, or an industry standard of conduct;

(I) a description of any remedial action, such as special training, continuing education requirements, or heightened supervision, imposed on an Associated Person by a state or federal authority or self-regulatory organization;

(J) a written acknowledgment that heightened supervisory procedures and special educational programs may be required pursuant to NASD Notice to Members 97-19 (as incorporated by reference into Nasdaq IM-3010) for an Associated Person whose record reflects disciplinary actions or sales practice events;

(K) a copy of final or proposed contracts with banks, clearing entities, or service bureaus, and a general description of any other final or proposed contracts;

(L) a description of the nature and source of Applicant's capital with supporting documentation, the risk to net capital presented by the Applicant's proposed business activities, and any arrangement for additional capital should a business need arise;

(M) a description of the financial controls to be employed by the Applicant;

(N) a description of the Applicant's supervisory system and a copy of its written supervisory procedures;

(O) a description of the number, experience, and qualifications of supervisors and principals and the number, experience, and qualifications of persons to be supervised by such personnel;

(P) Reserved

(Q) Reserved

(R) a Web CRD entitlement request form and a Member Contact Questionnaire user access request form;

(S) a copy of the Applicant's most recent "FOCUS Report" (Form X-17A-5) filed with the SEC pursuant to SEC Rule 17a-5 (the most current Parts I, II, and III, as applicable);

(T) an agreement to comply with the federal securities laws, the rules and regulations thereunder, the Nasdaq Rules, and all rulings, orders, directions, and decisions issued and sanctions imposed under the Nasdaq Rules;

(U) an agreement to pay such dues, assessments, and other charges in the manner and amount as from time to time shall be fixed pursuant to the Nasdaq Rules; and

(V) such other reasonable information with respect to the applicant as Nasdaq may require.

Each Applicant and Nasdaq member shall ensure that its membership application with Nasdaq is kept current at all times by supplementary amendments via electronic process or such other process as Nasdaq may prescribe. Such amendments to the application shall be filed with Nasdaq not later than 30 days after the applicant or Nasdaq member learns of the facts or circumstances giving rise to the amendment.

(3) Electronic Filings

Upon approval of the Applicant's Web CRD entitlement request form, the Applicant shall submit its Forms U4 for each Associated Person who is required to be registered under the Rules, any amendments to its Forms BD or U4, and any Form U5 electronically via Web CRD. Upon approval of the Applicant's membership, the Applicant shall submit any amendments to its Member Contact Questionnaire electronically.

(4) Rejection of Application That Is Not Substantially Complete

If the Department determines within 30 days after the filing of an application that the application is not substantially complete, the Department may reject the application and deem it not to have been filed. In such case, within the 30 day period, the Department shall serve a written notice on the Applicant of the Department's determination and the reasons therefor. Nasdaq shall refund the application fees, if any, in accordance with the provisions of the Nasdaq Rules governing such fees. If the Applicant determines to continue to seek membership, the Applicant shall submit a new application and any required fee under this Rule.

(5) Request For Additional Documents Or Information

Within 30 days after the filing of an application, the Department shall serve an initial request for any additional information or documents necessary to render a decision on the application. The Department may serve subsequent requests for additional information or documents at any time during the membership application process.

Unless otherwise agreed by the Department and the Applicant, the Applicant shall file any additional information and documents with the Department within 60 days after service of the Department's initial request and 30 days after service of any subsequent request.

(6) Applicants That Are Members of an Association or Another Exchange

(A) Applicants for Nasdaq membership that are also simultaneously applying for NASD membership may file one application with the NASD in compliance with the NASD Rule 1010 Series; however, Nasdaq will not take action on the application for Nasdaq membership until the applicant is an active member of the NASD.

(B) Applicants that are members of another registered national securities exchange or association must submit a complete application form containing all of the required items of information listed in Rule 1013(a)(2).

(C) An applicant that is an approved NASD member shall have the option to apply to become a Nasdaq member and to register with Nasdaq all associated persons of the firm whose registrations with the firm are approved with the NASD in categories recognized by Nasdaq rules through an expedited process by submitting a Waive-in Membership Application Form and a Nasdaq Membership Agreement.

(b) Membership Interview

(1) Requirement for Interview

Before the Department serves its decision on an application for new membership in Nasdaq, the Department shall conduct a membership interview with a representative or representatives of the Applicant.

(2) Service of Notice

At least seven days before the membership interview, the Department shall serve on the Applicant a written notice that specifies the date and time of the interview and the representative or representatives of the Applicant who are required to participate in the interview. The Department shall serve the notice by facsimile or overnight courier. The Applicant and the Department may agree to a shorter or longer period for notice or a different method of service under this subparagraph.

(3) Time

Unless the Department directs otherwise for good cause shown, a membership interview shall be scheduled to occur within 90 days after the filing of an application or within 60 days after the filing of all additional information or documents requested, whichever is later.

(4) Place

The membership interview shall be conducted in a location specified by Nasdaq.

(5) Updated Financial Documents

On or before the date of the membership interview, an Applicant shall file an updated trial balance and computation of net capital. The Applicant shall prepare such documents as of a date that is within 45 days before the date of the membership interview, unless the Applicant and the Department agree on a longer period. The Applicant shall promptly notify the Department in writing of any material adverse change in its financial condition that occurs before a decision constituting final action of Nasdaq is served on the Applicant.

(6) Review of Standards for Admission

During the membership interview, the Department shall review the application and the standards for admission to membership with the Applicant's representative or representatives.

(7) Information From Other Sources

During the membership interview, the Department shall provide to the Applicant's representative or representatives any information or document that the Department has obtained from the Central Registration Depository or a source

other than the Applicant and upon which the Department intends to base its decision under Rule 1014. If the Department receives such information or document after the membership interview or decides to base its decision on such information after the membership interview, the Department shall promptly serve the information or document and an explanation thereof on the Applicant.

1014. Department Decision

(a) Standards for Admission

After considering the application, the membership interview, other information and documents provided by the Applicant, other information and documents obtained by the Department, and the public interest and the protection of investors, the Department shall determine whether the Applicant meets each of the following standards:

(1) The application and all supporting documents are complete and accurate.

(2) The Applicant and its Associated Persons have all licenses and registrations required by state and federal authorities and self-regulatory organizations.

(3) The Applicant and its Associated Persons are capable of complying with the federal securities laws, the rules and regulations thereunder, and the Nasdaq Rules, including observing high standards of commercial honor and just and equitable principles of trade. In determining whether this standard is met, the Department shall take into consideration whether:

(A) a state or federal authority or self-regulatory organization has taken permanent or temporary adverse action with respect to a registration or licensing determination regarding the Applicant or an Associated Person;

(B) an Applicant's or Associated Person's record reflects a sales practice event, a pending arbitration, or a pending private civil action;

(C) an Applicant or Associated Person is the subject of a pending, adjudicated, or settled regulatory action or investigation by the Commission, the Commodity Futures Trading Commission, a federal, state, or foreign regulatory agency, or a self-regulatory organization; an adjudicated, or settled investment-related private civil action for damages or an injunction; or a criminal action (other than a minor traffic violation) that is pending, adjudicated, or that has resulted in a guilty or no contest plea; or an Applicant, its control persons, principals, registered representatives, other Associated Persons, any lender of 5% or more of the Applicant's net capital, or any other member with respect to which any of these persons is or was a control person or a 5% lender of its net capital is

subject to unpaid arbitration awards, other adjudicated customer awards, or unpaid arbitration settlements;

(D) an Associated Person was terminated for cause or permitted to resign after an investigation of an alleged violation of a federal or state securities law, a rule or regulation thereunder, a self-regulatory organization rule, or industry standard of conduct;

(E) a state or federal authority or self-regulatory organization has imposed a remedial action, such as special training, continuing education requirements, or heightened supervision, on an Associated Person; and

(F) a state or federal authority or self-regulatory organization has provided information indicating that the Applicant or an Associated Person otherwise poses a threat to public investors.

(4) The Applicant has established all contractual or other arrangements and business relationships with banks, clearing corporations, service bureaus, or others necessary to:

(A) initiate the operations described in the Applicant's application, considering the nature and scope of operations and the number of personnel; and

(B) comply with the federal securities laws, the rules and regulations thereunder, and the Nasdaq Rules.

(5) The Applicant has or has adequate plans to obtain facilities that are sufficient to:

(A) initiate the operations described in the Applicant's application, considering the nature and scope of operations and the number of personnel; and

(B) comply with the federal securities laws, the rules and regulations thereunder, and the Nasdaq Rules.

(6) The communications and operational systems that the Applicant intends to employ for the purpose of conducting business with customers and other members are adequate and provide reasonably for business continuity in each area set forth in Rule 1013(a)(2)(E)(xii);

(7) The Applicant is capable of maintaining a level of net capital in excess of the minimum net capital requirements set forth in SEC Rule 15c3-1 adequate to support the Applicant's intended business operations on a continuing basis, based on information filed under Rule 1013. The Department may impose a reasonably determined higher net capital requirement for the initiation of operations after

considering:

(A) the amount of net capital sufficient to avoid early warning level reporting requirements, such as SEC Rule 17a-11;

(B) the amount of capital necessary to meet expenses net of revenues for at least twelve months, based on reliable projections agreed to by the Applicant and the Department;

(C) any planned market making activities, the number of markets to be made, the type and volatility of products, and the anticipated maximum inventory positions;

(D) any plan to enter into other contractual commitments, such as underwritings or other securities-related activities;

(E) any plan to distribute or maintain securities products in proprietary positions, and the risks, volatility, degree of liquidity, and speculative nature of the products; and

(F) any other activity that the Applicant will engage in that reasonably could have a material impact on net capital within the first twelve months of business operations.

(8) The Applicant has financial controls to ensure compliance with the federal securities laws, the rules and regulations thereunder, and the Nasdaq Rules.

(9) The Applicant has compliance, supervisory, operational, and internal control practices and standards that are consistent with practices and standards regularly employed in the investment banking or securities business, taking into account the nature and scope of Applicant's proposed business.

(10) The Applicant has a supervisory system, including written supervisory procedures, internal operating procedures (including operational and internal controls), and compliance procedures designed to prevent and detect, to the extent practicable, violations of the federal securities laws, the rules and regulations thereunder, and the Nasdaq Rules. In evaluating the adequacy of a supervisory system, the Department shall consider the overall nature and scope of the Applicant's intended business operations and shall consider whether:

(A) the number, location, experience, and qualifications of supervisory personnel are adequate in light of the number, location, experience, and qualifications of persons to be supervised; the Central Registration Depository record or other disciplinary history of supervisory personnel and persons to be supervised; and the number and locations of the offices that the Applicant intends to open and the nature and scope of

business to be conducted at each office;

(B) the Applicant has identified specific Associated Persons to supervise and discharge each of the functions in the Applicant's business plan, and to supervise each of the Applicant's intended offices, whether or not such offices are required to be registered under the Nasdaq Rules;

(C) the Applicant has identified the functions to be performed by each Associated Person and has adopted procedures to assure the registration with Nasdaq and applicable states of all persons whose functions are subject to such registration requirements;

(D) each Associated Person identified in the business plan to discharge a supervisory function has at least one year of direct experience or two years of related experience in the subject area to be supervised;

(E) the Applicant will solicit retail or institutional business;

(F) the Applicant will recommend securities to customers;

(G) the location or part-time status of a supervisor or principal will affect such person's ability to be an effective supervisor;

(H) the Applicant should be required to place one or more Associated Persons under heightened supervision pursuant to NASD Notice to Members 97-19 (as incorporated by reference into Nasdaq IM-3010);

(I) any remedial action, such as special training or continuing education requirements or heightened supervision, has been imposed on an Associated Person by a state or federal authority or self-regulatory organization; and

(J) any other condition that will have a material impact on the Applicant's ability to detect and prevent violations of the federal securities laws, the rules and regulations thereunder, and the Nasdaq Rules.

(11) The Applicant has a recordkeeping system that enables Applicant to comply with federal, state, and self-regulatory organization recordkeeping requirements and a staff that is sufficient in qualifications and number to prepare and preserve required records.

(12) The Applicant has completed a training needs assessment and has a written training plan that complies with the continuing education requirements imposed by the federal securities laws, the rules and regulations thereunder, and the Nasdaq Rules.

(13) Nasdaq does not possess any information indicating that the Applicant may circumvent, evade, or otherwise avoid compliance with the federal securities laws, the rules and regulations thereunder, or the Nasdaq Rules.

(14) The application and all supporting documents otherwise are consistent with the federal securities laws, the rules and regulations thereunder, and the Nasdaq Rules.

(15) The Applicant is a member of another registered securities exchange or association. An Applicant that will transact business with the public must be a member of the NASD.

(b) Granting or Denying Application

(1) In reviewing an application for membership, the Department shall consider whether the Applicant and its Associated Persons meet each of the standards in paragraph (a). Where the Department determines that the Applicant or its Associated Persons are the subject of any of the events set forth in Rule 1014(a)(3)(A) and (C) through (E), a presumption exists that the application should be denied. The Applicant may overcome the presumption by demonstrating that it can meet each of the standards in paragraph (a), notwithstanding the existence of any of the events set forth in Rule 1014(a)(3)(A) and (C) through (E).

(2) If the Department determines that the Applicant meets each of the standards in paragraph (a), the Department shall grant the application for membership.

(3) If the Department determines that the Applicant does not meet one or more of the standards in paragraph (a) in whole or in part, the Department shall:

(A) grant the application subject to one or more restrictions reasonably designed to address a specific financial, operational, supervisory, disciplinary, investor protection, or other regulatory concern based on the standards for admission in Rule 1014(a); or

(B) deny the application.

(c) Decision

(1) Time

The Department shall serve a written decision on the membership application within 30 days after the conclusion of the membership interview or after the filing of additional information or documents, whichever is later.

(2) Content

If the Department denies the application, the decision shall explain in detail the reason for denial, referencing the applicable standard or standards in paragraph (a). If the Department grants the application subject to restrictions, the decision shall explain in detail the reason for each restriction, referencing the applicable standard or standards in paragraph (a) upon which the restriction is based and identify the specific financial, operational, supervisory, disciplinary, investor protection, or other regulatory concern that the restriction is designed to address and the manner in which the restriction is reasonably designed to address the concern.

(3) Failure to Serve Decision

If the Department fails to serve a decision within 180 days after the filing of an application or such later date as the Department and the Applicant have agreed in writing, the Applicant may file a written request with the Nasdaq Board requesting that the Nasdaq Board direct the Department to serve a decision. Within seven days after the filing of such a request, the Nasdaq Board shall direct the Department to serve its written decision immediately or to show good cause for an extension of time. If the Department shows good cause for an extension of time, the Nasdaq Board may extend the 180-day time limit by not more than 90 days.

(d) Submission of Membership Agreement

If the Department grants an application, with or without restriction, the Applicant's approval for membership shall be contingent upon the Applicant's filing of an executed written membership agreement, satisfactory to the Department, undertaking to:

(1) abide by any restriction specified in the Department's decision; and

(2) obtain the Department's approval of a change in ownership, control, or business operations pursuant to Rule 1017, including the modification or removal of a membership agreement restriction.

The Applicant shall not waive the right to file a written request for review under Rule 1015 by executing a membership agreement under this paragraph.

(e) Service and Effectiveness of Decision

The Department shall serve its decision and the membership agreement on the Applicant in accordance with Rule 1012. The decision shall become effective upon service and shall remain in effect during the pendency of any review until a decision constituting final action of Nasdaq is issued under Rule 1015 or 1016, unless otherwise directed by the Nasdaq Review Council, the Nasdaq Board, or the Commission.

(f) Effectiveness of Restriction

A restriction imposed under this Rule shall remain in effect and bind the Applicant and all successors to the ownership or control of the Applicant unless:

(1) removed or modified by a decision constituting final action of Nasdaq issued under Rule 1015, 1016, or 1017; or

(2) stayed by the Nasdaq Review Council, the Nasdaq Board, or the Commission.

(g) Final Action

Unless the Applicant files a written request for a review under Rule 1015, the Department's decision shall constitute final action by Nasdaq.

1015. Review by Nasdaq Review Council

(a) Initiation of Review by Applicant

Within 25 days after service of a decision under Rule 1014 or 1017, an Applicant may file a written request for review with the Nasdaq Review Council. A request for review shall state with specificity why the Applicant believes that the Department's decision is inconsistent with the membership standards set forth in Rule 1014, or otherwise should be set aside, and state whether a hearing is requested. The Applicant simultaneously shall file by first-class mail a copy of the request with the Department.

(b) Transmission of Documents

Within ten days after the filing of a request for review, the Department shall:

(1) transmit to the Nasdaq Review Council copies of all documents that were considered in connection with the Department's decision and an index to the documents; and

(2) serve on the Applicant a copy of such documents (other than those documents originally submitted by Applicant) and a copy of the index.

(c) Membership Application Docket

The Department shall promptly record in Nasdaq's membership application docket each request for review filed with the Nasdaq Review Council under this Rule and each material subsequent event, filing, and change in the status of a membership proceeding.

(d) Appointment of Subcommittee

The Nasdaq Review Council or the Review Subcommittee defined in Rule 9120 shall appoint a Subcommittee to participate in the review. The Subcommittee shall be composed of two or more persons who shall be current or past members of the Nasdaq Review Council or former Directors.

(e) Powers of Subcommittee

If a hearing is requested, the Subcommittee shall conduct the hearing. If a hearing is not requested, the Subcommittee may serve a notice directing that a hearing be held. If a hearing is not requested or directed, the Subcommittee shall conduct its review on the basis of the record developed before the Department and any written submissions made by the Applicant or the Department in connection with the request for review.

(f) Hearing

(1) Notice

If a hearing is requested or directed, the hearing shall be held within 45 days after the filing of the request with the Nasdaq Review Council or service of the notice by the Subcommittee. The Nasdaq Review Council shall serve written notice of the date and time of the hearing to the Applicant by facsimile or overnight courier not later than 14 days before the hearing.

(2) Counsel

The Applicant and the Department may be represented by counsel at a hearing conducted pursuant to this Rule.

(3) Evidence

Formal rules of evidence shall not apply to a hearing under this Rule. Not later than five days before the hearing, the Applicant and the Department shall exchange copies of their proposed hearing exhibits and witness lists and provide copies of the same to the Nasdaq Review Council. If the Applicant or the Department fails to provide copies of its proposed hearing exhibits or witness list within such time, the Subcommittee shall exclude the evidence or witnesses from the proceeding, unless the Subcommittee determines that good cause is shown for failure to comply with the production date set forth in this subparagraph.

(4) Transcript

The hearing shall be recorded and a transcript prepared by a court reporter. A transcript of the hearing shall be available for purchase from the court reporter at prescribed rates. The Applicant, the Department, or a witness may seek to correct the transcript. A proposed correction of the transcript shall be submitted to the Subcommittee within a reasonable period of time prescribed by the Subcommittee. Upon notice to the Applicant and the Department, the

Subcommittee may direct the correction to the transcript as requested or sua sponte.

(g) Additional Information, Briefs

At any time during its consideration, the Subcommittee or the Nasdaq Review Council may direct the Applicant or the Department to file additional information or briefs. Any additional information or brief filed shall be provided to all parties before the Nasdaq Review Council renders its decision.

(h) Abandonment of Request for Review

If an Applicant fails to specify the grounds for its request for review under Rule 1015(a)(1), appear at a hearing for which it has notice, or file information or briefs as directed, the Nasdaq Review Council or the Review Subcommittee may dismiss the request for review as abandoned, and the decision of the Department shall become the final action of Nasdaq. Upon a showing of good cause, the Nasdaq Review Council or the Review Subcommittee may withdraw a dismissal entered pursuant to this paragraph.

(i) Subcommittee Recommendation

The Subcommittee shall present a recommended decision in writing to the Nasdaq Review Council within 60 days after the date of the hearing held pursuant to paragraph (f), and not later than seven days before the meeting of the Nasdaq Review Council at which the membership proceeding shall be considered.

(j) Decision

(1) Proposed Written Decision

After considering all matters presented in the review and the Subcommittee's recommended written decision, the Nasdaq Review Council may affirm, modify, or reverse the Department's decision or remand the membership proceeding with instructions. The Nasdaq Review Council shall prepare a proposed written decision pursuant to subparagraph (2).

(2) Contents

The decision shall include:

- (A) a description of the Department's decision, including its rationale;
- (B) a description of the principal issues raised in the review;
- (C) a summary of the evidence on each issue; and

(D) a statement whether the Department's decision is affirmed, modified, or reversed, and a rationale therefor that references the applicable standards in Rule 1014.

(3) Issuance of Decision After Expiration of Call for Review Periods

The Nasdaq Review Council shall provide its proposed written decision to the Nasdaq Board. The Nasdaq Board may call the membership proceeding for review pursuant to Rule 1016. If the Nasdaq Board does not call the membership proceeding for review, the proposed written decision of the Nasdaq Review Council shall become final. The Nasdaq Review Council shall serve the Applicant with a written notice specifying the date on which the call for review period expired and stating that the final written decision will be served within 15 days after such date. The Nasdaq Review Council shall serve its final written decision within 15 days after the date on which the call for review period expired. The decision shall constitute the final action of Nasdaq for purposes of SEC Rule 19d-3, unless the Nasdaq Review Council remands the membership proceeding.

(4) Failure to Issue Decision

If the Nasdaq Review Council fails to serve its final written decision within the time prescribed in subparagraph (3), the Applicant may file a written request with the Nasdaq Board requesting that the Nasdaq Board direct the Nasdaq Review Council to serve its decision immediately or to show good cause for an extension of time. Within seven days after the filing of such a request, the Board shall direct the Nasdaq Review Council to serve its written decision immediately or to show good cause for an extension of time. If the Nasdaq Review Council shows good cause for an extension of time, the Nasdaq Board may extend the 15-day time limit by not more than 15 days.

1016. Discretionary Review by the Nasdaq Board

(a) Call for Review by Director

A Director may call a membership proceeding for review by the Nasdaq Board if the call for review is made within the period prescribed in paragraph (b).

(b) 15 Day Period; Waiver

A Director shall make his or her call for review at the next meeting of the Nasdaq Board that is at least 15 days after the date on which the Nasdaq Board receives the proposed written decision of the Nasdaq Review Council. By unanimous vote of the Nasdaq Board, the Nasdaq Board may shorten the period to less than 15 days. By an affirmative vote of the majority of the Nasdaq Board then in office, the Nasdaq Board may, during the 15 day period, vote to extend the period to more than 15 days.

(c) Review At Next Meeting

If a Director calls a membership proceeding for review within the time prescribed in paragraph (b), the Nasdaq Board shall review the membership proceeding not later than the next meeting of the Nasdaq Board. The Nasdaq Board may order the Applicant and the Department to file briefs in connection with review proceedings pursuant to this paragraph.

(d) Decision of the Nasdaq Board, Including Remand

After review, the Nasdaq Board may affirm, modify, or reverse the proposed written decision of the Nasdaq Review Council. Alternatively, the Nasdaq Board may remand the membership proceeding with instructions. The Nasdaq Board shall prepare a written decision that includes all of the elements described in Rule 1015(j)(2).

(e) Issuance of Decision

The Nasdaq Board shall serve its written decision on the Applicant within 15 days after the meeting at which it conducted its review. The decision shall constitute the final action of Nasdaq for purposes of SEC Rule 19d-3, unless the Nasdaq Board remands the membership proceeding.

1017. Application for Approval of Change in Ownership, Control, or Business Operations

(a) Events Requiring Application

A member shall file an application for approval of any of the following changes to its ownership, control, or business operations:

- (1) a merger of the member with another member, unless both are members of the New York Stock Exchange, Inc. or the surviving entity will continue to be a member of the New York Stock Exchange, Inc.;
- (2) a direct or indirect acquisition by the member of another member, unless the acquiring member is a member of the New York Stock Exchange, Inc.;
- (3) direct or indirect acquisitions or transfers of 25% or more in the aggregate of the member's assets or any asset, business or line of operation that generates revenues comprising 25% or more in the aggregate of the member's earnings measured on a rolling 36-month basis, unless both the seller and acquirer are members of the New York Stock Exchange, Inc.;
- (4) a change in the equity ownership or partnership capital of the member that results in one person or entity directly or indirectly owning or controlling 25 percent or more of the equity or partnership capital; or
- (5) a material change in business operations as defined in Rule 1011.

(b) Filing and Content of Application

(1) The member shall file the application with the Department.

(2) The application shall describe in detail the change in ownership, control, or business operations and include a business plan, pro forma financials, an organizational chart, and written supervisory procedures reflecting the change.

(A) If the application requests approval of a change in ownership or control, the application also shall include the names of the new owners, their percentage of ownership, and the sources of their funding for the purchase and recapitalization of the member.

(B) If the application requests the removal or modification of a membership agreement restriction, the application also shall:

(i) present facts showing that the circumstances that gave rise to the restriction have changed; and

(ii) state with specificity why the restriction should be modified or removed in light of the standards set forth in Rule 1014 and the articulated rationale for the imposition of the restriction.

(C) If the application requests approval of an increase in Associated Persons involved in sales, offices, or markets made, the application shall set forth the increases in such areas during the preceding 12 months.

(c) Effecting Change and Imposition of Interim Restrictions

(1) A member shall file an application for approval of a change in ownership or control at least 30 days prior to such change. A member may effect a change in ownership or control prior to the conclusion of the proceeding, but the Department may place new interim restrictions on the member based on the standards in Rule 1014, pending final Department action.

(2) A member may file an application to remove or modify a membership agreement restriction at any time. An existing restriction shall remain in effect during the pendency of the proceeding.

(3) A member may file an application for approval of a material change in business operations, other than the modification or removal of a restriction, at any time, but the member may not effect such change until the conclusion of the proceeding, unless the Department and the member otherwise agree.

(d) Rejection Of Application That Is Not Substantially Complete

If the Department determines within 30 days after the filing of an application that the application is not substantially complete, the Department may reject the application and deem it not to have been filed. In such case, within the 30 day period, the Department shall serve a written notice on the Applicant of the Department's determination and the reasons therefor. If the Applicant determines to continue to apply for approval of a change in ownership, control, or business operations, the Applicant shall submit a new application under this Rule.

(e) Request for Additional Documents and Information

Within 30 days after the filing of an application, the Department shall serve a request for any additional information or documents necessary to render a decision on the application. The Department may request additional information or documents at any time during the application process. Unless otherwise agreed to by the Department and the Applicant, the Applicant shall file such additional information or documents with the Department within 30 days after the Department's request.

(f) Membership Interview

(1) The Department may require the Applicant to participate in a membership interview within 30 days after the filing of the application, or if the Department requests additional information or documents, within 30 days after the filing of the additional information or documents by the Applicant.

(2) At least seven days before the membership interview, the Department shall serve on the Applicant a written notice that specifies the date and time of the interview and persons who are required to participate in the interview. The Department shall serve the notice by facsimile or overnight courier. The Applicant and the Department may agree to a shorter or longer period for notice or a different method of service.

(3) The membership interview shall be conducted in a location specified by Nasdaq.

(4) During the membership interview, the Department shall review the application and the considerations for the Department's decision set forth in paragraph (g)(1) with the Applicant's representative or representatives. The Department shall provide to the Applicant's representative or representatives any information or document that the Department has obtained from the Central Registration Depository or a source other than the Applicant and upon which the Department intends to base its decision under paragraph (g). If the Department receives such information or document after the membership interview or decides to base its decision on such information after the membership interview, the Department shall promptly serve the information or document and an explanation thereof on the Applicant.

(g) Department Decision

(1) The Department shall consider the application, the membership interview, other information and documents provided by the Applicant or obtained by the Department, the public interest, and the protection of investors. In rendering a decision on an application submitted under Rule 1017(a), the Department shall consider whether the Applicant and its Associated Persons meet each of the standards in Rule 1014(a). Where the Department determines that the Applicant or its Associated Person are the subject of any of the events set forth in Rule 1014(a)(3)(A) and (C) through (E), a presumption exists that the application should be denied. The Applicant may overcome the presumption by demonstrating that it can meet each of the standards in Rule 1014 (a), notwithstanding the existence of any of the events set forth in Rule 1014(a)(3)(A) and (C) through (E).

(A) In rendering a decision on an application for approval of a change in ownership or control, or an application for approval of a material change in business operations that does not involve modification or removal of a membership agreement restriction, the Department shall determine if the Applicant would continue to meet the standards in Rule 1014(a) upon approval of the application.

(B) In rendering a decision on an application requesting the modification or removal of a membership agreement restriction, the Department shall consider whether maintenance of the restriction is appropriate in light of:

- (i) the standards set forth in Rule 1014;
- (ii) the circumstances that gave rise to the imposition of the restriction;
- (iii) the Applicant's operations since the restriction was imposed;
- (iv) any change in ownership or control or supervisors and principals; and
- (v) any new evidence submitted in connection with the application.

(2) The Department shall serve a written decision on the application within 30 days after the conclusion of the membership interview or the filing of additional information or documents, whichever is later. If the Department does not require the Applicant to participate in a membership interview or request additional information or documents, the Department shall serve a written

decision within 45 days after the filing of the application under paragraph (a). The decision shall state whether the application is granted or denied in whole or in part, and shall provide a rationale for the Department's decision, referencing the applicable standard in Rule 1014.

(3) If the Department fails to serve a decision within 180 days after filing of an application or such later date as the Department and the Applicant have agreed in writing, the Applicant may file a written request with the Nasdaq Board requesting that the Nasdaq Board direct the Department to issue a decision. Within seven days after the filing of such a request, the Nasdaq Board shall direct the Department to issue a written decision immediately or to show good cause for an extension of time. If the Department shows good cause for an extension of time, the Nasdaq Board may extend the time limit for issuing a decision by not more than 30 days.

(4) If the Department approves an application under this Rule in whole or part, the Department may require an Applicant to file an executed membership agreement.

(h) Service and Effectiveness of Decision

The Department shall serve its decision on the Applicant in accordance with Rule 1012. The decision shall become effective upon service and shall remain in effect during the pendency of any review until a decision constituting final action of Nasdaq is issued under Rule 1015 or 1016, unless otherwise directed by the Nasdaq Review Council, the Nasdaq Board, or the Commission.

(i) Request for Review; Final Action

An Applicant may file a written request for review of the Department's decision with the Nasdaq Review Council pursuant to Rule 1015. The procedures set forth in Rule 1015 shall apply to such review, and the Nasdaq Review Council's decision shall be subject to discretionary review by the Nasdaq Board pursuant to Rule 1016. If the Applicant does not file a request for a review, the Department's decision shall constitute final action by Nasdaq.

(j) Removal or Modification of Restriction on Department's Initiative

The Department shall modify or remove a restriction on its own initiative if the Department determines such action is appropriate in light of the considerations set forth in paragraph (g)(1). The Department shall notify the member in writing of the Department's determination and inform the member that it may apply for further modification or removal of a restriction by filing an application under paragraph (a).

(k) Lapse or Denial of Application for Approval of Change in Ownership

If an application for approval of a change in ownership lapses, or is denied and all appeals are exhausted or waived, the member shall, no more than 60 days after the lapse or exhaustion or waiver of appeal:

- (1) submit a new application;
- (2) unwind the transaction; or
- (3) file a Form BDW.

For the protection of investors, the Department may shorten the 60-day period. For good cause shown by the member, the Department may lengthen the 60-day period. The Department shall serve written notice on the Applicant of any change in the 60-day period and the reasons therefor. During the 60-day or other imposed period, the Department may continue to place interim restrictions on the member for the protection of investors.

1018. RESERVED

1019. Application to Commission for Review

A person aggrieved by final action of Nasdaq under the Rule 1010 Series may apply for review by the Commission pursuant to Section 19(d)(2) of the Act. The filing of an application for review shall not stay the effectiveness of a decision constituting final action of Nasdaq, unless the Commission otherwise orders.

1020. Registration of Principals

1021. Registration Requirements

(a) All Principals Must Be Registered

All persons engaged or to be engaged in the investment banking or securities business of a member who are to function as principals shall be registered as such with Nasdaq in the category of registration appropriate to the function to be performed as specified in Rule 1022. Before their registration can become effective, they shall pass a Qualification Examination for Principals appropriate to the category of registration as specified by the Nasdaq Board. A member shall not maintain a principal registration with Nasdaq for any person (1) who is no longer active in the member's investment banking or securities business, (2) who is no longer functioning as a principal, or (3) where the sole purpose is to avoid the examination requirement prescribed in paragraph (c). A member shall not make application for the registration of any person as principal where there is no intent to employ such person in the member's investment banking or securities business. A member may, however, maintain or make application for the registration as a principal of a person who performs legal, compliance, internal audit, back-office operations, or similar responsibilities for the member or a person engaged in the investment banking or securities business of a foreign securities affiliate or subsidiary

of the member.

(b) Definition of Principal

Persons associated with a member, enumerated in subparagraphs (1) through (5) hereafter, who are actively engaged in the management of the member's investment banking or securities business, including supervision, solicitation, conduct of business or the training of persons associated with a member for any of these functions are designated as principals. Such persons shall include:

- (1) Sole Proprietors
- (2) Officers
- (3) Partners
- (4) Managers of Offices of Supervisory Jurisdiction, and
- (5) Directors of Corporations.

(c) Requirements for Examination on Lapse of Registration

Any person whose registration has been revoked pursuant to Rule 8310 or whose most recent registration as a principal has been terminated for a period of two or more years immediately preceding the date of receipt by Nasdaq of a new application shall be required to pass a Qualification Examination for Principals appropriate to the category of registration as specified in Rule 1022 hereof.

(d) Application for Principal Status

(1) Any person associated with a member as a Registered Representative whose duties are changed by the member so as to require registration in any principal classification shall be allowed a period of 90 calendar days following the change in his or her duties during which to pass the appropriate Qualification Examination for Principals. Upon elevation, the member shall submit to Nasdaq an amended "Uniform Application for Securities Industry Registration or Transfer" and any applicable fees. In no event may a person function as a Principal beyond the initial 90 calendar day period following the change in his or her duties without having successfully passed the appropriate Qualification Examination.

(2) Any person not presently associated with a member as a Registered Representative seeking registration as a Principal shall submit the appropriate application for registration and any required registration and examination fees. Such person shall be allowed a period of 90 days after all applicable prerequisites are fulfilled to pass the appropriate Qualification Examination for Principals. In no event may a person previously unregistered in any capacity applying for principal status function as a Principal until fully qualified.

(e) Requirement of Two Registered Principals for Members

(1) A Nasdaq member, except a sole proprietorship, shall have at least two officers or partners who are registered as principals with respect to each aspect of the member's investment banking and securities business pursuant to the applicable provisions of Rule 1022. This requirement applies to persons seeking admission as members and existing members.

(2) Pursuant to the Rule 9600 Series, Nasdaq may waive the provisions of subparagraph (1) in situations that indicate conclusively that only one person associated with an applicant for membership should be required to register as a principal.

(3) In addition to the provisions of subparagraph (1) above, an applicant for membership, if the nature of its business so requires, shall have at least one person qualified for registration pursuant to Rule 1022(b) and (c).

1022. Categories of Principal Registration

(a) General Securities Principal

(1) Each person associated with a member who is included within the definition of principal in Rule 1021, and each person designated as a Chief Compliance Officer on Schedule A of Form BD, shall be required to register with Nasdaq as a General Securities Principal and shall pass an appropriate Qualification Examination before such registration may become effective unless such person's activities are so limited as to qualify such person for one or more of the limited categories of principal registration specified hereafter. A person whose activities in the investment banking or securities business are so limited is not, however, precluded from attempting to become qualified for registration as a General Securities Principal, and if qualified, may become so registered. Each person seeking to register and qualify as a General Securities Principal must, prior to or concurrent with such registration, become registered, pursuant to the Rule 1030 Series, either as a General Securities Representative or as a Limited Representative--Corporate Securities. A person who has been designated as a Chief Compliance Officer on Schedule A of Form BD for at least two years immediately prior to January 1, 2002, and who has not been subject within the last ten years to any statutory disqualification as defined in Section 3(a)(39) of the Act; a suspension; or the imposition of a fine of \$5,000 or more for violation of any provision of any securities law or regulation, or any agreement with or rule or standard of conduct of any securities governmental agency, securities self-regulatory organization, or as imposed by any such regulatory or self-regulatory organization in connection with a disciplinary proceeding shall be required to register as a General Securities Principal, but shall be exempt from the requirement to pass the appropriate Qualification Examination. A Chief Compliance Officer who is subject to the Qualification Examination requirement shall be allowed a period of 90 calendar days following [the effective date of Nasdaq's registration as a national securities exchange] within which to pass the appropriate Qualification Examination for Principals.

(2) A Limited Representative—Corporate Securities seeking registration as General Securities Principal who will have supervisory responsibility over the conduct of business in investment company products and variable contracts products must, prior to or concurrent with registration as a General Securities principal, become registered pursuant to the Rule 1030 Series hereof, as a Limited Representative—Investment Company and Variable Contracts Products.

(3) Except as provided in Rule 1021(c), a person who was registered with NASD as a Principal, shall not be required to pass a Qualification Examination for General Securities Principal and shall be qualified as a General Securities Principal.

(4) A person registered solely as a General Securities Principal shall not be qualified to function as a Limited Principal--Financial and Operations or Limited Principal--General Securities Sales Supervisor unless that person is also qualified and registered as such.

(b) Limited Principal--Financial and Operations

(1) Every member of Nasdaq that is operating pursuant to the provisions of SEC Rule 15c3-1(a)(1)(ii), (a)(2)(i) or (a)(8), shall designate as Limited Principal--Financial and Operations those persons associated with it, at least one of whom shall be its chief financial officer, who performs the duties described in subparagraph (2) hereof. Each person associated with a member who performs such duties shall be required to register as a Limited Principal--Financial and Operations with Nasdaq and shall pass an appropriate Qualification Examination before such registration may become effective.

(2) The term "Limited Principal--Financial and Operations" shall mean a person associated with a member whose duties include:

(A) final approval and responsibility for the accuracy of financial reports submitted to any duly established securities industry regulatory body;

(B) final preparation of such reports;

(C) supervision of individuals who assist in the preparation of such reports;

(D) supervision of and responsibility for individuals who are involved in the actual maintenance of the member's books and records from which such reports are derived;

(E) supervision and/or performance of the member's responsibilities under all financial responsibility rules promulgated

pursuant to the provisions of the Act;

(F) overall supervision of and responsibility for the individuals who are involved in the administration and maintenance of the member's back office operations; or

(G) any other matter involving the financial and operational management of the member.

(3) A person registered solely as a Limited Principal--Financial and Operations shall not be qualified to function in a principal capacity with responsibility over any area of business activity not described in subparagraph (2) hereof.

(c) Limited Principal--Introducing Broker/Dealer Financial and Operations

(1) Every member of Nasdaq that is subject to the requirements of SEC Rule 15c3-1, other than a member operating pursuant to SEC Rule 15c3-1(a)(1)(ii), (a)(2)(i) or (a)(8) in which case paragraph (b) shall apply, shall designate as Limited Principal--Introducing Broker/Dealer Financial and Operations those persons associated with it, at least one of whom shall be its chief financial officer, who perform the duties described in subparagraph (2) hereof. Each person associated with a member who performs such duties shall be required to register as a Limited Principal--Introducing Broker/Dealer Financial and Operations with Nasdaq and shall pass an appropriate Qualification Examination before such registration may become effective.

(2) The term "Limited Principal--Introducing Broker/Dealer Financial and Operations" shall mean a person associated with a member whose duties include:

(A) final approval and responsibilities for the accuracy of financial reports submitted to any duly established securities industry regulatory body;

(B) final preparation of such reports;

(C) supervision of individuals who assist in the preparation of such reports;

(D) supervision of and responsibility for individuals who are involved in the actual maintenance of the member's books and records from which such reports are derived;

(E) supervision and/or performance of the member's responsibilities under all financial responsibility rules promulgated pursuant to the provisions of the Act;

(F) overall supervision of and responsibility for the individuals who are involved in the administration and maintenance of the member's back office operations; or

(G) any other matter involving the financial and operational management of the member.

(3) Except as provided in Rule 1021(c), a person designated pursuant to the provisions of subparagraph (1) hereof, shall not be required to take the Limited Principal-- Introducing Broker/Dealer Financial and Operations Examination and shall be qualified for registration as a Limited Principal-- Introducing Broker/Dealer Financial and Operations if such a person is qualified to be registered or is registered as a Limited Principal--Financial and Operations as defined in paragraph (b)(2) hereof.

(4) A person registered solely as a Limited Principal--Introducing Broker/Dealer Financial and Operations shall not be qualified to function in a principal capacity with responsibility over any area of business activity not described in subparagraph (2) hereof. Such person shall not be qualified to function in a principal capacity at a member unless such member operates under subparagraph (1) hereof.

(d) Limited Principal—Investment Company and Variable Contracts Products

(1) Each person associated with a member who is included within the definition of principal in Rule 1021, may register with Nasdaq as a Limited Principal—Investment Company and Variable Contracts Products if:

(A) his activities in the investment banking and securities business are limited to the solicitation, purchase and/or sale of:

(i) redeemable securities of companies registered pursuant to the Investment Company Act of 1940;

(ii) securities of closed-end companies registered pursuant to the Investment Company Act of 1940 during the period of original distribution only; and

(iii) variable contracts and insurance premium funding programs and other contracts issued by an insurance company except contracts which are exempt securities pursuant to Section 3(a)(8) of the Securities Act of 1933;

(B) he is registered, pursuant to the Rule 1030 Series, as either a General Securities Representative or a Limited Representative— Investment Company and Variable Contracts Products; and

(C) he passes an appropriate Qualification Examination for Limited Principal—Investment Company and Variable Contracts Products.

(2) A person registered solely as a Limited Principal—Investment Company and Variable Contracts Products shall not be qualified to function in a principal capacity with responsibility over any area of business activity not prescribed in subparagraph (1) hereof.

(e) Reserved

(f) Reserved

(g) Limited Principal--General Securities Sales Supervisor

(1) Each person associated with a member who is included in the definition of principal in Rule 1021 may register with Nasdaq as a Limited Principal--General Securities Sales Supervisor if:

(A) his or her supervisory responsibilities in the investment banking and securities business are limited to the securities sales activities of a member, including the training of sales and sales supervisory personnel and the maintenance of records of original entry and/or ledger accounts of the member required to be maintained in branch offices by SEC record keeping rules;

(B) he or she is registered pursuant to the Rule 1030 series as a General Securities Representative; and

(C) he or she is qualified to be so registered by passing an appropriate examination.

(2) A person registered in this category solely on the basis of having passed the Qualification Examination for Limited Principal--General Securities Sales Supervisor shall NOT be qualified to:

(A) function in a principal capacity with responsibility over any area of business activity not described in subparagraph (1);

(B) be included for purposes of the principal numerical requirements of Rule 1021(e)(1); or

(C) perform for a member any or all of the following activities:

(i) supervision of the origination and structuring of underwritings;

- (ii) supervision of market making commitments;
- (iii) final approval of advertisements as these are defined in Rule 2210;
- (iv) supervision of the custody of firm or customer funds and/or securities for purposes of SEC Rule 15c3-3; or
- (v) supervision of overall compliance with financial responsibility rules for broker/dealers promulgated pursuant to the provisions of the Act.

(h) Reserved

IM-1022-1. Reserved

IM-1022-2. Limited Principal--General Securities Sales Supervisor

Limited Principal--General Securities Sales Supervisor is an alternate category of registration designed to lessen the qualification burdens on principals of general securities firms who supervise sales. Without this category of limited registration, such principals could be required to separately qualify pursuant to the rules of Nasdaq, the NASD, MSRB, NYSE and the options exchanges. While persons may continue to separately qualify with all relevant self-regulatory organizations, the Limited Principal--General Securities Sales Supervisor Examination permits qualification as a supervisor of sales of all securities by one examination. Persons registered as Limited Principals--General Securities Sales Supervisor may also qualify in any other category of principal registration. Persons who are already qualified in one or more categories of principal registration may supervise sales activities of all securities by also qualifying as Limited Principals--General Securities Sales Supervisor.

Functions that may be performed by Limited Principals--General Securities Sales Supervisors. Any person required to be registered as a principal who supervises sales activities in corporate, municipal and option securities, investment company products, variable contracts, direct participation programs, and security futures may be registered solely as a Limited Principal--General Securities Sales Supervisor. In addition to branch office managers, other persons such as regional and national sales managers may also be registered solely as Limited Principals--General Securities Sales Supervisor as long as they supervise only sales activities. Qualification as a General Securities Representative is a prerequisite for registration as a Limited Principal--General Securities Sales Supervisor.

Functions that may not be performed by Limited Principals--General Securities Sales Supervisors. Certain functions may not be performed by persons registered solely as Limited Principal--General Securities Sales Supervisor. These include supervisory responsibility for the origination and structuring of underwritings, market-making, final

approval of advertising, custody of firm or customer funds and/or securities for purposes of SEC Rule 15c3-3 and overall compliance with financial responsibility rules for broker/dealers. Persons responsible for any of these activities are still required to qualify in the appropriate categories of principal registration. Moreover, persons qualified only as Limited Principals--General Securities Sales Supervisor are not included for purposes of the two principal requirements of Rule 1021(e)(1).

1030. Registration of Representatives

1031. Registration Requirements

(a) All Representatives Must Be Registered

All persons engaged or to be engaged in the investment banking or securities business of a member who are to function as representatives shall be registered as such with Nasdaq in the category of registration appropriate to the function to be performed as specified in Rule 1032. Before their registration can become effective, they shall pass a Qualification Examination for Representatives appropriate to the category of registration as specified by the Nasdaq Board. A member shall not maintain a representative registration with Nasdaq for any person (1) who is no longer active in the member's investment banking or securities business, (2) who is no longer functioning as a representative, or (3) where the sole purpose is to avoid the examination requirement prescribed in paragraph (c). A member shall not make application for the registration of any person as representative where there is no intent to employ such person in the member's investment banking or securities business. A member may, however, maintain or make application for the registration as a representative of a person who performs legal, compliance, internal audit, back-office operations, or similar responsibilities for the member, or a person who performs administrative support functions for registered personnel, or a person engaged in the investment banking or securities business of a foreign securities affiliate or subsidiary of the member.

(b) Requirement for Examination on Lapse of Registration

Any person whose registration has been revoked pursuant to Rule 8310 or whose most recent registration as a representative or principal has been terminated for a period of two (2) or more years immediately preceding the date of receipt by Nasdaq of a new application shall be required to pass a Qualification Examination for Representatives appropriate to the category of registration as specified in Rule 1032.

(c) Qualification Requirements

No Nasdaq member shall permit any person associated with the Nasdaq member to engage in the investment banking or securities business unless the Nasdaq member determines that such person satisfies the qualification requirements established by the Nasdaq Board and is not subject to statutory disqualification.

(d) Application for Registration

(1) Application by any person for registration with Nasdaq, properly signed by the applicant, shall be made to Nasdaq via electronic process or such other process as Nasdaq may prescribe, on the form proscribed by Nasdaq, and shall contain:

(A) an agreement to comply with the federal securities laws, the rules and regulations thereunder, the Nasdaq Rules, and all rulings, orders, directions, and decisions issued and sanctions imposed under the Nasdaq Rules; and

(B) such other reasonable information with respect to the applicant as Nasdaq may require.

(2) Nasdaq shall not approve an application for registration of any person who is not eligible to be an associated person of a Nasdaq member under the provisions of Nasdaq Rule 1002(b).

(3) Every application for registration filed with Nasdaq shall be kept current at all times by supplementary amendments via electronic process or such other process as Nasdaq may prescribe. Such amendments to the application shall be filed with Nasdaq not later than 30 days after the applicant learns of the facts or circumstances giving rise to the amendment. If such amendment involves a statutory disqualification, such amendment shall be filed not later than ten days after such disqualification occurs.

(e) Notification by Member to Nasdaq and Associated Person of Termination; Amendment to Notification

(1) Following the termination of the association with a Nasdaq member of a person who is registered with it, such Nasdaq member shall, not later than 30 days after such termination, give notice of the termination of such association to Nasdaq via electronic process or such other process as Nasdaq may prescribe, on a form designated by Nasdaq, and concurrently shall provide to the person whose association has been terminated a copy of said notice as filed with Nasdaq. A Nasdaq member that does not submit such notification and provide a copy to the person whose association has been terminated, within the time period prescribed, shall be assessed any late filing fee that is specified by the Nasdaq Rules. Termination of registration of such person associated with a Nasdaq member shall not take effect so long as any complaint or action under the Nasdaq Rules is pending against a Nasdaq member and to which complaint or action such person associated with a Nasdaq member is also a respondent, or so long as any complaint or action is pending against such person individually under the Nasdaq Rules. Nasdaq, however, may in its discretion declare the termination effective at any time.

(2) The Nasdaq member shall notify Nasdaq, via electronic process or such other process as Nasdaq may prescribe, by means of an amendment to the notice filed pursuant to paragraph (1) in the event that the Nasdaq member learns of facts or circumstances causing any information set forth in said notice to become inaccurate or incomplete. Such amendment shall be filed with Nasdaq via electronic process or such other process as Nasdaq may prescribe, and a copy provided to the person whose association with the Nasdaq member has been terminated not later than 30 days after the Nasdaq member learns of the facts or circumstances giving rise to the amendment.

(f) Retention of Jurisdiction

A person whose association with a Nasdaq member has been terminated and who is no longer associated with any member of Nasdaq or a person whose registration has been revoked or canceled shall continue to be subject to the filing of a complaint under Nasdaq Rules based upon conduct which commenced prior to the termination, revocation, or cancellation or upon such person's failure, while subject to Nasdaq's jurisdiction as provided herein, to provide information requested by Nasdaq pursuant to the Nasdaq Rules, but any such complaint shall be filed within:

(1) six years after the effective date of termination of registration pursuant to subsection (c); provided, however, that any amendment to a notice of termination filed pursuant to paragraph (c)(2) that is filed within six years of the original notice that discloses that such person may have engaged in conduct actionable under any applicable statute, rule, or regulation shall operate to recommence the running of the six-year period under this subsection;

(2) six years after the effective date of revocation or cancellation of registration pursuant to the Nasdaq Rules; or

(3) in the case of an unregistered person, within six years after the date upon which such person ceased to be associated with the Nasdaq member.

1032. Categories of Representative Registration

(a) General Securities Representative

(1) Each person associated with a member who is included within the definition of a Representative in Rule 1031, shall be required to register with Nasdaq as a General Securities Representative and shall pass an appropriate Qualification Examination before such registration may become effective unless his or her activities are so limited as to qualify him for one or more of the limited categories of representative registration specified hereafter. A person whose activities in the investment banking or securities business are so limited is not, however, precluded from attempting to become qualified for registration as a General Securities Representative, and if qualified, may become so registered.

(2) Except as provided in Rule 1031(b):

(A) Reserved

(B) A person who is authorized or approved to conduct business in accordance with the requirements of The Financial Services Authority and having passed the Modified General Securities Representative Qualification Examination shall be qualified to be registered as a General Securities Representative except that such person's activities in the investment banking or securities business may not involve the solicitation, purchase and/or sale of municipal securities as defined in Section 3(a)(29) of the Act.

(C) A person presently registered and in good standing as a representative with any Canada stock exchange, or with a securities regulator of any Canada Province or Territory, or with the Investment Dealers Association of Canada, and who has completed the training course of the Canadian Securities Institute, and who has passed the Canada Module of the General Securities Registered Representative Examination, shall be qualified to be registered as a General Securities Representative except that such person's activities may not involve the solicitation, purchase and/or sale of municipal securities as defined in Section 3(a)(29) of the Act.

(D) A person presently registered and in good standing as a representative with any Japan stock exchange, or with any Japan Securities Dealers Association, and who has passed the Japan Module of the General Securities Registered Representative Examination, shall be qualified to be registered as a General Securities Representative except that such person's activities may not involve the solicitation, purchase and/or sale of municipal securities as defined in Section 3(a)(29) of the Act.

(b) Limited Representative—Investment Company and Variable Contracts Products

(1) Each person associated with a member who is included within the definition of a representative in Rule 1031 may register with Nasdaq as a Limited Representative—Investment Company and Variable Contracts Products if:

(A) his activities in the investment banking or securities business are limited solely to those activities enumerated in Rule 1022(d)(1), and

(B) he passes an appropriate Qualification Examination for Limited Representative—Investment Company and Variable Contracts Products.

(2) A person qualified solely as a Limited Representative—
Investment Company and Variable Contracts Products shall not be qualified
to function as a representative in any area not described in paragraph
(b)(1)(A) hereof.

(c) Reserved

(d) Reserved

(e) Limited Representative--Corporate Securities

(1) Each person associated with a member who is included within the
definition of a representative in Rule 1031 may register with Nasdaq as a Limited
Representative--Corporate Securities if:

(A) Such person's activities in the investment banking or securities
business involve the solicitation, purchase, and/or sale of a "security," as
that term is defined in Section 3(a)(10) of the Act, and do not include such
activities with respect to the following securities unless such person is
separately qualified and registered with the NASD in the category or
categories of registration related to these securities:

(i) Municipal securities as defined in Section 3(a)(29) of
the Act;

(ii) Options;

(iii) Redeemable securities of companies registered
pursuant to the Investment Company Act of 1940, except for
money market funds;

(iv) Variable contracts of insurance companies registered
pursuant to the Securities Act of 1933; and/or

(v) Direct Participation Programs.

(B) Such person passes an appropriate qualification examination
for Limited Representative--Corporate Securities.

(2) A person qualified solely as a Limited Representative--Corporate
Securities shall not be qualified to function in any area not described by
subparagraph (1) hereof.

(3) For purposes of Rule 1032(e), the terms "option" and "direct
participation program" shall have the meanings assigned to such terms by NASD
Rules 2860 and 1022(e)(1)(A), respectively, and the definitions contained in such
NASD rules shall apply to Nasdaq members as if such Rules were part of

Nasdaq's Rules.

(f) Limited Representative - Equity Trader

(1) Each person associated with a member who is included within the definition of a representative as defined in Rule 1031 must register with Nasdaq as a Limited Representative - Equity Trader if, with respect to transactions in equity, preferred or convertible debt securities, such person is engaged in proprietary trading, the execution of transactions on an agency basis, or the direct supervision of such activities, other than any person associated with a member whose trading activities are conducted principally on behalf of an investment company that is registered with the Commission pursuant to the Investment Company Act of 1940 and that controls, is controlled by or is under common control, with the member.

(2) Before registration as a Limited Representative - Equity Trader as defined in subparagraph (1) hereof may become effective, an applicant must:

(A) be registered pursuant to Rule 1032, either as a General Securities Representative or a Limited Representative - Corporate Securities; and

(B) pass an appropriate Qualification Examination for Limited Representative-Equity Trader.

(g) Reserved

(h) Reserved

1040. Registration of Assistant Representatives

1041. Registration Requirements for Assistant Representatives

(a) All Assistant Representatives--Order Processing Must Be Registered

All persons associated with a member who are to function as Assistant Representatives-- Order Processing shall be registered with Nasdaq. Before their registrations can become effective, they shall pass a Qualification Examination for Assistant Representatives--Order Processing as specified by the Nasdaq Board.

(b) Definition of Assistant Representative--Order Processing

Persons associated with a member who accept unsolicited customer orders for submission for execution by the member are designated as Assistant Representatives--Order Processing.

(c) Requirement for Examination on Lapse of Registration

Any persons whose most recent registration as an Assistant Representative--Order Processing has been terminated for a period of two (2) or more years immediately preceding the date of receipt by Nasdaq of a new application shall be required to pass a Qualification Examination for Assistant Representative--Order Processing.

1042. Restrictions for Assistant Representatives

(a) Prohibited Activities

An Assistant Representative--Order Processing may not solicit transactions or new accounts on behalf of the member, render investment advice, make recommendations to customers regarding the appropriateness of securities transactions, or effect transactions in securities markets on behalf of the member. Persons registered in this category may not be registered concurrently in any other capacity.

(b) Compensation

Members may only compensate Assistant Representatives--Order Processing on an hourly wage or salaried basis and may not in any way, directly or indirectly, relate their compensation to the number or size of transactions effected for customers. This provision shall not prohibit persons registered in this capacity from receiving bonuses or other compensation based on a member's profit sharing plan or similar arrangement.

(c) Supervision

The activities of Assistant Representatives--Order Processing may only be conducted at a business location of the member that is under the direct supervision of an appropriately registered principal.

1043. Reserved

1050. Research Analysts

A Nasdaq member that employs a research analyst or publishes or otherwise distributes a research report shall also be a member of the NASD or the New York Stock Exchange and shall comply with NASD Rules 2711, 1050, 1022, 1120 (and any other applicable NASD rules that apply to research analysts or research reports), as amended and/or New York Stock Exchange Rules 472, 344, 345A, 351 (and any other applicable New York Stock Exchange rules that apply to research analysts or research reports), as amended. For purposes of this Rule 1050, (i) "research analyst" shall mean an associated person who is primarily responsible for, and any associated person who reports directly or indirectly to such research analyst in connection with, the preparation of the substance of a research report, whether or not any such person has the job title of "research analyst," and (ii) "research report" shall mean a written or electronic communication that includes an analysis of equity securities of individual companies or industries, and that provides information reasonably sufficient upon which to base an investment decision.

1060. Persons Exempt from Registration

(a) The following persons associated with a member are not required to be registered with Nasdaq:

- (1) persons associated with a member whose functions are solely and exclusively clerical or ministerial;
- (2) persons associated with a member who are not actively engaged in the investment banking or securities business;
- (3) persons associated with a member whose functions are related solely and exclusively to the member's need for nominal corporate officers or for capital participation; and
- (4) persons associated with a member whose functions are related solely and exclusively to:
 - (A) effecting transactions on the floor of another national securities exchange and who are registered as floor members with such exchange;
 - (B) transactions in municipal securities;
 - (C) transactions in commodities;
 - (D) transactions in security futures, provided that any such person is registered with the NASD or a registered futures association; or
 - (E) transactions in variable contracts and insurance premium funding programs and other contracts issued by an insurance company;
 - (F) transactions in direct participation programs;
 - (G) transactions in options;
 - (H) transactions in government securities;
 - (I) effecting sales as part of a primary offering of securities not involving a public offering pursuant to Section 3(b), 4(2), or 4(6) of the Securities Act of 1933 and the rules and regulations thereunder.

For purposes of Rule 1060(a)(4), the terms "option" and "direct participation program" shall have the meanings assigned to such terms by NASD Rules 2860 and 1022(e)(1)(A), respectively, and the definitions contained in such NASD rules shall apply to Nasdaq members as if such Rules were part of Nasdaq's

Rules.

(b) Member firms, and persons associated with a member, may pay to nonregistered foreign persons transaction-related compensation based upon the business of customers they direct to member firms if the following conditions are met:

(1) the member firm has assured itself that the nonregistered foreign person who will receive the compensation (the "finder") is not required to register in the U.S. as a broker/dealer nor is subject to a disqualification as defined in the Nasdaq Rules, and has further assured itself that the compensation arrangement does not violate applicable foreign law;

(2) the finders are foreign nationals (not U.S. citizens) or foreign entities domiciled abroad;

(3) the customers are foreign nationals (not U.S. citizens) or foreign entities domiciled abroad transacting business in either foreign or U.S. securities;

(4) customers receive a descriptive document, similar to that required by Rule 206(4)-3(b) of the Investment Advisers Act of 1940, that discloses what compensation is being paid to finders;

(5) customers provide written acknowledgment to the member firm of the existence of the compensation arrangement and that such acknowledgment is retained and made available for inspection by Nasdaq;

(6) records reflecting payments to finders are maintained on the member firm's books and actual agreements between the member firm and persons compensated are available for inspection by Nasdaq; and

(7) the confirmation of each transaction indicates that a referral or finders fee is being paid pursuant to an agreement.

1070. Qualification Examinations and Waiver of Requirements

(a) Qualification Examinations specified in this Rule 1000 Series shall consist of a series of questions based upon topics contained in study outlines provided by Nasdaq, a list of which is available from the Department.

(b) Examinations shall be given at such times and places and under such conditions as shall be prescribed by the Nasdaq Board and shall be graded according to the procedure prescribed by the Board.

(c) Examination results shall be reported to member firms and may be accompanied by an analysis of the candidate's performance on the examination. Passing scores assigned to each examination series shall be determined by the Nasdaq Board, or its designee.

(d) Pursuant to the Rule 9600 Series, Nasdaq may, in exceptional cases and where good cause is shown, waive the applicable Qualification Examination and accept other standards as evidence of an applicant's qualifications for registration. Advanced age or physical infirmity will not individually of themselves constitute sufficient grounds to waive a Qualification Examination. Experience in fields ancillary to the investment banking or securities business may constitute sufficient grounds to waive a Qualification Examination.

(e) Any person associated with a member who fails to pass a qualification examination prescribed by Nasdaq shall be permitted to take the examination again after either a period of 30 calendar days has elapsed from the date of the prior examination or the next administration of an examination administered on a monthly basis, except that any person who fails to pass an examination three or more times in succession shall be prohibited from again taking such examination either until a period of 180 calendar days has elapsed from the date of such person's last attempt to pass the examination or until the sixth subsequent administration of an examination administered on a monthly basis.

1080. Confidentiality of Examinations

Nasdaq considers all of its Qualification Examinations to be highly confidential. The removal from an examination center, reproduction, disclosure, receipt from or passing to any person, or use for study purposes of any portion of such Qualification Examination, whether of a present or past series, or any other use which would compromise the effectiveness of the Examinations and the use in any manner and at any time of the questions or answers to the Examinations are prohibited and are deemed to be a violation of Rule 2110. An applicant cannot receive assistance while taking the examination. Each applicant shall certify to the Board that no assistance was given to or received by him during the examination.

1090. Foreign Members

A member which does not maintain an office in the United States responsible for preparing and maintaining financial and other reports required to be filed with the Commission and Nasdaq must:

(a) prepare all such reports, and maintain a general ledger chart of account and any description thereof, in English and U.S. dollars;

(b) reimburse Nasdaq for any expenses incurred in connection with examinations of the member to the extent that such expenses exceed the cost of examining a member located within the continental United States in the geographic location most distant from Nasdaq;

(c) ensure the availability of an individual fluent in English and knowledgeable in securities and financial matters to assist representatives of Nasdaq during examinations; and

(d) utilize, either directly or indirectly, the services of a broker/dealer registered with the Commission, a bank or a clearing agency registered with the Commission located in the United States in clearing all transactions involving members of Nasdaq, except where both parties to a transaction agree otherwise.

1100. Foreign Associates

(a) All persons associated with a member who are designated as Foreign Associates shall be required to be registered but shall be exempt from the requirement to pass a Qualification Examination. Persons associated with a member shall be designated as Foreign Associates if they meet the following criteria:

(1) They are not citizens, nationals, or residents of the United States or any of its territories or possessions;

(2) They will conduct all of their securities activities in areas outside the jurisdiction of the United States and they will not engage in any securities activities with or for any citizen, national or resident of the United States.

(b) Prior to the time the exemption provided for in paragraph (a) hereof may become effective, the member desiring to employ any such person must file with Nasdaq a "Uniform Application for Securities Industry Registration or Transfer" for each such person and must certify that such person meets the criteria of paragraph (a), as well as that:

(1) Such person is not subject to any of the prohibitions to registration with Nasdaq;

(2) Service of process for any proceeding instituted by Nasdaq in respect to such person may be sent to an address designated by the member.

(c) In the event of the termination of the employment of a Foreign Associate, the member must notify Nasdaq immediately by filing a notice of termination.

1110. Reserved

1120. Continuing Education Requirements

This Rule prescribes requirements regarding the continuing education of certain registered persons subsequent to their initial qualification and registration with Nasdaq. The requirements shall consist of a Regulatory Element and a Firm Element as set forth below.

(a) Regulatory Element

(1) Requirements

No member shall permit any registered person to continue to, and no registered person shall continue to, perform duties as a registered person unless such person has complied with the requirements of paragraph (a) hereof.

Each registered person shall complete the Regulatory Element on the occurrence of their second registration anniversary date and every three years thereafter, or as otherwise prescribed by Nasdaq. On each occasion, the Regulatory Element must be completed within 120 days after the person's registration anniversary date. A person's initial registration date, also known as the "base date," shall establish the cycle of anniversary dates for purposes of this Rule. The content of the Regulatory Element shall be determined by Nasdaq and shall be appropriate to either the registered representative or principal status of person subject to the Rule.

(2) Failure to Complete

Unless otherwise determined by Nasdaq, any registered persons who have not completed the Regulatory Element within the prescribed time frames will have their registrations deemed inactive until such time as the requirements of the program have been satisfied. Any person whose registration has been deemed inactive under this Rule shall cease all activities as a registered person and is prohibited from performing any duties and functioning in any capacity requiring registration. A registration that is inactive for a period of two years will be administratively terminated. A person whose registration is so terminated may reactivate the registration only by reapplying for registration and meeting the qualification requirements of the applicable provisions of the Rule 1020 Series and the Rule 1030 Series. Nasdaq may, upon application and a showing of good cause, allow for additional time for a registered person to satisfy the program requirements.

(3) Disciplinary Actions

Unless otherwise determined by Nasdaq, a registered person will be required to retake the Regulatory Element and satisfy all of its requirements in the event such person:

(A) is subject to any statutory disqualification as defined in Section 3(a)(39) of the Act;

(B) is subject to suspension or to the imposition of a fine of \$5,000 or more for violation of any provision of any securities law or regulation, or any agreement with or rule or standard of conduct of any securities governmental agency, securities self-regulatory organization, or as imposed by any such regulatory or self-regulatory organization in connection with a disciplinary proceeding; or

(C) is ordered as a sanction in a disciplinary action to retake the Regulatory Element by any securities governmental agency or self-regulatory organization.

The retaking of the Regulatory Element shall commence with participation within 120 days of the registered person becoming subject to the statutory disqualification, in the case of (A) above, or the disciplinary action becoming final, in the case of (B) and (C) above. The date of the disciplinary action shall be treated as such person's new base date with Nasdaq.

(4) Reassociation in a Registered Capacity

Any registered person who has terminated association with a member and who has, within two years of the date of termination, become reassociated in a registered capacity with a member shall participate in the Regulatory Element at such intervals that may apply (second anniversary and every three years thereafter) based on the initial registration anniversary date rather than based on the date of reassociation in a registered capacity.

(5) Definition of Registered Person

For purposes of this Rule, the term "registered person" means any person registered with Nasdaq as a representative, principal, or assistant representative pursuant to the Rule 1020, 1030, 1040, and 1110 Series.

(6) In-Firm Delivery of the Regulatory Element

Nasdaq Members that are also NASD members will be permitted to administer the continuing education Regulatory Element program to their registered persons by instituting an in-firm program to the extent such program has been deemed acceptable to the NASD in accordance with NASD Rule 1120(a)(6). Such a program shall be administered by persons eligible to serve as principals and proctors under NASD Rules 1043 and 1120(a)(6). Nasdaq Members that are NASD members and that institute in-firm delivery of the Regulatory Element program shall comply with NASD Rules 1120(a)(6) and 1043 as if such Rules were part of Nasdaq's Rules. Nasdaq and NASD Regulation, an affiliate of NASD, are parties to the Regulatory Contract pursuant to which NASD Regulation has agreed to perform certain functions on behalf of Nasdaq. Therefore, Nasdaq members are complying with Nasdaq Rule 1120(a)(6) by complying with NASD Rules 1120(a)(6) and 1043 as written, including, for example, filing requirements and notifications. In addition, functions performed by NASD Regulation, NASD Regulation departments, and NASD Regulation staff under Nasdaq Rule 1120(a)(6) are being performed by NASD Regulation on behalf of Nasdaq.

Nasdaq Members that are not NASD members will not be permitted to institute in-firm delivery of the Regulatory Element program.

(7) Regulatory Element Contact Person

Each member shall designate and identify to Nasdaq (by name and e-mail address) an individual or individuals responsible for receiving e-mail notifications provided via the Central Registration Depository regarding when a registered person is approaching the end of his or her Regulatory Element time frame and when a registered person is deemed inactive due to failure to complete the requirements of the Regulatory Element program, and provide prompt notification to Nasdaq regarding any change in such designation(s). Each member must review and, if necessary, update the information regarding its Regulatory Element contact person(s) within 17 business days after the end of each calendar quarter to ensure the information's accuracy.

(b) Firm Element

(1) Persons Subject to the Firm Element

The requirements of this subparagraph shall apply to any person registered with a member who has direct contact with customers in the conduct of the member's securities sales, trading and investment banking activities, and to the immediate supervisors of such persons (collectively, "covered registered persons"). "Customer" shall mean any natural person and any organization, other than another broker or dealer, executing securities transactions with or through or receiving investment banking services from a member.

(2) Standards for the Firm Element

(A) Each member must maintain a continuing and current education program for its covered registered persons to enhance their securities knowledge, skill, and professionalism. At a minimum, each member shall at least annually evaluate and prioritize its training needs and develop a written training plan. The plan must take into consideration the member's size, organizational structure, and scope of business activities, as well as regulatory developments and the performance of covered registered persons in the Regulatory Element. If a member's analysis establishes the need for supervisory training for persons with supervisory responsibilities, such training must be included in the member's training plan.

(B) Minimum Standards for Training Programs - Programs used to implement a member's training plan must be appropriate for the business of the member and, at a minimum must cover the following matters concerning securities products, services, and strategies offered by the member:

- (i) General investment features and associated risk factors;

(ii) Suitability and sales practice considerations; and

(iii) Applicable regulatory requirements.

(C) Administration of Continuing Education Program - A member must administer its continuing education programs in accordance with its annual evaluation and written plan and must maintain records documenting the content of the programs and completion of the programs by covered registered persons.

(3) Participation in the Firm Element

Covered registered persons included in a member's plan must take all appropriate and reasonable steps to participate in continuing education programs as required by the member.

(4) Specific Training Requirements

Nasdaq may require a member, individually or as part of a larger group, to provide specific training to its covered registered persons in such areas as Nasdaq deems appropriate. Such a requirement may stipulate the class of covered registered persons for which it is applicable, the time period in which the requirement must be satisfied and, where appropriate, the actual training content.

1130. Reliance on Current Membership List

The Nasdaq Secretary shall keep a currently accurate and complete membership roll, containing the name and address of each Nasdaq member, and the name and address of the executive representative of each Nasdaq member. In any case where a membership has been terminated, such fact shall be recorded together with the date on which the membership ceased. The membership roll of Nasdaq shall at all times be available to all members of Nasdaq, to all governmental authorities, and to the general public. For the purpose of complying with pertinent Rules, a member shall be entitled to rely on such membership roll.

1140. Electronic Filing Rules

(a) Filing Requirement

Except as provided in Rule 1013(a)(2), all forms required to be filed under the Rule 1000 Series shall be filed through an electronic process or such other process as Nasdaq may prescribe to the Central Registration Depository.

(b) Supervisory Requirements

(1) In order to comply with the supervisory procedures requirement in

Rule 3010, each member shall identify a Registered Principal(s) or corporate officer(s) who has a position of authority over registration functions, to be responsible for supervising the electronic filing of appropriate forms pursuant to this Rule.

(2) The Registered Principal(s) or corporate officer(s) who has or have the responsibility to review and approve the forms filed pursuant to this Rule shall be required to acknowledge, electronically, that he is filing this information on behalf of the member and the member's associated persons.

(c) Form U4 Filing Requirements

(1) Every initial and transfer electronic Form U4 filing shall be based on a signed Form U4 provided to the member or applicant for membership by the person on whose behalf the Form U4 is being filed. As part of the member's recordkeeping requirements, it shall retain the person's signed Form U4 and make it available promptly upon regulatory request. An applicant for membership also must retain every signed Form U4 it receives during the application process and make them available promptly upon regulatory request.

(2) Fingerprint Cards

Upon filing an electronic Form U4 on behalf of a person applying for registration, a member shall promptly submit a fingerprint card for that person. Nasdaq may make a registration effective pending receipt of the fingerprint card. If a member fails to submit a fingerprint card within 30 days after Nasdaq receives the electronic Form U4, the person's registration shall be deemed inactive. In such case, Nasdaq shall notify the member that the person must immediately cease all activities requiring registration and is prohibited from performing any duties and functioning in any capacity requiring registration. Nasdaq shall administratively terminate a registration that is inactive for a period of two years. A person whose registration is administratively terminated may reactivate the registration only by reapplying for registration and meeting the qualification requirements of the applicable provisions of the Rule 1020 Series and the Rule 1030 Series. Upon application and a showing of good cause, Nasdaq may extend the 30-day period.

(d) Form U-5 Filing Requirements

Initial filings and amendments of Form U-5 shall be submitted electronically. As part of the member's recordkeeping requirements, it shall make such records available upon regulatory request.

(e) Third Party Filing

A member may employ a third party to file the required forms electronically on its behalf.

1150. Executive Representative

Each Nasdaq member shall appoint and certify to the Secretary of Nasdaq one “executive representative” who shall represent, vote, and act for the Nasdaq member in all the affairs of Nasdaq; provided, however, that other representatives of a Nasdaq member may also serve on the Nasdaq Board or committees of Nasdaq or otherwise take part in the affairs of Nasdaq. A Nasdaq member may change its executive representative or appoint a substitute for its executive representative upon giving notice thereof to the Nasdaq Secretary via electronic process or such other process as Nasdaq may prescribe. An executive representative of a Nasdaq member or a substitute shall be a member of senior management and registered principal of the Nasdaq member. Each executive representative shall maintain an Internet electronic mail account for communication with Nasdaq and shall update firm contact information as prescribed by Nasdaq. Each member shall review and, if necessary, update its executive representative designation and contact information within 17 business days after the end of each calendar quarter.

CHARGES FOR MEMBERSHIP, SERVICES, AND EQUIPMENT

TABLE OF CONTENTS

- 7000. CHARGES FOR MEMBERSHIP, SERVICES, AND EQUIPMENT
 - 7001. Membership Fees
 - 7002. SEC Transaction Fee
 - 7010. System Services
 - 7011. Nasdaq Level 1 Service
 - 7012. Nasdaq Level 2/3 Service
 - 7013. Consolidated Quotation Service and Exchange-Listed Securities Transaction Credit
 - 7014. Computer Assisted Execution Service
 - 7015. Access Services
 - 7016. Nasdaq Risk Management
 - 7017. National Quotation Data Service (NQDS)
 - 7018. Nasdaq Market Center and Brut Facility Order Execution
 - 7019. Market Data Distributor Fees
 - 7020. Automated Voice Response Service Fee
 - 7021. NasdaqTrader.com Trading and Compliance Data Package Fee
 - 7022. Historical Research and Administrative Reports
 - 7023. Nasdaq TotalView
 - 7024. Nasdaq Revenue Sharing Program
 - 7025. Extranet Access Fee
 - 7026. ACES
 - 7027. Aggregation of Activity of Affiliated Members
 - 7028. Special Options
 - 7029. Installation, Removal or Relocation
 - 7030. Other Services
 - 7031. Partial Month Charges
 - 7032. Late Fees
 - 7033. Mutual Fund Quotation Service
 - 7100. Minor Modifications in Charges

7000. Charges for Membership, Services, and Equipment

7001. Membership Fees

(a) Each Nasdaq member will be assessed a membership fee of \$1,200 per year and a trading rights fee of \$200 per month.

(b) There shall be no charge for applicants to apply for membership in Nasdaq pursuant to Nasdaq Rule 1013(a)(6)(C) prior to the date on which Nasdaq commences operation as a national securities exchange. All other applicants for membership in Nasdaq will be assessed a non-refundable application fee of \$2,000.

7002. SEC Transaction Fee

Each member shall be assessed an SEC transaction fee. The amount shall be determined by the SEC in accordance with Section 31 of the Act.

7010. System Services

7011. Nasdaq Level 1 Service

(a) The charge to be paid by the subscriber for each terminal receiving Nasdaq Level 1 Service is \$20 per month. This Service includes the following data:

- (1) inside bid/ask quotations calculated for securities listed in The Nasdaq Stock Market;
- (2) last sale information on Nasdaq-listed securities; and

Nasdaq Level 1 Service also includes inside/bid ask quotations calculated for securities quoted in the NASD's OTC Bulletin Board (OTCBB), individual quotations or indications of interest of broker/dealers utilizing the NASD's OTCBB service, and last sale information for securities classified as non-exchange listed securities under the NASD's 6600 Rule Series. Pursuant to an OTCBB and OTC Equities Transfer and Services Agreement, NASD has outsourced the operation of the NASD's OTCBB service to Nasdaq.

(b) Non-Professional Services

(1) The charge to be paid by non-professional subscribers for access to Nasdaq Level 1 Service or the Last Sale Information Service through an authorized vendor shall be \$1.00 per interrogation device per month.

(2) A "non-professional" is a natural person who is neither:

(A) registered or qualified in any capacity with the Commission, the Commodities Futures Trading Commission, any state securities agency, any securities exchange or association, or any commodities or futures contract market or association;

(B) engaged as an "investment adviser" as that term defined in Section 201(11) of the Investment Advisors Act of 1940 (whether or not registered or qualified under that Act); nor

(C) employed by a bank or other organization exempt from registration under federal or state securities laws to perform functions that would require registration or qualification if such functions were performed for an organization not so exempt.

(3) Nasdaq may waive all or part of the foregoing charges with respect to the services offered by a vendor.

7012. Nasdaq Level 2/3 Service

The charge to be paid by the subscriber for each terminal receiving Nasdaq Level 2 or Nasdaq Level 3 Service shall be \$150 per month plus \$140 per month communication charge, plus equipment related charges as detailed in Rules 7030 and 7040. Equipment related charges may include an installation charge, a site survey, a terminal charge and conversion, removal and relocation charges.

7013. Consolidated Quotation Service and Exchange-Listed Securities Transaction Credit

(a) The charge to be paid by the subscriber for each terminal receiving Consolidated Quotation Service shall be \$50 per month and \$.02 per quotation request plus the monthly charges established by the NYSE and AMEX for receiving last sale information and bid/ask quotations plus equipment related charges as detailed in Rules 7030, and 7040. Equipment related charges may include an installation charge, a site survey, a terminal charge and conversion, removal and relocation charges.

(b) Nasdaq members that trade securities listed on the NYSE ("Tape A") and Amex ("Tape B") through Nasdaq may receive from Nasdaq transaction credits based on the number of transactions attributed to them. A transaction is attributed to a member if the transaction is executed through CAES, ITS or Nasdaq's Brut Facility, and the member acts as liquidity provider (i.e., the member sells in response to a buy order or buys in response to a sell order). A Nasdaq member may earn credits from one or both pools maintained by Nasdaq, each pool representing 50% of the revenue paid by the Consolidated Tape Association to Nasdaq for each of Tape A and Tape B transactions after deducting

the amount that Nasdaq pays to the Consolidated Tape Association for capacity usage. A Nasdaq member may earn credits from the pools according to the member's pro rata share of transactions attributed to Nasdaq members in each of Tape A and Tape B for each calendar quarter.

7014. Computer Assisted Execution Service

The charges to be paid by members receiving the Computer Assisted Execution Service (CAES) for trading non-Nasdaq exchange-listed securities through the Nasdaq Market Center shall consist of a fixed service charge of \$200 per member per month, transaction charges as provided in Nasdaq Rule 7018 and equipment-related charges as provided elsewhere in the Rule 7000 Series.

7015. Access Services.

The following charges are assessed by Nasdaq for connectivity to the Nasdaq Market Center (NMC), the NASD's Trade Reporting Facility, the NASD's OTCBB Service, and Nasdaq's Brut Facility (Brut). The fees established under Rule 7015 for non-Nasdaq members using Nasdaq services to access the NASD's Trade Reporting Facility or OTCBB Service shall be the fees established for members under this Rule 7015, as in effect on the date of Nasdaq's registration as a national securities exchange.

(a) Nasdaq Information Exchange (QIX)

Port pair (plus optional proprietary quote information port)	\$1,200 per month
ECN direct connection port pair	\$1,200 per month
Unsolicited message port	\$1,000 per month

(b) Computer to computer interface (CTCI) and Financial Information Exchange (FIX)

Options	Price
Option 1: Dual 56kb lines (one for redundancy) and single hub and router.	\$1275/month
Option 2: Dual 56kb lines (one for redundancy), dual hubs (one for redundancy), and dual routers (one for redundancy).	\$1600/month

Option 3: Dual T1 lines (one for redundancy), dual hubs (one for redundancy), and dual routers (one for redundancy). Includes base bandwidth of 128kb.	\$8000/month
FIX Trading Port (NMC and Brut)	\$400/port/month
FIX Port for Services Other than Trading	\$500/port/month
Dedicated FIX server	\$1,000/server/month
Dedicated FIX server (Brut)	3,000/server/month; initial term of not less than 12 months is required
Option 1, 2, or 3 with Message Queue software enhancement	Fee for Option 1, 2, or 3 (including any Bandwidth Enhancement Fee) plus 20%
Disaster Recovery Option: Single 56kb line with single hub and router. (For remote disaster recovery sites only.)	\$975/month
Bandwidth Enhancement Fee (for T1 subscribers only)	\$600/month per 64kb increase above 128kb T1 base
Installation Fee	\$2000 per site for dual hubs and routers \$1000 per site for single hub and router
Relocation Fee (for the movement of TCP/IP-capable lines within a single location)	\$1700 per relocation

(c) New Nasdaq Workstation

Nasdaq Workstation Trader	\$435 per user per month
Nasdaq Workstation Post Trade	See Rule 7015(d)

(d) Specialized Services Related to NASD's Trade Reporting Facility

CTCI fee	\$575.00/month
WebLink ACT or Nasdaq Workstation Post Trade	\$300.00/month (full functionality) or \$150.00/month (up to an average of twenty transactions per day each month) (For the purposes of this service only, a transaction is defined as an original trade entry, either on trade date or as-of transactions per month.)
ACT Workstation	\$525/logon/month

7016. Nasdaq Risk Management

Clearing brokers using the Nasdaq Risk Management service will be assessed a charge of \$0.0035 per side per trade monitored by Nasdaq Risk Management and a charge of \$17.25 per month per correspondent executing broker monitored by Nasdaq Risk Management, up to a maximum charge of \$10,000 per month per correspondent executing broker.

7017. National Quotation Data Service (NQDS)

(a) Except as provided in subparagraph (2) of this section, the charge to be paid for each interrogation or display device receiving all or any portion of the information disseminated through the NQDS shall be \$50.00 per month. The NQDS information that will be provided through service consists of individual market maker quotations, Nasdaq Level 1 Service and the Last Sale Information Service.

(b) The charge to be paid by a non-professional for each interrogation or display device receiving all or any portion of the NQDS information disseminated through an authorized vendor shall be \$10.00 per month.

(c) A "non-professional" is a natural person who is neither:

(1) registered or qualified in any capacity with the Commission, the Commodities Futures Trading Commission, any state securities agency, any securities exchange or association, or any commodities or futures contract market or association;

(2) engaged as an "investment adviser" as that term defined in Section 201(11) of the Investment Advisors Act of 1940 (whether or not registered or qualified under that Act); nor

(3) employed by a bank or other organization exempt from registration under federal or state securities laws to perform functions that would require registration or qualification if such functions were performed for an organization not so exempt.

7018. Nasdaq Market Center and Brut Facility Order Execution

(a) The following charges shall apply to the use of the order execution services of the Nasdaq Market Center and Nasdaq's Brut Facility by members for Nasdaq-listed securities subject to the Nasdaq UTP Plan and for Exchange-Traded Funds listed on the American Stock Exchange. The term "Exchange-Traded Funds" shall mean Portfolio Depository Receipts, Index Fund Shares, and Trust Issued Receipts as such terms are defined in Rule 4420(i), (j), and (l), respectively.

Order that accesses the Quote/Order of a market participant that does not charge an access fee to market participants accessing its Quotes/Orders through the Nasdaq Market Center and/or Nasdaq's Brut Facility:	
Charge to member entering order:	
Average daily shares of liquidity provided through the Nasdaq Market Center and/or Nasdaq's Brut Facility by the member during the month:	
Greater than 10 million	\$0.0027 per share executed (but no more than \$108 per trade for trades in securities executed at \$1.00 or less per share)
Greater than 2,000,000 but less than or equal to 10,000,000	\$0.0028 per share executed (but no more than \$112 per trade for trades in securities executed at \$1.00 or less per share)
2,000,000 or less	\$0.0030 per share executed (but no more than \$120 per trade for trades in securities executed at \$1.00 or less per share)
Credit to member providing liquidity:	
Average daily shares of liquidity provided through the Nasdaq Market Center and/or Nasdaq's Brut Facility by the member	

during the month:	
Greater than 20 million	\$0.0025 per share executed (but no more than \$100 per trade for trades in securities executed at \$1.00 or less per share)
Greater than 2,000,000 but less than or equal to 20,000,000	\$0.0022 per share executed (but no more than \$88 per trade for trades in securities executed at \$1.00 or less per share)
Less than or equal to 2,000,000	\$0.0020 per share executed (but no more than \$80 per trade for trades in securities executed at \$1.00 or less per share)
Order that accesses the Quote/Order of a market participant that charges an access fee to market participants accessing its Quotes/ Orders through the Nasdaq Market Center:	
Charge to member entering order:	
Average daily shares of liquidity provided through the Nasdaq Market Center and/or Nasdaq's Brut Facility by the member during the month:	
500,000 or less	\$0.001 per share executed (but no more than \$40 per trade for trades in securities executed at \$1.00 or less per share)
500,001 or more	\$0.001 per share executed (but no more than \$40 per trade for trades in securities executed at \$1.00 or less per share, and no more than \$10,000 per month)
Routed Orders	
Any order entered by a member that is routed outside of both the Nasdaq Market Center and Nasdaq's Brut Facility and that does not attempt to execute in Nasdaq's Brut Facility prior to routing	\$0.004 per share executed

Any other order entered by a member that is routed outside of both the Nasdaq Market Center and Nasdaq's Brut Facility	
Average daily shares of liquidity provided through the Nasdaq Market Center and/or Nasdaq's Brut Facility by the member during the month and average daily shares accessed through and/or routed from the Nasdaq Market Center and/or Nasdaq's Brut Facility by the member during the month (excluding orders routed outside of both the Nasdaq Market Center and Nasdaq's Brut Facility that do not attempt to execute in Nasdaq's Brut Facility prior to routing):	
Greater than 20 million shares of liquidity provided and greater than 40 million shares accessed and/or routed	\$0.0025 per share executed
Greater than 10 million but less than or equal to 20 million shares of liquidity provided and any amount accessed or routed, OR greater than 20 million shares of liquidity provided and 40 million or fewer shares accessed and/or routed	\$0.0027 per share executed
Greater than 2,000,000 but less than or equal to 10,000,000 shares of liquidity provided and any amount accessed and/or routed	\$0.0028 per share executed

Less than or equal to 2,000,000 shares of liquidity provided and any amount accessed and/or routed	\$0.0030 per share executed
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(b) For purposes of assessing Nasdaq Market Center and Brut Facility fees and credits hereunder, (1) a Discretionary Order that executes prior to being displayed as a Quote/Order will always be deemed to be accessing liquidity unless it is executed by (or receives delivery of) a displayed Discretionary Order at a price in the discretionary price range of the displayed Discretionary Order, and (2) a Discretionary Order that executes after being displayed as a Quote/Order will always be deemed to be providing liquidity, unless the displayed Discretionary Order executes against (or is delivered to) a Quote/Order that has not been designated "Immediate or Cancel," at a price in its discretionary price range.

(c) Closing Cross

Market-on-Close and Limit-on-Close orders executed in the Nasdaq Closing Cross	\$0.0005 per share executed
All other quotes and orders executed in the Nasdaq Closing Cross	No charge for execution

(d) Opening Cross

Members shall be charged the Nasdaq Market Center execution fees, and receive the Nasdaq Market Center liquidity provider credits provided in Rule 7018(a), for those quotes and orders executed in the Nasdaq Opening Cross.

(e) There shall be no charges or credits for order entry, execution, routing, or cancellation by members accessing the Nasdaq Market Center or Nasdaq's Brut Facility to buy or sell exchange-listed securities subject to the Consolidated Quotations Service and Consolidated Tape Association plans, other than: (1) the charges in Rule 7018(a) for Exchange-Traded Funds listed on the American Stock Exchange, (2) charges described in Rule 7014, (3) a fee of \$0.0004 per share executed for orders delivered by Nasdaq's Brut Facility to an exchange using the exchange's proprietary order delivery system if such orders do not attempt to execute in Nasdaq's Brut Facility or the Nasdaq Market Center prior to routing to the exchange, and (4) a fee of \$0.009 per share executed for any limit order delivered by Nasdaq's Brut Facility to the New York Stock Exchange ("NYSE") using the NYSE's proprietary order delivery system if such an order is not an on-close order, is not executed in the opening, and remains at the NYSE for more than 5 minutes.

(f) The fees applicable to non-members using Nasdaq's Brut Facility shall be the fees established for members under Rule 7018, as in effect on the date of Nasdaq's registration as a national securities exchange..

7019. Market Data Distributor Fees

(a) Nasdaq Market Data Distributors shall be assessed the following annual administrative fee:

Delayed distributor	\$250
0-999 real-time terminals	\$500
1,000-4,999 real-time terminals	\$1,250
5,000-9,999 real-time terminals	\$2,250
10,000+ real-time terminals	\$3,750

Nasdaq may waive all or part of the foregoing charges.

(b) The charge to be paid by Distributors of the following Nasdaq Market Center real time data feeds shall be:

	Monthly Direct Access Fee	Monthly Internal Distributor Fee	Monthly External Distributor Fee
Issue Specific Data			
Dynamic Intraday	\$2,500	\$1,000	\$2,500
TotalView			
OpenView			
Daily	\$500	\$0	\$500
MFQS			
Market Summary Statistics			
Intraday	\$500	\$50	\$1,500
Real Time Index			

(c) A "distributor" of Nasdaq data is any entity that receives a feed or data file of Nasdaq data directly from Nasdaq or indirectly through another entity and then distributes it either internally (within that entity) or externally (outside that entity). All distributors shall execute a Nasdaq distributor agreement. Nasdaq itself is a vendor of its

data feed(s) and has executed a Nasdaq distributor agreement and pays the distributor charge.

(d) "Direct Access" means a telecommunications interface with Nasdaq for receiving Nasdaq data via a Nasdaq-operated website, system or application, the MCI Financial Extranet, or via an Extranet access provider or other such provider that is fee-liable under Rule 7025.

7020. Automated Voice Response Service Fee

The monthly charge to be paid by the subscriber for access to Nasdaq Level 1 Service and Last Sale Information Service through automated voice response services shall be \$21.25 for each voice port.

7021. NasdaqTrader.com Trading and Compliance Data Package Fee

The charge to be paid by a Nasdaq Member for each entitled user receiving Nasdaq Trading and Compliance Data Package via NasdaqTrader.com is \$100 per month (monthly maximum of 25 Historical Research Reports) or \$130 per month (monthly maximum of 100 Historical Research Reports). The Nasdaq Trading and Compliance Data Package includes:

- (a) Daily Share Volume Report for a Broker/Dealer (Member Firm's information only)
- (b) Monthly Compliance Report Cards (Member Firm's information only)
- (c) Monthly Summaries
- (d) Historical Research Reports
 - (1) Market Maker Price Movement Report
 - (2) Equity Trade Journal (Member Firm's information only)

Nasdaq may modify the contents of the Nasdaq Trading and Compliance Data Package from time to time based on subscriber interest.

7022. Historical Research and Administrative Reports

(a) The charge to be paid by the purchaser of an Historical Research Report regarding a Nasdaq security through the NasdaqTrader.com website shall be determined in accordance with the following schedule:

	Number of fields of information in the report
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	1-10	11-15	16 or more
A. Market Summary Statistics			
For a day	\$10	\$15	\$20
For a month, quarter, or year	\$15	\$20	\$25
B. Index Weighting Information			
For a day	\$15	\$30	\$45
C. Nasdaq Issues Summary Statistics			
For a security for a day	\$10	\$15	\$20
For a security for a month, quarter, or year	\$20	\$30	\$40
For all issues for a day	\$50	\$75	\$100
For all issues for a month, quarter or year	\$100	\$150	\$200
D. Intra-Day Quote and Intra-Day Time and Sales Data			
For a security and/or a market participant for a day	\$15	\$25	\$35
For all market participants for a day or for all securities for a day	\$30	\$40	\$50
E. Member Trading Activity Reports			
For a security and a market participant for a day	\$15	\$25	\$50
For all securities for a market participant for a day	\$30	\$50	\$75
<p>F. Nasdaq may, in its discretion, choose to make a report that purchasers wish to obtain every trading day available on a subscription discount basis. In such cases, the price for a subscription to receive a report every trading day in a month shall be the applicable rate to receive the report for a day times 20; the price for a subscription to receive a report every trading day in a quarter shall be the applicable rate to receive the report for a day times 60; and the price for a subscription to receive a report every trading day in a year shall be the applicable rate to receive the report for a day times 240.</p>			

(b) The charge to be paid by the purchaser of an Historical Research Report regarding a Nasdaq security that wishes to obtain a license to redistribute the information contained in the report to subscribers shall be determined in accordance with the following schedule:

	Number of subscribers				
	1-500	501-999	1,000-4,999	5,000-9,999	10,000+
A. Market Summary Statistics					
More often than once a month	\$250	\$350	\$450	\$550	\$750
Once a month, quarter, or year	\$125	\$175	\$225	\$275	\$375
B. Index Weighting Information					
More often than once a month	\$1,000	\$1,500	\$2,500	\$3,500	\$5,000
Once a month, quarter, or year	\$500	\$550	\$600	\$750	\$1,000
C. Nasdaq Issues Summary Statistics					
More often than once a month	\$500	\$600	\$700	\$800	\$1,000
Once a month, quarter, or year	\$250	\$300	\$350	\$400	\$500
D. Intra-Day Quote and Intra-Day Time and Sales Data					
For a security and/or a market participant for a day	\$200	\$300	\$400	\$500	\$700
For all market participants for a day or for all securities for a day	\$1,000	\$1,500	\$2,500	\$3,500	\$5,000

(c) Administrative Reports — \$25 per user, per month.

7023. Nasdaq TotalView

(a) TotalView Entitlement

The TotalView entitlement allows a subscriber to see all individual Nasdaq Market Center participant orders and quotes displayed in the system as well as the aggregate size of such orders and quotes at each price level in the execution functionality of the Nasdaq Market Center, including the NQDS feed and the Brut System Book Feed.

(1)(A) Except as provided in (a)(1)(B) for the TotalView entitlement there shall be a \$70 monthly charge for each controlled device.

(B) A non-professional subscriber, as defined in Rule 7011(b), shall pay \$14 per month for each controlled device.

(2) 30-Day Free-Trial Offer. Nasdaq shall offer all new individual subscribers and potential new individual subscribers a 30-day waiver of the user fees for TotalView. This waiver shall not include the incremental fees assessed for the NQDS-only service, which are \$30 for professional users and \$9 for non-professional users per month. This fee waiver period shall be applied on a rolling basis, determined by the date on which a new individual subscriber or potential individual subscriber is first entitled by a distributor to receive access to TotalView. A distributor may only provide this waiver to a specific individual subscriber once.

For the period of the offer, the TotalView fee of \$40 per professional user and \$5 per non-professional user per month shall be waived.

(b) A "controlled device" is any device that a distributor of the Nasdaq data entitlement package(s) permits to: (1) access the information in the Nasdaq data entitlement package(s); or (2) communicate with the distributor so as to cause the distributor to access the information in the Nasdaq data entitlement package(s). If a controlled device is part of an electronic network between computers used for investment, trading or order routing activities, the burden shall be on the distributor to demonstrate that the particular controlled device should not have to pay for an entitlement. For example, in some display systems the distributor gives the end user a choice to see the data or not; a user that chooses not to see it would not be charged. Similarly, in a non-display system, users of controlled devices may have a choice of basic or advanced computerized trading or order routing services, where only the advanced version uses the information. Customers of the basic service then would be excluded from the entitlement requirement.

(c) OpenView

The OpenView entitlement package consists of all individual Nasdaq Market Center participant orders and quotes in exchange-listed securities in the system. There shall be a charge of \$6 per month per controlled device for Open View.

(d) Historical TotalView Information — ModelView

Nasdaq will make historical TotalView information, under the ModelView entitlement package, available via NasdaqTrader.com. ModelView shall contain historical TotalView information regarding aggregate displayed and reserve liquidity at each price level in the Nasdaq Market Center. ModelView shall be available for a subscription fee of \$2,000 per month.

7024. Nasdaq Revenue Sharing Program

After Nasdaq earns total operating revenue sufficient to offset actual expenses and working capital needs, a percentage of all Market Participant Operating Revenue ("MPOR") shall be eligible for sharing with Nasdaq Quoting Market Participants (as defined in Rule 4701). MPOR is defined as operating revenue that is generated by Nasdaq Quoting Market Participants. MPOR consists of transaction fees, technology fees, and market data revenue that is attributable to Nasdaq Quoting Market Participant activity in Nasdaq National Market and SmallCap Market securities. MPOR shall not include any investment income or regulatory monies. The sharing of MPOR shall be based on each Nasdaq Quoting Market Participant's pro rata contribution to MPOR. In no event shall the amount of revenue shared with Nasdaq Quoting Market Participants exceed MPOR. To the extent market data revenue is subject to year-end adjustment, MPOR revenue may be adjusted accordingly.

7025. Extranet Access Fee

Extranet providers that establish a connection with Nasdaq to offer direct access connectivity to market data feeds shall be assessed a monthly access fee of \$750 per recipient Customer Premises Equipment ("CPE") Configuration. If an extranet provider uses multiple CPE Configurations to provide market data feeds to any recipient, the monthly fee shall apply to each such CPE Configuration. For purposes of this paragraph (v), the term "Customer Premises Equipment Configuration" shall mean any line, circuit, router package, or other technical configuration used by an extranet provider to provide a direct access connection to Nasdaq market data feeds to a recipient's site.

7026. ACES

Charges to Receiving Subscribers:

Per execution for the first 25,000 orders executed in one month	\$0.70
Per execution for the next 25,000 orders executed in one month	\$0.50
Per execution for all remaining orders executed in one month	\$0.10
Per execution for routing relationship between Receiving Subscriber and Routing Subscriber established after May 1, 2005	\$0.10

Charges to Routing Subscribers:

Reject Fee for orders routed to Receiving Subscribers that have not agreed to receive orders from the Routing Subscriber	\$1.00
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7027. Aggregation of Activity of Affiliated Members

(a) For purposes of applying any provision of Rules 7013, 7014, 7015, 7018, 7024, or 7026 that reflects a charge assessed, or credit provided, by Nasdaq, a member may request that Nasdaq aggregate its activity with the activity of its affiliates. A member requesting aggregation of affiliate activity shall be required to certify to Nasdaq the affiliate status of entities whose activity it seeks to aggregate prior to receiving approval for aggregation, and shall be required to inform Nasdaq immediately of any event that causes an entity to cease to be an affiliate. In addition, Nasdaq reserves the right to request information to verify the affiliate status of an entity.

(b) For purposes of applying any provision of Rules 7013, 7014, 7015, 7018, 7024, or 7026 that reflects a charge assessed, or credit provided, by Nasdaq, references to an entity (including references to a "member," a "participant," or a "Nasdaq Quoting Market Participant") shall be deemed to include the entity and its affiliates that have been approved for aggregation.

(c) For purposes of this Rule 7027, the terms set forth below shall have the following meanings:

(1) An "affiliate" of a member shall mean any wholly owned subsidiary, parent, or sister of the member that is also a member.

(2) A "wholly owned subsidiary" shall mean a subsidiary of a member, 100% of whose voting stock or comparable ownership interest is owned by the member, either directly or indirectly through other wholly owned subsidiaries.

(3) A "parent" shall mean an entity that directly or indirectly owns 100% of the voting stock or comparable ownership interest of a member.

(4) A "sister" shall mean an entity, 100% of whose voting stock or comparable ownership interest is owned by a parent that also owns 100% of the voting stock or comparable ownership interest of a member.

7028. Special Options

Receive only Printer		\$100/month
Local Posting	Permits subscriber to use Nasdaq Level 3 terminals to enter quotations simultaneously into an internal computer system.	\$ 10/month
Dual Keyboard		\$ 15/month
Non-Continuous Access to Nasdaq	Permits vendor to process and distribute Level 1 and LastSale	\$.005/query

Nasdaq Level 1 and Last Sale information	to its subscribers on a non-continuous or Information query-response basis.	
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7029. Installation, Removal or Relocation

Upon installation, removal, relocation of terminal and related equipment, or combination thereof, the subscriber shall pay charges incurred by Nasdaq, on behalf of the subscriber for the work being performed by the maintenance organization retained by Nasdaq.

7030. Other Services

(a) Daily Reports to Newspapers

Reports for regular public release, such as a list of closing quotations or market summary information for newspaper publication, shall be produced in a format acceptable to most publishers without charge. Should such information be transmitted to another location at the request of any firm, a charge may be imposed for such services by Nasdaq.

(b) Other Requests for Data

Nasdaq may impose and collect compensatory charges for data Nasdaq supplied upon request, where there is no provision elsewhere in this Rule 7000 Series for charges for such service or sale.

(c) Correspondents

The charge for registration and display of a correspondent firm for a registered market maker shall be \$3.50 per month for each correspondent displayed per security.

(d) Nasdaq Testing Facility

(1) Subscribers that conduct tests of their Nasdaq access protocols connection (which includes computer-to-computer interface (CTCI), Financial Information Exchange (FIX) interface, and Nasdaq Information Exchange (QIX) interface) or market data vendor feeds through the Nasdaq Testing Facility (NTF) shall pay the following charges:

\$285/hour	For Active Connection testing using current Nasdaq access protocols during the normal operating hours of the NTF;
No Charge	For Idle Connection testing using current Nasdaq access protocols;

\$333/hour	For Active Connection testing using current Nasdaq access protocols at all times other than the normal operating hours of the NTF.
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(2)(A) An "Active Connection" commences when the user begins to send and/or receive a transaction to and from the NTF and continues until the earlier of disconnection or the commencement of an Idle Connection.

(B) An "Idle Connection" commences after a Period of Inactivity and continues until the earlier of disconnection or the commencement of an Active Connection. If a Period of Inactivity occurs immediately after subscriber's connection to the NTF is established and is then immediately followed by an Idle Connection, then such Period of Inactivity shall also be deemed a part of the Idle Connection.

(C) A "Period of Inactivity" is an uninterrupted period of time of specified length when the connection is open but the NTF is not receiving from or sending to subscriber any transactions. The length of the Period of Inactivity shall be such period of time between 10 minutes and 60 minutes in length as Nasdaq may specify from time to time by giving notice to users of the NTF.

(3) The foregoing hourly fees shall not apply to market data vendor feed testing, or testing occasioned by:

(A) new or enhanced services and/or software provided by Nasdaq;

(B) modifications to software and/or services initiated by Nasdaq in response to a contingency; or

(C) testing by a subscriber of a Nasdaq service that the subscriber has not used previously, except if more than 30 days have elapsed since the subscriber commenced the testing of such Nasdaq service.

(4) Subscribers that conduct access protocol or market data vendor feed tests using a dedicated circuit shall pay a monthly fee, in addition to any applicable hourly fee described in section (d)(1) above, in accordance with the following schedule:

Service	Description	Price
NTF Market Data	Test Market Data Vendor Feeds over a 56kb dedicated circuit	\$1,100/circuit/month
NTF CTCI/and/or FIX	CTCI and/or FIX service over a 56kb dedicated circuit	\$1,100/circuit/month
NTF Test Suite	FIX service and CTCI service over two 56kb circuits (128 kb)	\$1,800/2 circuits/month

NTF Circuit Installation	Installation of any service option including SDP configuration	\$700/circuit/installation
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(5) New NTF subscribers that sign a one-year agreement for dedicated testing service shall be eligible to receive 90-calendar days free dedicated testing service.

(6) "New NTF subscribers" are subscribers that

(A) have never had dedicated testing service; or

(B) have not had dedicated testing service within the last 6 calendar months.

7031. Partial Month Charges

Distributors may elect to have the charges for the month of commencement or termination of service be billed on a full month basis or prorated based on the number of trade days in that month.

7032. Late Fees

(a) All charges imposed by Nasdaq that are past due 45 days or more will be subject to a late fee computed by taking the summation of one and one-half percent (1 ½%) of the amount past due for the first month plus one and one-half percent (1 ½%) of the amount past due for any month thereafter, compounded by late fees assessed for previous months.

(b) To illustrate how late fees are assessed, if an account is past due \$1,000 for 45 days, the late fee would be \$30.22. This charge reflects a charge of \$15 for the first month past due ($\$1,000 \times 1\frac{1}{2}\%$) and \$15.22 for the second month past due ($\$1,015 \times 1\frac{1}{2}\%$).

7033. Mutual Fund Quotation Service

(a) Funds and Unit Investment Trusts included in the Mutual Fund Quotation Service ("MFQS") shall be assessed an annual fee of \$400 per fund or trust authorized for the News Media Lists and \$275 per fund or trust authorized for the Supplemental List. Funds authorized during the course of an annual billing period shall receive a proration of these fees but no credit or refund shall accrue to funds or trust terminated during an annual billing period. In addition, there shall be a one-time application processing fee of \$325 for each new fund or trust authorized.

(b) If a Unit Investment Trust expires by its own terms during an annual billing period and is replaced within three months by a trust that is materially similar in investment objective, the replacing trust shall be charged a one-time application fee of

\$150. In addition, the replacing trust shall not be charged an annual fee if the expiring trust has already paid an annual fee for that annual billing period.

(c) Funds included in the MFQS and pricing agents designated by such funds ("Subscriber"), shall be assessed a monthly fee of \$100 or each logon identification obtained by the Subscriber. A Subscriber may use a logon identification to transmit to Nasdaq pricing and other information that the Subscriber agrees to provide to Nasdaq.

(d) Funds included in the MFQS shall be assessed a \$20 administrative fee to process a request to amend the name and/or the symbol of a fund.

7100. Minor Modifications in Charges

To facilitate the development of new information services and uses under appropriate terms and conditions, arrangements of limited duration, geography and/or scope may be entered into with Broker/Dealers, Vendors and other persons which may modify or dispense with some or all of the charges contained in this Rule or the terms and conditions contained in standard agreements. The arrangements contemplated will permit the testing and pilot operation of proposed new information services and uses to evaluate their impact on and to develop the technical, cost and market research information necessary to formulate permanent charges, terms and conditions for filing with and approval by the Commission.



Location: [NASD](#) > [Manual](#) > [Corporate Organization](#) > [By-Laws of NASD Regulation, Inc.](#)

By-Laws of NASD Regulation, Inc.

ARTICLE I

DEFINITIONS

When used in these By-Laws, unless the context otherwise requires, the term:

- (a) "Act" means the Securities Exchange Act of 1934, as amended;
- (b) "Board" means the Board of Directors of NASD Regulation;
- (c) "broker" shall have the same meaning as in Section 3(a)(4) of the Act;
- (d) "Commission" means the Securities and Exchange Commission;
- (e) "day" means calendar day;
- (f) "dealer" shall have the same meaning as in Section 3(a)(5) of the Act;
- (g) "Delaware law" means the General Corporation Law of the State of Delaware;
- (h) "Delegation Plan" means the "Plan of Allocation and Delegation of Functions by NASD to Subsidiaries" as approved by the Commission, and as amended from time to time;
- (i) "Director" means a member of the Board;
- (j) "district" means a district established by the Board pursuant to Article VIII, Section 8.1 of these By-Laws;
- (k) "District Committee" means a District Committee elected pursuant to Article VIII of these By-Laws;
- (l) "District Director" means an NASD Regulation staff member who heads a district office;
- (m) "District Nominating Committee" means a District Nominating Committee elected pursuant to Article VIII of these By-Laws;
- (n) "district office" means an office of NASD Regulation located in a district;
- (o) "Executive Representative" means the executive representative of an NASD member appointed pursuant to Article IV, Section 3 of the NASD By-Laws;
- (p) "Independent Agent" means a corporation or entity selected by the Secretary of NASD Regulation to assist NASD Regulation with nomination and election procedures under Articles VI and VIII of these By-Laws and the representatives of such corporation or entity;
- (q) "Industry Director" or "Industry member" means a Director (excluding the President of NASD Regulation and the Chief Executive Officer of NASD) or a National Adjudicatory Council or committee member who (1) is or has served in the prior three years as an officer, director, or employee of a broker or dealer, excluding an outside director or a director not engaged in the day-to-day management of a broker or dealer; (2) is an officer, director (excluding an outside director), or employee of an entity that owns more than ten percent of the equity of a broker or dealer, and the broker or dealer accounts for more than five percent of the gross revenues received by the consolidated entity; (3) owns more than five percent of the equity securities of any broker or dealer, whose investments in brokers or dealers exceed ten percent of his or her net worth, or whose ownership interest otherwise permits him or her to be engaged in the day-to-day management of a broker or dealer; (4) provides professional services to brokers or

dealers, and such services constitute 20 percent or more of the professional revenues received by the Director or member or 20 percent or more of the gross revenues received by the Director's or member's firm or partnership; (5) provides professional services to a director, officer, or employee of a broker, dealer, or corporation that owns 50 percent or more of the voting stock of a broker or dealer, and such services relate to the director's, officer's, or employee's professional capacity and constitute 20 percent or more of the professional revenues received by the Director or member or 20 percent or more of the gross revenues received by the Director's or member's firm or partnership; or (6) has a consulting or employment relationship with or provides professional services to the NASD, NASD Regulation, NASD Dispute Resolution, or a market for which NASD provides regulation, or has had any such relationship or provided any such services at any time within the prior three years;

(r) "NASD" means the National Association of Securities Dealers, Inc.;

(s) "NASD Board" means the NASD Board of Governors;

(t) "NASD Dispute Resolution" means NASD Dispute Resolution, Inc.;

(u) "NASD member" means any broker or dealer admitted to membership in the NASD;

(v) "NASD Regulation" means NASD Regulation, Inc.;

(w) "National Adjudicatory Council" means a body appointed pursuant to Article V of these By-Laws.

(x) "National Nominating Committee" means the National Nominating Committee appointed pursuant to Article VII, Section 9 of the NASD By-Laws;

(y) "Non-Industry Director" or "Non-Industry member" means a Director (excluding the President of NASD Regulation and the Chief Executive Officer of NASD) or a National Adjudicatory Council or committee member who is (1) a Public Director or Public member; (2) an officer or employee of an issuer of securities listed on a market for which NASD provides regulation; (3) an officer or employee of an issuer of unlisted securities that are traded in the over-the-counter market; or (4) any other individual who would not be an Industry Director or Industry member;

(z) "person associated with a member" or "associated person of a member" means: (1) a natural person who is registered or has applied for registration under the Rules of the Association; (2) a sole proprietor, partner, officer, director, or branch manager of a member, or other natural person occupying a similar status or performing similar functions, or a natural person engaged in the investment banking or securities business who is directly or indirectly controlling or controlled by a member, whether or not any such person is registered or exempt from registration with the NASD under these By-Laws or the Rules of the Association; and (3) for purposes of Rule 8210, any other person listed in Schedule A of Form BD of a member;

(aa) "Public Director" or "Public member" means a Director or National Adjudicatory Council or committee member who has no material business relationship with a broker or dealer or the NASD, NASD Regulation, or a market for which NASD provides regulation;

(bb) "Regional Nominating Committee" means a Regional Nominating Committee that nominates to the National Nominating Committee a candidate for the National Adjudicatory Council to represent a geographical region as provided in Article VI of these By-Laws; and

(cc) "Rules of the Association" or "Rules" means the numbered rules set forth in the NASD Manual beginning with the Rule 0100 Series, as adopted by the NASD Board pursuant to the NASD By-Laws, as hereafter amended or supplemented.

Amended by SR-NASD-2004-110 eff. Dec. 31, 2004.
 Amended by SR-NASD-2001-57 eff. Sept. 12, 2001.
 Amended by SR-NASD-01-13 eff. May 12, 2001.
 Amended by SR-NASD-99-21 eff. July 9, 2000.
 Amended by SR-NASD-99-35 eff. Dec. 1, 1999.
 Amended by SR-NASD-98-56 eff. Oct. 30, 1998.
 Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Selected Notice to Members: 99-95.

ARTICLE II

OFFICES

Location

Sec. 2.1 The address of the registered office of NASD Regulation in the State of Delaware and the name of the registered agent at such address shall be: The Corporation Trust Company, 1209 Orange Street, Wilmington, Delaware 19801. NASD Regulation also may have offices at such other places both within and without the State of Delaware as the Board may from time to time designate or the business of NASD Regulation may require.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Change of Location

Sec. 2.2 In the manner permitted by law, the Board or the registered agent may change the address of NASD Regulation's registered office in the State of Delaware and the Board may make, revoke, or change the designation of the registered agent.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

ARTICLE III

MEETINGS OF THE STOCKHOLDER

Action by Consent of Stockholder

Sec. 3.1 Any action required or permitted by law to be taken at any meeting of the stockholder of NASD Regulation may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, is signed by the holder of the outstanding stock.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

ARTICLE IV

BOARD OF DIRECTORS

General Powers

Sec. 4.1 The property, business, and affairs of NASD Regulation shall be managed by or under the direction of the Board. The Board may exercise all such powers of NASD Regulation and have the authority to perform all such lawful acts as are permitted by law, the Restated Certificate of Incorporation, these By-Laws, or the Delegation Plan to assist the NASD in fulfilling its self-regulatory responsibilities as set forth in Section 15A of the Act, and to support such other initiatives as the Board may deem appropriate. To the fullest extent permitted by applicable law, the Restated Certificate of Incorporation, and these By-Laws, the Board may delegate any of its powers to a committee appointed pursuant to Section 4.13 or to NASD Regulation staff in a manner not inconsistent with the Delegation Plan.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Number of Directors

Sec. 4.2 The Board shall consist of no fewer than five and no more than fifteen Directors, the exact number

to be determined by resolution adopted by the stockholder of NASD Regulation from time to time. Any new Director position created as a result of an increase in the size of the Board shall be filled pursuant to Section 4.4.

Amended by SR-NASD-2001-57 eff. Sept. 12, 2001.
Amended by SR-NASD-00-43 eff. July 21, 2000.
Amended by SR-NASD-99-10 eff. Feb. 8, 1999.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Qualifications

Sec. 4.3 (a) Directors need not be stockholders of NASD Regulation. Only Governors of the NASD Board shall be eligible for election to the Board. The number of Non-Industry Directors shall equal or exceed the number of Industry Directors. The Board shall include the President and the National Adjudicatory Council Chair, representatives of an issuer of investment company shares or an affiliate of such an issuer, and an insurance company or an affiliated NASD member. If the Board consists of 5–7 Directors, it shall include at least one Public Director. If the Board consists of eight to nine Directors, at least two Directors shall be Public Directors. If the Board consists of ten to twelve Directors, at least three Directors shall be Public Directors, and if the Board consists of thirteen to fifteen Directors, at least four shall be Public Directors. The Chief Executive Officer of the NASD shall be an ex-officio non-voting member of the Board.

(b) As soon as practicable, following the annual election of Directors, the Board shall elect from its members a Chair and a Vice Chair and such other persons having such titles as it shall deem necessary or advisable to serve until the next annual election or until their successors are chosen and qualify. The persons so elected shall have such powers and duties as may be determined from time to time by the Board. The Board, by resolution adopted by a majority of Directors then in office, may remove any such person from such position at any time.

Amended by SR-NASD-2001-57 eff. Sept. 12, 2001.
Amended by SR-NASD-99-10 eff. Feb. 8, 1999.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Election

Sec. 4.4 Except as otherwise provided by law, these By-Laws, or the Delegation Plan, after the first meeting of NASD Regulation at which Directors are elected, Directors of NASD Regulation shall be elected each year at the annual meeting of the stockholder, or at a special meeting called for such purpose in lieu of the annual meeting. If the annual election of Directors is not held on the date designated therefor, the Directors shall cause such election to be held as soon thereafter as convenient.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Resignation

Sec. 4.5 Any Director may resign at any time either upon written notice of resignation to the Chair of the Board, the President, or the Secretary. Any such resignation shall take effect at the time specified therein or, if the time is not specified, upon receipt thereof, and the acceptance of such resignation, unless required by the terms thereof, shall not be necessary to make such resignation effective.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Removal

Sec. 4.6 Any or all of the Directors may be removed from office at any time, with or without cause, only by a majority vote of the NASD Board.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Disqualification

Sec. 4.7 The term of office of a Director shall terminate immediately upon a determination by the Board, by a majority vote of the remaining Directors, that: (a) the Director no longer satisfies the classification for which the Director was elected; and (b) the Director's continued service as such would violate the compositional requirements of the Board set forth in Section 4.3. If the term of office of a Director terminates under this Section, and the remaining term of office of such Director at the time of termination is not more than six months, during the period of vacancy the Board shall not be deemed to be in violation of Section 4.3 by virtue of such vacancy.

Amended by SR-NASD-98-56 eff. Oct. 30, 1998.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Filling of Vacancies

Sec. 4.8 If a Director position becomes vacant, whether because of death, disability, disqualification, removal, or resignation, the National Nominating Committee shall nominate, and the NASD Board shall elect by majority vote, a person satisfying the classification (Industry, Non-Industry, or Public Director) for the directorship as provided in Section 4.3 to fill such vacancy, except that if the remaining term of office for the vacant Director position is not more than six months, no replacement shall be required.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Quorum and Voting

Sec. 4.9 (a) At all meetings of the Board, unless otherwise set forth in these By-Laws or required by law, a quorum for the transaction of business shall consist of a majority of the Board, including not less than 50 percent of the Non-Industry Directors. In the absence of a quorum, a majority of the Directors present may adjourn the meeting until a quorum is present.

(b) Except as provided in Section 4.14(b), the vote of a majority of the Directors present at a meeting at which a quorum is present shall be the act of the Board.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Regulation

Sec. 4.10 The Board may adopt such rules, regulations, and requirements for the conduct of the business and management of NASD Regulation not inconsistent with the law, the Restated Certificate of Incorporation, these By-Laws, the Rules of the Association, or the By-Laws of the NASD, as the Board may deem proper. A Director shall, in the performance of such Director's duties, be fully protected in relying in good faith upon the books of account or reports made to NASD Regulation by any of its officers, by an independent certified public accountant, by an appraiser selected with reasonable care by the Board or any committee of the Board or by any agent of NASD Regulation, or in relying in good faith upon other records of NASD Regulation.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Meetings

Sec. 4.11 (a) An annual meeting of the Board shall be held for the purpose of organization, election of officers, and transaction of any other business. If such meeting is held promptly after and at the place specified for the annual meeting of the stockholder, no notice of the annual meeting of the Board need be given. Otherwise, such annual meeting shall be held at such time and place as may be specified in a notice given in accordance with Section 4.12.

(b) Regular meetings of the Board may be held at such time and place, within or without the State of Delaware, as determined from time to time by the Board. After such determination has been made, notice shall be

given in accordance with Section 4.12.

(c) Special meetings of the Board may be called by the Chair of the Board, by the President, or by at least one-third of the Directors then in office. Notice of any special meeting of the Board shall be given to each Director in accordance with Section 4.12.

(d) A Director or member of any committee appointed by the Board may participate in a meeting of the Board or of such committee through the use of a conference telephone or similar communications equipment by means of which all persons participating in the meeting may hear one another, and such participation in a meeting shall constitute presence in person at such meeting for all purposes.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Notice of Meetings; Waiver of Notice

Sec. 4.12 (a) Notice of any meeting of the Board shall be deemed to be duly given to a Director if: (i) mailed to the address last made known in writing to NASD Regulation by such Director as the address to which such notices are to be sent, at least seven days before the day on which such meeting is to be held; (ii) sent to the Director at such address by telegraph, telefax, cable, radio, or wireless, not later than the day before the day on which such meeting is to be held; or (iii) delivered to the Director personally or orally, by telephone or otherwise, not later than the day before the day on which such meeting is to be held. Each notice shall state the time and place of the meeting and the purpose(s) thereof.

(b) Notice of any meeting of the Board need not be given to any Director if waived by that Director in writing (or by telegram, telefax, cable, radio, or wireless and subsequently confirmed in writing) whether before or after the holding of such meeting, or if such Director is present at such meeting, subject to Article XII, Section 12.3(b).

(c) Any meeting of the Board shall be a legal meeting without any prior notice if all Directors then in office shall be present thereat.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Committees

Sec. 4.13 (a) The Board may, by resolution or resolutions adopted by a majority of the whole Board, appoint one or more committees. Except as herein provided, vacancies in membership of any committee shall be filled by the vote of a majority of the whole Board. The Board may designate one or more Directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of any member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another Director to act at the meeting in the place of any such absent or disqualified member. Members of a committee shall hold office for such period as may be fixed by a resolution adopted by a majority of the whole Board. Any member of a committee may be removed from such committee only after a majority vote of the whole Board, after appropriate notice, for refusal, failure, neglect, or inability to discharge such member's duties.

(b) The Board may, by resolution or resolutions adopted by a majority of the whole Board, delegate to one or more committees the power and authority to act on behalf of the Board in carrying out the functions and authority delegated to NASD Regulation by the NASD under the Delegation Plan. Such delegations shall be in conformance with applicable law, the Restated Certificate of Incorporation, these By-Laws, and the Delegation Plan. Action taken by a committee pursuant to such delegated authority shall be subject to review, ratification, or rejection by the Board. In all other matters, the Board may, by resolution or resolutions adopted by a majority of the whole Board, delegate to one or more committees that consist solely of one or more Directors the power and authority to act on behalf of the Board in the management of the business and affairs of NASD Regulation to the extent permitted by law and not inconsistent with the Delegation Plan. A committee, to the extent permitted by law and provided in the resolution or resolutions creating such committee, may authorize the seal of NASD Regulation to be affixed to all papers that may require it.

(c) Except as otherwise permitted by applicable law, no committee shall have the power or authority of the Board with regard to: amending the Restated Certificate of Incorporation or the By-Laws of NASD Regulation; adopting an agreement of merger or consolidation; recommending to the stockholder the sale, lease, or exchange

of all or substantially all NASD Regulation's property and assets; or recommending to the stockholder a dissolution of NASD Regulation or a revocation of a dissolution. Unless the resolution of the Board expressly so provides, no committee shall have the power or authority to authorize the issuance of stock.

(d) Each committee may adopt its own rules of procedure and may meet at stated times or on such notice as such committee may determine. Each committee shall keep regular minutes of its proceedings and report the same to the Board when required.

(e) Unless otherwise provided by these By-Laws, a majority of a committee shall constitute a quorum for the transaction of business, and the vote of a majority of the members of such committee present at a meeting at which a quorum is present shall be an act of such committee.

(f) The Board may appoint an Executive Committee, which shall, to the fullest extent permitted by Delaware law and other applicable law, have and be permitted to exercise all the powers and authority of the Board in the management of the business and affairs of NASD Regulation between meetings of the Board, and which may authorize the seal of NASD Regulation to be affixed to all papers that may require it. The Executive Committee shall consist of three or four Directors, including at least one Public Director. The President of NASD Regulation shall be a member of the Executive Committee. The number of Non-Industry committee members shall equal or exceed the number of Industry committee members. An Executive Committee member shall hold office for a term of one year. At all meetings of the Executive Committee, a quorum for the transaction of business shall consist of a majority of the Executive Committee, including not less than 50 percent of the Non-Industry committee members. In the absence of a quorum, a majority of the committee members present may adjourn the meeting until a quorum is present.

(g) The Board may appoint a Finance Committee. The Finance Committee shall advise the Board with respect to the oversight of the financial operations and conditions of NASD Regulation, including recommendations for NASD Regulation's annual operating and capital budgets and proposed changes to the rates and fees charged by NASD Regulation. The Finance Committee shall consist of three or four Directors. The President of NASD Regulation shall serve as a member of the Committee. A Finance Committee member shall hold office for a term of one year.

(h) Upon request of the Secretary of NASD Regulation, each prospective committee member who is not a Director shall provide to the Secretary such information as is reasonably necessary to serve as the basis for a determination of the prospective committee member's classification as an Industry, Non-Industry, or Public committee member. The Secretary of NASD Regulation shall certify to the Board each prospective committee member's classification. Such committee members shall update the information submitted under this Section at least annually and upon request of the Secretary of NASD Regulation, and shall report immediately to the Secretary any change in such classification.

<p>Amended by SR-NASD-2001-57 eff. Sept. 12, 2001. Amended by SR-NASD-97-71 eff. Jan. 15, 1998.</p>

Conflicts of Interest; Contracts and Transactions Involving Directors

Sec. 4.14 (a) A Director or a National Adjudicatory Council or committee member shall not directly or indirectly participate in any adjudication of the interests of any party if that Director or National Adjudicatory Council or committee member has a conflict of interest or bias, or if circumstances otherwise exist where his or her fairness might reasonably be questioned. In any such case, the Director or National Adjudicatory Council or committee member shall recuse himself or herself or shall be disqualified in accordance with the Rules of the Association.

(b) No contract or transaction between NASD Regulation and one or more of its Directors or officers, or between NASD Regulation and any other corporation, partnership, association, or other organization in which one or more of its Directors or officers are directors or officers, or have a financial interest, shall be void or voidable solely for this reason if: (i) the material facts pertaining to such Director's or officer's relationship or interest and the contract or transaction are disclosed or are known to the Board or the committee, and the Board or committee in good faith authorizes the contract or transaction by the affirmative vote of a majority of the disinterested Directors; (ii) the material facts are disclosed or become known to the Board or committee after the contract or transaction is entered into, and the Board or committee in good faith ratifies the contract or transaction by the affirmative vote of a majority of the disinterested Directors; or (iii) the material facts pertaining to the Director's or officer's relationship or interest and the contract or transaction are disclosed or are known to the stockholder entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholder. Only disinterested Directors may be counted in determining the presence of a quorum at the portion of a meeting of the Board or of a

committee that authorizes the contract or transaction. This subsection shall not apply to a contract or transaction between NASD Regulation and the NASD, NASD Dispute Resolution, or Nasdaq.

Amended by SR-NASD-2004-110 eff. Dec. 31, 2004.
Amended by SR-NASD-98-56 eff. Oct. 30, 1998.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Action Without Meeting

Sec. 4.15 Any action required or permitted to be taken at a meeting of the Board or of a committee may be taken without a meeting if all Directors or all members of such committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the Board or the committee.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Communication of Views Regarding Contested Election or Nomination

Sec. 4.16 NASD Regulation, the Board, any committee, the National Adjudicatory Council, and NASD Regulation staff shall not take any position publicly or with an NASD member or person associated with or employed by a member with respect to any candidate in a contested election or nomination held pursuant to these By-Laws or the NASD By-Laws. A Director, committee member, or National Adjudicatory Council member may communicate his or her views with respect to a candidate if such individual acts solely in his or her individual capacity and disclaims any intention to communicate in any official capacity on behalf of NASD Regulation, the Board, the National Adjudicatory Council, or any committee. NASD Regulation, the Board, the National Adjudicatory Council, any committee, and the NASD Regulation staff shall not provide any administrative support to any candidate in a contested election or nomination conducted pursuant to these By-Laws or the NASD By-Laws.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

ARTICLE V

NATIONAL ADJUDICATORY COUNCIL

Appointment and Authority

Sec. 5.1 The Board shall appoint a National Adjudicatory Council. The National Adjudicatory Council may be authorized to act for the Board in a manner consistent with these By-Laws, the Rules of the Association, and the Delegation Plan with respect to an appeal or review of a disciplinary proceeding, a statutory disqualification proceeding, or a membership proceeding; a review of an offer of settlement, a letter of acceptance, waiver, and consent, and a minor rule violation plan letter; the exercise of exemptive authority; and such other proceedings or actions authorized by the Rules of the Association. The National Adjudicatory Council also shall consider and make recommendations to the Board on policy and rule changes relating to the business and sales practices of NASD members and associated persons and enforcement policies, including policies with respect to fines and other sanctions. The Board may delegate such other powers and duties to the National Adjudicatory Council as the Board deems appropriate in a manner not inconsistent with the Delegation Plan.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Number of Members and Qualifications

Sec. 5.2 (a) The National Adjudicatory Council shall consist of no fewer than 12 and no more than 14 members. The number of Non-Industry members, including at least three Public members, shall equal or exceed the number of Industry members. In 1999 and thereafter, each geographic region established by the Board under Article VI, Section 6.1 shall be represented by an Industry member. Those Industry members not representing a geographic region, if any, shall be considered at-large Industry members.

(b) The incumbent National Adjudicatory Council shall elect a Chair and a Vice Chair from among the members serving during the following term. The Chair and Vice Chair shall have such powers and duties as may be determined from time to time by the National Adjudicatory Council. The Chair also shall serve as a Director of the NASD Regulation Board and a Governor of the NASD Board for a one-year term as provided in the By-Laws and Restated Certificate of Incorporation of the NASD and these By-Laws. The Board, by resolution adopted by a majority of Directors then in office and after notice to the NASD Board, may remove the Chair or Vice Chair from such position at any time for refusal, failure, neglect, or inability to discharge his or her duties.

Amended by SR-NASD-99-36 eff. Aug. 4, 1999.
Amended by SR-NASD-98-36 eff. July 15, 1998.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Nomination Process

Sec. 5.3 (a) Pursuant to Article VII, Section 9 of the NASD By-Laws, the National Nominating Committee shall nominate all candidates for the National Adjudicatory Council for subsequent appointment by the Board. Each Regional Nominating Committee shall nominate an Industry member candidate for consideration by the National Nominating Committee as provided in Article VI of these By-Laws. Candidates for at-large Industry member positions on the National Adjudicatory Council shall not be subject to regional nominating procedures.

(b) The Secretary of NASD Regulation shall collect from each nominee for the office of member of the National Adjudicatory Council such information as is reasonably necessary to serve as the basis for a determination of the nominee's classification as an Industry, Non-Industry, or Public member, and the Secretary shall certify to the National Nominating Committee each nominee's classification. After appointment to the National Adjudicatory Council, each member shall update such information at least annually and upon request of the Secretary, and shall report immediately to the Secretary any change in such classification.

Amended by SR-NASD-98-36 eff. July 15, 1998.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Term of Office

Sec. 5.4 (a) Except as otherwise provided in this Article, each National Adjudicatory Council member shall hold office for a term of three years or until a successor is duly appointed and qualified, except in the event of earlier termination from office by reason of death, resignation, removal, disqualification, or other reason.

(b) Beginning in January 2002, the National Adjudicatory Council shall be divided into three classes. The term of office of those of the first class shall expire in January 2003, the term of office of those of the second class shall expire in January 2004, and the term of office of those of the third class shall expire in January 2005. Beginning in January 2003, members shall be appointed for term of three years to replace those whose terms expire.

(c) Beginning in 2002, no member may serve consecutive terms, except that if a member is appointed to fill a term of less than one year, such member may serve a single three year term following the expiration of such member's initial term.

Amended by SR-NASD-2001-74 eff. Oct. 17, 2001.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Resignation

Sec. 5.5 A member of the National Adjudicatory Council may resign at any time upon written notice to the Board. Any such resignation shall take effect at the time specified therein, or if the time is not specified, upon receipt thereof, and the acceptance of such resignation, unless required by the terms thereof, shall not be necessary to make such resignation effective.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Removal

Sec. 5.6 Any or all of the members of the National Adjudicatory Council may be removed from office at any time for refusal, failure, neglect, or inability to discharge the duties of such office by majority vote of the Board.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Disqualification

Sec. 5.7 Notwithstanding Section 5.4, the term of office of a National Adjudicatory Council member shall terminate immediately upon a determination by the Board, by a majority vote, that: (a) the member no longer satisfies the classification (Industry, Non-Industry, or Public member) for which the member was elected; and (b) the member's continued service as such would violate the compositional requirements of the National Adjudicatory Council set forth in Section 5.2. If the term of office of a National Adjudicatory Council member terminates under this Section, and the remaining term of office of such member at the time of termination is not more than six months, during the period of vacancy the National Adjudicatory Council shall not be deemed to be in violation of Section 5.2 by virtue of such vacancy.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Filling of Vacancies

Sec. 5.8 If a position on the National Adjudicatory Council becomes vacant, whether because of death, disability, disqualification, removal, or resignation, the National Nominating Committee shall nominate, and the Board shall appoint a person satisfying the classification (Industry, Non-Industry, or Public member) for the position as provided in Section 5.2(a) to fill such vacancy, except that if the remaining term of office for the vacant position is not more than six months, no replacement shall be required.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Quorum and Voting

Sec. 5.9 At all meetings of the National Adjudicatory Council, a quorum for the transaction of business shall consist of a majority of the National Adjudicatory Council, including not less than 50 percent of the Non-Industry members. In the absence of a quorum, a majority of the members present may adjourn the meeting until a quorum is present.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Meetings

Sec. 5.10 The members of the National Adjudicatory Council may participate in a meeting through the use of a conference telephone or similar communications equipment by means of which all persons participating in the meeting may hear one another, and such participation in a meeting shall constitute presence in person at such meeting for all purposes.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Review Subcommittee

Sec. 5.11 The National Adjudicatory Council shall appoint a Review Subcommittee to determine whether disciplinary and membership proceedings decisions should be called for review by the National Adjudicatory Council under the Rules of the Association and to perform any other function authorized by the Rules of the Association. The Review Subcommittee shall be composed of no fewer than two and no more than four members

of the National Adjudicatory Council. The number of Non-Industry members shall equal or exceed the number of Industry members. At all meetings of the Review Subcommittee, a quorum for the transaction of business shall consist of not less than 50 percent of the members of the Review Subcommittee, including not less than 50 percent of the Non-Industry members.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

ARTICLE VI

NATIONAL ADJUDICATORY COUNCIL REGIONAL NOMINATIONS FOR INDUSTRY MEMBERS

Establishment of Regions

Sec. 6.1 The Board shall establish boundaries for geographical regions within the United States for the purpose of nominating candidates for regional Industry member positions on the National Adjudicatory Council to the National Nominating Committee. The Board may make changes from time to time in the number or boundaries of the regions as the Board deems necessary or appropriate in accordance with Article V, Section 5.2(a). The Board shall prescribe such policies and procedures as are necessary or appropriate to address the implementation of a new region configuration in the event of a change in the number or boundaries of the regions.

Amended by SR-NASD-98-36 eff. July 15, 1998.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Composition

Sec. 6.2 (a) A Regional Nominating Committee shall be elected for each region designated by the Board under Section 6.1. Each District Nominating Committee for a district located in the region shall elect two District Committee members from the district to serve on the Regional Nominating Committee. If a region shall consist of one district, the District Nominating Committee for the district shall elect four District Committee members from the district to serve on the Regional Nominating Committee.

(b) In the event of the refusal, failure, neglect, or inability of a member of a Regional Nominating Committee to discharge his or her duties, the Regional Nominating Committee may remove the member by the affirmative vote of two-thirds of the members of the Regional Nominating Committee then in office and declare the member's position vacant. The Regional Nominating Committee shall notify the Regional Nominating Committee member of his or her removal within seven days after the vote. The member's position shall be filled pursuant to Section 6.4. A member who is removed may submit a written appeal of the removal to the Board within 30 days after the date he or she is notified in writing of the removal. The Board may affirm, reverse, or modify the determination of the Regional Nominating Committee. A vote of a majority of the Directors then in office shall be required to reverse or modify the action of the Regional Nominating Committee.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Term of Office

Sec. 6.3 Each regularly elected member of a Regional Nominating Committee shall hold office for a term of two years, or until a successor is elected and qualified, or until death, resignation, or removal. A member of a Regional Nominating Committee may not serve more than three consecutive terms.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Filling of Vacancies

Sec. 6.4 In the event of a vacancy on a Regional Nominating Committee caused by the departure of a member prior to the expiration of the member's term of office, the District Nominating Committee that elected the member shall appoint by majority vote another member of the District Committee to fill the vacancy. The appointment shall be effective until the next regularly scheduled election occurs pursuant to this Article.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Meetings

Sec. 6.5 Meetings of a Regional Nominating Committee shall be held at such times and places, upon such notice, and in accordance with such procedures as each Regional Nominating Committee in its discretion may determine. A quorum of a Regional Nominating Committee shall consist of a majority of its members, and any action taken by a majority vote at any meeting at which a quorum is present, except as otherwise provided in these By-Laws, shall constitute the action of the Committee. Action by a Regional Nominating Committee may be taken by mail, telephonic, or telegraphic vote, in which case any action taken by a majority of the Committee shall constitute the action of the Committee. Action taken by telephonic vote shall be confirmed in writing at a regular meeting of the Regional Nominating Committee.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Election of Officers

Sec. 6.6 Following the annual election of members of the Regional Nominating Committees pursuant to this Article, each Regional Nominating Committee shall elect from its members a Chair and such other officers as it deems necessary for the proper performance of its duties under these By-Laws.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Expenses

Sec. 6.7 Funds to meet the regular expenses of each Regional Nominating Committee shall be provided by the Board, and all such expenses shall be subject to the approval of the Board.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Notice to Chair

Sec. 6.8 On or before August 1, 1999, and annually thereafter, the Secretary of NASD Regulation shall send a written notice to the chair of a Regional Nominating Committee if the term of office of the National Adjudicatory council member representing the region shall expire in the next calendar year. The notice shall describe the nomination procedures for filling the office.

Amended by SR-NASD-2001-74 eff. Oct. 17, 2001.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Solicitation of Candidates

Sec. 6.9 NASD Regulation staff shall provide the Regional Nominating Committee with a description of the NASD membership in the region. The Regional Nominating Committee shall identify and solicit candidates to nominate to the National Nominating Committee for the office of National Adjudicatory Council member. The Regional Nominating Committee Chair shall send a written notice of the upcoming nomination to the Executive Representative and each branch office of the NASD members in the region and request that such NASD members submit names of candidates to the Regional Nominating Committee or the Secretary of NASD Regulation for consideration.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Secretary's Notice to NASD Members

Sec. 6.10 The Secretary of NASD Regulation shall send a written notice to NASD members in the region describing the nomination procedures.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Regional Nominating Committee Candidate

Sec. 6.11 The Regional Nominating Committee shall review the background of the candidates and the description of the NASD membership provided by NASD Regulation staff and shall propose one or more candidates for nomination to the National Nominating Committee. In proposing a candidate for nomination, the Regional Nominating Committee shall endeavor to secure appropriate and fair representation of the region.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Notice of Regional Nominating Committee Candidate

Sec. 6.12 The Regional Nominating Committee shall send to the Executive Representatives and branch offices of the NASD members in the region a written notice of the name of the candidate or candidates the Regional Nominating Committee proposes for nomination to the National Nominating Committee.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Designation of Additional Candidates

Sec. 6.13 If an officer, director, or employee of an NASD member in the region is not proposed for nomination by the Regional Nominating Committee and wants to seek the nomination, he or she shall send a written notice to the Regional Nominating Committee Chair or the Secretary of NASD Regulation within 14 calendar days after the mailing date of the Regional Nominating Committee's notice under Section 6.12. The Regional Nominating Committee Chair or the Secretary of NASD Regulation shall make a written record of the time and date of the receipt of the officer's, director's, or employee's notice. The officer, director, or employee shall be designated as an "additional candidate."

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

List of NASD Members Eligible to Vote

Sec. 6.14 (a) The Secretary of NASD Regulation shall mail a list of all NASD members eligible to vote in the region and their Executive Representatives to the additional candidate immediately following receipt of the additional candidate's notice by the Regional Nominating Committee Chair or the Secretary of NASD Regulation.

(b) An NASD member that has its principal office, one or more registered branch offices, or a principal office and one or more registered branch offices in the region shall be eligible to cast one vote on the nomination through the NASD member's Executive Representative.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Requirement for Petition Supporting Additional Candidate

Sec. 6.15 An additional candidate shall be proposed for nomination if a petition signed by at least ten percent

of the NASD members eligible to vote in the region is filed with the Regional Nominating Committee within 30 calendar days after the date of mailing of the list to the additional candidate pursuant to Section 6.14. Only an Executive Representative may sign a petition on behalf of an NASD member.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Uncontested Nomination

Sec. 6.16 If the Regional Nominating Committee proposes one candidate for nomination and no additional candidate is proposed for nomination pursuant to Section 6.15, the Regional Nominating Committee shall nominate its candidate to the National Nominating Committee.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Notice of Contested Nomination

Sec. 6.17 If the Regional Nominating Committee proposes more than one candidate for nomination, or if an additional candidate is proposed for nomination pursuant to Section 6.15, the Regional Nominating Committee shall send a written notice to the Executive Representatives of the NASD members eligible to vote in the region announcing the names of the candidates and describing contested nomination procedures.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Administrative Support

Sec. 6.18 The Secretary of NASD Regulation shall designate a district office in the region to provide administrative support to all candidates by sending to NASD members eligible to vote in the region up to two mailings of materials prepared by the candidates. NASD Regulation shall pay the postage for the mailings. If a candidate wants such mailings sent, the candidate shall prepare such material on the candidate's personal stationery. The material shall state that it represents the opinion of the candidate. The candidate shall provide a copy of such material for each member of the NASD in the region. A candidate proposed for nomination by the Regional Nominating Committee may identify himself or herself as such in his or her materials. Any candidate may send additional mailings to NASD members at the candidate's own expense. Except as provided in this Article, NASD Regulation, the Board, the Regional Nominating Committee, any other committee, the National Adjudicatory Council, and NASD Regulation staff shall not provide any other administrative support to a candidate for the nomination under this Article or any candidate in a contested election conducted under Article VII of the NASD By-Laws.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Ballots

Sec. 6.19 With the assistance of the Secretary of NASD Regulation and an Independent Agent, the Regional Nominating Committee shall prepare a ballot with the name or names of its candidate and any additional candidates proposed for nomination pursuant to Section 6.15. The ballot shall list the candidates in alphabetical order and shall identify the candidate or candidates proposed for nomination by the Regional Nominating Committee. The Regional Nominating Committee shall send a ballot to the Executive Representative of each NASD member eligible to vote in the region. Instructions on the ballot shall direct the Executive Representative to return the ballot to the Independent Agent and state that the ballot envelope must be postmarked on or before the return date specified on the ballot. The return date specified on the ballot shall be no fewer than 30 and no more than 45 days after the date of mailing of the ballot.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Vote Qualification List

Sec. 6.20 Eligibility to vote on a regional nomination shall be based on the NASD's membership records as of a date designated by the Secretary of NASD Regulation that is not more than 30 days before the date of mailing of the ballot. The Secretary of NASD Regulation shall prepare a list of NASD members eligible to vote in the region and their Executive Representatives, which shall be used for vote qualification purposes, and shall provide the list to the candidates.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Ballots Returned As Undelivered

Sec. 6.21 The Independent Agent shall open any ballot envelope returned undelivered and shall determine whether it was sent to the NASD member's address of record. If incorrectly addressed, the Independent Agent shall send a new ballot to the NASD member's address of record.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

General Procedures for Qualification and Accounting of Ballots

Sec. 6.22 After the voting period, on a date or dates designated by the Secretary of NASD Regulation, the qualification and accounting of ballots shall take place. The date or dates designated shall be not later than 14 calendar days after the return date specified on the ballot pursuant to Section 6.19. Candidates and their representatives shall be allowed to observe the qualification and accounting of ballots. Representation for each candidate shall be limited to two individuals. The Independent Agent shall bring to a specified district office in the region all ballots timely received. Under the direction of the Secretary of NASD Regulation or the Secretary's designee, the Independent Agent shall open and count the ballots. For ballot qualification purposes, the Independent Agent shall identify to the candidates the NASD members that timely returned ballots and inform the candidates of the Independent Agent's determination of whether or not a ballot is qualified for voting purposes. The determination shall be based on a comparison of ballots received against the list of NASD members eligible to vote in the region and their Executive Representatives as prepared by the Secretary of NASD Regulation under Section 6.20. The Secretary of NASD Regulation or the Secretary's designee shall make the final determination of the qualification of a ballot. Upon the qualification of a ballot, the Independent Agent shall record the vote indicated on the ballot. The candidates and their representatives shall not be allowed to see the vote of an NASD member.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Ballots Set Aside

Sec. 6.23 The Independent Agent shall set aside a ballot if: (a) the ballot is received from an NASD member eligible to vote in the region and the ballot is signed by a person who is not the Executive Representative listed on the vote qualification list prepared under Section 6.20, and the Secretary of the NASD has not received proper notice of a change in Executive Representative pursuant to the NASD By-Laws; or (b) two or more properly executed ballots are received from an NASD member eligible to vote in the region. If the Independent Agent determines that the ballots set aside are material to the outcome of the nomination, the Secretary of NASD Regulation and the Independent Agent shall make reasonable efforts to resolve each ballot set aside. With respect to a ballot not signed by an Executive Representative of record, the Secretary of NASD Regulation shall contact the NASD member to request that the NASD member send proper written notice of any change in Executive Representative by facsimile so that the ballot may be counted. With respect to multiple ballots from an NASD member, the Independent Agent shall contact the Executive Representative of the NASD member to obtain the NASD member's vote. The Secretary of NASD Regulation shall keep a list of NASD members that reported their ballot was lost or not received and that were provided with a duplicate ballot. The Secretary of NASD Regulation shall provide the list to the Independent Agent and, upon request, to the candidates.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Invalid Ballots

Sec. 6.24 The Independent Agent shall declare a ballot invalid if one or more of the following conditions exists:

- (a) the ballot is not signed by the Executive Representative (unless Section 6.23 applies);
- (b) a vote is not indicated on the ballot; or
- (c) a vote for more than one candidate is indicated on the ballot.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Certification of Nomination

Sec. 6.25 Under the direction of the Secretary of NASD Regulation or the Secretary's designee, the Independent Agent shall count the votes received for each candidate. The candidate receiving the largest number of votes cast in the region shall be declared the nominee from the region and the Regional Nominating Committee shall nominate such candidate to the National Nominating Committee. In the event of a tie, there shall be a run-off vote for the nomination. The Regional Nominating Committee shall send a written certification of the nomination results to the National Nominating Committee. The certification shall state the number of votes received by each candidate and the number of ballots set aside.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Rejection of Regional Nominating Committee Nominee

Sec. 6.26 If the National Nominating Committee rejects the nominee of the Regional Nominating Committee, the Regional Nominating Committee shall repeat the nomination procedures in Section 6.9 through Section 6.25.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Extension of Time and Additional Procedures

Sec. 6.27 The Secretary of NASD Regulation may extend a time period under this Article for good cause shown. In extraordinary circumstances, the Secretary of NASD Regulation, with the approval of the Executive Committee or the Board, may adopt additional procedures for nominations under this Article.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

ARTICLE VII

OFFICERS, AGENTS, AND EMPLOYEES

Officers

Sec. 7.1 The Board shall elect the officers of NASD Regulation, which shall include a President, a Secretary, and such other executive or administrative officers as it shall deem necessary or advisable, including, but not limited to: Executive Vice President, Senior Vice President, Vice President, General Counsel, and Treasurer of NASD Regulation. All such officers shall have such titles, powers, and duties, and shall be entitled to such compensation, as shall be determined from time to time by the Board. The terms of office of such officers shall be at the pleasure of the Board, which by affirmative vote of a majority of the Board, may remove any such officer at any time. One person may hold the offices and perform the duties of any two or more of said offices, except the offices and duties of President and Vice President or of President and Secretary. None of the officers, except the President, need be Directors of NASD Regulation.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Absence of the President

Sec. 7.2 In the case of the absence or inability to act of the President of NASD Regulation, or in the case of a vacancy in such office, the Board may appoint its Chair or such other person as it may designate to act as such officer pro tem, who shall assume all the functions and discharge all the duties of the President.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Agents and Employees

Sec. 7.3 In addition to the officers, NASD Regulation may employ such agents and employees as the Board may deem necessary or advisable, each of whom shall hold office for such period and exercise such authority and perform such duties as the Board, the President, or any officer designated by the Board may from time to time determine. Agents and employees of NASD Regulation shall be under the supervision and control of the officers of the NASD Regulation, unless the Board, by resolution, provides that an agent or employee shall be under the supervision and control of the Board.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Delegation of Duties of Officers

Sec. 7.4 The Board may delegate the duties and powers of any officer of NASD Regulation to any other officer or to any Director for a specified period of time and for any reason that the Board may deem sufficient.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Resignation and Removal of Officers

Sec. 7.5 (a) Any officer may resign at any time upon written notice of resignation to the Board, the President, or the Secretary. Any such resignation shall take effect upon receipt of such notice or at any later time specified therein. The acceptance of a resignation shall not be necessary to make the resignation effective.

(b) Any officer of NASD Regulation may be removed, with or without cause, by resolution adopted by a majority of the Directors then in office at any regular or special meeting of the Board or by a written consent signed by all of the Directors then in office. Such removal shall be without prejudice to the contractual rights of the affected officer, if any, with NASD Regulation.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Bond

Sec. 7.6 NASD Regulation may secure the fidelity of any or all of its officers, agents, or employees by bond or otherwise.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

ARTICLE VIII

DISTRICT COMMITTEES AND DISTRICT NOMINATING COMMITTEES

Establishment of Districts

Sec. 8.1 The Board shall establish boundaries for districts within the United States to assist NASD Regulation in administering its affairs in a manner that is consistent with applicable law, the Restated Certificate of Incorporation, these By-Laws, the Delegation Plan, and the Rules of the Association. The Board may make changes from time to time in the number or boundaries of the districts as it deems necessary or appropriate. The Board shall prescribe such policies and procedures as are necessary or appropriate to address the implementation of a new district configuration in the event of a change in the number or boundaries of the districts.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Composition of District Committees

Sec. 8.2 (a) A district created under Section 8.1 shall elect a District Committee pursuant to this Article. A District Committee shall consist of no fewer than five and no more than 20 members, unless otherwise provided by resolution of the Board. Subject to the limitation set forth in the immediately preceding sentence, the authorized number of members of a District Committee shall be determined from time to time by the Board; provided, however, that no decrease in the authorized number of members of a District Committee shall shorten the term of office of any member thereof. Each District Committee member shall: (1) be registered with an NASD member eligible to vote in the district for District Committee elections, and (2) work primarily from such NASD member's principal office or a branch office that is located within the district where the member serves on a District Committee. Members of the District Committees shall serve as panelists in disciplinary proceedings in accordance with the Rules of the Association. The District Committees shall consider and recommend policies and rule changes to the Board. The District Committees shall endeavor to educate NASD members and other brokers and dealers in their respective districts as to the objects, purposes, and work of the NASD and NASD Regulation in order to foster NASD members' interest and cooperation.

(b) A member of a District Committee may resign at any time upon giving Notice to the District Director. Any such resignation shall take effect upon receipt of such Notice or at any later time specified therein, provided that notice of resignation at a later date may be made immediately effective at the discretion of the Executive Vice President, Regulatory Policy and Programs or the Executive Vice President, Member Regulation or their respective designee(s). The acceptance of such resignation shall not be necessary to make such resignation effective.

(c) In the event of the refusal, failure, neglect, or inability of a member of a District Committee to discharge his or her duties, or for any cause affecting the best interests of NASD Regulation, the sufficiency of which shall be decided by the District Committee, the District Committee may remove the member by the affirmative vote of two-thirds of the members of the District Committee then in office and declare the member's position vacant. The District Committee shall notify the District Committee member of his or her removal within seven days after the vote. A member who is removed may submit a written appeal of the removal to the Board within 30 days after the date he or she is notified of the removal. The Board may affirm, reverse, or modify the determination of the District Committee. A vote of a majority of the Directors then in office shall be required to reverse or modify the action of the District Committee.

(d) In the event of a vacancy in a District Committee resulting from death, resignation, removal, or other cause, the Executive Vice President, Regulatory Policy and Programs or the Executive Vice President, Member Regulation or their respective designee(s) shall determine whether such vacancy shall be filled prior to the next regularly scheduled election of District Committee members. In the event the Executive Vice President, Regulatory Policy and Programs or the Executive Vice President, Member Regulation or their respective designee(s) determines that a vacancy on a District Committee should be filled, the vacancy shall be filled pursuant to Section 8.4.

Amended by SR-NASD-2005-086 eff. July 5, 2005.
Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Term of Office of District Committee Members

Sec. 8.3 Each regularly elected member of a District Committee shall hold office for a "full term" which is the later of three years or until a successor is elected and qualified. Notwithstanding the term of office for a regularly elected member, such member's term shall terminate sooner upon the member's death, resignation, or removal.

There is no limit on the number of terms that may be served by a member of a District Committee, provided, that no more than two terms may be served consecutively. The word "term" as used for the purpose of this Section shall mean either a full term for a regularly elected member or a "partial term" which is a term served by a member appointed to fill a vacancy on the District Committee created by the termination of a regularly elected member's office prior to the expiration of the full term.

Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Filling of Vacancies on District Committees

Sec. 8.4 In the event of a vacancy on a District Committee prior to the expiration of the member's term of office, and where the Executive Vice President, Regulatory Policy and Programs or the Executive Vice President, Member Regulation or their respective designee(s) determines, pursuant to Section 8.2(d), that such vacancy should be filled, or in the event of a newly created membership on a District Committee by virtue of an increase in the authorized number of members thereof, the District Committee shall appoint by majority vote a representative of an NASD member eligible pursuant to Section 8.2(a) to fill the vacancy or newly created membership. The appointment by the District Committee shall be effective until the next regularly scheduled election, and until such member's successor is elected and qualified. Following the next regularly scheduled election, in the event of a vacancy, the newly elected Committee member shall serve only the duration of the departed Committee member's term, and in the event of a newly created membership, the newly elected Committee member shall serve only the duration of the term for such class of membership.

Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Meetings of District Committees

Sec. 8.5 Meetings of a District Committee shall be held at such times and places, upon such notice, and in accordance with such procedures as the Executive Vice President, Regulatory Policy and Programs or the Executive Vice President, Member Regulation or their respective designee(s) in his or her discretion may determine in consultation with the Chair of the District Committee. A quorum of a District Committee shall consist of a majority of its members, and any action taken by a majority present at any meeting at which a quorum is present, except as otherwise provided in these By-Laws, shall constitute the action of the Committee. Any or all members of a District Committee may participate in any such meeting by means of conference telephone or other communications equipment by means of which all participants can communicate with each other, and such participation shall constitute presence in person at the meeting. Action by a District Committee may be taken by consent in writing or by electronic transmission in lieu of a meeting, in which case any action taken by a majority of the Committee shall constitute the action of the Committee.

Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Election of District Officers

Sec. 8.6 At or following its last regularly scheduled meeting of the calendar year, each District Committee shall elect from its members a Chair and such other officers as it deems necessary for the proper performance of its duties under these By-Laws.

Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Advisory Council

Sec. 8.7 (a) The Chairs of the District Committees, elected pursuant to Section 8.6, together with the Chair of the Market Regulation Committee shall constitute an Advisory Council to the Board.

(b) The Advisory Council shall be advised of and entitled to attend such meetings of the Board as the Board may designate for such Advisory Council's attendance, and the Board shall designate at least one such meeting annually. The Advisory Council shall not be entitled to vote at meetings of the Board.

Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Expenses of District Committees

Sec. 8.8 Funds to meet the regular expenses of each District Committee shall be provided by the Board, and all such expenses shall be subject to the approval of the Board.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Composition of District Nominating Committees

Sec. 8.9 (a) Each district created under Section 8.1 shall elect a District Nominating Committee pursuant to this Article. A District Nominating Committee shall consist of five members, unless the Board by resolution increases a District Nominating Committee to a larger number. Each District Nominating Committee member shall: (1) be registered with an NASD member eligible to vote in the district for District Committee elections, and (2) work primarily from such NASD member's principal office or a branch office that is located within the district where the member serves on a District Nominating Committee, but shall not be a member of the District Committee. A majority of the members of the District Nominating Committee shall include persons who previously have served on a District Committee or who are current or former Directors or current or former Governors of the NASD Board.

(b) A member of a District Nominating Committee may resign at any time upon giving Notice to the District Director. Any such resignation shall take effect upon receipt of such Notice or at any later time specified therein, provided that notice of resignation at a later date may be made immediately effective at the discretion of the Executive Vice President, Regulatory Policy and Programs or the Executive Vice President, Member Regulation or their respective designee(s). The acceptance of such resignation shall not be necessary to make such resignation effective.

(c) In the event of the refusal, failure, neglect, or inability of a member of a District Nominating Committee to discharge his or her duties, or for any cause affecting the best interests of NASD Regulation, the sufficiency of which shall be decided by the District Nominating Committee, the District Nominating Committee may remove the member by the affirmative vote of two-thirds of the members of the District Nominating Committee then in office and declare the member's position vacant. The District Nominating Committee shall notify the District Nominating Committee member of his or her removal within seven days after the vote. A member who is removed may submit a written appeal of the removal to the Board within 30 days after the date he or she is notified in writing of the removal. The Board may affirm, reverse, or modify the determination of the District Nominating Committee. A vote of a majority of the Directors then in office shall be required to reverse or modify the action of the District Nominating Committee.

(d) In the event of a vacancy in a District Nominating Committee resulting from death, resignation, removal, or other cause, the Executive Vice President, Regulatory Policy and Programs or the Executive Vice President, Member Regulation or their respective designee(s) shall determine whether such vacancy shall be filled prior to the next regularly scheduled election of District Nominating Committee members. In the event the Executive Vice President, Regulatory Policy and Programs or the Executive Vice President, Member Regulation or their respective designee(s) determines that a vacancy on a District Nominating Committee should be filled, the vacancy shall be filled pursuant to Section 8.11.

Amended by SR-NASD-2005-086 eff. July 5, 2005.
Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Term of Office of District Nominating Committee Members

Sec. 8.10 Each regularly elected member of a District Nominating Committee shall hold office for a "full term"

which is the later of one year or until a successor is elected and qualified. Notwithstanding the term of office for a regularly elected member, such member's term shall terminate sooner upon the member's death, resignation, or removal. There is no limit on the number of terms that may be served by a member of a District Nominating Committee, provided, that no more than two terms may be served consecutively. The word "term" as used for the purpose of this Section shall mean either a full term for a regularly elected member or a "partial term" which is a term served by a member appointed to fill a vacancy on the District Nominating Committee created by the termination of a regularly elected member's office prior to the expiration of the full term.

Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Filling of Vacancies for District Nominating Committees

Sec. 8.11 In the event of a vacancy on a District Nominating Committee prior to the expiration of the member's term of office, and where the Executive Vice President, Regulatory Policy and Programs or the Executive Vice President, Member Regulation or their respective designee(s) determines, pursuant to Section 8.9(d), that such vacancy should be filled, or in the event of a newly created membership on a District Nominating Committee by virtue of an increase in the authorized number of members thereof, the District Nominating Committee shall appoint by majority vote a representative of an NASD member eligible pursuant to Section 8.9(a) to fill the vacancy or newly created membership. The appointment shall be effective until the next regularly scheduled election pursuant to this Article, and until such member's successor is elected and qualified.

Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Meetings of District Nominating Committees

Sec. 8.12 Meetings of a District Nominating Committee shall be held at such times and places, upon such notice, and in accordance with such procedures as the Executive Vice President, Regulatory Policy and Programs or the Executive Vice President, Member Regulation or their respective designee(s) in his or her discretion may determine in consultation with the Chair of the District Nominating Committee. A quorum of a District Nominating Committee shall consist of a majority of its members, and any action taken by a majority present at any meeting at which a quorum is present, except as otherwise provided in these By-Laws, shall constitute the action of the District Nominating Committee. Any or all members of a District Nominating Committee may participate in any such meeting by means of conference telephone or other communications equipment by means of which all participants can communicate with each other, and such participation shall constitute presence in person at the meeting. Action by a District Nominating Committee may be taken by consent in writing or by electronic transmission in lieu of a meeting, in which case any action taken by a majority of the District Nominating Committee shall constitute the action of the District Nominating Committee.

Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Election of District Nominating Committee Officers

Sec. 8.13 Following the annual election of members of the District Nominating Committees pursuant to this Article, each District Nominating Committee shall elect from its members a Chair and such other officers as it deems necessary for the proper performance of its duties under these By-Laws.

Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Expenses of District Nominating Committees

Sec. 8.14 Funds to meet the regular expenses of each District Nominating Committee shall be provided by the Board, and all such expenses shall be subject to the approval of the Board.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Notice to District Nominating Committee

Sec. 8.15 On or before June 1 of each year, the Secretary of NASD Regulation shall give a Notice to each District Nominating Committee member and each District Director identifying the members of the District Nominating Committee and the District Committee whose terms of office shall expire in the next calendar year. The Notice shall describe election procedures for filling the offices.

Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Solicitation of Candidates and Secretary's Notice to NASD Members

Sec. 8.16 The Secretary of NASD Regulation shall give a Notice of the upcoming election to NASD members and the Executive Representatives of NASD members describing the election procedures and stating that NASD members may submit names of candidates for consideration to the District Director. NASD Regulation staff shall provide the District Nominating Committee with a description of the NASD membership in the district. The District Nominating Committee shall identify and solicit candidates to nominate for election to the District Committee and the District Nominating Committee.

Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

District Nominating Committee Slate

Sec. 8.17 (a) The District Nominating Committee shall review the background of proposed candidates and the description of the NASD membership provided by NASD Regulation staff and shall nominate a slate of candidates for the election. The slate shall include one candidate for each open position on the District Committee and the District Nominating Committee subject to election at the next annual election. The District Nominating Committee may also nominate one alternate candidate for the District Committee and one alternate candidate for the District Nominating Committee. In the event of an uncontested election pursuant to Section 8.19, the alternate candidate would replace any member of the nominated slate of candidates who withdrew or was determined to be ineligible. In nominating candidates for the office of member of the District Committee and the office of member of the District Nominating Committee, the District Nominating Committee shall endeavor to secure appropriate and fair representation on the District Committee and on the District Nominating Committee of the various sections of the district and various classes and types of NASD members engaged in the investment banking or securities business within the district. In nominating candidates for the office of member of the District Nominating Committee, a District Nominating Committee shall assure that the composition of the District Nominating Committee meets the standards in Section 8.9(a).

(b) A District Nominating Committee shall not nominate an incumbent member of the District Committee to succeed himself or herself on the District Committee unless the incumbent member of the District Committee is serving pursuant to the provisions of Section 8.4 or is serving a term pursuant to the provisions of Section 8.2 and reelection would not cause the incumbent member to violate the provisions of Section 8.3. A District Nominating Committee may not nominate more than two incumbent members of the District Nominating Committee to succeed themselves.

Amended by SR-NASD-2005-086 eff. July 5, 2005.
Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Notification of Nomination

Sec. 8.18 The District Director, acting on behalf of the District Nominating Committee, shall give a Notice to the Secretary of NASD Regulation of each candidate nominated by the District Nominating Committee and the office to which the candidate is nominated. If the District Nominating Committee chooses, in its discretion, to

nominate an alternate candidate for either the District Committee or the District Nominating Committee, or an alternate candidate for each such Committee, the District Director shall give Notice to the Secretary of NASD Regulation of each alternate candidate nominated by the District Nominating Committee and the office to which each alternate candidate is nominated. On or before October 1 of each year, the Secretary of NASD Regulation shall give a Notice of the nominated candidates and any alternate candidate(s) to the Executive Representatives of NASD members and the District Committee.

Amended by SR-NASD-2005-086 eff. July 5, 2005.
Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Uncontested Election

Sec. 8.19 If the District Nominating Committee nominates one candidate for each position on the District Committee and the District Nominating Committee subject to election at the next annual election and no additional candidate is nominated pursuant to Section 8.22, the candidates nominated by the District Nominating Committee shall be considered duly elected.

Adopted by SR-NASD-2003-55 eff. Feb. 1, 2004.

Designation of Additional Candidates

Sec. 8.20 If an officer or director of, or individual who is registered with, an NASD member who meets the qualifications of Section 8.2 or 8.9, as applicable, is not nominated by the District Nominating Committee as a candidate or an alternate and wants to be considered for election to the District Committee or the District Nominating Committee, he or she shall deliver a written notice to the District Director within 14 calendar days after the Secretary of NASD Regulation gives the Notice of nominated candidates pursuant to Section 8.18. The District Director shall make a written record of the time and date of the receipt of the officer's, director's, or registered person's notice. The officer, director, or registered person shall be designated as an "additional candidate."

Amended by SR-NASD-2005-086 eff. July 5, 2005.
Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

List of NASD Members Eligible to Vote

Sec. 8.21 (a) The Secretary of NASD Regulation shall provide a list of all NASD members eligible to vote in the district, their mailing addresses, and their Executive Representatives to the additional candidate promptly following receipt of the additional candidate's timely notice by the District Director.

(b) An NASD member that has its principal office and/or one or more registered branch offices in the district shall be eligible to cast one vote through the NASD member's Executive Representative for each position on the District Committee and the District Nominating Committee to be filled in the election.

Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Requirement for Petition Supporting Additional Candidate

Sec. 8.22 An additional candidate shall be nominated if a petition signed by at least ten percent of the NASD members eligible to vote in the district is filed with the District Nominating Committee within 30 calendar days after the date of mailing of the list to the additional candidate pursuant to Section 8.21. Only an Executive Representative may sign a petition on behalf of an NASD member.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Notice of Contested Election

Sec. 8.23 If an additional candidate is nominated pursuant to Section 8.22, the election shall be considered a contested election. The Secretary of NASD Regulation shall give a Notice to the Executive Representatives of the NASD members eligible to vote in the district announcing the names of the candidates and the office to which each candidate is nominated and describing contested election procedures.

Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Administrative Support

Sec. 8.24 The District Office shall provide administrative support to all candidates by sending, by electronic transmission, to NASD members eligible to vote in the district up to two distributions of materials prepared by the candidates. If a candidate wants such distributions sent, the candidate shall prepare such material on the candidate's personal stationery and make the material available to NASD Regulation in electronic format. The material shall state that it represents the opinion of the candidate. Candidates nominated by the District Nominating Committee may identify themselves as such in their materials. Any candidate may also send mailings at the candidate's own expense. Except as provided in this Article, NASD Regulation, the Board, the Regional Nominating Committee, any other committee, and NASD Regulation staff shall not provide any other administrative support to a candidate in the election.

Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Ballots

Sec. 8.25 With the assistance of the Secretary of NASD Regulation and an Independent Agent, the District Nominating Committee shall prepare a ballot with the names of the District Nominating Committee's candidates and any additional candidate nominated pursuant to Section 8.22 and the office to which each candidate is nominated. The ballot shall list separately, in alphabetical order, the candidates nominated by the District Nominating Committee and the additional candidates nominated pursuant to Section 8.22. The Secretary of NASD Regulation shall send a ballot to the Executive Representative of each NASD member eligible to vote in the district. Instructions on the ballot shall direct the Executive Representative to return the ballot to the Independent Agent and state that the ballot envelope must be postmarked on or before the return date specified on the ballot. The return date specified on the ballot shall be no fewer than 20 and no more than 30 days after the date of mailing of the ballot.

Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Vote Qualification List

Sec. 8.26 Eligibility to vote in a district election shall be based on the NASD's membership records as of a date selected by the Secretary of NASD Regulation that is not more than 30 days before the date of mailing of the ballot. The Secretary of NASD Regulation shall prepare a list of NASD members eligible to vote in the district, their mailing addresses, and their Executive Representatives, which shall be used for vote qualification purposes, and shall provide the list to the candidates.

Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Ballots Returned As Undelivered

Sec. 8.27 The Independent Agent shall open any ballot envelope returned undelivered and shall determine whether it was sent to the NASD member's address of record. If incorrectly addressed, the Independent Agent shall

send a new ballot to the address of record.

Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

General Procedures for Qualification and Accounting of Ballots

Sec. 8.28 After the voting period, on a date or dates designated by the Secretary of NASD Regulation, the qualification and accounting of ballots shall take place. The date or dates designated shall be not later than 14 calendar days after the return date specified on the ballot pursuant to Section 8.25. Candidates and their representatives shall be allowed to observe the qualification and accounting of ballots. Representation for each candidate shall be limited to two individuals. The Independent Agent shall bring to a location within the district agreed to between the Independent Agent and the Secretary of NASD Regulation all ballots timely received. Under the direction of the Secretary of NASD Regulation or the Secretary's designee, the Independent Agent shall open and count the ballots. For ballot qualification purposes, the Independent Agent shall identify to the candidates the NASD members that timely returned ballots and inform the candidates of the Independent Agent's determination of whether or not a ballot is qualified for voting purposes. The determination shall be based on a comparison of ballots received against the list of NASD members eligible to vote in the district and their Executive Representatives as prepared by the Secretary of NASD Regulation pursuant to Section 8.26. The Secretary of NASD Regulation or the Secretary's designee shall make the final determination of the qualification of a ballot. Upon the qualification of a ballot, the Independent Agent shall record the vote indicated on the ballot. The candidates and their representatives shall not be allowed to see the vote of an NASD member.

Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Ballots Set Aside

Sec. 8.29 The Independent Agent shall set aside a ballot if: (a) the ballot is received from an NASD member eligible to vote in the district and the ballot is signed by a person who is not the Executive Representative listed on the vote qualification list prepared under Section 8.26, and the Secretary of the NASD has not received proper notice of a change in Executive Representative pursuant to the NASD By-Laws; or (b) if two or more properly executed ballots are received from an NASD member eligible to vote in the district. If the Independent Agent determines that the ballots set aside are material to the outcome of the election, the Secretary of NASD Regulation and the Independent Agent shall make reasonable efforts to resolve each ballot set aside. With respect to a ballot not signed by an Executive Representative of record, the Secretary of NASD Regulation shall contact the NASD member to request that the NASD member send written notice of any change in Executive Representative by facsimile so that the ballot may be counted. With respect to multiple ballots from an NASD member, the Independent Agent shall contact the Executive Representative of the NASD member to obtain the NASD member's vote. The Secretary of NASD Regulation shall keep a list of NASD members that reported their ballot was lost or not received and that were provided with a duplicate ballot. The Secretary of NASD Regulation shall provide the list to the Independent Agent and, upon request, to the candidates.

Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Invalid Ballots

Sec. 8.30 The Independent Agent shall declare a ballot invalid if one or more of the following conditions exist:

- (a) the ballot is not signed by the Executive Representative (unless Section 8.29 applies);
- (b) a vote is not indicated on the ballot; or

(c) the ballot indicates votes for more candidates than there are positions on the District Committee or District Nominating Committee subject to election in the election.

Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Election Results

Sec. 8.31 Under the direction of the Secretary of NASD Regulation or the Secretary's designee, the Independent Agent shall count the votes received for each candidate in a district. The candidates for the office of member of the District Committee or District Nominating Committee receiving the largest number of votes cast in the district for the office shall be declared elected such that the number of candidates declared elected equals the number of positions on the District Committee or District Nominating Committee subject to election in the election. In the event of a tie, there shall be a run-off election. The Secretary of NASD Regulation shall notify the Board of the election results. The notification shall state the number of votes received by each candidate and the number of ballots set aside.

Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Extensions of Time and Additional Procedures

Sec. 8.32 The Secretary of NASD Regulation may extend a time period under this Article for good cause shown. In extraordinary circumstances, the Secretary of NASD Regulation, with the approval of the Executive Committee or the Board, may adopt additional procedures for elections under this Article.

Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.
Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Definitions

Sec. 8.33 (a) When used in Article VIII of these By-Laws, the term "Notice" means a notice in writing or by electronic transmission and the term "electronic transmission" means any form of communication, not directly involving the physical transmission of paper, that creates a record that may be retained, retrieved and reviewed by a recipient thereof, and that may be directly reproduced in paper form by such a recipient through an automated process.

(b) For purposes of this Article VIII, any notice by NASD Regulation, the Secretary of NASD Regulation, or the District Director given by electronic transmission shall be deemed given: (1) if by facsimile telecommunication, when directed to a number at which the person entitled to notice has consented to receive notice; (2) if by electronic mail, when directed to an electronic mail address at which the person entitled to notice has consented to receive notice; (3) if by a posting on an electronic network when the person entitled to notice has consented to receive notice in this manner, together with separate notice to the person entitled to notice of such specific posting, upon the later of (A) such posting and (B) the giving of such separate notice; and (4) if by any other form of electronic transmission when the person entitled to notice has consented to receive notice in this manner, when directed to the person entitled to notice. For purposes of this Article VIII, if mailed, any such notice by NASD Regulation, the Secretary of NASD Regulation, or the District Director shall be deemed given when deposited in the United States mail, postage prepaid, directed to the person entitled to notice at such person's address as it appears on the records of NASD Regulation.

Amended by SR-NASD-2003-55 eff. Feb. 1, 2004.

ARTICLE IX

COMPENSATION

Compensation of Board, Council, and Committee Members

Sec. 9.1 The Board may provide for reasonable compensation of the Chair of the Board, the Directors,

National Adjudicatory Council members, and the members of any committee of the Board or any District Committee. The Board may also provide for reimbursement of reasonable expenses incurred by such persons in connection with the business of NASD Regulation.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

ARTICLE X

INDEMNIFICATION

Indemnification of Directors, Officers, Employees, Agents, National Adjudicatory Council and Committee Members

Sec. 10.1 (a) NASD Regulation shall indemnify, and hold harmless, to the fullest extent permitted by Delaware law as it presently exists or may thereafter be amended, any person (and the heirs, executors, and administrators of such person) who, by reason of the fact that he or she is or was a Director, officer, or employee of NASD Regulation or a National Adjudicatory Council or committee member, or is or was a Director, officer, or employee of NASD Regulation who is or was serving at the request of NASD Regulation as a director, officer, employee, or agent of another corporation, partnership, joint venture, trust, enterprise, or non-profit entity, including service with respect to employee benefit plans, is or was a party, or is threatened to be made a party to:

(i) any threatened, pending, or completed action, suit, or proceeding, whether civil, criminal, administrative, or investigative (other than an action by or in the right of NASD Regulation) against expenses (including attorneys' fees and disbursements), judgments, fines, and amounts paid in settlement actually and reasonably incurred by such person in connection with any such action, suit, or proceeding; or

(ii) any threatened, pending, or completed action or suit by or in the right of NASD Regulation to procure a judgment in its favor against expenses (including attorneys' fees and disbursements) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit.

(b) NASD Regulation shall advance expenses (including attorneys' fees and disbursements) to persons described in subsection (a); provided, however, that the payment of expenses incurred by such person in advance of the final disposition of the matter shall be conditioned upon receipt of a written undertaking by that person to repay all amounts advanced if it should be ultimately determined that the person is not entitled to be indemnified under this Section or otherwise.

(c) NASD Regulation may, in its discretion, indemnify and hold harmless, to the fullest extent permitted by Delaware law as it presently exists or may thereafter be amended, any person (and the heirs, executors, and administrators of such persons) who, by reason of the fact that he or she is or was an agent of NASD Regulation or is or was an agent of NASD Regulation who is or was serving at the request of NASD Regulation as a director, officer, employee, or agent of another corporation, partnership, trust, enterprise, or non-profit entity, including service with respect to employee benefit plans, was or is a party, or is threatened to be made a party to any action or proceeding described in subsection (a).

(d) NASD Regulation may, in its discretion, pay the expenses (including attorneys' fees and disbursements) reasonably and actually incurred by an agent in defending any action, suit, or proceeding in advance of its final disposition; provided, however, that the payment of expenses incurred by such person in advance of the final disposition of the matter shall be conditioned upon receipt of a written undertaking by that person to repay all amounts advanced if it should be ultimately determined that the person is not entitled to be indemnified under this Section or otherwise.

(e) Notwithstanding the foregoing or any other provision of these By-Laws, no advance shall be made by NASD Regulation to an agent or non-officer employee if a determination is reasonably and promptly made by the Board by a majority vote of those Directors who have not been named parties to the action, even though less than a quorum, or, if there are no such Directors or if such Directors so direct, by independent legal counsel, that, based upon the facts known to the Board or such counsel at the time such determination is made: (1) the person seeking advancement of expenses (i) acted in bad faith, or (ii) did not act in a manner that he or she reasonably believed to be in or not opposed to the best interests of NASD Regulation; (2) with respect to any criminal proceeding, such person believed or had reasonable cause to believe that his or her conduct was unlawful; or (3) such person deliberately breached his or her duty to NASD Regulation.

(f) The indemnification provided by this Section in a specific case shall not be deemed exclusive of any other rights to which a person seeking indemnification may be entitled, both as to action in his or her official capacity and as to action in another capacity while holding such office, and shall continue as to a person who has ceased to be a Director, officer, National Adjudicatory Council or committee member, employee, or agent and shall inure to the benefit of such person's heirs, executors, and administrators.

(g) Notwithstanding the foregoing, but subject to subsection (j), NASD Regulation shall be required to indemnify any person identified in subsection (a) in connection with a proceeding (or part thereof) initiated by such person only if the initiation of such proceeding (or part thereof) by such person was authorized by the Board.

(h) NASD Regulation's obligation, if any, to indemnify or advance expenses to any person who is or was serving at its request as a director, officer, employee, or agent of another corporation, partnership, joint venture, trust, enterprise, or non-profit entity shall be reduced by any amount such person may collect as indemnification or advancement from such other corporation, partnership, joint venture, trust, enterprise, or non-profit entity.

(i) Any repeal or modification of the foregoing provisions of this Section shall not adversely affect any right or protection hereunder of any person respecting any act or omission occurring prior to the time of such repeal or modification.

(j) If a claim for indemnification or advancement of expenses under this Article is not paid in full within 60 days after a written claim therefor by an indemnified person has been received by NASD Regulation, the indemnified person may file suit to recover the unpaid amount of such claim and, if successful in whole or in part, shall be entitled to be paid the expense of prosecuting such claim. In any such action, NASD Regulation shall have the burden of proving that the indemnified person is not entitled to the requested indemnification or advancement of expenses under Delaware law.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Indemnification Insurance

Sec. 10.2 NASD Regulation shall have power to purchase and maintain insurance on behalf of any person who is or was a Director, officer, National Adjudicatory Council or committee member, employee, or agent of NASD Regulation, or is or was serving at the request of NASD Regulation as a director, officer, employee, or agent of another corporation, partnership, joint venture, trust, enterprise, or non-profit entity against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not NASD Regulation would have the power to indemnify such person against such liability hereunder.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

ARTICLE XI

CAPITAL STOCK

Sole Stockholder

Sec. 11.1 The NASD shall be the sole stockholder of the capital stock of NASD Regulation.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Certificates

Sec. 11.2 The stockholder shall be entitled to a certificate or certificates in such form as shall be approved by the Board, certifying the number of shares of capital stock in NASD Regulation owned by the stockholder.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Signatures

Sec. 11.3 (a) Certificates for shares of capital stock of NASD Regulation shall be signed in the name of NASD Regulation by two officers with one being the Chair of the Board, the President, or a Vice President, and the other being the Secretary, the Treasurer, or such other officer that may be authorized by the Board. Such certificates may be sealed with the corporate seal of NASD Regulation or a facsimile thereof.

(b) If any such certificates are countersigned by a transfer agent other than NASD Regulation or its employee, or by a registrar other than NASD Regulation or its employee, any other signature on the certificate may be a facsimile. In the event that any officer, transfer agent, or registrar who has signed or whose facsimile signature has been placed upon a certificate shall cease to be such officer, transfer agent, or registrar before such certificate is issued, such certificate may be issued by NASD Regulation with the same effect as if such person were such officer, transfer agent, or registrar at the date of issue.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Stock Ledger

Sec. 11.4 (a) A record of all certificates for capital stock issued by NASD Regulation shall be kept by the Secretary or any other officer, employee, or agent designated by the Board. Such record shall show the name and address of the person, firm, or corporation in which certificates for capital stock are registered, the number of shares represented by each such certificate, the date of each such certificate, and in the case of certificates that have been canceled, the date of cancellation thereof.

(b) NASD Regulation shall be entitled to treat the holder of record of shares of capital stock as shown on the stock ledger as the owner thereof and as the person entitled to vote such shares and to receive notice of meetings, and for all other purposes. Except as otherwise required by applicable law, NASD Regulation shall not be bound to recognize any equitable or other claim to or interest in any share of capital stock on the part of any other person, whether or not NASD Regulation shall have express or other notice thereof.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Transfers of Stock

Sec. 11.5 (a) The Board may make such rules and regulations as it may deem expedient, not inconsistent with law, the Restated Certificate of Incorporation, or these By-Laws, concerning the issuance, transfer, and registration of certificates for shares of capital stock of NASD Regulation. The Board may appoint, or authorize any principal officer to appoint, one or more transfer agents or one or more transfer clerks and one or more registrars and may require all certificates for capital stock to bear the signature or signatures of any of them.

(b) Transfers of capital stock shall be made on the books of NASD Regulation only upon delivery to NASD Regulation or its transfer agent of: (i) a written direction of the registered holder named in the certificate or such holder's attorney lawfully constituted in writing; (ii) the certificate for the shares of capital stock being transferred; and (iii) a written assignment of the shares of capital stock evidenced thereby.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Cancellation

Sec. 11.6 Each certificate for capital stock surrendered to NASD Regulation for exchange or transfer shall be canceled and no new certificate or certificates shall be issued in exchange for any existing certificate other than pursuant to Section 11.7 until such existing certificate shall have been canceled.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Lost, Stolen, Destroyed, and Mutilated Certificates

Sec. 11.7 In the event that any certificate for shares of capital stock of NASD Regulation shall be mutilated, NASD Regulation shall issue a new certificate in place of such mutilated certificate. In the event that any such certificate shall be lost, stolen, or destroyed NASD Regulation may, in the discretion of the Board or a committee appointed thereby with power so to act, issue a new certificate for capital stock in the place of any such lost, stolen, or destroyed certificate. The applicant for any substituted certificate or certificates shall surrender any mutilated certificate or, in the case of any lost, stolen, or destroyed certificate, furnish satisfactory proof of such loss, theft, or destruction of such certificate and of the ownership thereof. The Board or such committee may, in its discretion, require the owner of a lost or destroyed certificate, or such owner's representatives, to furnish to NASD Regulation a bond with an acceptable surety or sureties and in such sum as shall be sufficient to indemnify NASD Regulation against any claim that may be made against it on account of the lost, stolen, or destroyed certificate or the issuance of such new certificate. A new certificate may be issued without requiring a bond when, in the judgment of the Board, it is proper to do so.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Fixing of Record Date

Sec. 11.8 The Board may fix a record date in accordance with Delaware law.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

ARTICLE XII

MISCELLANEOUS PROVISIONS

Corporate Seal

Sec. 12.1 The seal of NASD Regulation shall be circular in form and shall bear, in addition to any other emblem or device approved by the Board, the name of NASD Regulation, the year of its incorporation, and the words "Corporate Seal" and "Delaware." The seal may be used by causing it to be affixed or impressed, or a facsimile thereof may be reproduced or otherwise used in such manner as the Board may determine.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Fiscal Year

Sec. 12.2 The fiscal year of NASD Regulation shall begin on the first day of January in each year, or such other month as the Board may determine by resolution.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Waiver of Notice

Sec. 12.3 (a) Whenever notice is required to be given by law, the Restated Certificate of Incorporation, or these By-Laws, a written waiver thereof, signed by the person or persons entitled to such notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholder, Directors, or members of a committee of Directors need be specified in any written waiver of notice.

(b) Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Execution of Instruments, Contracts, Etc.

Sec. 12.4 (a) All checks, drafts, bills of exchange, notes, or other obligations or orders for the payment of money shall be signed in the name of NASD Regulation by such officer or officers or person or persons as the Board, or a duly authorized committee thereof, may from time to time designate. Except as otherwise provided by law, the Board, any committee given specific authority in the premises by the Board, or any committee given authority to exercise generally the powers of the Board during intervals between meetings of the Board, may authorize any officer, employee, or agent, in the name of and on behalf of NASD Regulation, to enter into or execute and deliver deeds, bonds, mortgages, contracts, and other obligations or instruments, and such authority may be general or confined to specific instances.

(b) All applications, written instruments, and papers required by any department of the United States Government or by any state, county, municipal, or other governmental authority, may be executed in the name of NASD Regulation by any principal officer or subordinate officer of NASD Regulation, or, to the extent designated for such purpose from time to time by the Board, by an employee or agent of NASD Regulation. Such designation may contain the power to substitute, in the discretion of the person named, one or more other persons.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Form of Records

Sec. 12.5 Any records maintained by NASD Regulation in the regular course of business, including its stock ledger, books of account, and minute books, may be kept on, or be in the form of, magnetic tape, computer disk, or any other information storage device, provided that the records so kept can be converted into clearly legible form within a reasonable time.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

ARTICLE XIII

AMENDMENTS; EMERGENCY BY-LAWS

By Stockholder

Sec. 13.1 These By-Laws may be altered, amended, or repealed, or new By-Laws may be adopted, at any meeting of the stockholder, provided that, in the case of a special meeting, notice that an amendment is to be considered and acted upon shall be inserted in the notice or waiver of notice of said meeting.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

By Directors

Sec. 13.2 To the extent permitted by the Restated Certificate of Incorporation, these By-Laws may be altered, amended, or repealed, or new By-Laws may be adopted, at any regular or special meeting of the Board.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

Emergency By-Laws

Sec. 13.3 The Board may adopt emergency By-Laws subject to repeal or change by action of the stockholder that shall, notwithstanding any different provision of law, the Restated Certificate of Incorporation, or these By-

Laws, be operative during any emergency resulting from any nuclear or atomic disaster, an attack on the United States or on a locality in which NASD Regulation conducts its business or customarily holds meetings of the Board or stockholder, any catastrophe, or other emergency condition, as a result of which a quorum of the Board or a committee thereof cannot readily be convened for action. Such emergency By-Laws may make any provision that may be practicable and necessary under the circumstances of the emergency.

Amended by SR-NASD-97-71 eff. Jan. 15, 1998.

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2004
Annual Report

[Articles of Incorporation \(1/23/03\)](#)

AMENDED AND RESTATED ARTICLES OF INCORPORATION OF MICROSOFT CORPORATION

Pursuant to RCW 23B.10.070, the following Amended and Restated Articles of Incorporation are hereby submitted for filing:

**ARTICLE I
NAME**

The name of the corporation is Microsoft Corporation.

**ARTICLE II
REGISTERED OFFICE AND AGENT**

The address of the registered office of the "Corporation" is 920 Fourth Avenue, Suite 2900, Seattle, Washington 98104, and the name of the registered agent at such address is PTSGE Corp.

**ARTICLE III
PURPOSE**

The Corporation is organized for the purposes of transacting any and all lawful business for which a corporation may be incorporated under the Washington Business Corporation Act, Title 23B of the Revised Code of Washington, now or hereafter in force (the "Act").

**ARTICLE IV
CAPITAL SHARES**

4.1 *Authorized Shares.* . The total number of shares of stock that the Corporation shall have authority to issue is 24,100,000,000 shares, which shall consist of 24,000,000,000 shares of common stock, \$0.00000625 par value per share ("Common Shares") and 100,000,000 shares of preferred stock, \$.01 par value per share

("Preferred Shares"). Except as otherwise provided in accordance with these Articles of Incorporation, the Common Shares shall have unlimited voting rights, with each share being entitled to one vote, and the rights to receive the net assets of the Corporation upon dissolution, with each share participating on a pro rata basis.

4.2 *Issuance of Preferred Shares* . The Board of Directors is hereby authorized from time to time, without shareholder action, to provide for the issuance of Preferred Shares in one or more series not exceeding in the aggregate the number of Preferred Shares authorized by these Articles of Incorporation, as amended from time to time; and to determine with respect to each such series the voting powers, if any (which voting powers, if granted, may be full or limited), designations, preferences, and relative, participating, option, or other special rights, and the qualifications, limitations, or restrictions relating thereto, including without limiting the generality of the foregoing, the voting rights relating to Preferred Shares of any series (which may be one or more votes per share or a fraction of a vote per share, which may vary over time, and which may be applicable generally or only upon the happening and continuance of stated events or conditions), the rate of dividend to which holders of Preferred Shares of any series may be entitled (which may be cumulative or noncumulative), the rights of holders of Preferred Shares of any series in the event of liquidation, dissolution, or winding up of the affairs of the Corporation, the rights, if any, of holders of Preferred Shares of any series to convert or exchange such Preferred Shares of such series for shares of any other class or series of capital stock or for any other securities, property, or assets of the Corporation or any subsidiary (including the determination of the price or prices or the rate or rates applicable to such rights to convert or exchange and the adjustment thereof, the time or times during which the right to convert or exchange shall be applicable, and the time or times during which a particular price or rate shall be applicable), whether or not the shares of that series shall be redeemable, and if so, the terms and conditions of such redemption, including the date or dates upon or after which they shall be redeemable, and the amount per share payable in case of redemption, which amount may vary under different conditions and at different redemption dates, and whether any shares of that series shall be redeemed pursuant to a retirement or sinking fund or otherwise and the terms and conditions of such obligation.

4.3 *Filings and Effectiveness* . Before the Corporation shall issue any Preferred Shares of any series, Articles of Amendment or Restated Articles of Incorporation, fixing the voting powers, designations, preferences, the relative, participating, option, or other rights, if any, and the qualifications, limitations, and restrictions, if any, relating to the Preferred Shares of such series, and the number of Preferred Shares of such series authorized by the Board of Directors to be issued shall be filed with the secretary of state in accordance with the Washington Business Corporation Act ("WBCA") and shall become effective without any shareholder action. The Board of Directors is further authorized to increase or decrease (but not below the number of such shares of such series then outstanding) the number of shares of any series subsequent to the issuance of shares of that series.

ARTICLE V

NO PREEMPTIVE RIGHTS

Shareholders of the Corporation have no preemptive rights to acquire additional shares of stock or securities convertible into shares of stock issued by the Corporation.

ARTICLE VI

DIRECTORS

6.1 *Number*. The number of directors of the Corporation shall be fixed in the manner specified by the bylaws of the Corporation.

6.2 *Vacancies.* Vacancies and newly created directorships resulting from any increase in the authorized number of directors shall be filled only by a majority of the directors then in office, although less than a quorum, or by a sole remaining director, unless for any reason there are no directors in office in which case they shall be filled by a special election by shareholders.

ARTICLE VII

ELECTION OF DIRECTORS

Shareholders of the Corporation shall not have the right to cumulate votes in the election of directors.

ARTICLE VIII

SPECIAL SHAREHOLDER MEETINGS

Special meetings of the shareholders of the Corporation for any purpose or purposes may be called at any time by the Board of Directors, or by a committee of the Board of Directors which has been duly designated by the Board of Directors and whose powers and authority, as provided in a resolution of the Board of Directors or in the bylaws of the Corporation, include the power to call such meetings, but such special meetings may not be called by any other person or persons.

ARTICLE IX

AMENDMENT OF BYLAWS

In furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, adopt, repeal, alter, amend, and rescind the bylaws of the Corporation by a resolution adopted by a majority of the directors.

ARTICLE X

LIMITATION OF DIRECTOR LIABILITY

A director of the Corporation shall not be personally liable to the Corporation or its shareholders for monetary damages for conduct as a director, except for:

- (a) Acts or omissions involving intentional misconduct by the director or a knowing violation of law by the director;
- (b) Conduct violating Section 23B.08.310 of the Act (which involves distributions by the Corporation); or
- (c) Any transaction from which the director will personally receive a benefit in money, property, or services to which the director is not legally entitled.

If the Washington Business Corporation Act is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent not prohibited by the WBCA, as so amended. The provisions of this Article shall be deemed to be a contract with each Director of the Corporation who serves as such at any time while such provisions are in effect, and each such Directors shall be deemed to be serving as such in reliance on the provisions of this Article. Any repeal or modification of the foregoing paragraph by the shareholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation with respect to any acts or omissions of such director occurring prior to such repeal or modification.

ARTICLE XI

MERGERS, SHARE EXCHANGES, AND OTHER TRANSACTIONS

A merger, share exchange, sale of substantially all of the Corporation's assets, or dissolution must be approved by the affirmative vote of a majority of the Corporation's outstanding shares entitled to vote, or if separate voting by voting groups is required then by not less than a majority of all the votes entitled to be cast by that voting group.

ARTICLE XII

INDEMNIFICATION

12.1 *Definitions.* As used in this Article:

a. "Agent" means an individual who is or was an agent of the Corporation or an individual who, while an agent of the Corporation, is or was serving at the Corporation's request as a director, officer, partner, trustee, employee, or agent of another foreign or domestic corporation, partnership, joint venture, trust, employee benefit plan, or other enterprise. "Agent" includes, unless the context requires otherwise, the spouse, heirs, estate and personal representative of an agent.

b. "Corporation" means the Corporation, and any domestic or foreign predecessor entity which, in a merger or other transaction, ceased to exist.

c. "Director" means an individual who is or was a director of the Corporation or an individual who, while a director of the Corporation, is or was serving at the Corporation's request as a director officer, partner, trustee, employee, or agent of another foreign or domestic corporation, partnership, joint venture, trust, employee benefit plan or other enterprise. "Director" includes, unless the context requires otherwise, the spouse, heirs, estate and personal representative of a director.

d. "Employee" means an individual who is or was an employee of the Corporation or an individual, while an employee of the Corporation, is or was serving at the Corporation's request as a director, officer, partner, trustee, employee, or agent of another foreign or domestic corporation, partnership, joint venture, trust, employee benefit plan, or other enterprise- "Employee" includes, unless the context requires otherwise, the spouse, heirs, estate and personal representative of an employee.

e. "Expenses" include counsel fees.

f. "Indemnitee" means an individual made a party to a proceeding because the individual is or was a Director, Officer, Employee, or Agent of the Corporation, and who possesses indemnification rights pursuant to these Articles or other corporate action. "Indemnitee" includes, unless the context requires otherwise, the spouse, heirs, estate, and personal representative of such individuals.

g. "Liability" means the obligation to pay a judgment, settlement penalty, fine, including an excise tax with respect to an employee benefit plan, or reasonable Expenses incurred with respect to a proceeding.

h. "Officer" means an individual who is or was an officer of the Corporation (regardless of whether or not such individual was also a Director) or an individual who, while an officer of the Corporation, is or was serving at the Corporation's request as a director, officer, partner, trustee, employee, or agent of another foreign or domestic corporation, partnership, joint venture, trust, employee benefit plan, or other enterprise. "Officer" includes, unless the context requires otherwise, the spouse, heirs, estate and personal representative of an officer.

i. "Party" includes an individual who was, is, or is threatened to be named a defendant, respondent or witness in a proceeding.

j. "Proceeding" means any threatened, pending, or completed action, suit, or proceeding, whether civil, derivative, criminal, administrative, or investigative, and whether formal or informal.

12.2 *Indemnification Rights of Directors and Officers.* The Corporation shall indemnify its Directors and Officers to the full extent not prohibited by applicable law now or hereafter in force against liability arising out of a Proceeding to which such individual was made a Party because the individual is or was a Director or an Officer. However, such indemnity shall not apply on account of:

- (a) Acts or omissions of a Director or Officer finally adjudged to be intentional misconduct or a knowing violation of law;

(b) Conduct of a Director or Officer finally adjudged to be in violation of Section 23B.08.310 of the Act relating to distributions by the Corporation; or

(c) Any transaction with respect to which it was finally adjudged that a Director or Officer personally received a benefit in money, property, or services to which the Director or Officer was not legally entitled.

Subject to the foregoing, it is specifically intended that Proceedings covered by indemnification shall include Proceedings brought by the Corporation (including derivative actions); Proceedings by government entities and governmental officials or other third party actions.

12.3 Indemnification of Employees and Agents of the Corporation. The Corporation may, by action of its Board of Directors from time to time, provide indemnification and pay Expenses in advance of the final disposition of a Proceeding to Employees and Agents of the Corporation who are not also Directors, in each case to the same extent as to a Director with respect to the indemnification and advancement of Expenses pursuant to rights granted under, or provided by, the Act or otherwise.

12.4 Partial Indemnification. If an Indemnitee is entitled to indemnification by the Corporation for some or a portion of Expenses, liabilities, or losses actually and reasonably incurred by Indemnitee in an investigation, defense, appeal or settlement but not, however, for the total amount thereof, the Corporation shall nevertheless indemnify Indemnitee for the portion of such Expenses, liabilities or losses to which Indemnitee is entitled.

12.5 Procedure for Seeking Indemnification and/or Advancement of Expenses. The following procedures shall apply in the absence of (or at the option of the Indemnitee, in lieu thereof), specific procedures otherwise applicable to an Indemnitee pursuant to a contract, trust agreement, or general or specific action of the Board of Directors:

12.5.1 Notification and Defense of Claim. Indemnitee shall promptly notify the Corporation in writing of any proceeding for which indemnification could be sought under this Article. In addition, Indemnitee shall give the Corporation such information and cooperation as it may reasonably require and as shall be within Indemnitee's power.

With respect to any such proceeding as to which Indemnitee has notified the Corporation:

(a) The Corporation will be entitled to participate therein at its own expense; and

(b) Except as otherwise provided below, to the extent that it may wish, the Corporation, jointly with any other indemnifying party similarly notified, will be entitled to assume the defense thereof, with counsel satisfactory to Indemnitee. Indemnitee's consent to such counsel may not be unreasonably withheld.

After notice from the Corporation to Indemnitee of its election to assume the defense, the Corporation will not be liable to Indemnitee under this Article for any legal or other Expenses subsequently incurred by Indemnitee in connection with such defense. However, Indemnitee shall continue to have the right to employ its counsel in such proceeding, at Indemnitee's expense; and if:

(i) The employment of counsel by Indemnitee has been authorized by the Corporation;

(ii) Indemnitee shall have reasonably concluded that there may be a conflict of interest between the Corporation and Indemnitee in the conduct of such

defense; or

(iii) The Corporation shall not in fact have employed counsel to assume the defense of such proceeding,

the fees and Expenses of Indemnitee's counsel shall be at the expense of the Corporation.

The Corporation shall not be entitled to assume the defense of any proceeding brought by or on behalf of the Corporation or as to which Indemnitee shall reasonably have made the conclusion that a conflict of interest may exist between the Corporation and the Indemnitee in the conduct of the defense.

12.5.2 Information to be Submitted and Method of Determination and Authorization of Indemnification. For the purpose of pursuing rights to indemnification under this Article, the Indemnitee shall submit to the Board a sworn statement requesting indemnification and reasonable evidence of all amounts for which such indemnification is requested (together, the sworn statement and the evidence constitute an "Indemnification Statement").

Submission of an Indemnification Statement to the Board shall create a presumption that the Indemnitee is entitled to indemnification hereunder, and the Corporation shall, within sixty (60) calendar days thereafter, make the payments requested in the Indemnification Statement to or for the benefit of the Indemnitee, unless: (1) within such sixty (60) calendar day period it shall be determined by the Corporation that the Indemnitee is not entitled to indemnification under this Article; (2) such determination shall be based upon clear and convincing evidence (sufficient to rebut the foregoing presumption); and (3) the Indemnitee shall receive notice in writing of such determination, which notice shall disclose with particularity the evidence upon which the determination is based.

The foregoing determination may be made: (1) by the Board of Directors by majority vote of a quorum of Directors who are not at the time parties to the proceedings; (2) if a quorum cannot be obtained, by majority vote of a committee duly designated by the Board of Directors (in which designation Directors who are parties may participate) consisting solely of two (2) or more Directors not at the time parties to the proceeding; (3) by special legal counsel; or (4) by the shareholders as provided by Section 23B.08.550 of the Act.

Any determination that the Indemnitee is not entitled to indemnification, and any failure to make the payments requested in the Indemnification Statement, shall be subject to judicial review by any court of competent jurisdiction.

12.5.3 Special Procedure Regarding Advance for Expenses. An Indemnitee seeking payment of Expenses in advance of a final disposition of the proceeding must furnish the Corporation, as part of the Indemnification Statement:

(a) A written affirmation of the Indemnitee's good faith belief that the Indemnitee has met the standard of conduct required to be eligible for indemnification;

and

(b) A written undertaking, constituting an unlimited general obligation of the Indemnitee, to repay the advance if it is ultimately determined that the Indemnitee did not meet the required standard of conduct.

Upon satisfaction of the foregoing the Indemnitee shall have a contractual right to the payment of such Expenses.

12.5.4 Settlement. The Corporation is not liable to indemnify Indemnitee for any amounts paid in settlement of any proceeding without the Corporation's written consent. The Corporation shall not settle any proceeding in any manner which would impose any penalty or limitation on Indemnitee without Indemnitee's written consent.

Neither the Corporation nor Indemnitee may unreasonably withhold its consent to a proposed settlement.

12.6. *Contract and related rights.*

12.6.1 *Contract Rights.* The right of an Indemnitee to indemnification and advancement of Expenses is a contract right upon which the Indemnitee shall be presumed to have relied in determining to serve or to continue to serve in his or her capacity with the Corporation. Such right shall continue as long as the Indemnitee shall be subject to any possible proceeding. Any amendment to or repeal of this Article shall not adversely affect any right or protection of an Indemnitee with respect to any acts or omissions of such Indemnitee occurring prior to such amendment or repeal.

12.6.2 *Optional Insurance, Contracts, and Funding* The Corporation may:

(a) Maintain insurance, at its expense, to protect itself and any Indemnitee against any liability, whether or not the Corporation would have power to indemnify the individual against the same liability under Section 23B.08.5 10 or .520 of the Act;

(b) Enter into contracts with any Indemnitee in furtherance of this Article and consistent with the Act; and

(c) Create a trust fund, grant a security interest, or use other means (including without limitation a letter of credit) to ensure the payment of such amounts as may be necessary to effect indemnification as provided in this Article.

12.6.3 *Severability.* If any provision or application of this Article shall be invalid or unenforceable, the remainder of this Article and its remaining applications shall not be affected thereby, and shall continue in full force and effect.

12.6.4 *Right of Indemnitee to Bring Suit.* If (1) a claim under this Article for indemnification is not paid in full by the Corporation within sixty (60) days after a written claim has been received by the Corporation; or (2) a claim under this Article for advancement of Expenses is not paid in full by the Corporation within twenty (20) days after a written claim has been received by the Corporation, then the Indemnitee may, but need not, at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim. To the extent successful in whole or in part, the Indemnitee shall be entitled to also be paid the expense (to be proportionately prorated if the Indemnitee is only partially successful) of prosecuting such claim. Neither (1) the failure of the Corporation (including its Board of Directors, its shareholders, or independent legal counsel) to have made a determination prior to the commencement of such proceeding that indemnification or reimbursement or advancement of Expenses to the Indemnitee is proper in the circumstances; nor (2) an actual determination by the Corporation (including its Board of Directors, its shareholders, or independent legal counsel) that the Indemnitee is not entitled to indemnification or to the reimbursement or advancement of Expenses, shall be a defense to the proceeding or create a presumption that the Indemnitee is not so entitled.

12.6.5 *Nonexclusivity of Rights.* The right to indemnification and the payment of Expenses incurred in defending a Proceeding in advance of its final disposition granted in this Article shall not be exclusive of any other right which any Indemnitee may have or hereafter acquire under any statute, provision of this Article or the Bylaws, agreement, vote of shareholders or disinterested directors, or otherwise. The Corporation shall have the express right to grant additional indemnity without seeking further

approval or satisfaction by the shareholders. All applicable indemnity provisions and any applicable law shall be interpreted and applied so as to provide an Indemnitee with the broadest but nonduplicative indemnity to which he or she is entitled.

12.7 *Contribution*. If the indemnification provided in Section 12.2 of this Article is not available to be paid to Indemnitee for any reason other than those set forth in subparagraphs 12.2(a), 12.2(b), and 12.2(c) of Section 12.2 of this Article (for example, because indemnification is held to be against public policy even though otherwise permitted under Section 12.2) then in respect of any proceeding in which the Corporation is jointly liable with Indemnitee (or would be if joined in such proceeding), the Corporation shall contribute to the amount of loss paid or payable by Indemnitee in such proportion as is appropriate to reflect:

The relative benefits received by the Corporation on the one hand and the Indemnitee on the other hand from the transaction from which such proceeding arose, and
The relative fault of the Corporation on the one hand and the Indemnitee on the other hand in connection with the events which resulted in such loss, as well as any other relevant equitable consideration.

The relative benefits received by and fault of the Corporation on the one hand and the Indemnitee on the other shall be determined by a court of appropriate jurisdiction (which may be the same court in which the proceeding took place) with reference to, among other things, the parties' relative intent, knowledge, access to information, and opportunity to correct or prevent the circumstances resulting in such loss. The Corporation agrees that it would not be just and equitable if a contribution pursuant to this Article was determined by pro rata allocation or any other method of allocation which does not take account of the foregoing equitable considerations.

12.8 *Exceptions*. Any other provision herein to the contrary notwithstanding, the Corporation shall not be obligated pursuant to the terms of these Articles to indemnify or advance Expenses to Indemnitee with respect to any proceeding.

12.8.1 *Claims Initiated by Indemnitee*. Initiated or brought voluntarily by Indemnitee and not by way of defense, but such indemnification or advancement of Expenses may be provided by the Corporation in specific cases if the Board of Directors finds it to be appropriate. Notwithstanding the foregoing, the Corporation shall provide indemnification including the advancement of Expenses with respect to Proceedings brought to establish or enforce a right to indemnification under these Articles or any other statute or law or as otherwise required under the statute.

12.8.2 *Lack of Good Faith*. Instituted by Indemnitee to enforce or interpret this Article, if a court of competent jurisdiction determines that each of the material assertions made by Indemnitee in such proceeding was not made in good faith or was frivolous.

12.8.3 *Insured Claims*. For which any of the Expenses or liabilities for indemnification is being sought have been paid directly to Indemnitee by an insurance carrier under a policy of officers' and directors' liability insurance maintained by the Corporation.

12.8.4 *Prohibited by Law*. If the Corporation is prohibited by the Act or other applicable law as then in effect from paying such indemnification and/or advancement of Expenses. For example, the Corporation and Indemnitee acknowledge that the Securities and Exchange Commission ("SEC") has taken the position that indemnification is not possible for liabilities arising under certain federal securities laws. Indemnitee understands and acknowledges that the Corporation has undertaken or may be required in the future to undertake with the SEC to submit the

question of indemnification to a court in certain circumstances for a determination of the Corporation's right to indemnify Indemnitee.

12.9 *Successors and Assigns*. All obligations of the Corporation to indemnify any Director or Officer shall be binding upon all successors and assigns of the Corporation (including any transferee of all or substantially all of its assets and any successor by merger or otherwise by operation of law). The Corporation shall not effect any sale of substantially all of its assets, merger, consolidation, or other reorganization, in which it is not the surviving entity, unless the surviving entity agrees in writing to assume all such obligations of the Corporation.



ARTICLE XIII CORPORATION'S ACQUISITION OF ITS OWN SHARES

The Corporation may purchase, redeem, receive, take or otherwise acquire, own and hold, sell, lend, exchange, transfer or otherwise dispose of, pledge, use and otherwise deal with and in its own shares. As a specific modification of Section 23B.06.310 of the Act, pursuant to the authority in Section 23B.02.020(5)(c) of the Act, to include provisions related to the management of the business and the regulation of the affairs of the Corporation, shares of the Corporation's stock acquired by it pursuant to this Article shall be considered "Treasury Stock" and so held by the Corporation. The shares so acquired by the Corporation shall not be considered as authorized and unissued but rather as authorized, issued, and held by the Corporation. The shares, so acquired shall not be regarded as cancelled or as a reduction to the authorized capital of the Corporation unless specifically so designated by the Board of Directors in an amendment to these Articles of Incorporation. The provisions of this Article do not alter or effect the status of the Corporation's acquisition of its shares as a "distribution" by the Corporation as defined in Section 23B.01.400(6) of the Act, nor alter or effect the limitations on distributions by the Corporation as set forth in Section 23B.06.400 of the Act. Any shares so acquired by the Corporation, unless otherwise specifically designated by the Board of Directors, at the time of acquisition, shall be considered on subsequent disposition, as transferred rather than reissued. Nothing in this Article limits or restricts the right of the Corporation to resell or otherwise dispose of any of its shares previously acquired for such consideration and according to such procedures as established by the Board of Directors.

The undersigned has signed these Amended and Restated Articles of Incorporation as of January 23, 2003.

JOHN A. SEETHOFF

Assistant Secretary

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THE NASDAQ STOCK MARKET

Waive-In Membership Application Form

To qualify for Waive-In Membership in The NASDAQ Stock Market LLC (NASDAQ), the applicant must be an approved National Association of Securities Dealers, Inc. (NASD) member. An applicant is eligible to automatically become a NASDAQ member and to automatically register all associated persons whose registrations are approved with NASD in registration categories recognized by NASDAQ. To apply, please complete and submit this Waive-In Application Form and Membership Agreement and the NASDAQ Services Agreement using the enclosed postage-paid envelope or via certified or first class mail, courier or messenger service to:

The NASDAQ Stock Market
Membership Department
1735 K Street, NW
Washington, DC 20006-1506
Attention: Karin Marshall
NQX Membership Application Processing

Applicants are required to update any information submitted in this Application Form when and if it becomes inaccurate or incomplete after submission.

Part I

A. General Company Information

FIRM APPLICANT NAME

DATE

ADDRESS

CITY

STATE

ZIP

CENTRAL REGISTRATION DEPOSITORY® (CRD) NUMBER

DESIGNATED EXAMINING AUTHORITY

CONTACT NAME (FOR QUESTIONS CONCERNING THIS APPLICATION) CONTACT TITLE

TELEPHONE FACSIMILE

EMAIL

B. Nature of Activity on NASDAQ

Please check the business activity(ies) in which the firm intends to engage as a NASDAQ member. If this is not the same business activity that the firm currently engages in as an NASD member, the applicant must, pursuant to NASDAQ Rule 1017, apply for approval to effect a material change in business operations, before NASDAQ membership is approved.

- Market Maker
- Order Entry Firm
- Electronic Communications Network/Alternative Trading System
- Other: _____

C. Personnel

Please provide the name and Central Registration Depository (CRD) number of the person primarily responsible for the firm's NASDAQ trading activity:

NAME TITLE

CENTRAL REGISTRATION DEPOSITORY (CRD) NUMBER EMAIL

D. Executive Representative

Please provide the name and CRD number of the NASDAQ Executive Representative, as required pursuant to NASDAQ Rule 1150:

NAME TITLE

CENTRAL REGISTRATION DEPOSITORY (CRD) NUMBER EMAIL

Part II

Registration Transfers

NASDAQ will effect an automatic registration, via CRD, of all Associated Persons whose registrations with the firm under current NASD Rules are active in the following registration categories:

- Series 6 (Limited Representative, Investment Company and Variable Contracts Products)
- Series 7 (General Securities Representative)
- Series 9/10 (General Securities Sales Supervisor)
- Series 11 (Assistant Representative Order Processing)
- Series 17 (United Kingdom - Limited General Securities Registered Representative)
- Series 24 (General Securities Principal)
- Series 26 (Limited Principal, Investment Company and Variable Contracts Products)
- Series 27 (Financial and Operations Principal)
- Series 28 (Introducing Broker/Dealer Financial and Operations Principal)
- Series 37/38 (Canada - Limited General Securities Registered Representative)
- Series 55 (Equity Trader)
- Series 62 (Corporate Securities Representative)

NASDAQ Membership Agreement

FIRM APPLICANT NAME

CENTRAL REGISTRATION DEPOSITORY (CRD) NUMBER

In connection with this application for membership in The Nasdaq Stock Market LLC (NASDAQ), and in the event that this application is approved for NASDAQ membership, the Applicant hereby agrees to abide by the terms and conditions set forth below:

The Applicant undertakes to (1) engage only in those business activities permissible pursuant to its membership agreement(s) with NASDAQ, the National Association of Securities Dealers, Inc., the New York Stock Exchange, and any other Self-Regulatory Organization of which the Applicant is a member; (2) obtain the prior approval of NASDAQ pursuant to NASDAQ Rule 1017 before removing or modifying any restrictions imposed on permissible business activities or before effecting any material change in business operations; and (3) file a written notice and application with NASDAQ at least 30 days prior to effecting a change in the ownership or control of the Applicant pursuant to NASDAQ Rule 1017, in circumstances where required by the Rule.

The Applicant also agrees:

- A. To comply with the federal securities laws, the rules and regulations thereunder, the NASDAQ rules and all rulings, orders, directions and decisions issued and sanctions imposed under the NASDAQ rules;
- B. To pay such dues, assessments and other charges in the manner and amount as from time to time shall be fixed pursuant to the NASDAQ rules;
- C. That this Agreement has been executed on behalf of, and with the authority of, the above-named Applicant.

The Undersigned and Applicant represent that the information and statements contained within the application and other information filed are current, true, and complete. The undersigned and the Applicant further represent that to the extent that any information submitted is not amended, such information is currently accurate and complete and agree that the information contained in the Applicant's Uniform Application for Broker-Dealer Registration (Form BD) will be kept current and accurate by proper amending of the Form BD as changes occur. Applicant further represents that the registrations for waived-in Associated Persons registered with NASDAQ will be kept current by proper amending of Form U4 & Form U5.

This agreement becomes effective upon NASDAQ's registration as a national securities exchange with the Securities and Exchange Commission.

By:

PRINT NAME

TITLE

SIGNATURE DATE

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NASDAQ NTS Access Order Form

This NASDAQ NTS Access Order Form, and the provision of all Services ordered pursuant to this NASDAQ NTS Access Order Form, shall be governed by the terms and conditions of the NASDAQ Services Agreement ("Agreement") executed by and between NASDAQ and the Firm set forth below. The terms and conditions of the Agreement are incorporated herein by reference.

Please fax this completed document to NASDAQ Subscriber Services 203.385.5879

- Please refer to the Pricing schedule at:
www.nasdaqtrader.com/trader/tradingservices/productservices/pricesheet/pricing.stm for fees.
- If you have any questions concerning the order form please contact Subscriber Services at 1.800.777.5606

Firm Name: _____ **CRD #:** _____
If you are a new firm, please choose a 4-letter symbol, otherwise enter your existing MPID **MPID:** _____

Type of Firm:
(Please check one) ATS Market Maker Order Entry Participant
 Exchange Service Bureau

Contact Name: _____ Phone #: _____
Contact E-mail: _____ Fax #: _____

Business Contact: _____ Phone #: _____
E-mail: _____

Trader Contact: _____ Phone #: _____
E-mail: _____

Technical Contact _____ Phone #: _____
E-mail: _____

Security Administrator _____ Phone #: _____
E-mail: _____

Note: FIX and QIX requests require a minimum of one technical and one business contact.

Billing Address:

Street: _____ Suite / Room #: _____

City / State / Zip: _____

Soft Dollar Arrangements (if applicable):

This section may not be used for CTCI requests.

Please check here if you have entered into a Soft Dollar arrangement. Soft Dollar arrangements are permitted per site physical location.

Company you have entered into the arrangement with: _____

Address where bills should be sent:

Street: _____ Suite / Room #: _____

City / State / Zip: _____

Production

1. **Type of Order:** (Please check one) Add Remove

2. **Access Method:** (Please check one) QIX NASDAQ FIX BRUT FIX CTCI
 New NASDAQ Workstation WebLink ACT (≤20 Trades/day) WebLink ACES
 WebLink ACT (>20 Trades/day with Risk Management) QIX Drop Copy FIX Drop Copy
 QIX Prop Quote NWII (REMOVE ONLY) API (REMOVE ONLY)

3. **Address where the connection(s) is / are or will be used** (if different than billing address above):

Street: _____
Suite / Room #: _____
City / State / Zip: _____

4. **Number of connections:** _____

5. Connection information:

Please complete an entry for each user. Please provide the user's name and e-mail for each additional connection requested **OR** please provide the existing User ID / I1I2 for each connection to be removed. If additional space is required, please add to the comments section below.

<u>User Name /User ID</u>	<u>I1I2</u>	<u>E-mail</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

6. Order Details

If you chose either QIX or FIX as your connection option then fill out this section

a. If this is a sponsored relationship, please enter the name of the firm being sponsored.

b. These connections will be: (Please check one)

- going through an Extranet: Please identify Extranet company _____
- going through a Service Bureau: Please identify Service Bureau _____
- going through an existing NASDAQ/BRUT line

7. Session Disconnect / Log-out Order Cancellation

If you chose FIX as your connection option then fill out this section

Upon disconnect or log-out of any of our FIX sessions, orders for each disconnected or logged-out session will be (Please check one): Cancelled Not Cancelled

NASDAQ Test Facility (NTF)

1. **Type of Order:** *(Please check one)*

Add Remove

2. **Access Method:** *(Please check one)*

QIX NASDAQ FIX BRUT FIX CTCI
 New NASDAQ Workstation
 NWII (REMOVE ONLY) API (REMOVE ONLY)

3. **Number of connections:** _____

4. **Connection information:**

Please complete an entry for each user. Please provide the user's name and e-mail for each additional connection requested **or** please provide the existing User ID / I112 for each connection to be removed. If additional space is required, please add to the comments section below.

<u>User Name /User ID</u>	<u>I112</u>	<u>E-mail</u>
_____	_____	_____
_____	_____	_____

5. **Order Details**

If you chose either QIX or FIX as your connection option then fill out this section

a. If this is a sponsored relationship, please enter the name of the firm being sponsored.

b. These connections will be: *(Please check one)*

- going through an Extranet: Please identify Extranet company _____
- going through an existing NASDAQ/BRUT line _____
- going through a Service Bureau: Please identify Service Bureau _____
- VPN (Internet): Please check if Windows Linux Solaris
- CTCI ISDN
- V90 Modem

Comments and / or Miscellaneous Requests: _____

Signature

A signature is required from an officer or a person registered with CRD unless otherwise specified by an officer or CRD-registered person from your firm. If you would like to designate a specific individual, or individuals, other than an officer or a person registered with CRD, please submit a written request signed by an officer or a CRD-registered person so that we may maintain this request on file.

Signature: _____ **Position:** _____

Print Name: _____ **Date:** _____

Nasdaq Services Agreement

THIS AGREEMENT (“Agreement”), dated as of the date executed by The Nasdaq Stock Market, Inc. (the “**Effective Date**”), is made by and between The Nasdaq Stock Market, Inc., a Delaware Corporation whose principal offices are located at One Liberty Plaza, 165 Broadway, New York, NY 10006, and _____ (“**Subscriber**”), a _____ corporation whose principal offices are located at _____. The Nasdaq Stock Market, Inc and its subsidiaries and affiliates are collectively referred to herein as “**Nasdaq**”. Nasdaq and Subscriber are each individually a “**Party**” and collectively the “**Parties**”.

WHEREAS, Nasdaq has developed the Nasdaq System (“**System**”) which enables eligible individuals or entities to receive the Service, as further defined in Section 1.A herein, relating to: (i) eligible securities or other financial instruments, markets, products, vehicles, indicators, or devices; (ii) persons regulated by, or to activities of, Nasdaq; (iii) information, data, and services offered by Nasdaq from other sources; or (iv) other information and data from Nasdaq.

WHEREAS, Subscriber, representing that it is eligible to do so, is desirous of gaining access to the Service:

NOW THEREFORE, in consideration of the premises and the mutual covenants and conditions herein contained, the Parties, intending to be legally bound, agree as follows:

Section 1. Agreement to Provide Products and Services; Compliance with Nasdaq Requirements; Subscriber Warranty.

- A. Nasdaq agrees to provide to Subscriber, on the terms and conditions set forth herein, such information, data, access, capabilities, execution services, functions, features, software, or equipment that are related to the System (collectively, the “**Service**”; Service may also include as applicable, the performance of the Service and any deliverables or items delivered under this Agreement) as described in this Agreement or in the Nasdaq Requirements, as hereinafter defined, which Subscriber requests and for which Subscriber is eligible under the Nasdaq Requirements. The terms and conditions of this Agreement shall govern Nasdaq’s provision of the Service, and each portion thereof, received by Subscriber whether pursuant to an executed Nasdaq NTS Access Order Form, or otherwise. “**Nasdaq Requirements**” shall mean: (i) the rules, regulations, interpretations, decisions, opinions, orders and other requirements of the Securities and Exchange Commission (“**SEC**”); (ii) the rules and regulations of Nasdaq; (iii) Nasdaq’s decisions, interpretations, operating procedures, specifications, requirements, and other documentation (including, but not limited to, user guides); (iv) all other applicable laws, statutes, rules, regulations, orders, decisions, interpretations, opinions, and other requirements, whether promulgated by the United States or any other applicable jurisdiction (including in the area of intellectual property); and (v) the successors, as they may exist at the time, of the components of the Nasdaq Requirements. Subscriber warrants that it is, will continue to be during the term of this Agreement, and will only use the Service in compliance with this Agreement and the Nasdaq Requirements.
- B. Nasdaq offers the Service through various pricing packages. Subscriber acknowledges that the cost for the Service is subject to change. Nasdaq will provide Subscriber with pricing information and prior notice of any pricing change on the Nasdaq Trader website located at www.nasdaqtrader.com (“**Nasdaq Trader**”) or any other successor or designated website. Subscriber agrees to monitor and comply with the current pricing information contained on

Nasdaq Trader. Nasdaq reserves the right to audit Subscriber's transactions on a quarterly basis for the purposes of establishing and verifying pricing eligibility. If, as a result of its audit, Nasdaq determines that Subscriber is not eligible for its then current pricing package, Nasdaq shall have the right to retroactively bill Subscriber for the appropriate pricing package at the monthly rate that was in effect at the time the service was accessed and/or provided. Nasdaq must receive at least thirty (30) business days' prior written notice of all requests that constitute a change in subscription packages where Subscriber is a firm or corporation, and at least seven (7) business days' prior written notice where Subscriber is an individual user.

Section 2. License to Use; Prohibition on Diverting Service Data.

- A. Nasdaq grants to Subscriber a non-exclusive, non-assignable, non-transferable license to receive and use the Service during the term of this Agreement. Further, Nasdaq grants to Subscriber a non-exclusive, non-assignable, non-transferable license to use the information and data received during the term of this Agreement through the Service even after termination or cancellation of this Agreement (unless this Agreement is terminated by Nasdaq due to Subscriber's breach of this Agreement), provided, however, that such use and purpose is at all times consistent with the terms of this Agreement or with the then-current Nasdaq Requirements. Subscriber acknowledges and agrees that Nasdaq has proprietary rights in the information and data that originates on, derives from or relates to markets that are regulated or operated by Nasdaq, in the information and data that relates to individuals and entities that are regulated by Nasdaq, and in the information and data that relates to activities that are regulated or operated by Nasdaq. Nasdaq has compilation or other rights in the information and data gathered from other sources. Subscriber will attribute the appropriate source of the information and data received through the Service as appropriate under all the circumstances. Subscriber acknowledges and agrees that Nasdaq's third party information providers have exclusive proprietary rights in their respective information and data.
- B. Subscriber may not sell, lease, furnish or otherwise permit or provide access to the Service to any other entity or to any individual that is not Subscriber's agent, employee or associated person under the Securities Exchange Act of 1934 (the "Act"), provided however, Subscriber may provide access to the Service to third-party customers of Subscriber subject and pursuant to the Nasdaq Requirements. Subscriber shall indemnify Nasdaq for all Claims and Losses resulting from a third-party customer's receipt or use of the Service. Except as provided under the Nasdaq Requirements, Subscriber acknowledges and represents that the Authorized Devices (defined in Section 3.A) will be located in areas where they may be accessible only by Subscriber, its agents, employees and associated persons (for whom Subscriber agrees to be responsible), and Subscriber agrees to take all reasonable security precautions to prevent unauthorized individuals or entities from gaining access to the Service through Subscriber's Authorized Devices.
- C. Subscriber may, on a non-continuous basis, furnish limited amounts of the information and data received through the Service to individuals or entities in written advertisements, correspondence, client reports, or other literature; or during voice telephonic conversations not entailing computerized voice, automated information inquiry systems or similar technologies. Subscriber may not present the information and data received through the Service in any unfair, misleading, or discriminatory manner.
- D. Nasdaq prohibits Subscriber from diverting data from the Service, or any Nasdaq website

associated with this Service, either internally or externally except as specifically authorized by a Nasdaq Requirement. Nasdaq is not liable to Subscriber for any diverted, repackaged or disseminated data from the Service. Nasdaq reserves the right to audit Subscriber's usage of data in adherence to the Nasdaq Requirements and limitations specified within this Agreement on a quarterly basis for the purposes of establishing and verifying that Subscriber has not diverted, repackaged or disseminated data from the Service. If, as a result of its audit, Nasdaq determines that Subscriber has diverted, repackaged or disseminated data from the Service, Nasdaq shall have the right to disable all unauthorized logons and retroactively bill Subscriber for the appropriate amount that Subscriber should have paid.

- E. As consideration for receiving authorization to use the Service and the benefits associated therewith, Subscriber does hereby deliver, transfer, and convey to Nasdaq all right, title, and interest, including, without limitation, all rights of copyright, in the information and data entered into the Service and System, and acknowledges that Nasdaq may use such information and data for commercial purposes, including, without limitation, Nasdaq's data products and Nasdaq's Market Intelligence Desk. The delivery of such information and data into the Service and System shall be conclusively deemed to effect the transfer of all such right, title, and interest to such information and data to Nasdaq without further action either by Subscriber or Nasdaq. Subscriber shall not, by act or omission, diminish or impair in any manner the acquisition, maintenance, and full enjoyment by Nasdaq, its licensees, transferees and assignees, of the proprietary rights of Nasdaq in the information and data in the Service and System. Notwithstanding the foregoing, nothing herein shall affect Subscriber's intellectual property rights in the information and data inputted by Subscriber outside of the Service and System.

Section 3. Authorized Devices.

- A. Subscriber may access the System only through one or more systems, which meet the specifications and requirements (including, but not limited to, interface and operational requirements), set forth by Nasdaq (each an "**Authorized Device**"). Approved specifications and requirements are available from Nasdaq upon request and may be modified from time to time by Nasdaq in its sole discretion on at least thirty (30) days' notice (ninety (90) days notice if other than a routine change) unless: (i) a malfunction in the System or Service necessitates modifications on an accelerated basis; (ii) an emergency situation precludes such advance notice; or (iii) a shorter time period is required pursuant to an order of a court, an arbitrator(s), or a regulatory agency.
- B. Subscriber shall report to Nasdaq, as requested by Nasdaq, the information required to be supplied by Subscriber in Nasdaq's specifications and requirements. At reasonable times and upon reasonable notice from Nasdaq, Subscriber will grant to Nasdaq or its representatives free access to the Authorized Devices and, at any time, Subscriber will grant to Nasdaq or its representatives free access to the areas where the Service is received and used. Such access shall be for the purposes of: (i) inspection, audit, or testing; (ii) maintenance, repair, or replacement of any Nasdaq-provided equipment or of any Nasdaq provided software; or (iii) maintenance of Authorized Devices pursuant to this Agreement and Nasdaq shall comply with Subscriber's reasonable security regulations.
- C. When necessary, Nasdaq will grant to Subscriber a non-exclusive, non-assignable, non-transferable license to use certain Nasdaq-specialized software ("**Software**") with the Authorized Devices during the term of this Agreement.

- D. Subscriber shall designate to Nasdaq in writing, a security contact person ("**Security Administrator**"), or multiple or alternative Security Administrator(s). Nasdaq may request at any time an explanation of such person's scope of authority or a clarification of any information about the Security Administrator(s), or object to the Security Administrator(s) for any reason, including administrative burden on Nasdaq, or lack of clarity of the information provided about each Security Administrator(s) authority.
- E. Subscriber shall cause each Security Administrator to comply with the Nasdaq Requirements. Each Security Administrator's responsibilities shall include, without limitation: (i) providing all notices to Nasdaq by faxing Nasdaq Subscriber Services at the fax number set forth in Section 20 herein, or by sending an e-mail from a verifiable Subscriber e-mail account to subscriberservices@nasdaq.com and obtaining a Nasdaq generated receipt for the e-mail (all e-mail receipts to be retained for a period of not less than six months); (ii) notifying Nasdaq within one (1) business day when an authorized employee, agent or associated person of Subscriber (a "**User**") is assigned an Authorized Device that allows User to access the Service, has the Authorized Device revoked, or is no longer eligible to receive the Service; and (iii) providing only one unique Authorized Device per eligible User. Subscriber shall be responsible, under regulation, contract, tort or otherwise, for all actions or omissions of a Security Administrator (including those that were to have been performed by a Security Administrator, had one been named or available at the time).
- F. Subscriber shall cause each User to comply with the responsibilities set forth in detail in the Nasdaq Requirements, but include, without limitation, the following requirements: (i) Authorized Devices are personal to the User and may not be shared, lent, sold, transferred, or used by others; (ii) User will change passwords, where applicable, and perform other actions that are necessary to prevent compromise of the Authorized Device and to keep the Authorized Device operating correctly (the actions, such as criteria for choosing and changing passwords, will be specified in the Nasdaq Requirements and User agrees to abide by such requirements); (iii) User is liable, under regulation, contract, tort or otherwise, for all actions taken or omitted and all information submitted by User or on User's behalf from or to the Service or submitted by authorized or unauthorized persons who obtain access to the Service through User, including any actions performed, or information submitted or retrieved, using the designated Authorized Device; and (iv) User will not access any portion of the Service or any portion of the Service that utilizes Authorized Devices after User is no longer eligible for access because of a change in the User's role or responsibility, the User's employer, or otherwise does not meet the then current requirements of the Service, or any portion of the Service. The Subscriber shall be responsible, under regulation, contract, tort or otherwise, for all actions or omissions of a User or any other person, authorized or not, who gains access to the Service or a portion of the Service that uses a Authorized Device assigned to a User of Subscriber (including those that were to have been performed by the User, had one been named or available at the time).
- G. Subscriber shall not reverse engineer, decode, decompile, attempt to tamper with or evade, or discover the method of operations or defeat any Authorized Device. If applicable law authorizes Subscriber to perform certain types of reverse engineering or the like and declares unenforceable contractual restrictions that conflict with that law, then Subscriber may perform only such reverse engineering or the like as is expressly allowed by, and in strict compliance with, such law.

Section 4. Changes to Service. Subscriber acknowledges and agrees that nothing in this Agreement constitutes an undertaking by Nasdaq to continue: (a) the Service, the System, or any aspect of either, in the present form or configuration or under the current specifications or requirements or with the current Authorized Devices; or (b) use of the existing communications facilities. Nasdaq, in its sole discretion, may from time to time make additions to, deletions from or modifications to the: (a) Service, the System, or any aspect of either; (b) specifications and requirements; and (c) communications facilities. Nasdaq shall provide sufficient notice to Subscriber of any change to the Service (other than for a non-material change), unless a malfunction in the System or Service necessitates modifications on an accelerated basis or an emergency situation precludes such advance notice or a shorter time period is required pursuant to an order of a court, arbitrator or a regulatory agency. Subscriber's receipt or use of the Service after any change shall constitute Subscriber's acceptance of the Service, as changed.

Section 5. Payment; Taxes.

- A. Subscriber agrees to pay to Nasdaq or Nasdaq's designee the then effective charges as set forth in the Nasdaq Requirements or as provided to Subscriber by Nasdaq, including all applicable deposits, and charges for installation, de-installation, equipment, communications, facilities, interest and late fees and/or penalties (including, but not limited to, charges incurred after termination, cancellation, or rescission). In addition, if Subscriber is required by applicable law to deduct or withhold any such tax, charge or assessment from the amounts due Nasdaq, then such amounts due shall be increased so that the net amount actually received by Nasdaq after the deduction or withholding of any such tax, charge or assessment, will equal one hundred percent (100%) of the charges that are owed. Further, Subscriber shall pay any taxes, charges or assessments (other than taxes imposed on the net income of Nasdaq) by any foreign or domestic national, state, provincial or local government bodies, or subdivisions thereof, and any penalties or interest relating to the provision of the Service to Subscriber.
- B. Notwithstanding the foregoing, Subscriber shall not be responsible for the penalty or interest that is imposed on Nasdaq as a result of Nasdaq's failure to pay any taxes, charges or assessments in a timely manner, unless Nasdaq's failure was as a result of a good faith disagreement with the taxing authority as to the tax, charge or assessment.
- C. Payment for the Service, monthly subscription fees and other charges, are due thirty (30) calendar days from the date of Nasdaq's invoice. Payment shall be made in immediately available United States funds by a check drawn against a chartered United States financial institution or any other institution acceptable to Nasdaq or by electronic funds transfer to an institution of Nasdaq's choosing. All delinquent accounts shall accrue interest at the rate of one percent (1%) per month, or the highest rate permitted by law, whichever is lower.

Section 6. Term and Termination. The original term of this Agreement shall commence on the Effective Date and, unless this Agreement is otherwise terminated, the term shall continue until a Party elects to terminate this Agreement by providing the other Party with at least thirty (30) days' prior written notice of its intention to terminate.

Notwithstanding the foregoing, this Agreement may also be terminated by:

- A. Either Party in the event of a breach of an obligation, upon not less than fifteen (15) days' prior written notice to the breaching Party, unless, if the breach is capable of being cured, the breach is cured within the notice period;

- B. Nasdaq, immediately, in the event that the Subscriber becomes insolvent; or the Subscriber makes an assignment for the benefit of creditors; or the Subscriber does not pay its debts as they become due or admits, in writing, its inability to pay its debts when due; or the Subscriber files or has filed against it any petition under any provision of the Bankruptcy Act or an application for a receiver, trustee, or custodian is made by anyone or Subscriber becomes the subject of any proceedings of bankruptcy, insolvency, reorganization, dissolution, receivership, liquidation or arrangement, adjustment, or composition with creditors;
- C. Nasdaq, immediately, in the event that the Subscriber is not permitted to receive or Nasdaq is prevented from disseminating the Service, or any part thereof; or any representation, warranty or certification made by Subscriber in this Agreement or in any other document furnished by Subscriber is, as of the time made or furnished, false or misleading; or that Nasdaq, in its sole discretion, determines that any failure on the part of the Subscriber to comply with this Agreement has or is likely to have an adverse impact on the operation or performance of the System or Service or on the market;
- D. Nasdaq, upon not less than fifteen (15) days' prior written notice, in the event that any representation, warranty or certification made by Subscriber in this Agreement or in any other document furnished by Subscriber becomes untrue or inaccurate and is not made true or accurate within the notice period; or
- E. Nasdaq, upon not less than thirty (30) days' prior written notice, should it determine that it will cease providing the same class of Service to all other eligible individuals or entities that were receiving the same class of Service as Subscriber. Upon termination of this Agreement, Subscriber shall cease any and all use of the Service. Subscriber acknowledges and agrees that the exercise by Nasdaq of the remedies set forth herein for failure of Subscriber to pay all charges, taxes, or assessments related to its receipt of the Service shall not be deemed or considered to be, and, to the extent permitted by applicable law, Subscriber waives any right to represent or assert that any such exercise constitutes, an act or omission or any improper denial or limitation of access to any service or facility operated by Nasdaq as contemplated in Section 11A of the Act or any other provision of such Act, or any rule or regulation adopted thereunder. The right of termination set forth herein is in addition to any other remedy at law or in equity that is available to one Party with respect to a breach by the other.
- F. Nasdaq, immediately, in the event that the Subscriber has violated or is about to violate any applicable law, rule or regulation in connection with its use of the System.

Section 7. Integrity of Service. Subscriber agrees not to format, display, or alter the information or data received through and from the Service in violation of the Nasdaq Requirements; to affect materially the integrity of the information or data received through and from the Service; or to render the information or data received through the Service inaccurate, unfair, uninformative, fictitious, misleading, or discriminatory. Subscriber warrants that it will not interfere with or adversely affect any Nasdaq-provided equipment or software, or any of the component parts or processes of the Service or the System, or any use thereof by any other authorized individuals or entities or the operation of the Service or the System.

Section 8. Requirements of Self-Regulatory Organization; Securities Processor; Actions To Be Taken In Fulfillment of Statutory Obligations.

- A. Subscriber acknowledges: (i) that the National Association of Securities Dealers, Inc. ("**NASD**") is registered with the SEC as a national securities association pursuant to Section 15A of the Act; (ii) that the NASD and Nasdaq have a statutory obligation to protect investors and the public interest, and to ensure that quotation information supplied to investors and the public is fair and informative, and not discriminatory, fictitious or misleading; (iii) that Nasdaq may in the future be registered with the SEC as a national securities exchange pursuant to Section 6 of the Act ("**Exchange Registration**"); (iv) that Section 19(g)(1) of the Act mandates that NASD and Nasdaq comply with the Nasdaq Requirements and that in the event of Exchange Registration, Nasdaq will have jurisdiction over members of the exchange operated by Nasdaq to enforce compliance with the Nasdaq Requirements; (v) that NASD has jurisdiction over its members to enforce compliance with the Nasdaq Requirements; and (vi) that Nasdaq is registered with the SEC as a registered securities information processor pursuant to Section 11A of the Act and is obligated to offer terms that are not unreasonably discriminatory between Subscribers, subject to applicable Nasdaq Requirements.
- B. Subscriber agrees that Nasdaq, when required to do so in fulfillment of its statutory obligations, may -- temporarily or permanently -- unilaterally condition, modify or terminate the right of any or all individuals or entities to receive or use the Service. Nasdaq shall undertake reasonable efforts to notify Subscriber of any such condition, modification or termination, and Subscriber shall promptly comply with any such notice within such period of time as may be determined in good faith by Nasdaq to be necessary, consistent with its statutory obligations. Any individual or entity that receives such a notice shall have available to it such procedural protections as are provided to it by the Act and the applicable rules thereunder.

Section 9. Security; Confidentiality.

- A. Subscriber shall comply with all reasonable security specifications or requirements of Nasdaq in order to prevent the Authorized Devices and Service from being improperly used or accessed or the information and data from being improperly taken from any of Subscriber's place(s) of business. Nasdaq shall give Subscriber prior notice of any such specifications or requirements. For the purpose of determining compliance with this Agreement, at reasonable times and upon reasonable notice, Nasdaq and its representatives shall have access to the places where the Service is received and used, where the Authorized Devices are placed, and the right to observe the use made of the Service and the Authorized Devices, and to examine and inspect all instruments and apparatus, including Authorized Devices, used in connection therewith, subject to Subscriber's reasonable security regulations.
- B. Nasdaq shall keep confidential the information related to the Service provided by Subscriber pursuant to this Agreement, as well as any findings arising from any Nasdaq audit of Subscriber's transactions that may be conducted on a regular basis for the purposes of establishing and verifying Subscriber's eligibility.
- C. Nasdaq and Subscriber each acknowledge that, in the course of performance of this Agreement, each may obtain the other Party's confidential data, information or techniques. (Such confidential data, information or techniques along with information related to the

Authorized Devices and the Subscriber information identified in Section 9.A above shall collectively be referred to herein as "**Confidential Information**"). All such Confidential Information shall be deemed confidential upon disclosure to the other Party and any related oral information received from Nasdaq shall be deemed confidential upon disclosure to the Subscriber. Each Party shall use the Confidential Information of the other Party solely for use consistent with the purposes of this Agreement; shall hold such Confidential Information in confidence; and shall not use, disclose, copy, or publish any such Confidential Information without the prior written approval of the other Party.

- D. Notwithstanding the foregoing, Nasdaq or Subscriber may disclose Confidential Information: (i) to the extent requested by a court, the NASD or a government agency with regulatory jurisdiction over Nasdaq or Subscriber; (ii) to their respective employees, directors, and other agents solely for use consistent with the purposes of this Agreement; or (iii) in the case of Nasdaq, in the course of fulfilling its regulatory responsibilities, including responsibilities over members and associated persons under the Act. The duties in this section do not apply to data, information or techniques that are: (i) lawfully within a Party's possession prior to the date of this Agreement and not under a duty of non-disclosure; (ii) voluntarily disclosed to a Party by a third-party so long as the receiving Party does not know that the third-party has breached any obligation not to reveal such data, information or techniques; (iii) developed by a Party independently of the disclosure; or (iv) generally known or revealed to the public. Further, nothing shall prevent Nasdaq from freely disclosing the audit findings to the extent that (i) the findings are used in the aggregate with other information and such aggregation does not specifically identify Subscriber; and (ii) Nasdaq needs to disclose the findings in order to enforce its rights under this Agreement. The obligation of non-disclosure shall survive for a period of three years from the date of disclosure to the receiving Party.
- E. Neither Party shall make copies of Confidential Information except for those copies required for use by authorized employees, agents, partners or associated persons. Each copy, including its storage media, shall be marked CONFIDENTIAL, and include all notices, which appear on the original. Each Party agrees that all Confidential Information, including copies thereof, shall be returned to the other Party or destroyed within ten (10) days of the date of termination of this Agreement. Notes and other documents referencing or relating to Confidential Information may be made and kept by a receiving Party, but shall be governed by this Agreement until they are destroyed. All intellectual property rights associated with the Confidential Information, including without limitation, patent, trademark, copyright and trade secrets, and moral rights shall remain the disclosing Party's intellectual property rights.
- F. Each Party acknowledges that the other Party, because of the nature of the Confidential Information, would suffer irreparable harm in the event of a material breach of the provisions of this section of this Agreement in that monetary damages would be inadequate to compensate the Party for such a breach, and that in the event of any material breach or threatened material breach by of the provisions of this section, the disclosing Party shall be entitled, in addition to such other legal or equitable remedies which might be available, to injunctive relief in any court of competent jurisdiction against the threatened material breach or continuation of any such material breach without showing or proving any actual damages sustained. If the disclosing Party prevails in any action brought to enjoin a material breach or threatened breach of this provision, it shall be entitled to reasonable attorneys' fees and costs in connection with such legal proceeding.

Section 10. Nasdaq Warranties; Disclaimers of Warranties.

(A) NASDAQ WILL ENDEAVOR TO OFFER THE SERVICE AS PROMPTLY AND AS ACCURATELY AS IS REASONABLY PRACTICABLE. IN THE EVENT THAT THE SERVICE IS NOT AVAILABLE AS A RESULT OF A FAILURE BY NASDAQ TO PERFORM ITS OBLIGATIONS UNDER THIS AGREEMENT, NASDAQ WILL ENDEAVOR, GIVING DUE REGARD FOR THE COST, TIME, AND EFFECT ON OTHER USERS, TO CORRECT ANY SUCH FAILURE. IN THE EVENT THAT THE SERVICE IS NOT AVAILABLE, IS DELAYED, IS INTERRUPTED, IS INCOMPLETE, IS NOT ACCURATE OR IS OTHERWISE MATERIALLY AFFECTED FOR A CONTINUOUS PERIOD OF FOUR (4) HOURS OR MORE DURING THE TIME THAT NASDAQ REGULARLY TRANSMITS THE SERVICE DUE TO THE FAULT OF NASDAQ (EXCEPT FOR A REASON PERMITTED IN THIS AGREEMENT), SUBSCRIBER'S OR ANY OTHER INDIVIDUAL'S OR ENTITY'S EXCLUSIVE REMEDY AGAINST NASDAQ SHALL BE, AT NASDAQ'S OPTION IN NASDAQ'S SOLE DISCRETION, EITHER A PRORATED MONTH'S CREDIT OR A PRORATED MONTH'S REFUND OF ANY MONIES DUE TO NASDAQ FROM SUBSCRIBER FOR THE SERVICE FOR THE PERIOD AT ISSUE. SUCH CREDIT OR REFUND SHALL BE REQUESTED BY WRITTEN NOTICE TO NASDAQ WITH ALL PERTINENT DETAILS INCLUDED. THERE ARE NO OTHER WARRANTIES OF ANY KIND, EXPRESS, IMPLIED OR STATUTORY (INCLUDING, WITHOUT LIMITATION, TIMELINESS, TRUTHFULNESS, SEQUENCE, COMPLETENESS, ACCURACY, FREEDOM FROM INTERRUPTION, NONINFRINGEMENT, ANY IMPLIED WARRANTIES ARISING FROM TRADE USAGE, COURSE OF DEALING, OR COURSE OF PERFORMANCE, OR THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PURPOSE), BEYOND THE WARRANTIES STATED IN THIS SECTION,

(B) SUBSCRIBER ACKNOWLEDGES THAT NASDAQ MAY PROVIDE SUBSCRIBER ACCESS TO CERTAIN THIRD PARTY SOFTWARE TO ASSIST SUBSCRIBER IN RECEIVING THE SERVICE OR ANY DATA. SUCH THIRD PARTY SOFTWARE IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND. SUBSCRIBER AGREES THAT NASDAQ SHALL NOT BE LIABLE FOR ANY ERRORS OR DEFECTS IN ANY THIRD PARTY SOFTWARE (INCLUDING INFRINGEMENT BY THE SOFTWARE OF ANY THIRD PARTY'S INTELLECTUAL PROPERTY RIGHTS). SUBSCRIBER'S SOLE REMEDY AGAINST NASDAQ FOR ANY ERRORS OR DEFECTS IN ANY THIRD PARTY SOFTWARE (INCLUDING ANY INFRINGEMENT OF A THIRD PARTY'S INTELLECTUAL PROPERTY RIGHTS) SHALL BE TO CEASE USING SUCH SOFTWARE AND/OR RETURN THE SOFTWARE TO NASDAQ.

Section 11. Limitation of Liability.

(A) EXCEPT AS MAY OTHERWISE BE SET FORTH HEREIN AND EXCEPT FOR ITS INDEMNIFICATION OBLIGATIONS, NASDAQ SHALL NOT BE LIABLE TO SUBSCRIBER OR TO ANY OTHER INDIVIDUAL OR ENTITY FOR TRADING LOSSES, LOSS OF ANTICIPATED PROFITS, LOSS BY REASON OF SHUTDOWN IN OPERATION OR FOR INCREASED EXPENSES OF OPERATION, OR FOR INDIRECT, SPECIAL, PUNITIVE, CONSEQUENTIAL,

OR INCIDENTAL LOSS OR DAMAGE OF ANY NATURE ARISING FROM ANY CAUSE WHATSOEVER, EVEN IF NASDAQ HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

- (B) NASDAQ SHALL NOT BE LIABLE TO SUBSCRIBER OR TO ANY OTHER INDIVIDUAL OR ENTITY FOR ANY UNAVAILABILITY, INTERRUPTION, DELAY, INCOMPLETENESS, OR INACCURACY OF THE SERVICE THAT LASTS LESS THAN FOUR (4) CONTINUOUS HOURS DURING THE TIME THAT NASDAQ REGULARLY TRANSMITS THE SERVICE OR IF THE SERVICE IS MATERIALLY AFFECTED FOR LESS THAN FOUR (4) CONTINUOUS HOURS DURING THE TIME THAT NASDAQ REGULARLY TRANSMITS THE SERVICE. EXCEPT WHERE NASDAQ IS INDEMNIFYING THE SUBSCRIBER AS SET FORTH HEREIN, IF NASDAQ IS FOR ANY REASON HELD LIABLE TO SUBSCRIBER, OR TO ANY OTHER INDIVIDUAL OR ENTITY, WHETHER IN TORT OR IN CONTRACT, THE LIABILITY OF NASDAQ WITHIN A SINGLE YEAR OF THE AGREEMENT (FROM THE EFFECTIVE DATE OF THE AGREEMENT) IS LIMITED TO THE GREATER OF: (1) AT NASDAQ'S OPTION, IN NASDAQ'S SOLE DISCRETION, EITHER A PRORATED MONTH'S CREDIT OR A PRORATED MONTH'S REFUND OF ANY MONIES DUE TO NASDAQ FROM SUBSCRIBER FOR THE SERVICE FOR THE PERIOD AT ISSUE; OR (2) \$500.00. THIS SUBSECTION SHALL NOT RELIEVE NASDAQ FROM LIABILITY FOR DAMAGES THAT RESULT FROM ITS OWN WILLFUL TORTIOUS MISCONDUCT, OR FROM PERSONAL INJURY OR WRONGFUL DEATH CLAIMS.**
- (C) SUBSCRIBER AND NASDAQ UNDERSTAND AND AGREE THAT THE PRICING FOR THE SERVICE REASONABLY REFLECTS THE ALLOCATION OF RISK AND LIMITATION OF LIABILITY SET FORTH IN THIS SECTION.**
- (D) NASDAQ SHALL NOT BE LIABLE TO SUBSCRIBER OR TO ANY OTHER INDIVIDUAL OR ENTITY FOR THE UNAVAILABILITY, INTERRUPTION, DELAY, INCOMPLETENESS OR INACCURACY OF INFORMATION FROM NASDAQ'S THIRD PARTY INFORMATION AND SOFTWARE PROVIDERS.**

Section 12. Indemnification.

- A. Subscriber shall be liable to, indemnify against, and hold Nasdaq, its employees, directors, and other agents harmless from, any and all Claims or Losses (as those terms are defined in subsection (G) herein) imposed on, incurred by or asserted Nasdaq, its employees, directors, and other agents to the extent that the Claims and Losses result from acts or omissions of the Subscriber, its employees, directors, agents or associated persons, or from the receipt or use of the Service (including representations about the Service) by Subscriber, its employees, directors, agents or associated persons, unless the Claims or Losses are directly attributable to Nasdaq, its employees, directors, or other agents' gross negligence or willful misconduct. Subscriber's obligation to defend and indemnify under this subsection shall be conditioned on the following: (i) Nasdaq shall promptly notify Subscriber in writing of the claim, action or allegation (but, in any event, in a time frame that does not prejudice the rights of Subscriber or Nasdaq); (ii) Nasdaq shall cooperate fully with Subscriber in the defense thereof and Subscriber shall be liable to Nasdaq for Nasdaq's reasonable expenses (excluding

reimbursement for the time value of Nasdaq's employees, directors, and other agents in providing such cooperation); and (iii) Subscriber shall have sole control of the defense and all related settlement negotiations, but, upon Nasdaq's request, shall apprise Nasdaq of the status of any proceedings or negotiations. Nasdaq's duty of cooperation in litigation shall not be deemed to be a waiver of Nasdaq's attorney-client, attorney work product, or other legal privilege.

- B. Subject to Section 12.D., below, Nasdaq shall defend Subscriber, its employees, directors, agents, and associated persons from any and all Claims and Losses imposed on, incurred by or asserted against Subscriber, its employees, directors, agents and associated persons as a result of any alleged infringement or misappropriation by the System or the Service of any third parties' U.S. intellectual property rights. Nasdaq shall indemnify and hold Subscriber, its employees, directors, agents, and associated persons harmless from any and all such Claims and Losses imposed on, incurred by or asserted against Subscriber, its employees, directors, agents and associated persons up to the amount paid by Subscriber for the Service. Nasdaq's obligation to defend and indemnify under this subsection shall be conditioned on the following: (i) Subscriber shall promptly notify Nasdaq in writing of the claim, action or allegation (but, in any event, in a time frame that does not prejudice the rights of Subscriber or Nasdaq); (ii) Subscriber shall cooperate fully with Nasdaq in the defense thereof and Nasdaq shall be liable to Subscriber for Subscriber's reasonable expenses (excluding reimbursement for the time value of Subscriber's employees, directors, agents and associated persons in providing such cooperation); and (iii) Nasdaq shall have sole control of the defense and all related settlement negotiations, but upon Subscriber's request, shall apprise Subscriber of the status of any proceedings or negotiations. Subscriber's duty of cooperation in litigation shall not be deemed to be a waiver of Subscriber's attorney-client, attorney work product, or other legal privilege.
- C. For any and all Claims and Losses imposed on, incurred by or asserted against Subscriber, its employees, directors, agents, and associated persons as a result of any alleged infringement or misappropriation by the System or the Service of any third parties' intellectual property rights other than U.S. intellectual property rights, Subscriber shall notify Nasdaq in writing of the claim, action or allegation at least fifteen (15) business days before a responsive action is needed, so as not to prejudice the rights of Subscriber or Nasdaq, but, in any event, said notification to Nasdaq shall not be given later than fifteen (15) business days after Subscriber receives notification of any alleged non-U.S. infringement or misappropriation
- D. Notwithstanding anything to the contrary in this Agreement, Nasdaq shall NOT have the obligation to defend, indemnify and hold Subscriber, its employees, directors, agents or associated persons harmless for any and all Claims and Losses imposed on, incurred by or asserted against Subscriber, its employees, directors, other agents and affiliates as a result of any allegation of infringement or misappropriation if the System and/or Service has not been used in accordance with this Agreement or to the extent it is based on use of a superseded version of the System and/or Service if such infringement or misappropriation would have been avoided by use of the current version of the System and/or Service or if the infringement or misappropriation claim, action, or allegation is the result of the combination, operation, or use of the System and/or Service with hardware, software or materials not furnished by Nasdaq if such infringement or misappropriation would have been avoided by the use of the System and/or Service without such hardware, software or materials.
- E. In the event of a claim, action or allegation of infringement or misappropriation or if, in

Nasdaq's opinion, such a claim, action or allegation is likely to occur or if the use of the System and/or Service is enjoined because of infringement or misappropriation, Nasdaq may, at its sole option and expense, procure for Subscriber the right to continue using the System and/or Service, replace or modify the System and/or Service to be non-infringing, or require the return of the Licensed Programs.

- F. This Section 12 sets forth the entire liability and the exclusive remedy of Nasdaq and Subscriber, their employees, directors, agents, and associated persons for the infringement or use of the System or Service.
- G. Unless otherwise stated herein, "Claims or Losses" means any and all liabilities, obligations, losses, damages, penalties, claims, actions, suits, judgments, and reasonable costs and expenses of whatever nature, whether incurred by or issued against an indemnified Party, including, without limitation: (i) indirect, special, punitive, consequential, or incidental loss or damage (including, but not limited to, trading losses, loss of anticipated profits, loss by reason of shutdown in operation or increased expenses of operation, or other indirect loss or damage); and (ii) reasonable administrative costs, litigation costs, and auditors' and attorneys' fees, both in-house and outside counsel, and related disbursements.

Section 13. No Government Rights. This Agreement neither grants, nor is intended to grant, directly or through Subscriber, any governmental entity or agency any rights in technical data (including, but not limited to, software) as set forth in FAR Subpart 27.4 and its successors thereof. Any such rights of a governmental entity or agency in technical data (including, but not limited to, software) shall be determined by a separate written agreement with Nasdaq.

Section 14. Corporate Names; Proprietary Rights. Subscriber and Nasdaq each acknowledge and agree that the Nasdaq and Subscriber each have proprietary rights in their respective trade names, trademarks, servicemarks, logos, copyrights and patents, registered or unregistered, and Subscriber and Nasdaq each agree they shall not use the other Party's trade names, trademarks, servicemarks, logos, copyrights or patents, registered or unregistered, in any way that would infringe upon the rights of the other Party. Further, this Agreement shall not grant either Party the right to use the other Party's trade names, trademarks, servicemarks, logos, copyrights or patents, registered or unregistered, in any marketing, promotional or other materials without the prior review and written consent of the other Party.

Section 15. Force Majeure. Notwithstanding any other term or provision of this Agreement, neither Nasdaq (including, for purposes of this Section, its third party information and software providers) nor Subscriber shall be obligated to perform or observe its obligations undertaken in this Agreement (except for obligations to make payments hereunder and regulatory obligations) if prevented or hindered from doing so by any circumstances found to be beyond its control.

Section 16. Subsequent Parties; Limited Relationship. This Agreement shall inure to the benefit of and shall be binding upon the Parties hereto and their respective permitted successors or assigns. Neither Party shall assign this Agreement (including by operation of law) without the prior written consent of the other Party, such consent not to be unreasonably withheld. Notwithstanding the foregoing, Nasdaq may, assign this Agreement, or any part of it, to any affiliated corporation, limited liability company or other entity without the consent of the other Party. Nothing in this Agreement, express or implied, is intended to or shall: (a) confer on any individual or entity other than the Parties hereto, or their respective permitted successors or assigns, any rights to remedies under or by reason of this Agreement; (b) constitute the Parties hereto partners or participants in a joint venture; or (c) appoint one Party the agent of the other.

Section 17. Entire Agreement. This "Agreement" consists of this Nasdaq Services Agreement ("NSA") together with any attachments, addenda, cover sheets, amendments, and materials referenced herein (collectively, the "Attachments"), including, but not limited to, the Nasdaq Requirements, as any of these items may be added to, deleted from, or amended from time to time. This Agreement constitutes the entire agreement between the Parties with respect to the subject matter hereof, and supersedes all prior negotiations, communications, writings, and understandings. In the event of any conflict between the provisions of the NSA, the Attachments, or the Nasdaq Requirements, the order of preference shall be the Nasdaq Requirements, the Attachments, and the NSA. All personal pronouns used in this Agreement, whether used in the masculine, feminine or neuter gender, shall include all other genders, if and where applicable. The use of the singular in this Agreement shall include the plural, and vice versa. Section headings are included for convenience only and are not to be used to construe or interpret this Agreement. All references contained herein to sections or subsections shall refer to the sections or subsections of this Agreement, unless specific reference is made to the sections or subsections of another document.

Section 18. Arbitration.

- A. Except as may be provided in the Nasdaq Requirements, all claims, disputes, controversies, and other matters in question between the Parties to this Agreement and the Parties' employees, directors, agents and associated persons arising out of, or relating to this Agreement, or to the breach hereof, shall be settled by final binding arbitration in accordance with this Agreement and the following procedure or such other procedures as may be mutually agreed upon by the Parties.
- B. Except as otherwise provided herein or by agreement of the Parties, any arbitration proceeding shall be conducted in accordance with the Commercial Arbitration Rules of the American Arbitration Association or in accordance with such other rules and procedures as are agreed to by the Parties. The number of arbitrators to preside over an arbitration shall be as follows: (a) where the amount being sought is \$25,000.00 or less, one (1) arbitrator shall preside; (b) where the amount being sought is more than \$25,000.00, but less than \$500,000.00 or where no amount is sought, three (3) arbitrators shall preside; and (c) where the amount being sought is more than \$500,000.00, five (5) arbitrators shall preside.
- C. The arbitrators shall render a written award, if any, for each claim. The Parties agree that the arbitration proceedings and any aspect thereof, including, but not limited to, the contents of any awards, shall be considered Confidential Information.
- D. The arbitration proceeding shall be held in the City of New York, unless otherwise agreed by the Parties. The decision rendered through arbitration shall be final and binding upon the Parties hereto and judgment may be entered in accordance with applicable law in any court having jurisdiction thereof.
- E. Any challenge to an arbitration decision or proceeding (other than entry or enforcement of an arbitration award/judgment) shall be brought solely in the federal or local court(s) of and for the State of New York.
- F. The foregoing procedures shall not preclude either Party from: (i) petitioning a regulatory body regarding a matter in question over which the regulatory body has administrative jurisdiction; or (ii) pursuing injunctions before any administrative or judicial forum provided that all monetary and other relief is submitted for arbitration.

- G. The Parties shall not submit claims for punitive damages, and do hereby waive any right to the same and the arbitrators shall not be authorized to award punitive damages.
- H. A Party's demand for arbitration, which shall be effective upon receipt, shall not be made after the date when institution of legal or equitable proceedings based upon such claim, dispute, controversy or other matter in question would be barred by the applicable statute of limitations or laches. In no event shall such claim, dispute, controversy or other matter in question be made later than one year after the claim, dispute, controversy or other matter in question has arisen (unless the claim, dispute, controversy or other matter in question is related to the collection of past due payments).

Section 19. Waiver of Claims. Except as may be set forth in the Nasdaq Requirements, their Parties and the Parties' employees, directors, agents and associated persons expressly waive any claims, disputes, controversies, and other matters not brought within the period set forth herein.

Section 20. Notice. All notices, invoices, and other communications required to be given under this Agreement shall be either: (i) posted on Nasdaq Trader; or (ii) given in writing under this Agreement and shall be sent to the Subscriber's headquarters and addressed to the Subscriber's Chief Executive Officer or President, and if to Nasdaq, shall be sent to Nasdaq Subscriber Services, 80 Merritt Boulevard, Trumbull, CT 06611 and addressed to the attention of the Agreements Administrator. Notice shall be deemed to have been duly given upon actual receipt by the Parties, or upon constructive receipt if sent by certified mail, return receipt requested (as of the date of signature or of first refusal of the return receipt), or by any other delivery method which obtains a signed delivery receipt.

With, in the event of notices of dispute or default, a required copy to:

The Nasdaq Stock Market, Inc.
Office of the General Counsel
Attn: Contracts Group
9600 Blackwell Road
Rockville, MD 20850

Section 21. Governing Law. This Agreement shall be deemed to have been made in the United States, State of New York, and shall be construed and enforced in accordance with, and the validity and performance hereof shall be governed by, the laws of the State of New York, without reference to principles of conflicts of laws thereof. For all matters not subject to the arbitration provisions set forth in Section 18 above, Subscriber hereby consents to submit to the jurisdiction of the courts in and of the State of New York in connection with any action or proceeding instituted relating to this Agreement, and all proceedings shall be conducted in New York City.

Section 22. Authorization. This Agreement shall not be binding upon Nasdaq unless executed by an officer of Nasdaq. Subscriber, Nasdaq, and the individuals executing this Agreement for the respective Parties represent that such individuals are duly authorized by all necessary and appropriate corporate or other action to execute this Agreement on behalf of Nasdaq or Subscriber.

Section 23. Amendment Waiver; Severability.

- A. Nasdaq may alter any term or condition of this Agreement on sixty (60) days' notice to Subscriber, and any use by Subscriber of the Service after the expiration of the sixty (60) day

notice period shall be deemed acceptance by Subscriber of the new term or condition.

- B. No failure on the part of Nasdaq or Subscriber to exercise, no delay in exercising, and no course of dealing with respect to any right, power, or privilege under this Agreement shall operate as a waiver thereof nor shall any single or partial exercise of any such right, power, or privilege preclude any other or further exercise thereof or the exercise of any other right, power, or privilege under this Agreement.
- C. If any of the provisions of this Agreement, or application thereof to any individual, entity or circumstance, shall to any extent be held invalid or unenforceable, the remainder of this Agreement, or the application of such terms or provisions to individuals, entities, or circumstances other than those as to which they are held invalid or unenforceable, shall not be affected thereby and each such term and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

Section 24. Survival Of Provisions. The terms of this Agreement also apply to those obligations that do not implicitly survive any cancellation, termination, or rescission – namely obligations of the Security; Confidentiality; Corporate Names; and Property Rights sections.

IN WITNESS WHEREOF, Nasdaq and Subscriber have caused this Agreement to be executed by their respective duly authorized officers. If the requested service includes any of Nasdaq’s web products, then at least one Security Administrator (as identified in Section 3.D of this Agreement) must be noted below. Pursuant to Section 6 of this Agreement, the effective date of this Agreement shall be the date Nasdaq signs this Agreement.

_____ (“Subscriber”)

The Nasdaq Stock Market, Inc. (“Nasdaq”)

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Authorized Officer

Authorized Officer

Date: _____

Date: _____

CRD number (if applicable): _____

Subscriber’s Primary Security Administrator:

Subscriber’s Alternate Security Administrator:

Name: _____

Name: _____

Title: _____

Title: _____

Address: _____

Address: _____

Tel No: _____

Fax No: _____

Email: _____

Tel No: _____

Fax No: _____

Email: _____

I. Introduction and Background

The Nasdaq Market Center is a fully integrated order display and execution system for all Nasdaq National Market securities, Nasdaq SmallCap Market securities, and securities listed on other markets. The Nasdaq Market Center is a voluntary, open-access system that accommodates diverse business models and trading preferences. In contrast to traditional floor-based auction markets, Nasdaq has no single specialist through which transactions pass, but rather uses technology to aggregate and display liquidity and make it available for execution.

The Nasdaq Market Center allows market participants to enter unlimited quotes and orders at multiple price levels. Quotes and orders of all Nasdaq Market Center participants are integrated and displayed via data feeds to market participants and other Nasdaq data subscribers. Nasdaq Market Center participants are able to access the aggregated trading interest of all other Nasdaq Market Center participants in accordance with an order execution algorithm that adheres to the principle of price-time priority.¹

II. Nasdaq Market Participants

The Nasdaq Market Center accommodates a variety of market participants. Market makers are securities dealers that buy and sell securities at prices displayed in Nasdaq for their own account (principal trades) and for customer accounts (agency trades). Market makers actively compete for investor orders by displaying quotations representing their buy and sell interest – plus customer limit orders – in securities quoted in the Nasdaq Market Center. By standing ready to buy and sell shares of a company's stock, market makers provide to Nasdaq-listed companies and other companies quoted in the Nasdaq Market Center a valuable service. The result of their combined quotation activity helps meet investor demand and creates an environment of immediate and continuous trading. Currently, more than 260 market-making firms provide capital support for Nasdaq-listed stocks and more than 60 firms make markets in other stocks that trade on Nasdaq. Market makers are required to display continuous two-sided quotations in all stocks in which they choose to make a market. Trading interest from market makers may be displayed either as quotations attributable to the market maker through one or more market participant identifiers ("MPID") or through the anonymous SIZE MPID.

Order entry firms route orders to the Nasdaq Market Center for execution against displayed orders and quotations, and for display under the anonymous SIZE MPID. Order entry firms may not display trading interest under an attributable MPID. Electronic communications networks ("ECNs") participate in Nasdaq by displaying orders routed to them by subscribers, thereby making such orders available for execution

¹ Exceptions to the principle of price-time priority associated with directed order functionality were recently eliminated from the Nasdaq Market Center, and exceptions associated with preferenced order functionality will be eliminated at or prior to the effective date of exchange registration.

either through Nasdaq or through the ECN's own execution systems. ECN orders can be displayed under attributable MPIDs or through the anonymous SIZE MPID, but ECNs, unlike market makers, do not have an obligation to maintain continuous two-sided quotations since all ECNs trade on an agency basis only. Like order entry firms, ECNs may also enter orders into the Nasdaq Market Center for execution again displayed quotations.

National securities exchanges trading Nasdaq-listed stocks pursuant to grants of unlisted trading privileges ("UTP Exchanges") may also choose to participate directly in Nasdaq. UTP Exchanges have the ability to enter orders, to display trading interest on an attributable basis, and to display agency interest on a non-attributable basis through the SIZE MPID. In turn, UTP Exchanges are required to accept automatic execution of orders directed to their quotes by Nasdaq.

III. System Access

Market participants gain access to the Nasdaq Market Center via direct or indirect electronic linkages utilizing a variety of telecommunications protocols. The Nasdaq Information Exchange, or QIX, protocol, is a proprietary Nasdaq protocol that supports the entry, cancellation, and updating of quotations and orders, order delivery and execution, and message transmittal for all securities traded through the Nasdaq Market Center.² The Financial Information Exchange, or FIX, protocol, is a telecommunications protocol widely used in the financial services industry, and is used by Nasdaq market participants for order entry, modification, and cancellation and message transmittal for all securities traded through the Nasdaq Market Center. Market participants using QIX or FIX establish connectivity to Nasdaq through third party connectivity providers, including a range of extranets and service bureaus. Finally, market participants may connect to Nasdaq using the Computer-to-Computer Interface ("CTCI") protocol, which utilizes a two-way communications link over point-to-point circuits. CTCI is used by Nasdaq market participants for order entry, modification, and cancellation and message transmittal for all securities traded through the Nasdaq Market Center.

In addition to selecting a telecommunications protocol and establishing connectivity, market participants must also utilize "front-end" software at their premises to serve as the interface between individual traders and the market. Although Nasdaq currently offers, and will continue to offer, a "front-end" software product for market access,³ Nasdaq makes all of its communications protocols publicly available to allow

² QIX replaces the Application Programming Interface ("API") protocol, a Nasdaq proprietary protocol that supported (i) the Nasdaq Workstation II (the "NWII"), a proprietary "front-end" product used for market access, and (ii) front-end workstations developed by market participants and service bureaus using that protocol. The API and the NWII are scheduled to be eliminated in the near term.

³ As noted above, the NWII will be phased out in the near term. It is being replaced with a new product known simply as the new Nasdaq Workstation.

market participants and services bureaus to develop their own front-end software. Thus, a market participant is provided with choice at all stages of market access to ensure maximum accessibility. The market participant can use Nasdaq front-end software or software provided by a service bureau, or can develop its own software, and can then connect terminals running the software to Nasdaq through a variety of connectivity methods, using a variety of telecommunications protocols.

Market participants must also execute a subscriber agreement and be a participant in, or have an access arrangement with a participant in, an SEC-registered clearing agency. In addition, the subscriber must also agree to comply with all applicable rules and accept all trades identified by the Nasdaq Market Center as being effected by the participant.

IV. Nasdaq Market Center Quote and Order Display

Nasdaq offers market participants a variety of options for viewing quotes and orders in the Nasdaq Market Center. Using Nasdaq Level 1 Service, market participants receive the best bid and offer of Nasdaq and each other market center trading Nasdaq stocks, as well as last sale data. Through the Nasdaq Quotation Dissemination Service ("NQDS"), market participants receive the best bid and offer displayed under each Nasdaq MPID. Via the TotalView data feed, participants can view all displayed trading interest available in the Nasdaq Market Center (i.e., the full depth of the Nasdaq book).

V. Entry and Processing of Quotes/Orders

Market participants may submit multiple quotes and orders at multiple price levels, which Nasdaq manages and displays, consistent with the parameters of each quote or order. Nasdaq time-stamps each order or quote upon receipt. The time stamp determines the ranking for execution purposes. Each order and quote increment receives a separate time stamp to ensure that quoting participants will not lose time priority for updating their displayed trading interest to show greater size. Once a market participant's displayed size is diminished to zero, it no longer retains time priority, even though it may have a feature that automatically refreshes its displayed size.

Market orders and marketable limit orders are directed to displayed quotes/orders for execution. Quotes and non-marketable limit orders are displayed and made available for execution by incoming orders. Upon entry of a market order or marketable limit order, the Nasdaq Market Center identifies the next market participant in queue to receive an order. If that participant accepts automatic executions, the system will automatically execute against that participant and send it an execution report. Immediately upon execution, the system generates an execution report. If the market participant is an ECN that has elected to participate in the Nasdaq Market Center as an order delivery participant, the system will deliver orders rather than executions.

VI. Order Types and Time-in-Force Designations

Upon exchange registration, all orders in the Nasdaq Market Center will be forms of non-directed orders. A non-directed order does not identify a specific party to which the order should be delivered or against which the order should be executed, but rather is executed or delivered in accordance with price/time priority. An order may be of a size up to 999,999 shares and must indicate whether it is a buy, sell, sell short, or sell short exempt. The following order types and time-in-force designations are available in the Nasdaq Market Center during regular trading hours:⁴

- Market orders are un-priced orders to buy or sell at the market's current best price.
- Limit orders are orders to buy or sell at a specified price or better.
- Auto-Ex orders, which are available only for Nasdaq-listed securities, execute solely against the quotes/orders of Nasdaq Market Center Participants that participate in the automatic execution functionality of the Nasdaq Market Center and that do not charge a separate quote-access fee. Auto-Ex orders are cancelled before they trade through the quote or order of a Nasdaq Market Center participant that is not eligible to receive them or if they would lock or cross such a quote or order.
- Fill or Return orders, which are available only for non-Nasdaq listed securities, are executable only to the extent that they can be executed by Nasdaq Market Center Participants without routing the order to an exchange through the Intermarket Trading System (an "ITS Exchange") and without trading through the quotations of ITS Exchanges.
- Pegged orders, which are available only for Nasdaq-listed securities, have prices that are automatically adjusted in response to changes in the Nasdaq Market Center inside bid or offer, as appropriate.
- Discretionary orders have both a displayed bid or offer price and a non-displayed discretionary price range in which the market participant is also willing to buy or sell, if necessary.
- Summary orders are rejected if they are marketable when received by the Nasdaq Market Center.
- Sweep orders, which are available only for use by market makers in non-Nasdaq listed securities, are delivered to or executed by Nasdaq Market Center Participants at multiple price levels and may trade through the quotations of ITS Exchanges.

⁴ As described below, additional order types are used during the market open and market close.

- Orders with an Immediate or Cancel (“IOC”) designation are canceled and returned to the entering participant if they become non-marketable after they are entered into the Nasdaq Market Center.
- Orders with a Day designation remain available for potential display and/or execution until market close (4:00 p.m. Eastern Time).
- Orders with a Good-till-Cancelled” (“GTC”) designation remain available for potential display and/or execution until cancelled by the entering party, or until 1 year after entry, whichever comes first.
- Orders with an End-of-Day designation, which are available only for Nasdaq-listed stocks, remain available for potential execution and/or display until market close (4:00 p.m. Eastern Time), and thereafter for potential execution until 6:30 p.m. Eastern Time.
- Orders with a Total Day designation in non-Nasdaq listed stocks remain available for potential display between 7:30 a.m. and 6:30 p.m. and for potential execution between market open and 6:30 p.m. Orders with a Total Day designation in Nasdaq-listed securities remain available for potential display and execution between 9:25 a.m. and 4:00 p.m., but are rejected if entered prior to 9:25 a.m.
- Orders with a Total Good-till-Cancelled designation remain available for potential display between 7:30 a.m. and 6:30 p.m. and for potential execution between market open and 6:30 p.m., until cancelled by the entering party, or until 1 year after entry, whichever comes first.
- Orders with a Total Immediate or Cancel designation function like Immediate or Cancel orders but may be entered between 9:25 a.m. and 4:00 p.m. in the case of Nasdaq-listed stocks and between 9:30 a.m. and 6:30 p.m. in the case of non-Nasdaq listed stocks.

VII. Order and Quote Features

A. Anonymity

Non-attributable orders receive pre-trade anonymity, in that all non-attributable interest at a particular price level is aggregated and displayed under the SIZE MPID. In addition, with the full anonymity feature, participants can work orders anonymously from order display through execution and clearing. When an order designated for full anonymity is executed, the MPIDs of the contra parties are not identified on the execution and trade reports. Instead, the SIZE MPID will be reflected as the contra party. Nasdaq does not disclose the identity of the contra parties unless the liquidity-providing firm is an ECN that charges an access fee, or if an MPID inadvertently executes against

itself.⁵ In the case of an ECN, the ECN needs to know the contra party to properly assess the fee, and the accessing firm needs to know the contra party for billing reconciliation. Hence, the trade will not be anonymous: the true contra MPIDs will be identified on the delivery message, execution report, trade report, and clearing contract. Similarly, if an MPID executes against itself, the MPID will be revealed on both sides so that firms are aware of this occurrence. Firms that execute against their multiple MPIDs can download a file from nasdaqtrader.com at the end of each trading day to see the executions in which they crossed with their own multiple MPIDs. Contra party identities are also unmasked if necessary to fulfill regulatory obligations, such as prospectus delivery requirements.

B. Reserve Size for Quotes and Orders

Nasdaq market participants may indicate that a quote/order has reserve size. Reserve size replenishes displayed size to at least one round lot (100 shares), or a pre-established larger amount in round lots, once displayed size is decremented to less than one round lot. Reserve size, along with displayed size, is accessible through Nasdaq's trading platform, but is not displayed.

C. Order Execution Algorithm

The Nasdaq Market Center is programmed in accordance with a price/time priority algorithm. Under the algorithm, orders are executed as follows: 1) displayed quotes/order of market makers, ECNs, and non-attributable orders of UTP Exchanges, in time priority between such interest at a particular price; 2) reserve size of market makers, ECNs and UTPs with non-attributable interest in time priority between such interest at such price; and 3) attributable interest of UTP Exchanges in time priority between such interest at such price.

D. Internalization and Anti Internalization

The Nasdaq Market Center does not automatically prevent a market participant's order from executing against its own quote/order. At or prior to exchange registration, however, the system will eliminate a feature that allowed market participants to jump the price/time priority queue by "preferencing" their own MPIDs. Moreover, market participants that wish to avoid inadvertent internalization through the system can use the Anti-Internalization Qualifier (AIQ) options upon order entry. The AIQ options might be used if a market participant is prohibited from trading as principal with a particular order, such as orders from certain investment advisory accounts.

⁵ As discussed below, an order from a market participant can execute against its own quote/order if that quote/order is next in line to receive an execution under the principle of price/time priority. A market participant wishing to avoid this possibility can set an "Anti-Internalization Qualifier" on its quotes/orders.

E. Quote Decrementation

If an execution is delivered to a quoting market participant that accepts automatic executions, the system automatically decrements the participant's display quote/SIZE quote in the montage and the aggregate quote size by the size of the execution. If the participant's displayed size is decremented to less than a round lot and the market participant has reserve size, the displayed size will be replenished from reserve.

For quoting market participants that accept delivery, Nasdaq automatically decrements the participant's display quote/SIZE quote in the montage and the aggregate quote by the size of the delivered order. Nasdaq will continue delivering orders to such participant, up to its displayed and reserve size, regardless of whether it has processed the previous orders, until all size is exhausted.

If the delivery participant declines or partially fills the order or fails to respond within 30 seconds, Nasdaq sends the order (or the remaining portion thereof) back into the system for immediate delivery to (or execution against) the next available participant. If an ECN, whether it accepts automatic execution or delivery, has its attributable interest reduced to less than one round lot without an update or without transmission of another attributable quote/order to Nasdaq, Nasdaq will "zero out" the display quote on the exhausted side. If both sides are reduced to zero without an update or transmission of another attributable quote/order, the ECN is placed into an excused withdrawal state and restored once the ECN transmits to Nasdaq a revised attributable entry. While the ECN is in an excused withdrawal state, the system will still access the ECN's non-attributable orders.

F. Quote Refresh

To assist with the requirement of maintaining a two-sided, attributable quote, market participants are able to use the Automatic Quote Refresh (AQR) functionality. When a market participant's principal attributable quote is exhausted to less than one round lot, the system refreshes the market maker's price and size by an increment and to a size amount designated by the participant.

If a market participant is utilizing AQR but has an attributable entry in the system that is priced at or better than the quote/order that would be created by the AQR, Nasdaq displays the better-priced attributable quote/order, not the AQR-produced quote/order. If a market participant is not utilizing AQR and has given Nasdaq multiple attributable quotes/orders, Nasdaq displays the participant's next best-priced attributable entry when its attributable quote/order is decremented to less than one round lot.

If all of a market participant's attributable interest is reduced to less than one round lot and the participant is not using AQR, Nasdaq will zero out only the exhausted side of the market for thirty seconds. During this period, the participant can update its quote/order by transmitting a revised attributable quote/order to Nasdaq. If, after thirty seconds, the market participant does not update its quote or voluntarily withdraw from

the market, the Nasdaq Market Center will refresh its quote to the designated tick (price interval) away from the worst-displayed price in the montage. If there are no market participants with a current quote in the montage, the price will be set to at least one tick inferior from the last valid inside, or to at least one tick inferior from the market participant's last displayed price prior to time out processing, whichever is less. If the new quote would result in a locked-or-crossed market situation, the system will open the quote at least one tick inferior to the contra side of the market so that a locked-or-crossed condition would not exist.

VIII. Avoidance of Locked or Crossed Markets

If a quoting market participant enters a quote that would lock or cross the market, it will receive a system warning. In order to complete the quote/order entry, the participant is required to override the system warning. If the market participant overrides the warning, the Nasdaq Market Center does not display the order as part of a display quote, but instead the order will be treated as a marketable limit order and entered into the Nasdaq Market Center as an for execution in time priority. Locking/crossing orders automatically execute against the quote they are locking/crossing. A warning message is not provided.

For locked market situations, orders are routed to the quoting market participant(s) next in queue that would be locked, and are executed (or delivered for execution) at the price of the locking quote/order. For crossed market situations, the crossing order is routed to the next quoting market participant(s) in queue and is executed (or delivered for execution) at the price of the displayed quote/order that would have been crossed.

Once the lock or cross is cleared, if the quoting market participant's order is not completely filled, the Nasdaq Market Center will reformat the order and display it as part of a displayed quote on behalf of the entering participants. If the market moves and the order is no longer locking or crossing, the system will either return the order or include it as part of a displayed quote.

IX. Nasdaq Opening Process

Nasdaq recently introduced a new market open process and modifications to its pre-opening trading environment for all Nasdaq-listed stocks. Nasdaq adapted the Total Day order ("X Order") and the Total Immediate or Cancel order ("IOX"), which were already in use for non-Nasdaq exchange-listed securities, for use in the Nasdaq-listed pre-open environment. X Orders, which can be entered beginning at 7:30 a.m., are available for execution beginning at 9:25 and continuing until the end of the trading day. If not executed by that time, X Orders are cancelled automatically from the system and returned to the entering party. An IOX Order must be priced and if after entry into the Nasdaq Market Center it becomes non-marketable, the unexecuted portion will be canceled and returned to the entering party. IOX Orders are available for entry and execution between 9:25 a.m. and 4:00 p.m.

The Nasdaq Market Center uses the following process to “wake up” market participant quotes and X and IOX Orders. All quotes and limit price X Orders wake up at 9:25:00. Any order or quote whose limit price does not lock or cross the book is added to the book in strict time priority. Orders or quotes whose limit price would lock or cross the book are placed in an “In Queue” state, also in time priority. Once the wake-up process has been completed, within seconds after 9:25, the Nasdaq Market Center begins executing quotes and X Orders that were held In Queue in strict time priority regardless of quote or order type. In Queue quotes and orders that are not executable are added to the book. All quotes and X or IOX Orders entered while the system is waking up and sorting to clear locks and crosses are suspended. Once this process is complete, the system resumes processing the input queue of quotes, X and IOX Orders as needed to maintain an unlocked market.

All Nasdaq-listed stocks are eligible to participate in the Nasdaq Opening Cross. There are three components of the Nasdaq Opening Cross: (1) On Open and Imbalance Only order types; (2) the dissemination of an order imbalance indicator via a Nasdaq proprietary data feed; and (3) opening cross processing in the Nasdaq Market Center at 9:30 that will execute the maximum number of shares at a single, representative price that will be the Nasdaq Official Opening Price. Each component is described in detail below.

The new opening cross begins with market participants entering On Open and Opening Imbalance Only order types in the Nasdaq Market Center. On Open Orders are not displayed in the quotation montage or disseminated via any Nasdaq data feeds. On Open orders execute only at the price determined by the opening Nasdaq cross.

On Open orders can be un-priced and entered as Market on Open (“MOO”) orders, or priced and entered as Limit on Open (“LOO”) orders. MOO orders can be entered, cancelled, and corrected anytime between 7:30 a.m., when the system opens, until 9:28:00 a.m. when Nasdaq begins disseminating the opening order imbalance indicator. LOO orders can be entered from 7:30:00 until 9:29:59. LOO orders are subject to price improvement if the buy (sell) order is greater than (less than) the opening price. A LOO order at the opening price will not be filled if there are insufficient shares available on the opposite side of the market to fill the LOO order.

To reduce price volatility in the Opening Cross, LOO orders submitted after 9:28:00 a.m. are treated differently than those submitted before 9:28:00. LOO orders entered prior to 9:28:00 may have any limit price and may be cancelled anytime prior to 9:28:00 a.m. Late LOO Orders may only be submitted within a specified price range based on the last calculated Nasdaq Order Imbalance Indicator. Late LOO Orders submitted outside the prescribed price range will be rejected. If there is a sell imbalance, Late LOO Orders to sell must be priced no lower than the “near clearing price” (described below) or they will be rejected. Late LOO Orders to buy must be priced no higher than the “inside match price” (also described below) or they will be rejected. If there is a buy imbalance, Late LOO Orders to buy must be priced no higher than the near clearing price and Late LOO Orders to sell must be priced no lower than the inside match

price or they will be rejected. Finally, if there is no imbalance, Late LOO Orders to buy must be priced no higher than the inside match price and Late LOO Orders to sell must be priced no lower than the inside match price or they will be rejected. Late LOO orders cannot be cancelled at any time for any reason, although their price can be improved or their share size increased.

Opening Imbalance Only (“OIO”) orders must be priced as limit orders and are not displayed or disseminated. These orders provide supplemental liquidity and execute only on the opening cross against any imbalance. OIO orders that are priced more aggressively than the Nasdaq Market Center inside ask (bid) before the open will be repriced to the ask (bid) both for the purposes of the imbalance dissemination message and for executing on the opening cross. In this regard, they allow market participants to add liquidity to the market and help to ensure the execution of MOO and marketable LOO orders. OIO orders can be entered beginning at 7:30 a.m. until immediately before the market open. Imbalance orders can be improved after the cancellation threshold and if improved will receive a new timestamp.

In addition to MOO, LOO, and OIO orders, the Opening Cross includes: (1) market participant quotations, both displayed and reserve size; (2) orders that are entered with a time-in-force of Day, GTC or IOC prior to 9:28:00 (collectively “Early Regular Hours Orders”), which fully participate in the Opening Cross; (3) Day, GTC, and IOC orders that are entered after 9:28:00 (collectively “Late Regular Hours Orders”), which participate in the Opening Cross only to the extent that there is available liquidity on the other side at the Crossing Price; and (4) X and IOX orders. Additionally, after 9:28, all requests to cancel and cancel/replace Early Regular Hours Orders or Late Regular Hour Orders are suspended. If those orders are not executed during the Opening Cross, the requests for cancellation will be processed.

At 9:25 a.m. Nasdaq begins disseminating an opening order imbalance indicator on Nasdaq proprietary data feeds. Although the Opening Cross occurs at 9:30, the order imbalance indicator is disseminated to give participants insight into the state of the book and the opening cross if it were to take place at that time. The opening imbalance information includes several pieces of information regarding the cross: (1) the number of shares represented by MOO, LOO, OIO and Early Regular Hours orders that are paired at or within the current the Nasdaq Market Center inside; (2) the MOO, LOO, and Early Regular Hours orders imbalance at the current Nasdaq best bid or offer, depending on the direction of the imbalance; (3) the buy/sell direction of that imbalance at the current inside price; (4) an indicative clearing price range at which the Nasdaq Opening Cross would occur if the Nasdaq Opening Cross were to occur at that time; and (5) the percent by which that indicative price varies from the Nasdaq inside match price. The indicative clearing price range is bounded on the far side by the price at which all MOO, LOO, OIO, and Early Regular Hours orders would cross with only each other. It is bounded on the near side by the price at which the MOO, LOO, OIO Early Regular Hours orders, Extended Hours Orders and Quotes would clear. Where no clearing price exists, Nasdaq disseminates an indicator for “market buy” or “market sell.”

In the Nasdaq Opening Cross, Nasdaq's matching engine algorithmically evaluates all eligible prices at which an Opening Cross can occur and identifies the price or prices at which the maximum shares would be executed. If more than one price would result in the same number of shares being executed, the matching engine evaluates those prices only and determine which price would minimize the imbalance of on open orders. If more than one price still qualifies, the matching engine identifies the single price that would minimize the distance from a crossing price to the previous Nasdaq official closing price.

If the Nasdaq Opening Cross price is selected and fewer than all quotes and orders that are available for automatic execution in the Nasdaq Market Center would be executed, the system will execute quotes and orders in the following priority:

- MOO and Early Regular Hours market orders, with time as the secondary priority;
- LOO orders, Early Regular Hours limit orders, OIO orders, X limit orders, displayed quotes and reserve interest priced more aggressively than the Nasdaq Opening Cross price with time as the secondary priority;
- LOO orders, OIO orders, displayed interest of Early Regular Hours and X limit orders, displayed interest of limit orders, and displayed interest of quotes at the Nasdaq Opening Cross price with time as the secondary priority;
- Reserve interest of quotes and Early Regular Hours and X limit orders at the Nasdaq Opening Cross price with time as the secondary priority; and
- Late Regular Hours orders in strict time priority.

Unexecuted MOO, LOO, and OIO orders are canceled.

The Opening Cross occurs at 9:30. All orders that are executable are executed at the Nasdaq Opening Cross price, reported to Nasdaq's trade reporting system with SIZE as the contra party on both sides of the trade, and then transmitted to the consolidated tape. The Nasdaq Opening Cross price and the associated paired volume are then disseminated via data feeds. While the Opening Cross occurs, all entry of quotes and orders is suspended. When the Opening Cross concludes, normal trading commences.

Not all Nasdaq securities participate in the Nasdaq Opening Cross. For those that do not, Nasdaq has developed an improved procedure to ensure that all stocks open with an unlocked inside market. The process "wakes up" orders that are eligible for execution beginning at 9:30, and processes them in an orderly fashion to prevent the creation of locks and crosses.

The process has several steps each of which occur in strict time priority. First, limit orders that have a time-in-force of Day or GTC wake-up. Of those, orders whose limit price does not lock or cross the book will be added to the book. Orders whose limit price does lock or cross the book will be placed in an "In Queue" state in strict time priority. Second, reverse Pegged orders wake up. If the price created by the reverse Pegged order does not lock or cross the book, the order is placed on the book. If the price

created by the reverse Pegged order would lock or cross the book, the order is placed in "In Queue" status. Third, regular Pegged orders wake up in strict time priority. The In Queue orders also include market and IOC orders in strict time priority. At this point, all eligible orders that would not lock or cross the market will be on the Nasdaq Market Center book and all other eligible orders will be In Queue.

After the wake-up process has been completed, the system will process the "In Queue" orders, including market orders, in strict time priority order regardless of order type. IOC orders that are not executable will be canceled as is currently done. Orders with a time in force of DAY and GTC that are not executable will be added to the book in strict time priority. Once this process is complete, the system will resume processing the input queue as normal.

X. Closing Cross

There are three components of the Nasdaq Closing Cross: (1) On Close and Imbalance Only order types; (2) the dissemination of an order imbalance indicator via a Nasdaq proprietary data feed; and (3) closing cross processing in the Nasdaq Market Center at 4:00:00 that will execute the maximum number of shares at a single, representative price that will be the Nasdaq Official Closing Price. Each component is described in detail below.

The closing process begins with market participants entering On-Close and Imbalance Only order types in the Nasdaq Market Center. On-Close orders can be un-priced and entered as market-on-close ("MOC"), or priced and entered as limit-on-close ("LOC"). On-Close orders can be entered, cancelled, and corrected between 9:30:01 a.m. EST and 3:50:00 p.m. but they are not displayed in the Nasdaq Order Display Facility or disseminated via any data feed. On-Close orders, both MOC and LOC, execute only at the price determined by the closing Nasdaq cross. Thus, LOC orders will be subject to price improvement if the buy (sell) order is greater than (less than) the closing price.

Imbalance Only orders ("IO") supplement the liquidity provided by On Close orders and will execute only within the closing cross against any imbalance in liquidity. Imbalance Only order types must be priced limit orders. Like On Close orders, IO orders are not displayed in the Nasdaq Order Display Facility or disseminated via any data feed. IO orders can be entered until 3:59:59, but they cannot be cancelled or modified after 3:50:00 except to increase the number of shares or to increase (decrease) the buy (sell) limit price. IO sell orders only execute at or above the 4:00:00 Nasdaq inside offer, and IO buy orders will only execute at or below the 4:00:00 Nasdaq inside bid. On Close and IO orders constitute the "Nasdaq Closing Orders" which, as described below, serve as the basis for the Closing Cross Order Imbalance Indicator.

At 3:50:00, Nasdaq begins the closing auction calculation and disseminates an order imbalance indicator on Nasdaq's proprietary data feed. Imbalance Information includes several pieces of information regarding the closing cross: (1) the number of shares represented by MOC, LOC, and IO orders that are paired at the current Nasdaq

inside; (2) the MOC and LOC imbalance at the current Nasdaq best bid or offer, depending on the direction of the imbalance; (3) the buy/sell direction of that imbalance, and the current inside price; (4) an indicative clearing price range at which the Nasdaq Closing Cross would occur if the Nasdaq Closing Cross were to occur at that time and (5) the percent by which that indicative price varies from the Nasdaq inside price. The indicative clearing price range is bounded on the far side by the price at which the MOC, LOC, and IO orders would clear with only each other. It is bounded on the near side by the price at which the Nasdaq Closing Orders and continuous orders (excluding volume that is available only by order delivery) would clear. Where no clearing price exists, Nasdaq disseminates the phrase “market buy” or “market sell.”

The Nasdaq Closing Cross begins at 4:00:00 and, thus, does not affect Nasdaq Market Center processing that occurs during normal market hours. The Nasdaq Closing Cross concludes at approximately 4:00:05 at which time the closing executions are reported to the consolidated tape for Nasdaq securities.

If the Nasdaq Closing Cross price is selected and fewer than all Nasdaq Closing Orders and all continuous orders that are available for automatic execution in the Nasdaq Market Center would be executed, the system executes orders in the following priority:

- MOC orders, with time as the secondary priority;
- LOC orders, limit orders, IO orders, displayed quotes and reserve interest that are priced more aggressively than the Nasdaq Closing Cross price;
- LOC orders, displayed interest of limit orders, and displayed interest of quotes at the Nasdaq Closing Cross price with time as the secondary priority;
- Reserve interest and IO orders at the Nasdaq Closing Cross price with time as the secondary priority.

All orders that are executable will be executed at the Nasdaq Closing Cross price and reported to the consolidated tape with SIZE as the contra party. The Nasdaq Closing Cross price and the associated paired volume will then be disseminated as the Nasdaq Official Closing Price.

XI. Routing

The Nasdaq Market Center offers an optional routing feature that routes orders in Nasdaq-listed securities to other markets when those markets are displaying quotes at prices that are superior to those displayed in Nasdaq and are accessible through the router. Nasdaq Market Center participants may choose on an order-by-order basis whether they want an order routed outside the Nasdaq Market Center. Routed orders are executed pursuant to the rules and regulations of the destination market. Orders in stocks subject to the Intermarket Trading System (“ITS”) plan may be routed to the New York Stock Exchange, the American Stock Exchange, and regional exchanges through the ITS linkage in accordance with rules governing use of that linkage, or through direct linkages established through Nasdaq’s Brut facility, as described below.

Nasdaq accesses the quotes of exchanges through its broker-dealer subsidiary, Brut, which may not be a member of all exchanges. Routing done by Brut for the Nasdaq Market Center is conducted separately from routing the Brut Facility performs for its subscribers. Nasdaq will route orders to exchanges in which Brut is not a member, to the extent Brut has access to the market participants displaying quotes in these other markets. For example, one national securities exchange's quotes can be accessed indirectly by routing orders to the ECN that is the predominant, if not sole, market participant displaying quotes on that exchange. In addition, Nasdaq also may route orders to market centers that display their quotes through the NASD's Alternative Display Facility and market centers that do not display their quotes through exchanges or the ADF.

The processing of an order marked for routing differs depending on whether there are quotes on other markets at prices superior to those displayed on Nasdaq and whether such quotes are accessible by Nasdaq. For each order flagged for routing, the Nasdaq Market Center determines whether Nasdaq is at the best price vis-à-vis other markets that are accessible through Nasdaq's router. If Nasdaq is displaying the best prices, the order will be executed in full or up to the maximum amount of shares available in Nasdaq at the price levels that are superior to the prices at these other markets. Nasdaq would then route any unfilled portion of the order to accessible markets that are displaying quotes superior to Nasdaq's updated quotes. If more than one market is at a price level that is superior to Nasdaq's displayed price, the computer algorithm of the Nasdaq Market Center router will determine the market, or markets, to which the order will be sent, based on several factors including the number of shares being displayed, response time, likelihood of undisplayed trading interest, and the cost of accessing the market.

If other markets accessible through the router have prices superior to those on Nasdaq when an order is next in line to be processed, the order will by-pass the Nasdaq Market Center execution algorithm and will be routed to a market or markets displaying the superior priced quotes.⁶ If an order (or a portion of the order) remains unfilled after being routed, it will be returned to Nasdaq where, if the order is marketable, it will be returned to the Non-Directed Order processing queue, where it can be executed in Nasdaq, or routed again, if Nasdaq is not at the best price when the order is next in line in the processing queue.⁷ Once a routed limit order is no longer marketable, whether it becomes non-marketable upon return to Nasdaq or while in the execution queue, it will be placed on the Nasdaq Market Center book, if consistent with the order's time in force

⁶ When a member submits a market order to the Nasdaq Market Center and has chosen to have the order routed, if routed, the market order will be routed to another market as a limit order. An order that has been routed to another market shall have no time standing in the Nasdaq Market Center execution queue relative to other orders in the Nasdaq Market Center.

⁷ A market order that is converted to a limit order when it is routed to another market will become a market order again upon return to Nasdaq. However, if after being placed back in the order execution queue the order is routed yet again, it will be re-converted to a limit order.

condition.⁸ Once on the book, however, an order will not be routed out of the Nasdaq Market Center, even if it becomes marketable against the quotes of another market. Finally, orders are not routed outside the Nasdaq Market Center during Nasdaq's Opening and Closing Crosses.

XII. The Brut ECN

On September 7, 2004, Nasdaq completed its purchase of Brut, LLC, a registered broker-dealer and member of the NASD and the New York Stock Exchange ("NYSE"), and operator of the Brut ECN (the "Brut ECN" or "Brut"). As an SRO member, Brut remains subject to all rules applicable to its activities as a broker-dealer, including those requiring its participation in market surveillance and audit trail programs conducted by Nasdaq, the NASD, and the NYSE. As an ECN, Brut participates in the Nasdaq Market Center system as an Order-Delivery ECN pursuant to the Rule 4700 Series and as an ITS Market Maker pursuant to the Rule 5200 Series. Brut continues to act as a counter-party to all trades taking place in its system, for anonymity as well as clearance and settlement purposes. Brut also continues to provide outbound order routing services to other market centers for its subscribers. Brut provides the Nasdaq Market Center its full book of orders for display in Nasdaq.

The Brut ECN is currently a "facility" of a national securities association, and upon exchange registration, will become a facility of the exchange operated by Nasdaq. As such, Nasdaq is obligated to file with the Commission rules to govern the operation of the Brut ECN.

A. Order Display/Matching System

The Brut ECN allows subscribers to enter market and priced limit orders to buy and sell Nasdaq and exchange-listed securities. Brut acts only as an agent on behalf of its subscribers and engages in no proprietary trading save that necessary to correct system errors. Subscribers may enter multiple orders at single or multiple price levels. Subscribers have the option to have a portion of their order held in reserve and not displayed to the marketplace. Brut, in turn, makes available to System subscribers and market data vendors a data feed of all displayable orders on both the bid and offer side of the market (excluding reserve size share amounts) for all price levels at which shares are available within its System. Brut orders displayed in the Nasdaq Market Center are displayed under the same terms and conditions generally applicable to Nasdaq Quoting Market Participants.

⁸ Orders returned to Nasdaq will be placed on the Nasdaq Market Center book on the basis of the time-stamp assigned to the order when it was originally submitted to the Nasdaq Market Center.

B. Access Standards

To obtain access to the Brut ECN as a system participant, a user must execute a subscriber agreement and be a participant in, or have an access arrangement with a participant in, an SEC-registered clearing agency. In addition, the Brut subscriber must also agree to comply with all applicable rules and accept all Brut ECN trades identified by the Brut ECN as being effected by the subscriber.

Broker-dealers may also access Brut ECN orders through the Nasdaq Market Center, regardless of their status as a Brut ECN participant as described above, provided they have met the conditions for access to the Nasdaq Market Center.

C. Order Types

The Brut ECN makes available to subscribers several order types. These order types are described below.

- Limit orders are orders to buy or sell a stock at a specified price or better.
- Market orders are un-priced orders to buy or sell a stock at the market's current best price. A market order may have a limit price beyond which the order shall not be executed.
- Agency Away orders, which are available for Nasdaq-listed securities, are designated by the entering party as eligible for execution at a price inferior to the then-current national best bid/offer.
- Principal Inside Only orders are designated by the party as only eligible for execution at a price equal or better than the then-current national best bid/offer.
- Brut Cross orders are displayed in Brut and executable against marketable contra-side orders in any market center, including the Brut ECN, at the time of receipt. If equally-priced executable orders are available both in Brut and another market center, the order will first execute against Brut ECN orders; otherwise, it will be routed to other market centers. Once a Brut Cross Order is routed out in whole or in part to another market center, any remaining unexecuted or returned portion of the order will be posted in the Brut ECN and will no longer be routed out for potential execution, unless the order is designated as an Aggressive Cross Order or Super Aggressive Cross Order.
- Directed Cross orders are routed to a specified market center for potential execution after they exhaust available liquidity in the Brut ECN.
- Aggressive Cross orders are Brut Cross orders that if, after being posted in the Brut ECN and exhausting available liquidity in the Brut ECN, have their price

crossed by the displayed quote of another market center, are routed by Brut to that market center for potential execution.

- Super Aggressive Cross orders are Brut Cross Order that, if after being posted in the Brut ECN, have their price locked or crossed by the displayed quote of another market center, are routed by Brut for potential execution.
- Thru Brut orders are directed to a market center other than Brut for execution.
- To Brut orders are eligible for execution upon receipt solely against Brut ECN orders, and are displayed in the Brut ECN to the extent they cannot be executed upon receipt.
- Hunter orders are not displayed in the Brut ECN, but will execute against available trading interest residing in the Brut ECN or another market center.
- Pegged orders are a form of To Brut limit order that, after entry, have their price automatically adjusted by the Brut ECN in response to changes in the Nasdaq Market Center (for Nasdaq-listed securities) or national best bid or offer (for exchange-listed securities), as appropriate.
- Discretionary orders have both a displayed price, as well as a non-displayed discretionary price range and size in which the entering party, if necessary, is also willing to buy or sell.
- Post Only orders are a form of To Brut limit order that, if marketable upon receipt against an order then-displayed in the Brut ECN, are rejected and returned to the entering party. If the order is marketable against a quote displayed outside of Brut, the price of the order is adjusted to a price \$0.01 inferior to the best bid or offer, as appropriate, and then displayed in the Nasdaq Market Center and Brut.

D. Time in Force Designations

Orders entered into the Brut ECN may be designated by the entering party to remain in force and available for display and/or potential execution for varying periods of time. Unless cancelled earlier, once these time periods expire, the order (or the unexecuted portion thereof) is returned to the entering party. These “time in force” designations are described below:

- Immediate or Cancel (IOC) orders are returned to the sender if not immediately executed. If partially executed, un-executed remainders of these orders are returned immediately to the entering party.
- Day (DAY) and Good-till-Canceled (GTC) orders (or the unexecuted portions of such orders) are held by the Brut ECN and remain available for potential

display/execution until 4:00 p.m. Eastern Time on the day they are submitted unless cancelled before then by the entering party.⁹

- Good-till-Canceled-Overnight (GTCO) orders (or the unexecuted portions of such orders) are treated like GTC orders, but are held by the Brut ECN overnight and remain available for potential display/execution until 4:00 p.m. of a date provided by the entering party, or indefinitely, unless and until cancelled by the entering party. GTCO orders are not eligible for execution between 4:00 p.m. and 8:00 p.m. Eastern Time.
- End-of-Day (GTX) orders (or the unexecuted portions of such orders) are held by the Brut ECN and remain available for potential display/execution until 8:00 p.m. Eastern Time on the day they are submitted unless cancelled before then by the entering party.
- Good-till-Time (GTT) orders (or the unexecuted portions of such orders) are held by the Brut ECN and remain available for potential display/execution until the time designated by the entering party. This time may be a relative time (e.g. 30 minutes after receipt) or an actual time (e.g. 2:00 p.m.).
- Effective Time (EFT) orders (or the unexecuted portions of such orders) are held by the Brut ECN and only become available for potential display/execution at an actual time during the trading day selected by entering party (e.g. 3:00 p.m.).

The Brut ECN normally operates between the hours of 6:30 a.m. and 8:00 p.m. Eastern Time. Orders with the above time-in-force designations may be entered into the Brut ECN, or previously entered orders cancelled, starting at 6:30 a.m. Eastern Time. With the exception of the GTC and DAY designations, which may only be entered until 4:00 p.m. Eastern Time, all time in force designations may be entered into Brut until 8:00 p.m. Eastern Time. Although the entry of various time-in-force designations is permitted throughout the Brut ECN's hours of operation, the Brut ECN will not execute an order in contravention of the time-in-force period selected by the entering party, and instead will hold all such entries until they can be processed in conformity with the time-in-force parameters selected upon entry.

E. Routing

The Brut ECN provides the capability to route orders to other available market centers between the hours of 7:30 a.m. and 6:30 p.m. Eastern Time.¹⁰ The entering party

⁹ Currently, the Brut ECN processes orders designated as GTC and Day in the exact same manner. In the near future, Brut will modify the names of its order types to eliminate this duplication.

¹⁰ Brut routes to other market centers trading Nasdaq securities as well as to national securities exchanges, including the American Stock Exchange, the NYSE, and

designates, through the order type it selects, whether the Brut ECN should seek to execute the order against contra-side marketable orders in the Brut ECN prior to routing. In no event, however, does the router give an order to a market center displaying an inferior-priced order until the router has attempted to access better-priced displayed orders in that or other market centers.¹¹

With the exception of Thru Brut and Directed Cross orders that specifically direct to which market center an order is to be routed, orders routed out of the Brut ECN to other market centers for potential execution are generally delivered to other market centers in price/size priority. If the Nasdaq Market Center has displayed shares at the best price level, the Brut ECN will first deliver to the displayed Nasdaq Market Center quote/order before routing to other market centers. If the routed order is smaller in size than the total combined displayed share amounts of accessible market centers at the best price level, the Brut ECN delivers the routed order to the available market centers in price/size priority. If the routed order is larger than the total combined displayed share amounts of accessible market centers at the best price level, the Brut ECN delivers over-sized orders to each displayed market center's quote in proportion to the individual market's center share of that total displayed share amount.

Orders routed by Brut to another market do not retain time priority with respect to other orders in the Brut ECN, and Brut continues to execute other orders while the routed order is away at another market. Once routed by Brut, an order becomes subject to the rules and procedures of the destination market including, but not limited to, short-sale regulation and order cancellation.

F. Execution Algorithm

The Brut ECN has an execution algorithm of price/time priority. For each order, among equally-priced trading interest, the Brut ECN executes against available contra-side displayed share amounts in full, in price/time priority, before then moving to reserve shares which are likewise executed in price/time priority. After display and reserve size are exhausted at a particular price level, the Brut ECN will then access, if available, share amounts of Discretionary Orders within the Discretionary Order's discretionary price range at that same price level, followed by executable Hunter Orders before moving on to the next price level.

Having determined which orders are eligible for execution via the matching process, the Brut Brut ECN then proceeds to decrement (reduce) share amounts from

regional stock exchanges using the Intermarket Trading System ("ITS"). As an NYSE member, Brut also has access to the New York Stock Exchange's DOT system.

¹¹ Use of the Brut router is voluntary. Users can select, by the type of order entered, if they want the Brut ECN to route their order to another market center for potential execution.

those orders. These share amounts are decremented from the matched orders starting with reserve size of the orders, if any.¹²

XIII. Brut/Nasdaq Integration Plan

Although now sharing common ownership, Brut and Nasdaq currently operate separate order display and execution systems. With respect to the processing of quotes/orders: (i) Brut participates in the Nasdaq Market Center as a Nasdaq Order-Delivery ECN pursuant to the NASD Rule 4700 Series and an ITS Market Maker pursuant to NASD Rule 5200 Series, and (ii) provides its full depth of its order book to the Nasdaq Market Center. Brut connect to the Nasdaq Market Center using a dedicated direct voluntary linkage that Nasdaq makes available to any Nasdaq Order-Delivery ECN that wants it.

Nasdaq's long-term vision is to have Brut and Nasdaq unified in a single technology platform that will further enhance execution quality for system users. Nasdaq currently contemplates using the Brut broker-dealer in a manner ancillary to the market execution system as an outbound access broker-dealer to other market centers. However, the timing and manner of integration may be affected by Nasdaq's agreement to acquire the Inet ECN ("Inet"). If Nasdaq's acquisition of Inet is consummated, Nasdaq would expect to unify Nasdaq, Inet, and Brut into a single technology platform, while operating one or more broker-dealers for the purpose of outbound access.

XIV. Fees and Hours of Operation

The Rule 7000 Series of the Nasdaq Rules (filed as Exhibit A, Tab 9) describes the fees to be assessed by Nasdaq for use of the Nasdaq Market Center and Brut. The Rule 4500 Series of the Nasdaq Rules (filed as Exhibit A, Tab 6) describes the fees to be assessed by Nasdaq for listing.

Nasdaq's hours of operation are as follows:

Nasdaq-listed securities trading in the Nasdaq Market Center

Order/Quote Entry: 7:30 am, ET

Pre-Market Session: 8:00 am to 9:25 am, ET

Pre-Open Session: 9:25 am to 9:29:59 am, ET

Regular Market Hours: 9:30 am to 4:00 pm, ET

Post-Market Hours: 4:00 pm to 6:30 pm, ET

Other exchange-listed securities trading in the Nasdaq Market Center

Order/Quote Entry 7:30 am, ET

¹² This decrementation process differs from that of the Nasdaq Market Center which decrements shares directly from the matched portion of quotes/orders and then refreshes those matched portions from any remaining reserve share amounts.

Regular Market Hours: 9:30 am to 4:00 pm, ET
Post-Market Hours: 4:00 pm to 6:30 pm, ET

Trading of Nasdaq-listed securities and other exchange-listed securities in Brut

Order Entry: 6:30 am, ET
Pre-Market Trading Session: 8:00 am to 9:30 am, ET
Market Hours: 9:30 am, ET to 4:00 pm, ET
Post-Market Hours: 4:00 pm, ET to 6:30 pm, ET
After Hours Session: 6:30 pm, ET to 8:00 pm, ET

At present, Nasdaq operates the Nasdaq Market Center and Brut as facilities of the NASD, and will operate them as facilities of a national securities exchange immediately upon the effectiveness of the registration of The NASDAQ Stock Market LLC as a national securities.

XV. Market Surveillance

A. Nasdaq MarketWatch

Nasdaq operates MarketWatch, a real-time surveillance department. The principal purpose of MarketWatch is to maintain an orderly market and ensure a level playing field for market participants, investors and the public in general. Market Watch performs this real-time, intra-day surveillance over all Nasdaq-listed companies and all market participants in the Nasdaq Market Center and Brut.

MarketWatch oversees the complete and timely disclosure of Nasdaq issuers' material information. Under Nasdaq IM-4120-1, issuers are required to notify MarketWatch prior to the release of significant corporate developments. MarketWatch determines if implementing a trading halt is necessary to maintain an orderly market for the release of that material news.

MarketWatch utilizes an automated detection system that monitors the trading activity in each issue and generates price and volume alerts that aid in the assessment of unusual market activity. MarketWatch coordinates and executes the release of Initial Public Offerings ("IPOs") and actively monitors the IPO during the opening quote period to facilitate an orderly open. MarketWatch is also responsible for administering market participants' excused withdrawals and passive market making requests and handles the clearly erroneous trades adjudication process for the Nasdaq Market Center and Brut.

If MarketWatch staff observes any activity that may involve a violation of SEC or SRO rules, MarketWatch immediately refers the activity to NASD Regulation's Market Regulation Department for further investigation and potential disciplinary actions. All information received by MarketWatch is confidential and used strictly for regulatory purposes.

B. NASD Regulation

In addition to surveillance by Nasdaq, Nasdaq has contracted with NASD Regulation for NASD Regulation to surveil Nasdaq in the same manner that it does today. NASD Regulation's Market Regulation Department operates a highly automated process of investigating and preventing abusive, manipulative, or illegal trading practices in the Nasdaq Market Center and Brut.. NASD Regulation carries out its regulatory responsibilities through education, examinations, market surveillance, registration of securities personnel, advertising and underwriting regulation, disciplinary actions that violate rules, investigation of customer complaints, and forums to resolve disputes.

To promote effective regulation and investor confidence, and to protect market participants, Market Regulation has put in place regulatory programs and has established specialized units focused on determining compliance with specific Nasdaq rules and regulations and federal securities laws. Market Regulation is comprised of investigative, examination, and operational units consisting of analysts, attorneys, and examiners based in Rockville, Maryland, Chicago and New York. The Market Regulation Department utilizes state-of-the-art technology to carry out its regulatory responsibilities. This technology provides the ability to reconstruct market transactions utilizing trading data and quote information that is captured second-by-second throughout the trading day, and alert staff to potential violative activity.

The Market Regulation Department also conducts onsite inspections of the larger Nasdaq Market Center and Brut participants to assess compliance with Nasdaq market-making and trading rules and regulations and federal securities laws. The regulatory information gathered from online surveillance, customer and broker/dealer complaints, and on-site examinations of trading activity is shared and analyzed by experts in the Market Regulation Department to determine whether violative activity has occurred and disciplinary action is warranted. The staff's mission is to serve investors and all market participants by being a fair, efficient, and effective regulator.

As it does today, NASD Market Regulation may investigate any Nasdaq member or associated person, or any transaction occurring on the Nasdaq market, for potential violation of the federal securities laws, and relevant SEC and Nasdaq rules. NASD Market Regulation will have complete discretion to initiate, conduct, close and report on investigations, without input or review by Nasdaq.



FIX for Orders
Programming Specification

for FIX 4.2

September 13, 2005

version 2005-07

Confidentiality/Disclaimer

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Contents

1 Overview	5
1.1 Related Documentation	6
1.2 NASDAQ Customer Support	6
1.3 Publication Information	6
2 Session Overview	8
2.1 Architecture	8
2.2 Connectivity	8
2.3 Hours of Operation	9
2.3.1 Regular Trading Day	9
2.3.2 Early Close Trading Day	10
2.3.3 Non-trading Days	11
2.4 Trading Session ID (336=?)	11
2.5 Encryption	11
2.6 Expiry	11
2.7 Session Rejects	12
3 NASDAQ FIX for Orders	13
3.1 Tags	13
3.1.1 Supported Message Types (35=?)	13
3.1.2 Supported Order Types (40=?)	14
3.1.3 Supported Order TIFs (59 =?)	14
3.1.4 Price fields	14
3.1.5 AvgPx	14
3.2 NASDAQ Implementation of FIX	16
3.2.1 Mass Order Cancel	16
3.2.2 Not Available Status	16
3.2.3 Purged Orders	17
3.2.4 Order Status after NASDAQ-generated Events	17
3.2.5 Done for Day	17
3.2.6 Other Unsolicited Cancels	18
3.2.7 Possible Duplicates and Resends	18
3.2.8 Reject Messages	18
3.2.9 Broker Dealer On Behalf Ofs	19
3.2.10 Service Bureau On Behalf Ofs	19
3.3 NASDAQ Order Functionality	20
3.3.1 Pegged Orders	20
3.3.2 Discretionary Orders	21
3.3.3 Opening Cross	21
3.3.4 Closing Cross	23
3.3.5 Behavior of IOC, IOX, DAY, and DAYX Orders	24
4 Message Formats	25
4.1 Standard Messages	25
4.1.1 Header Inbound to NASDAQ	25
4.1.2 Trailer Inbound to NASDAQ	26
4.1.3 Header Outbound from NASDAQ	27
4.1.4 Trailer Outbound from NASDAQ	28

4.1.5	Session Reject	29
4.2	Administrative Messages	30
4.2.1	Heartbeat	30
4.2.2	Logon	30
4.2.3	Test Request.....	30
4.2.4	Resend Request	31
4.2.5	Sequence Reset.....	31
4.2.6	Logout	31
4.3	Application Messages.....	32
4.3.1	Inbound to NASDAQ	32
4.3.1.1	New Order – Single	32
4.3.1.2	Order Cancel Request	40
4.3.1.3	Cancel/Replace Request (Order Modification Request)	42
4.3.1.4	Order Status Request	47
4.3.1.5	Complaint Message	48
4.3.2	Outbound from NASDAQ.....	50
4.3.2.1	Order Acknowledgement.....	50
4.3.2.2	Execution/Trade Report	52
4.3.2.3	Order Reject.....	55
4.3.2.4	Pending Cancel	57
4.3.2.5	Accepted Cancel	59
4.3.2.6	Rejected Cancel	61
4.3.2.7	Pending Cancel/Replace	62
4.3.2.8	Accepted Cancel/Replace	64
4.3.2.9	Rejected Cancel/Replace.....	66
4.3.2.10	Order Status Response.....	67
4.3.2.11	Trade Through Notification.....	69
4.3.2.12	Restatement	70
4.3.2.13	Drop Copies	72
5	Appendix A: State Matrices.....	74
6	Appendix B: Order Timeline	91
7	Appendix C: Reject Codes	92
8	Appendix D: Publication History	122

1 Overview

This document contains the FIX 4.2 protocols used by NASDAQ, the functionality of NASDAQ FIX, and the user requirements for accessing the NASDAQ FIX protocol. This document outlines the messages transmitted via FIX for entering orders into NASDAQ market center. This document considers neither messages transmitted via other entry points into NASDAQ nor applications other than NASDAQ market center. Future releases will include other NASDAQ applications.

Users should be familiar with the FIX 4.2 specifications, as this document supplements those specifications.

NASDAQ supports:

- Order;
- Cancel;
- Cancel/Replace; and
- Order Status.

These messages are not currently supported in NASDAQ FIX:

Quote Processing

Mass Quote
Quote Acknowledgement
Quote Cancel
Quote Request
Quote Status Request

Market Data

Market Data Request
Market Data – Snapshot / Full Refresh
Market Data – Incremental Refresh

Other

Advertisements
Allocation
Allocation ACK
Bid Request
Bid Response
E-mail
Indications of Interest
List Execute
List Status
List Strike Price
News
Security Definition
Security Definition Request
Security Status
Security Status Request
Settlement Instructions
Trading Session Status
Trading Session Status Request






As new NASDAQ FIX functionality becomes available, you will receive technical updates detailing that functionality. At the same time the technical update is distributed, this programming specification will be updated on the NASDAQ Trader web site.

1.1 Related Documentation

The *NASDAQ FIX Trade Reporting Programming Specification* is here:
<http://www.nasdaqtrader.com/trader/tradingservices/specsinstallguides/fixactspec.pdf>

The *NASDAQ FIX ACES Programming Specification* is here:
<http://www.nasdaqtrader.com/trader/tradingservices/specsinstallguides/fixaccesspec.pdf>

1.2 NASDAQ Customer Support

	NASDAQ FIX Support	800-243-4284
	NASDAQ FIX Support	mailto:NASDAQFIX@NASDAQ.COM
	NASDAQ Testing Facility	800-288-3783
	NASDAQ Subscriber Services	800-777-5606
	NASDAQ Trading Services	800-219-4861

1.3 Publication Information

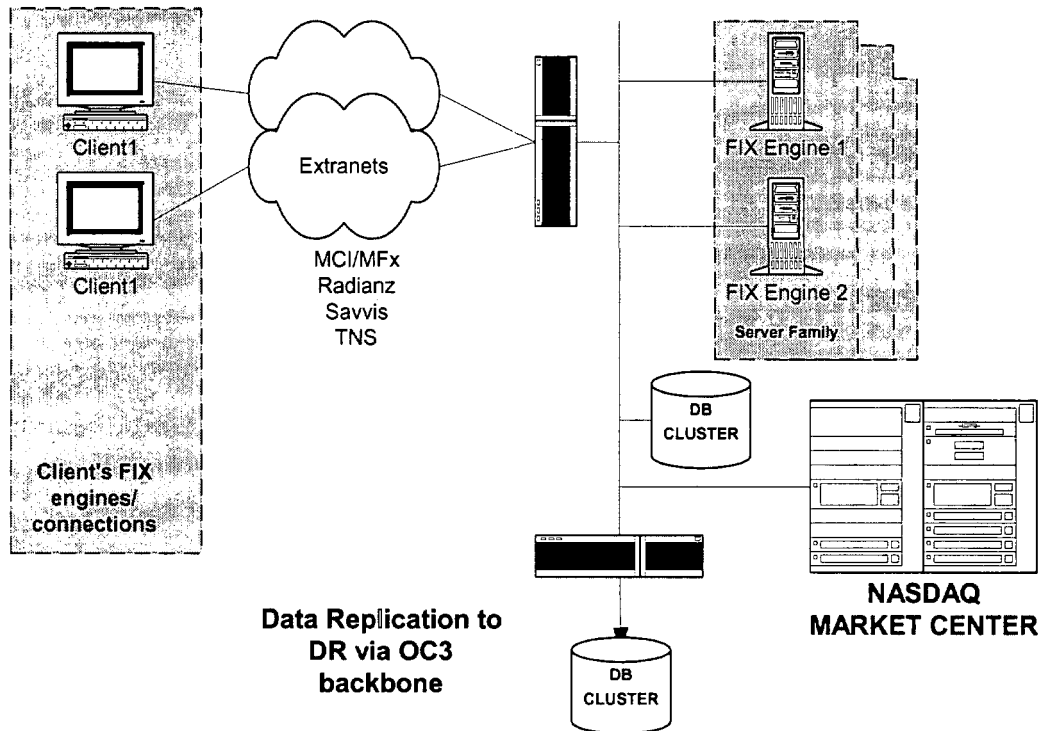
This section contains the information for the last six publications of this specification. Additional historical information is in section 8.

Date	Version	Enhancements
May 24, 2005	2005-06	General Updates Added filtered drop copy functionality. Modification of TIF is now allowed.
April 19, 2005	2005-05	General Updates Added tag 11, MaxFloor to all MsgType = 8; updated tag 18, ExecInst, tag 100, ExDestination; and tag 9307, PfdMktMkr in New Order Single; and added tag 58, Text, to Accepted Cancel message.
April 5, 2005	2005-04	NASDAQ FIX Routing 2 With this release, NASDAQ introduces functionality that allows you to enter super-aggressive and thru orders, peg to the NASDAQ Inside or NBBO, enter a 2-character peg difference amount, and route to non-participant, external market centers.
March 17, 2005	2005-03	NASDAQ FIX software version 6.1 With this release, NASDAQ introduces functionality that allows you to enter GTC and GTX orders, define an order as DNI or DNR, and provide multiple values in ExecInst. We have also added an optional display size

Date	Version	Enhancements
		tag.
February 10, 2005	2005-02	NASDAQ FIX Routing and Pre-Market NASDAQ introduces functionality that allows you to route orders to the NASDAQ Market Center only. NASDAQ announces the addition of pre-market session from 8:00 a.m. to 9:25 a.m.
January 21, 2005	2005-01	NASDAQ FIX software version 5.4 With this release, NASDAQ introduces functionality that allows you to update both price and size with a cancel/replace message. We have also added optional refresh and reserve size tags and a memo tag.

2 Session Overview

2.1 Architecture



2.2 Connectivity

- A connector ID is good for one and only one I1I2.
- The initial logon message is validated for both the sender comp ID (MPID) and the sender sub ID (I1I2).
- If logon fails, the user will not receive a message indicating this failure.
- Subsequent administrative and application messages will validate the connector ID and I1I2.

2.3 Hours of Operation

All times are Eastern. Please see Appendix B: Order Timeline.

2.3.1 Regular Trading Day

Logon/Logoff

FIX Startup	FIX Shutdown
4:00 a.m. ET	7:00 p.m. ET

- NASDAQ FIX will be up and accessible at 4:00 a.m.
- NASDAQ FIX will remain up and running until 7:00 p.m.
- Although it is not required, we suggest you log off at the end of your trading day. Otherwise, NASDAQ will log you off at shutdown.

Order Entry for NMS Security Trading

Start Time	End Time
7:30 a.m. ET	4:00 p.m. ET

Order Entry for Exchange-listed Security Trading

Start Time	End Time
7:30 a.m. ET	6:30 p.m. ET

- Orders entered between 4:00 a.m. and 7:30 a.m. will be rejected.
- Orders for NMS securities submitted after 4:00 p.m. will be rejected with a NOT WITHIN ALLOWABLE TIME message, as the current implementation of NASDAQ FIX will support only IOC and DAY orders.
- Orders for exchange-listed securities submitted after 6:30 p.m. will be rejected with a NOT WITHIN ALLOWABLE TIME message.
- Order Cancel and Cancel Replace requests for NMS securities made after 4:00 p.m., while possible, will most likely receive an ORDER NOT FOUND message, as these will be for DAY or IOC orders.
- Order Cancel and Cancel Replace requests for exchange-listed securities made after 6:30 p.m., while possible, will most likely receive an ORDER NOT FOUND message, as these will be for the X trading session. See Section 2.4 information.
- NASDAQ will continue to generate Execution Reports for NMS securities after the 4:00 p.m. market close until all reports have been generated.
- NASDAQ will continue to generate Execution Reports for exchange-listed securities after the 6:30 p.m. session close until all reports have been generated.

NASDAQ FIX will reset its inbound and outbound sequence numbers to 1 at approximately 7:00 p.m. each day.

2.3.2 Early Close Trading Day

A planned early market close usually occurs at 1:00 p.m. NASDAQ will notify you of an early close by Head Trader Alert that will provide closing times. In unforeseen circumstances, an unplanned early market close may be necessary. Again, NASDAQ will notify you of such an event by Head Trader Alert. Head Trader Alerts are available online at: http://www.nasdaqtrader.com/dynamic/newsindex/headtraderalerts_2004.stm.

Logon/Logoff

FIX Startup	FIX Shutdown
4:00 a.m. ET	4:00 p.m. ET

- As with regular trading days, NASDAQ FIX will be up and accessible at 4:00 a.m.
- Logons are accepted any time after 4:00 a.m., and all messaging remains the same through market open.
- NASDAQ FIX will remain up and running until 4:00 p.m.
- Logoffs are not required. If you choose to log off, do so by 4:00 p.m.

Order Entry for NMS Security Trading

Start Time	End Time (Market Close)
7:30 a.m. ET	1:00 p.m. ET

Order Entry for Exchange-listed Security Trading

Start Time	End Time (Session Close)
7:30 a.m. ET	3:30 p.m. ET

- Orders entered between 4:00 a.m. and 7:30 a.m. will be rejected.
- Orders for NMS securities submitted after 1:00 p.m. will be rejected with a NOT WITHIN ALLOWABLE TIME message, as the current implementation of NASDAQ FIX will support only IOC and DAY orders.
- Orders for exchange-listed securities submitted after 3:30 p.m. will be rejected with a NOT WITHIN ALLOWABLE TIME message.
- Order Cancel and Cancel Replace requests for NMS securities made after 1:00 p.m., while possible, will most likely receive an ORDER NOT FOUND message, as these will be for DAY or IOC orders.

- Order Cancel and Cancel Replace requests for exchange-listed securities made after 3:30 p.m., while possible, will most likely receive an ORDER NOT FOUND message, as these will be for the X trading session. See Section 2.4 for additional information.
- NASDAQ will continue to generate Execution Reports for NMS securities after the 1:00 p.m. market close until all reports have been generated.
- NASDAQ will continue to generate Execution Reports for exchange-listed securities after the 3:30 p.m. session close until all reports have been generated.

NASDAQ FIX will reset its inbound and outbound sequence numbers to 1 at approximately 4:00 p.m. each day.

2.3.3 Non-trading Days

All messages, including logon, will be rejected on non-trading days. Of course, users will be able to logon and test on User Acceptance Test days.

2.4 Trading Session ID (336=?)

NASDAQ has defined a new trading session. This new session includes pre-market, regular market, and extended market hours. These trading sessions are defined in `TradingSessionID` [336] by the values "P" and "X". Orders with a trading session ID of "P" will be displayed to the market during the regular trading day. Orders with a trading session ID of "X" will be displayed during the regular and extended markets. These rules apply to both NMS and Listed securities.

2.5 Encryption

NASDAQ FIX, in its initial releases, will not support use of encrypted messages. While these specifications indicate that the use of tags 90 and 91 are optional in the message header, no encryption/decryption is intended.

2.6 Expiry

When an expiry event has occurred, the FIX engine will respond to the submitting user as follows:

If the inbound message was a 35=D or 35=E, NASDAQ will send an execution report (35=8) with an `ExecType Rejected` (150=8), `OrdRejReason` (103=8), and text in tag 58 to the effect of *Transaction Time Expired*.

If the inbound message was a 35=F or 35=G, NASDAQ will send an execution report (35=8) with an `ExecType Rejected` (150=8), `CxlRejReason` (102=8), and text in tag 58 to the effect of *Transaction Time Expired*.

As a default, your connector will be set up to perform this expiry checking. If you notice that all of your inbound messages are being rejected because of expiry checking, it may be

that your and our system clocks are significantly different. Please call our FIX Support Group, and they will temporarily disable expiry checking for your connectors.

2.7 Session Rejects

Sometimes, messages that are inbound to NASDAQ FIX are rejected directly resulting in session level rejects. In these cases, you will receive a reject message (35=3) that includes the reject reason (tag 373) and detailed, specific causes of the reject (tag 58). Each reject reason in tag 58 is associated with a number in the range of 0001-0199. The session reject message format is in section 4.1.5.

3 NASDAQ FIX for Orders

3.1 Tags

3.1.1 Supported Message Types (35=?)

TYPE	Message	Inbound, Outbound, or Both
0	Heartbeat	B
1	Test Request	B
2	Resend Request	B
3	Reject	O
4	Sequence Reset	B
5	Logout	B
8	Execution Report	O
9	Order Cancel Reject	O
A	Logon	B
D	Order Single	I
F	Order Cancel Request	I
G	Cancel/Replace Request	I
H	Order Status Request	I

NASDAQ FIX uses execution reports to communicate various statuses of the order. These reports go out when NASDAQ FIX/NASDAQ:

- Accepts/acknowledges an order;
- Rejects an order;
- Pends a cancel;
- Accepts/processes a cancel;
- Pends a cancel/replace;
- Accepts/processes a cancel/replace;
- Rejects a cancel/replace; and
- Executes a trade.

Each of these events will be mapped out in this section, depicting what the execution report will convey under each scenario. The table of reject reasons will be conveyed in their respective sections.

In the NASDAQ market center, certain situations result in your orders being made "Not Available." This "Not Available" state is not supported in FIX, and so no corresponding execution report is generated. For instance, if an issue goes into an Issue Halt state, any orders for that stock are made "Not Available." When the halt is lifted, the orders are made

available again. Similarly, if a NASDAQ supervisor performs an "Office Outage," that firm's orders are placed in a "Not Available" state. When the outage is lifted, those orders are made available again. FIX does not send a message in either scenario to let the user know the "Not Available" state or the following "Available State."

3.1.2 Supported Order Types (40=?)

NASDAQ FIX supports Market (1), Limit (2), and Pegged (P) order types. Exchange-listed securities cannot be part of a pegged order. Pegged orders are discussed in detail in section 3.3.

3.1.3 Supported Order TIFs (59 =?)

NASDAQ FIX supports DAY (0), OPG (2), IOC (3), CLO (7), GTC (1), and GTX (5) orders.

GTC orders are valid for one year. If they are not executed by that time, they will be cancelled automatically. GTC orders are susceptible to corporate actions. Order Quantity, Reserve Quantity, Leaves Quantity, Cumulative Quantity, Price, and Max Floor may all change based on these corporate actions. You will not receive notice of these changes via UM, but you can access all order details by either an Order Status Request or a Recap file. If a GTC order is cancelled as a result of a corporate action, then you will receive an OUT. If ClOrdIds are unique, then you will be able to differentiate between GTC orders that remain on the book. Please keep this issue in mind when you assign ClOrdID values.

You may enter GTX orders one of two ways. You may use value 5 (GTX) in tag 59. You may also use value 1 (GTC) in tag 59 and value X (regular and extended trading hours) in tag 336, TradingSessionID, similarly to how you enter DAYX orders now. If you select 59 = 5 and 336 = P, then NASDAQ will process this order as a GTX.

GTD, FOK, and OPG may be supported in subsequent releases.

3.1.4 Price fields

NASDAQ supports decimal pricing, but does not support sub-penny pricing. Any orders that are received with price fields held in amounts that are more granular than 0.01 will be:

Side	Action
Buys	Rounded down to the nearest 0.01
Sells	Rounded up to the nearest 0.01

3.1.5 AvgPx

An average price is returned only on Fills, Partial Fills, and Execution Reports. The average price is computed using this formula:

$$\text{AvgPx} = [(\text{AvgPx} * \text{CumQty}) + (\text{LastShares} * \text{LastPx})] / (\text{LastShares} + \text{CumQty}).$$

If `MsgType = 8` and the message is not a fill or partial fill, then `AvgPx = 0`. If `OrdStatus ≠ 1` or `2`, then `AvgPx = 0`.

3.2 NASDAQ Implementation of FIX

3.2.1 Mass Order Cancel

You can choose to cancel all open orders automatically upon disconnect in these situations:

- Logout sent by the firm;
- NASDAQ initiated server fail-over;
- NASDAQ initiated connection kill;
- Network failure and resulting disconnects; and
- Client FIX engine failure.

You must first send written authorization to NASDAQ. Mass cancel should be used in extraordinary circumstances only and not for routine log off. Mass cancel will be performed manually if NASDAQ's FIX engine fails. If you do not have an authorization on file, then NASDAQ will consult you first. When the connection is re-established, you will receive the UROUTS resulting from the cancels.

The FIX engine will cancel all open orders. As some trades may happen too close to logoff to be reported, we cannot assure complete cancellation of all open orders.

While mass cancel is in progress, you are not allowed to log on. Please allow at least 10 seconds between connection attempts.

NASDAQ's Mass Cancel Indicator has three values:

N = you do not participate in mass cancel;

Y = you participate in mass cancel and all orders are applicable; and

O = you participate in mass cancel, but you want On Open, On Close, and Imbalance Only orders excluded from the cancel.

If you choose "O", then orders with tags (9376 = I) or (59 = 2 or 7) or (40 = 5 or B) will be excluded from mass cancel.

3.2.2 Not Available Status

Issue halts, office outages, and customer-initiated supervisory transactions can cause orders to become "not available." An issue halt results from a supervisory action to suspend trading in a security due to market conditions. An office outage results directly from a customer communication to NASDAQ. Several other supervisory transactions can cause orders to become "not available." In each of these situations, NASDAQ FIX will not send notification that the order status is now not available to the user. The order may, however, become available again without user intervention. Again, NASDAQ FIX will not send notification that the order is now available to the user. Users should note that if they query NASDAQ FIX, the order will appear open without reference to its current status.

It is important that users understand that the market may move while an order is unavailable and that the order may become available in different market conditions. Users

should pay particular attention to issue halts, so that they can either cancel the order or keep track of the market in case the order is made available. In all situations where an order is made "not available," users are able to cancel the order.

3.2.3 Purged Orders

A purged order is another type of not available order. A purged order may result from a user request to a NASDAQ Supervisor to purge orders. NASDAQ FIX will not send the user notification of the change in order status. Purged orders do not automatically become active again. The user may request the NASDAQ Supervisor reinstate a purged order to an active status. If a purged order is not reinstated and its Time-In-Force is DAY, it will be cancelled by the system at the end of the day. The user will receive a cancel UM.

3.2.4 Order Status after NASDAQ-generated Events

Some infrequent supervisory cases exist in which NASDAQ Market Operations personnel may take action that will not result in message communications back to the originating user on orders. Certain events, such as Office Outages, Mass Order Purges, and Position State Changes result in orders changing (often to a status of not available) without corresponding notification to the originating user. Typically, users initiate these events as a result of phone, power, or infrastructural problems at their sites. Please note that a mass order purge is not the same as a mass order cancel. NASDAQ Operations manually initiates a mass order purge. The NASDAQ FIX Engine initiates a mass order cancel in the event that your FIX engine loses communication with NASDAQ.

If these events do, however, occur, and an order status is requested of NASDAQ FIX, there will be no notification of the change in order status. That is, an `OrdStatus` of `9-Suspended`, is not supported.

The order status message is designed only to relate summary information regarding the order status, primarily:

- original order quantity;
- total shares executed;
- leaves quantity; and
- average price.

`OrdStatus` will reflect the most recent message status of the order, i.e. new if an Acknowledgement was generated or canceled if so. The order status, suspended, will not be supported until FIX supports a suspend message in response to events such as mass purge.

3.2.5 Done for Day

NASDAQ FIX will no longer send done for day messages. DAY orders, which expire at the end of the day, will be cancelled, and you will receive a cancel message.

3.2.6 Other Unsolicited Cancels

There are a number of situations in which NASDAQ's system can return a cancel of an order without that cancel being specifically requested by you. The end of day canceling of DAY orders will result in a spin of these canceled DAY orders that will be passed on to you. Similarly, a spin will occur for exchange-listed securities. When this occurs, the Cancel Accept message will be as outlined above with one very specific difference. Tag 11, ClOrdId, when created for one of these unsolicited cancels, will contain the Original order id, just as tag 41 will. Whereas normally tag 11 responds with your *cancel* order ID, unsolicited cancels respond with the *original* order ID.

Other cases result in an unsolicited cancel message. If a customer submits an IOC order and that order is determined to be marketable and happens to be delivered to an ECN, the ECN can either accept it or decline it. If a decline occurs, and your IOC order is rechecked for marketability and it is no longer marketable (the inside has moved), a cancel (obviously unsolicited) will be returned. Here too, the tag 11 will contain the OrigOrdId.

3.2.7 Possible Duplicates and Resends

You should set tag 43, PossDupFlag, if you are sending a message with a sequence number that was already used. This tag is required for retransmissions. NASDAQ will process as follows:

If tag 43 =	& Seq # is a dup	then, NASDAQ will...
Y	Y	ignore the message.
Y	N	process the message normally.
N	Y	drop the connection.
N	N	process the message normally.

You should set tag 97, PossResend, if you are sending a message that may be a duplicate of another message. NASDAQ will process as follows:

If tag 97 =	& tag 11 is a dup	then, NASDAQ will...
Y	Y	reject the message.
N	Y	reject the message.
Y	N	process the message normally.
N	N	process the message normally.

3.2.8 Reject Messages

Messages can be rejected when tag content validation fails, resulting in business level rejects. Messages can also be rejected by the application. Both business and application rejects include order, cancel, and cancel/replace rejects. The message formats for these rejects are in sections 4.3.2.3, 4.3.2.6, and 4.3.2.9.

3.2.9 Broker Dealer On Behalf Of

NASDAQ allows broker dealers to enter transactions on behalf of a customer. To do so, broker dealers submit tag 115, *OnBehalfOfId*, and tag 116, *OnBehalfOfSubId*. The meaning of these tags is no different for broker dealer processing than it is for standard processing.

Tags 115 and 116 are not validated and are not sent to the destination system. NASDAQ will echo these values in tags 128 and 129 on the outbound message.

3.2.10 Service Bureau On Behalf Of

NASDAQ allows service bureaus to submit transactions for several customers over a single connector. These customers enter the application as their own entity, that is, with their own MPID. Service bureaus are no longer required to have a distinct connector for each customer. A service bureau may, however, have multiple connectors and use them however they wish.

Service bureaus will be required to submit both their NASDAQ-assigned dummy I1I2s and each customer I1I2 for each message. Specifically, the service bureau will submit a message containing:

- Tag 49, *SenderCompId*, the service bureau's company ID;
- Tag 50, *SenderSubId*, the service bureau's stub I1I2;
- Tag 115, *OnBehalfOfId*, the individual customer's MPID; and
- Tag 116, *OnBehalfOfSubId*, the individual customer's I1I2.

The processing of these tags for service bureaus differs from standard processing. The MPID submitted in tag 49 is a 4-character code that identifies the service bureau. It could be a valid NASDAQ MPID or a representative code used for FIX processing only. This flexibility is allowed because the value is not passed to a destination system. Likewise, the dummy I1I2 submitted in tag 50 is not passed to the destination system. It is used only for identification purposes.

If a service bureau submits a message that includes values for tags 49 and 50, but does not include values in both tag 115 and tag 116, then the message will be rejected.

On messages from NASDAQ to the service bureau, tags 115 and 116 are unused. The individual customer's MPID is returned to the service bureau in tag 128, *DeliverToCompId*, and the I1I2 is returned in tag 129, *DeliverToSubId*.

3.3 NASDAQ Order Functionality

3.3.1 Pegged Orders

The price of a pegged order will automatically be adjusted to reflect the price movement of the NASDAQ Inside. A pegged order will, therefore, track the inside and assure that the order's price position relative to the inside bid or ask price remains consistent.

You will be able to enter two types of pegged orders:

- Regular pegged orders are pegged to a price equal to the inside quote on the same side of the National market. A regular buy order will be pegged to the Inside Bid price. A regular sell order will be pegged to the Inside Offer price.
- Reverse pegged orders are pegged to a price that is better than the inside quote on the contra side of the market. A reverse pegged buy order will be pegged to a price that is better than the Inside Offer price. A reverse pegged sell order will be pegged to a price that is better than the Inside Bid price.

Short sale orders may be entered as a regular and reverse pegged orders.

You will specify pegged orders using peg option, peg offset value, and cap price. The peg option defines if the order will be pegged. If pegged, set `OrdType (40) = P` (pegged). To indicate the type of pegged order, set `ExecInst (18) = R` for a regular pegged order where the order will be pegged to the inside on the same side or set `ExecInst (18) = P` for a reverse pegged order where the order will be pegged to the inside on the opposite side of the market.

Cap Price is an optional field that defines a limit price at which the pegging action stops. By setting this limit, you can prevent the order from executing at an undesirable price. Failure to enter a cap price will allow the order price to continue pegging to the Inside Bid/offer allowing the order to execute at any price. At order entry, if the Inside exceeds the Cap Price for a Buy order or the Inside is less than the Cap Price for a Sell order, the system converts the order to a standard limit order. Both buy and sell orders cannot be priced higher than the cap price. Once the buy order reaches the cap price, the price becomes fixed at that cap price. All pegging action is terminated, effectively converting the order into a standard limit order.

Pegged orders:

- can have only DAY as TIF;
- cannot be preferenced;
- do not require an order price;
- are regulated by all existing order entry and update rules; and
- will receive the same solicited and unsolicited messages as other orders.

Orders for exchange-listed securities cannot be pegged.

3.3.2 Discretionary Orders

A discretionary order allows you to enter an order that is displayed to the market at a specified price, but executable at a price that is better than the displayed price, as defined by an incremental price improvement spread.

Discretionary orders:

- can have only DAY as TIF;
- cannot be preferenced;
- are regulated by all existing order entry and update rules; and
- will receive the same solicited and unsolicited messages as other orders.

Participants will specify discretionary orders using the following parameters:

Display Price is the price at which the order quantity is quoted and displayed. The user may enter a limit price in the price tag (44) to fix the price range at which the order is displayed and executable. The display price may be at or away from the current inside price on that side. Orders entered with a price of Market will be rejected immediately and returned to the entering firm. The user may peg the display price of the discretionary order using the rules and parameters defined for a regular pegged order type to provide a floating price range at which the order is displayed and executable. The user will not be able to use the reverse pegged option for discretionary orders.

You may indicate an incremental value that is applied to the display price to establish a price range within which the discretionary order may be executed. The values of `DiscretionOffset` (389) are from .01 to .99. If `DiscretionOffset` is specified, then `DiscretionInst` (388) is required. This field identifies the price to which a `DiscretionOffset` is related to which it should be added. The only `DiscretionInst` value supported at this time is 0. Discretionary orders entered with a discretionary offset of zero (0) will be rejected immediately and returned to the entering firm.

Discretionary short sale orders cannot be entered as pegged or reverse pegged. Discretionary orders cannot be entered as reverse pegged.

Orders for exchange-listed securities cannot be discretionary.

3.3.3 Opening Cross

The Opening Cross release introduces two new order types (tag 40 and tag 59): market on open and limit on open. These orders are executable only during the Opening Cross.

On Open orders:

- will be processed as unpreferenced.
- can be entered as buy, sell, sell short, and sell short exempt.
- will not support a pegged display price or a discretionary price.
- will have the attributable indicator set for full anonymity.
- will have the AIQ set to allow internalization.
- will have the Price Improvement Indicator set to 'No'.

- will have the dividend/split indicators (DNR and DNI) set to 'No'.

Reserve size will be consolidated with the display size by the system for execution purposes.

The Opening Cross release also includes Imbalance Only orders (tag 9376 = imbalance only (IO)). This algorithm identifies specific On Open orders that are liquidity-providing orders intended to offset a buy/sell imbalance during the opening cross auction. This value currently exists for Closing Cross. For this release, the definition of that value is expanded.

An On Open Imbalance Order Only order has TimeInForce = 2 and SMExecAlgorFlag = I. An On Close Imbalance Order Only order has TimeInForce = 7 and SMExecAlgorFlag = I.

IO orders:

- will be processed as unpreferenced.
- can be entered as buy, sell, sell short, and sell short exempt.
- must be limit priced.
- will have the attributable indicator set to full anonymity.
- will have the AIQ set to allow internalization.
- must have an order type of limit on open.
- must specify IO in the prioritization algorithm field.
- will have the Price Improvement Indicator set to 'No'.
- will have the dividend/split indicators (DNR and DNI) set to 'No'.
- will not support a pegged display price or a discretionary price.

Market price IO orders will be rejected. IO orders whose limit price is more aggressive than the predicted 9:30 a.m. NASDAQ Market Center Inside will be re-priced to the appropriate bid/ask price starting from the pre-open information dissemination period start time. Reserve size will be consolidated with the display size by the system for execution purposes.

All executions performed during the Opening Cross are subject to auto-ex only. No order delivery will be performed. All auto-ex participants will participate in the Opening Cross process by default. They are not allowed to opt out. Delivery MPs are allowed to indicate their participation in the Opening Cross or not.

On Open orders can be entered at session open at 7:30 a.m. and cannot be entered after 9:28 a.m. They are not displayed and are executed during the opening cross.

Imbalance Only orders can be entered at session open at 7:30 a.m. Opening Cross Imbalance Only orders should be entered before market open at 9:30 a.m. After that time, if the order TimeInForce = 2, then the order will be rejected. If the order TimeInForce = 7, then the order will be accepted for Closing Cross.

At 9:28 a.m., NASDAQ starts calculating and disseminating the opening imbalance information, halts order entry, order cancels, and order cancel/replace orders for regular market on open orders, and halts order cancels for imbalance only and limit on open orders.

NASDAQ will differentiate between early and late regular day orders (DAY and IOC). Regular day orders received prior to 9:28 a.m. will be considered early orders that participate fully in the opening cross. Regular day orders received after 9:28 a.m. are considered late orders that participate in the opening cross only to the extent that there is liquidity available on the other side at the crossing price.

3.3.4 Closing Cross

The Closing Cross release introduces two new order types (tag 40 and tag 59): market on close and limit on close. These orders are executable only during the Closing Cross.

OC orders:

- will be processed as unpreferenced.
- can be entered as buy, sell, sell short, and sell short exempt.
- will not support a pegged display price or a discretionary price.
- will have the attributable indicator set for full anonymity.
- will have the AIQ set to allow internalization.
- will have the Price Improvement Indicator set to 'No'.
- will have the dividend/split indicators (DNR and DNI) set to 'No'.

Reserve size will be consolidated with the display size by the system for execution purposes. You can enter the new prioritization algorithm value, imbalance only, described below.

The Closing Cross release also introduces a new prioritization algorithm value (tag 9376), imbalance only (IO). This algorithm identifies specific On Close orders that are liquidity-providing orders intended to offset a buy/sell imbalance during the closing cross auction.

An On Close Imbalance Order Only order has TimeInForce = 7 and SMExecAlgorFlag = I. An On Open Imbalance Order Only order has TimeInForce = 2 and SMExecAlgorFlag = I. The Opening Cross is explained in the next section.

IO orders:

- will be processed as unpreferenced.
- can be entered as buy, sell, sell short, and sell short exempt.
- must be limit priced.
- will have the attributable indicator set to full anonymity.
- will have the AIQ set to allow internalization.
- must have an order type of LOC.
- must specify IO in the prioritization algorithm field.
- will have the Price Improvement Indicator set to 'No'.
- will have the dividend/split indicators (DNR and DNI) set to 'No'.
- will not support a pegged display price or a discretionary price.

Market price IO orders will be rejected. IO orders whose limit price is more aggressive than the NASDAQ market center Inside will be re-priced to the appropriate bid/ask price starting

from the pre-close information dissemination period start time. Reserve size will be consolidated with the display size by the system for execution purposes.

All executions performed during the Closing Cross are subject to auto-ex only. No order delivery will be performed. All auto-ex participants will participate in the Closing Cross process by default. They are not allowed to opt out. Delivery MPs are allowed to indicate their participation in the Closing Cross or not.

On regular trading days, OC order entry can be entered at 09:30:01 a.m. and will not be accepted after 3:50 p.m. IO orders can be entered at 3:30 p.m. and will not be accepted after 4:00 p.m. OC and IO orders are not displayable and are not included in the display quote (attributable and non-attributable) and inside calculations. Please note that these times do not apply to early close days.

At 3:50 p.m., NASDAQ starts calculating and disseminating the imbalance information, halts order entry, order cancels, and order cancel/replace orders for regular OC orders, and halts order cancels for IO orders.

3.3.5 Behavior of IOC, IOX, DAY, and DAYX Orders

If order is submitted:	IOC order	IOX order	DAY order	X (DAYX) Order
Session Open 7:30 a.m. - 8:00 a.m.	Pended & put in queue until market open at 9:30.	Rejected.	Pended & put in queue until market open at 9:30.	Put on the book & able to lock or cross other X orders or quotes until pre-market session at 8:00.
Pre-Market Session 8:00 a.m. - 9:25 a.m.	Pended & put in queue until market open at 9:30.	Either executed or rejected as non-executable.	Pended & put in queue until market open at 9:30.	Either executed or put on the book.
Pre-Open Session 9:25 - 9:30 a.m.	Pended & put in queue until market open (9:30).	Either executed or rejected as non-executable.	Pended & put on a queue until market open (9:30).	Either executed or put on the book.
9:30 a.m. - market close (typically 4:00 p.m.)	Either executed or rejected as non-executable.	Acts as IOC. Either executed or rejected as non-executable.	Either executed or put on the book.	Either executed or put on the book.
After Market Close	Rejected.	Rejected.	Rejected.	Rejected.

4 Message Formats

The following tables describe NASDAQ's special handling or requirements for each of the supported FIX messages.

4.1 Standard Messages

All inbound messages will begin with a standard header and end with a standard footer.

4.1.1 Header Inbound to NASDAQ

Tag	Field Name	Req'd	NASDAQ Implementation
8	BeginString	Y	FIX.4.2, unencrypted, must be first field in the message.
9	BodyLength	Y	Unencrypted, must be second field in the message.
34	MsgSeqNum	Y	Integer message sequence number.
35	MsgType	Y	Unencrypted, must be third field in the message. See section 3.1.1 for supported message types.
43	PossDupFlag	N	Required for retransmissions. Indicates possible retransmission of message with this sequence number Valid values: Y = Possible duplicate N = Original transmission
49	SenderCompID	Y	To be supplied by Member. This is your 4-character ID assigned to you by NASDAQ as part of your NASDAQ connectivity. For service bureau on behalf of, this tag contains the service bureau's company ID. See section 3.2.10.
50	SenderSubID	Y (NASDAQ)	User ID must be supplied here. NASDAQ assigns this ID to you as part of your NASDAQ connectivity. For service bureau on behalf of, this tag contains the service bureau's stub ID. See section 3.2.10.
52	SendingTime	Y	YYYYMMDD-HH:MM:SS Currently, this tag is not functional.
56	TargetCompID	Y	NSDQ
57	TargetSubID	Y	1-character indicator to indicate destination system within NASDAQ. S = NASDAQ market center trading If tag 57 is any other value, NASDAQ will reject.

Tag	Field Name	Req'd	NASDAQ Implementation
90	SecureDataLen	N	Not supported in initial release. Encrypted length. Required to identify any such section of the message. See the FIX specifications.
91	SecureData	N	Not supported in initial release. See the FIX specifications.
97	PossResend	N	This tag is required if the message is being resent and is a possible duplicate of a different message sequence number.
115	OnBehalfOfCompID	N	You can use this field to submit your customer's MPID. This value will be returned to you in tag 128 on the outbound message. Please note that while it is possible for you submit a chain of transactions with inconsistent values for this tag in different messages, you are strongly advised not to do so. For broker dealer on behalf ofs, this tag contains the customer's MPID. See section 3.2.9 For service bureau on behalf ofs, this tag contains the individual customer's MPID. See section 3.2.10.
116	OnBehalfOfSubID	N	You can use this field to submit your customer's I1I2. This value will be returned to you in tag 129 on the outbound message. Please note that while it is possible for you submit a chain of transactions with inconsistent values for this tag in different messages, you are strongly advised not to do so. For broker dealer on behalf ofs, this tag contains the customer's MPID. See section 3.2.9. For service bureau on behalf ofs, this tag contains the individual customer's I1I2. See section 3.2.10.
122	OrigSendingTime	N	YYYYMMDD-HH:MM:SS Required for message resends.

4.1.2 Trailer Inbound to NASDAQ

Tag	Field Name	Req'd	NASDAQ Implementation
10	Checksum	Y	See FIX specifications.

4.1.3 Header Outbound from NASDAQ

Tag	Field Name	Req'd	NASDAQ Implementation
8	BeginString	Y	FIX.4.2, unencrypted, must be first field in the message.
9	BodyLength	Y	Unencrypted, must be second field in the message.
34	MsgSeqNum	Y	See the FIX specifications.
35	MsgType	Y	Unencrypted, must be third field in the message. Refer to Supported Message types.
43	PossDupFlag	N	Required for retransmissions. See the FIX specifications.
49	SenderCompID	Y	Will hold "NSDQ".
50	SenderSubID	N	1-character indicator to denote which destination system within NASDAQ was involved. S = NASDAQ market center
52	SendingTime	Y	YYYYMMDD-HH:MM:SS Please note that this time is the time the message left NASDAQ's FIX application. It has no relevancy to execution time, reject time, or cancel time in the destination systems.
56	TargetCompID	Y	From 49 on the original inbound message.
57	TargetSubID	Y	From 50 on the original inbound message.
90	SecureDataLen	N	Not supported in initial release. Encrypted length. Required to identify any such section of the message. See the FIX specifications.
91	SecureData	N	Not supported in initial release. See the FIX specifications.
115	OnBehalfOfCompID	N	This field will not be populated. See tag 128.
116	OnBehalfOfSubID	N	This field will not be populated. See tag 129.
122	OrigSendingTime	N	YYYYMMDD-HH:MM:SS. Required for message resends.
128	DeliverToCompID	N	Your MPID as stated in tag 115 in the inbound message is returned to the service bureau in this tag. Please see the explanation after this table. For service bureau on behalf of messages, this field contains the service bureau's customer's MPID.
129	DeliverToSubID	N	Your I112 as stated in tag 116 in the inbound header is returned to the service bureau in this tag. Please see the explanation below. For service bureau on behalf of messages, this

Tag	Field Name	Req'd	NASDAQ Implementation
			field contains the service bureau's customer's I112.

Sent from A to B via Q:

If A sends to Q, then:

SenderCompID = A
 TargetCompID = Q
 DeliverToCompID = B

If Q sends to B, then:

SenderCompID = Q
 OnBehalfOfCompID = A
 TargetCompID = B
 OnBehalfOfSendingTime = A's time

B responds to A via Q:

If B sends to Q, then:

SenderCompID = B
 TargetCompID = Q
 DeliverToCompID = A

If Q sends to A, then:

SenderCompID = Q
 OnBehalfOfCompID = B
 TargetCompID = A
 OnBehalfOfSendingTime = B's time

4.1.4 Trailer Outbound from NASDAQ

Tag	Field Name	Req'd	NASDAQ Implementation
10	Checksum	Y	See FIX specifications.

4.1.5 Session Reject

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>		MsgType = 3
45	RefSeqNum	Y	MsgSeqNum of Rejected message
58	Text	Y (NASDAQ)	Where possible, coded message that includes an indicator and text to explain reason for rejection. 0001 Invalid tag number 0002 Required tag missing 0003 Tag not defined for this message type 0004 Undefined Tag 0005 Tag specified without a value 0006 Value is incorrect (out of range) for tag 0007 Incorrect data format for value 0009 Signature problem 0010 Tag CompID problem 0011 SendingTime accuracy problem 0012 Invalid value for MsgType tag
371	RefTagId	N	The tag number, if appropriate, being referenced in tag 373.
372	RefMsgType	N	The message type, tag 35, of the FIX message being referenced.
373	SessionRejectReason	Y (NASDAQ)	As per FIX specifications, the reason for the reject: Valid values: 0 = Invalid tag number 1 = Required tag missing 2 = Tag not defined for this message type 3 = Undefined Tag 4 = Tag specified without a value 5 = Value is incorrect (out of range) for this tag 6 = Incorrect data format for value 7 = Decryption problem 8 = Signature problem 9 = CompID problem 10 = SendingTime accuracy problem 11 = Invalid MsgType
5149	Memo	N	This tag will contain the text in the message that is being rejected.
	<i>Standard Trailer</i>		

4.2 Administrative Messages

4.2.1 Heartbeat

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 0
112	TestReqID	N	Required when the heartbeat is in response to a Test Request. It is the TestReqID received from TestRequest message.
	<i>Standard Trailer</i>	Y	

4.2.2 Logon

After establishing your TCP connection with NASDAQ FIX, a Logon must be the first message that you send. NASDAQ will respond with its own Logon. You must wait for that Logon before sending additional messages. Messages received without a prior logon will be rejected with a "Please Logon" message.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = A
95	RawDataLength	N	
96	RawData	N	
98	EncryptMethod	Y	Must be 0.
108	HeartBtInt	Y	NASDAQ recommends an interval between 30-60 seconds. If you submit a value of less than 30 seconds, the logon will be rejected.
	<i>Standard Trailer</i>	Y	

4.2.3 Test Request

The HeartBtInt that is specified in the Logon message will be used to make sure that your connection is alive and functioning. If NASDAQ detects inactivity for a period longer than the HeartBtInt + 1 second, we will send a Test Request to determine if you are still active. If after another HeartBtInt, there is still no activity, NASDAQ will send another test request. If there is still no activity after this additional HeartBtInt, NASDAQ will immediately send a logout message and the connection will be closed. It is expected that similar logic will be used on your side in order to detect host activity.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 1
112	TestReqID	Y	Date/Time combination

Tag	Field Name	Req'd	Comments
	<i>Standard Trailer</i>	Y	

4.2.4 Resend Request

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 2
7	BeginSeqNo	Y	Beginning sequence number of Requested Message
16	EndSeqNo	Y	Ending sequence number of Requested Message
	<i>Standard Trailer</i>	Y	

4.2.5 Sequence Reset

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 4
36	NewSeqNum	Y	Next expected sequence number
123	GapFillFlag	N	
	<i>Standard Trailer</i>	Y	

4.2.6 Logout

Logouts will occur as a normal end of day routine but may also occur as a result of inactivity. It is your responsibility to logout prior to 5:00 p.m. each trading day.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 5
58	Text	N	
	<i>Standard Trailer</i>	Y	

4.3 Application Messages

4.3.1 Inbound to NASDAQ

Note: An invalid FIX tag on an inbound message will result in no response.

4.3.1.1 New Order – Single

You use this message to send orders to NASDAQ. You will receive either an Order Acknowledgement or a reject message in response.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = D
1	Account	N	Account mnemonic as agreed between broker and institution. Limited to 20 characters.
11	ClOrdID	Y	Must be unique for each order. Limited to 20 characters.
15	Currency	N	Reserved for future use.
18	ExecInst	N	Valid values: E = Do Not Increase (DNI) F = Do Not Reduce (DNR) R = regular pegged to NASDAQ Inside P = reverse pegged to NASDAQ Inside H = regular pegged to NBBO (default) (Production, Routing 2, 7/11) Q = reverse pegged to NBBO (Production, Routing 2, 7/11) You may enter more than one value in this tag, separated by a space. For example: 18=E F R You cannot enter any combination of R, P, H, and Q. If this tag is not present and 59 = 1, then your action is not subject to corporate action.
21	HandlInst	Y	Valid value: 1 = automated execution order, private, no broker intervention
22	IDSource	N	Reserved for future use.
38	OrderQty	Y	For NMS orders, acceptable values range from 1 to 999999. No commas, decimals, or spaces are allowed, nor are negative numbers. This value represents the total Order Quantity. If MaxFloor (Tag 111) is not present, the display quantity will be set to the Order Quantity. If MaxFloor

Tag	Field Name	Req'd	Comments
			<p>(Tag 111) is present, the display quantity will be set to the Max Floor size and the reserve size will be set to the difference between Order Quantity and MaxFloor). (Order Quantity - MaxFloor).</p> <p>To enter an odd lot: Enter total order quantity in OrderQty (Tag 38)</p> <p>To enter an order with reserve: Enter total order quantity (display + reserve) in OrderQty (Tag 38). Enter display quantity in MaxFloor (Tag 111). The order's display quantity will be set to Max Floor. Reserve size will be set to (Order Quantity - MaxFloor). Refresh size will be set to Max Floor.</p> <p>To enter an order without reserve: Enter total order quantity in OrderQty (Tag 38). Do not include MaxFloor (Tag 111) in the message.</p> <p>For exchange-listed securities, only round lot multiples and mixed lots are allowed. Odd lots are not allowed and will be rejected if entered. An order submitted to ITS must be in round lots.</p>
40	OrdType	Y	<p>Valid Values: 1 = market 2 = limit P = pegged</p> <p>If tag 40 contains any other value, NASDAQ will reject the order. Exchange-listed security orders cannot be pegged. Please see note at the end of this table.</p>
44	Price	N	<p>Required if tag 40 = 2. 1-10 character decimal price. "12.34" is the correct presentation of twelve dollars and thirty-four cents.</p> <p>If tag 40 = 1 or 5 and tag 44 is present, NASDAQ will reject the order.</p> <p>If tag 40 = P and tag 44 is present, then this tag will be treated as the Peg Cap Price.</p>
48	SecurityID	N	Reserved for future use.
54	Side	Y	<p>Valid Values: 1 = buy 2 = sell 5 = sell short</p>

Tag	Field Name	Req'd	Comments
			6 = sell short exempt If tag 54 is any other value, NASDAQ will reject.
55	Symbol	Y	1-14 character security identifier. Spaces, periods, commas are not allowed. All incoming messages will send the symbol as entered. If the symbol is sent in lower case, then NASDAQ will reject it. This field will contain the base listed symbol only for listed securities. See SymbolSfx [65] field for additional information about the security.
59	TimeInForce	N	Valid values: 0= DAY (default) 1 = GTC 2 = At the Opening (OPG) 3 = Immediate or Cancel (IOC) 5 = GTX 7 = At the Close If tag 59 contains any other value, then NASDAQ will reject it. NASDAQ automatically converts MKT orders to IOC. X and IOX orders are supported. Please see the chart in section 3.3.5 to understand the behavior of these orders. In order to create an IOX order, this tag 59 should be coded with a "3" while tag 336 is coded with an X. In order to create an X order, this tag 59 should be coded with a "0" while tag 336 is coded with an X. Please see note at the end of this table.
60	TransactTime	Y	The time that you released this request. If NASDAQ FIX receives a New Order Single that is more than 120 seconds old, the transaction will be rejected. That is, if tag 60 is more than 120 seconds older than the NASDAQ FIX engine's GMT, then the order is rejected with a 103=4. It is important that you are aware of possible variances between our time stamp and your time stamp. NASDAQ's clocks are synchronized with the Global Positioning Satellite that is maintained by the Department of Defense.

Tag	Field Name	Req'd	Comments
65	SymbolSfx	N	<p>This field will contain only the additional information about the security (e.g. preferred, warrants, etc.) for listed securities. This additional information must be in CMS format and is uppercase. No delimiters are allowed in this tag. For example, security "OXY PRB" would be formatted as follows:</p> <p>Symbol [55]: OXY SymbolSfx [65]: PRB</p>
76	ExecBroker	N	<p>If a give-up MPID is to be indicated to NASDAQ market center, place the MPID here. Give-Up trades are prohibited through the ITS system for exchange-listed securities.</p>
99	StopPx	N	<p>Reserved for future use.</p>
100	ExDestination	N	<p>This tag indicates the execution destination for your order. If this tag is not present, then no preference exists and the order may execute with both NASDAQ and up to three exchanges. The order will execute within the price level in NASDAQ first, then it will route to an exchange.</p> <p>For NMS securities (Production, Routing 2, 7/11), the allowed values are: A = American Stock Exchange B = Boston Stock Exchange C = Cincinnati Stock Exchange M = Chicago Stock Exchange N = New York Stock Exchange O = NASDAQ (executes only in NASDAQ without trading through an exchange's quote) P = ARCA/EX Pacific Stock Exchange W = Chicago Board Options Exchange (CBOE) X = Philadelphia Stock Exchange Y = Attain (Production, Routing 2, 7/11) Z = Instinet (Production, Routing 2, 7/11) blank = executes with both NASDAQ and an Exchange (default)</p> <p>For Exchange-listed securities, the allowed values are: A = American Stock Exchange B = Boston Stock Exchange C = Cincinnati Stock Exchange</p>

Tag	Field Name	Req'd	Comments
			<p>M = Chicago Stock Exchange N = New York Stock Exchange O = NASDAQ (executes only in NASDAQ without trading through an exchange's quote) P = ARCA/EX Pacific Stock Exchange W = Chicago Board Options Exchange (CBOE) X = Philadelphia Stock Exchange blank = executes with both NASDAQ and an Exchange (default)</p>
111	MaxFloor	N	<p>Optional 1-6 character field indicating the display quantity and refresh quantity. Must be in shares in round lot multiples.</p> <p><u>Example 1 - New Order Entered with Max Floor:</u> In FIX New Order Single Message OrdQty = 10000 and Max Floor = 1000. In NASDAQ market center, the display quantity = 1000, Reserve Quantity = 9000 and Refresh Quantity = 1000.</p> <p><u>Example 2 - New Order Entered without Max Floor:</u> In FIX New Order Single Message OrdQty = 10000. In NASDAQ market center, the display quantity = 10000, Reserve Quantity = 0 and Refresh Quantity = 0.</p>
211	PegDifference	N	.01 - .99 allowed for regular and reverse pegged.
336	TradingSessionID	N	<p>Values are: P = Regular market hours (default) X = Regular and extended trading hours</p>
388	DiscretionInst	N	Required only if tag 389 is present. Code to identify the price that a DiscretionOffset is related to and should be mathematically added to. NASDAQ supports only a value of 0 = related to display price.
389	DiscretionOffset	N	If present, this field implies a discretionary order. This value (.01-.99) is applied to the display price to establish the price range within which the discretionary order may be executed.
440	ClearingAccount	N	1-4 character numeric clearing number. Orders preferenced to ITS exchanges must be cleared through the primary clearing arrangement.

Tag	Field Name	Req'd	Comments
528	OrderCapacity	N	Valid values: A = Agency P = Principal R = Riskless Principal If tag 528 is anything else, NASDAQ will reject the order.
5149	Memo	N	Free format, 60-character text field. Single and double quotes, pipes, and carets are not allowed. This text cannot be changed in an order modify message.
9211	SMAtribFlag	N	Indicates whether the order should be anonymous or not. Non-attributable = anonymous Y = attributable (default) N = pre-trade and post-trade non-attributable ("SIZE") P = pre-trade non-attributable
9212	SMAIQFlag	N	This value is used to specify whether internalization is allowed on this order. Keep in mind that AIQ means <i>anti</i> -internalization. I = allow this order to match orders with same MPID. Y = never allow internalization. Orders with the same MPID will not match with this order.
9214	SMBnchdFlag	N	For NMS orders, a 1-character indicator, B, for bunched orders. This tag is passed back on execution reports.
9233	ComplResp	N	For exchange-listed securities, this field contains the complaint ID (ITS reference number) when an order being preferenced to an exchange is to satisfy a complaint. The ID number is obtained from NASDAQ Market Watch as part of our notification of the complaint to the participant.
9234	BlkOrdFlag	N	For exchange-listed securities, allows a participant to submit a block order, indicated by a 'Y' in this field, The flag is applicable only if it is indicated on an ITS commitment. It will be ignored if the order is preferenced to a security participant or to only exchange-listed securities. Currently, two reasons exist to use this tag: 1. It may indicate an order has a sizeable quantity, 10,000 shares or more, or a large order value, \$200,000 or greater. It may also

Tag	Field Name	Req'd	Comments
			<p>indicate that the order is away from the inside.</p> <p>2. It may indicate that the commitment may be in response to a complaint received via ITS, and the order has to be executed at the block price to satisfy the complaint.</p>
9307	PfdMktMkr	N	<p>For both NMS and exchange-listed securities, if you are preferencing this order to a particular Market Maker at the inside, place their MPID here.</p> <p>An order entered without preferences will be routed to the ITS system if it is marketable against an exchange's quote. An Order Entry participant can direct only a preferenced order to a specific exchange-listed security participant or enter an order that is exchange-listed only (the NASDAQ exchange) to access exchange-listed market participants only. OE firms are prohibited to trade with ITS participants.</p>
9376	SMExecAlgorFlag	N	<p>For NMS orders, value that indicates which execution algorithm is to be used.</p> <p>A = super-aggressive H = thru order I = imbalance only P = summary order T = price/time (default) U = auto-ex</p> <p>Allowed values for exchange-listed securities are:</p> <p>T = price/time S = trading sweep for exchange-listed securities</p> <p>The price/time algorithm (T) is used when your order is matched at a price level and it goes against crossing orders on a pure time basis. That is, those that were there first, get hit first. The price/time algorithm is used most frequently. Your order will cross with NASDAQ first and if the order is marketable, then go out to an alternate exchange to seek fill. If order is not marketable, then post residual in NASDAQ book. NB: NASDAQ presumes that unless otherwise instructed, all orders are routable. An auto-ex order (U) will execute only against automatic execution participants that do not charge an access fee in the NASDAQ Market Center book.</p>

Tag	Field Name	Req'd	Comments
			<p>The Imbalance-Only algorithm (I) identifies specific On Open or On Close orders that are liquidity-providing orders intended to offset a buy/sell imbalance during the opening and closing cross auctions.</p> <p>The sweep algorithm (S) allows participants the option to trade through the BBO when executing their exchange-listed security orders. A participant is allowed to select the "S" algorithm only if it has an open/valid quotation in the security. This option is applicable if either the order is preferenced to an exchange-listed security market participant or the order is an exchange-listed security only order.</p>
	<i>Standard Trailer</i>	Y	

Note: NASDAQ will still support an alternative means of coding *at the close* orders. If desired, you may code tag 40 to include the values, 5 = Market on Close (MOC) and B = Limit on Close (LOC). Please note that if this tag = 5 or B and tag 59 contains any value, then we will ignore the value coded in 59. This is not the preferred means of coding *at the close* order types, but it is accepted.

4.3.1.2 Order Cancel Request

You use this message to cancel orders that you have sent to NASDAQ. NASDAQ will always return both a Pending Cancel when the inbound cancel request is received by NASDAQ FIX, and either an Accepted Cancel or a Rejected Cancel after the cancel is acted upon by the destination system. We intend to send the Pending Cancel message before the Cancel Acknowledgement message, but that sequence is not guaranteed. NASDAQ views a cancel request as a request to cancel any remaining quantity on an order. As such, any value passed in tag 38 in a cancel request is superfluous.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = F
1	Account	N	Account mnemonic as agreed between broker and institution. Limited to 20 characters. The sum of tags 1 and 11 cannot exceed 19 characters.
11	ClOrdID	Y	This is your new and unique ID for this request. Limited to 20 characters.
37	OrderID	N	This is NASDAQ's reference number for the order to be canceled. If you do not supply this number, then NASDAQ will supply it for you.
38	OrderQty	N	NASDAQ will always cancel any remaining quantity in response to a cancel request.
41	OrigClOrdID	Y	This is your unique id of the original order, the order to be canceled. Limited to 20 characters.
54	Side	Y	Must be the same as the side of the original order.
55	Symbol	Y	Must be the same as the symbol of the original order. All incoming messages will send the symbol as entered. If the symbol is sent in lower case, then NASDAQ will reject it. For exchange-listed securities, this field will contain the base listed symbol only. See SymbolSfx [65] field for additional information about the security.
60	TransactTime	Y	The time that you released this request.
65	SymbolSfx	N	For exchange-listed securities, this field will contain only the additional information about the security (e.g. preferred, warrants, etc.). This additional information must be in CMS format and is uppercase. No delimiters are allowed in this tag. For example, security "OXY PRB" would be formatted as follows: Symbol [55]: OXY SymbolSfx [65]: PRB

Tag	Field Name	Req'd	Comments
125	CxlType	N	Not used. Whereas this was a required tag in earlier versions of FIX, this tag is no longer used. If it is present on any cancel requests inbound to NASDAQ, we will ignore it.
5149	Memo	N	Free format, 60-character text field. Single and double quotes, pipes, and carets are not allowed.
	<i>Standard Trailer</i>	Y	

4.3.1.3 Cancel/Replace Request (Order Modification Request)

You use this message to cancel/replace orders that you have sent to NASDAQ. NASDAQ will return both a Pending Cancel/Replace, when the inbound cancel request is received by NASDAQ FIX, and either an Accepted Cancel/Replace or a Rejected Cancel/Replace after the cancel is acted upon by the destination system.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = G
1	Account	N	Account mnemonic as agreed between broker and institution. Limited to 20 characters
11	ClOrdID	Y	This is your new and unique ID for this request. Limited to 20 characters.
18	ExecInst	N	As per the original New Order Single.
21	HandlInst	Y	Valid value: 1 = automated execution order, private, no broker intervention
37	OrderID	N	This is NASDAQ's reference number for the order to be canceled. If you have not taken an action against the original order, then this number is the ID as passed back in the original order acknowledgement. If you have taken an action against the original order, such as a cancel/replace, then this number is the ID as passed back in the associated acknowledgement message.
38	OrderQty	Y	This value represents the new total Order Quantity. This new order quantity will be compared to the original Order Quantity to determine whether to increment or decrement the order. For NMS orders, acceptable values range from 1 to 999999. Exchange-listed security orders allow only round and mixed lots. If incrementing the order and the original MaxFloor is greater than 0, the Reserve Size will be increased. If incrementing the order and there is no original MaxFloor, the display quantity will be increased. If decrementing the order, the Display Quantity will be decreased. If the decrement quantity is greater than the display size and Reserve Size is greater than 0, Reserve Size will be decreased. If MaxFloor is specified on the CxlRpl and there was none on the original order, the Qty increment will be applied to Reserve and all subsequent Qty increments will be applied to Reserve. Please refer to the MaxFloor field description for further details.

Tag	Field Name	Req'd	Comments
40	OrdType	Y	Must be the same as the original order. Exchange-listed security orders do not allow pegged orders.
41	OrigClOrdID	Y	ClOrderID of the order to be canceled. (Original ClOrderID if order has not been replaced or ClOrderID of last Replace.)
44	Price	N	1-10 character decimal price. 12.34 is the correct presentation of twelve dollars and thirty four cents.
54	Side	Y	Must be the same as the side of the original order.
55	Symbol	Y	Must be the same as the symbol of the original order. All incoming messages will send the symbol as entered. If the symbol is sent in lower case, then we will reject it. For exchange-listed securities, this field will contain the base listed symbol only. See SymbolSfx [65] field for additional information about the security.
59	TimeInForce	N	Valid values: 0= DAY 1 = GTC 2 = At the Opening (OPG) 3 = Immediate or Cancel (IOC) 5 = GTX 7 = At the Close You may modify DAY to GTC and GTC to DAY only.
60	TransactTime	Y	The time that you released this request. If NASDAQ FIX receives a cancel/replace request that is more than 120 seconds old, the transaction will be rejected. That is, if tag 60 is more than 120 seconds older than the NASDAQ FIX engine's GMT, then the order is rejected with a 103=4. It is important that you are aware of possible variances between our time stamp and your time stamp. NASDAQ's clocks are synchronized with the Global Positioning Satellite that is maintained by the Department of Defense.
65	SymbolSfx	N	For exchange-listed securities, this field will contain only the additional information about the security (e.g. preferred, warrants, etc.). This additional information must be in CMS format and is uppercase. No delimiters are allowed in this tag. For example, security "OXY PRB" would be formatted as follows: Symbol [55]: OXY

Tag	Field Name	Req'd	Comments
			SymbolsSfx [65]: PRB
76	ExecBroker	N	<p>Must be the same as the ExecBroker of the original order.</p> <p>For exchange-listed securities, Give-Up trades are prohibited through the ITS system.</p>
111	MaxFloor	N	<p>Optional 1-6 character field indicating the new refresh quantity. Must be in shares in round lot multiples. The new Max Floor Size will update the Refresh Size.</p> <p><u>Example 1 - Cancel Replace Decrement:</u> The FIX New Order Single was entered with the following values: OrdQty = 10000 MaxFloor = 1000 The order has the following values: Display Quantity = 1000 Reserve Quantity = 9000 Refresh Quantity = 1000 A FIX Cancel/Replace Message is entered with OrdQty = 8000. Since the Original Order Quantity is greater than Cancel/Replace Order Quantity, the order will be decremented by 2000 shares. The display quantity will be decremented by 1000 and the Reserve Quantity will be decremented by 1000. Then the order will be Refreshed by 1000 resulting in the following values: Display Quantity = 1000 Reserve Quantity = 7000 Refresh Quantity = 1000</p> <p><u>Example 2 - Cancel Replace Increment with MaxFloor:</u> The FIX New Order Single was entered with the following values: OrdQty = 10000 MaxFloor = 1000 The order has the following values: Display Quantity = 1000 Reserve Quantity = 9000 Refresh Quantity = 1000 A FIX Cancel/Replace Message is entered with OrdQty = 12000. Since the Original Order Quantity is less than Cancel/Replace Order Quantity, the order will be incremented by 2000 shares. Since the order has a MaxFloor, the reserve quantity will be incremented by 2000 resulting in the following values:</p>

Tag	Field Name	Req'd	Comments
			Display Quantity = 1000 Reserve Quantity = 11000 Refresh Quantity = 1000 <u>Example 3 - Cancel Replace Increment without MaxFloor:</u> The FIX New Order Single was entered with the following values: OrdQty = 10000 The order has the following values: Display Quantity = 10000 A FIX Cancel/Replace Message is entered with OrdQty = 12000. Since the Original Order Quantity is less than Cancel/Replace Order Quantity, the order will be incremented by 2000 shares. Since the order does not have a MaxFloor, the display quantity will be incremented by 2000 resulting in Display Quantity = 12000.
211	PegDifference	N	Must be the same as the original order.
336	TradingSessionID	N	Must be the same as the original order.
5149	Memo	N	Free format, 60-character text field. Single and double quotes, pipes, and carets are not allowed. This text cannot be modified.
	<i>Standard Trailer</i>	Y	

Example 1: Cancel/Replace Decrement of 1 share resulting in a Mixed lot display quantity

The FIX New Order Single was entered with the following values:

OrdQty = 500
 MaxFloor = 200

The order has the following values:

Display Quantity = 200
 Reserve Quantity = 300
 Refresh Quantity = 200

A FIX Cancel/Replace Message is entered with OrdQty = 499. Since the Original Order Quantity is greater than Cancel/Replace Order Quantity, display quantity will be decremented by 1 share (500 - 499) resulting in the following values:

Display Quantity = 199
 Reserve Quantity = 300
 Refresh Quantity = 200

When the display quantity is a mixed lot, the display size is rounded down to the nearest round lot on feeds and displays. In this case, the display size will be disseminated as 1 round lot.

Example 2: Cancel/Replace Decrement that causes a Refresh

The FIX New Order Single was entered with the following values:

OrdQty = 500
MaxFloor = 100

The order has the following values:

Display Quantity = 100
Reserve Quantity = 400
Refresh Quantity = 100

A FIX Cancel/Replace Message is entered with OrdQty = 450. Since the Original Order Quantity is greater than Cancel/Replace Order Quantity, display quantity will be decremented by 50 shares (500 - 450) resulting in the following values:

Display Quantity = 50
Reserve Quantity = 400
Refresh Quantity = 100

Because the display quantity is less than a round lot, the display quantity will be refreshed to a round lot resulting in the following values:

Display Quantity = 100
Reserve Quantity = 350
Refresh Quantity = 100

4.3.1.4 Order Status Request

You use this message to obtain an order's status. The tags below are the only tags considered by NASDAQ on this message. All other tags are ignored.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = H
11	ClOrdID	Y	This is your unique ID of the original order, the order whose status you are requesting.
37	OrderID	N	This is NASDAQ's reference number for the order whose status you are requesting, as passed back in the original order acknowledgement.
54	Side	Y	Must be the same as the side of the original order.
55	Symbol	Y	Must be the same as the symbol of the original order. All incoming messages will send the symbol as entered. If the symbol is sent in lower case, then we will reject it. For exchange-listed securities, this field will contain the base listed symbol only. See SymbolSfx [65] field for additional information about the security.
65	SymbolSfx	N	For exchange-listed securities, this field will contain only the additional information about the security (e.g. preferred, warrants, etc.). This additional information must be in CMS format and is uppercase. No delimiters are allowed in this tag. For example, security "OXY PRB" would be formatted as follows: Symbol [55]: OXY SymbolSfx [65]: PRB
5149	Memo	N	Free format, 60-character text field. Single and double quotes, pipes, and carets are not allowed.
	<i>Standard Trailer</i>	Y	

4.3.1.5 Complaint Message

Tag	Field	Req'd	Name/Meaning
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	This field is limited to 20 characters.
6	AvgPx	Y	0.0
11	ClOrdID	N	This is your unique ID of the original order, the order whose status you are requesting.
14	CumQty	Y	0
17	ExecID	Y	0
20	ExecTransType	Y	Valid value: 0 = New
37	OrderID	Y	
39	OrdStatus	Y	0
54	Side	Y	As per New Order Single.
55	Symbol	Y	Stock market or exchange assigned symbol of a specific security. For exchange-listed securities, this symbol must represent a CQS security and must be in CMS format. For example: OXY PRB ROY PR
65	SymbolSfx	N	For exchange-listed securities, this field will contain only the additional information about the security (e.g. preferred, warrants, etc.). This additional information must be in CMS format and is uppercase. No delimiters are allowed in this tag. For example, security "OXY PRB" would be formatted as follows: Symbol [55]: OXY SymbolSfx [65]: PRB
100	ExDestination	N	A = American Stock Exchange B = Boston Stock Exchange C = Cincinnati Stock Exchange M = Chicago Stock Exchange N = New York Stock Exchange O = NASDAQ P = ARCA/EX Pacific Stock Exchange W = Chicago Board Options Exchange X = Philadelphia Stock Exchange Y = Attain Z = Instinet

Tag	Field	Req'd	Name/Meaning
150	ExecType	Y	
151	LeavesQty	Y	
5149	Memo	Q	Free format, 60-character text field to expand upon complaint code. Single and double quotes, pipes, and carets are not allowed.
9829	ComplaintCode	Q	91 = block trade through 92 = locked market 93 = lock/ship 94 = pre open report 95 = quote error 96 = quote change 97 = resend comm. 98 = trade through 99 = why cancel
	Standard Trailer	Y	

4.3.2 Outbound from NASDAQ

4.3.2.1 Order Acknowledgement

You will receive this message when NASDAQ FIX receives a New Order Single, and its destination system has accepted that order.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	This field is limited to 20 characters.
6	AvgPx	Y	0.0
11	ClOrdID	Y	NASDAQ FIX will return the Client Order ID, as submitted on the original New Order Single.
14	CumQty	Y	0
15	Currency	N	Not present in initial releases.
17	ExecID	Y	Uniquely generated by NASDAQ FIX, this is an identifier for this message.
18	ExecInst	N	As per New Order Single.
20	ExecTransType	Y	Valid value: 0 = New
37	OrderID	Y	NASDAQ's Order Reference number, as generated by its destination system.
38	OrderQty	Y	The order's original quantity.
39	OrdStatus	Y	Valid value: 0 = New
40	OrdType	N	As per the original New Order Single.
44	Price	N	As per the original New Order Single. If tag 40 = P and tag 44 is present, this tag is the Peg Cap Price.
54	Side	Y	As per the original New Order Single.
55	Symbol	Y	As per the New Order Single.
59	TimeInForce	N	As per the New Order Single.
65	SymbolSfx	N	As per the New Order Single.
111	MaxFloor	N	1-6 character field indicating the display quantity and refresh quantity. Must be in shares in round lot multiples. If MaxFloor = 0, then this tag will not be returned.
150	ExecType	Y	Valid value: 0 = New
151	LeavesQty	Y	For an Order Acknowledgement, Leaves Qty is equal to OrderQty.

Tag	Field Name	Req'd	Comments
211	PegDifference	N	As per original order.
336	TradingSessionID	N	NASDAQ will echo the value of the new order single message.
388	DiscretionInst	N	Code to identify the price a DiscretionOffset is related to and should be mathematically added to. NASDAQ supports only a value of 0 = related to display price. Required if DiscretionOffset is specified. This tag will be returned only if it was present in the original New Order Single.
389	DiscretionOffset	N	If present implies a discretionary order. This value (.01-.99) is applied to the display price to establish the price range within which the discretionary order may be executed. This tag will be returned only if it was present in the original New Order Single.
5149	Memo	N	This tag will contain the text included in the New Order Single.
	<i>Standard Trailer</i>	Y	

4.3.2.2 Execution/Trade Report

You will receive this message when your order has been executed.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	This field is limited to 20 characters.
6	AvgPx	Y	An average price is returned on Fills and Partial fills. The average price is computed using this formula: $AvgPx = [(AvgPx * CumQty) + (LastShares * LastPx)] / (LastShares + CumQty)$.
11	ClOrdID	Y	NASDAQ FIX will return the Client Order Id as submitted on the original New Order Single
14	CumQty	Y	Cumulative quantity executed against this order.
15	Currency	N	Not present in initial releases.
17	ExecID	Y	Uniquely generated by NASDAQ FIX, this is an identifier for this message.
18	ExecInst	N	As per the New Order Single.
19	ExecRefID	N	Not present in Execution reports for trade reports.
20	ExecTransType	Y	0 = New
31	LastPx	Y	Price of shares executed in this fill.
32	LastShares	Y	Number of shares executed in this fill.
37	OrderID	Y	NASDAQ's Order Reference number for the original order that is being executed, as generated by its destination system.
38	OrderQty	Y	The order's original quantity, or, as per State matrixes in FIX 4.2 specifications.
39	OrdStatus	Y	Valid values: 1 = Partially filled 2 = Filled
40	OrdType	N	As per the New Order Single.
41	OrigClOrdID	Y	ClOrdID of the first order in a Cancel Replace chain.
44	Price	N	As per the New Order Single.
54	Side	Y	As per the New Order Single.
55	Symbol	Y	As per the New Order Single.
59	TimeInForce	N	As per the New Order Single.
60	TransactTime	N	Time of the execution as per execution venue system.

Tag	Field Name	Req'd	Comments
65	SymbolSfx	N	As per the New Order Single.
76	ExecBroker	N	This tag echoes the value that was submitted in the incoming new order single.
111	MaxFloor	N	1-6 character field indicating the display quantity and refresh quantity. Must be in shares in round lot multiples. If MaxFloor = 0, then this tag will not be returned.
150	ExecType	Y	Valid values: 1 = Partial Fill 2 = Fill
151	LeavesQty	Y	Quantity left on the order, as per State Matrixes - Appendix D of FIX specifications. Note that in initial implementations, the Leaves quantity returned here is the sum of unexecuted display and reserve quantities.
211	PegDifference	N	As per the New Order Single.
336	TradingSessionID	N	As per the New Order Single.
375	ContraBroker	N	MPID. First field in repeating group. Required if NoContraBrokers > 0. This field will be present in the message if the OrdStatus = 1 or 2. For exchange-listed securities: 4-char MPID or 4-char exchange Exchange Values: American Stock Exchange = AMEX Boston Stock Exchange = BOSX Cincinnati Stock Exchange = CINN Chicago Stock Exchange = XMSE New York Stock Exchange = NYSE Pacific Stock Exchange = PACX Philadelphia Stock Exchange = PHLX
382	NoContraBrokers	N	Number of ContraBrokers repeating group instances. This field will be present in the message if the OrdStatus = 1 or 2.
388	DiscretionInst	N	Code to identify the price to which a DiscretionOffset is related and should be added. NASDAQ market center supports only a value of 0 = related to display price. Required if DiscretionOffset is specified. This tag will be returned only if it was present in the original New Order Single.

Tag	Field Name	Req'd	Comments
389	DiscretionOffset	N	If present implies a discretionary order. This value (.01-.99) is applied to the display price to establish the price range within which the discretionary order may be executed. This tag will be returned only if it was present in the original New Order Single.
440	ClearingAccount	N	1-4 character numeric clearing number.
5149	Memo	N	This tag will contain the text included in the New Order Single.
9231	TradeThruFlag	N	For exchange-listed securities, Y identifies when the order that corresponds to this trade report is traded through another market center.
9730	LiqProvFlg	Y	Required on trade reports, this indicates whether the execution of this order accessed liquidity or provided liquidity. Valid values: A = adds liquidity (provided) R = removes liquidity (accessor) I = during closing cross, adds liquidity D = during closing cross, removes liquidity S = during opening cross, adds liquidity E = during opening cross, removes liquidity B = routed accessor
9870	ReserveSize	N	Indicates the leaves quantity of the reserve size. Reserve size must be either in round lot multiples or in mixed lots. You may configure your system, so that you do not receive this tag.
9872	DisplaySize	N	Indicates the display quantity. You may configure your system, so that you do not receive this tag.
	<i>Standard Trailer</i>	Y	

4.3.2.3 Order Reject

You will receive this message when a New Order Single message is rejected. Tag 103, `OrdRejectReason`, and the `ExecType = 8` signify the fact that this message is a reject. NASDAQ will include tag 103. Specific causes, i.e. more detailed explanations, will be conveyed by tag 58. Although tag 58 is intended as text, NASDAQ will communicate reasoning via a series of codes, so as both to economize message length and to allow application decision on your part without the need for parsing text.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	<code>MsgType = 8</code>
1	Account	N	This field is limited to 20 characters.
6	AvgPx	Y	0.0
11	ClOrdID	Y	NASDAQ FIX will return the Client Order ID as submitted on the original New Order Single.
14	CumQty	Y	Set to 0 for an Order Reject.
15	Currency	N	Not present in initial releases.
17	ExecID	Y	Uniquely generated by NASDAQ FIX, this is an identifier for this message.
18	ExecInst	N	As per the New Order Single.
20	ExecTransType	Y	0 = New
37	OrderID	Y	NASDAQ's Order Reference number, as generated by its destination system.
38	OrderQty	Y	The order's original quantity.
39	OrdStatus	Y	8 = Rejected
40	OrdType	N	As per the New Order Single.
44	Price	N	As per the New Order Single. If tag 40 = P and tag 44 is present, this tag is the Peg Cap Price.
54	Side	Y	As per the New Order Single.
55	Symbol	Y	As per the New Order Single.
58	Text	N	Where possible, a coded message to explain reason for rejection. Business reject and application reject codes are in section 7.
59	TimeInForce	N	If this tag was present in the original New Order Single, it will be returned here. Otherwise, this tag will not be returned.
65	SymbolSfx	N	As per the New Order Single.
103	OrdRejReason	N	Code to identify reason for order rejection. Valid values: 0 = Broker option 1 = Unknown symbol

Tag	Field Name	Req'd	Comments
			2 = Exchange closed 3 = Order exceeds limit 4 = Too late to enter 5 = Unknown Order 6 = Duplicate Order (e.g. dupe ClOrdID) 7 = Duplicate of a verbally communicated order 8 = Stale Order
111	MaxFloor	N	1-6 character field indicating the display quantity and refresh quantity. Must be in shares in round lot multiples. If MaxFloor = 0, then this tag will not be returned.
150	ExecType	Y	8 = Rejected
151	LeavesQty	Y	For an Order reject, Leaves Qty is equal to OrderQty.
211	PegDifference	N	As per the New Order Single.
388	DiscretionInst	N	Code to identify the price to which a DiscretionOffset is related and should be added. NASDAQ market center only supports a value of 0 = related to display price. Required if DiscretionOffset is specified. This tag will be returned only if it was present in the original New Order Single.
389	DiscretionOffset	N	If present implies a discretionary order. This value (.01-.99) is applied to the display price to establish the price range within which the discretionary order may be executed. This tag will be returned only if it was present in the original New Order Single.
5149	Memo	N	This tag will contain the text included in the New Order Single.
	<i>Standard Trailer</i>	Y	

4.3.2.4 Pending Cancel

You will receive this message in response to a Cancel Request. This message is followed by either an Accepted Cancel or a Rejected Cancel after the request has been acted upon. Although there is no guarantee of sequencing, the intent is to return the Pending Cancel before the Cancel Acknowledgement. It is, therefore, incumbent upon you to have cancel processing logic that anticipates this possibility.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	This field is limited to 20 characters.
6	AvgPx	Y	0.0
11	ClOrdID	Y	NASDAQ FIX will return the Client Order ID as submitted on the Cancel request.
14	CumQty	Y	For a pending cancel, this represents the current total executed quantity against this order when the cancel request was received. As per State Matrixes, Appendix D of FIX specifications.
15	Currency	N	Not present, in initial releases.
17	ExecID	Y	Uniquely generated by NASDAQ FIX, this is an identifier for this message.
18	ExecInst	N	As per the New Order Single.
20	ExecTransType	Y	For this pending message: 0 = New
37	OrderID	Y	NASDAQ's Order Reference number for the order attempting to be canceled, as generated by its destination system.
38	OrderQty	Y	The order's original quantity or from state matrixes in FIX 4.2 specifications.
39	OrdStatus	Y	Valid value: 6 = pending cancel
40	OrdType	N	As per the New Order Single.
41	OrigClOrdID	Y	Returns your unique ID of the order to be cancelled.
44	Price	N	As per the New Order Single. If tag 40 = P and tag 44 is present, this tag is the Peg Cap Price.
54	Side	Y	As per the New Order Single.
55	Symbol	Y	As per the New Order Single.
59	TimeInForce	N	As per the New Order Single.
65	SymbolSfx	N	As per the New Order Single.
111	MaxFloor	N	1-6 character field indicating the display quantity and refresh quantity. Must be in shares in round lot

Tag	Field Name	Req'd	Comments
			multiplies. If MaxFloor = 0, then this tag will not be returned.
150	ExecType	Y	Valid values: 6 = pending cancel D = restated (ExecutionRpt sent unsolicited by sell side with ExecRestatementReason set)
151	LeavesQty	Y	For a pending cancel, this represents the current leaves quantity for this order when the cancel request was received.
211	PegDifference	N	As per the New Order Single.
336	TradingSessionID	N	As per the New Order Single.
388	DiscretionInst	N	Code to identify the price to which a DiscretionOffset is related and should be added. NASDAQ market center only supports a value of 0 = related to display price. Required if DiscretionOffset is specified. This tag will be returned only if it was present in the original New Order Single.
389	DiscretionOffset	N	If present implies a discretionary order. This value (.01-.99) is applied to the display price to establish the price range within which the discretionary order may be executed. This tag will be returned only if it was present in the original New Order Single.
5149	Memo	N	This tag will contain the text included in the Cancel Request.
	<i>Standard Trailer</i>	Y	

4.3.2.5 Accepted Cancel

You will receive this message in response to a Cancel Request, unless that request is rejected. The accepted cancel conveys that the remaining quantity or a portion thereof has been cancelled. NASDAQ presumes that a cancel request is for all remaining shares. NASDAQ may cancel part of the remaining quantity. This message is usually preceded by a Pending Cancel, although sequencing is not guaranteed.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	This field is limited to 20 characters.
6	AvgPx	Y	0.0 if no fills have occurred.
11	ClOrdID	Y	NASDAQ FIX will return the Client Order ID as submitted on the Cancel request.
14	CumQty	Y	For a cancel, this represents the total executed quantity against this order when the cancel occurred.
15	Currency	N	Not present in initial releases.
17	ExecID	Y	Uniquely generated by NASDAQ FIX, this is an identifier for this message.
18	ExecInst	N	As per the original New Order Single.
20	ExecTransType	Y	Valid value: 0 = New
31	LastPx	Y	Set to 0 for Accepted Cancels.
32	LastShares	Y	Set to 0 for Accepted Cancels.
37	OrderID	Y	NASDAQ's Order Reference number for the order attempting to be canceled, as generated by its destination system.
38	OrderQty	Y	The order's original quantity or from State matrixes as per FIX 4.2 specifications.
39	OrdStatus	Y	Valid value: 4 = Cancelled
40	OrdType	Y	As per the New Order Single.
41	OrigClOrdID	Y	Returns your unique ID of the order to be cancelled.
44	Price	N	As per the original New Order Single. If tag 40 = P and tag 44 is present, this tag is the Peg Cap Price.
54	Side	Y	As per the New Order Single.
55	Symbol	Y	As per the New Order Single.
58	Text	N	This tag is returned only for unsolicited cancels.
59	TimeInForce	N	As per the New Order Single.

Tag	Field Name	Req'd	Comments
65	SymbolSfx	N	As per the New Order Single.
111	MaxFloor	N	1-6 character field indicating the display quantity and refresh quantity. Must be in shares in round lot multiples. If MaxFloor = 0, then this tag will not be returned.
150	ExecType	Y	Valid value: 4 = Cancel
151	LeavesQty	Y	Will be zero in most cases, but in the case of order delivery scenarios as mentioned below, this may be non-zero in cases where tag 378 = 5.
211	PegDifference	N	As per the New Order Single.
388	DiscretionInst	N	Code to identify the price to which a DiscretionOffset is related and should be added. NASDAQ market center supports only a value of 0 = related to display price. Required if DiscretionOffset is specified. This tag will be returned only if it was present in the original New Order Single.
389	DiscretionOffset	N	If present implies a discretionary order. This value (.01-.99) is applied to the display price to establish the price range within which the discretionary order may be executed. This tag will be returned only if it was present in the original New Order Single.
5149	Memo	N	This tag will contain the text included in the Cancel Request.
9870	ReserveSize	N	Indicates the quantity of the reserve size. Reserve size must be either in round lot multiples or in mixed lots. You may configure your system, so that you do not receive this tag.
9872	DisplaySize	N	Indicates the display quantity. You may configure your system, so that you do not receive this tag.
	<i>Standard Trailer</i>	Y	

4.3.2.6 Rejected Cancel

NASDAQ FIX sends this message when a Cancel Request is rejected. We will include tag 102 in its Cancel Reject messages. Specific causes will be detailed in tag 58.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 9
11	ClOrdID	Y	NASDAQ FIX will return the Client Order Id as submitted on the Cancel request.
37	OrderId	Y	If CxlRejReason=1, then this tag will be populated with "None". Otherwise, this tag will contain NASDAQ's order reference number.
39	OrdStatus	Y	Order status after the cancel reject is applied.
41	OrigClOrdID	Y	Returns your unique id of the original order – the order that was attempted to be canceled.
58	Text	N	Where possible, coded message to explain reason for rejection. Business reject and application reject codes are in section 7.
76	ExecBroker	N	Not used.
102	CxlRejReason	N	Code to identify reason for cancel rejection. Valid values: 0 = Too late to cancel 1 = Unknown order 2 = Broker Option 3 = Order already in Pending Cancel or Pending Replace status
5149	Memo	N	This tag will contain the text included in the Cancel Request.
	<i>Standard Trailer</i>	Y	

4.3.2.7 Pending Cancel/Replace

You will receive this message in response to a Cancel/Replace Request. Either an accept or reject message follows after the request has been acted upon by the destination system.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	This field is limited to 20 characters.
6	AvgPx	Y	0.0
11	ClOrdID	Y	NASDAQ FIX will return the Client Order Id as submitted on the Cancel/replace request.
14	CumQty	Y	For a pending cancel/replace, this represents the current total executed quantity against this order when the cancel request was received. As per State Matrixes – Appendix D of FIX specifications.
15	Currency	N	Not present, in initial releases
17	ExecID	Y	Uniquely generated by NASDAQ FIX, this is an identifier for this message.
18	ExecInst	N	As per the original New Order Single.
20	ExecTransType	Y	For this pending message: 0 = New
37	OrderID	Y	NASDAQ's Order Reference number for the order attempting to be canceled/replaced, as generated by its destination system.
38	OrderQty	Y	The order's original quantity, or, as per State matrixes as per FIX 4.2 specifications.
39	OrdStatus	Y	Valid value: E = pending replace
40	OrdType	N	As per the New Order Single.
41	OrigClOrdID	Y	Returns your unique id of the original order – the order to be canceled.
44	Price	N	If tag 40 = P and tag 44 is present, this tag is the Peg Cap Price.
54	Side	Y	As per the New Order Single.
55	Symbol	Y	As per the New Order Single.
59	TimeInForce	N	As per the New Order Single.
65	SymbolSfx	N	As per the New Order Single
111	MaxFloor	N	1-6 character field indicating the display quantity and refresh quantity. Must be in shares in round lot multiples. If MaxFloor = 0, then this tag will not be returned.

Tag	Field Name	Req'd	Comments
150	ExecType	Y	Valid value: E = Pending Replace
151	LeavesQty	Y	For a pending cancel/replace, this represents the current leaves quantity for this order when the cancel/replace request was received. Note that in initial implementations, the Leaves quantity returned here is the sum of unexecuted display, reserve, and delivery quantities.
211	PegDifference	N	As per the New Order Single.
388	DiscretionInst	N	Code to identify the price to which a DiscretionOffset is related and should be added. NASDAQ market center supports only a value of 0 = related to display price. Required if DiscretionOffset is specified. This tag will be returned only if it was present in the original New Order Single.
389	DiscretionOffset	N	If present implies a discretionary order. This value (.01-.99) is applied to the display price to establish the price range within which the discretionary order may be executed. This tag will be returned only if it was present in the original New Order Single.
5149	Memo	N	This tag will contain the text included in the Cancel/Replace Request.
	<i>Standard Trailer</i>	Y	

4.3.2.8 Accepted Cancel/Replace

You will receive this message in response to a Cancel/Replace Request, unless that request is rejected. This message is usually preceded by a Pending Cancel/Replace, although sequencing is not guaranteed.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	This field is limited to 20 characters.
6	AvgPx	Y	0.0
11	ClOrdID	Y	NASDAQ FIX will return the Client Order ID as submitted on the Cancel/Replace request.
14	CumQty	Y	As per State Matrixes, Appendix D of FIX specifications.
15	Currency	N	Not present in initial releases.
17	ExecID	Y	Uniquely generated by NASDAQ FIX, this is an identifier for this message.
18	ExecInst	N	Not present in initial releases.
19	ExecRefID	N	Reference ID.
20	ExecTransType	Y	Valid value: 0 = New
31	LastPx	N	0 for Cancel Replace acknowledgements.
32	LastShares	N	0 for Cancel Replace acknowledgements.
37	OrderID	Y	NASDAQ's Order Reference number for the order attempting to be cancel/replaced, as generated by its destination system.
38	OrderQty	Y	The order's original quantity, or, as per State matrixes as per FIX 4.2 specifications.
39	OrdStatus	Y	As per State matrixes in FIX 4.2 specifications.
40	OrdType	N	As per the New Order Single.
41	OrigClOrdID	Y	Unique ID of the order to be cancel/replaced.
44	Price	N	1-10 character decimal price. 12.34 is the correct presentation of twelve dollars and thirty four cents.
54	Side	Y	As per the New Order Single.
55	Symbol	Y	As per the New Order Single.
59	TimeInForce	N	As per the New Order Single.
65	SymbolSfx	N	As per the New Order Single.
111	MaxFloor	N	1-6 character field indicating the display quantity and refresh quantity. Must be in shares in round lot multiples. If MaxFloor = 0, then this tag will not be

Tag	Field Name	Req'd	Comments
			returned.
150	ExecType	Y	As per State matrixes in FIX 4.2 specifications.
151	LeavesQty	Y	The leaves quantity will be returned representing this order's leaves quantity as of the processing of this cancel replace. Note that in initial implementations, the Leaves quantity returned here is the sum of unexecuted display, reserve, and delivery quantities.
211	PegDifference	N	As per New Order Single.
388	DiscretionInst	N	Code to identify the price to which a <i>DiscretionOffset</i> is related and should be added. NASDAQ market center supports only a value of 0 = related to display price. Required if <i>DiscretionOffset</i> is specified. This tag will be returned only if it was present in the original New Order Single.
389	DiscretionOffset	N	If present implies a discretionary order. This value (.01-.99) is applied to the display price to establish the price range within which the discretionary order may be executed. This tag will be returned only if it was present in the original New Order Single.
5149	Memo	N	This tag will contain the text included in the Cancel/Replace Request.
9870	ReserveSize	N	Indicates the quantity of the reserve size. Reserve size must be either in round lot multiples or in mixed lots. You may configure your system, so that you do not receive this tag.
9872	DisplaySize	N	Indicates the display quantity. You may configure your system, so that you do not receive this tag.
	<i>Standard Trailer</i>	Y	

4.3.2.9 Rejected Cancel/Replace

You will receive this message when a Cancel/Replace is rejected. NASDAQ will include tag 102. Specific causes will be detailed in tag 58.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 9
11	ClOrdID	Y	NASDAQ FIX will return the Client Order ID as submitted on the Cancel/Replace request.
37	OrderId	Y	If CxlRejReason=1, then this tag will be populated with "None". Otherwise, this tag will contain NASDAQ's order reference number.
39	OrdStatus	Y	Order status after the cancel/replace reject is applied.
41	OrigClOrdID	Y	Returns your unique ID of the order that was attempted to be replaced.
58	Text	N	Where possible, coded message to explain reason for rejection. Business reject and application reject codes are in section 7.
76	ExecBroker	N	Not used.
102	CxlRejReason	N	Code to identify reason for cancel rejection. Valid values: 0 = Too late to cancel 1 = Unknown order 2 = Broker Option 3 = Order already in Pending Cancel or Pending Replace status
5149	Memo	N	This tag will contain the text included in the Cancel/Replace Request.
	<i>Standard Trailer</i>	Y	

4.3.2.10 Order Status Response

You will receive this message in response to an Order Status Request. It represents the current state of the order when NASDAQ FIX receives the request. Should you submit an Order Status request for an order that has already been filled or canceled, the status request will receive a reject with Tag 58=0202 Unknown Client Order Id (ClOrdId).

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	This field is limited to 20 characters.
6	AvgPx	Y	An average price is returned on Fills and Partial fills. The average price is computed using this formula: AvgPx = [(AvgPx * CumQty) + (LastShares * LastPx)] / (LastShares + CumQty).
11	ClOrdID	Y	As per the New Order Single.
14	CumQty	Y	Total shares executed against this order to date.
15	Currency	N	As per the New Order Single.
17	ExecID	Y	Set to 0 for Order Status response.
18	ExecInst	N	Not present in initial releases.
20	ExecTransType	Y	Valid value: 3 = Status
37	OrderID	Y	NASDAQ's Order Reference number for the original order, as generated by its destination system.
38	OrderQty	Y	Original quantity of the order.
39	OrdStatus	Y	Identifies current status of order. Valid values: 0 = New 1 = Partially filled 5 = Replaced 6 = Pending Cancel (e.g. result of Order Cancel Request) A = Pending New C = Expired E = Pending Replace (e.g. result of Order Cancel/Replace Request)
40	OrdType	N	As per the New Order Single.
44	Price	N	As per the New Order Single.
54	Side	Y	As per the New Order Single.
55	Symbol	Y	As per the New Order Single.
59	TimeInForce	N	The TIF after considering all cancel/replace orders.
65	SymbolSfx	N	As per the New Order Single.
111	MaxFloor	N	1-6 character field indicating the display quantity and refresh quantity. Must be in shares in round lot

Tag	Field Name	Req'd	Comments
			multiples. If MaxFloor = 0, then this tag will not be returned.
150	ExecType	Y	As per State matrixes in FIX 4.2 specifications.
151	LeavesQty	Y	Quantity left on the order, as per State Matrixes - Appendix D of FIX specifications. Note that in initial implementations, the Leaves quantity is returned here.
5149	Memo	N	This tag will contain the text included in the New Order Single.
9870	ReserveSize	N	Indicates the current quantity of the reserve size. Reserve size must be either in round lot multiples or in mixed lots. You may configure your system, so that you do not receive this tag.
9872	DisplaySize	N	Indicates the display quantity. You may configure your system, so that you do not receive this tag.
	<i>Standard Trailer</i>	Y	

4.3.2.11 Trade Through Notification

Message notifies firm that their Bid/Ask was traded through.

Tag	Field	Req'd	Name/Meaning
???	Market Center		American Boston Cincinnati Chicago New York ARCA EX/Pacific Stock Exchange NASDAQ CBOE Philadelphia
31	LastPx	Q	Price of shares executed in this fill.
55	Symbol	Q	As per the New Order Single.
60	TransactTime	Q	Time of the execution as per execution venue system.
65	SymbolSfx	N	As per the New Order Single.

4.3.2.12 Restatement

While NASDAQ presumes that a Cancel Request is for all remaining shares, NASDAQ may cancel part of the remaining quantity. If a Cancel Request is received while the order has shares in delivery, a user may receive a Restatement and Accepted Cancel for a single Cancel Request. The first message will indicate the number of shares that were cancelled immediately, as they were not in delivery. If additional shares can be cancelled when the delivery is complete, that is, declined or partially declined, a second UR Out will be sent for that amount. If no additional shares can be cancelled after the delivery, the user will receive an Execution Report to indicate the trade. IOC (59 = 3) orders follow this same process.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	This field is limited to 20 characters.
6	AvgPx	Y	0.0 if no partial fills have occurred.
11	ClOrdID	Y	NASDAQ FIX will return the Client Order ID as submitted on the Cancel request.
14	CumQty	Y	For a restatement, this represents the total executed quantity against this order when the restatement occurred.
15	Currency	N	Not present in initial releases.
17	ExecID	Y	Identifier for this message uniquely generated by NASDAQ FIX.
18	ExecInst	N	As per the New Order Single.
20	ExecTransType	Y	Valid value: 0 = New
31	LastPx	Y	Set to 0 for Restatements.
32	LastShares	Y	Set to 0 for Restatements.
37	OrderID	Y	NASDAQ's Order Reference number for the original order attempting to be restated, as generated by its destination system.
38	OrderQty	Y	The restated order quantity.
39	OrdStatus	Y	Identifies current status of order.
40	OrdType	N	As per the New Order Single.
41	OrigClOrdID	Y	Returns the current ClOrdID of the order after any cancel/replace orders
44	Price	N	This field will be returned even if it was not included in the original order. If tag 40 = P and tag 44 is present, this tag is the Peg Cap Price.
54	Side	Y	As per the New Order Single.
55	Symbol	Y	As per the New Order Single.

Tag	Field Name	Req'd	Comments
59	TimeInForce	N	As per the original New Order Single.
65	SymbolSfx	N	As per the original New Order Single.
111	MaxFloor	N	1-6 character field indicating the display quantity and refresh quantity. Must be in shares in round lot multiples. If MaxFloor = 0, then this tag will not be returned.
150	ExecType	Y	Valid value: D = Restatement
151	LeavesQty	Y	Quantity left on the order.
211	PegDifference	N	As per New Order Single.
378	ExecRestatementReason	N	Used when communicating a specific unsolicited cancel. Valid value: 5 = Partial decline of OrderQty for exchange-initiated partial cancel
5149	Memo	N	This tag will contain the text included in the New Order Single.
9870	ReserveSize	N	Indicates the quantity of the reserve size. Reserve size must be either in round lot multiples or in mixed lots. You may configure your system, so that you do not receive this tag.
9872	DisplaySize	N	Indicates the display quantity. You may configure your system, so that you do not receive this tag.
	<i>Standard Trailer</i>	Y	

4.3.2.13 Drop Copies

NASDAQ FIX provides drop-copy services on both an application and execution level. A separate I1I2 is required to receive drop copies. The drop copy message will not conform to FIX 4.2 execution report specifications. Some of the expected and mandatory fields may be missing.

NASDAQ introduces functionality that allows you to filter drop copy messages. Messages will be filtered by entering I1I2. If the entering I1I2 on the execution report corresponds to an entering I1I2 that you provided for filtering, then that execution report will be drop copied. If the entering I1I2 on the execution report is not one of the I1I2s that you provided for filtering, then the execution report is not drop copied. If you would like to use filtered drop copies, please contact the FIX Support Group at 800-243-4284.

Application Drop Copy

NASDAQ is introducing additional drop copy functionality. This new functionality allows you to register to receive drop copies of all application messages. You must register to receive these new messages. Registration occurs on a connector-by-connector basis. Note that every application message that you receive over your primary connector will be duplicated on your drop copy connector. There is no message format table associated with this new functionality. If you would like to receive application drop copies, please contact the FIX Support Group at 800-243-4284.

Execution Drop Copy

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	Y	As specified in New Order Single.
6	AvgPx	Y	The value of this tag is always 0.
11	ClOrdId	Y	CLORDID of the original order. This is the CLORDID of the first order in a Cancel Replace Chain.
14	CumQty	Y	The value of this tag is always 0.
17	ExecId	Y	Execution reference number returned from NASDAQ market center.
20	ExecTransType	Y	The value of this tag is always 0.
31	LastPx	Y	Price of this Partial Fill/Fill.
32	LastShares	Y	Executed quantity.
37	OrderID	Y	Unique ORDERID assigned by NASDAQ market center.
39	OrdStatus	Y	Order status indicating a Partial Fill/Fill.
54	Side	Y	Side indicating bought or sold.
55	Symbol	Y	Security Symbol.
60	TransactTime	Y	The time that you released this request.
65	SymbolSfx	Y	Security symbol suffix.

Tag	Field Name	Req'd	Comments
111	MaxFloor	N	1-6 character field indicating the display quantity and refresh quantity. Must be in shares in round lot multiples. If MaxFloor = 0, then this tag will not be returned.
150	ExecType	Y	Indicates indicating a Partial Fill/Fill.
151	LeavesQty	Y	Non-Restate leaves quantity.
375	ContraBroker	Y	The other side on this execution.
382	NoContraBrokers	Y	The number of <code>ContraBroker</code> entries.
440	ClearingAccount	Y	Clearing account.
5149	Memo	N	This tag will contain the text included in the New Order Single.
9730	LiqProvFlag	Y	Indicates indicating if the FIRM accessed or provided liquidity.
9870	ReserveSize	N	Indicates the quantity of the reserve size. Reserve size must be either in round lot multiples or in mixed lots. You may configure your system, so that you do not receive this tag.
	<i>Standard Trailer</i>	Y	

5 Appendix A: State Matrices

This section provides possible scenarios encountered during delivery. These scenarios complement the scenarios in the FIX 4.2 specifications. The matrices describe the messages received by a FIX client and its contents. Sub-scenarios or variations of the scenarios are indicated by repeating the time line for a new set of messages. For example, in scenario 4, line 5 is repeated to illustrate a sub-scenario.

These abbreviations are used in the matrices that follow:

This abbreviation...	means this...
0	New
1	Partially Filled
2	Filled
4	Cancel
5	Replaced
6	Pending Cancel
D	Restate
E	Pending Replaced
Cxl	Cancel
CxlRj	Cancel Reject
CxRp	Cancel Replaced
Exec	Execution
Ord	New Order

Scenario 1: Cancel Order Full Delivery / Declined

Time	Msg Rcv [CLOrdID, OrigCLOrdID]	Msg Sent [CLOrdID, OrigCLOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					1000				1000 shares go into delivery.
2		Exec(x)	0	0	0	1000	0	1000	0	
3	Cxl(y,x)					1000				
4		Exec(y,x)	6	6	0	1000	0	1000	0	
5		CxIRj(y,x)		0		1000				If Cancel is rejected by SM / FIX Engine.
5		Exec(y,x)	6	6	0	1000	0	1000	0	SM sends an additional pending Cancel message for orders in full delivery.
6		Exec(y,x)	4	4	0	1000	0	0	0	Delivery declined, Order is canceled.

Scenario 2: Cancel Order in Partial Delivery / Declined

Time	Msg Rcv [CLOrdID, OrigCLOrdID]	Msg Sent [CLOrdID, OrigCLOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					1000				500 Shares go into delivery immediately.
2		Exec(x)	0	0	0	1000	0	1000	0	
3	Cxl(y,x)					1000				
4		Exec(y,x)	6	6	0	1000	0	1000	0	
5		CxIRj(y,x)		0		1000				Cancel is rejected by SM.
5		Exec(x)	D	6	0	500	0	500	0	Execution restatement is sent to indicate a partial cancel 500 shares that were not in delivery.
6		Exec(y,x)	4	4	0	500	0	0	0	Delivery declined, Order is canceled.

Scenario 3: Cancel Order in Full Delivery / Accepted

Time	Msg Rcv [CLOrdID, OrigCLOrdID]	Msg Sent [CLOrdID, OrigCLOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					1000				1000 shares entered go into delivery.
2		Exec(x)	0	0	0	1000	0	1000	0	
3	Cxl(y,x)					1000				
4		Exec(y,x)	6	6	0	1000	0	1000	0	
5		CxIRj(y,x)		0		1000				Cancel rejected by SM.
5		Exec(y,x)	6	6	0	1000	0	1000	0	
6		Exec(x)	2	2	0	1000	0	1000	0	Delivery accepted in full results in execution.
7		CxIRj(y,x)		2		1000				Cancel gets rejected with TLTC.

Scenario 4: Cancel Order in Partial Delivery / Accepted

Time	Msg Rcv [CLOrdID, OrigCLOrdID]	Msg Sent [CLOrdID, OrigCLOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					1000				1000 shares entered, 500 shares go into delivery.
2		Exec(x)	0	0	0	1000	0	1000	0	
3	Cxl(y,x)					1000				
4		Exec(y,x)	6	6	0	1000	0	1000	0	
5		CxIRj(y,x)		0		1000				Cancel rejected by SM.
5		Exec(x)	D	6	0	500	0	500	0	Restatement indicating partial cancel of 500 shares not in delivery.
6		Exec(x)	2	2	0	500	500	500	0	Delivery accepted results in execution.
7		CxIRj(y,x)		2		1000				Cancel gets rejected with TLTC.

Scenario 5: Cancel Order in Full Delivery / Partially Accepted

Time	Msg Rcv [CLOrdID, OrigCLOrdID]	Msg Sent [CLOrdID, OrigCLOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					1000				1000 Shares entered goes into delivery.
2		Exec(x)	0	0	0	1000	0	1000	0	
3	Cxl(y,x)					1000				
4		Exec(y,x)	6	6	0	1000		1000	0	
5		Exec(y,x)	6	6	0	1000	0	1000	0	SM sends an additional pending Cancel message for orders in full delivery.
6		Exec(x)	1	6	0	1000	500	0	500	Delivery accepted partially results in execution.
7		Exec(y,x)	4	4	0	1000	500	0	0	Remaining Quantity Canceled.

Scenario 6: Cancel Order in Partial Delivery / Partially Accepted

Time	Msg Rcv [CLOrdID, OrigCLOrdID]	Msg Sent [CLOrdID, OrigCLOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					1000				1000 shares entered 500 shares go into delivery.
2		Exec(x)	0	0	0	1000	0	1000	0	
3	Cxl(y,x)					1000				
4		Exec(y,x)	6	6	0	1000	0	1000	0	
5		CxIR](y,x)		0		1000				Cancel Rejected by SM.
5		Exec(x)	D	6	0	500	0	500	0	Restatement indicating partial cancel of 500 shares not in delivery.
6		Exec(x)	1	6	0	500	250	250	250	Delivery Partially accepted results in execution.
7		Exec(y,x)	4	4	0	500	250	0	0	Remaining Quantity Canceled.

Scenario 7: Cancel/Replace - Increment Quantity

Time	Msg Rcv [CLOrdID, OrigCLOrdID]	Msg Sent [CLOrdID, OrigCLOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					1000				
2		Exec(x)	0	0	0	1000	0	1000	0	
3	CxRp(y,x)					2000				Cancel Replace incrementing Quantity.
4		Exec(y,x)	E	E	0	1000	0	1000		
5		Exec(y,x)	5	5	0	2000	0	2000		Order replaced.
6		Exec(y)	2	2	0	2000	2000	0	2000	New order executed for 2000 shares.

Scenario 8: Cancel/Replace - Increment Quantity/Refresh Size with Initial Refresh Size at 0

Time	Msg Rcv [CLOrdID, OrigCLOrdID]	Msg Sent [CLOrdID, OrigCLOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					1000				Order entered without refresh size.
2		Exec(x)	0	0	0	1000	0	1000	0	
3	CxRp(y,x)					2000 1000 MF				Cancel Replace modifying Quantity and refresh size.
4		Exec(y,x)	E	E	0	1000	0	1000		
5		Exec(y,x)	5	5	0	1000	0	2000		Order Replaced.
6		Exec(y)	2	2	0	1000	2000	0	2000	New order fully executed.

Scenario 9: Cancel/Replace - Increment Quantity/Refresh Size with initial refresh size > 0

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				Order entered with refresh size of 1000.
2		Exec(x)	0	0	0	2000 1000	0	2000	0	
3	CxRp(y,x)					3000 2000				Cancel Replace modifying both Quantity and Refresh size.
4		Exec(y,x)	E	E	0	2000 1000	0	2000		
5		Exec(y,x)	5	5	0	3000 2000	0	3000		Order replaced with new order.
6		Exec(y)	2	2	0	3000 2000	3000	0	3000	New order fully executed.

Scenario 10: Cancel/Replace - Increment Quantity/Refresh Size with Initial refresh size > 0 with executions

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				Order entered with a refresh size of 1000.
2		Exec(x)	0	0	0	2000 1000	0	2000	0	
3	CxRp(y,x)					3000 2000				Cancel Replace modifying refresh size to 2000 and Quantity to 3000.
4		Exec(x)	1	1	0	2000 1000	1000	1000	1000	Partial Fill.

Time	Msg Rcv [CfOrdID, OrigCfOrdID]	Msg Sent [CfOrdID, OrigCfOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
5		Exec(y,x)	E	E	0	2000 1000	1000	1000		
6		Exec(y,x)	5	1	0	3000 2000	1000	2000		Order replaced with new order.
7		Exec(y)	2	2	0	3000 2000	3000	0	2000	New order fully executed.

Scenario 11: Cancel/Replace - Decrement Refresh Size

Time	Msg Rcv [CfOrdID, OrigCfOrdID]	Msg Sent [CfOrdID, OrigCfOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				Order entered with a refresh size of 1000.
2		Exec(x)	0	0	0	2000 1000	0	2000	0	
3	CxRp(y,x)					2000 500				Cancel replace decrementing only refresh size.
4		Exec(x)	1	1	0	2000 1000	1000	1000	1000	
5		Exec(y,x)	E	E	0	2000 1000	1000	1000		
6		Exec(y,x)	5	1	0	2000 500	1000	1000		Order replaced with new order.
7		Exec(y)	2	2	0	2000 500	2000	0	1000	New order fully executed.

Scenario 12: Cancel/Replace - Decrement Qty and Decrement Refresh Size

Time	Msg Rcv [CfOrdID, OrigCfOrdID]	Msg Sent [CfOrdID, OrigCfOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				Order entered with refresh size of 1000.
2		Exec(x)	0	0	0	2000 1000	0	2000	0	
3	CxRp(y,x)					1500 500				Cancel replace decrementing both quantity and refresh size.
4		Exec(x)	1	1	0	2000 1000	1000	1000	1000	
5		Exec(y,x)	E	E	0	2000 1000	1000	1000		
6		Exec(y,x)	5	1	0	1500 500	1000	500		Order replaced by new order.
7		Exec(y)	2	2	0	1500 500	1500	0	500	New order fully executed.

Scenario 13: Cancel/Replace - Full Delivery Decrement Refresh Size

Time	Msg Rcv [CfOrdID, OrigCfOrdID]	Msg Sent [CfOrdID, OrigCfOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				2000 shares entered go into delivery immediately.
2		Exec(x)	0	0	0	2000 1000	0	2000	0	
3	CxRp(y,x)					2000 500				Cancel replaces to decrement refresh size.

Time	Msg Rcv [CfOrdID, OrigCfOrdID]	Msg Sent [CfOrdID, OrigCfOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
4		Exec(x)	1	1	0	2000 1000	1000	1000	1000	
5		Exec(y,x)	E	E	0	2000 1000	1000	1000		
6		CxIRj(y)		1						Cancel Replace Rejected, cannot modify refresh size when order is in full delivery.

Scenario 14: Cancel/Replace -Partial Delivery Decrement Refresh Size

Time	Msg Rcv [CfOrdID, OrigCfOrdID]	Msg Sent [CfOrdID, OrigCfOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				
2		Exec(x)	0	0	0	2000 1000	0	2000	0	1000 shares go into delivery immediately.
3	CxRp(y,x)					2000 500				Cancel Replace to decrement refresh size.
4		Exec(x)	1	1	0	2000 1000	1000	1000	1000	
5		Exec(y,x)	E	E	0	2000 1000	1000	1000		
6		Exec(y,x)	5	1	0	2000 500	1000	1000		Order replaced with new order.
7		Exec(y)	2	2	0	2000 500	2000	0	1000	New order fully executed.

Scenario 15: Cancel/Replace -FULL Delivery Decrement Quantity - Delivery Declined

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				2000 shares entered go into delivery immediately.
2		Exec(x)	0	0	0	2000 1000	0	2000	0	
3	CxRp(y,x)					1500 1000				Cancel Replace decrementing to 1500 shares.
4		Exec(y,x)	E	E	0	2000 1000	0	2000	0	
5		Exec(y,x)	E	E	0	2000 1000	0	2000	0	
6		Exec(y,x)	5	5	0	1500 1000	0	1500	0	Delivery declined, order replaced with new order.

Scenario 16: Cancel/Replace -Partial Delivery Decrement Qty - Delivery Declined

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				2000 shares entered and 1000 shares go into delivery immediately.
2		Exec(x)	0	0	0	2000 1000	0	2000	0	
3	CxRp(y,x)					1500 500				Cancel Replace decrementing quantity to 1500 shares.
4		Exec(x)	1	1	0	2000 1000	1000	1000	1000	Execution for 1000 non-delivered shares.

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
5		Exec(y,x)	E	E	0	2000 1000	1000	1000		
6		Exec(y,x)	5	1	0	1500 500	1000	500		Delivery declined order replaced with new order.
7		Exec(y)	2	2	0	1500 500	1500	0	500	New order fully executed.

Scenario 17: Cancel/Replace - FULL Delivery Decrement Quantity - Delivery Accepted

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				2000 shares entered go into delivery immediately.
2		Exec(x)	0	0	0	2000 1000	0	2000		
3	CxRp(y,x)					1500 1000				Cancel Replace decrementing quantity to 1500 shares.
4		Exec(y,x)	E	E	0	2000 1000	0	2000		
5		Exec(y,x)	E	E	0	2000 1000	0	2000	0	SM sends an additional pending replace message for orders in full delivery.
6		Exec(x)	2	2	0	2000 1000	2000	0	2000	Delivery Accepted results in execution.
7		CxIRj(y,x)		2		1500 1000				Cancel Replace rejected as TLTC.

Scenario 18: Cancel/Replace -Partial Delivery Decrement Qty - Delivery Accepted

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				2000 shares entered 500 shares go into delivery.
2		Exec(x)	0	0	0	2000 1000	0	2000	0	
3	CxRp(y,x)					1000 500				Cancel Replace decrementing quantity to 1000.
4		Exec(x)	1	1	0	2000 1000	1000	1000	1000	1000 Non-delivered shares executed.
5		Exec(y,x)	E	E	0	2000 1000	1000	1000		
6		Exec(x)	D	E	0	1500 1000	1000	500		Restatement indicating cancel of 500 non-delivered shares.
7		Exec(x)	5	2	0	1500 500	1500	0	500	Delivery accepted order fully executed for the restated quantity.
8		CxIRJ(y,x)		2		1500 500				Cancel Replace rejected as TLTC.

Scenario 19: Cancel/Replace -Partial Delivery Decrement Qty - Delivery Declined

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				2000 shares entered partially delivered to multiple destinations in the amounts 250, 250 and 500.
2		Exec(x)	0	0	0	2000 1000	0	2000	0	

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
3	CxRp(y,x)					1000 500				Cancel Replaces decrementing quantity to 1000.
4		Exec(x)	1	1	0	2000 1000	1000	1000	1000	Non-Delivered 1000 shares executed.
5		Exec(y,x)	E	E	0	2000 1000	1000	1000		
6		Exec(x)	D	E	0	1750 1000	1000	750		Restatement on decline of 250 shares delivered to destination 1.
7		Exec(x)	D	E	0	1500 1000	1000	500		Restatement on decline of 250 shares delivered to destination 2.
8		Exec(y,x)	5	2	0	1000 500	1000	0	0	Replaced Filled on decline of 500 shares from destination 3.

Scenario 20: Cancel/Replace - FULL Delivery Decrement Quantity - Delivery Partially Accepted

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				
2		Exec(x)	0	0	0	2000 1000	0	2000	0	2000 shares entered goes into delivery.
3	CxRp(y,x)					1500 1000				Cancel Replace decrementing quantity to 1500.
4		Exec(x)	1	1	0	2000 1000	1000	1000	1000	1000 shares Partially accepted.
5		Exec(y,x)	E	E	0	2000 1000	1000	1000	0	

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
6		Exec(y,x)	E	E	0	2000 1000	1000	1000	0	SM sends an additional pending replace message.
7		Exec(x)	1	E	0	2000 1000	1750	250	750	750 shares partially accepted.
8		Exec(y,x)	5	2	0	1750 1000	1750	0	0	Declined remaining quantity results in order being replaced/filled.

Scenario 21: Cancel/Replace - Partial Delivery Decrement Qty - Delivery Partially Accepted

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				2000 shares entered of which 500 goes into delivery.
2		Exec(x)	0	0	0	2000 1000	0	2000	0	
3	CxRp(y,x)					1000 500				Cancel Replace decrementing quantity to 1000 shares.
4		Exec(x)	1	1	0	2000 1000	1000	1000	1000	Execution for 1000 shares.
5		Exec(y,x)	E	E	0	2000 1000	1000	1000		
6		Exec(x)	D	E	0	1500 1000	1000	500		Restatement indicating cancel of 500 non-delivered shares.
7		Exec(x)	1	E	0	1500 1000	1250	250	250	250 shares partially accepted.
8		Exec(y,x)	5	2	0	1250 500	1250	0	0	Declined remaining quantity results in order being replaced/filled.

Scenario 22: Example Exec Restatement for NASDAQ market center-Generated Event

In this scenario, the order goes into delivery (1), and an acknowledgement is sent (2). 200 shares are executed (4), and the 300 shares remaining are submitted for auto-ex. Because of the price/blow-through rule, this remainder is canceled. A restatement of the order for 200 shares is sent (3).

Time	Msg Rcv [CLOrdID, OrigCLOrdID]	Msg Sent [CLOrdID, OrigCLOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					500				500 shares entered.
2		Exec(x)	0	0	0	500	0	500		
3		Exec(x)	D	0	0	200	0	200	0	Restatement indicating the new order amount of 200 shares.
4		Exec(x)	2	2	0	200	200	0	200	Execution of 200 shares.

Scenario 23: Example Exec Restatement for an AIQ Event

If you submit a "Buy" AIQ order (tag 9212, SMAIQFlag) that is sent out for delivery (routed out to an ECN), partially executed, resubmitted for auto-execution, matched to the inside, and then finds one of your own "Sell" orders there, you will receive an exec restatement like the one in this scenario.

Time	Msg Rcv [CLOrdID, OrigCLOrdID]	Msg Sent [CLOrdID, OrigCLOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					1200				1200 shares entered.
2		Exec(x)	0	0	0	1200	0	1200		
3		Exec(x)	D	0	0	900	0	900	0	Restatement indicating the new order amount of 900 shares.
4		Exec(x)	1	1	0	900	700	200	700	Partial Execution of 700 shares.
5		Exec(x)	4	4	0	900	700	0	0	Remaining Quantity Canceled.

Scenario 24: Cancel/Replace - Price Only

In this scenario a cancel replace is performed that changes only the price of an order. Concurrent changes of both price and size are not allowed.

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000				Priced at 20.00
2		Exec(x)	0	0	0	2000	0	2000	0	
3	CxRp(y,x)					2000				Cancel Replace merely changing price to 20.01
4		Exec(y,x)	E	E	0	2000	0	2000	0	44 = 20.00
5		Exec(y,x)	5	5	0	2000	0	2000	0	44 = 20.01

6 Appendix B: Order Timeline

NASDAQ (NMS) Trading																														
tag 58 = DAY (0) or IDC (3) tag 336 = Regular Market (P)																														
IOC, P orders can be executed																														
IOC, P orders can be entered																														
DAY, P orders can be executed																														
DAY, P orders can be entered and displayed																														
Orders Rejected																														
4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30	17:00	17:30	18:00	18:30	19:00
Orders Rejected																														
DAY, X orders can be entered and displayed																														
DAY, X orders can be executed																														
IOC, X orders can be entered																														
IOC, X orders can be executed																														
Reject																														
NASDAQ SuperMontage: Exchange-Listed Trading																														
tag 59 = DAY (0) or IDC (3) tag 336 = Regular and Extended Market (X)																														

7 Appendix C: Reject Codes

The following table lists business reject errors that you will see in tag 58 of business level rejects. See section 4.3.2 for reject message formats.

Tag 58
0200 Client Order ID (ClOrdID) exceeds the NASDAQ specified 20-character limit
0201 Original Client Order ID (OrigClOrdID) exceeds the NASDAQ specified 20-character limit
0202 Unknown Client Order ID (ClOrdID)
0203 Unknown Original Client Order ID (OrigClOrdID)
0204 Symbol does not match symbol from original order
0205 Side does not match side from original order
0206 Invalid SenderSubID
0207 Cannot send Cancel/Replace Request while in Pending New Order state
0208 Cannot send Cancel/Replace Request while in Pending Cancel state
0214 Non-supported Order Type (OrdType) value
0217 Non-supported Time In Force (TimeInForce) value
0219 Cannot send Cancel/Replace Request while in Pending Replace state
0220 Too Late To Cancel
0221 Price must be present on Limit Order
0216 Non-supported Side Value
0223 Cancel NACKed by NASDAQ Market Center - Not accepted
0224 No Client Order ID (ClOrdID)/Invalid ClOrdID provided
0225 No Original Client Order ID (ClOrdID) provided
0226 Invalid TargetSubID
0227 Invalid HandInst
0228 Price not allowed on Market order
0229 Invalid Dispatch
0230 Order Rejected By NASDAQ Market Center
0231 Invalid Order Capacity
0232 Transaction Time is Missing
0233 PossDup Flag Must be Y or N or None
0234 PossResend Flag Must be Y or N or None
0235 Invalid Bunched Indicator
0236 Error UM has been processed - Possible Duplicate
0237 Cannot send Cancel Request while in Pending New Order state
0238 Cannot send Cancel Request while in Pending Cancel state

Tag 58
0239 Cannot send Cancel Request while in Pending Replace state
0240 Order Already Cancelled
0241 Client Order ID must be Alphanumeric
0300 Invalid Size
0301 Invalid Reserve/Refresh Size
0302 Order Not Accepted No Attributable Orders
0303 Too Late To Cancel
0304 Not Within Allowable Time
0305 MPID Not Authorized
0306 Size Over Limit
0307 Size Smaller Than Default
0308 Invalid Delta Update No Reserve Size
0309 Excessive Open Order Quantity
0310 Cannot Reinstate a Quote
0310 Cannot Reinstate - Order Not Purged
0311 Violation Shortsale Rule
0312 Order Rejected Due to Anti-Internalization
0313 Security in Trade Halt
0314 Security in Quote Halt
0315 Issue Set to Delete
0316 Order Not Executable
0317 Preferenced Order Not Executable
0318 Preferenced Order Not Executable
0319 Action Rejected
0320 Order Not Found
0321 Cannot Lock/Cross Market
0322 Quote Not Found
0323 Order Not Executed
0324 Invalid Update No Open Qty
0325 Cannot Cancel Quote
0326 Cannot Cancel/Replace Quote
0327 No Display Quote For Destination MPID
0328 [This message varies in meaning. The text following this message number explains the reason for the reject. Please see the explanation of this reject after this table.]
0499 Order NACKed by NASDAQ Market Center - Not accepted

Tag 58
0500 Replaced/Filled Orders cannot be Modified
0501 Invalid Quantity
0502 Error SIDE does not match original order / not present on cancel replace
0503 Internal Error Unable to Process Message
0504 Error Duplicate CLORDID
0505 Error MsgType Not Supported
0506 Illegal character(s) in ClOrdID
0507 Error Layer6 CLORDID not found
0508 Error Outbound NSMP Message I1I2 Invalid
0509 Error Order Not Found
0510 Cannot Modify Side/Tif/Symbol/OrdType
0511 Account exceeds maximum length of 20
0514 Error Drop Copy I1I2, No Inbound Messages Allowed
0515 If OrdType is P ExecInst must be R, P, Q or H
0521 Unknown Exchange Destination
0522 Preferenced Market Maker Not Allowed Unless ExDestination is O
0523 Unknown TradingSessionID
0612 Temporarily Not Available

A note about value 328:

Business reject messages from NASDAQ may contain the value 328, the text of which is undocumented in this specification. These values are undocumented because unique reject text may be returned to you for enhanced host processing rejects. Allowing a variable text reject through the use of tag 328 and its companion tags enables you to receive these unique rejects in unison with other methods of message delivery (API, CTCI, QIX). This flexibility eliminates the need for you to upgrade your access service software in unison with business rule changes.

While some values of 328 are known at this time, inclusion of these in the specification would result in a still incomplete list due to ongoing system changes and implementations. Instead, we have listed several examples of possible explanations for 328.

In the rare event that your FIX engine does not automatically recognize these values because of the uniqueness of the messages, then please call the FIX Support Group. See section 1.2, NASDAQ Customer Support.

Example 1:

Enter a Day or GTC order prior to 9:28, status = K. If you decrement quantity or try to cancel the order after 9:28, you will receive reject **0328 Action Pended at This Time**.

Format is below, where tag 58 (reject code) = 0328 and tag 102 (reject reason) = 0 (too late to cancel)

```
8=FIX.4.2|9=162|35=9|34=149|49=NSDQ|50=S|52=20041203-
15:01:01|56=DLJP|57=03F9|11=120308061324|37=04804DT000MN|39=0|41=120308061
323|58=0328 ACTION PENDED AT THIS TIME|102=0|434=2|10=082|
```

Example 2:

Enter an On Open order prior to 9:28, status = Q. If you modify and the price is not better than the open price, you receive reject **0328 Invalid Price**. Format is below, where tag 58 (reject code) = 0328 and tag 102 (reject reason) = 0 (too late to cancel)

```
8=FIX.4.2|9=148|35=9|34=102|49=NSDQ|50=S|52=20041203-
14:28:21|56=DLJP|57=03F9|11=120308061317|37=04D04DT000MC|39=0|41=120308061
35|58=0328 INVALID PRICE|102=0|434=2|10=216|
```

Example 3:

Enter a Pegged order, where there is not an inside to peg to. You receive reject **0328 Order Not Accepted - No Current Insid**. Format is below where tag 58 (reject code) = 0328. The Order Reject Reason Tag 103 is not required and does not appear on this reject message.

```
8=FIX.4.2|9=246|35=8|34=168|49=NSDQ|50=S|52=20041203-
15:16:44|56=DLJP|57=03F9|6=0.0|11=120308061326|14=0|17=R0000000000000000120
072|18=R|20=0|31=0|32=0|37=04D04DT000N1|38=200|39=8|40=P|54=1|55=JPST|58=0
328 ORDER NOT ACCEPTED - NO CURRENT INSID|59=0|150=8|151=200|10=164|
```

Example 4:

Enter an auto-ex only order. If it cannot auto execute, you'll receive the reject **0328 Cannot Autoex - Order Rejected**. Format is below where tag 58 (reject code) = 0328. The Order Reject Reason tag 103 is not required and does not appear on this reject message.

```
8=FIX4.2|9=242|35=8|34=180|49=NSDQ|50=S|52=20041203-
15:25:42|56=DLJP|57=03F9|6=0.0|11=120308061328|14=0|17=R000000042949672970
072|20=0|31=0|32=0|37=04D04DT000N4|38=200|39=8|40=2|44=4.33|54=2|55=JPST|5
8=0328 CANNOT AUTOEX - ORDER REJECTED|59=0|150=8|151=200|10=107|
```

The following table lists all of the application error codes. Note that some of these codes are not valid at this time, as they will not be returned given current FIX functionality.

Message Code	Meaning
4000	No Error(s)
4001	Function Suspended
4002	Function Unavailable

Message Code	Meaning
4003	Market Closed
4004	Market Not Yet Open
4005	System Not Available
4006	System Not Open
4007	Temporarily Not Available
4008	Corrupted Message
4009	Duplicate Transaction ID
4010	Error in Transaction Record Length
4011	Internal Constant Table
4012	Internal Conversion Table
4013	Internal Error
4014	Internal Translation Table
4015	Invalid Client Code
4016	Invalid Data - Must Be Numeric
4017	Invalid Data - Invalid Code
4018	Invalid Data - Invalid List Size
4019	Invalid Data - List Size Too Large
4020	Invalid Data - Must Be Alphanumeric
4021	Invalid Data - Must Be Numeric
4022	Invalid Data - Must Be Alpha
4023	Invalid Data - Must Be Nonnumeric
4024	Invalid Data - Numeric Too Large
4025	Invalid Data - String Too long
4026	Invalid Data - Too Many Iterations
4027	Invalid Data - Value Out Of range
4028	Invalid Deregistration Length
4029	Invalid Header Information
4030	Invalid Registration Record Length
4031	Max Outstanding Transaction Records Exceeded
4032	Message Lost
4033	Message Lost from Host
4034	Message Lost to Host
4035	Missing Disconnect Flag
4036	Missing Message Type

Message Code	Meaning
4037	Missing Token
4038	Missing Transaction ID
4039	No Translation For This Transaction
4040	No-Host-Confirmation Message Sent
4041	No-Host-Confirmation Message Undeliverable
4042	Too Many Errors in Transaction
4043	Undeliverable Message
4044	User Already Registered
4045	User Not Entitled to Register
4046	User Not Registered
4047	User Not Entitled For Transaction
4048	Price Over Limit
4049	Size Over Limit
4053	Invalid MPID
4100	Fraction too Small
4101	Decimal too Small
4102	A Free Transfer Must Be Free of Payment
4103	A List is Already Assigned To This Issue
4104	A Required Field is Missing
4105	ACES Not Available
4106	ACT Entry Suspended
4107	Price/Size Over Limit
4108	An Institution Cannot Enter a Free Transfer
4109	Beginning Bid Exceeds Ending Bid
4110	Beginning Ask Exceeds Ending Ask
4111	Beginning Ask Size Exceeds Ending Ask Size
4112	Beginning Bid Size Exceeds Ending Bid Size
4113	Beginning Price Exceeds Ending Price
4114	Beginning Time Exceeds Ending Time
4115	Beginning Volume Exceeds Ending Volume
4116	Better Quote
4117	Bid Must Be Less Than Offer
4118	Block Volume Reporting Closed
4119	Both Files are Locked Out

Message Code	Meaning
4120	Buffer Size Requested Exceeds Max
4121	CAE Not Available
4122	CLRN 9999 Test MM Only
4123	CUSIP Number Already Exists
4124	CXL Order Not Found
4125	CXL/Order Data MisMatch
4126	Can't Cancel This Entry
4127	Can't Withdraw After 4 p.m.
4128	Cannot Chg/Dlt Master Trmnl
4129	Check ISIN
4130	Check Limit Price
4131	Check Price
4132	Check Price & Qty
4133	Check Qty
4134	Check Quote
4135	Clearing Number and Name Must Be Updated
4136	Clearing Rej
4137	Clearing Relationship Already Exists
4138	Combination Of Free Of Payment and NonFungible Not Allowed
4139	Command Not Yet Implemented
4140	Commitment Expired
4141	Conflicting Data
4142	Contra Firm Not Authorized
4143	Contra MMID Already Cancelled
4144	Contra Must Be A Broker/Dealer
4145	Contra Not Ready
4146	Contra Or BrSeq Not Allowed
4147	Contra Or Price Not Allowed
4148	Counter Not Allowed
4149	Current MM Auth Not Active, Withdrawn or Del
4150	DIAGNOSTIC
4151	Data Communication Problems
4152	Delay Execution
4153	Deleted

Message Code	Meaning
4154	Duplicate Entry
4155	Emergency Market Conditions - Trading Halt
4156	Enter Both Bid and Offer Prices
4157	Entry Not Permitted For Exchanges
4158	Entry out of Turn
4159	Entry Placed in Queue
4161	Euro ExcSp & L/C - US Pot ExcSp
4162	Euro ExcSp & L/C - US Pot L/C
4163	Euro ExcSp - US Pot ExcSp
4164	Euro ExcSp-US Pot ExcSp & L/C
4165	Euro ExcSp-US Pot L/C
4166	Euro L/C - US Pot ExcSp
4167	Euro L/C - US Pot ExcSp & L/C
4168	Euro L/C - US Pot L/C
4169	Euro Pot L/C - US Pot L/C
4170	Euro Pot L/C - Us Pot ExcSp & L/C
4171	Euro Pot L/C
4172	Euro Pot L/C
4173	Euro Pot L/C-US Pot ExcSp
4174	Euro Security Volume Held
4175	Exceeds Capacity
4176	Exceeds Maximum Contract Amount
4177	ExcSp
4178	ExcSp & L/C
4179	Excessive Open Order Quantity
4180	Execution Failure
4181	Execution Time Required
4182	Execution Time Greater Than Trade Rept Time
4183	Executions Not Allowed
4184	Existing NASDAQ Security
4185	FOK Order Not Executed
4186	Firm Already Closed This Security
4187	Firm Already Opened This Security
4188	Firm Already Registered In Security

Message Code	Meaning
4189	Before Office Close Time.
4190	Firm No Quote For This Security
4191	MMP Not in Security
4192	Security not OTCBB
4193	Firm Not Authorized
4194	Firm Not Registered For This Security
4195	Firm Not Registered In Security
4196	Firm Not Required
4197	Firm Quote Not Allow For Exempt Security
4198	Firm Required
4199	Firm Withdrawn This Security
4200	Fixed Data Altered
4201	Flag Is Already Set
4202	Function Not Allowed
4203	M2 Match In Progress-No Actions Allowed
4204	Function Temporarily Inactive
4206	Giveup Table Exceeds Max Size
4207	I1I2 Already Allocated
4208	I1I2 Already exists
4209	I1I2 CAE Unauthorized
4210	Illegal Relative Drum Address
4211	Improper Form-T Trade
4212	Improper Open/Close Format
4213	Improper Reference Number
4214	Incorrect OCU Assignment
4215	Index Not Available
4216	Inside Quote Closed
4217	Insufficient Quantity
4218	Invalid AON Response
4219	Invalid Action
4220	Invalid Address
4221	Invalid Amount
4222	Invalid Announcement Indicator
4223	Invalid As-Of

Message Code	Meaning
4224	Invalid Ask
4225	Invalid Ask Indicator
4226	Invalid Ask Size
4227	Invalid Ask Size Indicator
4228	Invalid Authorization Code
4229	Invalid B/A Indicator
4230	Invalid B/S
4231	Invalid Back Indicator
4232	Invalid Bid
4233	Invalid Bid Indicator
4234	Invalid Bid Size
4235	Invalid Bid Size Indicator
4236	Invalid Br/Seq Number
4237	Invalid Buy/Sell Code
4238	Invalid CAE Security
4239	Invalid CHECKSUM
4240	Invalid CLID/EXID Relationship In TARS
4241	Invalid CUSIP Number
4242	Invalid Canned Message Code
4243	Invalid Category
4244	Invalid Character
4245	Invalid Clearance Entry
4246	Invalid Clearing Number
4247	Invalid Clearing Relationship
4248	Invalid Contra
4249	Invalid Control Number
4250	Invalid Currency Code
4251	Invalid Currency Description
4252	Invalid Data
4253	Invalid Data Change Indicator
4254	Invalid Date
4255	Invalid Day
4256	Invalid Dealer Code
4257	Invalid Dealer Currency Code

Message Code	Meaning
4258	Invalid Dealer/Dealer Currency
4259	Invalid Delimiter
4260	Invalid Denominator Entered
4261	Invalid Device Address
4262	Invalid Display Code
4263	Invalid Entry
4264	Invalid Epic Code
4265	Invalid Ex-Indicator
4266	Invalid Exchange CQS Entry
4267	Invalid Exposure Update
4268	Invalid FOK Order
4269	Invalid Firm
4270	Invalid Force Indicator
4271	Invalid Format
4272	Invalid Function
4273	Invalid Function Code
4274	Invalid Give-up ID
4275	Invalid I1I2
4276	Invalid I1I2 - New
4277	Invalid I1I2 - Old
4278	Invalid I1I2 Authorization
4279	Invalid IES - SEDOL
4280	Invalid IES Indicator
4281	Invalid ISO Code
4282	Invalid ITS Line 4
4283	Invalid ITS Origin SMM
4284	Invalid Index
4285	Invalid Indicator On No Quote
4286	Invalid Input
4287	Invalid Interest Amount
4288	Invalid Line 1A
4289	Invalid Location Identifier
4290	Invalid MM1/MM2
4291	Invalid MM1/MM3

Message Code	Meaning
4292	Invalid MM1/MM4
4293	Invalid MM2/MM3
4294	Invalid MM2/MM4
4295	Invalid MM3/MM4
4296	Invalid MMID
4297	Invalid Market Center
4298	Invalid Market ID
4299	Invalid Market Maker in Requested Order
4300	Invalid Message Type
4301	Invalid Minimum Quantity
4302	Invalid Multiline
4303	Invalid Name
4304	Invalid Non-Negotiable
4305	Invalid Number Entered
4306	Invalid Number Of Giveups
4307	Invalid O/C Indicator
4308	Invalid O/M/T Code
4309	Invalid OE Entered
4310	Invalid Oddlot MKT Maker
4311	Invalid Oddlot Mkt Order
4312	Invalid Order Destination
4313	Invalid Order Number
4314	Invalid Origin
4315	Invalid PCL Data
4316	Invalid Parameter
4317	Invalid Partial/Counter Combination
4318	Invalid Phone Number Entered
4319	Invalid Preference Combination
4320	Invalid Preference MM
4321	Invalid Preference Option
4322	Invalid Price
4323	Invalid Price Indicator
4324	Invalid Price Override
4325	Invalid Price Updates

Message Code	Meaning
4326	Invalid Price/Contract Indicator
4327	Invalid Price/Non-Negotiable
4328	Invalid Capacity
4329	Invalid Processing State Update
4330	Invalid Purchase Cust/Dealer Indicator
4331	Invalid Purchase Price
4332	Invalid Purchase Price Numerator
4333	Invalid Purchase Volume
4334	Invalid QSR Entry
4335	Invalid Qty/Qualifier
4336	Invalid Qualifier
4337	Invalid Quantity
4338	Invalid Quantity/Non-Negotiable
4339	Invalid Quantity/Price
4340	Invalid Quantity/SECID
4341	Invalid Quote Entered
4342	Invalid R.L. This MM
4343	Invalid RTE Code
4344	Invalid Read Displacement
4345	Invalid Read Length
4346	Invalid Reference Number
4347	Invalid Report Digit
4348	Invalid Request
4349	Invalid Retrieval Code
4350	Invalid Risk Management
4351	Invalid Round Lot
4352	Invalid SECID/Non-Negotiable
4353	Invalid SECID/Price
4354	Invalid Contra PA
4355	Invalid Sale Cust/Dealer Indicator
4356	Invalid Sale Price
4357	Invalid Sale Price Numerator
4358	Invalid Sale Volume
4359	Invalid Scan Parameters

Message Code	Meaning
4360	Invalid Security
4361	Invalid Security
4362	Invalid Security Class
4363	Invalid Security Code
4364	Invalid Security Selection
4365	Invalid Security Specification
4366	Invalid Security Status
4367	Invalid Security Sub-Type
4368	Invalid Security Type
4369	Invalid Selection
4370	Invalid Sequence Number
4371	Invalid Service Specification
4372	Invalid Settlement Amount
4373	Invalid Short Sale Indicator
4374	Invalid Side O/M Code
4375	Invalid Side/Non-Negotiable
4376	Invalid Side/Price
4377	Invalid Side/Price/Non-Negotiable
4378	Invalid Side/Quantity
4379	Invalid Side/SECID
4380	Invalid Size
4381	Invalid Special Trade Indicator
4382	Invalid State
4383	Invalid Status
4384	Invalid Status Indicator
4385	Invalid Supervisory Indicator
4386	Invalid Switch Sequence
4387	Invalid Symbol
4388	Invalid System
4389	Invalid System Designation
4390	Invalid TIF
4391	Invalid Terminal-Call NASD
4392	Invalid Terms
4393	Invalid Text

Message Code	Meaning
4394	Invalid Threshold Entered
4395	Invalid Time
4396	Invalid Time Combination
4397	Invalid Time Increment
4398	Invalid Time Indicator
4399	Invalid Time-In-Force
4400	Invalid Trade Modifier
4401	Invalid Trade Report Override
4402	Invalid Trade Status
4403	Invalid Trade Time Format
4404	Invalid Transaction Number
4405	Invalid Type
4406	Invalid Type/Addr
4407	Invalid Update
4408	Invalid Update Character
4409	Invalid User ID
4410	Invalid Volume Indicator
4411	Invalid Volume Report Format
4412	Invalid Withdrawal/Restore Code
4413	Issue Not ACT Authorized
4414	LSE/IES Not Available
4415	Not Crg Eligible
4416	Limit Order Not Executed
4417	Limit Orders Not Allowed
4418	Limit Price Away From Current Inside
4419	Lock Rec Bit-SECID Is Rec Locked
4420	L/C Market
4421	Logon Already In Use
4422	Lot And Digit Are Required
4423	MFund Update Not Allowed
4424	MM Clearing Not ACT Authorized
4425	MM Dest Required
4426	MM Firm Not ACT Authorized
4427	MM Giveup Not ACT Authorized

Message Code	Meaning
4428	MM Must Be An Exchange
4429	MM Not In RT Table
4430	MM Temporarily Suspended
4431	MMID Already Exists
4432	MMID Not Authorized
4433	MMID Not Authorized For Function
4434	MMP Not Active
4437	Market Maker No Longer in Directory
4438	Market Maker Position Limit Exceeded
4439	Max MMP Exceeded
4440	Mkt Order Not Executed
4441	Mod SLD Required
4442	Mod T Not Allowed
4443	Mod T Required
4445	Must Be Principal If Pref Is All
4446	Must Be Update Terminal
4447	NNMSI/ITS Trading Suspended
4448	OTCBB Securities Not Available
4449	NO No/Was For .T Trades
4450	NASDAQ Market Suspended - Check News
4451	NASDAQ Not Open
4452	Need To File 15C2-11 To Register
4453	Negotiation Ended
4454	New Data Not Allowed For CXL
4455	New EQL Old Already In Temp
4456	New File Full
4457	New Terminal Not Installed Yet
4458	No Access-SECID in Tape Recovery
4459	No Buffer Addr For Release Funct
4460	No CAE MMs In Security
4461	No Change To Request
4462	No Clearing
4463	No Clearing Relationship Set Up
4464	No Data

Message Code	Meaning
4465	No Data Entered
4466	No Data Updated
4467	No Executable MMP's
4468	No Exposure Limit Record
4469	No Flag Is Set
4470	No I1I2 Given On An Update
4471	No I1I2 Found for MMID
4472	No I1I2/MMID Entry
4473	No I1I2/MMID Entry - New
4474	No I1I2/MMID Entry - Old
4475	No Indices Available
4476	No Inside Quote
4477	No MM/Giveup Relationship
4478	No MMID Associated With I1I2
4479	No Market Makers For Security
4480	No Market Making Positions
4481	No Match For I1I2
4482	No Matching Temp Entry
4483	No Modifier For As-Of Trade
4484	No More Data
4485	No News Available
4486	No No/Was For As-Of Trade
4487	No Open For Security
4488	No Opening Price Required
4489	No Price Check For OTCBB Securities
4490	No Reassignments Found
4491	No Request Entered
4492	No Routing Record for SECID
4493	No SDRUM Buffers Are Available
4495	No Scan Records For This Selection
4496	No Selection Parameter Entered
4497	No Statistics Available
4498	No Symbol Change In No/Was
4499	No Update Allowed-File In Recvry

Message Code	Meaning
4500	No Update-Both Files in Recovery
4501	No Update-File In Tape Recovery
4502	No Update-File Is Being Verified
4503	No Update-Only File Is Bumped
4504	No Update-Only File in Recovery
4505	No Update-SRange Lock Conflict
4506	No Update-Update In SNAP Range
4507	No Update-Update Queues Are Full
4508	No Updates Allowed When State Is Deleted
4509	No/One-Sided Inside
4510	Non Zero Buffer Addr-Get Buf Fct
4511	Not A CQS Subscriber
4512	Not A Cross Trade
4513	Not A Reportable Open Trade
4514	Not An NMS Security
4515	Not An Open Trade
4516	Not Applicable
4517	Not Authorized
4518	Not Authorized As Supervisory Terminal
4519	Not Available
4520	Resubmit with an Effective Date
4521	Not Enough Room To Add a MMP
4522	Not In On-Line File
4523	Not UTP Security
4524	Not When Negotiating
4525	Not Within Allowable Time
4526	Not Within Correct Market
4527	Notify NASD Operations
4528	OCU Already In Table
4529	OE Clearing Not ACT Authorized
4530	OE Firm ID Required
4531	OE Firm Not ACT Authorized
4533	OE Giveup Not ACT Authorized
4534	OE MMID Already Cancelled

Message Code	Meaning
4535	OddLot Order Not Executed
4536	OddLot Orders Not Allowed
4537	Old EQL New Alrdy In Temp
4538	Old EQL Old Alrdy In Temp
4539	Old/New I1I2 Equal
4540	Only MM Can Correct This Trade
4541	Only NMS Security Eligible For UTP
4542	Open Order NG MKT MKR
4543	Open Order Not Executed
4544	Open/Close Not Permitted
4545	Order Cancelled
4546	Order Exdividend - Not Reinstated
4547	Order No Longer Open
4548	Order Not Accepted
4549	Order Not Allowed
4550	Order Not Executed
4551	Order Quantity Exceeds Tier Size
4552	Order Timed Out
4553	Order/Counter Not Available
4554	PLock Already Set-Set PLock FCT
4555	PLock Bit Set
4556	PLock Not Set-Unlock PLock FCT
4557	Pot. ExcSp & Pot L/C
4558	Pot ExcSp
4559	Pot L/C
4560	Preference MMID Duplicate
4561	Price Not Negotiable
4562	Price Out of Range
4563	Price/Size Not Available
4564	Process Not Available
4565	Processing Send Message Request
4566	Quote Away From Inside Market
4567	Quote Display Not Allowed
4568	Quote Must Be In Eighths

Message Code	Meaning
4569	Quote Update Not Allowed
4570	RLock Bit Set
4571	Record Already Exists
4572	Record Is Not Locked
4573	Record Modified During This Process
4574	Record is Currently In Use
4575	Requested Amount Below Minimum
4576	Retransmission Is Active Or Pending
4577	Routing Address Limit Exceeded
4578	SCD Or SOD In Use By ADMMP-SPIN
4579	SECID Has Finished Tape Recovery
4580	SECID Has Good Data Available
4581	SECID Names Do Not Compare
4582	SECID Not International
4583	SEDOL Required
4584	SEQ Prev Received
4589	SUPV Terminal Duplicate
4590	Security Already Exists
4591	Security Held - See News
4592	Security In Index
4593	Security Is Mandatory SOES
4594	Security Must Be Active In P & V Service
4595	Security Not Active
4596	Security Not Active On SOES
4597	Security Not Available-Plock Set
4598	Security Not Being Traded
4599	Security Not ITS
4602	Security Suspended
4603	Security Unavailable
4604	Short Sale Not Allowed
4605	Spread Too Wide
4606	Subscriber ID Not Found
4607	Super Cap Still Exceeded
4608	Supervisor May Read Only

Message Code	Meaning
4609	Switch Header Dest Not CA
4610	Symbol Already Exists
4611	Symbol Deleted
4612	Symbol Is Now In Tape Recovery
4613	System Control Flags
4614	System Suspended
4615	Take Out Must Be Within Inside
4616	Takeout Not Allowed
4617	Takeout Requires Active Quote
4618	Temp Area Full
4619	Terminal Not Authorized
4620	Terminal Not Authorized For Function
4621	Terminal Not Found
4622	Terminal Not In Table
4623	Terminal Not Supervisory
4624	There May Be More Trades
4625	Timer Full/Do Immediate
4626	Tmtr Invalid Oddlot
4627	Tmtr Invalid Security
4628	Tmtr Trade Not Reported - Status
4629	Trade Already Cancelled, Errored, or Corrected
4630	Trade Already Locked-In
4631	Trade Cancelled
4632	Trade Detail Must Be Updated
4633	Trade Held
4634	Trade Not Eligible For Resubmission
4635	Trade Sent To Clearing
4636	Unlock Function-SECID Not Locked
4637	Unlock Rec Bit-SECID Not Locked
4638	User ID Already Exists
4639	Valid CLID/EXID Relationship in TARS
4640	Viewer Is Not Eligible
4641	Vol Exceeds NASDAQ Capacity
4642	Vol Not Permitted CQS/NMS

Message Code	Meaning
4643	Volume Not In Thousands
4644	Volume Report Not Found
4645	Volume Reporting Not Allowed
4646	Write Length Exceeds ALCN or CN
4647	Zero Error
4648	Zero SECID
4650	Issue Set To Delete
4651	Invalid MMID State
4652	More Than 1 User Of This Program
4653	Euro ExcSp & L/C - US Pot ExcSp & L/C
4654	Invalid Modifier
4657	Invalid Account Number
4658	Invalid Location Code
4659	50 Entry Limit
4660	Entered Size Smaller Than Default
4661	Action Rejected
4662	Qte Closed Entry Prohibited
4663	*Temporarily Not Available
4664	Information Not Released
4665	Invalid Market ID
4666	Invalid Price/Contract Indicator
4667	At Least One Range Required
4668	CAE Enter Zero Price
4669	Opening Price Required
4670	Closing Report In Progress
4671	Oddlot Quote Not Allowed
4672	Order Not Available
4673	Order is Opening Order
4674	Order Requires a Price
4675	Invalid Price For Order
4676	First Price Must Be Zero
4677	Size Must Be Smaller Than Preceding Size
4678	Invalid or Missing Parameter
4679	Data Not Available

Message Code	Meaning
4680	No Current ACT Alerts
4681	Takeout Not Allowed-Match in Progress
4682	Order Not Found
4683	Quote Not Active
4684	Can't Match Fill-Or-Kills
4685	Can't Match Odd Lot
4686	Sequence Numbers Not Equal
4688	Execution Not In Progress
4689	Order Not Executable
4690	Violation ShortSale Rule
4691	Order Already Executed
4692	Invalid DNI/R
4693	DNI/R Must Be Buy Order
4694	Can't Cancel In Match Or Delivery
4695	Can't Correct in Match or Delivery
4696	Can't Reinstate - Order not Cancelled
4697	Order Partially Executed
4698	Can't Track Order
4699	Must Enter Secid
4700	Must Enter Side
4701	Must Enter Price
4702	No Events Found
4703	No More Events
4704	No More Executable Intervals
4705	No Executable Intervals Found
4706	Unadjusted Round Lot
4707	Reverse Split
4708	Matching Not Allowed
4709	Order Not Matchable
4710	Match Hasn't Started Yet
4711	Match Not In Progress
4712	Zero Exposure Time Not Cleared
4713	Sec Ctrl Event Flag Won't Allow
4714	Order Not In System Yesterday

Message Code	Meaning
4715	Use Scan For Current Day Order
4716	Order May Only Be Cancelled
4717	Order Requires Reinstatement
4718	Order Requires Correction
4719	Fraction Too Small
4720	Check Takeout Price & Override To Accept
4721	Action Not Allowed For Order
4722	Please Enter Request Again
4723	MMID Required
4724	Invalid MM Give-Up
4725	Invalid OE Give-Up
4726	Time Field Required
4727	Invalid Mask
4728	Invalid MMP
4729	Invalid Partition
4730	Invalid Desk Type
4731	Invalid Exchange Specialist
4732	Session Condition Not Found
4733	Market Already Open
4734	Security Trading Close in Effect
4735	Firm Suspended In This Security
4736	Security In Quote Halt
4737	Security In Trade Halt
4738	Max Number of Records Exceeded
4740	DNI/R Must Be a Buy Order
4741	MM Already in Correspondent Relationship
4742	MM Already in Other Arrangement
4743	Old Value Doesn't Match - Do Refresh
4746	Invalid P/A/R
4747	No Orders Found
4749	Order Not Available
4750	Order by Non-Auth Market Maker
4751	Causes Rej of all OE Orders Xmit OK
4752	Order Executed By Your Firm

Message Code	Meaning
4753	Executable Greater than Tier Max
4754	Principal Not Allowed
4755	Non mandatory L/C no MM at Inside
4756	Cancel/Correction Delayed
4760	Pre Open not allowed
4761	Orders Not Allowed
4762	Invalid Combination
4763	Trade Thru Not Open Or Pending
4764	Security Already Open
4765	No Corresponding POA
4766	Fill Request Time Has Expired
4767	Trade Thru Has been Canceled
4768	Trade Thru has been Filled
4769	Fill has been Requested
4770	Fill has been Canceled
4771	Can Not Request Fill
4772	Fill Request Can Not be Canceled
4773	Invalid Class
4774	No Request to Cancel
4775	Request already Canceled
4776	Fill Request Can Not be Corrected
4777	No request To Correct
4778	Invalid Side/Class Combination
4779	Invalid Class/Contra Combination
4780	Invalid Class/CID Combination
4781	Execution already Killed
4782	Execution Cannot be Corrected
4783	Invalid Trading Digit
4784	Invalid Tick Size
4785	Invalid Tick
4786	Invalid Auto Refresh Value
4787	Invalid Tick Default Value
4850	Gap Entry does Not Exist
4851	Invalid Beginning Sequence Number

Message Code	Meaning
4852	Invalid Ending Sequence Number
4853	Mismatch in Gap Status
4854	Input does Not Match Internal Data
4890	Position record not found
4900	Security Not Mandatory SOES
4901	Security Not SOES Eligible
4902	Invalid Side
4903	Invalid SOES Modifier
4904	OE Not Authorized for Giveup
4905	Giveup Firm Not Authorized For SOES
4906	Unadjusted Odd Lot
4907	MMP Not SOES Withdrawn
4908	SOES in Recovery Mode
4909	Preferencing Not Allowed
4910	Invalid Capacity
4932	OE Firm Only SOES MM
4935	MMP SOES Closed / Table Full
4936	MSOES MM Inactive
4944	Must Be In SOES To Quote
4954	Invalid SOES Order Entered
4985	SOES Executions Suspended - Check News
4986	SOES Exposure Below Minimum
4987	SOES Orders Suspended - Check News
4988	SOES Suspended - Check News
4991	Firm Not Active In SOES
4992	Firm Not Authorized For SOES
4993	Security Is Mandatory SOES
4994	No SOES MM In This Security
4996	Security Not Active On SOES
4999	Error(s)
4A00	Invalid Refresh Size
4A01	AIQ Not Allowed for Prefd Orders
4A02	Alt Clrng Not Allowed for Giveup
4A03	Attributable Indicator Required

Message Code	Meaning
4A04	Attributable Order Not Allowed
4A05	Firm Not Authorized to Use Give-Ups
4A06	Invalid AIQ indicator
4A07	Invalid ATR indicator
4A08	Invalid Attributable Indicator
4A09	Invalid Bunched Indicator
4A10	Invalid Destination Type
4A11	Invalid Div/Split Indicator
4A12	Invalid Giveup Status
4A13	Invalid IOC indicator
4A14	Invalid Memo
4A15	Invalid Non-negotiable
4A16	Invalid Order Destination
4A17	Invalid Override Indicator
4A18	Invalid Price Improvement Indicator
4A19	Invalid Priority
4A20	Invalid Reserve Size
4A21	Invalid TIF
4A22	Issue not UTP eligible
4A23	Odd Lot Invalid for Prefd Orders
4A24	OE Not Authorized
4A25	Exceeds Threshold Size. Override & Resend.
4A26	Order Exceeds Tier Threshold Size
4A27	Exceeds Threshold Value. Override & Resend.
4A28	Preferenced Orders Must be IOC
4A29	Refresh Size Not Allowed
4A30	Reject due to Issue Status
4A31	Reserve Entry Not Allowed
4A32	Reserve Size Not Allowed
4A33	Only IOC Sell Ords Allowed in Qte Md
4A34	Orders Not Accepted, Quotes Only
4A35	User Order Id Required
4A36	Invalid Bid Reserve Size
4A37	Invalid Ask Reserve Size

Message Code	Meaning
4A38	Invalid Bid Refresh Amount Size
4A39	Invalid Ask Refresh Amount Size
4A40	Ask Direction Code
4A41	Invalid Override Indicator
4A42	Quote Entry Status Not Active
4A43	Issue not UTP eligible
4A44	Quote Entry not Allowed
4A45	Invalid Mode
4A46	Cannot update single side quote
4A47	Reserve Processing Not Allowed
4A48	Must Maintain Display Qte Above Zero
4A49	No Display Quote for Preferred MP
4A50	ECN Doesn't Charge Separate Access Fee
4A51	Invalid Price for Preferred Order
4A52	Over Allowable Deviation. Override & Resend.
4A53	Away from the Inside. Override & Resend.
4A54	Two Sided Quote Required
4A55	Order Reserve Decreased by X Shares
4A56	Invalid Delta Update, No Reserve Size
4A57	U R Out Z Shares
4A58	Too Late to Cancel
4A59	Too Late to Cancel X shares
4A60	Y Shares in Delivery, Cancel Pending
4A61	Can't Reinstate a Quote
4A62	Will L/C Market. Override & Resend.
4A63	Too Late to Replace
4A64	L/C - Non-displayed Odd Lot
4A65	Accepted. New Quantity - X
4A66	X Cancelled Due to Odd Lot Execution
4A67	Canceled Due to Internalization Rules
4A68	Non-attributable Orders Not Allowed
4A69	Alt Clrng Not Allwd. Sec in Transition
4A70	Invalid Order Type
4A71	Sum Qte Not Allwd. Sec in Transition

Message Code	Meaning
4A72	Qte Upd Not Allwd. Sec in Transition
4A73	Invalid Order Delivered Timestamp
4A74	Invalid Risk Management Indicator
4A75	Invalid Supercap Amount
4A76	Invalid Blockbuster Amount
4A77	Invalid Blockbuster Action
4A78	Invalid Sizeable Amount
4A79	Invalid Sizeable Action
4A80	Supercap Exceeds All Value
4A81	Blockbuster Exceeds Mkt Supercap
4A82	Sizeable Exceeds Mkt Supercap
4A83	Sizeable Exceeds Mkt Blockbuster Amt
4A84	Blockbuster Below Minimum Amount
4A85	Sizeable Below Minimum Amount
4A86	Not Authorized To Update Risk File
4A87	Not Authorized To Update Default File
4A88	Invalid Capmarkcode
4A89	Invalid Market Type
4A90	Supercap Exceeds Default All Value
4A91	Blockbuster Exceeds Default Mkt Supercap
4A92	Sizeable Exceeds Default Mkt Supercap
4A93	Sizeable Exceeds Default Mkt Blockbuster Amt
4A94	No Default Record Found
4A95	Mkt Blockbuster Exceeds All Blockbuster
4A96	Mkt Sizeable Exceeds All Sizeable
4A97	Mkt Blockbuster Exceeds Default All Blockbuster
4A98	Mkt Sizeable Exceeds Default All Sizeable
4A99	Supercap Less Than Blockbuster
4B00	Supercap Less Than Default Blockbuster
4B01	All Supercap Less Than Mkt Supercap
4B02	All Blockbuster Less Than Mkt Blockbuster
4B03	All Sizeable Less Than Mkt Sizeable
4B04	All Supercap Less Than Default Mkt Supercap
4B05	All Blockbuster Less Than Default Mkt Blockbuster

Message Code	Meaning
4B06	All Sizeable Less Than Default Mkt Sizeable
4B07	Invalid Peg Type
4B08	Invalid Peg Offset
4B09	Invalid Discretionary Flag
4B10	Invalid Discretionary Offset
4B11	Pegged Orders Not Allowed
4B12	Pegged Cap/Offset Not Allowed
4B13	Discretionary Orders Not Allowed
4B14	Invalid Commitment ID
4B15	Invalid Exchange ID
4B16	Invalid Error Code
4B17	Invalid Complaint ID
4B18	Invalid Block Indicator
4B19	Giveup Entry not permitted for Exchanges
4B20	Only IOC/IOX sell orders allowed for quote mode
4B21	Cannot Lock/Cross NBBO
4FE1	TCDBF Read Unsuccessful
4FE2	TCDBF Write Unsuccessful
4FE3	TCDBF Lock Unsuccessful
4FE4	LineID Record Not Found
4FE5	Retransmission Record Fetch Error
4FE6	Impart Failure
4FE7	No Records Found
4FE8	Depart Failure
4FE9	Error in DMS operation
4FEA	DMS Timeout Error
4FEB	Market Data Vendor Record Fetch Error
4FEC	Retransmission Record Create Error
4FF0	Authentication Failed
4FF1	Authentication System Unavailable. Try Again.
4FF2	Authentication Logon Has Expired. Logon Again.
4FF3	Function Unavailable At This Time Period.

8 Appendix D: Publication History

This section provides information for publications prior to the last six. The information is in chronological order.

Date	Version	Enhancements
August 27, 2003	2003-01	Initial publication of this programming specification on the NASDAQ Trader web site.
October 10, 2003	2003-02	<p>SuperMontage 4 Order Handling and Order Management</p> <p>These SuperMontage enhancements introduce pegged, discretionary, and summary/liquidity provider only orders; a new price improvement value; a new execution algorithm value; and new execution kill functionality.</p>
November 7, 2003	2003-03	<p><i>NASDAQ SuperMontage: Exchange-Listed Trading</i></p> <p>Currently, listed securities are traded on the CAES/ITS application and quoted on the IQMS platform. The <i>NASDAQ SuperMontage: Exchange-Listed Trading</i> release incorporates trading of listed securities to the SuperMontage application.</p> <p>Auto-Ex Order</p> <p>This order type will allow market participants to designate their order to execute only against automatic execution participants at the NASDAQ Best Bid or Offer (NASDAQ BBO) without delivering the order to any SuperMontage participant or market center that is not auto-ex and at the NASDAQ BBO.</p>
January 12, 2004	2004-01	<p><i>NASDAQ SuperMontage: Exchange-Listed Trading</i></p> <p>Additional updates for this release.</p> <p>General Updates</p> <p>Various updates to reflect current functionality.</p>
February 13, 2004	2004-02	<p>Closing Cross</p> <p>This release offers an enhanced Market Close process that allows the closing price for a security to be determined based on a single crossing price defined by a special class of orders that are valid only at Market Close. These enhancements also provide improvements to the NASDAQ Official Closing Price (NOCP) generation and dissemination. The initial implementation of the SuperMontage Closing Cross process is specific to NASDAQ; no listed securities will participate. The two new order types are Market</p>

Date	Version	Enhancements
		<p>On Close and Limit On Close. The new prioritization algorithm is Imbalance Only.</p> <p><i>NASDAQ SuperMontage: Exchange-Listed Trading</i></p> <p>Additional updates for this release.</p>
April 20, 2004	2004-03	<p>Introduction of <i>NASDAQ market center</i></p> <p>The NASDAQ market center is a new, consolidated name for what is essentially already a consolidated offering that encompasses both SuperMontage for NASDAQ-listed and exchange-listed securities and the Automated Confirmation Transaction Service (ACT). The new naming convention is a simple, streamlined, and accurate reflection of our enhanced marketplace.</p> <p>Closing Cross 1.1</p> <p>NASDAQ will split each dissemination spin for Net Order Imbalance Information into 5 individual spins, spread 1 second apart, with each spin covering approximately 20% of the applicable issues.</p> <p>NASDAQ market center report process will be modified to provide distinct values for Closing Cross liquidity providers and accessors.</p> <p>NASDAQ will execute OC order in parity with display size of Day/GTC interest (in time priority) at the Crossing Price.</p> <p>General Updates</p> <p>Various updates to reflect current functionality, including the removal of summary orders.</p>
May 17, 2004	2004-04	<p>Release 3.3</p> <p>NASDAQ FIX now supports changing price through the cancel/replace function.</p>
May 28, 2004	2004-05	<p>Release 3.3 Functionality postponed</p> <p>This release that originally included changes to the processing associated with the Order Modify message for the NASDAQ Market Center Execution System has been postponed in order to give firms more time to prepare. NASDAQ will instead implement this functionality in July.</p>
July 15, 2004	2004-06	<p>Release 5.0</p> <p>NASDAQ FIX will now support changing price through the cancel/replace function. This functionality is expected by end of July 2004.</p> <p>Opening Cross</p> <p>Scheduled for third quarter 2004, the NASDAQ Opening Cross will significantly improve NASDAQ's</p>

Date	Version	Enhancements
		<p>opening process. Multiple market participants will interact and discover the price at the open, providing a robust benchmark of trading interest at the open, enhanced liquidity for expiration days and enhanced pre-open trading for NASDAQ participants</p> <p>General Updates Various updates to reflect current functionality.</p>
July 29, 2004	2004-07	<p>Drop Copies NASDAQ is introducing additional drop copy functionality. This functionality allows you to register to receive drop copies of all application messages.</p> <p>Broker Dealer On Behalf Ofs NASDAQ allows broker dealers to submit transactions on behalf of a customer.</p> <p>General Updates Various updates to reflect current functionality.</p>
August 31, 2004	2004-08	<p>Expiry In order to prevent stale messages and, therefore, latent data from entering the system, NASDAQ has modified expiry functionality.</p> <p>General Updates Various updates to reflect current functionality.</p>
October 27, 2004	2004-09	<p>Service Bureau On Behalf Ofs (NASDAQ FIX software version 5.2) With this release, NASDAQ introduces functionality that allows service bureaus to submit transactions for different customers down a single connector.</p> <p>General Updates Various updates to reflect current functionality.</p>
November 11, 2004	2004-10	<p>NASDAQ FIX software version 5.3 With this release, NASDAQ adds tag 76, ExecBroker, to execution reports.</p>
December 17, 2004	2004-11	<p>General Updates Added an explanation of business reject tag 58 value, 328.</p>



FIX ACES
Programming Specification

September 13, 2005

2005-04

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Contents

1 Overview	5
1.1 Related Documentation	5
1.2 NASDAQ Customer Support	5
1.3 Publication Information	5
2 NASDAQ FIX ACES	6
2.1 Message Type	6
2.2 Required Fields	6
2.3 New FIX ACES Messages	7
3 Session Details	8
3.1 Hours of Operation	8
3.1.1 Regular Trading Day	8
3.1.2 Early Close Trading Day	9
3.1.3 Non-trading Days	10
3.2 Connectivity	11
4 Message Formats	12
4.1 Headers and Footers	12
4.1.1 Inbound to NASDAQ Header Format	12
4.1.2 Inbound to NASDAQ Trailer Format	12
4.1.3 Outbound from NASDAQ Header Format	13
4.1.4 Outbound from NASDAQ Trailer Format	13
4.2 Administrative Messages	14
4.2.1 Heartbeat	14
4.2.2 Logon	14
4.2.3 Test Request	14
4.2.4 Resend Request	15
4.2.5 Sequence Reset	15
4.2.6 Logout	15
4.3 Application Messages	16
4.3.1 Order Entry Firm to NASDAQ	16
4.3.1.1 New Order Single (OE to N)	16
4.3.1.2 Cancel Request (OE to N)	19
4.3.1.3 Cancel/Replace Request (OE to N)	21
4.3.1.4 Order Status Request (OE to N)	24
4.3.2 NASDAQ to Market Maker	25
4.3.2.1 New Order Single (N to MM)	25
4.3.2.2 Cancel Request (N to MM)	28
4.3.2.3 Cancel/Replace Request (N to MM)	31
4.3.3 Market Maker to NASDAQ	34
4.3.3.1 Order Confirm (MM to N)	34
4.3.3.2 Order Decline (MM to N)	35
4.3.3.3 Execution Report (MM to N)	37
4.3.3.4 Cancel Confirmation (MM to N)	39
4.3.3.5 Cancel Decline (MM to N)	41
4.3.3.6 Cancel/Replace Confirmation (MM to N)	43
4.3.3.7 Cancel/Replace Decline (MM to N)	45
4.3.4 NASDAQ to Order Entry Firm	47

4.3.4.1	Order Acknowledgement (N to OE)	47
4.3.4.2	Order Reject (N to OE)	48
4.3.4.3	Order Confirm (N to OE)	50
4.3.4.4	Order Decline (N to OE)	51
4.3.4.5	Execution Report (N to OE)	52
4.3.4.6	Pending Cancel (N to OE)	54
4.3.4.7	Rejected Cancel (N to OE)	55
4.3.4.8	Cancel Confirmation (N to OE)	56
4.3.4.9	Cancel Decline (N to OE)	57
4.3.4.10	Pending Cancel/Replace (N to OE)	59
4.3.4.11	Rejected Cancel/Replace (N to OE)	60
4.3.4.12	Cancel/Replace Confirmation (N to OE)	61
4.3.4.13	Cancel/Replace Decline (N to OE)	62
4.3.4.14	Purged Order (N to OE)	64
4.3.4.15	Order Status Response (N to OE)	65
5	Reject Messages	67
5.1	Session	67
5.2	Business	68
5.3	Application	72
6	Appendix A: Message Flow Scenarios	73
6.1	OE sends order and MM confirms it	73
6.2	OE sends order and MM executes it	73
6.3	OE sends order and MM declines it	74
6.4	OE cancels order and MM confirms cancel	75
6.5	OE cancels order and MM declines cancel	76
6.6	OE cancel/replaces order and MM confirms cancel/replace	77
6.7	OE cancel/replaces order and MM declines cancel/replace	78
6.8	OE sends order and FIX ACES rejects it	78
6.9	FIX ACES purges open order	79
6.10	FIX ACES purges pending cancel order	80
6.11	OE cancels order while MM execution is in flight	81
6.12	MM executes order while OE cancel is in flight	82
6.13	OE decreases quantity while MM execution (fills) is in flight	83
6.14	MM executes order while cancel/replace is in flight	84
6.15	OE decreases quantity while MM execution (leaves) is in flight	85
6.16	MM executes 500 shares of a 1000 share order (leaves)	86
6.17	MM executes 500 shares of a 1000 share order (fills)	86
6.18	MM executes partial order and FIX ACES purges remainder at expiration	87
6.19	OE submits a cancel/replace while another is in flight	88
6.20	FIX ACES sends status request and MM responds	89
6.21	FIX ACES sends status request and MM does not respond	89
6.22	FIX ACES sends status request and MM responds with Do Not Know	90
6.23	OE sends status request and FIX ACES responds	90
6.24	MM sends execution report and order is not open on FIX ACES book	91

1 Overview

This document contains the user requirements for accessing the NASDAQ FIX protocol, NASDAQ FIX for ACES functionality, and the messages transmitted via FIX for entering orders into ACES.

Users should be familiar with the FIX 4.2 specifications, as this document supplements those specifications.






As new functionality becomes available, you will receive technical updates detailing that functionality. At the same time the technical update is distributed, this programming specification will be updated on the NASDAQ Trader web site at <http://www.nasdaqtrader.com/asp/ctcidisclaim4.asp> - FIX.

1.1 Related Documentation

The *NASDAQ FIX Orders Programming Specification for FIX 4.2* is here:
<http://www.nasdaqtrader.com/trader/tradingservices/specsinstallguides/fixprogspec.pdf>

The *NASDAQ FIX Trade Reporting Programming Specification* is here:
<http://www.nasdaqtrader.com/trader/tradingservices/specsinstallguides/fixactspec.pdf>

1.2 NASDAQ Customer Support

	NASDAQ FIX Support	800-243-4284
	NASDAQ FIX Support	mailto:NASDAQFIX@NASDAQ.COM
	NASDAQ Testing Facility	800-288-3783
	NASDAQ Subscriber Services	800-777-5606
	NASDAQ Trading Services	800-219-4861

1.3 Publication Information

Date	Version	Enhancements
May 26, 2005	2005-03	General updates made to pre-production specification.
May 4, 2005	2005-02	General updates made to pre-production specification.
February 4, 2005	2005-01	Initial publication of this programming specification on the NASDAQ Trader web site.

2 NASDAQ FIX ACES

ACES acts as an order-routing tool between a firm entering orders, in any security, and a market maker's order management system. ACES is a voluntary service for which market makers must register. Once registered, market makers may authorize their order entry customers to send them order flow.

Market Makers route execution reports back to order entry firms through ACES. ACES does not offer automatic trade-reporting or locked-in clearing of transactions.

2.1 Message Type

NASDAQ FIX supports these message types for FIX ACES:

Type	Message	Inbound, Outbound, or Both
0	Heartbeat	B
1	Test Request	B
2	Resend Request	B
3	Reject	O
4	Sequence Reset	B
5	Logout	B
8	Execution Report	O
9	Order Cancel Reject	O
A	Logon	B
D	Order	I
F	Cancel	I
G	Cancel/Replace	I
H	Status Request	B

2.2 Required Fields

Message format tables indicate which tags are required. Fields are required either by FIX (=Y), by NASDAQ (=Q), or by neither (=N).

2.3 New FIX ACES Messages

Currently in ACES, no acknowledgements are sent in response to order, cancel, and cancel/replace messages. FIX ACES introduces acknowledgement messaging. When an order entry firm enters an order, NASDAQ will send an acknowledgement message in response. NASDAQ will send pending messages for cancel and cancel/replace requests. See section 6 for messaging scenarios.

We have also added order status messages, which are used in two ways. First, an order entry firm may request order status from FIX ACES. FIX ACES responds directly to the order entry firm with current ACES state. Second, FIX ACES will send market makers an end of day order status request. If the market maker responds with order status information that does not match the ACES book, the ACES book will be updated to reflect the market maker's.

3 Session Details

3.1 Hours of Operation

All times are Eastern.

3.1.1 Regular Trading Day

Logon/Logoff

FIX Startup	FIX Shutdown
4:00 a.m.	7:00 p.m.

- NASDAQ FIX ACES will be up and accessible at 4:00 a.m.
- NASDAQ FIX ACES will remain up and running until 7:00 p.m.
- If you log off prior to 6:00 p.m., you will lose execution reports that in response to orders executed after 4:00 p.m.
- Log offs are not required. If you do not log off before 7:00 p.m, NASDAQ will log you off at shutdown.

Order Entry for NMS Security Trading

Start Time	End Time
7:00 a.m.	4:00 p.m.

Order Entry for Exchange-listed Security Trading

Start Time	End Time
7:00 a.m.	4:00 p.m.

- Orders entered between 4:00 a.m. and 7:00 a.m. will be rejected.
- All messages entered between 7:00 a.m. and 7:59.59 a.m. will be acknowledged, but they will not, however, be delivered until 8:00 a.m.
- All messages from order entry firms will be rejected after 4:00 p.m.
- Message delivery ends at 6:30 p.m.
- All messages from market maker firms after 6:30 p.m. will result in a System Not Available message.
- At 6:30 p.m., all day orders are auto-canceled in the ACES system.

NASDAQ FIX will reset its inbound and outbound sequence numbers to 1 at approximately 7:00 p.m. each day.

3.1.2 Early Close Trading Day

A planned early market close usually occurs at 1:00 p.m. NASDAQ will notify you of an early close by Head Trader Alert that will provide closing times. In unforeseen circumstances, an unplanned early market close may be necessary. Again, NASDAQ will notify you of such an event by Head Trader Alert. Head Trader Alerts are available online at: http://www.nasdaqtrader.com/dynamic/newsindex/headtraderalerts_2004.stm.

Logon/Logoff

FIX Startup	FIX Shutdown
4:00 a.m.	4:00 p.m.

- As with regular trading days, NASDAQ FIX will be up and accessible at 4:00 a.m.
- Logons are accepted any time after 4:00 a.m., and all messaging remains the same through market open. NASDAQ FIX will remain up and running until 4:00 p.m.
- If you log off prior to 6:00 p.m., you will lose execution reports that in response to orders executed after 4:00 p.m.
- Logoffs are not required. If you choose to log off, do so by 4:00 p.m.

Order Entry for NMS Security Trading

Start Time	End Time (Market Close)
7:00 a.m.	1:00 p.m.

Order Entry for Exchange-listed Security Trading

Start Time	End Time (Session Close)
7:00 a.m.	1:00 p.m.

- Orders entered between 4:00 a.m. and 7:00 a.m. will be rejected.
- All messages entered between 7:00 a.m. and 7:59.59 a.m. will be acknowledged, but they will not, however, be delivered until 8:00 a.m.
- All messages from order entry firms will be rejected after 1:00 p.m.
- Message delivery ends at 3:30 p.m.
- All messages from market maker firms after 1:30 p.m. will result in a System Not Available message.
- At 1:30 p.m., all day orders are auto-canceled in the ACES system.

NASDAQ FIX will reset its inbound and outbound sequence numbers to 1 at approximately 4:00 p.m. each day.

3.1.3 Non-trading Days

All messages, including logon, will be rejected on non-trading days. Of course, users will be able to logon and test on User Acceptance Test days.

3.2 Connectivity

You have the ability to send ACES order messages, NASDAQ Market Center order messages, and NASDAQ trade reporting messages over the same connection, although you may choose to send them over separate connections. You should make the decision after considering your own architecture and performance requirements.

To indicate the destination of your message within NASDAQ, you will use tag 57, `TargetSubID`. The values of this tag are:

- A = ACES
- S = NASDAQ market center orders
- T = NASDAQ market center trade reporting

You must use A for all FIX ACES messages.

- A connector ID is good for one and only one I1I2.
- The initial logon message is validated for both the sender comp ID (MPID) and the sender sub ID (I1I2).
- If logon fails, you will not receive a message indicating this failure.
- Subsequent administrative and application messages will validate the connector ID and I1I2.

4 Message Formats

4.1 Headers and Footers

All inbound and outbound messages will begin with a standard header and end with a standard footer.

4.1.1 Inbound to NASDAQ Header Format

Tag	Field Name	Req'd	Comments
8	BeginString	Y	Always unencrypted. Must be first field in message.
9	BodyLength	Y	Always unencrypted. Must be second field in message.
34	MsgSeqNum	Y	Integer message sequence number.
35	MsgType	Y	Unencrypted, must be third field in the message. See section 2.1 for supported message types.
49	SenderCompID	Y	To be supplied by Member. This is your 4-character ID assigned to you by NASDAQ as part of your NASDAQ connectivity.
50	SenderSubID	Q	User ID must be supplied here. NASDAQ assigns this ID to you as part of your NASDAQ connectivity.
52	SendingTime	Y	YYYYMMDD-HH:MM:SS Currently, this tag is not functional.
56	TargetCompID	Y	NSDQ
57	TargetSubID	Q	1-character indicator to indicate destination system within NASDAQ. A = ACES Other NASDAQ systems not applicable here: S = NASDAQ market center trading T = NASDAQ trade reporting
128	DeliverToCompID	Q	For order entry firm-entered messages, this tag contains the MMID. For market maker-entered messages, this tag contains the OEID.

4.1.2 Inbound to NASDAQ Trailer Format

Tag	Field Name	Req'd	NASDAQ Implementation
10	Checksum	Y	3-character end-of-message delimiter that represents the total number of bytes in this message. Unencrypted, must be last field in message.

4.1.3 Outbound from NASDAQ Header Format

Tag	Field Name	Req'd	Comments
8	BeginString	Y	FIX.4.2. Always unencrypted. Must be first field in message.
9	BodyLength	Y	Always unencrypted. Must be second field in message.
34	MsgSeqNum	Y	Integer message sequence number.
35	MsgType	Y	Unencrypted, must be third field in the message. See section 2.1 for supported message types.
49	SenderCompID	Y	NSDQ
50	SenderSubID	Q	1-character indicator that identifies this response as an ACES message. A = ACES
52	SendingTime	Y	YYYYMMDD-HH:MM:SS Please note that this time is the time the message left NASDAQ's FIX application. It has no relevancy to execution time, reject time, or cancel time in the destination systems.
56	TargetCompID	Y	This is your 4-character ID as submitted on the associated inbound message in its Sender Comp Id.
57	TargetSubID	Q	Receiving party's I1I2.
115	OnBehalfOfCompID	Q	For messages from NASDAQ to the market maker, this tag contains the OEID. For messages from NASDAQ to the order entry firm, this tag contains the MMID.

4.1.4 Outbound from NASDAQ Trailer Format

Tag	Field Name	Req'd	NASDAQ Implementation
10	Checksum	Y	3-character end-of-message delimiter that represents the total number of bytes in this message. Unencrypted, must be last field in message.

4.2 Administrative Messages

4.2.1 Heartbeat

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 0
112	TestReqID	N	Required when the heartbeat is in response to a Test Request. It is the TestReqID received from TestRequest message.
	<i>Standard Trailer</i>	Y	

4.2.2 Logon

After establishing your TCP connection with NASDAQ FIX, a Logon must be the first message that you send. NASDAQ will respond with its own Logon. You must wait for that Logon before sending additional messages.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = A
95	RawDataLength	N	
96	RawData	N	
98	EncryptMethod	Y	Must be 0.
108	HeartBtInt	Y	NASDAQ recommends an interval between 30-60 seconds. If you submit a value of less than 30 seconds, the logon will be rejected.
	<i>Standard Trailer</i>	Y	

4.2.3 Test Request

The HeartBtInt that is specified in the Logon message will be used to make sure that the customer is alive and functioning. If NASDAQ detects inactivity for a period longer than the HeartBtInt + 1 second, it will send a Test Request to determine if the customer is still active. If after another HeartBtInt, there is still no activity, NASDAQ will send another test request. If after this additional HeartBtInt there is still no activity, NASDAQ will immediately send a logout message and the connection will be closed. It is expected that similar logic will be used on the customer's side in order to detect host activity.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 1
112	TestReqID	Y	Date/Time combination
	<i>Standard Trailer</i>	Y	

4.2.4 Resend Request

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 2
7	BeginSeqNo	Y	Beginning sequence number of Requested Message
16	EndSeqNo	Y	Ending sequence number of Requested Message
	<i>Standard Trailer</i>	Y	

4.2.5 Sequence Reset

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 4
36	NewSeqNum	Y	Next expected sequence number
123	GapFillFlag	N	
	<i>Standard Trailer</i>	Y	

4.2.6 Logout

Logouts will occur as a normal end of day routine, but they may also occur as a result of inactivity. It is your responsibility to logout prior to 5:00 p.m. each trading day.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 5
58	Text	N	10-character alphanumeric subscriber memo field. The system does not validate this entry.
	<i>Standard Trailer</i>	Y	

4.3 Application Messages

4.3.1 Order Entry Firm to NASDAQ

4.3.1.1 New Order Single (OE to N)

Order entry firms use this message to place an order. If this message is not rejected, then NASDAQ sends the order entry firm an order acknowledgement in response (section 4.3.4.1). Also in response to this message, NASDAQ sends the market maker firm an order message (section 4.3.2.1).

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = D
1	Account	N	Limited to 20 characters.
11	ClOrdID	Y	Must be unique for each order. For these ACES orders only, Nasdaq requires that you limit ClOrdIDs to 8 characters (because the Market Maker you are directing to may not have a FIX implementation and they may be limited to 8 characters. Used for OATS reporting.
18	ExecInst	N	Valid values: E = DNI F = DNR G = AON 1 = not held Either [tag 59 = 3 or 4] or [tag 18 = E, F, G, or 1], not both.
21	HandlInst	Y	Valid value: 1 = automated execution order, private, no broker intervention
38	OrderQty	Q	Number of shares. Odd lots are accepted.
40	OrdType	Y	Valid values: 1 = market 2 = limit 3 = stop 4 = stop limit 9 = on basis If tag 40 = 2, 3, or 4 then tag 44 is required. If tag 40 = 3 or 4, then tag 99 is required. Either [tag 59 = 2 or 7] or [tag 40 = 3, 4, or 9], not both.
44	Price	N	Required if tag 40 = 2 or 4. 1-10 character decimal price. "12.34" is the correct presentation of twelve dollars and thirty-four cents.

Tag	Field Name	Req'd	Comments
			If tag 40 ≠ 2 (or 4) and tag 44 is present, NASDAQ will reject the order.
54	Side	Y	Valid values: 1 = buy 2 = sell 5 = sell short
55	Symbol	Y	1-14 character security identifier. Spaces, periods, and commas are not allowed. NASDAQ will reject it a symbol in lowercase letters. For exchange-listed securities, this tag will contain the base listed symbol only. See <i>SymbolSfx</i> [65] field for additional information about the security.
59	TimeInForce	N	Valid values: 0= DAY (default) 1 = GTC 2 = OPG (at the opening) 3= IOC 4 = FOK 6 = GTD* 7 = CLO (at the close) Either [tag 59 = 3 or 4] or [tag 18 = E, F, G, or 1], not both. Either [tag 59 = 2 or 7] or [tag 40 = 3, 4, or 9], not both. *GTD is used in conjunction with tag 126. If MMDD is after the current date, then the order will expire in the current year. If MMDD is before the current date, then the order will expire in the following year. For example, today is September 20, 2005. MMDD = 1220 expires on December 20, 2005. MMDD = 0731 expires on July 31, 2006.
60	TransactTime	Y	Time this order request was released by the trading system.
65	SymbolSfx	N	Contains only the additional information about the security (e.g. preferred, warrants, etc.) for exchange-listed securities. This additional information must be in CQS format. No delimiters are allowed in this tag. For example, "OXYpB" would be formatted as: Symbol [55]: OXY SymbolSfx [65]: pB

Tag	Field Name	Req'd	Comments
76	ExecBroker	N	Give-up MPID. Give-Up trades are prohibited through the ITS system for exchange-listed securities.
99	StopPx	N	Contains the limit price associated with an STP order once the trigger price (in 44) has been reached. If tag 44 is blank, then the order is treated as a stop market order. Required if tag 40 = 4. In order to code a stop market, set 40 = 3, leave 44 blank, and set your stop price here. In order to code a stop limit, set 40=4, set your trigger in 44 (required) and set your stop price here.
126	ExpireTime	N	Time/date of order expiration expressed in UTC. This tag is required if 59 = 6. The time portion of this tag is ignored.
5149	Memo	N	Free format, 60-character text field. Single and double quotes, pipes, and carets are not allowed. This text cannot be changed in a cancel/replace.
9214	SMBnchdFlag	N	For NMS orders, a 1-character indicator, B, for bunched orders.
9307	PfdMktMkr	Q	Contains the ID of the market maker to whom you are sending this order.
	<i>Standard Trailer</i>	Y	

4.3.1.2 Cancel Request (OE to N)

Order entry firms use this message to cancel an order. If this message is not rejected, then NASDAQ sends the order entry firm a pending cancel message in response (section 4.3.4.6). Also in response to this message, NASDAQ sends the market maker firm a cancel message (section 4.3.2.2).

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = F
1	Account	N	This tag is limited to 20 characters.
11	ClOrdID	Y	This tag contains a new, unique 8-character ID for this request. For these ACES cancels only, Nasdaq requires that you limit ClOrdIDs to 8 characters (because the Market Maker you are directing to may not have a FIX implementation and they may be limited to 8 characters. Used for OATS reporting.
18	ExecInst	N	As per associated order message.
37	OrderID	N	If available, the OrderID assigned by the market maker.
38	OrderQty	Q	The full quantity of the order is cancelled.
40	OrdType	Q	Valid values: 1 = market 2 = limit 3 = stop 4 = stop limit 9 = on basis If tag 40 = 2, 3, or 4 then tag 44 is required. If tag 40 = 3 or 4, then tag 99 is required. Either [tag 59 = 2 or 7] or [tag 40 = 3, 4, or 9], not both.
41	OrigClOrdID	Y	ClOrdID of the previous order (not necessarily the initial order of the day) after cancel/replace messages are considered. Limited too to 8 characters for ACES messages.
44	Price	N	As per associated order message.
54	Side	Y	As per associated order message.
55	Symbol	Y	As per associated order message.
59	TimeInForce	N	As per associated order message.
60	TransactTime	Y	Time the original New Order Single was initiated/released by the trader or trading system.
65	SymbolSfx	N	As per associated order message.
76	ExecBroker	N	As per associated order message.

Tag	Field Name	Req'd	Comments
99	StopPx	N	As per associated order message.
126	ExpireTime	N	As per associated order message.
5149	Memo	N	Free format, 60-character text field. Single and double quotes, pipes, and carets are not allowed.
9214	SMBnchdFlag	N	As per associated order message.
9307	PfdMktMkr	Q	Contains the ID of the market maker to whom you are sending this cancel request.
	<i>Standard Trailer</i>	Y	

4.3.1.3 Cancel/Replace Request (OE to N)

Order entry firms use this message to cancel/replace an order. If this message is not rejected, then NASDAQ sends the order entry firm a pending cancel/replace message in response (section 4.3.4.10). Also in response to this message, NASDAQ sends the market maker firm a cancel/replace message (section 4.3.2.3). This message contains the new information for the order, i.e. the field values that are changing. Only tag 5149 contains a value from the original order.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = G
1	Account	N	As per the order message.
11	ClOrdID	Y	Unique identifier of replacement order. For these ACES orders only, Nasdaq requires that you limit ClOrdIDs to 8 characters (because the Market Maker you are directing to may not have a FIX implementation and they may be limited to 8 characters. . Used for OATS reporting.
18	ExecInst	N	Valid values: E = DNI F = DNR G = AON 1 = not held Either [tag 59 = 3 or 4] or [tag 18 = E, F, G, or 1], not both.
21	HandlInst	Y	Valid value: 1 = automated execution order, private, no broker intervention Values 2 and 3 will be defaulted to 1.
37	OrderID	N	If available, the OrderID assigned by the market maker.
38	OrderQty	Q	Number of shares. Odd lots are accepted.
40	OrdType	Q	Valid values: 1 = market 2 = limit 3 = stop 4 = stop limit 9 = on basis If tag 40 = 2 or 4 then tag 44 is required. If tag 40 = 3 or 4, then tag 99 is required. Either [tag 59 = 2 or 7] or [tag 40 = 3, 4, or 9], not both.

Tag	Field Name	Req'd	Comments
41	OrigClOrdID	Y	ClOrdID of the previous order (not necessarily the initial order of the day) after cancel/replace messages are considered. Limited too to 8 characters.
44	Price	N	Required if tag 40 = 2 or 4. 1-10 character decimal price. "12.34" is the correct presentation of twelve dollars and thirty-four cents. If tag 40 \neq 2 (or 4) and tag 44 is present, NASDAQ will reject the order.
54	Side	Y	Valid values: 1 = Buy 2 = Sell 5 = Sell Short
55	Symbol	Y	1-14 character security identifier. Spaces, periods, commas are not allowed. All incoming messages will send the symbol as entered. If the symbol is sent in lower case, then NASDAQ will reject it. This field will contain the base listed symbol only for listed securities. See <i>SymbolSfx</i> [65] field for additional information about the security.
59	TimeInForce	N	Valid values: 0= DAY (default) 1 = GTC 2 = at the opening (OPG) 3= IOC 4 = FOK 6 = GTD* 7 = at the close (CLO) Either [tag 59 = 3 or 4] or [tag 18 = E, F, G, or 1], not both. Either [tag 59 = 2 or 7] or [tag 40 = 3, 4, or 9], not both. *GTD is used in conjunction with tag 126. If MMDD is after the current date, then the order will expire in the current year. If MMID is before the current date, then the order will expire in the following year. For example, today is September 20, 2005. MMDD = 1220 expires on December 20, 2005. MMDD = 0731 expires on July 31, 2006.
60	TransactTime	Y	Time this order request was initiated/released by the trader or trading system.

Tag	Field Name	Req'd	Comments
65	SymbolSfx	N	This field will contain only the additional information about the security (e.g. preferred, warrants, etc.) for listed securities. This additional information must be in CQS format. No delimiters are allowed in this tag. For example, "OXYpB" would be formatted as: Symbol [55]: OXY SymbolSfx [65]: pB
76	ExecBroker	N	Must be the same as the ExecBroker of the original order. For exchange-listed securities, Give-Up trades are prohibited through the ITS system.
99	StopPx	N	Contains the limit price associated with an STP order once the trigger price (in 44) has been reached. If tag 44 is blank, then the order is treated as a stop market order. Required if tag 40 = 4. In order to code a stop market, set 40 = 3, leave 44 blank, and set your stop price here. In order to code a stop limit, set 40=4, set your trigger in 44 (required) and set your stop price here.
126	ExpireTime	N	Time/Date of order expiration expressed in UTC. This tag is required if 59 = 6. The time portion of this tag is ignored.
5149	Memo	N	As per the order message.
9214	SMBnchdFlag	N	For NMS orders, a 1-character indicator, B, for bunched orders.
9307	PfdMktMkr	Q	As per the order message.
	<i>Standard Trailer</i>	Y	

4.3.1.4 Order Status Request (OE to N)

Order entry firms use this message to request order status from FIX ACES. NASDAQ responds directly to the order entry firm (section 4.3.4.15).

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = H
11	ClOrdID	Y	The ClOrdID of the original order whose status you are requesting. Used for OATS reporting.
37	OrderID	N	If available, the OrderID assigned by the market maker.
54	Side	Y	As per the order message.
55	Symbol	Y	As per the order message.
60	TransactTime	N	The date and time of the original order and not the time of this message. The time portion of this tag is ignored, so you may enter the date only.
65	SymbolSfx	N	As per the order message.
5149	Memo	N	Free format, 60-character text field. Single and double quotes, pipes, and carets are not allowed.
	<i>Standard Trailer</i>	Y	

4.3.2 NASDAQ to Market Maker

4.3.2.1 New Order Single (N to MM)

NASDAQ sends this message to the market maker firm in response to an order submitted by an order entry firm (section 4.3.1.1):

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = D
11	ClOrdID	Y	Contains the unique, 20-character value assigned by NASDAQ ACES. Used for OATS reporting.
18	ExecInst	N	Contains the value sent by the order entry firm. Valid values: E = DNI F = DNR G = AON 1 = not held Either [tag 59 = 3 or 4] or [tag 18 = E, F, G, or 1], not both.
21	HandlInst	Y	Contains the value sent by the order entry firm. Valid value: 1 = automated execution order, private, no broker intervention Values 2 and 3 will be defaulted to 1.
38	OrderQty	Q	Contains the number of shares sent by the order entry firm.
40	OrdType	Y	Contains the value sent by the order entry firm. Valid values: 1 = market 2 = limit 3 = stop 4 = stop limit 9 = on basis If tag 40 = 2, 3, or 4 then tag 44 is required. If tag 40 = 3 or 4, then tag 99 is required. Either [tag 59 = 2 or 7] or [tag 40 = 3, 4, or 9], not both.
44	Price	Q	Contains the price sent by the order entry firm. 1-10 character decimal price. "12.34" is the correct presentation of twelve dollars and thirty-four cents. Required if tag 40 = 2.

Tag	Field Name	Req'd	Comments
54	Side	Y	Contains the value sent by the order entry firm. Valid values: 1 = buy 2 = sell 5 = sell short
55	Symbol	Y	Contains the symbol sent by the order entry firm. This field will contain only the base listed symbol for listed securities. See SymbolSfx [65] field for additional information about the security.
59	TimeInForce	N	Contains the value sent by the order entry firm. Valid values: 0= DAY (default) 1 = GTC 2 = at the opening (OPG) 3= IOC 4 = FOK 6 = GTD* 7 = at the close (CLO) Either [tag 59 = 3 or 4] or [tag 18 = E, F, G, or 1], not both. Either [tag 59 = 2 or 7] or [tag 40 = 3, 4, or 9], not both. *GTD is used in conjunction with tag 126. If MMDD is after the current date, then the order will expire in the current year. If MMDD is before the current date, then the order will expire in the following year. For example, today is September 20, 2005. MMDD = 1220 expires on December 20, 2005. MMDD = 0731 expires on July 31, 2006.
60	TransactTime	Y	Time this order request was released by the trading system.
65	SymbolSfx	N	Contains the symbol information sent by the order entry firm. Contains only the additional information about the security (e.g. preferred, warrants, etc.) for exchange-listed securities. This additional information must be in CQS format. No delimiters are allowed in this tag. For example, "OXYpB" would be formatted as: Symbol [55]: OXY SymbolSfx [65]: pB
76	ExecBroker	N	Contains the give-up MPID sent by the order entry firm.

Tag	Field Name	Req'd	Comments
99	StopPx	N	Contains the stop limit price sent by the order entry firm. If tag 44 is blank, then the order is treated as a stop market order. Required if tag 40 = 4.
126	ExpireTime	N	Contains the order expiration date sent by the order entry firm.
375	ContraBroker	Q	MPID of the other side.
9214	SMBnchdFlag	N	Contains the value sent by the order entry firm. For NMS orders, a 1-character indicator, B, for bunched orders.
	<i>Standard Trailer</i>	Y	

4.3.2.2 Cancel Request (N to MM)

NASDAQ sends this message to the marker maker firm in response to a cancel request by the order entry firm (section 4.3.1.2).

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = F
1	Account	N	Contains the value sent by the order entry firm.
11	ClOrdID	Y	Contains the unique, 20-character value assigned by NASDAQ ACES. Used for OATS reporting.
18	ExecInst	N	Valid values: E = DNI F = DNR G = AON 1 = not held Either [tag 59 = 3 or 4] or [tag 18 = E, F, G, or 1], not both.
37	OrderID	N	If available, the OrderID assigned by the market maker.
38	OrderQty	Q	The full quantity of the order is cancelled.
40	OrdType	N	Valid values: 1 = market 2 = limit 3 = stop 4 = stop limit 9 = on basis If tag 40 = 2, 3, or 4 then tag 44 is required. If tag 40 = 3 or 4, then tag 99 is required. Either [tag 59 = 2 or 7] or [tag 40 = 3, 4, or 9], not both.
41	OrigClOrdID	Y	ClOrdID of the previous order (not necessarily the initial order of the day) after cancel/replace messages are considered.
44	Price	Q	1-10 character decimal price. "12.34" is the correct presentation of twelve dollars and thirty-four cents.
54	Side	Y	Valid values: 1 = Buy 2 = Sell 5 = Sell Short

Tag	Field Name	Req'd	Comments
55	Symbol	Y	1-14 character security identifier. Spaces, periods, commas are not allowed. All incoming messages will send the symbol as entered. If the symbol is sent in lower case, then NASDAQ will reject it. This field will contain the base listed symbol only for listed securities. See SymbolSfx [65] field for additional information about the security.
59	TimeInForce	N	Valid values: 0= DAY (default) 1 = GTC 2 = at the opening (OPG) 3= IOC 4 = FOK 6 = GTD* 7 = at the close (CLO) Either [tag 59 = 3 or 4] or [tag 18 = E, F, G, or 1], not both. Either [tag 59 = 2 or 7] or [tag 40 = 3, 4, or 9], not both. *GTD is used in conjunction with tag 126. If MMDD is after the current date, then the order will expire in the current year. If MMDD is before the current date, then the order will expire in the following year. For example, today is September 20, 2005. MMDD = 1220 expires on December 20, 2005. MMDD = 0731 expires on July 31, 2006.
60	TransactTime	Y	Time this order request was initiated/released by the trader or trading system.
65	SymbolSfx	N	This field will contain only the additional information about the security (e.g. preferred, warrants, etc.) for listed securities. This additional information must be in CQS format. No delimiters are allowed in this tag. For example, "OXYpB" would be formatted as: Symbol [55]: OXY SymbolSfx [65]: pB
76	ExecBroker	N	This tag contains an optional give-up MPID. Give-Up trades are prohibited through the ITS system for exchange-listed securities.
99	StopPx	N	The stop limit price. This field contains the limit price associated with an STP order once the trigger price has been reached. If tag 44 is blank, then the order is treated as a stop market order.
126	ExpireTime	N	Time/Date of order expiration expressed in UTC. This tag is required if 59 = 6.

Tag	Field Name	Req'd	Comments
375	ContraBroker	Q	MPID of the other side.
	<i>Standard Trailer</i>	Y	

4.3.2.3 Cancel/Replace Request (N to MM)

NASDAQ sends this message to the marker maker firm in response to a cancel/replace request by the order entry firm (section 4.3.1.3).

This message is also sent unsolicited after a corporate action. Receipt of this UM is optional.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = G
1	Account	N	Contains the value sent by the order entry firm.
11	ClOrdID	Y	Contains the unique, 20-character value assigned by NASDAQ ACES. Used for OATS reporting.
18	ExecInst	N	Valid values: E = DNI F = DNR G = AON 1 = not held Either [tag 59 = 3 or 4] or [tag 18 = E, F, G, or 1], not both.
21	HandlInst	Y	Valid value: 1 = automated execution order, private, no broker intervention Values 2 and 3 will be defaulted to 1.
37	OrderID	N	If available, the OrderID assigned by the market maker.
38	OrderQty	Q	Number of shares. Odd lots are accepted.
40	OrdType	Y	Valid values: 1 = market 2 = limit 3 = stop 4 = stop limit 9 = on basis If tag 40 = 2, 3, or 4 then tag 44 is required. If tag 40 = 3 or 4, then tag 99 is required. Either [tag 59 = 2 or 7] or [tag 40 = 3, 4, or 9], not both.
41	OrigClOrdID	Y	ClOrdID of the previous order (not necessarily the initial order of the day) after cancel/replace messages are considered.
44	Price	Q	Required if tag 40 = 2. 1-10 character decimal price. "12.34" is the correct presentation of twelve dollars and thirty-four cents. If tag 40 ≠ 2 and tag 44 is present, NASDAQ will

Tag	Field Name	Req'd	Comments
			reject the order.
54	Side	Y	Valid Values: 1 = Buy 2 = Sell 5 = Sell Short
55	Symbol	Y	1-14 character security identifier. Spaces, periods, commas are not allowed. All incoming messages will send the symbol as entered. If the symbol is sent in lower case, then NASDAQ will reject it. This field will contain the base listed symbol only for listed securities. See SymbolSfx [65] field for additional information about the security.
59	TimeInForce	N	Valid values: 0= DAY (default) 1 = GTC 2 = at the opening (OPG) 3= IOC 4 = FOK 6 = GTD* 7 = at the close (CLO) Either [tag 59 = 3 or 4] or [tag 18 = E, F, G, or 1], not both. Either [tag 59 = 2 or 7] or [tag 40 = 3, 4, or 9], not both. *GTD is used in conjunction with tag 126. If MMDD is after the current date, then the order will expire in the current year. If MMDD is before the current date, then the order will expire in the following year. For example, today is September 20, 2005. MMDD = 1220 expires on December 20, 2005. MMDD = 0731 expires on July 31, 2006.
60	TransactTime	Y	Time this order request was initiated/released by the trader or trading system.
65	SymbolSfx	N	This field will contain only the additional information about the security (e.g. preferred, warrants, etc.) for listed securities. This additional information must be in CQS format. No delimiters are allowed in this tag. For example, "OXYpB" would be formatted as: Symbol [55]: OXY SymbolSfx [65]: pB

Tag	Field Name	Req'd	Comments
76	ExecBroker	N	Must be the same as the ExecBroker of the original order. For exchange-listed securities, Give-Up trades are prohibited through the ITS system.
99	StopPx	N	The stop limit price. This field contains the limit price associated with an STP order once the trigger price has been reached. If tag 44 is blank, then the order is treated as a stop market order. Only allowed if OrdType = 4.
126	ExpireTime	N	Time/Date of order expiration expressed in UTC. This tag is required if 59 = 6.
375	ContraBroker	Q	MPID of the other side.
9214	SMBnchdFlag	N	For NMS orders, a 1-character indicator, B, for bunched orders.
	<i>Standard Trailer</i>	Y	

4.3.3 Market Maker to NASDAQ

4.3.3.1 Order Confirm (MM to N)

Market maker firms use this message to confirm an order from an order entry firm. Sending this message is optional. In response to this message, NASDAQ sends the order entry firm an order confirm message (section 4.3.4.3).

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
6	AvgPx	Y	0 (zero)
11	ClOrdID	Q	The ClOrdID, as provided by NASDAQ, of the order being confirmed. This value will not be validated.
14	CumQty	Y	0
17	ExecID	Y	You enter a new, unique 20-character ID for this order confirmation, or enter 0.
20	ExecTransType	Y	0 = New
37	OrderID	Y	You enter a unique ID for this order.
39	OrdStatus	Y	0 = New
40	OrdType	Q	As per the order message.
44	Price	N	As per the order message.
54	Side	Y	As per the order message.
55	Symbol	Y	As per the order message.
60	TransactTime	N	The date and time that you are accepting this order. The time portion of this tag is ignored, so you may enter the date only.
65	SymbolSfx	N	As per the order message.
76	ExecBroker	N	As per the order message.
150	ExecType	Y	0 = New
151	LeavesQty	Y	For an Order Confirmation, LeavesQty is equal to OrderQty.
375	ContraBroker	Q	MPID of the other side.
	<i>Standard Trailer</i>	Y	

4.3.3.2 Order Decline (MM to N)

Market maker firms use this message to decline an order from an order entry firm. In response to this message, NASDAQ sends the order entry firm an order decline message (section 4.3.4.4).

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	As per the order message.
6	AvgPx	Y	0 (zero)
11	ClOrdID	Q	The ClOrdID, as provided by NASDAQ, of the order being declined. This value will not be validated.
14	CumQty	Y	0
17	ExecID	Y	You enter a new, unique 20-character ID for this order decline or 0 (zero).
20	ExecTransType	Y	0 = New
37	OrderID	Y	If available, the OrderID from the order confirmation. Otherwise, a unique ID for this order or 0 (zero).
38	OrderQty	Q	As per the order message.
39	OrdStatus	Y	8 = Rejected
40	OrdType	N	As per the order message.
44	Price	Q	As per the order message.
54	Side	Y	As per the order message.
55	Symbol	Y	As per the order message.
58	Text	N	Where possible, a coded message to explain reason for decline, such as: Rej -- NOT A MARKET MAKER Rej -- OPEN ORDER CANCELLED Rej -- DUPE BRANCH & SEQ NO Rej -- COMPANY DISALLOW ACES Rej - INVALID EXPIRY DATE AND TIME: # Rej -- ORD CXLD BY MM Rej -- ORDER ALREADY CXLD
59	TimeInForce	N	As per the order message.
60	TransactTime	N	The date and time that you are declining this order. The time portion of this tag is ignored, so you may enter the date only.
65	SymbolSfx	N	As per the order message.
76	ExecBroker	N	As per the order message.

Tag	Field Name	Req'd	Comments
99	StopPx	N	As per the order message.
103	OrdRejReason	N	Code to identify reason for order rejection. Valid values: 0 = Broker option (used for any undefined reason) 1 = Unknown symbol 2 = Exchange closed 3 = Order exceeds limit 4 = Too late to enter 5 = Unknown Order 6 = Duplicate Order 7 = Duplicate of a verbally communicated order 8 = Stale Order
126	ExpireTime	N	As per the order message.
150	ExecType	Y	8 = Rejected
151	LeavesQty	Y	For an Order decline, LeavesQty is equal to OrderQty.
375	ContraBroker	Q	MPID of the other side.
9214	SMBnchdFlag	N	As per the order message.
	<i>Standard Trailer</i>	Y	

4.3.3.3 Execution Report (MM to N)

Market maker firms use this message to execute an order from an order entry firm. In response to this message, NASDAQ sends the order entry firm an execution report (section 4.3.4.5).

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	As per the order message.
6	AvgPx	Y	0 (zero)
11	ClOrdID	Q	The ClOrdID, as provided by NASDAQ, of the order being executed. This value will not be validated.
14	CumQty	Y	Cumulative quantity executed against this order.
17	ExecID	Y	You enter a new, unique 20-character ID for this execution report.
18	ExecInst	N	As per the order message.
20	ExecTransType	Y	0 = New
31	LastPx	Q	Price of shares executed in this fill.
32	LastShares	Q	Number of shares executed in this fill.
37	OrderID	Y	If available, the OrderID from the order confirmation. Otherwise, a unique ID for this order.
38	OrderQty	Q	As per the order message.
39	OrdStatus	Y	Valid values: 1 = Partially filled 2 = Filled
40	OrdType	Q	Valid values: 1 = market 2 = limit 3 = stop 4 = stop limit 9 = on basis If tag 40 = 2, 3, or 4 then tag 44 is required. Either [tag 59 = 2 or 7] or [tag 40 = 3, 4, or 9], not both.
41	OrigClOrdID	Q	ClOrdID of the order that you are executing.
44	Price	N	Most recent price from this order after considering all cancel/replace messages.
54	Side	Y	As per the order message.
55	Symbol	Y	As per the order message.

Tag	Field Name	Req'd	Comments
58	Text	N	Miscellaneous text limited to 20 characters.
59	TimeInForce	N	As per the order message.
60	TransactTime	N	The date and time of this execution. The time portion of this tag is ignored, so you may enter the date only.
65	SymbolSfx	N	As per the order message.
76	ExecBroker	N	As per the order message.
126	ExpireTime	N	Time/Date of order expiration expressed in UTC. This tag is required if 59 = 6.
150	ExecType	Y	Valid values: 1 = Partial Fill 2 = Fill
151	LeavesQty	Y	Quantity left on the order.
375	ContraBroker	Q	MPID of the other side.
9214	SMBnchdFlag	N	As per the order message.
9863	ContraClearingAcct	N	Number of the clearing firm associated with the order entry firm.
	<i>Standard Trailer</i>	Y	

4.3.3.4 Cancel Confirmation (MM to N)

Market maker firms use this message to confirm a cancel request from an order entry firm. In response to this message, NASDAQ sends the order entry firm a cancel confirmation (section 4.3.4.8).

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	Contains the value sent to you on the Cancel message.
6	AvgPx	Y	0 (zero)
11	ClOrdID	Q	The ClOrdID of the cancel message sent by NASDAQ. This value will not be validated.
14	CumQty	Y	For a cancel, this represents the total executed quantity against this order when the cancel occurred.
17	ExecID	Y	You enter a new, unique 20-character ID for this cancel confirmation, or enter 0.
18	ExecInst	N	As per the order message.
20	ExecTransType	Y	0 = New
37	OrderID	Y	If available, the OrderID from the order confirmation, decline, or execution. Otherwise, 0 (zero).
38	OrderQty	Q	The order's original quantity.
39	OrdStatus	Y	4 = Cancelled
40	OrdType	N	As per the order message.
44	Price	Q	As per the order message.
54	Side	Y	As per the order message.
55	Symbol	Y	As per the order message.
59	TimeInForce	N	As per the order message.
60	TransactTime	N	The date and time that you are accepting the cancel request. The time portion of this tag is ignored, so you may enter the date only.
65	SymbolSfx	N	As per the order message.
76	ExecBroker	N	Give-up ID.
99	StopPx	N	As per the order message.
126	ExpireTime	N	Time/Date of order expiration expressed in UTC. This tag is required if 59 = 6.
150	ExecType	Y	4 = Cancelled

Tag	Field Name	Req'd	Comments
151	LeavesQty	Y	This tag is always 0, as all remaining shares are included in a cancel request.
375	ContraBroker	Q	MPID of the other side.
9214	SMBnchdFlag	N	As per the order message.
	<i>Standard Trailer</i>	Y	

4.3.3.5 Cancel Decline (MM to N)

Market maker firms use this message to decline a cancel request from an order entry firm. In response to this message, NASDAQ sends the order entry firm a cancel decline message (section 4.3.4.9).

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	Contains the value sent to you on the Cancel message.
6	AvgPx	Y	0 (zero)
11	ClOrdID	Q	The ClOrdID of the cancel message sent by NASDAQ. This value will not be validated.
14	CumQty	Y	0
17	ExecID	Y	You enter a new, unique 20-character ID for this cancel decline or 0 (zero).
18	ExecInst	N	As per the order message.
20	ExecTransType	Y	0 = New
37	OrderID	Y	If available, the OrderID from the order confirmation, decline, or execution. Otherwise, a unique ID for this order or 0 (zero).
38	OrderQty	Q	The order's original quantity.
39	OrdStatus	Y	Status at the time of the cancel request.
40	OrdType	N	As per the order message.
44	Price	Q	As per the order message.
54	Side	Y	As per the order message.
55	Symbol	Y	As per the order message.
58	Text	N	Where possible, coded message to explain reason for rejection.
59	TimeInForce	N	As per the order message.
60	TransactTime	N	The date and time that you are declining this cancel request. The time portion of this tag is ignored, so you may enter the date only.
65	SymbolSfx	N	As per the order message.
76	ExecBroker	N	Give-up ID.
99	StopPx	N	As per the order message.
102	CxlRejReason	N	Code to identify reason for cancel rejection. Valid values: 0 = Too late to cancel 1 = Unknown order

Tag	Field Name	Req'd	Comments
			2 = Broker Option 3 = Order already in Pending Cancel or Pending Replace status
126	ExpireTime	N	Time/Date of order expiration expressed in UTC. This tag is required if 59 = 6.
150	ExecType	Y	8 = Rejected
151	LeavesQty	Y	Quantity left on the order.
375	ContraBroker	Q	MPID of the other side.
9214	SMBnchdFlag	N	As per the order message.
	<i>Standard Trailer</i>	Y	

4.3.3.6 Cancel/Replace Confirmation (MM to N)

Market maker firms use this message to confirm a cancel/replace request from an order entry firm. In response to this message, NASDAQ sends the order entry firm a cancel/replace confirmation (section 4.3.4.12).

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	<i>MsgType = 8</i>
1	Account	N	Contains the value sent to you on the Cancel/Replace message.
6	AvgPx	Y	0 (zero)
11	ClOrdID	Q	The ClOrdID of the cancel/replace message sent by NASDAQ. This value will not be validated.
14	CumQty	Y	Currently executed shares for chain of orders.
17	ExecID	Y	You enter a new, unique 20-character ID for this cancel/replace confirmation, or enter 0.
18	ExecInst	N	As per cancel/replace message.
20	ExecTransType	Y	0 = New
37	OrderID	Y	If available, the OrderID from the order confirmation, decline, or execution.
38	OrderQty	Q	As per cancel/replace message.
39	OrdStatus	Y	5 = Replaced
40	OrdType	N	As per cancel/replace message.
44	Price	Q	As per cancel/replace message.
54	Side	Y	As per cancel/replace message.
55	Symbol	Y	As per cancel/replace message.
59	TimeInForce	N	As per cancel/replace message.
60	TransactTime	N	The date and time that you are accepting this cancel/replace request.. The time portion of this tag is ignored, so you may enter the date only.
65	SymbolSfx	N	As per cancel/replace message.
76	ExecBroker	N	Give-up ID.
99	StopPx	N	As per cancel/replace message.
126	ExpireTime	N	Time/Date of order expiration expressed in UTC. This tag is required if 59 = 6.
150	ExecType	Y	5 = Replaced
151	LeavesQty	Y	Quantity left on the order.
375	ContraBroker	Q	MPID of the other side.

Tag	Field Name	Req'd	Comments
9214	SMBnchdFlag	N	As per cancel/replace message.
	<i>Standard Trailer</i>	Y	

4.3.3.7 Cancel/Replace Decline (MM to N)

Market maker firms use this message to decline a cancel/replace request from an order entry firm. In response to this message, NASDAQ sends the order entry firm a cancel/replace decline message (section 4.3.4.13).

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	Contains the value sent to you on the Cancel/Replace message.
6	AvgPx	Y	0 (zero)
11	ClOrdID	Q	The ClOrdID of the cancel/replace message sent by NASDAQ. This value will not be validated.
14	CumQty	Y	0
17	ExecID	Y	You enter a new, unique 20-character ID for this cancel/replace decline or 0 (zero).
18	ExecInst	N	As per cancel/replace message.
20	ExecTransType	Y	0 = New
37	OrderID	Y	If available, the OrderID from the order confirmation, decline, or execution. Otherwise, a unique ID for this order or 0 (zero).
38	OrderQty	Q	As per cancel/replace message.
39	OrdStatus	Y	The status at the time of the cancel/replace request.
40	OrdType	N	As per cancel/replace message.
44	Price	Q	As per cancel/replace message.
54	Side	Y	As per cancel/replace message.
55	Symbol	Y	As per cancel/replace message.
58	Text	N	Where possible, coded message to explain reason for rejection. Business reject and application reject codes are in section Error! Reference source not found.
59	TimeInForce	N	As per cancel/replace message.
60	TransactTime	N	The date and time that you are declining this cancel/replace request.. The time portion of this tag is ignored, so you may enter the date only.
65	SymbolSfx	N	As per cancel/replace message.
76	ExecBroker	N	Give-up ID.
99	StopPx	N	As per cancel/replace message.

Tag	Field Name	Req'd	Comments
102	CxlRejReason	N	Code to identify reason for cancel rejection. Valid values: 0 = Too late to cancel 1 = Unknown order 2 = Broker Option 3 = Order already in Pending Cancel or Pending Replace status
126	ExpireTime	N	Time/Date of order expiration expressed in UTC. This tag is required if 59 = 6.
150	ExecType	Y	8 = Rejected
151	LeavesQty	Y	Quantity left on the order.
375	ContraBroker	Q	MPID of the other side.
9214	SMBnchdFlag	N	As per cancel/replace message.
	<i>Standard Trailer</i>	Y	

4.3.4 NASDAQ to Order Entry Firm

4.3.4.1 Order Acknowledgement (N to OE)

NASDAQ sends this message to an order entry firm when NASDAQ receives an order entry firm's order message and FIX ACES has accepted that order message.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	As per the order message.
6	AvgPx	Y	0 (zero)
11	ClOrdID	Q	As per the order message.
14	CumQty	Y	0
17	ExecID	Y	0
20	ExecTransType	Y	0 = New
37	OrderID	Y	0
39	OrdStatus	Y	0 = New
54	Side	Y	As per the order message.
55	Symbol	Y	As per the order message.
65	SymbolSfx	N	As per the order message.
150	ExecType	Y	0 = New
151	LeavesQty	Y	LeavesQty is equal to OrderQty.
5149	Memo	N	As per the order message.
	<i>Standard Trailer</i>	Y	

4.3.4.2 Order Reject (N to OE)

Order entry firms receive this message when NASDAQ rejects a New Order Single.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	As per the order message.
6	AvgPx	Y	0 (zero)
11	ClOrdID	Q	As per the order message.
14	CumQty	Y	0
17	ExecID	Y	0
18	ExecInst	N	As per the order message.
20	ExecTransType	Y	0 = New
37	OrderID	Y	0 (zero)
38	OrderQty	N	As per the order message.
39	OrdStatus	Y	8 = Rejected
40	OrdType	N	As per the order message.
54	Side	Y	As per the order message.
55	Symbol	Y	As per the order message.
58	Text	N	Where possible, a coded message to explain reason for rejection. Reject codes are in section 5.
59	TimeInForce	N	If this was present in the original order, it will be returned here. If it was not present, this tag will not be returned.
65	SymbolSfx	N	As per the order message.
103	OrdRejReason	N	Code to identify reason for order rejection. Valid values: 0 = Broker option 1 = Unknown symbol 2 = Exchange closed 3 = Order exceeds limit 4 = Too late to enter 5 = Unknown Order 6 = Duplicate Order (e.g. dupe ClOrdID) 7 = Duplicate of a verbally communicated order 8 = Stale Order
150	ExecType	Y	8 = Rejected
151	LeavesQty	Y	For an order reject, this tag is equal to OrderQty.
5149	Memo	N	As per the order message.

Tag	Field Name	Req'd	Comments
	<i>Standard Trailer</i>	Y	

4.3.4.3 Order Confirm (N to OE)

NASDAQ sends this message to an order entry firm when NASDAQ receives a market maker's order confirm message (section 4.3.3.1).

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	As per the order message.
6	AvgPx	Y	0 (zero)
11	ClOrdID	Q	As per the order message.
14	CumQty	Y	0
17	ExecID	Y	If available, the ExecID provided by the market maker.
20	ExecTransType	Y	0 = New
37	OrderID	Y	If available, the OrderID assigned by the market maker.
39	OrdStatus	Y	0 = New
54	Side	Y	As per the order message.
55	Symbol	Y	As per the order message.
65	SymbolSfx	N	As per the order message.
150	ExecType	Y	0 = New
151	LeavesQty	Y	For an Order Confirmation, LeavesQty is equal to OrderQty.
5149	Memo	N	As per the order message.
	<i>Standard Trailer</i>	Y	

4.3.4.4 Order Decline (N to OE)

NASDAQ sends this message to an order entry firm when NASDAQ receives a market maker's order decline message (section 4.3.3.2).

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	<i>MsgType = 8</i>
1	Account	N	As per the order message.
6	AvgPx	Y	0 (zero)
11	ClOrdID	Q	As per the order message.
14	CumQty	Y	0
17	ExecID	Y	If available, the ExecID provided by the market maker.
20	ExecTransType	Y	0 = New
37	OrderID	Y	If available, the OrderID assigned by the market maker.
38	OrderQty	Q	As per the order message.
39	OrdStatus	Y	8 = Rejected
54	Side	Y	As per the order message.
55	Symbol	Y	As per the order message.
58	Text	N	Where possible, a coded message to explain reason for decline.
65	SymbolSfx	N	As per the order message.
103	OrdRejReason	Q	Code to identify reason for order rejection. NASDAQ passes the value input by the market maker. Valid values: 0 = Broker option (used for any undefined reason) 1 = Unknown symbol 2 = Exchange closed 3 = Order exceeds limit 4 = Too late to enter 5 = Unknown Order 6 = Duplicate Order 7 = Duplicate of a verbally communicated order 8 = Stale Order
150	ExecType	Y	8 = Rejected
151	LeavesQty	Y	For an Order decline, <i>LeavesQty</i> is equal to <i>OrderQty</i> .
5149	Memo	N	As per the order message.
	<i>Standard Trailer</i>	Y	

4.3.4.5 Execution Report (N to OE)

NASDAQ sends this message to an order entry firm when NASDAQ receives a market maker's execution message (section 4.3.3.3).

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	As per the order message.
6	AvgPx	Y	0 (zero)
11	ClOrdID	Q	As per the order message.
14	CumQty	Y	Quantity, generated by the market maker, of currently executed shares for chain of orders.
17	ExecID	Y	If available, the ExecID provided by the market maker.
18	ExecInst	N	As per the order message.
20	ExecTransType	Y	0 = New
31	LastPx	Q	Price of shares executed in this fill.
32	LastShares	Q	Number of shares executed in this fill.
37	OrderID	Y	If available, the OrderID assigned by the market maker.
38	OrderQty	Q	As per the order message.
39	OrdStatus	Y	Valid values: 1 = Partially filled 2 = Filled
40	OrdType	Q	As per the order message.
41	OrigClOrdID	Q	As per the order message.
44	Price	Q	Most recent price from this order after considering all cancel/replace messages.
54	Side	Y	As per the order message.
55	Symbol	Y	As per the order message.
59	TimeInForce	N	As per the order message.
65	SymbolSfx	N	As per the order message.
76	ExecBroker	N	As per the order message.
99	StopPx	N	As per the order message.
126	ExpireTime	N	As per the order message.
150	ExecType	Y	Valid values: 1 = Partially filled 2 = Filled

Tag	Field Name	Req'd	Comments
151	LeavesQty	Y	Amount of shares open for further execution.
5149	Memo	N	As per the order message.
9214	SMBnchdFlag	N	As per the order message.
9863	ContraClearingAcct	N	Number of the clearing firm associated with the order entry firm.
	<i>Standard Trailer</i>	Y	

4.3.4.6 Pending Cancel (N to OE)

NASDAQ sends this message to an order entry firm when NASDAQ receives an order entry firm's cancel request message and FIX ACES has accepted that cancel request message.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	Contains the value provided by the order entry firm on the cancel request.
6	AvgPx	Y	0 (zero)
11	ClOrdID	Q	As per the cancel request.
14	CumQty	Y	Current total executed quantity against this order when the cancel request was received.
17	ExecID	Y	0
18	ExecInst	N	As per the order message.
20	ExecTransType	Y	For this pending message: 0 = New
37	OrderID	Y	If available, the OrderID assigned by the market maker.
38	OrderQty	Y	The order's original quantity.
39	OrdStatus	Y	6 = pending cancel
41	OrigClOrdID	Y	Returns your unique id of the order to be canceled.
54	Side	Y	As per the order message.
55	Symbol	Y	As per the order message.
59	TimeInForce	N	If present on the original order, it is returned here.
65	SymbolSfx	N	As per the order message.
150	ExecType	Y	6 = pending cancel
151	LeavesQty	Y	0
5149	Memo	N	As per the cancel request.
	<i>Standard Trailer</i>	Y	

4.3.4.7 Rejected Cancel (N to OE)

Order entry firms receive this message when NASDAQ rejects a cancel request.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 9
11	ClOrdID	Y	As per the cancel request.
37	OrderID	Y	If available, the OrderID assigned by the market maker.
39	OrdStatus	Y	Order status after the cancel reject is applied.
41	OrigClOrdID	Y	Returns your unique ID of the original order that was attempted to be canceled.
58	Text	N	Where possible, coded message to explain reason for rejection. Reject codes are in section 5.
102	CxlRejReason	N	Code to identify reason for cancel rejection. Valid values: 0 = Too late to cancel 1 = Unknown order 2 = Broker Option 3 = Order already in Pending Cancel or Pending Replace status
5149	Memo	N	As per the cancel request.
	<i>Standard Trailer</i>	Y	

4.3.4.8 Cancel Confirmation (N to OE)

NASDAQ sends this message to an order entry firm when NASDAQ receives a market maker's cancel confirmation message (section 4.3.3.4).

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	This field contains the value you sent on the original cancel message.
6	AvgPx	Y	0 (zero)
11	ClOrdID	Q	As per the cancel request.
14	CumQty	Y	For a cancel, this represents the total executed quantity against this order when the cancel occurred.
17	ExecID	Y	If available, the ExecID provided by the market maker.
18	ExecInst	N	As per the order message.
20	ExecTransType	Y	0 = New
37	OrderID	Y	If available, the OrderID assigned by the market maker.
38	OrderQty	Q	The order's original quantity.
39	OrdStatus	Y	4 = cancelled
40	OrdType	N	As per the order message.
41	OrigClOrdID	Y	Returns your unique id of the original order - the order to be canceled.
54	Side	Y	As per the order message.
55	Symbol	Y	As per the order message.
59	TimeInForce	N	As per the order message.
65	SymbolSfx	N	As per the order message.
126	ExpireTime	N	Time/Date of order expiration expressed in UTC. This tag is required if 59 = 6.
150	ExecType	Y	4 = cancelled
151	LeavesQty	Y	0
5149	Memo	N	As per the cancel request.
9214	SMBnchdFlag	N	As per the order message.
	<i>Standard Trailer</i>	Y	

4.3.4.9 Cancel Decline (N to OE)

NASDAQ sends this message to an order entry firm when NASDAQ receives a market maker's cancel decline message (section 4.3.3.5).

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	This field contains the value you sent on the original cancel message.
6	AvgPx	Y	0 (zero)
11	ClOrdID	Q	As per the cancel request.
14	CumQty	Y	0
17	ExecID	Y	If available, the ExecID provided by the market maker.
18	ExecInst	N	As per the order message.
20	ExecTransType	Y	0 = New
37	OrderID	Y	If available, the OrderID assigned by the market maker.
38	OrderQty	Q	The order's original quantity.
39	OrdStatus	Y	Status at the time of the cancel request.
40	OrdType	N	As per the order message.
41	OrigClOrdID	Q	ClOrdID of the order that you attempted to cancel.
44	Price	Q	As per the order message.
54	Side	Y	As per the order message.
55	Symbol	Y	As per the order message.
58	Text	N	Where possible, coded message to explain reason for rejection. Reject codes are in section 5.
59	TimeInForce	N	As per the order message.
65	SymbolSfx	N	As per the order message.
99	StopPx	N	As per the order message.
102	CxlRejReason	N	Code to identify reason for cancel rejection. Valid values: 0 = Too late to cancel 1 = Unknown order 2 = Broker Option 3 = Order already in Pending Cancel or Pending Replace status
126	ExpireTime	N	Time/Date of order expiration expressed in UTC. This tag is required if 59 = 6.
150	ExecType	Y	8 = Rejected

Tag	Field Name	Req'd	Comments
151	LeavesQty	Y	0
5149	Memo	N	As per the cancel request.
9214	SMBnchdFlag	N	As per the order message.
	<i>Standard Trailer</i>	Y	

4.3.4.10 Pending Cancel/Replace (N to OE)

NASDAQ sends this message to an order entry firm when NASDAQ receives an order entry firm's cancel/replace request message and FIX ACES has accepted that cancel/replace request message.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	This field is limited to 20 characters.
6	AvgPx	Y	0 (zero)
11	ClOrdID	Q	As per the cancel/replace request.
14	CumQty	Y	For a pending cancel/replace, this represents the current total executed quantity against this order when the cancel request was received.
17	ExecID	Y	0
18	ExecInst	N	As per the order message.
20	ExecTransType	Y	For this pending message: 0 = New
37	OrderID	Y	If available, the OrderID assigned by the market maker.
38	OrderQty	Y	The order's original quantity.
39	OrdStatus	Y	E = pending replace
41	OrigClOrdID	Y	Returns your unique id of the order to be canceled.
54	Side	Y	As per the order message.
55	Symbol	Y	As per the order message.
59	TimeInForce	N	As per the order message.
65	SymbolSfx	N	As per the order message.
150	ExecType	Y	E = Pending Replace
151	LeavesQty	Y	For a pending cancel/replace, this represents the current leaves quantity for this order when the cancel/replace request was received.
5149	Memo	N	As per the cancel/replace request.
	<i>Standard Trailer</i>	Y	

4.3.4.11 Rejected Cancel/Replace (N to OE)

Order entry firms receive this message when NASDAQ rejects a cancel/replace request.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 9
11	ClOrdID	Y	As per the cancel/replace request.
37	OrderId	Y	If available, the OrderID assigned by the market maker.
39	OrdStatus	Y	Status at the time of the cancel/replace request.
41	OrigClOrdID	Y	Returns your unique ID of the order that you attempted to replace.
58	Text	N	Where possible, coded message to explain reason for rejection. Reject codes are in section 5.
102	CxlRejReason	N	Code to identify reason for cancel rejection. Valid values: 0 = Too late to cancel 1 = Unknown order 2 = Broker Option 3 = Order already in Pending Cancel or Pending Replace status
5149	Memo	N	As per the cancel/replace request.
	<i>Standard Trailer</i>	Y	

4.3.4.12 Cancel/Replace Confirmation (N to OE)

NASDAQ sends this message to an order entry firm when NASDAQ receives a market maker's cancel/replace confirmation message (section 4.3.3.6).

This message is also sent unsolicited after a corporate action. Receipt of this UM is optional.

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	This field contains the value you sent on the original cancel/replace message.
6	AvgPx	Y	0 (zero)
11	ClOrdID	Q	As per the cancel/replace request.
14	CumQty	Y	Currently executed shares for chain of orders.
17	ExecID	Y	If available, the ExecID provided by the market maker.
18	ExecInst	N	As per cancel/replace message.
20	ExecTransType	Y	0 = New
37	OrderID	Y	If available, the OrderID assigned by the market maker.
38	OrderQty	Q	As per cancel/replace message.
39	OrdStatus	Y	5 = replaced
40	OrdType	N	As per cancel/replace message.
41	OrigClOrdID	Q	ClOrdID of the order that you are cancel/replacing.
44	Price	Q	As per cancel/replace message.
54	Side	Y	As per cancel/replace message.
55	Symbol	Y	As per cancel/replace message.
59	TimeInForce	N	As per cancel/replace message.
65	SymbolSfx	N	As per cancel/replace message.
99	StopPx	N	As per cancel/replace message.
126	ExpireTime	N	Time/Date of order expiration expressed in UTC. This tag is required if 59 = 6.
150	ExecType	Y	5 = replace
151	LeavesQty	Y	0
5149	Memo	N	As per cancel/replace request.
9214	SMBnchdFlag	N	As per cancel/replace message.
	<i>Standard Trailer</i>	Y	

4.3.4.13 Cancel/Replace Decline (N to OE)

NASDAQ sends this message to an order entry firm when NASDAQ receives a market maker's cancel/replace decline message (section 4.3.3.7).

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	This field contains the value you sent on the original cancel/replace message.
6	AvgPx	Y	0 (zero)
11	ClOrdID	Q	As per the cancel/replace request.
14	CumQty	Y	0
17	ExecID	Y	If available, the ExecID provided by the market maker.
18	ExecInst	N	As per cancel/replace message.
20	ExecTransType	Y	0 = New
37	OrderID	Y	If available, the OrderID assigned by the market maker.
38	OrderQty	Q	As per cancel/replace message.
39	OrdStatus	Y	Status at the time of the cancel/replace request.
40	OrdType	N	As per cancel/replace message.
41	OrigClOrdID	Q	ClOrdID of the order that you attempted to cancel/replace.
44	Price	Q	As per cancel/replace message.
54	Side	Y	As per cancel/replace message.
55	Symbol	Y	As per cancel/replace message.
58	Text	N	Where possible, coded message to explain reason for rejection. Reject codes are in section 5.
59	TimeInForce	N	As per cancel/replace message.
65	SymbolSfx	N	As per cancel/replace message.
99	StopPx	N	As per cancel/replace message.
102	CxlRejReason	N	Code to identify reason for cancel rejection. Valid values: 0 = Too late to cancel 1 = Unknown order 2 = Broker Option 3 = Order already in Pending Cancel or Pending Replace status
126	ExpireTime	N	Time/Date of order expiration expressed in UTC. This tag is required if 59 = 6.

Tag	Field Name	Req'd	Comments
150	ExecType	Y	8 = Rejected
151	LeavesQty	Y	0
5149	Memo	N	As per cancel/replace request.
9214	SMBnchdFlag	n	As per cancel/replace message.
	<i>Standard Trailer</i>	Y	

4.3.4.14 Purged Order (N to OE)

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	This field contains the value you sent on the original order message.
6	AvgPx	Y	0 (zero)
11	ClOrdID	Q	As per the order message.
14	CumQty	Y	0
17	ExecID	Y	If available, the ExecID provided by the market maker.
18	ExecInst	N	As per the order message.
20	ExecTransType	Y	0 = New
37	OrderID	Y	If available, the OrderID assigned by the market maker.
38	OrderQty	Q	1-8 numbers that represents the number of shares.
39	OrdStatus	Y	4 = cancelled
40	OrdType	N	As per the order message.
44	Price	Q	As per the order message.
54	Side	Y	As per the order message.
55	Symbol	Y	As per the order message.
59	TimeInForce	N	As per the order message.
65	SymbolSfx	N	As per the order message.
76	ExecBroker	Q	Market Maker ID.
99	StopPx	N	As per the order message.
126	ExpireTime	N	Time/Date of order expiration expressed in UTC. This tag is required if 59 = 6.
150	ExecType	Y	8 = cancelled
151	LeavesQty	Y	0
5149	Memo	N	As per the order message.
9214	SMBnchdFlag	N	As per the order message.
	<i>Standard Trailer</i>	Y	

4.3.4.15 Order Status Response (N to OE)

NASDAQ sends this message to an order entry firm when NASDAQ receives the firm's order status request message (section 4.3.1.4).

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType = 8
1	Account	N	Value sent to you on the order status request.
6	AvgPx	Y	0 (zero)
11	ClOrdID	Q	As per the order status request.
14	CumQty	Y	Total shares executed against this order.
17	ExecID	Y	If available, the ExecID provided by the market maker.
20	ExecTransType	Y	3 = Status
37	OrderID	Y	If available, the OrderID assigned by the market maker.
38	OrderQty	Q	Original quantity of the order.
39	OrdStatus	Y	Identifies current status of order. Valid values: 0 = New 1 = Partially filled 2 = Filled 3 = Done for day 4 = Canceled 5 = Replaced 6 = Pending Cancel 7 = Stopped 8 = Rejected 9 = Suspended A = Pending New B = Calculated C = Expired D = Accepted for bidding E = Pending Cancel/Replace
44	Price	N	As per the order message.
54	Side	Y	As per the order message.
55	Symbol	Y	As per the order message.
65	SymbolSfx	N	As per the order message.

Tag	Field Name	Req'd	Comments
150	ExecType	Y	0 = new
151	LeavesQty	Y	Quantity left on the order.
	<i>Standard Trailer</i>	Y	

5 Reject Messages

5.1 Session

Sometimes, messages that are inbound to NASDAQ FIX are rejected directly, resulting in session level rejects. In these cases, you will receive a reject message (35=3) that includes the reject reason (tag 373) and detailed, specific causes of the reject (tag 58).

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>		MsgType = 3
45	RefSeqNum	Y	MsgSeqNum of Rejected message
58	Text	Q	Where possible, coded message that includes an indicator and text to explain reason for rejection. 0001 Invalid tag number 0002 Required tag missing 0003 Tag not defined for this message type 0004 Undefined Tag 0005 Tag specified without a value 0006 Value is incorrect (out of range) for tag 0007 Incorrect data format for value 0009 Signature problem 0010 Tag CompID problem 0011 SendingTime accuracy problem 0012 Invalid value for MsgType tag
371	RefTagId	N	The tag number, if appropriate, being referenced in tag 373.
372	RefMsgType	N	The message type, tag 35, of the FIX message being referenced.
373	SessionRejectReason	Q	As per FIX specifications, the reason for the reject: Valid values: 0 = Invalid tag number 1 = Required tag missing 2 = Tag not defined for this message type 3 = Undefined Tag 4 = Tag specified without a value 5 = Value is incorrect (out of range) for this tag 6 = Incorrect data format for value 7 = Decryption problem 8 = Signature problem 9 = CompID problem 10 = SendingTime accuracy problem 11 = Invalid MsgType

Tag	Field Name	Req'd	Comments
5149	Memo	N	This tag will contain the text from the message being rejected.
	<i>Standard Trailer</i>		

5.2 Business

Messages can be rejected when tag content validation fails, resulting in business level rejects. Business rejects include order, cancel, and cancel/replace rejects. In these cases, you will receive a reject message (35=8 or 35=9) that includes the reject reason (tag 103 or 102) and detailed and specific causes of the reject (tag 58). The message formats are in sections 4.3.4.2, 4.3.4.7, and 4.3.4.11.

The following table lists business reject errors that you may see in tag 58 of business level rejects.

Tag 58
0200 Client Order ID (ClOrdID) exceeds the NASDAQ specified 20-character limit
0201 Original Client Order ID (OrigClOrdID) exceeds the NASDAQ specified 20-character limit
0202 Unknown Client Order ID (ClOrdID)
0203 Unknown Original Client Order ID (OrigClOrdID)
0204 Symbol does not match symbol from original order
0205 Side does not match side from original order
0206 Invalid SenderSubID
0207 Cannot send Cancel/Replace Request while in Pending New Order state
0208 Cannot send Cancel/Replace Request while in Pending Cancel state
0214 Non-supported Order Type (OrdType) value
0217 Non-supported Time In Force (TimeInForce) value
0219 Cannot send Cancel/Replace Request while in Pending Replace state
0220 Too Late To Cancel
0221 Price must be present on Limit Order
0216 Non-supported Side Value
0223 Cancel NACKed by NASDAQ Market Center - Not accepted
0224 No Client Order ID (ClOrdID)/Invalid ClOrdID provided
0225 No Original Client Order ID (ClOrdID) provided
0226 Invalid TargetSubID
0227 Invalid HandlInst
0228 Price not allowed on Market order

Tag 58
0229 Invalid Dispatch
0230 Order Rejected By NASDAQ Market Center
0231 Invalid Order Capacity
0232 Transaction Time is Missing
0233 PossDup Flag Must be Y or N or None
0234 PossResend Flag Must be Y or N or None
0235 Invalid Bunched Indicator
0236 Error UM has been processed - Possible Duplicate
0237 Cannot send Cancel Request while in Pending New Order state
0238 Cannot send Cancel Request while in Pending Cancel state
0239 Cannot send Cancel Request while in Pending Replace state
0240 Order Already Cancelled
0241 Client Order ID must be Alphanumeric
0300 Invalid Size
0301 Invalid Reserve/Refresh Size
0302 Order Not Accepted No Attributable Orders
0303 Too Late To Cancel
0304 Not Within Allowable Time
0305 MPID Not Authorized
0306 Size Over Limit
0307 Size Smaller Than Default
0308 Invalid Delta Update No Reserve Size
0309 Excessive Open Order Quantity
0310 Cannot Reinstate a Quote
0310 Cannot Reinstate - Order Not Purged
0311 Violation Shortsale Rule
0312 Order Rejected Due to Anti-Internalization
0313 Security in Trade Halt
0314 Security in Quote Halt
0315 Issue Set to Delete
0316 Order Not Executable
0317 Preferenced Order Not Executable
0318 Preferenced Order Not Executable
0319 Action Rejected
0320 Order Not Found

Tag 58
0321 Cannot Lock/Cross Market
0322 Quote Not Found
0323 Order Not Executed
0324 Invalid Update No Open Qty
0325 Cannot Cancel Quote
0326 Cannot Cancel/Replace Quote
0327 No Display Quote For Destination MPID
0328 [This message varies in meaning. The text following this message number explains the reason for the reject. Please see the explanation of this reject after this table.]
0499 Order NACKed by NASDAQ Market Center - Not accepted
0500 Replaced/Filled Orders cannot be Modified
0501 Invalid Quantity
0502 Error SIDE does not match original order / not present on cancel replace
0503 Internal Error Unable to Process Message
0504 Error Duplicate CLORDID
0505 Error MsgType Not Supported
0506 Illegal character(s) in ClOrdID
0507 Error Layer6 CLORDID not found
0508 Error Outbound NSMP Message I112 Invalid
0509 Error Order Not Found
0510 Cannot Modify Side/Tif/Symbol/OrdType
0511 Account exceeds maximum length of 20
0514 Error Drop Copy I112, No Inbound Messages Allowed
0521 Unknown Exchange Destination
0522 Preferenced Market Maker Not Allowed Unless ExDestination is O
0523 Unknown TradingSessionID
0612 Temporarily Not Available
0659 Client Order ID (ClOrdID) exceeds the ACES specified 8-character limit.
0660 Original Client Order ID (OrigClOrdID) exceeds the ACES specified 8-character limit

A note about reject 0328:

Business reject messages from NASDAQ may contain the value 328, the text of which is undocumented in this specification. These values are undocumented because unique reject text may be returned to you for enhanced host processing rejects. Allowing a variable text reject through the use of tag 328 and its companion tags enables you to receive these unique rejects in unison with other methods of message delivery (API, CTCI, QIX). This flexibility eliminates the need for you to upgrade your access service software in unison with business rule changes.

While some values of 328 are known at this time, inclusion of these in the specification would result in a still incomplete list due to ongoing system changes and implementations. Instead, we have listed several examples of possible explanations for 328.

In the rare event that your FIX engine does not automatically recognize these values because of the uniqueness of the messages, then please call the FIX Support Group. See section 1.2, NASDAQ Customer Support.

Example 1:

Enter a Day or GTC order prior to 9:28, status = K. If you decrement quantity or try to cancel the order after 9:28, you will receive reject **0328 Action Pended at This Time**. Format is below, where tag 58 (reject code) = 0328 and tag 102 (reject reason) = 0 (too late to cancel)

```
8=FIX.4.2|9=162|35=9|34=149|49=NSDQ|50=S|52=20041203-
15:01:01|56=DLJP|57=03F9|11=120308061324|37=04804DT000MN|39=0|41=120308061
323|58=0328 ACTION PENDED AT THIS TIME|102=0|434=2|10=082|
```

Example 2:

Enter an On Open order prior to 9:28, status = Q. If you modify and the price is not better than the open price, you receive reject **0328 Invalid Price**. Format is below, where tag 58 (reject code) = 0328 and tag 102 (reject reason) = 0 (too late to cancel)

```
8=FIX.4.2|9=148|35=9|34=102|49=NSDQ|50=S|52=20041203-
14:28:21|56=DLJP|57=03F9|11=120308061317|37=04D04DT000MC|39=0|41=120308061
35|58=0328 INVALID PRICE|102=0|434=2|10=216|
```

Example 3:

Enter a Pegged order, where there is not an inside to peg to. You receive reject **0328 Order Not Accepted - No Current Inside**. Format is below where tag 58 (reject code) = 0328. The Order Reject Reason Tag 103 is not required and does not appear on this reject message.

```
8=FIX.4.2|9=246|35=8|34=168|49=NSDQ|50=S|52=20041203-
15:16:44|56=DLJP|57=03F9|6=0.0|11=120308061326|14=0|17=R0000000000000000120
072|18=R|20=0|31=0|32=0|37=04D04DT000N1|38=200|39=8|40=P|54=1|55=JPST|58=0
328 ORDER NOT ACCEPTED - NO CURRENT INSID|59=0|150=8|151=200|10=164|
```

Example 4:

Enter an auto-ex only order. If it cannot auto execute, you'll receive the reject **0328 Cannot Autoex - Order Rejected**. Format is below where tag 58 (reject code) = 0328. The Order Reject Reason tag 103 is not required and does not appear on this reject message.

```
8=FIX4.2|9=242|35=8|34=180|49=NSDQ|50=S|52=20041203-
15:25:42|56=DLJP|57=03F9|6=0.0|11=120308061328|14=0|17=R000000042949672970
072|20=0|31=0|32=0|37=04D04DT000N4|38=200|39=8|40=2|44=4.33|54=2|55=JPST|5
8=0328 CANNOT AUTOEX - ORDER REJECTED|59=0|150=8|151=200|10=107|
```

5.3 Application

Messages can be rejected when tag content validation fails, resulting in business level rejects. Business rejects include order, cancel, and cancel/replace rejects. In these cases, you will receive a reject message (35=8 or 35=9) that includes the reject reason (tag 103 or 102) and detailed and specific causes of the reject (tag 58). The message formats are in sections 4.3.4.2, 4.3.4.7, and 4.3.4.11.

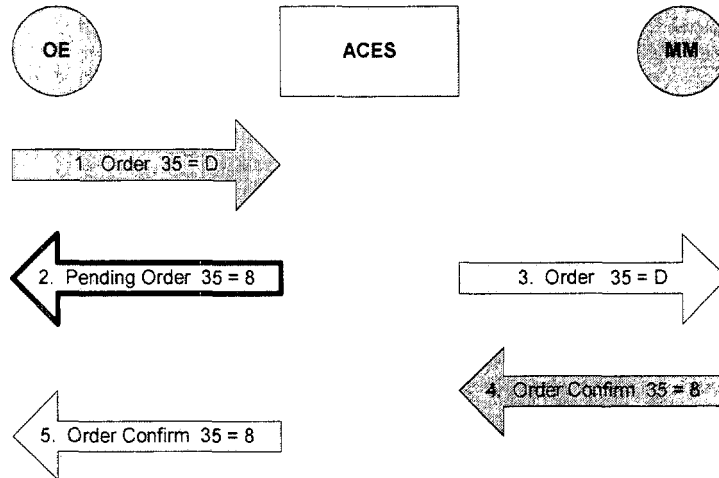
The following table lists FIX ACES reject errors that you may see in tag 58 of application level rejects. All application errors will be preceded by 5000.

Tag 58
Rej - INVALID FORMAT
Rej - NOT WITHIN ALLOWABLE HOURS
Rej - CANT FIND
Rej - MMID NOT AUTHORIZED
Rej - CONTRA FIRM NOT IN CUSTOMER FILE
Rej - NOT AUTHORIZED
Rej - FUNCTION NOT ALLOWED
Rej - INVALID BUY/SELL CODE
Rej - INVALID CUSTOMER
Rej - INVALID FORMAT
Rej - INVALID GIVEUP
Rej - INVALID PRICE
Rej - INVALID VOLUME
Rej - INVALID MM FIRM

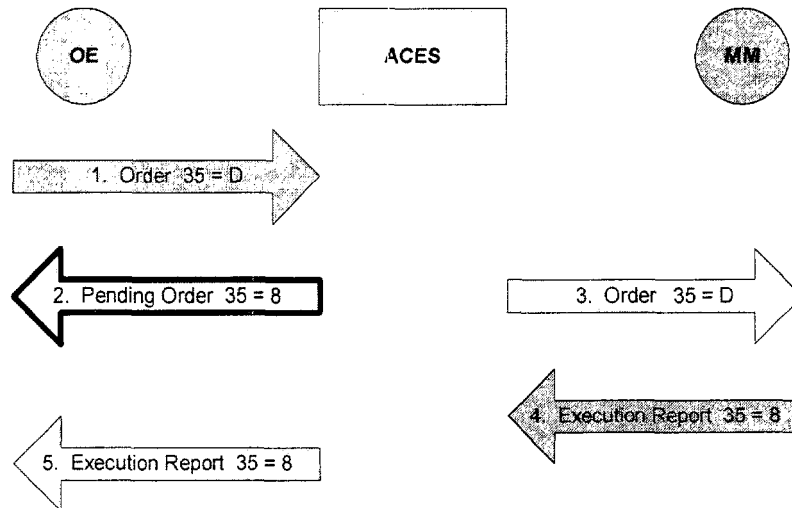
6 Appendix A: Message Flow Scenarios

Please note that bold arrows indicate messages that do not currently exist in ACES, but do exist in FIX ACES.

6.1 OE sends order and MM confirms it

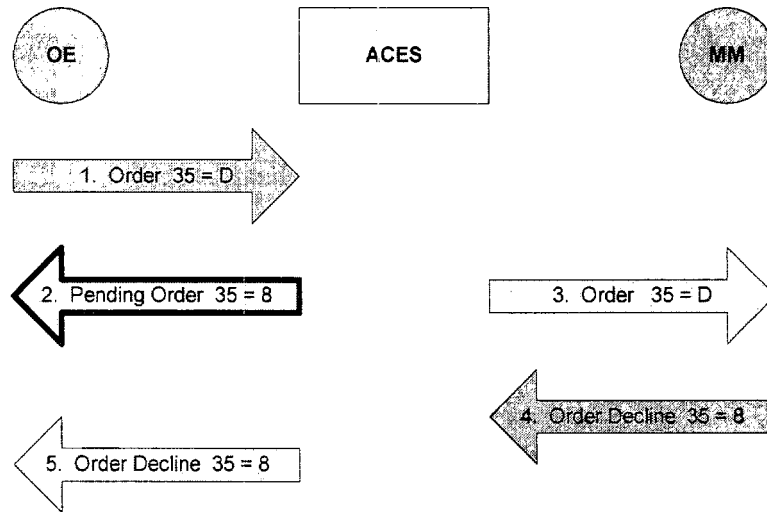


6.2 OE sends order and MM executes it

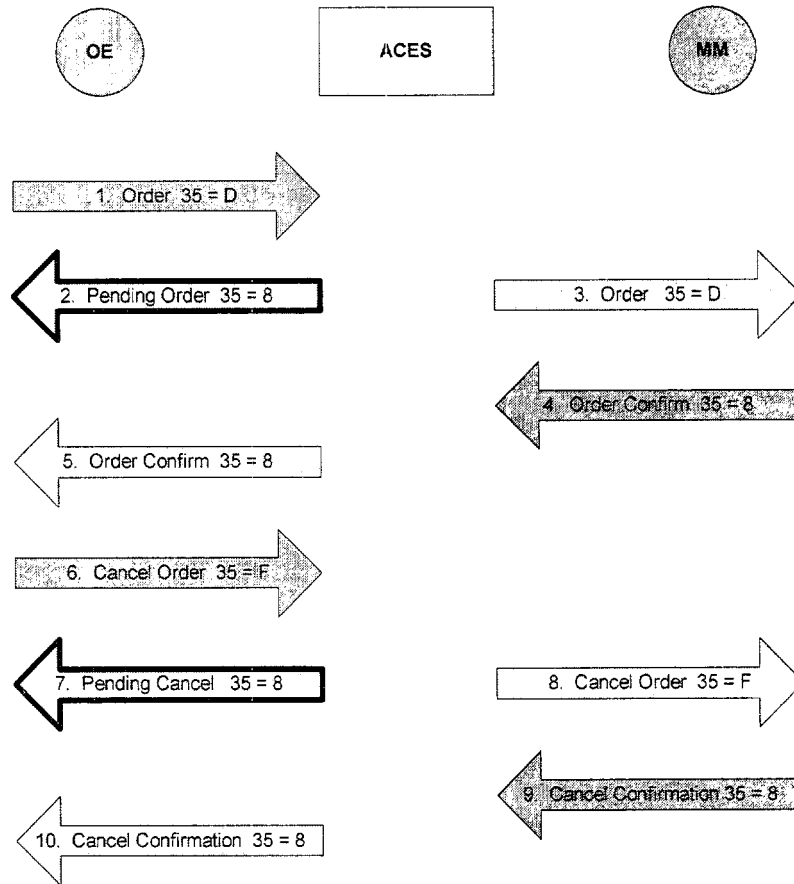


Please note that the MM could also send an Order Confirmation message prior to the execution report. Order Confirmation messages are optional.

6.3 OE sends order and MM declines it

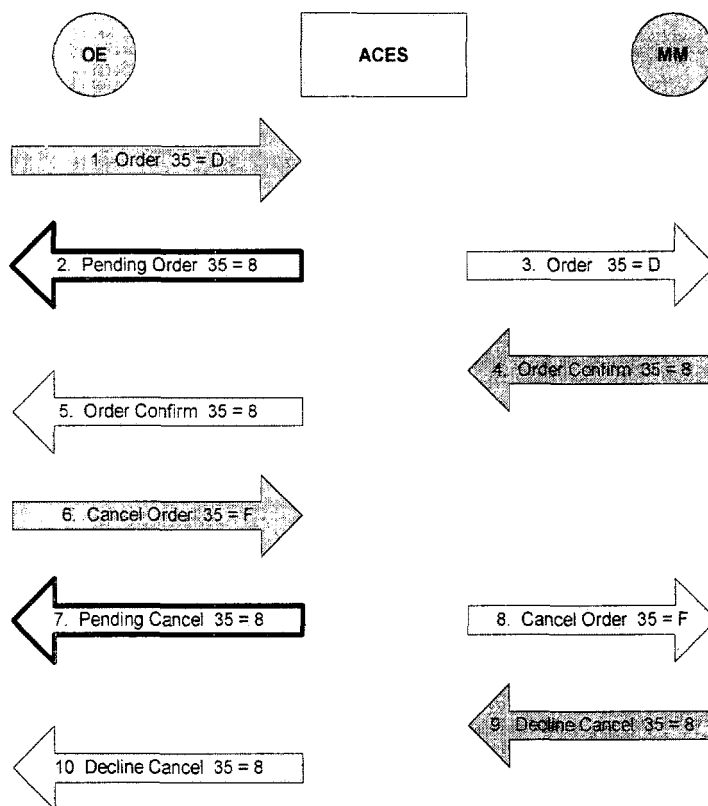


6.4 OE cancels order and MM confirms cancel



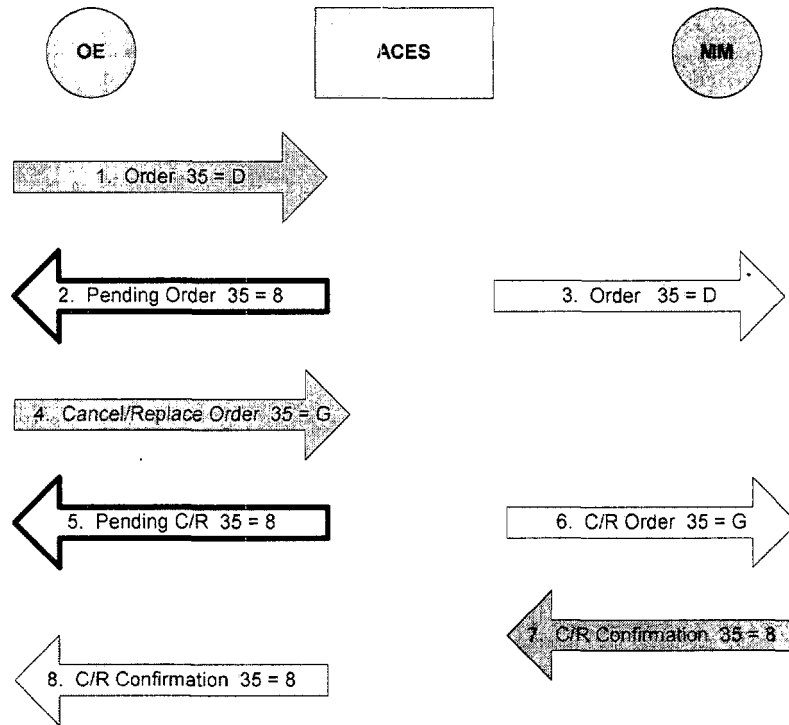
Please note that the MM is under no obligation to send an Order Confirm message. This scenario could exclude steps 4 and 5.

6.5 OE cancels order and MM declines cancel

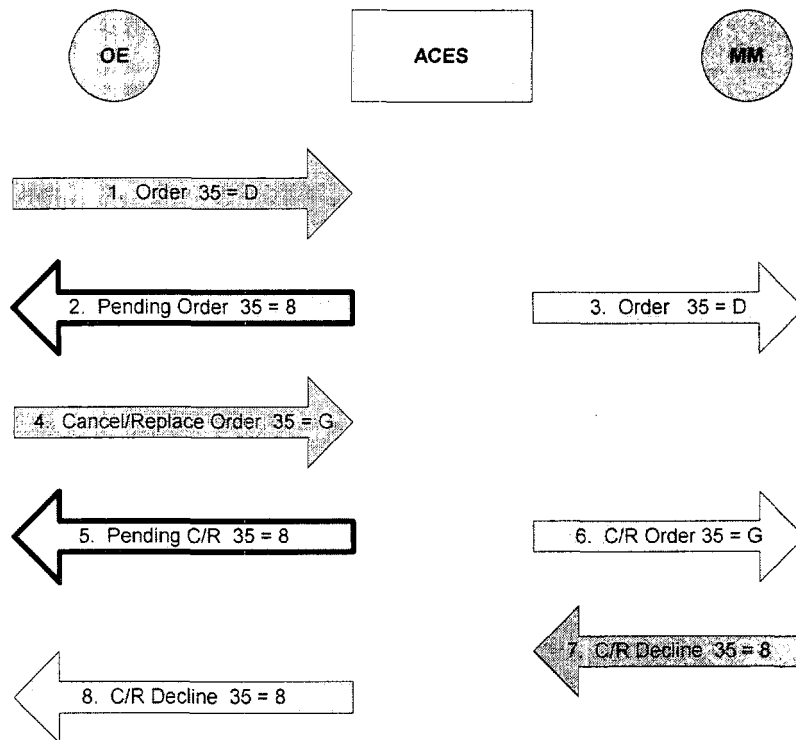


Please note that the MM is under no obligation to send an Order Confirm message. This scenario could exclude steps 4 and 5.

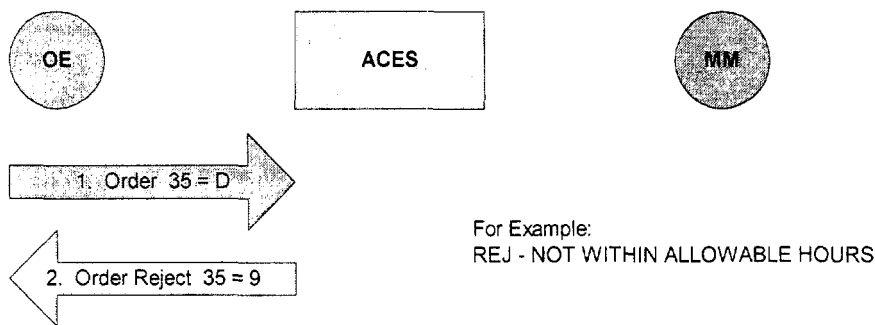
6.6 OE cancel/replaces order and MM confirms cancel/replace



6.7 OE cancel/replaces order and MM declines cancel/replace

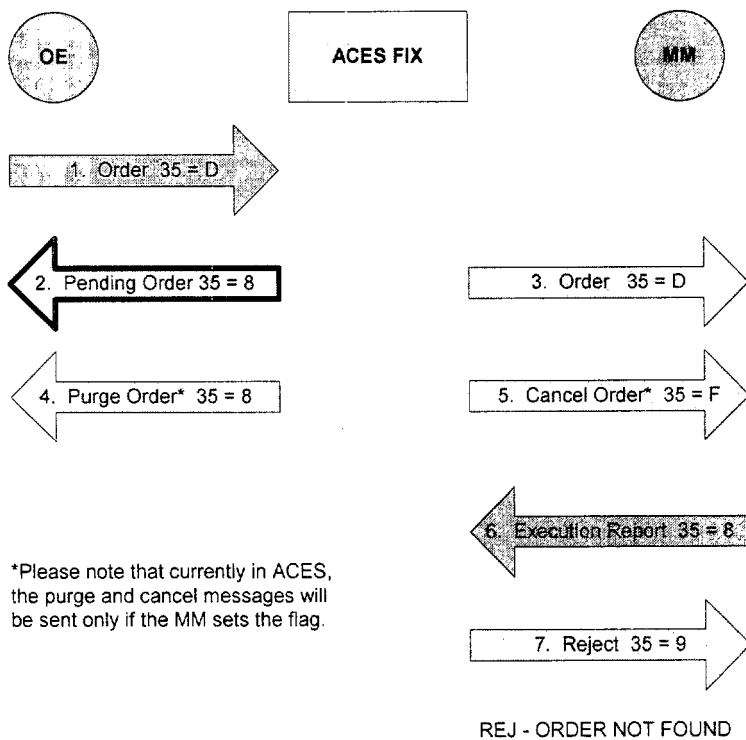


6.8 OE sends order and FIX ACES rejects it

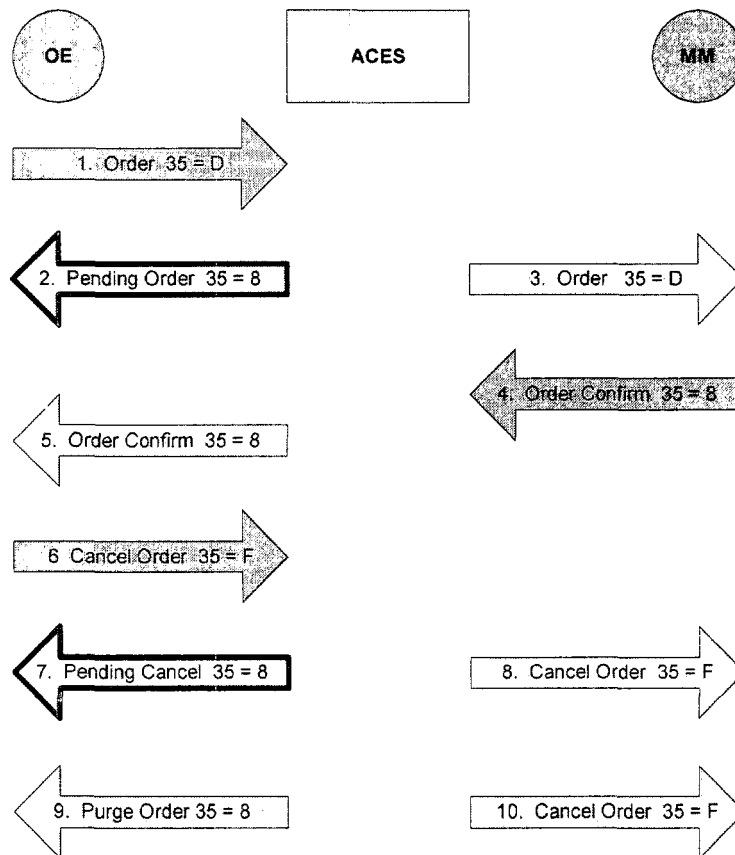


6.9 FIX ACES purges open order

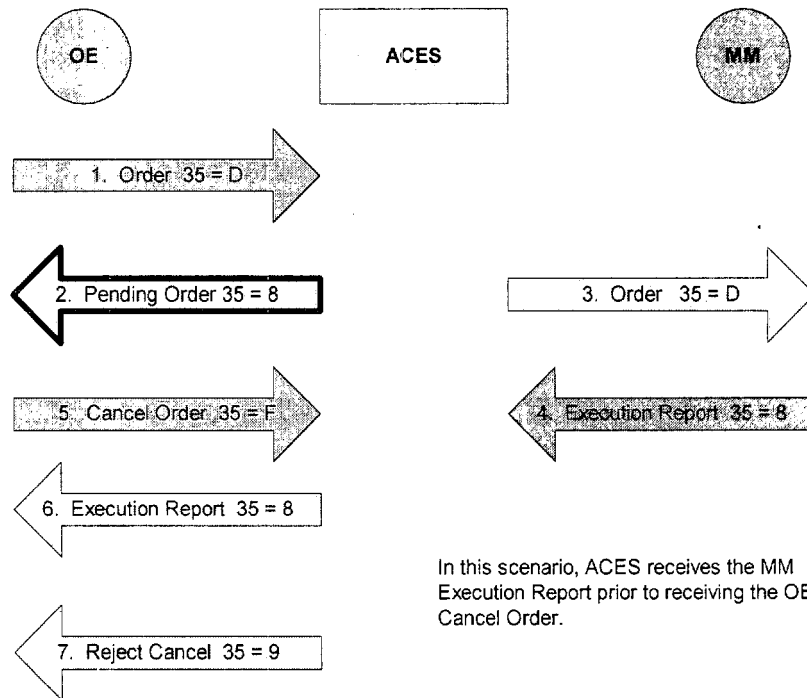
This DAY order is purged at the end of the day - when it expires - because it has not been executed.



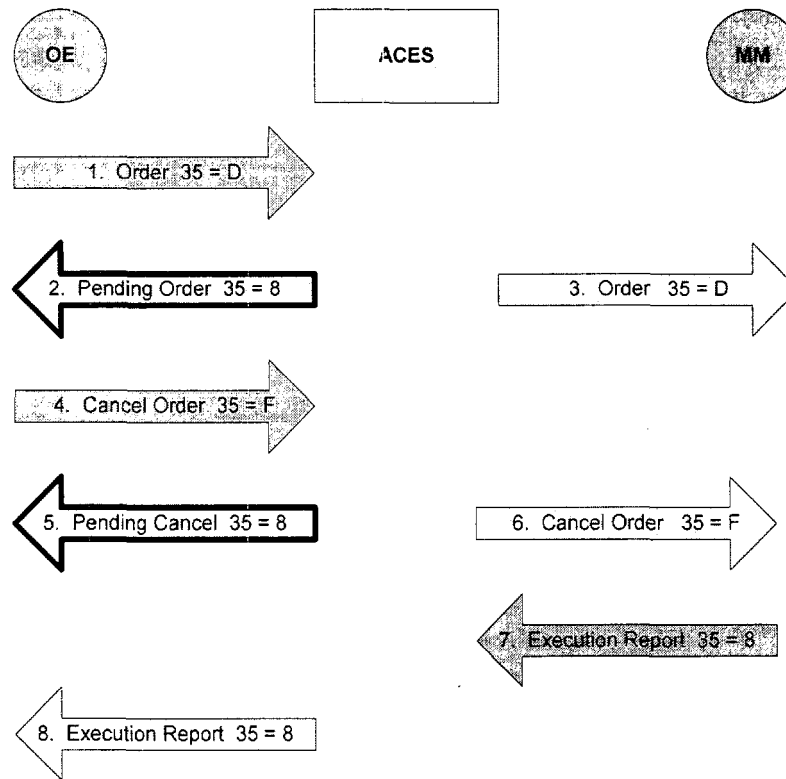
6.10 FIX ACES purges pending cancel order



6.11 OE cancels order while MM execution is in flight

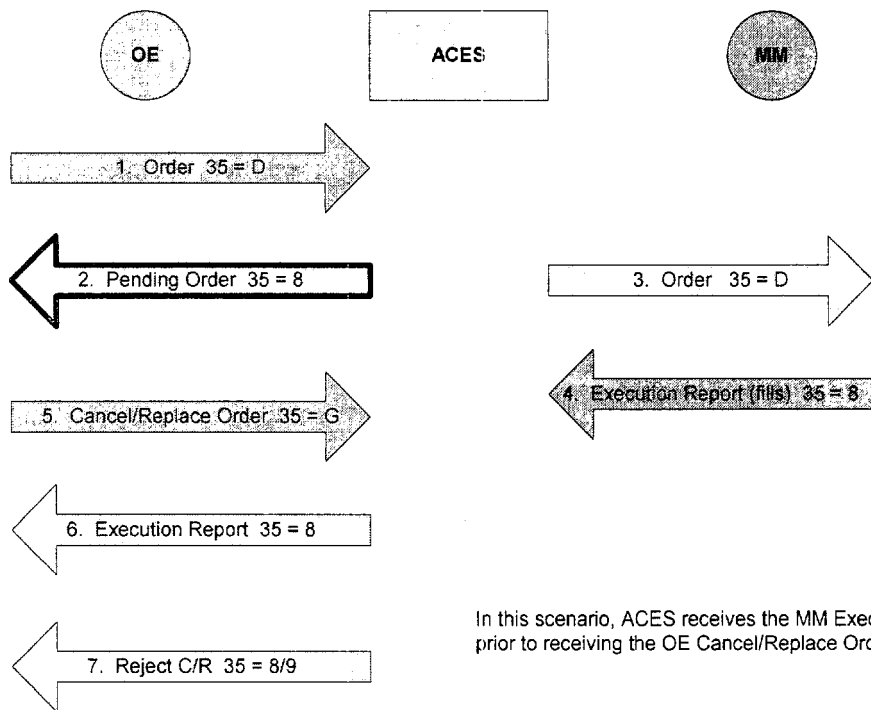


6.12 MM executes order while OE cancel is in flight

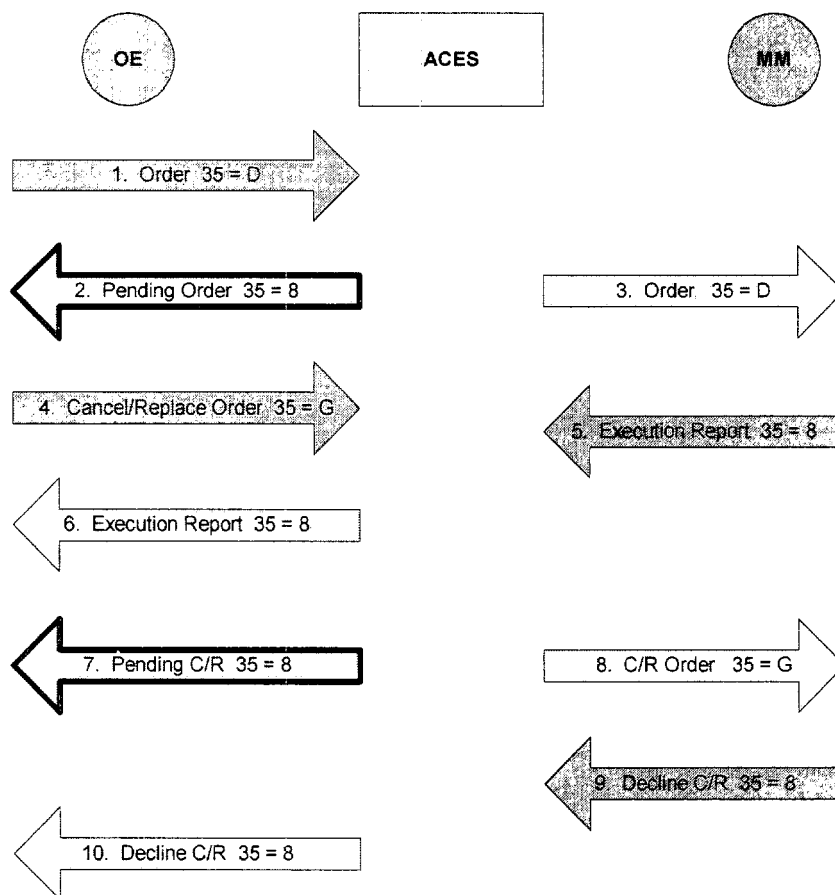


In this scenario, ACES receives the OE Cancel Order prior to receiving the MM Execution Report. The order will execute, as in scenario 15, but the OE will not receive a reject cancel message.

6.13 OE decreases quantity while MM execution (fills) is in flight

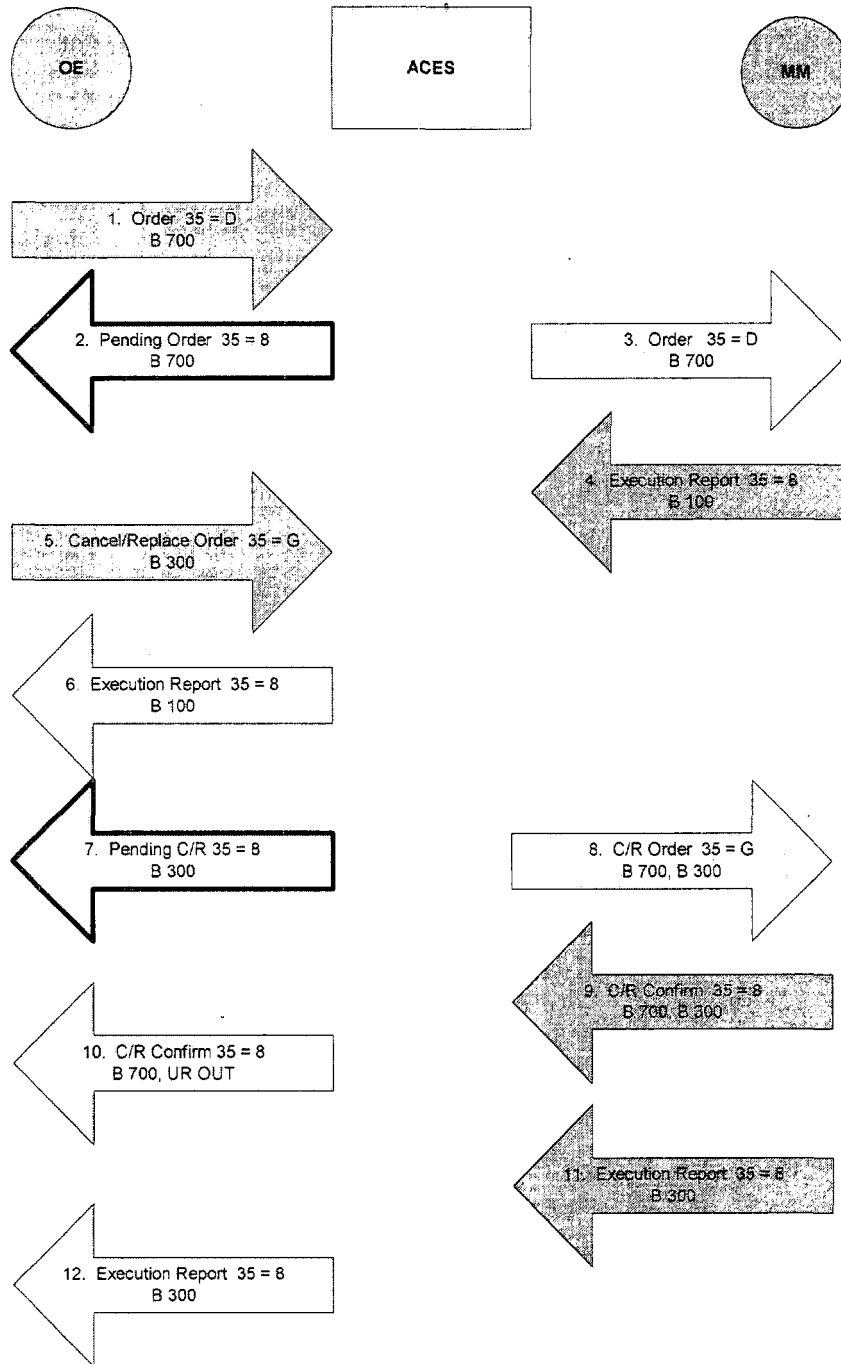


6.14 MM executes order while cancel/replace is in flight

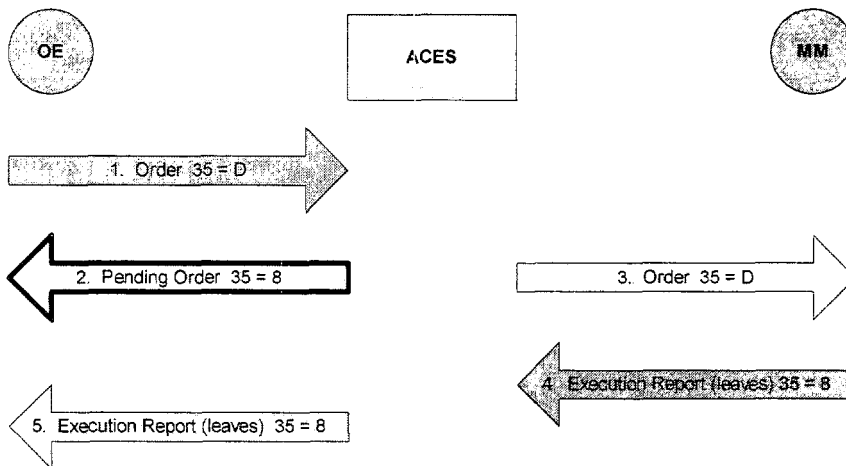


In this scenario, ACES receives the OE Cancel/Replace Order prior to receiving the MM Execution Report.

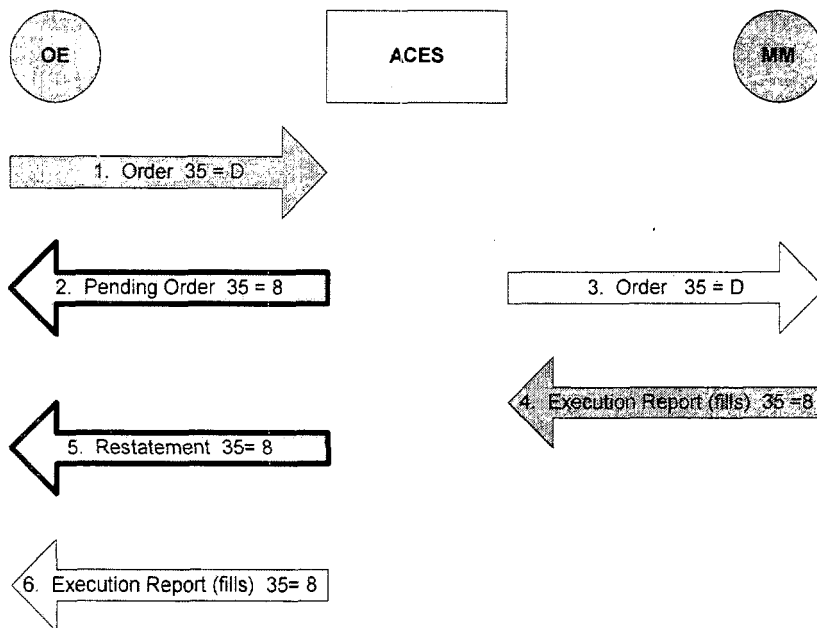
6.15 OE decreases quantity while MM execution (leaves) is in flight



6.16 MM executes 500 shares of a 1000 share order (leaves)

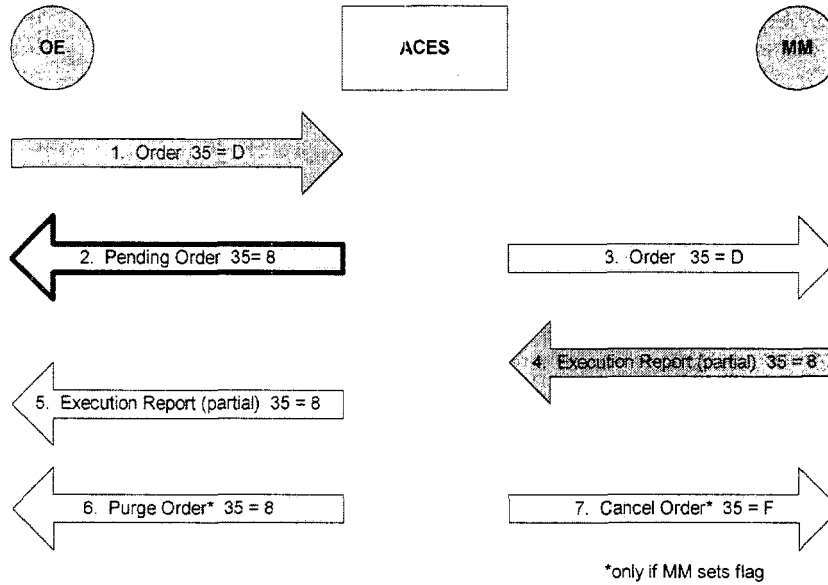


6.17 MM executes 500 shares of a 1000 share order (fills)



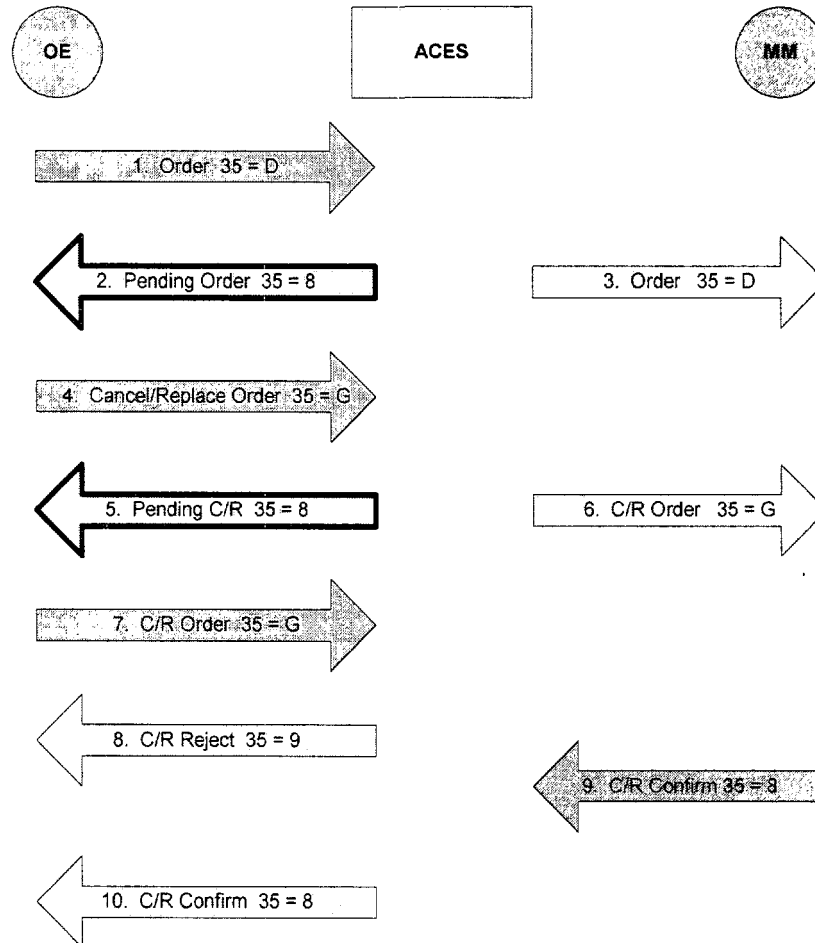
6.18 MM executes partial order and FIX ACES purges remainder at expiration

In this case, the MM did not designate leaves or fills.



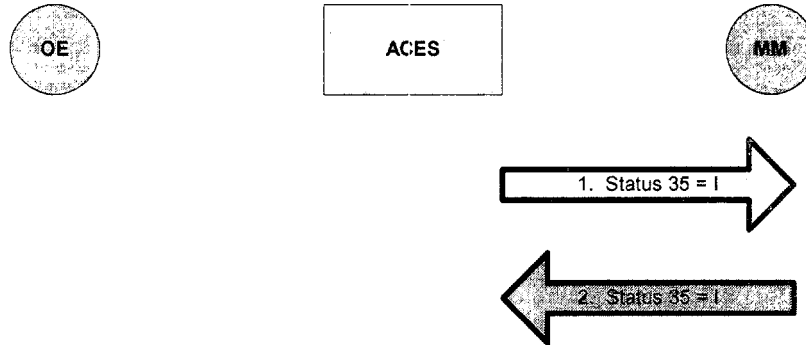
6.19 OE submits a cancel/replace while another is in flight

Both of these cancel/replace messages are for the same order.

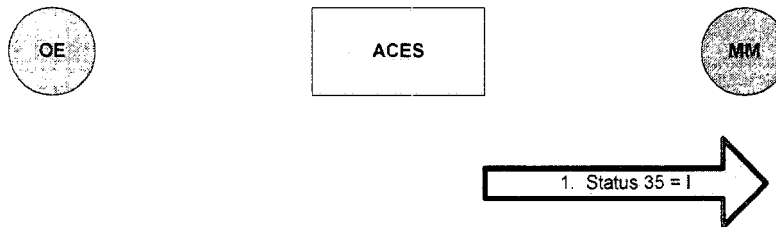


6.20 FIX ACES sends status request and MM responds

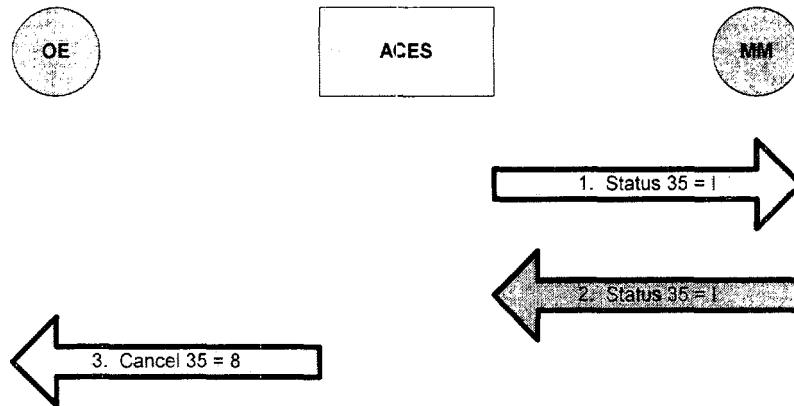
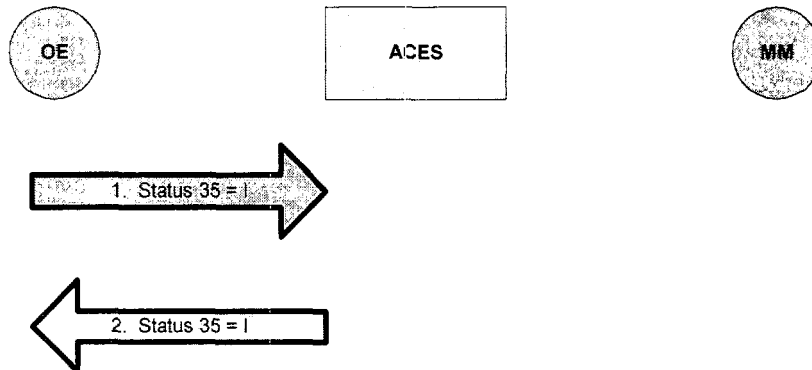
The MM response status is the same as FIX ACES state. If not, then FIX ACES will adjust its book to reflect the market maker's.



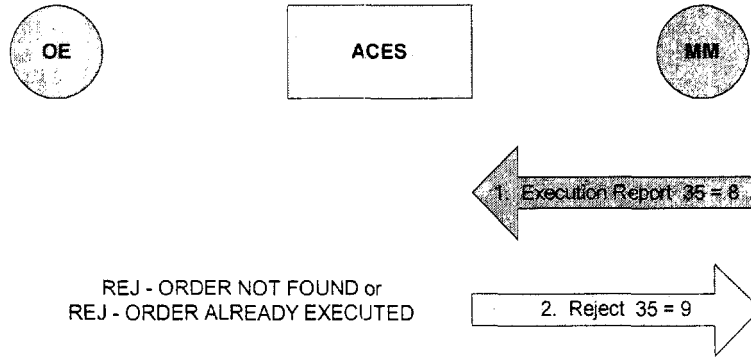
6.21 FIX ACES sends status request and MM does not respond

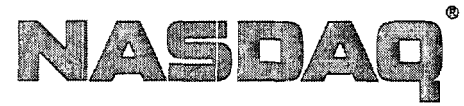


In this situation, orders in pending cancel or pending cancel/replace state revert to their prior state. DAY orders will be purged, as we do today. All other orders will remain open.

6.22 FIX ACES sends status request and MM responds with Do Not Know**6.23 OE sends status request and FIX ACES responds**

6.24 MM sends execution report and order is not open on FIX ACES book





**Computer-to-Computer Interface (CTCI)
Programming Specifications**

September 13, 2005

version 2005-07

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Table of Contents

1	Introduction	6
1.1	Document Overview	6
1.2	CTCI Overview	7
1.3	Allowable Subscriber Entry Times	8
1.4	NASDAQ Customer Support Information	9
1.5	Communication Protocols	10
2	Standard Input Messages	11
2.1	General Message Format	12
2.1.1	Message Header Format	12
2.1.2	Message Body Format	12
2.1.3	Message Trailer Format	13
2.2	Application Messages	15
2.2.1	Message Header Format	15
2.2.2	Message Body Format	17
2.2.3	Message Trailer Format	17
2.3	Admin Messages	18
2.3.1	Message Header Format	18
2.3.2	Message Body Format	19
2.3.3	Message Trailer Format	19
2.4	SUPER Messages	21
2.4.1	Message Header Format	21
2.4.2	Message Body Format	21
2.4.3	Message Trailer Format	24
3	Standard Output Messages	25
3.1	General Message Format	25
3.1.1	Message Header Format	25
3.1.2	Message Body Format	27
3.1.3	Message Trailer Format	27
3.1.4	Message Numbers	28
3.2	SUPER Messages	30
3.2.1	Message Acknowledgment	30
3.2.1.1	Acknowledgement Message Body Format #1	30
3.2.1.2	Acknowledgement Message Body Format #2	30
3.2.2	Number Gap Message	31
3.3	Reject Messages	33
3.3.1	Switch Reject Messages	33
3.3.2	Application Reject Messages	34
4	ACES Application Messages	36
4.1	Order Entry Firm to ACES	37
4.1.1	Order Entry	37
4.1.2	Cancel Order	39
4.1.3	Cancel/Replace	40
4.2	ACES to Market Maker	43
4.2.1	Market Maker Order	43
4.2.2	Cancel	45
4.2.3	Cancel/Replace	46
4.3	Market Maker to ACES	48
4.3.1	Order Confirm	48

4.3.2	Reject	49
4.3.3	Execution Report	51
4.3.4	Cancel Confirmation	53
4.3.5	Reject Cancel	54
4.3.6	Cancel/Replace Confirmation	55
4.3.7	Reject Cancel/Replace	57
4.3.8	Update Corporate Action (Stock Split and Dividend Adjustment)	59
4.3.9	Cancel Corporate Action	61
4.4	ACES to Order Entry Firm	62
4.4.1	Order Confirm	62
4.4.2	Reject	63
4.4.3	Execution Report	64
4.4.4	Cancel Confirmation	66
4.4.5	Reject Cancel	68
4.4.6	Cancel/Replace Confirmation	70
4.4.7	Reject Cancel/Replace	72
4.4.8	Update Corporate Action (Stock Split and Dividend Adjustment)	74
4.4.9	Cancel Corporate Action	76
4.4.10	Purged Order	77
4.5	Application and Market Maker Reject Text	79
4.6	Recaps	80
5	NASDAQ Market Center Trading Messages	81
5.1	Input Message Formats	82
5.1.1	Order Entry	83
5.1.2	Order Cancel	91
5.1.3	Order Cancel/Replace (Version One)	94
5.1.4	Order Cancel/Replace (Version Two)	98
5.1.5	Order Mass Cancel	107
5.1.6	Order Reinstate	111
5.1.7	Order Update	114
5.2	Output Message Formats	117
5.2.1	Order Entry Acknowledgement	117
5.2.2	Order Cancel Acknowledgement	119
5.2.3	Order Cancel/Replace Acknowledgement (Version One)	121
5.2.4	Order Cancel/Replace Acknowledgement (Version Two)	124
5.2.5	Order Mass Cancel Acknowledgement	125
5.2.6	Order Reinstate Acknowledgement	127
5.2.7	Order Update Acknowledgement	129
5.2.8	Execution Reports	132
5.2.8.1	Order Entry Execution Report	132
5.2.8.2	Order Entry Execution Kill Report	136
5.2.8.3	Market Maker Execution Report	137
5.2.8.4	Market Maker Execution Kill Report	140
5.2.9	Exposure Warning Messages	141
5.2.10	NASDAQ Market Center Reject Messages	142
6	Risk Management Input Messages	149
6.1.1	Risk Management Information	149
6.1.2	Risk Management Query and Update (Function K)	153
6.1.3	Clearing Firm Inhibit/Allow Blockbuster and Sizable Trade (Function I)	155
6.1.4	Enhanced Risk Management Query and Update (Function J)	156
6.2	Risk Management Output Messages	159

6.2.1	Risk Management Query Update Response (TCAK)	159
6.2.2	Enhanced Risk Management Query Update Response (TTAJ)	161
6.2.3	Blockbuster Trade Notification (TCBT)	163
6.2.4	Sizable Trade Notification (TCST)	165
6.2.5	Net Trade Threshold Notification (TTNT/TTNP).....	166
6.2.6	Net Trade Threshold Fallback Notification (TTFB/TTFP)	170
6.3	Reject Message Format	174
6.4	End of Day Recaps	181
6.4.1	End of Day Participant Recap (TCRC)	181
6.4.2	Short Form Clearing Firm Recap (TCSR)	183
6.4.3	Clearing Firm Recap of Trades (TTFR)	185
6.5	Short Sale Reporting	188
6.6	Trade Status Tables.....	190
8	Appendix A: TCP/IP Connection	193
9	Appendix B: IBM WebSphere MQ	209

1 Introduction

1.1 Document Overview

This document contains the subscriber requirements for using NASDAQ's Computer-to-Computer Interface (CTCI) to access the NASDAQ market center¹. The document outlines only the messages transmitted via CTCI and not via other entry points to NASDAQ.

This document should be used by NASDAQ member firms acting on their own behalf and by third party software vendors/service bureaus acting on behalf of a NASDAQ participant.

The document contains these sections:

- Standard input messages;
- Standard output messages;
- ACES;
- NASDAQ market center trading;
- Appendix A: TCP/IP Connection;
- Appendix B: IBM WebSphere MQ; and

The standard input and output sections detail the formats for messages to and from the NASDAQ Switch. The other sections detail the input and output messages that are specific to a particular application. Appendix A describes how a subscriber can submit and receive messages to and from the CTCI using the TCP/IP protocol. Appendix B provides a link to *CTCI WebSphere MQ V1.1 Subscriber Intercommunication Specification*. Appendix C offers a trade reporting-specific list of terms.

These conventions are used throughout the document:

- Fields defined as required must be present in the message.
- Fields defined as alphabetic can only hold A-Z (no spaces or numbers).
- Fields defined as numeric can only hold 0-9 (no spaces or alpha characters).
- Embedded spaces cannot be entered in alphabetic or numeric fields.
- Messages are limited to 1024 characters (including the header and trailer).
- Lines within messages are limited to 253 characters, including the end-of-line delimiter.
- All lines are terminated by a CR/LF pair.
- Fields within square brackets are optional.
- Multiple fields within brackets must all be present if any are.

¹MFQS and TRACE specifications are in separate documents.
<http://www.nasdaqtrader.com/asp/ctcidisclaim4.asp#MFQS>
http://www.nasd.com/mkt_sys/trace_techspec.asp

1.2 CTCI Overview

NASDAQ provides a CTCI facility that allows subscribers to record and to report NASDAQ securities transactions from their computer systems to NASDAQ's computer systems via the NASDAQ Message Switch (Switch) using a two-way communications link over dedicated point-to-point circuits. ACES and NASDAQ market center trading are all available via the CTCI.

There are nearly 500 circuits in production, handling more than 2 million transactions a day. CTCI uses a Transmission Control Protocol/Internet Protocol (TCP/IP) interface connection that allows incremental bandwidth.

NASDAQ supports IBM WebSphere MQ over the CTCI TCP/IP interface connection. IBM WebSphere MQ, a message queue middleware that extends business applications and enables them to communicate with one another, offers customers the ability to incorporate different systems a common messaging infrastructure. CTCI TCP/IP customers may implement WebSphere MQ software to facilitate interaction between their computer-to-computer-interface and other internal systems. See Appendix B: IBM WebSphere MQ.

CTCI Frequently Asked Questions can be found on the NASDAQ Trader website at: <http://www.nasdaqtrader.com/trader/tradingservices/productservices/productdescriptions/ctcifags.stm>.

1.3 Allowable Subscriber Entry Times

Entry of	Start time	End time
ACES Orders	7:00, but will not be delivered until 8:00	18:30, but cancel and cancel/replace are accepted until the switch is taken down
ADMIN or SUPER Messages	Anytime switch is up. These are not orders but admin messages or retransmission requests.	Until switch taken down
Money Market Prices	9:00	17:55 cutoff for newspaper dissemination; can be entered until 19:00 for level one dissemination
Mutual Fund Prices	9:00	17:55 cutoff for newspaper dissemination; can be entered until 19:00 for level one dissemination
NASDAQ Market Center Trading Orders	7:30	16:00

ACES orders can be entered as early as 7:00 a.m., Eastern Time (ET), although orders entered between 7:00 a.m. and 7:59.59 a.m. will not be delivered until 8:00 a.m., ET. The ACES system will accept cancel orders after 6:30 p.m., ET, but will not accept new or cancel/replace orders at that time. There is no message delivery after 6:30 p.m., ET; therefore, no cancellation messages will be sent to either side. At 6:30 p.m., ET, all day orders are auto-canceled in the ACES system.

The **NASDAQ market center trading** pre-opening session begins at 7:30 a.m. ET, when order/quote entry is allowed. You can enter market and limit orders that will be executed during market hours (9:30 a.m. to 4:00 p.m., ET). Both Inside Calculation and Display Quote calculation also commence at 7:30 a.m. Beginning at 9:20 a.m. ET, you can send Trade or Move messages to other market participants (except for the MPID "SIZE") to attempt to resolve possible locked/crossed markets. If participants do not resolve a locked/crossed situation during the Trade or Move period, NASDAQ will implement an Auto-Ex processing system at 9:29:30 a.m. ET. Trading executions begin at 9:30 a.m. ET and end at 4:00 p.m. ET. The after-hours session closes at 6:30 p.m.

1.4 NASDAQ Customer Support Information



CTCI Help Desk 203-385-6332



CTCI E-mail SMCTCI@NASDAQ.com

Type of Support	Contact
Trade Reporting Operations	203-378-0166 203-385-6382 fax
Customer Test Support	800-288-3783
Emergency Market Close	800-677-7997
Form T Fax	240-386-5134
Market Data Integrity	203-375-9609
Market Data Integrity Fax	203-385-6381
Miscellaneous Trading Support	800-219-4861
NASDAQ Technical Support Help Desk	800-243-4284 203-385-6280 fax
Public Information	800-289-9999
Subscriber Services	800-777-5606
Trading Services	800-219-4861
Training	212-858-4424

1.5 Communication Protocols

Computerized firms that elect to use the CTCI will conform to the TCP/IP protocol detailed in Appendix A.

The subscriber is responsible for all line and equipment costs required for the use of the CTCI. In the TCP/IP environment, the system will support bandwidth from 56 kbps up to full T1 rates. A subscriber may order a redundant line(s) for backup.

CTCI permits a firm acting as a Service Bureau to interface with NASDAQ applications on behalf of multiple firms. Two station configuration methods for this Service Bureau capability are available:

1. One or more stations can be defined for each Service Bureau client. Since each client station will be configured and used just as if it were a direct link to the actual client, *no* Service Bureau-specific message formatting rules contained herein apply to this type of configuration.
2. Multiple clients can be associated to one or more Service Bureau stations. Since the Service Bureau station will be configured and used on behalf of multiple clients, *all* Service Bureau-specific message formatting rules contained herein apply to this type of configuration.

2 Standard Input Messages

The NASDAQ Message Switch supports three types of input messages:

- Application (section 2.2);
- ADMIN (section 2.3); and
- SUPER (section 2.4).

Application messages carry application-specific data in the message body to the NASDAQ application system designated in the message header. For example, an order entry message is an application message.

ADMIN messages are text messages sent to and logged in the Switch as communication checks.

SUPER messages are used to communicate with the NASDAQ Message Switch itself. These messages are used to notify the switch of the status of the user station, to turn sequence number checking on or off, to reset the sequence numbers, and to initiate retransmission of missed or lost CTCI output messages.

2.1 General Message Format

Input messages consist of:

- a message header that defines the message origin, category, and destination;
- a message body that consists of one or more lines of text; and
- an optional message trailer that consists of one line of text carrying the message sequence number.

Message headers, body, and trailers are constructed from lines of text. Each line consists of one or more data fields. All lines except the last line must be terminated with an end-of-line delimiter, which is either a Carriage Return/Line Feed pair <CR/LF> or a single Line Feed <LF> (for the sake of uniformity only the <CR/LF> pair will be used throughout this document to represent the end-of-line delimiter). Some of the data fields may be optional depending on the message category or destination. When an optional field is omitted and the result is a blank line the required end-of-line delimiter must still be provided.

Messages delivered to the NASDAQ Message Switch via TCP/IP are enclosed within a message envelope consisting of a 13-byte header and a 2-byte sentinel ("UU"). These 15 bytes are in addition to the header, body, and trailer described here. Transmission of blocked messages is not permitted, that is, each 15 byte "message envelope" must contain only one message, regardless of the message destination. Please see Appendix A: TCP/IP Connection for more details.

2.1.1 Message Header Format

Line 0: [Origin] <CR/LF>
Line 1: [Data] <CR/LF>
Line 1A: [Category] space [Destination] <CR/LF>
Blank Line: <CR/LF>

The header consists of four lines. The first line is line 0 and contains the origin of the message. The second line is line 1 and contains the data. The third line is line 1a and contains the category and destination of the message. The fourth line is always a blank line.

2.1.2 Message Body Format

Line 2: [first line of message body] <CR/LF>
Line 3: [possible 2nd line] <CR/LF>
Line n: [possible additional lines] <CR/LF>

The body consists of one or more lines. The first line is always line 2. For application messages, the content of the message body varies according to the destination application and the function being specified. For ADMIN messages, the body consists of one or more lines of user-defined text. For SUPER messages, the body consists of one or more lines of Switch-defined text.

2.1.3 Message Trailer Format

Trailer 1: [trailer data]

The trailer consists of a single line carrying the message sequence number. If the user elects to provide message sequence numbers for validation by the Switch, the message trailer line is required for all input messages. If the user elects not to provide message sequence numbers for validation by the Switch, the message trailer line can be omitted from ADMIN and application input messages. It cannot be omitted for SUPER messages. The message trailer is the last line of a message and is, therefore, never terminated with a <CR/LF>.

The NASDAQ Switch supports four input message trailer formats:

Format	Description	Examples
Format 1	A fixed 4-digit, zero-filled sequence number.	0034
Format 2	A hyphen (-), followed by a 1-4 digit sequence number.	-34
Format 3	The letters "OL" followed by an optional third alphabetic character and/or a space followed by a 1-4 digit sequence number. The sequence number can be zero-filled if desired. This sequence can appear anywhere on the last line. A space is used to separate the sequence number from any following user-defined data.	OL34 OLX 0034 [user-defined data]OLX 0034 [<u>space</u> user-defined data]
Format 4	A 1-4 digit sequence number at the beginning of the line, followed by a space and a user-defined character string starting with a <i>non-numeric</i> character. The sequence number can be zero-filled if desired.	34 <u>space</u> AXD 0034 <u>space</u> /200008041717

If a user elects to provide message sequence numbers for validation by the Switch, the following should be kept in mind:

1. The allowed range for sequence numbers is 0001 to 9999.
2. Once 9999 is reached, the number rolls over to 0001 (not 0000), and any currently outstanding gaps for the station will be erased.
3. Each station requires its own unique sequence number series.
For example:
 - The first message from Station 1 will be number 0001.
 - The second message from Station 1 will be number 0002.
 - If the next message is from Station 2, it will be number 0001, starting a new series specifically for Station 2.

4. The Switch will issue a NUMBER GAP message to any station where a gap in the provided message sequence numbers has been detected. The user is strongly urged to fill any gap (by retransmitting the missed message including the original i.e., missing, sequence number) as soon as possible, as the Switch allows only 16 outstanding gaps per station.
5. The sequence number in the required trailer of SUPER messages can have any value because this message type is never used to detect or fill a gap.
6. The station input sequence number, maintained by the Switch:
 - has value of the next expected sequence number from the user without exception;
 - has a start-of-day value of 0001;
 - can be altered programmatically with SUPER messages;
 - can be altered manually by NASDAQ Tandem Operations staff;
 - all input messages, including SUPER messages, "consume" a station input sequence number. For example, if two non-SUPER messages are sent with the legitimate sequence numbers 0041 and 0042, then two SYSTEM CHECK (SUPER) messages are sent with sequence number values of 0001 and 0100, and then another non-SUPER message is sent, then the SUPER message sequence numbers will not be flagged as out of the ordinary in any way. The non-SUPER message sent must contain the input sequence number 0045 because the two SUPER messages "consumed" the input sequence numbers 0043 and 0044.
7. The subscriber may retransmit a SUPER message, but the message will not fill a gap reported by any NUMBER GAP message. A self-addressed ADMIN message should be sent to fill a gap caused by a missed SUPER message.
8. A SUPER message should never be the first message sent to a station when a session is restored after a communication outage. If messages were in-flight when the session was lost, any SUPER message sent to stations as the first message following session reestablishment will adversely affect input gap detection, and one or more missing messages from the previous session will not be reported with a NUMBER GAP message. It is recommended that a self-addressed ADMIN message be the first message sent to stations when a session is re-established.

To read more about ADMIN messages, see section 2.3. To read more about SUPER messages, see section 3.2. Number Gap Messages are explained in section 3.2.2.

2.2 Application Messages

Application messages carry application-specific data in the message body to the NASDAQ application system designated in the message header. Please see section **Error! Reference source not found.** for additional trade reporting information.

2.2.1 Message Header Format

Input Application Message Header Format

Line 0: [Entry Originator] <CR/LF>
 Line 1: [Branch Office] space [Branch Office Seq. #] <CR/LF>
 Line 1A: **Category** space **Destination** <CR/LF>
 Blank Line: <CR/LF>

Examples for line 1:

ABCDspace1234<CRLF>

Aspace7<CRLF>

DR 2850/120601<CRLF> (optional format for ACES only)

Line	Field	Description	Req'd
0	Entry Originator	1 to 6 characters For service bureaus, the field must contain the 4-character MMID (as specified by the NASD) of the firm represented by the transaction. The NASDAQ Switch will populate the field if it is not supplied.	Y for firms acting as a service bureau & when either "PMXR" or "PMXN" is used in the destination field, even if the user is not a service bureau N for firms not acting as a service bureau
	<CR/LF>	line delimiter	Y even if the Entry Originator field is not entered
1	Branch Office*	1 to 4 alpha characters. Used to denote the firm's branch office.	Y for ACES
	Branch Office Seq. #	1 to 4 numeric characters	Y for ACES and NASDAQ market center
	Optional Entry date (ACES only)		N
	<CR/LF>	line delimiter	Y

Line	Field	Description	Req'd
1A**	Category	"ORDER" or "OTHER" For NNMS and NASDAQ market center, this field must contain the string "ORDER". For all other NASDAQ applications this field must contain the string "OTHER".	Y
	space	field separator	Y if destination is filled in
	Destination	For ACES : Must contain one of the following: A lower case "c", or "ACES" followed by a space and the MMID of the ACES market maker. If the MMID is included in the message body it can be omitted from this line. "ACESP" for messages from an ACES market maker that are to be "passed through" to the order entry firm. For NASDAQ market center : A lower case "b" followed by a space and the MMID of the preferred market maker. If not preferred, the MMID can be omitted.	Y
	<CR/LF>	line delimiter	Y
blank line	<CR/LF>	line delimiter used to separate the message header from the message body	Y

- * If you are entering a trade reporting message, the format of the branch sequence allows for 1-8 alphanumeric with embedded spaces. See section **Error! Reference source not found.**
- ** Line 1A is required for all new CTCI users. When omitted, the destination of the message is determined by the content of the SECID field in the message body. New CTCI users should always populate the destination field as omission of the destination may cause incorrect routing. Current CTCI users are encouraged to do this as well.

2.2.2 Message Body Format

ADMIN message body format is discussed in section 2.3.2. SUPER message body format is discussed in sections 3.2.1.1 and 3.2.1.2.

The body of each application message (versus SUPER or ADMIN) sent from the user to the Switch is application-specific. Please refer to one of the following sections for information about the format of the application message body:

- ACES messages are described in Section 4.
- NASDAQ market center trading messages are described in Section 5.

2.2.3 Message Trailer Format

Trailer 1: [trailer data]

The NASDAQ Switch supports four input message trailer formats:

Format	Description	Examples
Format 1	A fixed 4-digit, zero-filled sequence number.	0034
Format 2	A hyphen (-), followed by a 1-4 digit sequence number.	-34
Format 3	The letters "OL" followed by an optional third alphabetic character and/or a space followed by a 1-4 digit sequence number. The sequence number can be zero-filled if desired. This sequence can appear anywhere on the last line. A space is used to separate the sequence number from any following user-defined data.	OL34 OLX 0034 [user-defined data]OLX 0034 [<u>space</u> user-defined data]
Format 4	A 1-4 digit sequence number at the beginning of the line, followed by a space and a user-defined character string starting with a <i>non-numeric</i> character. The sequence number can be zero-filled if desired.	34 <u>space</u> AXD 0034 <u>space</u> /200008041717

2.3 Admin Messages

Input Admin messages should be used in the following recovery situations.

- A self-addressed ADMIN message should be sent in place of a SUPER message when the Switch sends the user a NUMBER GAP message (see Section 4) and the gap corresponds to a missed SUPER message; the sequence number of the missing SUPER message must be used by this ADMIN message in order to remove the gap created by the missed SUPER message. If necessary, the SUPER message can be resent after the gap has been filled by the ADMIN message.
- When a session is restored after a communications problem, an ADMIN message should be the first message sent to a station, so that the input gap detection by the Switch is accurate. An application message may also be used for this purpose.

When an ADMIN message is used as described above, it is recommended that the destination field on Line 1A be populated with a value that will cause the message to be routed back to the originator; the user can obtain the "address" for this specific purpose from the output message trailer <DestId> field, described in section 3.1.3. Such a self-addressed message not only handles the situations described above, but also proves to the user that data can flow in both directions.

2.3.1 Message Header Format

Input Admin Message Header Format

Line 0: <Originator><CR/LF>
 Line 1: <CR/LF>
 Line 1A: <Category>space<Destination><CR/LF>
 Blank Line: <CR/LF>

Line	Field	Description	Req'd
0	Entry Originator	1 to 6 characters The NASDAQ Switch will populate the field if it is not supplied.	N for firms not acting as a service bureau
	<CR/LF>	line delimiter	Y even if the Entry Originator field is not entered
1	Variable Data	0 to 253 characters Field that the CTCI subscriber may use to enter any data.	N
	<CR/LF>	line delimiter	Y
1a	Category	"ADMIN" Identifies the message category. This field must contain the string "ADMIN".	Y

Line	Field	Description	Req'd
	space	field separator	Y
	Destination	1 to 6 character address code Holds the address of the message destination. It is recommended that this field be populated with an address that will route it back to the originator (a "self-addressed" message). The NASDAQ Customer Subscriber Test group (CST) can provide the user with the appropriate destination code for use in sending themselves self-addressed Admin messages.	Y
	<CR/LF>	line delimiter	Y
blank	<CR/LF>	Blank line used to separate the message header from the message body.	Y

2.3.2 Message Body Format

Input Admin Message Body Format

Line 2: [Variable Data] <CR/LF>
Line 3 ... : [Additional Data] <CR/LF>

Line	Field	Description	Req'd
2	Variable Data	Free form text. of an Admin Message. This is a free format message containing information destined for the individual address identified in the Destination field of the message header.	Y
	<CR/LF>	line delimiter	Y
3	Additional Data	Free form additional lines of message text. Each line requires a <CR/LF> to separate it from the following line.	N

2.3.3 Message Trailer Format

Trailer 1: [trailer data]

The NASDAQ Switch supports four input message trailer formats:

Format	Description	Examples
Format 1	A fixed 4-digit, zero-filled sequence number.	0034
Format 2	A hyphen (-), followed by a 1-4 digit sequence number.	-34

Format	Description	Examples
Format 3	The letters "OL" followed by an optional third alphabetic character and/or a space followed by a 1-4 digit sequence number. The sequence number can be zero-filled if desired. This sequence can appear anywhere on the last line. A space is used to separate the sequence number from any following user-defined data.	OL34 OLX 0034 [user-defined data]OLX 0034 [<u>space</u> user-defined data]
Format 4	A 1-4 digit sequence number at the beginning of the line, followed by a space and a user-defined character string starting with a <i>non-numeric</i> character. The sequence number can be zero-filled if desired.	34 <u>space</u> AXD 0034 <u>space</u> /200008041717

2.4 SUPER Messages

Input SUPER messages are used to communicate with the NASDAQ Message Switch. These messages are used to notify the switch of the status of the user station, to turn sequence number checking on or off, to reset the sequence numbers, and to initiate retransmission of missed or lost CTCI output messages.

2.4.1 Message Header Format

Line 0: [Entry Originator] <CR/LF>
 Line 1: [Variable Data] <CR/LF>
 Line 1A: [Category] <CR/LF>
 Blank Line: <CR/LF>

Line	Field	Description	Req'd
0	Entry Originator	1 to 6 characters For service bureaus, the field must contain the 4-character MMID (as specified by the NASD) of the firm represented by the transaction. The NASDAQ Switch will populate the field if it is not supplied.	Y for firms acting as a service bureau N for firms not acting as a service bureau
	<CR/LF>	line delimiter	Y even if the Entry Originator field is not entered
1	Variable Data	0-253 characters Field which the CTCI subscriber may use to enter any data.	N
	<CR/LF>	line delimiter	Y
1a	Category	"SUPER" Identifies the message category. This field must contain the string "SUPER". SUPER messages do not have a destination field.	Y
	<CR/LF>	line delimiter	Y
blank	<CR/LF>	blank line used to separate the message header from the message body.	Y

2.4.2 Message Body Format

In order to be processed automatically by the Switch, the message body portion of a SUPER Message must match one of the expected SUPER message formats. If the text does not conform to one of the specified formats, the message will be rejected.

Line 2: [Function Text]
 Line 3-n: [Additional Lines of Text as required]

Line	Field	Description	Req'd
2	Function Text	See the following table for the supported SUPER message functions. In some cases, the Function Text may consist of multiple lines, with a <CR/LF> between each one. The last line does not require a <CR/LF> as a terminator.	Y

SUPER Message Functions

SUPER Function Text	Processing
GOOD MORNING	Indicates the subscriber is ready to begin receiving messages from the Switch.
GOOD NIGHT	Indicates the subscriber has no further traffic to send and is no longer prepared to receive traffic. This command will cause the station output queue to be drained.
SUSPEND SEQ CHECK	Instructs the Switch to suspend input sequence number checking for this subscriber station. This command is only valid if sequence checking was previously instituted.
ALLOW SEQ CHECK	Instructs the Switch to resume input sequence number checking from the next received input sequence number. This command is only valid if suspension of sequence checking was previously instituted.
SYSTEM CHECK	A test message allowing a subscriber to check its ability to communicate with the Switch.
RESET ORDER SEQ<CR/LF> nnnn or RESET ORDER SEQ<CR/LF> ANY	Instructs the Switch to expect a new input sequence number. Two options are provided: nnnn - Numeric string specifying the sequence number provided with the next input message. ANY - Literal indicating that sequence number checking is to commence from the sequence number of the next input message. Either form of this message will erase all previously created number gaps.
REVERT TO SEQ 1	Instructs the Switch to reset to start-of-day numbering in both directions (input and output). This message will erase all previously created number gaps.
RESTART LAST RCVD<CR/LF> nnnn	Instructs the Switch that a subscriber switching facility has been restored after a failure.

SUPER Function Text	Processing
	<p>The Switch will reset the next output sequence number to $nnnn + 1$, where $nnnn$ is typically the last message sequence number that had been received by the subscriber.</p>
<p>RTVL LAST OUT [mm] or RTVL OUT nnnnn mm</p> <p>Other options: ROUTE=[ADDR] ID=[SID]</p>	<p>Permits a subscriber to request a resend of messages previously transmitted by the Switch. The optional field mm is the number of messages to be retrieved and must be between 1 and 15 (default is 1). If more than 15 messages are requested then multiple SUPER messages must be used. LAST OUT mm instructs the Switch to resend the most recent mm messages.</p> <p>OUT nnnnn mm instructs the Switch to resend mm messages starting with the message which had output retrieval number nnnnn.</p> <p>Valid values for nnnnn are 1 through 65535.</p> <p>Retrieval of INPUT messages is no longer supported.</p> <p>If the "ROUTE=" option is used, the retrieved messages will be sent to <ADDR>.</p> <p>If the "ID=" option is used, the retrieved messages will be messages belonging to the station defined by <SID>.</p> <p>A station may only use the ROUTE= and ID= options if it has been granted those privileges.</p> <p>NOTE: The previous specification showed <CR/LF> after the RTVL. This is still a valid input format. However, the response to this command echoes this information as a single line, i.e., no <CR/LF> after RTVL. While both formats are acceptable, we choose to represent it in this spec with a single line in an attempt to avoid confusion.</p>
<p>NUMBER GAP nnnnn or NUMBER GAP nnnnn nnnnn</p> <p>Other options: ROUTE=[ADDR] ID=[SID]</p>	<p>As input to the Switch:</p> <p>Indicates that a subscriber has detected a gap in the Switch assigned output sequence number and is requesting the resend of the message originally sent with retrieval number nnnnn. The Switch will resend the related message with a new output sequence number; the optional second trailer line in the output message will indicate the retrieval number previously assigned to the message i.e., nnnnn.</p> <p>Up to two messages can be retrieved by a single NUMBER GAP message (nnnnn nnnnn denotes 2 distinct retrieval numbers, not a range).</p> <p>Valid values for nnnnn are 1 through 65535 only.</p>

SUPER Function Text	Processing
	<p>See the discussion of the RTVL command for info about the optional ROUTE= and ID= fields.</p> <p>NOTE: The previous specification showed <CR/LF> after the NUMBER GAP. This is still a valid input format. However, the response to this command echoes this information as a single line, i.e., no <CR/LF> after NUMBER GAP. While both formats are acceptable, we choose to represent it in this spec with a single line in an attempt to avoid confusion.</p>

Because the station output queue is a first-in-first-out (FIFO) queue, the subscriber CTCI design must take into account the fact that SUPER message rejects and acknowledgements are always appended to the existing (and potentially deep) queue. There is currently no way to push output messages onto the top of an output queue.

2.4.3 Message Trailer Format

Trailer 1: [trailer data]

The NASDAQ Switch supports four input message trailer formats:

Format	Description	Examples
Format 1	A fixed 4-digit, zero-filled sequence number.	0034
Format 2	A hyphen (-), followed by a 1-4 digit sequence number.	-34
Format 3	The letters "OL" followed by an optional third alphabetic character and/or a space followed by a 1-4 digit sequence number. The sequence number can be zero-filled if desired. This sequence can appear anywhere on the last line. A space is used to separate the sequence number from any following user-defined data.	OL34 OLX 0034 [user-defined data]OLX 0034 [spaceuser-defined data]
Format 4	A 1-4 digit sequence number at the beginning of the line, followed by a space and a user-defined character string starting with a <i>non-numeric</i> character. The sequence number can be zero-filled if desired.	34spaceAXD 0034space/200008041717

3 Standard Output Messages

3.1 General Message Format

Output messages consist of:

- a message header that defines the start of the message, its origin, its destination, its output sequence number, and the message type;
- a message body that consists of one or more lines of text; and
- an optional message trailer that carries the date and time, the message retrieval number, and other information.

Messages sent from the NASDAQ Message Switch via TCP/IP are enclosed within a message envelope consisting of a 13-byte header and a 2-byte sentinel ("UU"). These 15 bytes are in addition to the header, body, and trailer described here. Please see Appendix A for more details.

Message headers and trailers are constructed from lines of text. Each line consists of one or more data fields and is terminated by a Carriage Return/Line Feed pair <CR/LF>.

An output message header consists of up to 4 fields with a user defined field separator between each field. The separator defaults to space if the user has not specified something else. The user can select which fields they would like to receive and can specify the order in which the fields should be placed in the header.

Assuming that the user has elected to receive all fields in the default order, the format is as follows:

3.1.1 Message Header Format

The message header format is one line containing four fields. The field separators can, however, be <CR/LF>, which makes the message header four lines.

```
Line 1:      [Destination Code]   [field separator]
             [Originator Code]  [field separator]
             [Sequence Number]  [field separator]
             [Message Type]     <CR/LF>
```

Line	Field	Description
1	Destination Code	The Destination Code is a 1-6 character identifier that defaults to the Station ID of the user. The user may specify a custom code. Custom codes may also be specified for each message. See field 4. The user may elect not to receive this field.
	Field Separator	The field separator is defined by the user (<u>space</u> , <CR/LF>, <LF>, etc.). If the user does not specify a separator, a <u>space</u> is used by default.

Line	Field	Description
	Originator Code	The Originator Code is a 1-6 character identifier that defaults to the Station ID of the originator of the message. The user may specify custom Originator Codes for each message type. See field 4. The user may elect not to receive this field.
	Field Separator	The field separator is defined by the user (space , <CR/LF> , <LF> , etc.). If the user does not specify a separator, a space is used by default.
	Sequence Number	4 numeric characters. Output message sequence number. The number is in the range 0001 to 9999. When 9999 is reached, the number wraps to 0001 (0000 is not used). The "REVERT TO SEQ 1" Super Message resets this field. The user may elect not to receive this field.
	Field Separator	The user defines the field separator (space , <CR/LF> , <LF> , etc.). If the user does not specify a separator, a space is used by default.
	Message Type	The message type is a 1-character code that specifies the nature of the message. The user may select the user's own codes. If custom codes are not used, the defaults are as follows: R = Report A = Admin S = Status P = Super T = Other The type of an application output message is determined by the Category Field of Input Header Line 1A of the message input to the switch by the application. It does not indicate which application produced the message. Standard Input information is in section three of this document. The user may elect not to receive this field.
	<CR/LF>	Line delimiter. A <CR/LF> is used to separate the output message header from the message body. It is present even if the user elects not to receive any of the fields defined above.

As part of NASDAQ's on-going effort to maximize Switch performance and capacity, NASDAQ will require that the last three characters of the six-character Common Message Switch (CMS) output header Originator Code be reserved for NASDAQ's use. If you, therefore, plan to code your firm's internal systems to use the Originator Code to identify system of origin, you should compare the first three characters of the Originator Code.

Below are the three-letter codes that should be used to identify the system of origin:

System of Origin	(Mnemonic)
ACES Pass-Thru SM	ACE
NASDAQ Market Center	HSW
ITS	ITS
NASDAQ Market Center	HSW SOE

NASDAQ reserves the right to change an application mnemonic at any time.

3.1.2 Message Body Format

An output message body consists of one or more lines, with the first line referred to as Line 1. The number of lines and their content varies with the class of the message.

Line 1: [first line of message body] <CR/LF>
 Line 2: [possible 2nd line] <CR/LF>
 Line n: [possible additional lines] <CR/LF>

See Sections 3.1.4 - 3.3.2 for format information specific to each message class.

3.1.3 Message Trailer Format

An output message trailer consists of either one or two lines depending upon the type of message. Each line in the trailer is optional and the user may elect to not receive either one. If present, the format is as follows:

Trailer 1: [Date/Time]**space**[Dest ID]**slash**[Rtvl #]**<CR/LF>**
 Trailer 2: [Resend]**space**[Alt Route]**space**[Poss Dup]

Line	Field	Description
Trailer 1	Date/Time	12 character numeric field. The format of the Date/Time field is HHMMSSDDMMYY (hours, minutes, seconds, day, month, year).
	space	Field separator.
	DestID	1-6 character Destination Station ID. This is identical to the default Destination Code found in the output message header. It is not affected if the user chooses to have a custom Destination Code.
	slash	Field separator (/).
	Rtvl #	4 or 6 character numeric field. The switch maintains a 6-digit retrieval number (RN) from 000001 to 065535. When 065535 is reached, the number wraps to 000001. A user will receive

Line	Field	Description
		the default 4-digit RN or can choose to receive the 6-digit RN (recommended). The 4-digit RN is merely the rightmost 4 digits of the number maintained by the switch. The 4-digit wrapping sequence is [00]0001 to [00]9999, [01]0000 to [01]9999, [02]..., [06]0000 to [06]5535, [00]0001 to [00]9999 and so on.
	<CR/LF>	Line delimiter. The <CR/LF> is only present if the trailer includes Trailer Line 2.
Trailer 2*	Resend	An optional "RSND" followed by [destID] / [Rtvl #]. Used when the switch resends a message (due to an input Super RTVL or Super Number Gap message). The switch places the character string "RSND" in this field, followed by a 1-6 character Destination Id, a slash, and the 4 or 6 character retrieval number of the original message. Optional.
	space	Field separator. A space will be present if another field follows the Resend field
	Alt Route	Holds the 1-6 character Destination ID of the original location the message was addressed to when the message has been rerouted. Optional.
	space	Field separator. A space will be present if another field follows the Alt Route field.
	Poss Dup	An optional "PD". Holds the string value "PD" if the switch needs to indicate that this message may possibly be a duplicate of an earlier attempt to deliver the message. Optional.

*Trailer Line 2 is present only when the Switch must indicate unusual situations to the user (message resend, alternate routing, possible duplicate message). If the line is present, it will consist of one, two, or all three of the fields, with a space between each one.

A message that successfully passes the Switch validation and safestore procedures is forwarded to the specified application, which performs additional validation on the text of the message. If an error is detected, the user will receive a reject message explaining why the original message could not be processed. All reject messages sent from applications will be forwarded to the subscriber via the Switch and will be contained in a Standard Switch Output Message.

If the text from an application is too large, the Switch will replace the text with the character string "-->" so that the message does not exceed 1024 characters. This string replaces the entire echo.

See section 3.3.2 for additional reject information.

3.1.4 Message Numbers

Each output message delivered by the Switch is assigned two numbers:

1. A Message Sequence Number located in the output header.
2. A Message Retrieval Number located in the output trailer.

The Message Sequence and Message Retrieval numbers are independently maintained for each station and will normally be sequential.

The user detects missing messages by monitoring the Message Sequence Number for gaps, but must request message retrievals by using the Message Retrieval Number. The Message Sequence Number may wrap, be set back to 0001 via a REVERT TO SEQ 1 (SUPER) Message, or be manually altered by the Tandem Operations Staff, at any time so the Message Retrieval Number is necessary to uniquely identify all transmitted messages.

The Retrieval Number wraps to 0 after 65,535. Only the most recently output 65,535 messages are ever retrievable, so if output message counts for a particular station are expected to exceed 65,535 during the trading day the user may opt to configure multiple stations and employ the Switch's Balanced Delivery feature.

"Balanced Delivery" is a Message Switch configuration feature that allows subscriber-bound messages to be queued in round robin fashion to more than one output queue. This technique spreads like-addressed output messages over many output stations, effectively reducing the number of messages transmitted per station while increasing overall throughput.

This feature requires that multiple stations be configured for the firm and that any addresses used to direct messages to the 'prime' station queue be added to our Balanced Delivery Configuration (BDFILE) file. Configuration must be coordinated and tested with the NASDAQ Testing Facility (NTF).

3.2 SUPER Messages

3.2.1 Message Acknowledgment

Super Messages received by the Switch are subject to message validation, except that the Switch does not validate the value of the message sequence number contained in the trailer of a message. If the Switch rejects the message, a reject message is sent to the user. If the Switch accepts the message, a response is sent to the user to indicate the disposition of the Super Message. The format of the Super Message Acknowledgment is the Standard Switch Output Message format, as described in Section 3.1. The Super Message Acknowledgment message is a STATUS message.

If the Super message was processed successfully, the body of the Super Acknowledgement message is formatted as follows:

3.2.1.1 Acknowledgement Message Body Format #1

Line 1: [message category] <CR/LF>
 Line 2: [message text] <CR/LF>

Line	Field	Description
1	message category	"STATUS". This field identifies the message category and will contain " STATUS ".
	<CR/LF>	Line delimiter
2	message text	"SUPER MSG PROCESSED". This field contains the string "SUPER MSG PROCESSED", indicating that the function requested in the Super message has been performed.

If the message could not be processed due to an error in content or formatting or it could not be processed immediately, the body will contain:

3.2.1.2 Acknowledgement Message Body Format #2

Line 1: [message category] <CR/LF>
 Line 2: [message text] <CR/LF>
 Line 3: [additional clarification] <CR/LF>
 Line 4-n: [input msg echo] <CR/LF>

Line	Field	Description
1	message category	"STATUS". This field identifies the message category and will contain " STATUS ".
	<CR/LF>	Line delimiter
2	message text	"SUPER MSG RECEIVED". This field contains the string "SUPER MSG RECEIVED", indicating that the switch received the Super message.
	<CR/LF>	Line delimiter

Line	Field	Description
3	additional clarification	Variable text.
	<CR/LF>	Line delimiter
4-n	input msg echo	Copy of the super message. These lines are a copy of the entire input Super message, including the header.
	<CR/LF>	Line delimiter

3.2.2 Number Gap Message

If input message sequence checking is enabled and the Switch receives a message with a sequence number other than the number expected, the Switch will generate either a Number Gap status message or a Sequence Number Reject message. This message will be formatted as a separate output message in the Standard Switch Output Message format, as described in Section 3.1. Number Gap messages are SUPER messages.

The body of the Number Gap message is formatted as follows:

```

Line 1:      [message category] <CR/LF>
Line 2:      [message type] <CR/LF>
Lines 3 - 6: [nnnn] [nnnn] [nnnn] [nnnn] <CR/LF>

```

Line	Field	Description
1	message category	"STATUS". This field identifies the message category and will contain " STATUS ".
	<CR/LF>	Line delimiter.
2	message type	"NUMBER GAP". This field contains the string "NUMBER GAP", indicating that this is a Number Gap message from the switch.
	<CR/LF>	Line delimiter.
3-6	nnnn nnnn nnnn nnnn	Up to 4 sets of 4 numeric characters. A number gap message can report up to 16 gaps, with up to 4 space separated sequence numbers on each line. The value nnnn represents the input sequence number of a missed message.
	<CR/LF>	Line delimiter

When 16 gaps become outstanding then all subsequent input will be rejected (reason: REJ-INVALID MSG SEQ NO) until one of the following occurs:

- one or more missing messages are resent with the original sequence number;
- one or more gaps are filled with the "self-addressed" ADMIN message (see Section 3.3);
- the station gap table is erased upon receipt of either the REVERT TO SEQ 1 or RESET ORDER SEQUENCE (SUPER) message;
- The Tandem Operations Staff manually sets the next expected input sequence number, which also erases the station gap table.

3.3 Reject Messages

3.3.1 Switch Reject Messages

The Switch rejects a message received from a CTCI subscriber when the message fails to pass one of the Switch validation tests. The subscriber will receive a reject message in the Standard Switch Output Message format, as described in Section 3.1. All reject messages are STATUS messages.

The body of a reject message is formatted as follows:

```

Line 1:      [message category]          <CR/LF>
Line 2:      [message type]             [reason] <CR/LF>
Lines 3 - n: [input msg Echo]          <CR/LF>

```

Line	Field	Description
1	message category	"STATUS" This field identifies the message category and will contain "STATUS".
	<CR/LF>	Line delimiter
2	message type	"REJ-" This field contains the string "REJ-", indicating that this is a Reject message from the switch.
	Reason	Fixed text. This field indicates the reason for the rejection. If there was a problem with the input message, the following text may be reported in the reason field: <ul style="list-style-type: none"> • MSG EXCEEDS MAX SIZE, message is greater than 1024 chars • INVALID FIRM, origin code is invalid • INVALID BRID/SEQ NO, branch office identifier is invalid • INVALID CATEGORY, category is invalid • DESTINATION INVALID, destination code is invalid • FORMAT ERROR, message is not in the proper format • INVALID MSG SEQ NO, message sequence number is missing, badly formatted, equal to zero, or the maximum number of gaps (16) was exceeded • SEQ NO REPEATED, sequence number duplicates the number of an earlier message. The message will not be accepted. • TOO MANY DESTINATIONS, Admin Message contains too many destination codes. • NOT ACCEPTING INPUTS, input station has been closed by the System Operator or the User. • UNKNOWN STATION, MMID entered on Line 0 by a Service Bureau firm does not equal the first four characters of the station associated with the select address. • REJspace-spaceSYSTEM UNAVAILABLE, The destination

Line	Field	Description
		application/system is unavailable.
3-n	input msg echo	This is a copy of the entire rejected message, including the header and trailer.
	<CR/LF>	line delimiter

3.3.2 Application Reject Messages

A message that successfully passes the Switch validation and safestore procedures is forwarded to the specified application, which performs additional validation on the text of the message. If an error is detected, the user will receive a reject message explaining why the original message could not be processed. All reject messages sent from NASDAQ applications will be forwarded to the subscriber via the Switch and will be contained in General Output Message format, as described in Section 3.1. All reject messages are STATUS messages.

If the application cannot process a message received from the user it will generate a Status Message that will indicate why the message was rejected. The format of an application reject message body is as follows:

Application Reject Message Body

Line 1: [optional MMID] <CR/LF>
 Line 2: [message category] <CR/LF>
 Line 3: [reason] <CR/LF>
 Line 4-n: [echo] <CR/LF>

Line	Field	Description
1	optional MMID	4 characters (if present). Contains the 4-character MMID of the entering firm or the MMID of the firm the Service Bureau is acting for. If this option is utilized for multi-station lines, it will equal the 4-character MMID associated with the station.
	<CR/LF>	Line delimiter
2	message category	"STATUS". This field identifies the message category and will contain "STATUS".
	<CR/LF>	Line delimiter
3	reason	This field contains the text explaining why the application rejected the message.
	<CR/LF>	Line delimiter
4-n	Echo	These lines are a copy of the entire input Application message, including the header and trailer.
	<CR/LF>	Line delimiter

Because the Switch may change the category destination to "OTHER m" on inbound messages to NASDAQ market center, "OTHER m" is a valid Category/Destination combination for reject messages sent from NASDAQ market center to Users (Line 4-n echo of original message). The destination code "m" is, however, not valid for inbound messages (user to NASDAQ market center). While NASDAQ market center does echo back the original message, the echo may contain "m" because the destination code was changed to "m" before NASDAQ market center received the message.

4 ACES Application Messages

This section provides the formats of the messages used when interfacing through the Switch to the ACES application.

ACES provides authorized market participants with the ability to route orders to market makers' order management systems. ACES acts as an order-routing tool between the firm entering orders and a market maker's order management system. ACES is a voluntary service for which market makers must register to be authorized subscribers. Once registered, market makers may authorize their order-entry customers to send them order flow.

Order entry firms can route orders directly to specified market makers via CTCI. Market Makers, in turn, route the execution messages to the order-entry firms through ACES. ACES does not offer automatic trade-reporting or locked-in clearing of transactions. ACES market makers must rely on Qualified Special Representatives (QSRs) or other arrangements to effect locked trades.

Orders in any security can be routed to a market maker through ACES. An order is unique within the system by a combination of the branch ID and sequence number, entry date, preferenced market maker and SECID. The branch ID and sequence number contains (1-4) alphabetic characters and (1-4) numeric characters. A space between the two portions of the field is no longer needed.

4.1 Order Entry Firm to ACES

4.1.1 Order Entry

Order Entry firms use this message to place an order. ACES sends the market maker firm a Market Maker Order message (4.2.1) in response.

SAMPLE MESSAGES

```
<SOH>
<STX> <ESC> 1 KOSE<LF>
TEST0004<LF>
OTHER c<LF>
<LF>
BUY<LF>
400 KR 21.00<LF>
GTC
<LF>
:KSEC<LF>
<ETX>
```

```
<SOH>
<STX> <ESC> 1 ROCK<LF>
THUR0005<LF>
OTHER c ROYL<LF>
<LF>
B<LF>
425 TAGS 4.05<LF>
<LF>
<LF>
<ETX>
```

Message Format

Line	Field	Description	Req'd
2	Side	1-5 alpha characters: B, S, BUY, SL, SSHRT.	Y
	<CR/LF>	Line delimiter.	Y
3	Quantity	1-8 numbers. Number of shares.	Y
	space	Field separator.	Y
	Security	Security identifier: 1-14 alpha characters.	Y
	space	Field separator.	Y
	Price	"MKT" denotes a market order and a price denotes a limit order. In the case of a stop order, a price denotes the stop trigger price.	Y
	space	Field separator.	Y
	Currency	The system will default to USD.	N
	space	Field separator.	Y
	Price Qualifier	Price qualifier. Valid entries are OB, OPG, CLO, STP.	N
	space	Field separator.	Y

Line	Field	Description	Req'd
	Stop Price	The stop limit price. This field contains the limit price associated with an STP order once the trigger price has been reached. If the STP order does not have a second price, then the order is treated as a stop market order. The trigger price is indicated in the first price field on this line.	N
	<CR/LF>	Line delimiter.	Y
4a	Order Qualifier	Valid entries are AON, FOK, IOC, DNR, DNI, NH.	N
	space	Field separator.	Y
	Time in Force	DAY, GTC, GTMMDD. If a value is not provided, the system will default to DAY. GTD YY to be assigned by ACES (if MMDD is > today, current year; if MMDD is < today, following year).	N
	<CR/LF>	Line delimiter.	Y
4b	Bunched	Bunched indicator: .B	N
	<CR/LF>	Line delimiter if 4b is present.	Y
4c	GU GUID	Constant "GU", space, GUID (Give-up firm ID).	Y
	<CR/LF>	Line delimiter.	Y
4d	:Preferred MM	:MMID - Preferred market maker ID if not specified in header.	Y if not in header
	<CR/LF>	Line delimiter if 4d is present.	Y
4e-x	Miscellaneous or Blank	Miscellaneous text (Max 10 lines). Or blank.	N
	<CR/LF>	Line delimiter.	N

4.1.2 Cancel Order

Order Entry firms submit this message to cancel an open order. Day orders do not require an entry date, but good-till-cancel orders do. ACES sends the order entry firm a Cancel message (4.2.2) in response.

SAMPLE MESSAGE

```
<SOH>
<STX> <ESC> 1 TSCOz<LF>
TOM1<LF>
OTHER ACES MADF<LF>
<LF>
CXL S<LF>
1400 HUH 3000.125<LF>
GTC<LF>
GU KDZZ<LF>
RE TOM1/061505<LF>
<ETX>
```

Message Format

Line	Field	Description	Req'd
2	CXL	Constant CXL, space, Buy/Sell Code (B, S, BUY, SL, SSHRT).	Y
	<CR/LF>	Line delimiter.	Y
3	Order Details	Same as original order.	Y
4a-d	Order Details	Same as original order.	Y
5	RE	Constant "RE".	Y
	Space	Field separator.	Y
	Branch Office Sequence #/Date	Branch ID Sequence #/Date of Order (MMDDYY).	Y
	<CR/LF>	Line delimiter.	Y

4.1.3 Cancel/Replace

Order Entry firms submit this message to cancel/replace an open order. Day orders do not require an entry date, but good-till-cancel orders do. ACES sends the order entry firm a Cancel/Replace message (4.2.3) in response.

SAMPLE MESSAGE

```
<SOH>
<STX> <ESC> 1 ROCK<LF>
CNRP6299<LF>
OTHER c ROYL<LF>
<LF>
S<LF>
300 TALK 3.75<LF>
DAY<LF>
<LF>
CXL B<LF>
100 TALK 3.85<LF>
DAY<LF>
<LF>
RE SAT0004/120796<LF>
<LF>
<ETX>
```

Message Format

Line	Field	Description	Req'd
2	Side	1-5 alpha characters: B, S, BUY, SL, SSHRT.	Y
	<CR/LF>	Line delimiter.	Y
3	Quantity	1-8 numbers. Number of shares.	Y
	space	Field separator.	Y
	Security	1-14 alpha character security identifier	Y
	space	Field separator.	Y
	Price	"MKT" to denote a market order, or a price to denote a limit order.	Y
	space	Field separator.	Y
	Currency	The system will default to USD.	N
	space	Field separator.	Y
	Price Qualifier	Price qualifier (OB, OPG, CLO, STP).	N
	space	Field separator.	Y
	Stop Price	Price at which this order becomes activated. Only allowed after STP Price qualifier.	N
	<CR/LF>	Line delimiter.	Y
4a	Order Qualifier	AON, FOK, IOC, DNR, DNI, NH.	N
	space	Field separator.	Y

Line	Field	Description	Req'd
	Time in Force	DAY, GTC, GTMMDD. If a value is not provided, the system will default to DAY.	N
	<CR/LF>	Line delimiter.	Y
4b-d		Lines for bunched, Give-up, Preferred MMID. See Order format 4.1.1.	N
5	CXL	Constant CXL, space, Buy/Sell Code (B, S, BUY, SL, SSHRT).	Y
	<CR/LF>	Line delimiter.	Y
6	Quantity	1-8 numbers. Number of shares.	Y
	space	Field separator.	Y
	Security	1-14 alpha character security identifier	Y
	space	Field separator.	Y
	Price	"MKT" to denote a market order, or a price to denote a limit order.	Y
	space	Field separator.	Y
	Currency	The system will default to USD.	N
	space	Field separator.	Y
	Price Qualifier	OB, OPG, CLO, STP.	N
	space	Field separator.	Y
	Stop Price	Price at which this order becomes activated. Only allowed after STP Price qualifier.	N
	<CR/LF>	Line delimiter.	Y
7	Order Qualifier	Valid entries are AON, FOK, IOC, DNR, DNI, NH.	N
	space	Field separator.	Y
	Time in Force	DAY, GTC, GTMMDD. If a value is not provided, the system will default to DAY.	N
	<CR/LF>	Line delimiter.	Y
7b-d		Lines for bunched, give-up, Preferred MMID. See Order Format 4.1.1.	N
8*	RE	Constant "RE".	Y
	space	Field separator.	Y
	Branch ID/Sequence Number	Branch ID Sequence #.	Y
	Date	Date of Order (MMDDYY). Where the default optional entry date is the current business date. Original order entry date is only other valid entry.	Y
	<CR/LF>	Line delimiter.	Y

* If line 1 is different than line 8, then the user will see line 1 upon completion of the execution.

4.2 ACES to Market Maker

ACES will forward orders received from the Order Entry firm to the Market Maker for execution. ACES will also forward Cancel and Cancel/Replace requests. The following sections describe the format of the text portion of the ACES CTCI Market Maker messages. The header and trailer portions of the message follow standard Switch output message formats.

ACES market maker output messages will always contain order entry date and currency (USD unless otherwise specified) when sent from the NASDAQ switch. They will contain optional entry fields only when submitted to ACES by an OE and indicated on the output message description. ACES will insert the space within the branch Id and sequence number.

4.2.1 Market Maker Order

ACES sends this message to a market maker in response to an order submitted by an order entry firm (4.1.1).

SAMPLE MESSAGE

```

KOSE
TEST 0003
OTHER c
<CR/LF>
BUY
400 KMGB 21
GTC
:KSEC

<CR/LF>
<CR/LF>
REPORT acKSEC
<CR/LF>
TEST 0003/061803
B
400 KMGB 21 USD
GTC
KOSE

```

Message Format

Line	Field	Description	Req'd
2	Side	1-5 alpha characters: B,S, SSHRT.	Y
	<CR/LF>	Line delimiter.	Y
3	Quantity	1-8 numbers, which is the number of shares.	Y
	space	Field separator.	Y
	Security	1-14 alpha character security identifier	Y
	space	Field separator.	Y
	Price	"MKT" to denote a market order, or a price to denote a limit order.	Y

Line	Field	Description	Req'd
	space	Field separator.	Y
	Currency	The system will default to USD.	N
	space	Field separator.	Y
	Price Qualifier	Price qualifier. Valid entries are OB, OPG, CLO, STP.	N
	space	Field separator.	Y
	Stop Price	Price at which this order becomes activated. Only allowed after STP Price qualifier.	N
	<CR/LF>	Line delimiter.	Y
4	Order Qualifier	Valid entries are AON, FOK, IOC, DNR, DNI, NH.	N
	space	Field separator.	Y
	Time in Force	DAY, GTC, GTMMDD. If a value is not provided, the system will default to DAY. GTD YY assigned by ACES (if MMDD is > today, current year; if MMDD is < today, following year).	N
	space	Field separator.	Y
	Bunched	Bunched indicator: .B	N
	<CR/LF>	Line delimiter.	Y
5	OEID	Order Entry ID.	Y
	.GUID	4-alpha character identifier of give-up firm.	N

4.2.2 Cancel

ACES sends this message to the market maker in response to an order canceled by the order entry firm (4.1.2).

SAMPLE MESSAGE

```
<CR/LF>
<CR/LF>
REPORT acKSEC
<CR/LF>
TEST 0001
CXL B
400 KMGB 21 USD
GTC
RE TEST 0001/062303
KOSE
```

Message Format

Line	Field	Description	Req'd
2	CXL	Constant 'CXL'	Y
	space	Field separator.	Y
	Side	B, S, SSHRT.	Y
	<CR/LF>	Line delimiter.	Y
3		Number of shares, security ID, price, optional currency, price qualifier (If STP, then an Optional Stop Price is allowed), order qualifiers, and TIF indicator (Same as original order).	Y
4a-c		Number of shares, security ID, price, optional currency, price qualifier (If STP, then an Optional Stop Price is allowed), order qualifiers, and TIF indicator (Same as original order).	Y
5	RE	Constant "RE".	Y
	space	Field separator.	Y
	Branch ID/Sequence Number/Date	Branch ID Sequence # / Date of Order (MMDDYY) to be cancelled.	Y
	<CR/LF>	Line delimiter.	Y
6	OEID	Order Entry ID.	Y
	.GUID	4-alpha character identifier of give-up firm.	N

4.2.3 Cancel/Replace

ACES sends this message to the market maker in response to an order canceled/replaced by the order entry firm (4.1.3).

SAMPLE MESSAGE

```
<CR/LF>
<CR/LF>
REPORT acKSEC
<CR/LF>
TEST 0002/062303
B
500 KMGB 21 USD
GTC
CXL B
400 KMGB 21 USD
GTC
RE TEST 0002/062303
KOSE
```

Message Format

Line	Field	Description	Req'd
2	Side	Side of new order (B, S, SSHRT).	Y
	<CR/LF>	Line delimiter.	Y
3	Order Details	Quantity / Security / Price / Currency / Price Qualifiers (OB, OPG, CLO, STP) / (If STP, then an Optional Stop Price is allowed) of new order.	Y
	<CR/LF>	Line delimiter.	Y
4	Order Qualifiers	AON, FOK, IOC, DNI, DNR, NH.	N
	space	Field separator.	Y
	TIF	DAY, GTC, GTMMDD. If a value is not provided, the system will default to DAY.	N
	space	Field separator.	Y
	Bunched	Bunched indicator: .B	N
	<CR/LF>	Line delimiter.	Y
5	CXL	Constant, CXL.	Y
	space	Field separator.	Y
	Side	B, S, SSHRT.	Y
	<CR/LF>	Line delimiter.	Y
6	Order Details	Quantity/Security/ Price/ Price Qualifier (OB, OPG, CLO, STP/ (If STP, then an Optional Stop Price is allowed) of order to be replaced.	Y
	<CR/LF>	Line delimiter.	Y
6a	Order Qualifier	Valid entries are AON, FOK, IOC, DNR, DNI, NH.	N
	space	Field separator.	Y

Line	Field	Description	Req'd
	Time in Force	DAY, GTC, GTMMDD. If a value is not provided, the system will default to DAY.	N
	space	Field separator.	Y
	Bunched	Bunched indicator: .B	N
	<CR/LF>	Line delimiter.	Y
7	RE	Constant "RE".	Y
	space	Field separator.	Y
	Branch ID/Sequence Number/Date	Branch ID Sequence #/Date of Order (MMDDYY) to be cancelled.	Y
	<CR/LF>	Line delimiter.	Y
8	OEID	Order Entry ID.	Y
	.GUID	4-alpha character identifier of give-up firm.	N

4.3 Market Maker to ACES

A Market Maker will use several messages to transmit execution messages and related cancels from the firm's in-house system to ACES. A Market Maker does not have to, but may include the space in between the branch id and sequence number.

Each message contains the header, text, and trailer. The standard header information that comes from the Switch is contained in lines 0, 1 and 1a. Because this is an ACES message, the destination on Line 1a is "ACESP". Line 1b is a required blank line between the header and message text. The message text begins on Line 2. The trailer is always the message sequence number. Samples in this section do not contain trailers.

4.3.1 Order Confirm

The market maker uses this message to confirm receipt of an order. This message is optional, repeatable, and not required prior to any other order activity by the market maker. ACES will send an Order Confirm message (section 4.4.1) to the order entry firm upon receipt of this message.

SAMPLE MESSAGE

```
KSEC
TEST0001
OTHER ACESP
<CR/LF>
TEST0001/062503
B 400 KMGB 21
KOSE
UR HERE
```

Message Format

Line	Field	Description	Req'd
2	Branch ID/ Sequence Number/ Date	1-4 alpha and 1-4 numbers used to denote the Branch Office and Sequence Number, of the original order/ date of original order (mmddy)	Y
	Side	B, S, SSHRT.	Y
	<CR/LF>	Line delimiter.	Y
3	Quantity	Number of shares.	Y
	Security	Security ID.	Y
	Price	MKT or Price.	Y
	Currency	The system will default to USD.	N
4	OEID.GUID	Order Entry ID. Optional Give-up ID.	Y
5	UR HERE	Order confirmation keyword.	Y

4.3.2 Reject

The market maker uses this message to reject an order. ACES will send a Reject message (section 4.4.2) to the order entry firm upon receipt of this message.

SAMPLE MESSAGES

```
<SOH>
<STX> <ESC> 1 KSEC<LF>
KSEC0031/022603<LF>
OTHER ACESP<LF>
<LF>
KOSE<LF>
STATUS<LF>
REJ - ERROR ERROR ERROR<LF>
KSEC0031/022603<LF>
S<LF>
500 KROL 21.99<LF>
DAY<LF>
KOSE<LF>
<ETX>
```

```
<SOH>
<STX> <ESC> 1 KSEC<LF>
KOSE0000<LF>
OTHER ACESP<LF>
<LF>
KOSE<LF>
STATUS<LF>
REJ NOWAY <LF>
KOSE0000<LF>
B<LF>
200 KROL 22.00<LF>
DAY<LF>
KOSE<LF>
<ETX>
```

Message Format

Line	Field	Description	Req'd
2	OEID	ID of order entry firm - 4 alpha characters.	Y
	<CR/LF>	Line delimiter.	Y
3	STATUS	Constant "STATUS".	Y
	<CR/LF>	Line delimiter.	Y
4	REJ	The constant "REJ - "	Y
	Reason	Rejection reason (1-40 alpha characters).	N
	<CR/LF>	Line delimiter.	Y

Line	Field	Description	Req'd
5	Branch ID/Sequence Number/Date	Branch ID/ Sequence # / mmddyy - 1-4 alpha and 1-4 numeric used to denote the Branch Office and Sequence Number, of the rejected order / date of original order (mmddyy)	Y
	<CR/LF>	Line delimiter.	Y
6	Side	B, S, BUY, SL, SSHRT	Y
	<CR/LF>	Line delimiter.	Y
7	Order Details	Quantity, Security, Price (optional currency), Price Qualifier (If STP, then an Optional Stop Price is allowed)	Y
	<CR/LF>	Line delimiter.	Y
8	Order Qualifier	AON, FOK, IOC, DNR, DNI, NH.	N
	space	Field separator.	Y
	Time in Force	DAY, GTC, GTMMDD. If a value is not provided, the system will default to DAY.	N
	space	Field separator.	Y
	Bunched	Bunched indicator, .B	N
	<CR/LF>	Line delimiter.	Y
9	OEID.GUID	Order entry firm id. Optional Give-up id.	Y

4.3.3 Execution Report

The market maker uses this message to indicate that the order has been executed. ACES will send an Execution Report message (section 4.4.3) to the order entry firm upon receipt of this message.

SAMPLE MESSAGE

```
<SOH>
<STX> <ESC> 1 KSEC<LF>
<LF>
OTHER ACESP<LF>
<LF>
TEST0055/032403<LF>
SLD<LF>
100 PJK 20<LF>
ON 20 LMT<LF>
FILLS<LF>
GTC<LF>
<LF>
KOSE KSEC100<LF>
<ETX>
```

Message Format

Line	Field	Description	Req'd
2	Branch ID/Sequence Number/Date	Branch ID of the ordering firm. Sequence Number of the original order/ Date of original order (mmddyy)	Y
	<CR/LF>	Line delimiter.	Y
3	Side	1-8 alpha characters: BOT, SLD, SLD SHRT.	Y
	<CR/LF>	Line delimiter.	Y
4	Quantity	1-8 numbers for the number of shares.	Y
	space	Field separator.	Y
	Security	Security Identifier of issue traded.	Y
	space	Field separator.	Y
	Price	Execution price of the order.	Y
	space	Field separator.	Y
	Currency	The system will default to USD.	N
	space	Field separator.	Y
	Price Qualifier	OB, OPG, CLO, STP, if entered on order, else blank.	N
	<CR/LF>	Line delimiter.	Y
5	ON (price) (USD) LMT or ON MKT	Pricing information to differentiate between market (MKT) and limit orders (price then LMT). USD is an optional currency indicator.	Y
	<CR/LF>	Line delimiter.	Y

Line	Field	Description	Req'd
6	FILLS or LVS nnnn	Constant FILLS if execution fills order completely or LVS nnnn where nnnn is the balance of the partial execution.	Y
	<CR/LF>	Line delimiter.	Y
7	Order Qualifier	AON, FOK, IOC, DNR, DNI, NH.	N
	space	Field separator.	Y
	Time in Force	DAY, GTC, GTMMDD. If a value is not provided, the system will default to DAY.	N
	space	Field separator.	Y
	Bunched	Bunched indicator, .B	N
	<CR/LF>	Line delimiter.	Y
8	<CR/LF>	Blank line.	Y before clearing line
9	OEID	Order entry firm id.	Y
	space	Field separator.	Y
	MMIDnnnn	Market Maker and nnnn equal to the number of shares.	Y
	.GUID	4-character character identifier of the give up firm.	Y if a GU was entered
10	Misc Text or <CR/LF>	Miscellaneous text (20 chars; must start with "MISC") or blank line.	N

4.3.4 Cancel Confirmation

The market maker uses this message to confirm the cancellation of an order, that is, to accept the cancel message sent by the order entry firm. ACES will send an Execution Report message (section 4.4.4) to the order entry firm upon receipt of this message.

SAMPLE MESSAGE

```
<SOH>
<STX> <ESC> 1 ROCK<LF>
<LF>
OTHER ACESP<LF>
<LF>
THUR0004<LF>
B 450 TALK 3.85 DAY<LF>
ROYL<LF>
UR OUT<LF>
<ETX>
```

Message Format

Line	Field	Description	Req'd
2	Branch ID/ Sequence Number/ Date	1-4 alpha followed by 1-4 numbers denoting the Branch Office and Sequence Number of the original order, plus its entry date.	Y
	<CR/LF>	Line delimiter.	Y
3	Side	B, S, SSHRT.	Y
	Quantity	Number of shares.	Y
	Security	Security ID.	Y
	Price	Order Price.	Y
	Currency	The system will default to USD.	N
	Price Qualifiers	OB, OPG, CLO, STP.	N
	Stop Price	Price at which this order becomes activated. Only allowed after STP Price qualifier.	N
	Order Qualifiers	AON, FOK, IOC, DNR, DNI, NH.	N
	Time In Force	DAY, GTC, GTMMDD. If a value is not provided, the system will default to DAY.	N
	space	Field separator	Y
	Bunched	Bunched indicator, .B	N
	<CR/LF>	Line delimiter.	Y
4	OEID.GUID	Order entry firm id and Give-up ID if necessary.	Y
5	UR OUT	Literal that confirms cancellation. Order is not marked as canceled until ACES receives this confirmation.	Y

4.3.5 Reject Cancel

The market maker uses this message to reject the cancel message sent by the order entry firm. ACES will send a Reject Cancel message (section 4.4.5) to the order entry firm upon receipt of this message.

SAMPLE MESSAGE

```
<SOH>
<STX> <ESC> 1 DLJP<LF>
DLJP0582<LF>
OTHER ACESP<LF>
<LF>
B 200 X 200.35 DAY<LF>
WUSA
UR REJ<LF>
<ETX>
```

Message Format

Line	Field	Description	Req'd
2	Branch ID/ Sequence Number/ Date	1-4 alpha and 1-4 numbers used to denote the Branch Office and Sequence Number, of the original order / date of original order (mmddyy)	Y
	<CR/LF>	Line delimiter.	Y
3	Side	B, S, SSHRT.	Y
	Quantity	Number of shares.	Y
	Security	Security ID.	Y
	Price	Order Price.	Y
	Price Qualifiers	OB, OPG, CLO, STP	N
	Stop Price	Price at which this order becomes activated. Only allowed after STP Price qualifier.	N
	Order Qualifiers	AON, FOK, IOC, DNR, DNI, NH.	N
	space	Field separator.	Y
	Time In Force	DAY, GTC, GTMMDD. If a value is not provided, the system will default to DAY.	N
	space	Field separator.	Y
	Bunched	Bunched indicator, .B	N
	<CR/LF>	Line delimiter.	Y
4	OEID.GUID	Order entry firm Id. Optional Give-up ID.	Y
	<CR/LF>	Line delimiter.	Y
5	UR REJ	The constant "UR REJ" for Reject Notification.	Y
	<CR/LF>	Line delimiter.	Y

4.3.6 Cancel/Replace Confirmation

The market maker uses this message to confirm a cancel/replace message from an order entry firm, that is, to accept the cancel/replace sent by the market maker. ACES will send a Cancel/Replace Confirmation message (section 4.4.6) to the order entry firm upon receipt of this message.

SAMPLE MESSAGE

```
<SOH>
<STX> <ESC> 1 ROCK<LF>
THUR0005<LF>
OTHER ACESP<LF>
<LF>
THUR 0005<LF>
B 350 TALK 3.85 DAY<LF>
B 425 TACO 3.85 DAY<LF>
ROYL<LF>
UR OUT<LF>
<ETX>
```

Message Format

Line	Field	Description	Req'd
2	Branch ID/Sequence Number/ Date	1-4 alpha and 1-4 numbers used to denote the Branch Office and Sequence Number, of the original order/ <i>optional</i> date of original order (mmddyy)	Y
	<CR/LF>	Line delimiter.	Y
3	Side	B, S, SSHRT.	Y
	Quantity	Number of shares.	Y
	Security	Security ID.	Y
	Price	Order Price.	Y
	Currency	The system will default to USD.	N
	Price Qualifiers	OB, OPG, CLO, STP	N
	Stop Price	Price at which this order becomes activated. Only allowed after STP Price qualifier.	N
	Order Qualifiers	AON, FOK, IOC, DNR, DNI, NH.	N
	Time in Force	DAY, GTC, GTMMDD. If a value is not provided, the system will default to DAY.	N
	space	Field separator.	Y
	Bunched	Bunched indicator, .B	N
	<CR/LF>	Line delimiter.	Y
4	Side	Beginning of details of new order that replaces canceled order. B, S, SSHRT.	Y
	Quantity	Number of shares.	Y
	Security	Security ID.	Y

Line	Field	Description	Req'd
	Price	Order Price.	Y
	Currency	The system will default to USD.	N
	Price Qualifiers	OB, OPG, CLO, STP.	N
	Stop Price	Price at which this order becomes activated. Only allowed after STP Price qualifier.	N
	Order Qualifiers	AON, FOK, IOC, DNR, DNI, NH.	N
	Time in Force	DAY, GTC, GTMMDD. If a value is not provided, the system will default to DAY.	N
	space	Field separator.	Y
	Bunched	Bunched indicator, .B	N
	<CR/LF>	Line delimiter. (Details of order being canceled.)	Y
5	OEID.GUID	Order entry firm id. Give-up ID if necessary.	Y
	<CR/LF>	Line delimiter.	Y
6	UR OUT	Literal that confirms cancellation. Order is not marked as canceled until ACES Passthru receives this confirmation.	Y
	<CR/LF>	Line delimiter.	Y

4.3.7 Reject Cancel/Replace

The market maker uses this message to reject a cancel/replace message from an order entry firm. ACES will send a Reject Cancel/Replace message (section 4.4.7) to the order entry firm upon receipt of this message.

SAMPLE MESSAGE

```
<SOH>
<STX> <ESC> 1 DLJP<LF>
DLJP0582<LF>
OTHER ACESP<LF>
<LF>
B 200 X 200.35 DAY<LF>
B 100 X 200.35 DAY<LF>
WUSA
UR REJ<LF>
<ETX>
```

Message Format

Line	Field	Description	Req'd
2	Branch ID/Sequence Number/ Date	1-4 alpha and 1-4 numbers used to denote the Branch Office and Sequence Number, of the original order / date of original order (mmddy)	Y
	<CR/LF>	Line delimiter.	Y
3	Side	B, S, SSHRT.	Y
	Quantity	Number of shares.	Y
	Security	Security ID.	Y
	Price	Order Price.	Y
	Currency	The system will default to USD.	N
	Price Qualifiers	OB, OPG, CLO, STP.	N
	Stop Price	Price at which this order becomes activated. Only allowed after STP Price qualifier.	N
	Order Qualifiers	AON, FOK, IOC, DNR, DNI, NH.	N
	space	Field separator.	Y
	Time in Force	DAY, GTC, GTMMDD. If a value is not provided, the system will default to DAY.	N
	space	Field separator.	Y
	Bunched	Bunched indicator, .B	N
	<CR/LF>	Line delimiter. (Details of new order that replaces canceled order.)	Y
4	Side	B, S, SSHRT.	Y
	Quantity	Number of shares.	Y
	Security	Security ID.	Y
	Price	Order Price.	Y

Line	Field	Description	Req'd
	Price Qualifiers	OB, OPG, CLO, STP	N
	Stop Price	Price at which this order becomes activated. Only allowed after STP Price qualifier.	N
	Order Qualifiers	AON, FOK, IOC, DNR, DNI, NH.	N
	Time in Force	Time in Force indicator.	Y
	Space	Field separator.	Y
	Bunched	Bunched indicator, .B	N
	<CR/LF>	Line delimiter. (Details of order being canceled.)	Y
5	OEID	Order entry firm Id.	Y
	.GUID	Optional Give-up ID.	N
	<CR/LF>	Line delimiter.	Y
6	UR REJ	The constant "UR REJ" for Reject Notification.	Y
	<CR/LF>	Line delimiter.	Y

4.3.8 Update Corporate Action (Stock Split and Dividend Adjustment)

The market maker uses this message to update a corporate action. ACES will send an Update Corporate Action message (section 4.4.8) to the order entry firm upon receipt of this message.

Message Format

Line	Field	Description	Req'd
4	STATUS	Constant STATUS	
5	REJ - CORP UPDATE	Constant REJ - CORP UPDATE	
6	Branch ID/Sequence Number/Date	Branch ID (1-4 alpha characters) and sequence number (1-4 numerals) / Date of original order (mmddyy)	
7	Side	B, S, SSHRT	
8	Order details	Quantity/Security/ Price/ Price Qualifier (OB, OPG, CLO, STP) / (If STP, then an Optional Stop Price is allowed) of order to be replaced	
	<CR/LF>	Line delimiter	Y
9	Order Qualifier	Valid entries are AON, FOK, IOC, DNR, DNI, NH	
	space	Field separator	Y
	Time in Force	DAY, GTC, GTMMDD. If a value is not provided, the system will default to DAY.	N
	space	Field separator	Y
	Bunched	Bunched indicator (.B)	N
	<CR/LF>	Line delimiter	Y
10	CXL	Constant	
	Side	B, S, SSHRT	
11	Order Details	Quantity/Security/ Price/ Price Qualifier (OB, OPG, CLO, STP) / (If STP, then an Optional Stop Price is allowed) of order to be replaced	
12	Order Qualifier	Valid entries are AON, FOK, IOC, DNR, DNI, NH	
	space	Field separator	Y
	Time in Force	DAY, GTC, GTMMDD. If a value is not provided, the system will default to DAY.	N
	space	Field separator	Y
	Bunched	Bunched indicator (.B)	N
	<CR/LF>	Line delimiter	Y
13	RE	Constant "RE"	
	space	Field separator	Y
	Branch ID/Sequence	Branch ID Sequence # / Date of Order (MMDDYY) to be canceled	

Line	Field	Description	Req'd
	Number/Date		
	<CR/LF>	Line delimiter	Y
14	OEID	Order Entry Id	
	.GUID	Give up id if required	

4.3.9 Cancel Corporate Action

The market maker uses this message to cancel a corporate action. ACES will send a Cancel Corporate Action message (section 4.4.9) to the order entry firm upon receipt of this message.

Message Format

Line	Field	Description	Req'd
4	STATUS	Constant STATUS	
5	REJ - CORP PURGE	The constant "REJ - CORP PURGE"	
6	Branch ID/Sequence Number	Branch ID (1-4 alpha characters) and sequence number (1-4 numerals)	
7	CXL	Constant 'CXL'	
	space	Field separator.	Y
	Side	B, S, SSHRT.	
	<CR/LF>	Line delimiter.	Y
8	Order Details	Quantity, Security, price, optional currency, price qualifier (If STP, then an Optional Stop Price is allowed), order qualifiers, and Time in Force indicator (Same as original order).	
9	Order Qualifier	Valid entries are AON, FOK, IOC, DNR, DNI, NH.	
	space	Field separator.	Y
	Time in Force	DAY, GTC, GTMMDD. If a value is not provided, the system will default to DAY.	N
	space	Field separator.	Y
	Bunched	Bunched indicator (.B).	N
	<CR/LF>	Line delimiter.	Y
10	RE	Constant "RE".	
	space	Field separator.	Y
	BranchID/Sequence Number /Date	Branch ID Sequence # / Date of Order (MMDDYY) to be cancelled.	
	<CR/LF>	Line delimiter.	Y
11	OEID	Order Entry identifier.	
	.GUID	4-character alpha ID of Give up firm if required.	

4.4 ACES to Order Entry Firm

ACES order entry output messages will always contain order entry date and currency (USD unless otherwise specified) when sent from the NASDAQ switch. They will contain optional entry fields, such as order and price qualifier, only when originally submitted to ACES by an OE firm and indicated on the output message description. ACES will return the branch id. and sequence number to the Order Entry firm in the same format it was originally submitted to ACES. If a space was (allowed and) entered, then a space will be inserted back into the output messages.

4.4.1 Order Confirm

ACES sends this message to order entry firms when a market maker submits an Order Confirmation message (4.3.1). It will be sent for any type of order -- day, good-till-date, and good-till-cancel.

SAMPLE MESSAGE

```
<CR/LF>
<CR/LF>
REPORT acKOSE
<CR/LF>
TEST0001/062503
BUY 400 KMGB 21 USD
UR HERE
```

Message Format

Line	Field	Description	Req'd
2	Branch Id/Sequence Number/Date	Branch ID (1-4 alpha characters) and sequence number (1-4 numerals) / Date of original order (mmddyy)	Y
	<CR/LF>	Line delimiter.	Y
3	Side	1-5 alpha characters: B, S, BUY, SL, SSHRT	Y
	Quantity	Number of shares; 1-8 numbers	Y
	Security	1-14 alpha containing SEC ID	Y
	Price	MKT to denote a market order, or price to denote limit.	
	Currency	The system will default to USD.	N
	<CR/LF>	Line delimiter.	Y
4	UR HERE	Order Confirmation Notification	Y

4.4.2 Reject

This output message can be used both by the application and by market makers to order entry firms, but it is used primarily by the application. The message may be used by a MM to reject a new order if they are not in that security or by ACES if an order cannot be found (e.g., cancel request for GTC order missing entry date).

SAMPLE MESSAGE

```
KSECN2 ACES 0013 S
STATUS
REJ - INVALID FORMAT
```

OTHER ACESP

```
TEST0003/061803
KSEC
UR HERE
```

```
091416180603 KSECN2/0013
```

Message Format

Line	Field	Description	Req'd
2	STATUS	Constant "STATUS" to identify status.	Y
	<CR/LF>	Line delimiter.	Y
3	REJ - reason	"REJ -" constant, following by the reason the order was rejected. If space precedes REJ, it is an ACES reject.	Y
	<CR/LF>	Line delimiter.	Y
4...n	TEXT OF ORIGINAL MESSAGE		Y
	<CR/LF>	Trailer line 1.	N

4.4.3 Execution Report

ACES sends this message to order entry firms when a market maker submits an Execution Report message (4.3.3).

SAMPLE MESSAGE

```
<CR/LF>
<CR/LF>
REPORT acKOSE
<CR/LF>
TEST0002/062403
BOT
400 KMGB 21 USD
ON 21 USD LMT
FILLS
GTC
<CR/LF>
0712 KSEC400
```

Message Format

Line	Field	Description	Req'd
2	Branch ID/Sequence Number/Date	1-4 alpha and 1-4 numbers used to denote the Branch Office and Sequence Number, of the original order / order entry date (mmddy).	Y
	<CR/LF>	Line delimiter.	Y
3	Side	1-8 alpha characters: BOT, SLD, SLD SHRT.	Y
	<CR/LF>	Line delimiter.	Y
4	Quantity	1-8 numbers for number of shares.	Y
	space	Field separator.	Y
	Security	1-14 alpha character security id.	Y
	space	Field separator.	Y
	Price	Execution price.	Y
	space	Field separator.	Y
	Currency	The system will default to USD.	N
	space	Field separator.	Y
	Price Qualifier	Price Qualifier	Y
	space	Field separator.	Y
	Stop Price	Price at which this order becomes activated. Only allowed after STP Price qualifier.	N
	<CR/LF>	Line delimiter.	Y
5	ON (price) (USD) LMT or ON MKT	Where (price) is the price entered in the original order for the limit or market order. USD is the default currency.	Y
	<CR/LF>	Line delimiter.	Y

Line	Field	Description	Req'd
6	FILLS or LVS nnnn	If the order was filled in its entirety, the line will contain "FILLS". For partial executions, it will be "LVS nnnn", where nnnn is the number of shares left after the execution.	Y
	<CR/LF>	Line delimiter.	Y
7	Order Qualifier	Valid entries are AON, FOK, IOC, DNR, DNI, NH.	N
	space	Field separator.	Y
	Time in Force	DAY, GTC, GTMMDD. If a value is not provided, the system will default to DAY.	N
	space	Field separator.	Y
	Bunched	Bunched indicator, .B	N
	<CR/LF>	Line delimiter.	Y
8	<CR/LF>	Line delimiter. (A blank line must separate Line 7 from Line 9)	Y
9	OE Clearing Number	4-character clearing number of the firm who clears for the OE Firm.	Y
	space	Field separator.	Y
	MMID	Market Maker identifier.	Y
	Quantity	1-8 numbers that specify the number of shares.	Y
	.GUID	4 alpha character identifier of the give up firm.	Y if GU was entered
	<CR/LF>	Line delimiter.	Y
10	Misc Text	Must start with MISC. 20 characters max. This text is carried forward from the execution.	N
	<CR/LF>	Optional trailer lines 1 and 2.	N

4.4.4 Cancel Confirmation

ACES sends this message to order entry firms when a market maker submits a Cancel Confirmation message (4.3.4).

SAMPLE MESSAGE

```
KSEC
<CR/LF>
OTHER ACESP
<CR/LF>
TEST0001/061903
B 400 KMGB 21 GTC
KOSE
UR OUT
```

Message Format

Line	Field	Description	Req'd
2	Branch ID/Sequence Number/Date	Branch ID (1-4 alpha characters) and sequence number (1-4 numerals) / Date of original order (mmddyy)	Y
	<CR/LF>	Line delimiter.	Y
3	Side	1-5 alpha characters: B, S, BUY, SL, SSHRT.	Y
	space	Field separator.	Y
	Quantity	1-6 numbers. Number of shares.	Y
	space	Field separator.	Y
	Security	1-14 alpha character security identifier.	Y
	space	Field separator.	Y
	Price	"MKT" to denote a market order, or a price to denote a limit order.	Y
	space	Field separator.	Y
	Currency	The system will default to USD.	N
	space	Field separator.	Y
	Price Qualifier	Price qualifier. Valid entries are OB, OPG, CLO, STP.	N
	space	Field separator.	Y
	Stop Price	Price at which this order becomes activated. Only allowed after STP Price qualifier.	N
	space	Field separator.	Y
	Order Qualifier	Valid entries are AON, FOK, IOC, DNR, DNI, NH.	N
	Time in Force	DAY, GTC, GTMMDD. If a value is not provided, the system will default to DAY.	N
	space	Field separator.	Y
	Bunched	Bunched indicator, .B	N
	<CR/LF>	Line delimiter.	Y

Line	Field	Description	Req'd
4	UR OUT	Constant indicating Order Entry firm canceled an open order. This is a confirmation that ACES canceled the order within its file.	Y
	<CR/LF>	Line delimiter.	Y

4.4.5 Reject Cancel

ACES sends this message to order entry firms when a market maker submits a Reject Cancel message (4.3.5).

SAMPLE MESSAGE

```
KSEC
TEST0001
OTHER ACESP
<CR/LF>
TEST0001/062603
B 400 KMGB 21
KOSE
UR REJ
```

Message Format

Line	Field	Description	Req'd
2	Branch ID/Sequence Number/Date	1-4 alpha and 1-4 numbers used to denote the Branch Office and Sequence Number, of the original order / date of original order (mmddyy)	Y
	<CR/LF>	Line delimiter.	Y
3	Side	1-5 alpha characters: B, S, BUY, SL, SSHRT.	Y
	space	Field separator.	Y
	Quantity	1-8 numbers for the number of shares.	Y
	space	Field separator.	Y
	Security	1-14 alpha character security identifier.	Y
	space	Field separator.	Y
	Price	"MKT" to denote a market order, or a price to denote a limit order.	Y
	space	Field separator.	Y
	Currency	The system will default to USD.	N
	space	Field separator.	Y
	Price Qualifier	Price qualifier. Valid entries are OB, OPG, CLO, STP.	N
	space	Field separator.	Y
	Stop Price	Price at which this order becomes activated. Only allowed after STP Price qualifier.	N
	space	Field separator.	Y
	Order Qualifier	Valid entries are AON, FOK, IOC, DNR, DNI, NH.	N
	space	Field separator.	Y
	Bunched	Bunched indicator, .B	N
	<CR/LF>	Line delimiter.	Y
4	UR REJ	Update Notification.	

Line	Field	Description	Req'd
	<CR/LF>	Line delimiter.	Y
5	<CR/LF>	Trailer line.	N

4.4.6 Cancel/Replace Confirmation

ACES sends this message to order entry firms when a market maker submits a Cancel/Replace Confirmation message (4.3.6).

SAMPLE MESSAGE

```
KSEC
<CR/LF>
OTHER ACESP
<CR/LF>
TEST0001/061903
B 400 KMGB 21 GTC
KOSE
UR OUT
```

Message Format

Line	Field	Description	Req'd
2	Branch Office Sequence #	Branch ID (1-4 alpha characters) and sequence number (1-4 numerals) / Date of original order (mmddyy)	Y
	<CR/LF>	Line delimiter.	Y
3	Side	1-5 alpha characters: B, S, BUY, SL, SSHRT.	Y
	space	Field separator.	Y
	Quantity	1-6 numbers. Number of shares.	Y
	space	Field separator.	Y
	Security	1-14 alpha character security identifier.	Y
	space	Field separator.	Y
	Price	"MKT" to denote a market order, or a price to denote a limit order.	Y
	space	Field separator.	Y
	Currency	The system will default to USD.	N
	space	Field separator.	Y
	Price Qualifier	Price qualifier. Valid entries are OB, OPG, CLO, STP.	N
	space	Field separator.	Y
	Stop Price	Price at which this order becomes activated. Only allowed after STP Price qualifier.	N
	space	Field separator.	Y
	Order Qualifier	Valid entries are AON, FOK, IOC, DNR, DNI, NH.	N
	Time in Force	DAY, GTC, GTMMDD. If a value is not provided, the system will default to DAY.	N
	space	Field separator.	Y
	Bunched	Bunched indicator, .B	N
	<CR/LF>	Line delimiter.	Y

Line	Field	Description	Req'd
4	UR OUT	Constant indicating Order Entry firm canceled an open order. This is a confirmation that ACES canceled the order within its file.	Y
	<CR/LF>	Line delimiter.	Y

4.4.7 Reject Cancel/Replace

ACES sends this message to order entry firms when a market maker submits a Reject Cancel/Replace message (4.3.7).

SAMPLE MESSAGE

```
KSEC
TEST0001/062703
OTHER ACESP
<CR/LF>
TEST0001/062703
B 400 KMGB 21
B 400 KMGB 21
KOSE
UR REJ
```

Message Format

Line	Field	Description	Req'd
2	Branch ID/Sequence Number/Date	1-4 alpha and 1-4 numbers used to denote the Branch Office and Sequence Number, of the original order / date of original order(mmddyy)	Y
	<CR/LF>	Line delimiter.	Y
3	Side	B, S, BUY, SL, or SSHRT.	Y
	space	Field separator.	Y
	Quantity	1-8 numbers for number of shares.	
	space	Field separator.	Y
	Security	1-14 alpha character security id.	
	space	Field separator.	Y
	Price	Execution price.	Y
	space	Field separator.	Y
	Currency	The system will default to USD.	N
	space	Field separator.	Y
	Price Qualifiers	OB, OPG ,CLO, STP.	N
	space	Field separator.	Y
	Stop Price	Price at which this order becomes activated. Only allowed after STP Price qualifier.	N
	space	Field separator.	Y
	Order Qualifiers	AON, FOK, IOC, DNR, DNI, NH.	N
	space	Field separator.	Y
	Bunched	Bunched indicator, .B	N
	<CR/LF>	Line delimiter.	Y

Line	Field	Description	Req'd
4	Side	1-5 alpha characters: B, S, BUY, SL, SSHRT.	Y
	space	Field separator.	Y
	Quantity	1-8 numbers for the number of shares.	Y
	space	Field separator.	Y
	Security	1-14 alpha character security identifier.	Y
	space	Field separator.	Y
	Price	"MKT" to denote a market order, or a price to denote a limit order.	Y
	space	Field separator.	Y
	Currency	The system will default to USD.	N
	space	Field separator.	Y
	Price Qualifier	Price qualifier. Valid entries are OB, OPG, CLO, STP.	N
	space	Field separator.	Y
	Stop Price	Price at which this order becomes activated. Only allowed after STP Price qualifier.	N
	space	Field separator.	Y
	Order Qualifier	Valid entries are AON, FOK, IOC, DNR, DNI, NH.	N
	space	Field separator.	Y
	Bunched	Bunched indicator, .B	N
	<CR/LF>	Line delimiter.	Y
5	UR REJ	Update Notification.	Y
	<CR/LF>	Line delimiter.	Y
6	<CR/LF>	Trailer line.	N

4.4.8 Update Corporate Action (Stock Split and Dividend Adjustment)

ACES sends this message to order entry firms when a market maker submits an Update Corporate Action message (4.3.8).

SAMPLE MESSAGE

```
KSEC
KSEC0121/061903
OTHER ACESP
<CR/LF>
KSEC0121/061903
B 100 KMGB 21 GTC
B 1000 KMGB 21 GTC
KOSE
UR UPD
```

Message Format

Line	Field	Description	Req'd
2	Branch ID/Sequence Number/date	Branch ID (1-4 alpha characters) and sequence number (1-4 numerals) / Date of original order (mmddy)	Y
	<CR/LF>	Line delimiter.	Y
3	Side	1-5 alpha characters: B, S, BUY, SL, SSHRT	Y
	space	Field separator.	Y
	Quantity	Number of shares; 1-8 numbers	Y
	space	Field separator.	Y
	Security	1-14 alpha character security identifier	Y
	space	Field separator.	Y
	Price	"MKT" to denote a market order, or price to denote a limit order.	Y
	space	Field separator.	Y
	Currency	The system will default to USD.	N
	space	Field separator.	Y
	Price Qualifier	Price qualifier. Valid entries are OB, OPG, CLO, STP.	N
	space	Field separator.	Y
	Stop Price	Price at which this order becomes activated. Only allowed after STP Price qualifier.	N
	space	Field separator.	Y
	Order Qualifier	Valid entries are AON, FOK, IOC, DNR, DNI, NH.	N
	<CR/LF>	Line delimiter.	Y
4	UR UPD	Update Notification.	Y
	<CR/LF>	Line delimiter.	Y
5	<CR/LF>	Trailer line one.	N

Line	Field	Description	Req'd
6	<CR/LF>	Trailer line two.	N

4.4.9 Cancel Corporate Action

ACES sends this message to order entry firms when a market maker submits a Cancel Corporate Action message (4.3.9).

Message Format

Line	Field	Description	Req'd
4	STATUS	Constant STATUS	
5	REJ - CORP PURGE	The constant "REJ - CORP PURGE"	
6	Branch ID/Sequence Number	Branch ID (1-4 alpha characters) and sequence number (1-4 numerals)	
7	CXL	Constant 'CXL'	
	space	Field separator.	Y
	Side	B, S, SSHRT.	
	<CR/LF>	Line delimiter.	Y
8	Order Details	Quantity, security, price, optional currency, price qualifier (If STP, then an Optional Stop Price is allowed), order qualifiers, and TIF indicator (Same as original order).	
9	Order Qualifier	Valid entries are AON, FOK, IOC, DNR, DNI, NH.	
	space	Field separator.	Y
	Time in Force	DAY, GTC, GTMMDD. If a value is not provided, the system will default to DAY.	N
	space	Field separator.	Y
	Bunched	Bunched indicator (.B).	N
	<CR/LF>	Line delimiter.	Y
10	RE	Constant "RE".	
	space	Field separator.	Y
	Branch ID/Sequence Number /Date	Branch ID Sequence # / Date of Order (MMDDYY) to be cancelled.	
	<CR/LF>	Line delimiter.	Y
11	OEID	Order Entry identifier.	
	.GUID	4-character alpha ID of Give up firm if required.	

4.4.10 Purged Order

This message is generated by the application at the end of each business day to notify order entry firms of their expired orders (ex: day, GTD orders). Corresponding cancel messages are sent to market makers.

SAMPLE MESSAGE

```
KOSEN2 ACES3 0001 S
STATUS
REJECT - ORDER PURGED BY KOSE
TEST0002/061903
OTHER c
```

```
B
400 KMGB 21 USD
GTC
:KSEC
```

```
084856240603 KOSEN2/0001
```

Message Format

Line	Field	Description	Req'd
2	STATUS	Constant to identify status.	Y
	<CR/LF>	Line delimiter.	Y
3	REJ - ORD EXPIRED	Constant message indicating that order was purged the night before.	Y
	<CR/LF>	Line delimiter.	Y
4	Branch ID/Sequence Number/Date	1-4 alpha and 1-4 numbers used to denote the Branch Office and Sequence Number, of the original order / date of original order (mmddyy)	Y
	<CR/LF>	Line delimiter.	Y
5	CXL	Constant CXL	Y
	space	Field separator.	Y
	Side	B, S, BUY, SL, SSHRT.	Y
	<CR/LF>	Line delimiter.	Y
6	Quantity	1-8 numbers that represents the number of shares.	Y
	space	Field separator.	Y
	Security	1-14 alpha character security identifier.	Y
	space	Field separator.	Y
	Price	"MKT" denotes a market order while a price denotes a limit order.	Y
	space	Field separator.	Y
	Currency	The system will default to USD.	N
	space	Field separator.	Y

Line	Field	Description	Req'd
	Price Qualifier	Price qualifier. Valid entries are OB, OPG, CLO, STP.	N
	space	Field separator.	Y
	Stop Price	Price at which this order becomes activated. Only allowed after STP Price qualifier.	N
	<CR/LF>	Line delimiter.	Y
7	Time in Force	DAY, GTC, GTMMDD. If a value is not provided, the system will default to DAY.	N
	space	Field separator.	Y
	Order Qualifier	Valid entries are AON, FOK, IOC, DNR, DNI, NH.	N
	space	Field separator.	Y
	Bunched	Bunched indicator, .B	N
	<CR/LF>	Line delimiter.	Y
8	<CR/LF>	Line delimiter. A blank line must separate Line 8 from Line 10.	Y
9	MMID.GUID	Market Maker identifier. Identifies attached id as a Correspondent.	Y
	<CR/LF>	Line delimiter. A blank line must separate Line 8 from Line 10.	Y
10	<CR/LF>	Trailer.	N

4.5 Application and Market Maker Reject Text

Both market makers and ACES will generate reject messages for various reasons. These include invalid message formats such as price and date, a market maker not being active in a symbol, or an order being sent outside of market hours.

This section provides examples of both application and market maker rejects to help firms differentiate between the two. Both will start with the constant "Rej -" followed by the rejection reason. Please note that application rejects will contain a leading space before the constant "Rej - " while market maker rejects will not lead with a space.

Application Rejects	Market Maker Rejects
INVALID FORMAT	NOT A MARKET MAKER
NOT WITHIN ALLOWABLE HOURS	OPEN ORDER CANCELLED
CANT FIND	DUPE BRANCH & SEQ NO
MMID NOT AUTHORIZED	COMPANY DISALLOW ACES
CONTRA FIRM NOT IN CUSTOMER FILE	REJ - INVALID EXPIRY DATE AND TIME: #
NOT AUTHORIZED	ORD CXLD BY MM
FUNCTION NOT ALLOWED	ORDER ALREADY CXLD
INVALID BUY/SELL CODE	
INVALID CUSTOMER	
INVALID FORMAT	
INVALID GIVEUP	
INVALID PRICE	
INVALID VOLUME	
INVALID MM FIRM	

4.6 Recaps

Market Makers will have the ability to request a recap of their open orders to reconcile against their in-house systems. To request recaps, the subscriber must set an indicator in the ACES Firm Profile using the ACES Workstation. Valid indicators are:

N = Do not send recaps at end of day

Y = Send recaps at end of day, then reset indicator to N

D = Send recaps daily at end of day.

The Y indicator would be used for those firms that would like to receive recaps periodically, such as weekly or monthly.

5 NASDAQ Market Center Trading Messages

This section describes the format of the message text used to interface through the switch to the NASDAQ market center application.

NASDAQ market center is a fully integrated order display and execution system that aggregates quotes and orders, thereby providing access to a greater number of possible trades as well as greater depth and transparency of the market. NASDAQ market center responds to today's market factors of fragmentation, decimalization, and best execution obligations by creating a stronger natural center of liquidity, multiple execution options for market participants, and pre-trade anonymity.

Using NASDAQ market center, you can enter multiple quotes and orders at multiple prices. The system will display the total amount of trading interest in NASDAQ at the best prices, as well as four price levels away, for a total of five price levels on the bid and offer sides of the market. This increased transparency provides more information with which investors and market participants can make trading decisions.

All messages sent to NASDAQ market center via CTCI will conform to modified Common Message Switch (CMS) formats. Only one NASDAQ market center message may be placed in a single CTCI message. A firm may enter an order, cancel an open order, or cancel and replace an order.

5.1 Input Message Formats

Time in Force Timetables

The following tables provide entry, execution, delivery, and expiration times for IOC, DAY, GTC, IOX, X, and GTX orders for both NMS and Exchange-listed securities.

NMS Securities

	IOC	DAY	GTC	IOX	X	GTX
Entry	7:30-4:00	7:30-4:00	7:30-4:00	7:30-6:30	7:30-6:30	7:30-6:30
Execution	9:30-4:00	9:30-4:00	9:30-4:00	8:00-4:00	8:00-4:00	8:00-4:00
Delivery	8:00	8:00	8:00	8:00	8:00	8:00
Expiration		4:00 same day of entry	4:00 one year from entry		4:00 same day of entry	4:00 one year from entry

Exchange-listed Securities:

	IOC	DAY	GTC	IOX	X	GTX
Entry	7:30-4:00	7:30-4:00	7:30-4:00	7:30-6:30	7:30-6:30	7:30-6:30
Execution	9:30-4:00	9:30-4:00	9:30-4:00	9:30-6:30	9:30-6:30	9:30-6:30
Delivery	9:30	9:30	9:30	9:30	9:30	9:30
Expiration		4:00 same day of entry	6:30 one year from entry		6:30 same day of entry	6:30 one year from entry

5.1.1 Order Entry

The standard message header (see section 2.1.1) is followed by:

Required Lines²:

Line 2: ['POSS DUPE' sp] **Side** sp **`.SM'** <CR/LF>
 Line 3: **Quantity** sp **Secid** sp **Price** [sp Reserve [sp Refresh]] <CR/LF>
 Line 3a: [TIF] [sp Capacity] [sp 'DNI'] [sp 'DNR'] [sp 'PRI' sp priority] [sp 'ANON']
 [sp 'AIQ' sp value] [sp 'PI' sp Price Improvement] [sp 'TYP' sp Order Type]
 <CR/LF>

Optional Lines:

[Line 4:] [['UID' sp User Order ID] <CR/LF>]
 [Line 4a:] [['BCH'] [sp '.RCV' sp order rcv date] [sp 'OVR'] <CR/LF>]
 [Line 4b:] [['GU' sp giveup id] [sp 'CLR' sp clearing number] <CR/LF>]
 [Line 4c:] ['[Preferenced MMID] <CR/LF>]
 [Line 4d:] [['PEG' sp Peg Type] [sp 'CAP' sp Cap Price] [sp 'OFF' sp Offset Value] [sp
 'DIS] [sp 'DIF' sp Discretionary Offset] <CR/LF>]

Optional line for exchange-listed securities:

[Line 4e:] [['COM' sp Complaint Response] [sp 'BLK' sp Block Indicator] <CR/LF>]

Message Format

Line	Field	Description	Req'd
0	Entry Originator	1-6 character field - filled in by the Switch if not provided by the Order entry firm. For firms acting as a Service bureau. Must hold the 4-character MMID of the firm represented by the transaction.	Y for firms acting as a Service Bureau
	<CR/LF>	Line terminator.	Y
1	Branch Office	1-4 character alpha field used to identify the firm's branch office.	Y
	Branch Office Sequence #	1-4 character numeric sequence number field.	Y
	<CR/LF>	Line terminator.	Y
1a	Category	Field identifying the message category. For NASDAQ market center messages, this always will be "ORDER".	Y

² Fields are separated by a space character, sp
 All lines are terminated by a CR/LF pair, <CR/LF>

Fields in bold are required, **Category**

Fields in quotes are keywords, **`.SM'**

Fields within square brackets are optional, [sp Reserve]

Multiple fields within brackets must all be present if any are, [sp 'PRI' sp priority]

Line	Field	Description	Req'd
	Destination	Always contains "b" for NASDAQ market center messages.	Y
	Preferred MMID	<p>Can be present only if no Preferred MMID in line 4c.</p> <p>Preferred MMID indicating the market maker the order entry firm wishes to execute against. In the event that an MPID is present in both 1a and 4c, the system will ignore 1a. "SIZE" cannot be used as a market maker and cannot, therefore, be preferred in an order. "SIZE" is simply a display-only MMID that is used to display orders from market makers that have been indicated as unattributable. It is not a real MMID and has no orders of its own, making it an invalid destination for preferencing.</p> <p>Allowed values are:</p> <ul style="list-style-type: none"> 1-char exchange value 4-char MPID null = omitted <p>Exchange values are:</p> <ul style="list-style-type: none"> A or AMEX = American Stock Exchange B or BOSX = Boston Stock Exchange C or CINN = Cincinnati Stock Exchange M or MWSE = Chicago Stock Exchange N or NYSE = New York Stock Exchange P or PACX = ARCA/EX Pacific Stock Exchange W or CBOE = Chicago Board Options Exchange (CBOE) X or PHLX = Philadelphia Stock Exchange ATTN = Attain INET = Instinet <p>For NMS securities, if you would like to route your order to the NASDAQ market center only, then enter "NADQ".</p> <p>For exchange-listed securities, if you would like to route your order to the NASDAQ market center only, then enter "SIM."</p> <p>Without indicating a preferred destination, the order will be subject to routing to external venues.</p>	N
	<CR/LF>	Line terminator	Y
	Blank Line		Y
	<CR/LF>	To terminate the Message Header	Y
2	'POSS DUPE'	9-character field that indicates that the message may be a duplicate.	N

Line	Field	Description	Req'd
	Side	Alpha field indicating whether the order is a buy, sell, or short sale. Allowed values: B = buy BUY = buy S = sell SL = sell SSHRT = short sale SSHRT EXEMPT = short sale exempt	Y
	`.SM`	Field used to indicate that the message is in NASDAQ market center format and that the firm is prepared to receive Response Messages in NASDAQ market center format.	Y
	<CR/LF>	Line terminator.	Y
3	Quantity	1-6 character numeric field, in the range of 1-999999, representing the number of shares in the order. Exchange-listed securities can be in round lots and mixed lots only.	Y
	SECID	1-14 character security identifier. This symbol must represent a CQS security and must be in CMS format for exchange-listed securities. For example: OXY PRB or ROY PR.	Y
	Price	Field which must contain either: "MKT" to denote a market order, a 1-10 character decimal price, or "NBBO" if the order is pegged. Pegged orders are not allowed for exchange-listed securities.	Y
	Reserve	1-6 character field indicating the quantity of the Reserve Size. Must be in shares in either round lot multiples or mixed lots.	N
	Refresh	1-6 character field indicating the quantity to which the order will be replenished from Reserve size. Must be in shares, in a round lot multiple. If Refresh is supplied, Reserve is not an optional field.	N
	<CR/LF>	Line terminator.	Y
3a	TIF	Field indicating Time-in-Force. Allowed values for NMS securities: IOC = immediate or cancel, executable from market open to market close (default) DAY = executable from market open to market close, cancelled at market close (default if pegged, discretionary, or summary). GTC = good till cancel, executable from market	N

Line	Field	Description	Req'd
		<p>open to market close, cancelled one year from entry</p> <p>IOX = immediate or cancel, executable from pre-market session to market close</p> <p>X = cancel at market close, executable from pre-market session to market close</p> <p>GTX = good till cancel, executable from pre-market session to market close, cancelled one year from entry</p> <p>OO = executable only during opening cross</p> <p>OC = executable only during closing cross</p> <p>Allowed values for Exchange-listed securities:</p> <p>IOC = immediate or cancel, executable from market open to market close (default)</p> <p>DAY = executable from market open to market close (default if pegged, discretionary, or summary), cancelled at market close</p> <p>GTC = good till cancel, executable from market open to market close, cancelled one year from entry</p> <p>IOX = immediate or cancel, executable from market open to session close</p> <p>X = cancel at session close, executable from market open to session close</p> <p>GTX = good till cancel, executable from market open to session close, cancelled one year from entry</p>	
3a	Capacity	<p>Field indicating on whose behalf the order was entered. Allowed values:</p> <p>A = agency (this is the default)</p> <p>P = principal</p> <p>R = riskless</p>	N
	'DNI'	<p>Do Not Increase flag. 3-character keyword used to indicate that the order quantity and number of shares should not be increased as the result of a stock split.</p>	N
	'DNR'	<p>Do Not Reduce flag. 3-character keyword used to indicate that the order price should not be reduced because of a cash dividend.</p>	N
	'PRI' <i>sp</i> priority	<p>3-character keyword followed by a value that indicates which execution algorithm is to be utilized.</p> <p>Allowed values for NMS securities:</p> <p>T = price/time</p> <p>U = auto-ex</p>	N

Line	Field	Description	Req'd
		<p>A = super-aggressive H = thru orders I = Imbalance Only for open and close (only allowed TIFs are "OC" and "OO") Allowed values for exchange-listed securities: T = price/time S = Sweep The "S" algorithm allows you to trade through the NBBO when executing exchange-listed security orders. Access fee and price improvement are not allowed for exchange-listed securities, so the modified price/time is not applicable.</p>	
	'ANON' or 'PNON'	<p>4-character keyword indicating that the order is non-attributable. If this value is not given, then the order is attributable. Allowed values: PNON = pre-trade non-attributable ANON = pre-trade and post-trade non-attributable</p>	N
	'AIQ' <u>sp</u> value	<p>3-character keyword followed by a value used to specify whether internalization is allowed on this order. Allowed values: I = allow this order to match orders with same MPID Y = never allow internalization, orders with the same MPID will not match with this order (default if "AIQ" literal is entered without a value)</p>	N
	'PI' <u>sp</u> Price Improvement	<p>2-character keyword followed by a value to indicate whether Price Improvement is in effect. Price improvement is not allowed for exchange-listed securities. Allowed values: N = Order is fee liable with no price improvement. Y = Order is fee liable with price improvement offered that is greater than the fee. NOTE: This value will be defaulted to N. F = Order is not fee liable.</p>	N
	'TYP' <u>sp</u> Order Type	<p>3-character keyword followed by a value to indicate the type of order. If this field is not present in the message, the default type is O = Order. Allowed values: O = Order U = Summary Order</p>	N
	<CR/LF>	<p>Line terminator. This line terminator is required if any of the following optional lines are present, even if none of the optional fields found on Line 3a</p>	Y

Line	Field	Description	Req'd
		are supplied.	
4	'UID' <u>sp</u> User Order ID	4-character keyword followed by a 1-20 character field that holds an order ID used by the entering firm for internal processing. Valid characters are A-Z and 0-9. Embedded spaces are invalid.	N
	<CR/LF>	Line terminator if Optional Line 4 is present.	Y
4a	'B' or 'BCH'	Keyword used to indicate bunched orders.	N
	'RCV' <u>sp</u> order rcv date	4-character keyword followed by an 8-character user-specified date in MMDDYYYY format.	N
	'OVR'	Keyword used to indicate that you are overriding Price and Size warnings for the order. NASDAQ performs two levels of price validation. An initial validation will be performed that will result in a reject if the price exceeds an egregious level, even if this override parameter is set. A second level of validation is then performed. If the price fails this second level of price validation and this override parameter is included with the order, normal order processing continues. If the override parameter is not included, you will receive a reject with a warning.	N
	<CR/LF>	Line terminator if Optional Line 4a is present.	Y
4b	'GU' <u>sp</u> giveup id	2-character keyword followed by a space and the 4-character identifier of another firm (the give up firm) the order was entered on behalf of.	N
	'CLR' <u>sp</u> clearing number	3-character keyword followed by a 4 character numeric clearing number.	N
	<CR/LF>	Line terminator if Optional Line 4b is present.	Y
4c	':MMID	Can be present only if no Preferred MMID in line 1a. In the event that an MPID is present in both 1a and 4c, the system will ignore 1a. Preferred MMID indicating the market maker the order entry firm wishes to execute against. In the event that an MPID is present in both 1a and 4c, the system will ignore 1a. "SIZE" cannot be used as a market maker and cannot, therefore, be preferred in an order. "SIZE" is simply a display-only MMID that is used to display orders from market makers that have been indicated as unattributable. It is not a real MMID and has no orders of its own, making it an invalid destination for preferencing. Allowed values are: 1-char exchange value 4-char MPID	N

Line	Field	Description	Req'd
		<p>null = omitted</p> <p>Exchange values are:</p> <p>A or AMEX = American Stock Exchange</p> <p>B or BOSX = Boston Stock Exchange</p> <p>C or CINN = Cincinnati Stock Exchange</p> <p>M or MWSE = Chicago Stock Exchange</p> <p>N or NYSE = New York Stock Exchange</p> <p>P or PACX = ARCA/EX Pacific Stock Exchange</p> <p>W or CBOE = Chicago Board Options Exchange (CBOE)</p> <p>X or PHLX = Philadelphia Stock Exchange</p> <p>ATTN = Attain</p> <p>INET = Instinet</p> <p>For NMS securities, if you would like to route your order to the NASDAQ market center only, then enter "NADQ".</p> <p>For exchange-listed securities, if you would like to route your order to the NASDAQ market center only, then enter "SIM."</p> <p>Without indicating a preferred destination, the order will be subject to routing to external venues.</p>	
	<CR/LF>	Line terminator if Optional Line 4c is present.	Y
4d	'PEG' <u>sp</u> Peg Type	<p>3-character keyword followed by a value indicating the order's peg type. If this field is not present in the message, the default is not pegged. Pegged orders are not allowed for exchange-listed securities. Allowed values:</p> <p>G = regular pegged to NASDAQ Inside</p> <p>R = reverse pegged to NASDAQ Inside</p> <p>H = regular pegged to NBBO</p> <p>Q = reverse pegged to NBBO</p> <p>N = Not pegged</p>	N
	'CAP' <u>sp</u> Cap Price	<p>3-character keyword followed by a price. Cap price must contain a 1-10 character decimal price. If the field is not present in the message, the Cap price will default to 0. Pegged orders are not allowed for exchange-listed securities.</p>	N
	'OFF' <u>sp</u> Offset Value	<p>3-character keyword followed by a 2-digit value (00-99) that indicates the Peg Offset value. This field is applicable to Pegged orders and indicates the numerical offset that is applied to the current inside bid/offer to derive the current display price for the order. If the "PEG" value is G, this field should be set to a minimum of 00. If the "PEG" value is R, this field should be set to a minimum of 01. Pegged orders are not allowed for exchange-</p>	N

Line	Field	Description	Req'd
		listed securities.	
	'DIS'	3-character keyword indicating the order is discretionary. If the field is not present in the message, the order is not discretionary.	N
	'DIF' <i>sp</i> Discretionary Offset	3-character keyword followed by a 1-2 character numeric value. If a discretionary order is entered this field must contain a non-zero value. If an order is entered that is not discretionary, this field cannot be entered.	N
	<CR/LF>	Line terminator if Optional Line 4d is present.	Y
4e	'COM' <i>sp</i> Complaint Response	3-character keyword indicating the Complaint Response field followed by a 5 character field that allows you to preference an order to an exchange in response to a complaint. In this field, you indicate the complaint ID number for the complaint to which the order is responding. You obtain this ID number from Market Watch.	N
	'BLK' <i>sp</i> Block Indicator	3-character keyword indicating the Block Indicator field followed by a block indicator value that allows you to submit a block order for exchange-listed securities. This field is applicable only if it is indicated on an ITS commitment. It will be ignored if the order is preferenced to an exchange-listed security participant or exchange-listed security trading only. Allowed values: Y N.	N
	<CR/LF>	Line terminator if Optional Line 4e is present.	Y

5.1.2 Order Cancel

SAMPLE MESSAGE

```
ADVS
B1
ORDER b
<CR/LF>
CXL SSHRT EXEMPT .SM
100 UBCD 11.99
<CR/LF>
RE A1/060203 0B3035Q000N1
OE CTCI TESTING -0100
```

The standard message header (see section 2.1.1) is followed by:

Required Lines:

Line 2: '**CXL**' sp Side sp '.SM' <CR/LF>
 Line 3: **Quantity** sp **Secid** sp **Price** [sp Reserve] <CR/LF>
 Line 3a: [TIF] [sp Capacity] <CR/LF>
 Line 5: '**RE**' sp **Branch Office** sp **Branch Office Seq. #** '/' date sp **Order Reference Id** <CR/LF>

Message Format

Line	Field	Description	Req'd
0	Entry Originator	1-6 character field - filled in by the Switch if not provided by the Order entry firm. This is a required field for firms acting as a Service bureau and must hold the 4-character MMID of the firm represented by the transaction.	Y for firms acting as a Service Bureau
	<CR/LF>	Line terminator.	Y
1	Branch Office	1-4 character alpha field used to identify the firm's branch office.	Y
	Branch Office Sequence #	1-4 character numeric sequence number field.	Y
	<CR/LF>	Line terminator.	Y
1a	Category	Identifies the message category. For NASDAQ market center messages, this always will be "ORDER".	Y
	Destination	Always contains "b" for NASDAQ market center messages.	Y
	<CR/LF>	Line terminator.	Y
	Blank Line		
	<CR/LF>	Required to terminate the Message Header.	Y
2	'CXL'	3-character keyword indicating that this message is a Cancel Order Message.	Y

Line	Field	Description	Req'd
	Side	Alpha field indicating whether the order was a buy, sell or short sale. Allowed values: B = buy BUY = buy S = sell SL = sell SSHRT = short sale SSHRT EXEMPT = short sale exempt	Y
	'.SM'	Used to indicate that the message is in NASDAQ market center format and that the firm is prepared to receive Response Messages in NASDAQ market center format.	Y
	<CR/LF>	Line terminator.	Y
3	Quantity	1-6 character numeric field, in the range of 1-999999, representing the number of shares in the original order.	Y
	SECID	1-14 character security identifier. This symbol must represent a CQS security and must be in CMS format for exchange-listed securities. For example: OXY PRB or ROY PR.	Y
	Price	Holds the price of the original order. The precision of the price (i.e. the number of decimal positions) should be the same as in the original order.	Y
	Reserve	1-6 character field indicating the quantity of the Reserve Size. Must be in shares in either round lot multiples or mixed lots.	N
	<CR/LF>	Line terminator.	Y
3a	TIF	Indicates Time-in-Force of the original order. Allowed values for NMS securities: IOC = immediate or cancel, executable from market open to market close (default) DAY = executable from market open to market close, cancelled at market close (default if pegged, discretionary, or summary). GTC = good till cancel, executable from market open to market close, cancelled one year from entry IOX = immediate or cancel, executable from pre-market session to market close X = cancel at market close, executable from pre-market session to market close GTX = good till cancel, executable from pre-market session to market close, cancelled one year from entry	N

Line	Field	Description	Req'd
		OO = executable only during opening cross OC = executable only during closing cross Allowed values for Exchange-listed securities: IOC = immediate or cancel, executable from market open to market close (default) DAY = executable from market open to market close (default if pegged, discretionary, or summary), cancelled at market close GTC = good till cancel, executable from market open to market close, cancelled one year from entry IOX = immediate or cancel, executable from market open to session close X = cancel at session close, executable from market open to session close GTX = good till cancel, executable from market open to session close, cancelled one year from entry	
	Capacity	Field indicating on whose behalf the original order was entered. Allowed values: A = agency (this is the default) P = principal R = riskless	N
	<CR/LF>	Line terminator. Required even if TIF and Capacity are not present.	Y
5	'RE'	Required 2-character keyword indicating that this line defines the order to which this Cancel refers.	Y
	Branch Office	1-4 character alpha field used to identify the branch office of the original order.	Y
	Branch Office Sequence #	1-4 character numeric field indicating the sequence number of the original order.	Y
	'/' date	A slash followed by the 6-character entry date of the order to be canceled in MMDDYY format.	Y
	Order Reference ID	12-character Order Reference ID of the order to be canceled. This identifier is returned to the Order Entry Firm via the NASDAQ market center Order Entry Acknowledgement Message.	Y
	<CR/LF>	Required line terminator if optional line 5 is present.	Y if line 5 is present

5.1.3 Order Cancel/Replace (Version One)

SAMPLE MESSAGE

```
<CR/LF>
CA12
ORDER b
<CR/LF>
B .SM
100 UBCD 12
GTC
CXL B
200 UBCD 12
RE A 1/051303 0B3035J000MJ
```

The standard message header (see section 2.1.1) is followed by:

New Order:

```
Line 2:      ['POSS DUPE'] Side sp '.SM' <CR/LF>
Line 3:      Quantity sp Secid sp Price [ sp Reserve [ sp Refresh ] ] <CR/LF>
Line 3a:     [TIF] [ sp Capacity] [ sp DNI] [ sp DNR] <CR/LF>
```

Order being Canceled:

```
Line X:      'CXL' sp Side <CR/LF>
Line X1:     Quantity sp Secid sp Price [ sp Reserve ] <CR/LF>
Line X2:     'RE' sp Branch Office sp Branch Office Seq. # '/' date sp Order
              Reference ID <CR/LF>
```

Message Format

Line	Field	Description	Req'd
0	Entry Originator	1-6 character field. Filled in by the Switch if not provided by the Order entry firm. Must hold the 4-character MMID of the firm represented by the transaction.	Y for firms acting as service bureaus
	<CR/LF>	Line terminator.	Y
1	Branch Office	1-4 character alpha field used to identify the firm's branch office	Y
	Branch Office Sequence #	1-4 character numeric sequence number field.	Y
	<CR/LF>	Line terminator.	Y
1a	Category	Identifies the message category. For NASDAQ market center messages, this always will be "ORDER".	Y
	Destination	Always contains "b" for NASDAQ market center messages.	Y
	<CR/LF>	Required line terminator	Y

Line	Field	Description	Req'd
	Blank Line:		
	<CR/LF>	Required to terminate the Message Header.	Y
2	['POSS DUPE']	9-character field that indicates that the message may be a duplicate.	N
	Side	Alpha field indicating whether the order is a buy, sell, or short sale. Allowed values: B = buy BUY = buy S = sell SL = sell SSHRT = short sale SSHRT EXEMPT = short sale exempt	Y
	'.SM'	Indicates that the message is in NASDAQ market center format and that the firm is prepared to receive Response Messages in NASDAQ market center format	Y
	<CR/LF>	Line terminator	Y
3	Quantity	1-6 character numeric field, in the range of 1-999999, representing the number of shares in the order. Can be expressed as a delta (an adjustment to the Quantity of the original order) by including a "+" or "-" in front of the numeric value.	Y
	SECID	1-14 character security identifier.	Y
	Price	Must contain either: "MKT" to denote a market order, a 1-10 character decimal price, or "NBBO" if order is pegged.	Y
	Reserve	1-6 character field indicating the quantity of the Reserve Size. Must be in shares in either round lot multiples or mixed lots. This value can be expressed as a delta (an adjustment to the Reserve of the original order) by including a "+" or "-" in front of the numeric value.	N
	Refresh	1-6 character field indicating the quantity to which the order will be replenished from Reserve size. Must be in shares, in a round lot multiple. If Refresh is supplied, Reserve is not an optional field.	N
	<CR/LF>	Line terminator.	Y

Line	Field	Description	Req'd
3a	TIF	Will be ignored by NASDAQ market center. Optional field indicating Time-in-Force. Allowed values: DAY = expires at market close GTC = good till canceled IOC = Immediate or Cancel (default)	N
	Capacity	Will be ignored by NASDAQ market center. Optional field indicating on whose behalf the order was entered. Allowed values: A = agency (default) P = principal R = riskless	N
	'DNI'	Do Not Increase flag. 3-character keyword used to indicate that the order quantity and number of shares should not be increased as the result of a stock split	N
	'DNR'	Do Not Reduce flag. 3-character keyword used to indicate that the order price should not be reduced because of a cash dividend.	N
	<CR/LF>	Line terminator.	Y
X	'CXL'	3-character keyword identifying this portion of the message as representing the order being canceled.	Y
	Side	Alpha field indicating whether the order is a buy, sell or short sale. Allowed values: B = buy BUY = buy S = sell SL = sell SSHRT = short sale SSHRT EXEMPT = short sale exempt	Y
	<CR/LF>	Line terminator.	Y
X1	Quantity	1-6 character numeric field in the range of 1-999999 representing the current number of shares in the order being updated.	Y
	SECID	1-14 character security identifier.	Y
	Price	Holds the price of the original order.	Y
	Reserve	1-6 character field indicating the quantity of the Reserve Size. Must be in shares in either round lot multiples or mixed lots.	N
	<CR/LF>	Line terminator.	Y
X2	'RE'	2-character keyword indicating that this line defines the order to which this Cancel refers.	Y
	Branch Office	Required one to four character alpha field used to identify the branch office of the original order.	Y

Line	Field	Description	Req'd
	Branch Office Sequence #	Required one to four character numeric field indicating the sequence number of the original order.	Y
	'/' date	A slash followed by the 6-character entry date of the order to be canceled in MMDDYY format.	Y
	Order Reference ID	12-character Order Reference ID of the order to be canceled. This identifier is returned to the Order Entry Firm via the NASDAQ market center Order Entry Acknowledgement Message. This number must be supplied if an order acknowledgement message that includes the order reference number was received.	Y
	<CR/LF>	Line terminator.	Y

5.1.4 Order Cancel/Replace (Version Two)

SAMPLE MESSAGE

```

<SELECT --EE>
<STX> <ESC>1 DALL <LF>
DALL1234<LF>
ORDER b<LF>
<LF>
B .SM<LF>
100 CNET 1.25 <LF>
DAY <LF>
<LF>
<LF>
<LF>
<LF>
PEG G CAP 1.30 <LF>
CXL 08C03D2000N4 <LF>
OE CTCI TESTING -0100<ETX>

```

The standard message header (see section 2.1.1) is followed by:

Required Lines:

```

Line 2:      ['POSS DUPE' sp] Side sp '.SM' <CR/LF>
Line 3:      Quantity sp Secid sp Price [ sp Reserve [sp Refresh] ] <CR/LF>
Line 3a:     [TIF] [sp Capacity] [sp 'DNI'] [sp 'DNR'] [sp 'PRI' sp priority] [sp 'ANON']
             [sp 'AIQ' sp value] [sp 'PI' sp Price Improvement] [sp 'TYP' sp Order Type]
             <CR/LF>

```

Optional Lines:

```

[Line 4:]    [['.UID' sp User Order ID] <CR/LF>]
[Line 4a:]   [['BCH'] [sp '.RCV' sp order rcv date] [sp 'OVR'] <CR/LF>]
[Line 4b:]   [['GU' sp giveup id] sp ['CLR' sp clearing number] <CR/LF>]
[Line 4c:]   [':'[Preferenced MMID] <CR/LF>]
[Line 4d:]   ['PEG' sp Peg Type] [sp 'CAP' sp Cap Price] [sp 'OFF' sp Offset Value] [sp
             'DIS'] [sp 'DIF' sp Discretionary Offset] <CR/LF>]

```

Optional line for exchange-listed security trading:

```

[Line 4e:]   [['COM' sp Complaint Response] [sp 'BLK' sp Block Indicator] <CR/LF>]

```

Order being Canceled:

```

Line X:      'CXL' sp Order Reference ID <CR/LF>

```


Message Format

Line	Field	Description	Req'd
0	Entry Originator	1-6 character field - filled in by the Switch if not provided by the Order entry firm. For firms acting as a Service bureau and must hold the four character MMID of the firm represented by the transaction.	Y for firms acting as a Service Bureau
	<CR/LF>	Line terminator.	Y
1	Branch Office	1-4 character alpha field used to identify the firm's branch office.	Y
	Branch Office Sequence #	1-4 character numeric sequence number field.	Y
	<CR/LF>	Line terminator.	Y
1a	Category	Field identifying the message category. For NASDAQ market center messages, this always will be "ORDER".	Y
	Destination	Always contains "b" for NASDAQ market center messages.	Y
	Preferred MMID	Can be present only if no Preferred MMID in line 4c. Preferred MMID indicating the market maker the order entry firm wishes to execute against. In the event that an MPID is present in both 1a and 4c, the system will ignore 1a. "SIZE" cannot be used as a market maker and cannot, therefore, be preferred in an order. "SIZE" is simply a display-only MMID that is used to display orders from market makers that have been indicated as unattributable. It is not a real MMID and has no orders of its own, making it an invalid destination for preferencing. Allowed values are: 1-char exchange value 4-char MPID null = omitted Exchange values are: A or AMEX = American Stock Exchange B or BOSX = Boston Stock Exchange C or CINN = Cincinnati Stock Exchange M or MWSE = Chicago Stock Exchange N or NYSE = New York Stock Exchange P or PACX = ARCA/EX Pacific Stock Exchange W or CBOE = Chicago Board Options Exchange (CBOE) X or PHLX = Philadelphia Stock Exchange For NMS securities, if you would like to route your	N

Line	Field	Description	Req'd
		order to the NASDAQ market center only, then enter "NADQ". For exchange-listed securities, if you would like to route your order to the NASDAQ market center only, then enter "SIM." Without indicating a preferred destination, the order will be subject to routing to external venues.	
	<CR/LF>	Line terminator	Y
	Blank Line		
	<CR/LF>	To terminate the Message Header	Y
2	'POSS DUPE'	9-character field that indicates that the message may be a duplicate.	N
	Side	Alpha field indicating whether the order is a buy, sell or short sale. Allowed values: B = buy BUY = buy S = sell SL = sell SSHRT = short sale SSHRT EXEMPT = short sale exempt	Y
	`.SM'	Field used to indicate that the message is in NASDAQ market center format and that the firm is prepared to receive Response Messages in NASDAQ market center format.	Y
	<CR/LF>	Line terminator.	Y
3	Quantity	1-6 character numeric field in the range of 1-999999, representing the number of shares in the order. Exchange-listed securities can be only round lots and mixed lots.	Y
	SECID	1-14 character security identifier. For exchange-listed securities, this symbol must represent a CQS security and must be in CMS format. For example: OXY PRB or ROY PR.	Y
	Price	Field which must contain either: "MKT" to denote a market order, a 1-10 character decimal price, or "NBBO" if order is pegged. Pegged orders are not allowed for exchange-listed securities. Please note that changing a limit order to a market order is not allowed.	Y
	Reserve	1-6 character field indicating the quantity of the Reserve Size. Must be in shares in either round lot multiples or mixed lots.	N

Line	Field	Description	Req'd
	Refresh	1-6 character field indicating the quantity to which the order will be replenished from Reserve size. Must be in shares, in a round lot multiple. If Refresh is supplied, Reserve is not an optional field.	N
	<CR/LF>	Line terminator.	Y
3a	TIF	<p>Field indicating Time-in-Force.</p> <p>Allowed values for NMS securities:</p> <p>IOC = immediate or cancel, executable from market open to market close (default)</p> <p>DAY = executable from market open to market close, cancelled at market close (default if pegged, discretionary, or summary).</p> <p>GTC = good till cancel, executable from market open to market close, cancelled one year from entry</p> <p>IOX = immediate or cancel, executable from pre-market session to market close</p> <p>X = cancel at market close, executable from pre-market session to market close</p> <p>GTX = good till cancel, executable from pre-market session to market close, cancelled one year from entry</p> <p>OO = executable only during opening cross</p> <p>OC = executable only during closing cross</p> <p>Allowed values for Exchange-listed securities:</p> <p>IOC = immediate or cancel, executable from market open to market close (default)</p> <p>DAY = executable from market open to market close (default if pegged, discretionary, or summary), cancelled at market close</p> <p>GTC = good till cancel, executable from market open to market close, cancelled one year from entry</p> <p>IOX = immediate or cancel, executable from market open to session close</p> <p>X = cancel at session close, executable from market open to session close</p> <p>GTX = good till cancel, executable from market open to session close, cancelled one year from entry</p>	N
	Capacity	<p>Field indicating on whose behalf the order was entered. Allowed values:</p> <p>A = agency (default)</p> <p>P = principal</p> <p>R = riskless</p>	N
	'DNI'	Do Not Increase flag. 3-character keyword used to indicate that the order quantity and number of shares should not be increased as the result of a stock split.	N

Line	Field	Description	Req'd
	'DNR'	Do Not Reduce flag. 3-character keyword used to indicate that the order price should not be reduced because of a cash dividend.	N
	'PRI' <u>sp</u> priority	3-character keyword followed by a value that indicates which execution algorithm is to be utilized. Allowed values for NMS securities: T = price/time U = auto-ex A = super-aggressive I = Imbalance Only for opening and close (only allowed TIFs are "OC" or "OO") Allowed values for exchange-listed securities: T = price/time S = Sweep The "S" algorithm allows you to trade through the NBBO when executing your exchange-listed security orders. Access fee and price improvement are not allowed for exchange-listed securities, so the modified price/time is not applicable.	N
	'ANON' or 'PNON'	4-character keyword indicating that the order is non-attributable. If this value is not given, then the order is attributable. Allowed values: PNON = pre-trade non-attributable ANON = pre-trade and post-trade non-attributable	N
	'AIQ' <u>sp</u> value	3-character keyword followed by a value used to specify whether internalization is allowed on this order. Allowed values: I = allow this order to match orders with same MPID Y = never allow internalization, orders with the same MPID will not match with this order (default if "AIQ" literal is entered without a value)	N
	'PI' <u>sp</u> Price Improvement	2-character keyword followed by a value to indicate whether Price Improvement is in effect. Allowed values: N = Order is fee liable with no price improvement. Y = Order is fee liable with price improvement offered that is greater than the fee. NOTE: This value will be defaulted to N. Order is not fee liable. Price improvement is not allowed for exchange-listed securities.	N

Line	Field	Description	Req'd
	'TYP' <u>sp</u> Order Type	3-character keyword followed by a value to indicate the type of order. If this field is not present in the message, the default type is O = Order. Allowed values: O = Order U = Summary Order	N
	<CR/LF>	Line terminator. This line terminator is required if any of the following optional lines are present, even if none of the optional fields found on Line 3a are supplied.	Y
4	'UID' <u>sp</u> User Order ID	4-character keyword followed by a 1-20 character field that holds an order ID used by the entering firm for internal processing. Valid characters are A-Z and 0-9. Embedded spaces are invalid.	N
	<CR/LF>	Line terminator if Optional Line 4 is present.	Y
4a	'B' or 'BCH'	Keyword used to indicate bunched orders.	N
	'RCV' <u>sp</u> order rcv date	4-character keyword followed by an 8-character user-specified date in MMDDYYYY format.	N
	'OVR'	Keyword used to indicate that you are overriding Price and Size warnings for the order cancel/replace. NASDAQ performs two levels of price validation. An initial validation will be performed that will result in a reject if the price exceeds an egregious level, even if this override parameter is set. A second level of validation is then performed. If the price fails this second level of price validation and this override parameter is included with the order, normal order processing continues. If the override parameter is not included, you will receive a reject with a warning.	N
	<CR/LF>	Line terminator if Optional Line 4a is present.	Y
4b	'GU' <u>sp</u> giveup id	2-character keyword followed by a space and the 4-character identifier of another firm (the give up firm) the order was entered on behalf of.	N
	'CLR' <u>sp</u> clearing number	3-character keyword followed by a 4 character numeric clearing number.	N
	<CR/LF>	Line terminator if Optional Line 4b is present.	Y
4c	':MMID	Can be present only if no Preferred MMID in line 1a. In the event that an MPID is present in both 1a and 4c, the system will ignore 1a. Preferred MMID indicating the market maker the order entry firm wishes to execute against. In the event that an MPID is present in both 1a and 4c, the system will ignore 1a. "SIZE" cannot be used as a market maker and cannot, therefore, be preferred in an order. "SIZE" is simply a display-only MMID that is used to display orders from market makers	N

Line	Field	Description	Req'd
		<p>that have been indicated as unattributable. It is not a real MMID and has no orders of its own, making it an invalid destination for preferencing.</p> <p>Allowed values are:</p> <ul style="list-style-type: none"> 1-char exchange value 4-char MPID null = omitted <p>Exchange values are:</p> <ul style="list-style-type: none"> A or AMEX = American Stock Exchange B or BOSX = Boston Stock Exchange C or CINN = Cincinnati Stock Exchange M or MWSE = Chicago Stock Exchange N or NYSE = New York Stock Exchange P or PACX = ARCA/EX Pacific Stock Exchange W or CBOE = Chicago Board Options Exchange (CBOE) X or PHLX = Philadelphia Stock Exchange <p>For NMS securities, if you would like to route your order to the NASDAQ market center only, then enter "NADQ".</p> <p>For exchange-listed securities, if you would like to route your order to the NASDAQ market center only, then enter "SIM."</p> <p>Without indicating a preferred destination, the order will be subject to routing to external venues.</p>	
	<CR/LF>	Line terminator if Optional Line 4c is present.	Y
4d	'PEG' <u>sp</u> Peg Type	<p>3-character keyword followed by a value indicating the order's peg type. If this field is not present in the message, the default is not pegged. Allowed values:</p> <ul style="list-style-type: none"> G = regular pegged to NASDAQ Inside R = reverse pegged to NASDAQ Inside H = regular pegged to NBBO order Q = reverse pegged to NBBO order N = Not pegged <p>Pegged orders are not allowed for exchange-listed securities.</p>	N
	'CAP' <u>sp</u> Cap Price	<p>3-character keyword followed by a price. Cap price must contain a 1-10 character decimal price. If the field is not present in the message, the Cap price will default to 0.</p> <p>Pegged orders are not allowed for exchange-listed securities.</p>	N

Line	Field	Description	Req'd
	'OFF' <u>sp</u> Offset Value	3-character keyword followed by a 2-digit (00-99) that indicates the Peg Offset value. This field is applicable to Pegged orders and indicates the numerical offset that is applied to the current inside bid/offer to derive the current display price for the order. If the "PEG" value is G, this field should be set to a minimum of 00. If the "PEG" value is R, this field should be set to a minimum of 01. Pegged orders are not allowed for exchange-listed securities.	N
	'DIS'	3-character keyword indicating the order is discretionary. If the field is not present in the message, the order is not discretionary.	N
	'DIF' <u>sp</u> Discretionary Offset	3-character keyword followed by a 1-2 character numeric value. If the field is not present in the message, the Discretionary Offset Value will default to 0.	N
	<CR/LF>	Line terminator if Optional Line 4d is present.	Y
4e	'COM' <u>sp</u> Complaint Response	3-character keyword indicating the Complaint Response field followed by a 5 character field that allows you to preference an order to an exchange in response to a complaint. In this field, you indicate the complaint ID number for the complaint to which the order is responding. You obtain this ID number from Market Watch.	N
	'BLK' <u>sp</u> Block Indicator	3-character keyword indicating the Block Indicator field followed by a block indicator value that allows you to submit a block order for exchange-listed securities. This field is applicable only if it is indicated on an ITS commitment. It will be ignored if the order is preferenced to an exchange-listed security participant or exchange-listed security trading only. Allowed values: Y N.	N
	<CR/LF>	Line terminator if Optional Line 4e is present.	Y
X	'CXL'	3-character keyword identifying this portion of the message as representing the order being canceled.	Y
	Order Reference ID	12-character Order Reference ID of the order to be canceled. This identifier is returned to the Order Entry Firm via the Order Entry Acknowledgement Message.	Y
	<CR/LF>	Line terminator.	Y

Note: A successful Cancel/Replace (Version Two) transaction will receive an Order Entry Acknowledgement for the new order that is created and a Cancel Order Acknowledgement for the order that is cancelled.

5.1.5 Order Mass Cancel

The standard message header (see section 2.1.1) is followed by:

Required Lines:

Line 2: `MCXL' Side sp '.SM' <CR/LF>
 Line 3: Quantity sp Secid sp Price <CR/LF>
 Line 3a: [TIF] [sp ATRIB sp value] [sp TYP sp value] [sp PRI sp value] <CR/LF>
 Line 4b: ['GU' sp giveup ID] [sp 'CLR' sp clearing number] <CR/LF>
 Line 4d: [['PEG'] [sp DIS] <CR/LF>
 Line 4e: ['SYS'] sp System Application <CR/LF>

Message Format

Line	Field	Description	Req'd
0	Entry Originator	1-6 character field filled in by the Switch if not provided by the Order entry firm. This is a required field for firms acting as a Service bureau and must hold the 4-character MMID of the firm represented by the transaction.	Y
	<CR/LF>	Line terminator.	Y
1	Branch Office	1-4 character alpha field used to identify the firm's branch office.	Y
	Branch Office Sequence #	1-4 character numeric sequence number field.	Y
	<CR/LF>	Line terminator.	Y
1a	Category	Identifies the message category. This value will be "OTHER".	Y
	Destination	Always contains "b" for NASDAQ market center messages.	Y
	<CR/LF>	Line terminator.	Y
	Blank Line:		Y
	<CR/LF>	Required to terminate the Message Header.	Y
2	'MCXL'	4-character keyword indicating that this message is a Mass Cancel Order Message.	Y
	Side	Alpha field indicating whether buy orders, sell orders, or both should be cancelled. Allowed values: B = buy S = sell Z = both	Y
	'.SM'	Used to indicate that the message is in NASDAQ market center format and that the firm is prepared to receive Response Messages in NASDAQ market center format.	Y
	<CR/LF>	Line terminator.	Y

Line	Field	Description	Req'd
3	Quantity	Quantity should always be set to 0.	Y
	SECID	1-14 character security identifier. For exchange-listed security trading, this symbol must represent a CQS security and must be in CMS format. For example: OXY PRB or ROY PR.	Y
	Price	Price should always be set to 0.	Y
	<CR/LF>	Line terminator.	Y
3a	TIF	<p>Indicates Time-in-Force of orders that should be canceled. This field applies to orders only and will be ignored for "TYP" = S or Q.</p> <p>Allowed values for NMS securities:</p> <p>IOC = immediate or cancel, executable from market open to market close (default)</p> <p>DAY = executable from market open to market close, cancelled at market close (default if pegged, discretionary, or summary).</p> <p>GTC = good till cancel, executable from market open to market close, cancelled one year from entry</p> <p>IOX = immediate or cancel, executable from pre-market session to market close</p> <p>X = cancel at market close, executable from pre-market session to market close</p> <p>GTX = good till cancel, executable from pre-market session to market close, cancelled one year from entry</p> <p>OO = executable only during opening cross</p> <p>OC = executable only during closing cross</p> <p>ALL = All TIFs</p> <p>If no TIF is specified, the default is "ALL".</p> <p>Allowed values for Exchange-listed securities:</p> <p>IOC = immediate or cancel, executable from market open to market close (default)</p> <p>DAY = executable from market open to market close (default if pegged, discretionary, or summary), cancelled at market close</p> <p>GTC = good till cancel, executable from market open to market close, cancelled one year from entry</p> <p>IOX = immediate or cancel, executable from market open to session close</p> <p>X = cancel at session close, executable from market open to session close</p> <p>GTX = good till cancel, executable from market open to session close, cancelled one year from</p>	N

Line	Field	Description	Req'd
		entry	
	'ATTRIB' <i>sp</i> value	5-character keyword followed by a value that indicates whether attributable, non-attributable or both attributable, non-attributable orders should be cancelled. Allowed values: A = cancel attributable orders only P = cancel pre-trade non-attributable orders only N = cancel pre-trade and post-trade non-attributable orders only B = cancel both attributable and non-attributable orders (default)	N
	'TYP' <i>sp</i> value(s)	3-character keyword followed by one or more values used to specify the type of orders/quotes to cancel. Allowed values are: O = cancel orders U = cancel summary orders Q = cancel quotes S = cancel summary quotes Examples: If orders and summary orders are to be cancelled, enter: "TYP OU" If quotes, orders and summary orders are to be cancelled, enter: "TYP QOU" If quotes, summary quotes, orders and summary orders are to be cancelled, enter: "TYP QSOU" If no order type is specified, default is "QSOU" (all types will be canceled).	N
	'PRI' priority	3-character keyword followed by a value that indicates which execution algorithm is to be utilized. Allowed values for NMS securities: T = price/time U = auto-ex A = super-aggressive H = thru orders I = Imbalance Only for open and close (only allowed TIFs are "OC" and "OO") Allowed values for exchange-listed securities: T = price/time S = Sweep The "S" algorithm allows you to trade through the NBBO when executing your exchange-listed security orders. Access fee and price improvement are not allowed for exchange-listed securities, so the modified price/time is not applicable.	N
	<CR/LF>	Line terminator. Line terminator if Optional Line 3a is present	Y

Line	Field	Description	Req'd
4b	'GU' sp give up id	2-character keyword followed by a space and the 4-character used to cancel orders by a specific give up firm. This field applies to orders only and will be ignored for "TYP" = S or Q.	N
	'CLR' sp clearing number	3-character keyword followed by a 1-4 character numeric clearing number used to cancel orders by a specific clearing number. This field applies to orders only and will be ignored for "TYP" = S or Q.	N
	<CR/LF>	Line terminator if optional Line 4b is present.	Y
4d	'PEG'	3-character keyword indicating if Pegged orders should be cancelled. If "PEG" keyword is present TIF is ignored. This field applies to orders only and will be ignored for "TYP" = S or Q. Examples: If all pegged orders are to be cancelled, enter "TYP OU" on line 3a and "PEG" on line 4d. This will cancel all orders/summary orders that are classified as pegged. If only pegged summary orders are to be cancelled, enter "TYP U" on line 3a and "PEG" on line 4d. Pegged orders are not allowed for exchange-listed securities.	N
	'DIS'	3-character keyword indicating if discretionary orders should be cancelled. If "DIS" keyword is present TIF is ignored. This field applies to orders only and will be ignored for "TYP" = S or Q. Examples: If all discretionary orders are to be cancelled, enter "TYP OU" on line 3a and "DIS" on line 4d. This will cancel all orders/summary orders that are classified as discretionary. If only discretionary summary orders are to be cancelled, enter "TYP U" on line 3a and "DIS" on line 4d.	N
	<CR/LF>	Line terminator.	Y
4e	'SYS'	3-character keyword.	N
	System Application	Allowed values: Q = NASDAQ I = Exchange-listed securities	Y
	<CR/LF>	Line terminator.	Y

5.1.6 Order Reinstate

This is a new Message for NASDAQ market center only. Only purged orders can be reinstated. Only a NASDAQ Supervisor can purge orders. A firm can call a supervisor and, for instance, ask that all XXXX orders be purged. It is more likely that purged orders will result from market control events, such as suspension. Purged orders differ from canceled orders in that purged orders are temporarily left on the book.

SAMPLE MESSAGE

```
<CR/LF>
ABCD 1234
ORDER b
<CR/LF>
RIN S .SM
200 UBCD 10
<CR/LF>
RE ADVS5738/050703 0B3035Q000MK
OE CTCI TESTING -0100
```

The standard message header (see section 2.1.1) is followed by:

Required Lines:

```
Line 2:  'RIN' sp Side sp '.SM' <CR/LF>
Line 3:  Quantity sp Secid sp Price [sp Reserve] <CR/LF>
Line 3a: [TIF] [sp Capacity] <CR/LF>
Line 5:  'RE' sp Branch Office sp Branch Office Seq. # '/' date sp Order
        Reference Id <CR/LF>
```

Message Format

Line	Field	Description	Req'd
0	Entry Originator	1-6 character field filled in by the Switch if not provided by the Order entry firm. Must hold the 4-character MMID of the firm represented by the transaction.	Y for firms acting as service bureaus
	<CR/LF>	Line terminator.	Y
1	Branch Office	1-4 character alpha field used to identify the firm's branch office.	Y
	Branch Office Sequence #	1-4 character numeric sequence number field.	Y
	<CR/LF>	Line terminator.	Y
1a	Category	Identifies the message category. For NASDAQ market center messages, this always will be "ORDER".	Y
	Destination	Always contains "b" for NASDAQ market center messages.	Y
	<CR/LF>	Line terminator.	Y
	Blank Line		

Line	Field	Description	Req'd
	<CR/LF>	Required to terminate the Message Header.	Y
2	'RIN'	3-character keyword indicating that this message is an Order Re-Instate Message.	Y
	Side	Alpha field indicating whether the order was a buy, sell or short sale. Allowed values: B = buy BUY = buy S = sell SL = sell SSHRT = short sale SSHRT EXEMPT = short sale exempt	Y
	'.SM'	Used to indicate that the message is in NASDAQ market center format and that the firm is prepared to receive Response Messages in NASDAQ market center format.	Y
	<CR/LF>	Line terminator.	Y
3	Quantity	1-6 character numeric field in the range of 1-999999, representing the number of shares in the original order.	Y
	SECID	1-14 character security identifier. This symbol must represent a CQS security and must be in CMS format for exchange-listed securities. For example: OXY PRB or ROY PR.	Y
	Price	Holds the price of the original order. The precision of the price (i.e. the number of decimal positions) should be the same as in the original order.	Y
	Reserve	1-6 character field indicating the quantity of the Reserve Size. Must be in shares in either round lot multiples or mixed lots.	N
	<CR/LF>	Line terminator.	Y
3a	TIF	Indicates Time-in-Force of the original order.	N
	Capacity	Indicates on whose behalf the original order was entered. Allowed values: A = agency (default) P = principal R = riskless	N
	<CR/LF>	Line terminator. This is required even if TIF and Capacity are not present.	Y
5	'RE'	2-character keyword indicating that this line defines the order to which this Re-Instate refers.	Y
	Branch Office	1-4 character alpha field used to identify the branch office of the original order.	Y
	Branch Office Sequence #	1-4 character numeric field indicating the sequence number of the original order.	Y

Line	Field	Description	Req'd
	'/' date	A slash followed by the 6-character entry date of the order to be Re-Instated in MMDDYY format.	Y
	Order Reference ID	12-character Order Reference ID of the order to be Re-Instated. This identifier is returned to the Order Entry Firm via the NASDAQ market center Order Entry Acknowledgement Message.	Y
	<CR/LF>	Line terminator.	Y

5.1.7 Order Update

The standard message header (see section 2.1.1) is followed by:

New Order:

Line 2: ['POSS DUPE'] Side sp '.SM' <CR/LF>
 Line 3: Quantity sp Secid sp Price [sp Reserve [sp Refresh]] <CR/LF>
 Line 3a: [DNI] [sp DNR] <CR/LF>

Optional Line if setting Price/Size warning override:

Line 4a: ['OVR'] <CR/LF>

Optional Line if updating Alternate Clearing Number:

Line 4b: ['CLR' sp clearing number] <CR/LF>

Order being Updated:

Line X: 'UPD' sp Order Reference ID <CR/LF>
 Line X1: Quantity sp Secid sp Price [sp Reserve] <CR/LF>

Message Format

Line	Field	Description	Req'd
0	Entry Originator	1-6 character field. Filled in by the Switch if not provided by the Order entry firm. Must hold the 4-character MMID of the firm represented by the transaction.	Y for firms acting as a Service bureau.
	<CR/LF>	Line terminator.	Y
1	Branch Office	1-4 character alpha field used to identify the firm's branch office.	Y
	Branch Office Sequence #	1-4 character numeric sequence number field.	Y
	<CR/LF>	Line terminator.	Y
1a	Category	Identifies the message category. For NASDAQ market center messages, this always will be "ORDER".	Y
	Destination	Always contains "b" for NASDAQ market center messages.	Y
	<CR/LF>	Line terminator	Y
	Blank Line:		
	<CR/LF>	Required to terminate the Message Header.	Y
2	['POSS DUPE']	9-character field that indicates that the message may be a duplicate.	N

Line	Field	Description	Req'd
	Side	Alpha field indicating whether the order is a buy, sell or short sale. Allowed values: B = buy BUY = buy S = sell SL = sell SSHRT = short sale SSHRT EXEMPT = short sale exempt	Y
	'SM'	Indicates that the message is in NASDAQ market center format and that the firm is prepared to receive Response Messages in NASDAQ market center format	Y
	<CR/LF>	Line terminator	Y
3	Quantity	1-6 character numeric field, in the range of 1-999999, representing the number of shares in the order. Can be expressed as a delta (an adjustment to the Quantity of the original order) by including a "+" or "-" in front of the numeric value. Exchange-listed securities can be only round lots and mixed lots.	Y
	SECID	1-14 character security identifier. For exchange-listed securities, this symbol must represent a CQS security and must be in CMS format. For example: OXY PRB or ROY PR.	Y
	Price	Must contain either: "MKT" to denote a market order, a 1-10 character decimal price, or "NBBO" if order is pegged.	Y
	Reserve	1-6 character field indicating the quantity of the Reserve Size. Must be in shares in either round lot multiples or mixed lots. This value can be expressed as a delta (an adjustment to the Reserve of the original order) by including a "+" or "-" in front of the numeric value.	N
	Refresh	1-6 character field indicating the quantity to which the order will be replenished from Reserve size. Must be in shares, in a round lot multiple. If Refresh is supplied, Reserve is not an optional field.	N
	<CR/LF>	Line terminator.	Y
3a	'DNI'	Do Not Increase flag. 3-character keyword used to indicate that the order quantity and number of shares should not be increased as the result of a stock split.	N
	'DNR'	Do Not Reduce flag. 3-character keyword used to indicate that the order price should not be reduced because of a cash dividend.	N
	<CR/LF>	Line terminator.	Y

Line	Field	Description	Req'd
4a	'OVR'	Keyword used to indicate that you are overriding Price and Size warnings for the order update. NASDAQ performs two levels of price validation. An initial validation will be performed that will result in a reject if the price exceeds an egregious level, even if this override parameter is set. A second level of validation is then performed. If the price fails this second level of price validation and this override parameter is included with the order, normal order processing continues. If the override parameter is not included, you will receive a reject with a warning.	N
	<CR/LF>	Line terminator if Optional Line 4a is present.	Y
4b	'CLR' <u>sp</u> clearing number	3-character keyword followed by a 4 character numeric clearing number.	N
	<CR/LF>	Line terminator if Optional Line 4b is present.	Y
X	'UPD' <u>sp</u> Order Reference ID	3-character keyword identifying that this message represents an order update, followed by the 12-character Order Reference ID of the order to be updated. This identifier is returned to the Order Entry Firm via the Order Entry Acknowledgement Message.	Y
	<CR/LF>	Line terminator.	Y
X1	Quantity	1-6 character numeric field, in the range of 1-999999, representing the number of shares in the order.	Y
	SECID	1-14 character security identifier. For exchange-listed securities, this symbol must represent a CQS security and must be in CMS format. For example: OXY PRB or ROY PR.	Y
	Price	Must contain either: "MKT" to denote a market order, a 1-10 character decimal price, or "NBBO" if order is pegged.	Y
	Reserve	1-6 character field indicating the quantity of the Reserve Size. Must be in shares in either round lot multiples or mixed lots.	N
	<CR/LF>	Line terminator.	

5.2 Output Message Formats

5.2.1 Order Entry Acknowledgement

The Order Entry Acknowledgement Message is a STATUS message.

SAMPLE MESSAGE

```
ADVS
<CR/LF>
STATUS C170A
<CR/LF>
EZ 12 .SM
ACCEPTED 20030602 112451 0B3035Q000MF
UID DOMOIN111111
```

Optional MMID:

```
Line 0: [MMID] <CR/LF>
Line 1: Branch Office sp Branch Office Seq. # sp .SM <CR/LF>
Line 2: 'ACCEPTED' sp Date sp Time sp Order Reference Number <CR/LF>
```

Optional Lines:

```
[Line 4a:] [['UID' sp User Order ID] <CR/LF>]
```

Message Format

Line	Field	Description	Req'd
0	MMID	May contain the 4-character MMID of the entering firm or the MMID of the firm a Service Bureau is acting for. If this option is utilized for multi-station lines it will equal the 4-character MMID associated with the station.	N
	<CR/LF>	Line terminator.	Y
1	Branch Office	1-4 character alpha field used to identify the firm's branch office.	Y
	Branch Office Sequence #	1-4 character numeric sequence number field.	Y
	.SM	3-character keyword identifying this as a NASDAQ market center message.	Y
	<CR/LF>	Line terminator.	Y
2	ACCEPTED	Keyword indicating that this is an Order Acknowledgement Message.	Y
	Date	8-character date in "YYYYMMDD" format.	Y
	Time	6-character time in "hhmmss" format.	Y

Line	Field	Description	Req'd
	Order Reference Number	12-character reference number assigned to this order. This number should be used in any subsequent Cancel or Cancel/Replace messages sent by the order entry firm.	Y
	<CR/LF>	Line terminator.	Y
4a	UID	3-character keyword identifying the following field as being a User Order ID.	N
	User Order ID	1-20 character field User Order ID if the order entry firm supplied provided one in Line 4 of the order message.	N
	<CR/LF>	Line terminator.	Y if line 4a is present

5.2.2 Order Cancel Acknowledgement

The Cancel Order Acknowledgement Message is an ADMIN message.

SAMPLE MESSAGE

```
ADVS
<CR/LF>
ADMIN C170A
<CR/LF>
EZ 12 .SM
SSHRT EXEMPT 100 UBCD 11.99
UR OUT 100 LVS 100
081035Q000MP
```

Optional MMID:

```
Line 0: [MMID] <CR/LF>
Line 1: Branch Office sp Branch Office Seq. # sp .SM <CR/LF>
Line 2: Side sp Quantity sp Secid sp Price <CR/LF>
Line 3: 'UR OUT' sp Quantity sp 'LVS' sp Quantity <CR/LF>
Line 4: Order Reference Number <CR/LF>
```

Message Format

Line	Field	Description	Req'd
0	MMID	May contain the 4-character MMID of the entering firm or the MMID of the firm a Service Bureau is acting for. If this option is utilized for multi-station lines it will equal the 4-character MMID associated with the station.	N
	<CR/LF>	Line terminator.	Y
1	Branch Office	1-4 character alpha field used to identify the firm's branch office.	Y
	Branch Office Sequence #	1-4 character sequence number field.	Y
	.SM	3-character keyword identifying this as a NASDAQ market center message.	Y
	<CR/LF>	Line terminator.	Y
2	Side	Field containing one of the following: B, BUY, S, SL, SSHRT or SSHRT EXEMPT.	Y
	Quantity	Number of shares in the canceled order.	Y
	SECID	Security ID of the security involved in the canceled order.	Y
	Price	Price of the canceled order.	Y
	<CR/LF>	Line terminator.	Y
3	UR OUT	6-character constant acknowledging that the order was canceled.	Y

Line	Field	Description	Req'd
	Quantity	Number of shares canceled.	Y
	LVS	3-character constant indicating that the Leaves Quantity is to follow.	N
	Quantity	Leaves quantity. This is the number of shares that could not be canceled because they were in delivery when the cancel occurred. Once the delivery completes, an execution report and/or another cancel UM will be sent for these shares based on the outcome of the delivery.	N
	<CR/LF>	Line terminator.	Y
4	Order Reference Number	12-character reference number assigned to the canceled order. If a quote or quote summary is canceled, this field will be "QT" for quote and "SQ" for summary quote.	Y
	<CR/LF>	Line terminator.	Y

If a cancel request is received while the order has shares in delivery, a user may receive two cancel UMs for a single cancel request. The first UM will indicate the number of shares that can be canceled immediately. If a portion of those shares can be canceled when the delivery is complete, a second cancel UM will be sent for that amount. If the full shares in delivery are canceled, a reject message will be returned echoing the original order. If no additional shares can be canceled, the user will receive an execution report.

5.2.3 Order Cancel/Replace Acknowledgement (Version One)

The Cancel/Replace Acknowledgement Message is an ADMIN message.

If the Cancel/Replace operation combined a complete order quantity replacement (i.e., not a quantity increment or quantity decrement), plus a Reserve decrement, two Cancel/Replace Acknowledgement Messages will be returned. The first will return information about the order canceled and order created. The second will return information about the Reserve decremented.

SAMPLE MESSAGE

```
ADVS
<CR/LF>
ADMIN C170A
<CR/LF>
CA 12 .SM
SL 900 UBCD 11.99 .RES 0 .REF 0
SL 800 UBCD 11.99
ADVS
0B3035Q000NC
UR OUT
```

Optional MMID:

```
Line 0:      [MMID] <CR/LF>
Line 1:      Branch Office sp Branch Office Seq. # sp .SM <CR/LF>
```

New Order Information:

```
Line 2:      Side sp Quantity sp Secid sp Price [sp '.RES' sp Reserve] [sp '.REF' sp
Refresh] [sp DNI] [sp DNR] <CR/LF>
```

Canceled Order Information:

```
Line 3:      Side sp Quantity sp Secid sp Price [sp DNI] [sp DNR] <CR/LF>
```

Additional Information:

```
Line 4:      Order Entry Firm <CR/LF>
Line 5:      New Order Reference Number <CR/LF>
Line 6:      'UR OUT' or 'ACCEPTED' <CR/LF>
```

Message Format

Line	Field	Description	Req'd
0	MMID	May contain the 4-character MMID of the entering firm or the MMID of the firm a Service Bureau is acting for. If this option is utilized for multi-station lines it will equal the 4-character MMID associated with the station.	N
	<CR/LF>	Line terminator.	Y

Line	Field	Description	Req'd
1	Branch Office	1-4 character alpha field used to identify the firm's branch office. Branch Office will be the new Branch Office.	Y
	Branch Office Sequence #	1-4 character sequence number field. Branch Office Sequence # will be the new Branch Office Sequence #.	Y
	.SM	3-character keyword identifying this as a NASDAQ market center message.	Y
	<CR/LF>	Line terminator.	Y
2	Side	Field containing one of the following: B, BUY, S, SL, SSHRT or SSHRT EXEMPT.	Y
	Quantity	Open Quantity for the new or modified order. Increments: Total number of open shares after the increment. Absolute Cancel Replace: Number of shares in the new order. Decrement: Total number of open shares after the decrement. DNI or DNR only change: Total number of open shares for the order. Absolute changes to Reserve and/or Refresh only: Total number of open shares for the order.	Y
	SECID	Security ID of the new order.	Y
	Price	Price of the new order.	Y
	.RES Reserve	Reserve Quantity of the new or modified order (if provided).	Y
	.REF Refresh	Refresh Quantity of the new or modified order (if provided).	Y
	'DNI'	Do Not Increase flag. 3-character keyword used to indicate that the order quantity and number of shares should not be increased as the result of a stock split.	Y
	'DNR'	Do Not Reduce flag. 3-character keyword used to indicate that the order price should not be reduced because of a cash dividend.	Y
	<CR/LF>	Line terminator.	Y
3	Side	Field containing one of the following: B, BUY, S, SL, SSHRT or SSHRT EXEMPT.	Y

Line	Field	Description	Req'd
	Quantity	Number of shares in the canceled order. Since increments, DNI, DNR only changes and Absolute change to Refresh only, do not reduce shares, Quantity will be 0 for these transactions. For all other transactions, this is the number of shares canceled in the order (Reserve + Open QTY canceled).	Y
	SECID	Security ID of the canceled order.	Y
	Price	Price of the canceled order.	Y
	'DNI'	Optional Do Not Increase flag. 3-character keyword used to indicate that the order quantity and number of shares should not be increased as the result of a stock split.	Y
	'DNR'	Optional Do Not Reduce flag. 3-character keyword used to indicate that the order price should not be reduced because of a cash dividend.	Y
	<CR/LF>	Line terminator.	Y
4	Order Entry Firm	4-character ID of the firm that entered the order.	Y
	<CR/LF>	Line terminator.	Y
5	New Order Reference Number	12-character reference number assigned to the new or modified order. For an increment transaction, DNI, DNR changes and absolute changes to Refresh only and/or Reserve only, this will be their order reference number of the modified order.	Y
	<CR/LF>	Line terminator.	Y
6	UR OUT or ACCEPTED	6-character constant acknowledging that the old order has been completely canceled. 8-character constant acknowledging that the transaction has been accepted.	Y
	<CR/LF>	Line terminator.	Y

If an absolute cancel replace or a decrement is entered and the order has share in delivery, then the user will receive a cancel/replace acknowledgement indicating the number of shares that can be immediately canceled as well as the new order information (if applicable). If more shares can be canceled once the delivery is complete, a cancel UM will be sent with that amount. If no additional shares can be canceled, the user will receive an execution report.

5.2.4 Order Cancel/Replace Acknowledgement (Version Two)

You will receive an order acknowledgement (section 5.2.1) followed by a cancel acknowledgement (section 5.2.2) in response to your incoming cancel/replace (version two) message, as indicated in the sample below.

SAMPLE MESSAGE

```
NFSCK SOEROA 0006 S
AAAA 11 .SM
ACCEPTED 20041007 160105 0J904BN000MC
UID HITHERE
160105071004 NFSCK/0006
```

```
-
NFSCK SOEROA 0007 A
AA 11 .SM
BUY 100000 AMZN 0.01
UR OUT 100700 LVS 0
0J904BN000MB
160105071004 NFSCK/0007
```

5.2.5 Order Mass Cancel Acknowledgement

SAMPLE MESSAGE

```
ADVS
<CR/LF>
ADMIN C170A
<CR/LF>
EZ 12 .SM
SSHRT EXEMPT 100 UBCD 11.99
UR OUT 100 LVS 100
081035Q000MP
```

Optional MMID:

```
Line 0: [MMID]<CR/LF>
Line 1: Branch Office sp Branch Office Seq. # sp .SM <CR/LF>
Line 2: Side sp Quantity sp Secid sp Price <CR/LF>
Line 3: 'UR OUT' sp Quantity sp 'LVS' sp Quantity <CR/LF>
Line 4: Order Reference Number <CR/LF>
```

Message Format

Line	Field	Description	Req'd
0	MMID	May contain the 4-character MMID of the entering firm or the MMID of the firm a Service Bureau is acting for. If this option is utilized for multi-station lines it will equal the 4-character MMID associated with the station.	N
	<CR/LF>	Line terminator.	Y
1	Branch Office	1-4 character alpha field used to identify the firm's branch office.	Y
	Branch Office Sequence #	1-4 character numeric sequence number field.	Y
	.SM	3-character keyword identifying this as a NASDAQ market center message.	Y
	<CR/LF>	Line terminator.	Y
2	Side	Field containing one of the following: B, BUY, S, SL, SSHRT or SSHRT EXEMPT.	Y
	Quantity	Number of shares in the canceled order.	Y
	SECID	Security ID of the security involved in the canceled order.	Y
	Price	Price of the canceled order.	Y
	<CR/LF>	Line terminator.	Y
3	UR OUT	6-character constant acknowledging that the order was canceled.	Y
	Quantity	Number of shares canceled.	Y

Line	Field	Description	Req'd
	LVS	3-character constant indicating that the Leaves Quantity is to follow.	N
	Quantity	Leaves quantity. This is the number of shares that could not be canceled because they were in delivery when the cancel occurred. Once the delivery completes, an execution report and/or another cancel UM will be sent for these shares based on the outcome of the delivery.	N
	<CR/LF>	Line terminator.	Y
4	Order Reference Number	12-character reference number assigned to the canceled order. If a quote or quote summary is canceled, this field will be "QT" for quote and "SQ" for summary quote.	Y
	<CR/LF>	Line terminator.	Y

5.2.6 Order Reinstate Acknowledgement

The Order Reinstate Message is a STATUS message. The Reinstatement Acknowledge Message has the same format as the Order Entry Acknowledgement Message, except that the Keyword "ACCEPTED" on Line 2 of the message is replaced with the keyword "REINSTATED".

Optional MMID:

Line 0: [MMID] <CR/LF>
 Line 1: Branch Office sp Branch Office Seq. # sp .SM <CR/LF>
 Line 2: 'REINSTATED' sp Date sp Time sp Order Reference Number
 <CR/LF>

Optional Lines:

[Line 4a:] [['UID' sp User Order ID] <CR/LF>]

Message Format

Line	Field	Description	Req'd
0	MMID	May contain the 4-character MMID of the entering firm or the MMID of the firm a Service Bureau is acting for. If this option is utilized for multi-station lines it will equal the 4-character MMID associated with the station.	N
	<CR/LF>	Line terminator.	Y
1	Branch Office	1-4 character alpha field used to identify the firm's branch office.	Y
	Branch Office Sequence #	1-4 character numeric sequence number field.	Y
	.SM	3-character keyword identifying this as a NASDAQ market center message.	Y
	<CR/LF>	Line terminator.	Y
2	REINSTATED	Keyword indicating that this is an Order Reinstatement Message.	Y
	Date	8-character date in YYYYMMDD format.	Y
	Time	6-character time in hhmmss format.	Y
	Order Reference Number	12-character reference number assigned to this order. This number should be used in any subsequent Cancel or Cancel/Replace messages sent by the order entry firm.	Y
	<CR/LF>	Line terminator.	Y
4a	UID	3-character keyword identifying the following field as being a User Order ID.	N

Line	Field	Description	Req'd
	User Order ID	1-20 character field User Order ID if the order entry firm supplied provided one in Line 4 of the order message.	N
	<CR/LF>	Line terminator.	Y if Line 4a is present

5.2.7 Order Update Acknowledgement

The Order Update Acknowledgement Message is an ADMIN message.

Optional MMID:

Line 0: [MMID] <CR/LF>
 Line 1: **Branch Office** sp **Branch Office Seq. #** sp **.SM** <CR/LF>

Updated Order Information:

Line 2: **Side** sp **Quantity** sp **Secid** sp **Price**
 [sp '.RES' sp Reserve] [sp '.REF' sp Refresh] [sp DNI] [sp DNR] [sp 'CLR' sp
 Clearing Number] <CR/LF>

Order Information Before Update:

Line 3: **Side** sp **Quantity** sp **Secid** sp **Price** [sp DNI] [sp DNR] [sp 'CLR' sp
 Clearing Number] <CR/LF>

Additional Information:

Line 4: **Order Entry Firm** <CR/LF>
 Line 5: **Order Reference Number** <CR/LF>
 Line 6: **'UR OUT' or 'ACCEPTED'** <CR/LF>

Message Format

Line	Field	Description	Req'd
0	MMID	May contain the 4-character MMID of the entering firm or the MMID of the firm a Service Bureau is acting for. If this option is utilized for multi-station lines it will equal the 4-character MMID associated with the station.	N
	<CR/LF>	Line terminator.	Y
1	Branch Office	1-4 character alpha field used to identify the firm's branch office. Branch Office will be the new Branch Office.	Y
	Branch Office Sequence #	1-4 character sequence number field. Branch Office Sequence # will be the new Branch Office Sequence #.	Y
	.SM	3-character keyword identifying this as a NASDAQ market center message.	Y
	<CR/LF>	Line terminator.	Y
2	Side	Field containing one of the following: B, BUY, S, SL, SSHRT or SSHRT EXEMPT.	Y

Line	Field	Description	Req'd
	Quantity	Open Quantity for the modified order. Increments: Total number of open shares after the increment. Decrement: Total number of open shares after the decrement. DNI or DNR only change: Total number of open shares for the order. Absolute changes to Reserve and/or Refresh only: Total number of open shares for the order.	Y
	SECID	Security ID of the modified order.	Y
	Price	Price of the modified order.	Y
	.RES Reserve	Reserve Quantity of the modified order (if provided).	N
	.REF Refresh	Refresh Quantity of the modified order (if provided).	N
	'DNI'	Optional Do Not Increase flag. 3-character keyword used to indicate that the order quantity and number of shares should not be increased as the result of a stock split.	N
	'DNR'	Optional Do Not Reduce flag. 3-character keyword used to indicate that the order price should not be reduced because of a cash dividend.	N
	'CLR' <i>sp</i> clearing number	3-character keyword followed by a 1-4 character numeric clearing number.	N
	<CR/LF>	Line terminator.	Y
3	Side	Field containing one of the following: B, BUY, S, SL, SSHRT or SSHRT EXEMPT.	Y
	Quantity	Number of shares cancelled. Since increments, DNI, DNR only changes and Absolute change to Refresh only, do not reduce shares, Quantity will be 0 for these transactions. For all other transactions, this is the number of shares canceled in the order (Reserve + Open QTY canceled).	Y
	SECID	Security ID of the modified order.	Y
	Price	Price of the modified order.	Y
	'DNI'	Optional Do Not Increase flag. 3-character keyword used to indicate that the order quantity and number of shares should not be increased as the result of a stock split.	N
	'DNR'	Optional Do Not Reduce flag. 3-character keyword used to indicate that the order price should not be reduced because of a cash dividend.	N
	'CLR' <i>sp</i> clearing number	3-character keyword followed by a 1-4 character numeric clearing number.	N

Line	Field	Description	Req'd
	<CR/LF>	Line terminator.	Y
4	Order Entry Firm	4-character ID of the firm that entered the order.	Y
	<CR/LF>	Line terminator.	Y
5	Order Reference Number	12-character reference number assigned to the modified order.	Y
	<CR/LF>	Line terminator.	Y
6	UR OUT or ACCEPTED	6-character constant acknowledging that the order has been completely canceled. 8-character constant acknowledging that the transaction has been accepted.	Y
	<CR/LF>	Line terminator.	Y

If a decrement is entered and the order has shares in delivery, then the user will receive an Order Update acknowledgement indicating the number of shares that can be immediately canceled. If more shares can be canceled once the delivery is complete, a cancel UM will be sent with that amount. If no additional shares can be canceled, the user will receive an execution report.

5.2.8 Execution Reports

An order message that successfully passes the validation by the switch is forwarded to either the NASDAQ market center application for additional validation processing.

If an error is detected or the order cannot be automatically executed, the order entry firm will receive a reject message explaining why the order could not be executed. If the order is executed, the order entry firm shall receive an execution report notifying him of the market maker who executed the order, the number of shares executed and the execution price.

NASDAQ Operations may cancel (kill) a NASDAQ market center execution if both parties to the trade agree to the cancellation. Order Entry and Market Maker firms receiving execution reports via CTCI will receive execution kill reports via CTCI.

All execution reports, cancellation messages and reject messages will be forwarded to the CTCI order entry firm via the switch and will be contained in a switch output message envelope (described in Section 4.6 *Application Reject messages*). Execution Reports and Execution Kill Reports are REPORT messages.

A firm may elect to receive NASDAQ market center market maker execution reports via a CTCI message. Market makers electing to receive execution reports via CTCI will also receive cancellation messages via CTCI.

5.2.8.1 Order Entry Execution Report

Optional MMID:

Line 0: [MMID] <CR/LF>

Body Text:

Line 1: Branch Office sp Branch Office Seq. # sp .SM <CR/LF>
 Line 2: **Execution Category** <CR/LF>
 Line 3: **Execution Quantity** sp **Secid** sp **Execution Price** <CR/LF>
 Line 4: **Original Price** [sp '.B'] <CR/LF>
 Line 4a: **Remaining Display Quantity** [sp Remaining Reserve Quantity] <CR/LF>

Optional Line if Price Improvement:

[Line 4b:] ['PI'] <CR/LF>
 Blank Line: <CR/LF>
 Line 5: **Executing Broker Clearing #** sp **MM Executed Against Size of Trade**
sp Execution Time [sp '.OEID'] <CR/LF>

Optional Line if Giveup on Opposite Side:

[Line 6:] [.MMID] <CR/LF>
 Line 7: **Order Reference Number** [sp **Execution Reference Number**] sp
Liquidity Indicator <CR/LF>

Optional Line if User Order ID:

[Line 8:] [User Order ID <CR/LF>]

Optional Line for exchange-listed securities:

[Line 9:] [Trade Through sp Commitment Identifier <CR/LF>]

Message Format

Line	Field	Description	Req'd
0	MMID	May contain the 4-character MMID of the entering firm or the MMID of the firm a Service Bureau is acting for. If this option is utilized for multi-station lines it will equal the 4-character MMID associated with the station.	N
	<CR/LF>	Line terminator.	Y
1	Branch Office	1-4 character alpha field used to identify the receiving firm's branch office.	N
	Branch Office Sequence #	1-4 character numeric sequence number.	N
	.SM	3-character keyword identifying this as a NASDAQ market center message.	Y
	<CR/LF>	Line terminator.	Y
2	Execution Category	This field identifies the type of execution. Allowed values: BOT SLD SLD SHRT SLD SHRT EXEMPT	Y
	<CR/LF>	Line terminator.	Y
3	Quantity	1-6 character numeric field representing the number of shares.	Y
	SECID	1-14 character security identifier.	Y
	Execution Price	Execution Price in decimal format.	Y
	<CR/LF>	Line terminator.	Y
4	Original Price	If the original order contained "MKT" as the price, line 5 will contain "ON MKT". If the original order contained a price, line 5 will contain "ON (price) LMT" where (price) is the price entered in the original order. Pegged orders will also contain "ON (price) LMT."	Y
	.B	If the order was entered as a bunched order, the characters ".B" will follow the Original Price.	N
	<CR/LF>	Line terminator.	Y

Line	Field	Description	Req'd
4a	Remaining Display Quantity	Valid fields are "FILLS" or "LVS #####", where ##### represents shares remaining as a result of a partial execution. LVS quantity is the unexecuted display shares.	Y
	Remaining Reserve Quantity	A field containing the number shares remaining in Reserve as a result of a partial execution. This field is optional if Reserve = 0.	N
	<CR/LF>	Line terminator.	Y
4b	PI	2-character keyword used to indicate Price Improvement. Price improvement is not allowed for exchange-listed securities.	N
	<CR/LF>	Line terminator. If line 4b is present, then this field will be present also. If there is no price improvement, then this field will not be present.	Y
Blank	<CR/LF>		Y
5	Executing Broker Clearing #	4-character clearing number of the firm who clears for the order entry firm. If a give up firm was entered in the original order, this field shall be equal to the clearing number of the firm who clears for the give up firm. If a give up firm was not entered, the clearing number shall be equal to the firm who clears for the firm who entered the original order.	Y
	MM Executed Against	4-character MMID of the Market Maker or of the exchange ID who executed the trade. If the trade is marked as anonymous, the MMID will be reported as "SIZE".	Y
	Size of Trade	1-6 character field containing the actual number of shares of the execution.	Y
	Execution Time	Execution Time in HH:MM:SS format.	Y
	'.'OEID	4-character alpha identifier of the firm who entered the original order. This field will only appear if a give-up identifier was entered in the original order. If no give up firm was entered, this field shall be blank.	N
	<CR/LF>	Line terminator.	Y
6	'.'MMID	4-character alpha identifier of the give up firm on the opposite side. This line will appear only if a give-up identifier was entered on the matching order. If the trade is marked as anonymous, the give-up MMID will be suppressed. If a give up firm was not entered, this line will not appear in the message.	N
	<CR/LF>	Line terminator.	Y if Line 6 is present

Line	Field	Description	Req'd
7	Order Reference Number	12-character reference number assigned to this order. If the execution is for an order, this field will contain the 12-character order reference number. If the execution is for a quote or summary quote, this field will contain "QT" or "SQ," respectively."	Y
	Execution Ref. Number	6-character reference number assigned to this execution.	Y
	Liquidity Indicator	2-character identifier. Allowed values: LA = liquidity accessor LP = liquidity provider CA = closing cross liquidity accessor CP = closing cross liquidity provider OA = opening cross liquidity accessor OP = opening cross liquidity provider RA = routed accessor	Y
	<CR/LF>	Line terminator.	Y
8	User Order ID	Order ID supplied by the entering firm.	N
	<CR/LF>	Line terminator.	Y if line 8 is present
9	Trade Through	Identifies when an execution of a exchange-listed security is traded through another market center. Allowed values: Y N	N
	Commitment Identifier	5-character field for exchange-listed securities. This field is populated when an execution is effected with an ITS participant.	N
	<CR/LF>	Line terminator.	Y if line 9 is present

5.2.8.2 Order Entry Execution Kill Report

The Order Entry Execution Kill Report has the same format as the Order Entry Execution Report, with the addition of the keyword 'CXL' on Line 3 of the message.

Optional MMID:

Line 0: [MMID] <CR/LF>

Body Text:

Line 1: Branch Office sp Branch Office Seq. # sp .SM <CR/LF>

Line 2: 'CXL' sp Execution Category <CR/LF>

Line 3: Execution Quantity sp Secid sp Execution Price <CR/LF>

Line 4: Original Price [sp '.B'] <CR/LF>

Line 4a: Remaining Display Quantity [sp Remaining Reserve Quantity] <CR/LF>

Optional Line if Price Improvement:

[Line 4b:] [PI] <CR/LF>

Blank Line: <CR/LF>

Line 5: Executing Broker Clearing # sp MM Executed Against Size of Trade
sp Execution Time [sp '.OEID'] <CR/LF>

Optional Line if Giveup on Opposite Side:

[Line 6:] [.MMID] <CR/LF>

Line 7: Order Reference Number [sp Execution Reference Number] sp
Liquidity Identifier <CR/LF>

Optional Line if User Order ID:

[Line 8:] [User Order ID] <CR/LF>

See the Field definitions in Section 5.2.8.1.

5.2.8.3 Market Maker Execution Report

Optional MMID:

Line 1: [MMID] <CR/LF>

Body Text:

Line 2: Branch Office sp Branch Office Seq. # sp .SM <CR/LF>

Line 2a: 'REPORT' sp MMID <CR/LF>

Line 3: Execution Category <CR/LF>

Line 4: Execution Quantity sp Secid sp Execution Price [sp '.B'] <CR/LF>

Line 4a: '.NNNNN [sp Remaining Reserve Quantity]<CR/LF>

Optional Line if Preferred Order or Price Improvement

Line 4b: \: P [sp PI]

Blank Line: <CR/LF>

Line 5: MM Clearing # sp OE Executing Broker Size of Trade sp Execution Time [sp '.OEID] <CR/LF>

[Line 6:] Order Reference Number [sp Execution Reference Number] sp Liquidity Identifier <CR/LF>

Optional Line for exchange-listed security trading:

[Line 7:] [Commitment Identifier <CR/LF>]

Message Format

Line	Field	Description	Req'd
1	MMID	May contain the 4-character MMID of the entering firm or the MMID of the firm a Service Bureau is acting for. If this option is utilized for multi-station lines it will equal the 4-character MMID associated with the station.	N
	<CR/LF>	Line terminator.	Y
2	Branch Office	1-4 character alpha field used to identify the receiving firm's branch office. For quotes, this field will be blank.	N
	Branch Office Sequence #	1-4 character numeric sequence number. For quotes, this field will be blank.	N
	.SM	3-character keyword identifying this as a NASDAQ market center message.	Y
	<CR/LF>	Line terminator.	Y
2a	REPORT	Constant to identify the message as an execution report.	Y
	MMID	Market Maker identifier.	Y
	<CR/LF>	Line terminator.	Y

Line	Field	Description	Req'd
3	Execution Category	This field identifies the type of execution. Allowed values: BOT SLD SLD SHRT SLD SHRT EXEMPT	Y
	<CR/LF>	Line terminator.	Y
4	Quantity	1-6 character numeric field representing the number of shares.	Y
	SECID	1-14 character security identifier.	Y
	Execution Price	Execution Price in decimal format.	Y
	.B	If the original order was entered as a bunched order, a ".B" will follow the execution price.	N
	<CR/LF>	Line terminator.	Y
4a	.NNNNNN	Actual leaves size as a result of the execution. LVS quantity is the unexecuted display shares.	Y
	Remaining Reserve Quantity	Optional field containing the number shares remaining in Reserve as a result of a partial execution. This field will not be present if Reserve = 0.	N
	<CR/LF>	Line terminator.	Y
4b	:P	Line if order was preferenced. Colon followed by "P" signifying the order was preferenced to the market maker.	N
	PI	2-character keyword used to indicate Price Improvement.	N
	<CR/LF>	Line terminator.	Y
blank	<CR/LF>		Y
5	MM Clearing #	4-character clearing number of the firm who clears for the market maker.	Y
	OE Executing Broker	4-character ID of the OE executing broker. If a give up firm was entered in the original order, this field will be equal to the 4 alpha character identifier of the give up firm. If a give up was not entered in the original order, this field will be equal to the 4 alpha character identifier of the firm who entered the order. If the trade is marked as anonymous, the OE executing Broker will be reported as "SIZE".	Y
	Size of Trade	1-6 character field containing the actual number of shares of the execution.	Y
	Execution Time	Execution Time in HH:MM:SS format.	Y

Line	Field	Description	Req'd
	OEID	4-character alpha identifier of the firm or the ID of the exchange who entered the original order. This field will only appear if a give-up identifier was entered in the original order. If the trade is marked as anonymous, the MMID will be suppressed. If no give up firm was entered, this field will be blank.	N
	<CR/LF>	Line terminator.	Y
6	Order Reference Number	12-character reference number assigned to this order. If the execution is for an order, this field will contain the 12-character order reference number. If the execution is for a quote or summary quote, this field will contain "QT" or "SQ", respectively.	Y
	Execution Reference Number	Six character reference number assigned to this order.	Y
	Liquidity Identifier	2-character identifier. Allowed values are: LA = liquidity accessor LP = liquidity provider CA = closing cross liquidity accessor CP = closing cross liquidity provider OA = opening cross liquidity accessor OP = opening cross liquidity provider RA = routed accessor	Y
	<CR/LF>	Line terminator.	Y
7	Commitment Identifier	5-character field for exchange-listed security trading. This field is populated when an execution is effected with an ITS participant.	N
	<CR/LF>	Line terminator.	Y if line 7 is present

In NASDAQ market center, quotes can execute against quotes. Quotes do not have branch sequence numbers. If Market Maker 1 has a quote on the book and Market Maker 2 enters a quote that executes against MM1's quote, then both firms will receive execution reports without branch sequence numbers because the opposite side is a quote. This will only occur with the market maker version of the execution reports.

5.2.8.4 Market Maker Execution Kill Report

The Market Maker Execution Kill Report has the same format as the Market Maker Execution Report, with the addition of the keyword "CXL" on Line 3 of the message.

Optional MMID:

Line 1: [MMID] <CR/LF>

Body Text:

Line 2: Branch Office sp Branch Office Seq. # sp .SM <CR/LF>
 Line 2a: 'REPORT' sp MMID <CR/LF>
 Line 3: 'CXL' sp Execution Category <CR/LF>
 Line 4: Execution Quantity sp Secid sp Execution Price [sp '.B'] <CR/LF>
 Line 4a: \.'NNNNNN [sp Remaining Reserve Quantity] <CR/LF>

Optional Line if Preferred order or Price Improvement

Line 4b: \.' P [sp PI] <CR/LF>
 Blank Line: <CR/LF>
 Line 5: MM Clearing # sp OE Executing Broker Size of Trade sp
 Execution Time [sp '.OEID] <CR/LF>
 [Line 6:] Order Reference Number [sp Execution Reference Number] sp
 Liquidity Indicator <CR/LF>

See the Field definitions in Section 5.2.8.3.

5.2.9 Exposure Warning Messages

These messages are STATUS messages. The "Position Exhausted" warning message will be sent as a quasi Status message. The message type code in the header will be the same as a regular Status message but the constant "STATUS" on Line 2 will be replaced with:

SAMPLE MESSAGES

```
ADVS
<CR/LF>
STATUS C170A
<CR/LF>
xMSOS: ADVS UBCD -QUOTE UPDATE 0 12.01 <BEL> **** 13:05
```

Line 2: xMSOS: MMID SECID-POSITION EXHAUSTED **** HH:MM

System generated quote updates will receive the following message:

Line 2: xMSOS: MMID SECID -QUOTE UPDATE BIDPRICE ASKPRICE **** HH:MM

5.2.10 NASDAQ Market Center Reject Messages

Reject Messages are STATUS messages.

Message Text	Message Explanation
REJ - ATTRIBUTABLE ORDER NOT ALLOWED	Request is rejected because attributable orders are not accepted.
REJ - CANNOT CANCEL QUOTE	Quote cannot be canceled.
REJ - CANNOT CANCEL/REPLACE QUOTE	Quote cannot be cancel/replaced.
REJ - ECN DOES NOT CHANGE SEPARATE ACCESS FEE	Request is rejected because price improvement is selected and firm does not charge an access fee.
REJ - ERRORS	Request is rejected because an error or errors were detected.
REJ - FIRM NOT AUTHORIZED TO USE GIVE-UPS	Entering firm is not authorized to enter a giveup.
REJ - INSUFFICIENT QUANTITY	Request is rejected because quantity is 0 or less.
REJ - INTERNAL ERROR	An error occurred internal to the application.
REJ - INVALID CAPACITY	Request is rejected because capacity is invalid.
REJ - INVALID CLEARING NUMBER	Request is rejected because clearing number format is invalid.
REJ - INVALID CLEARING RELATIONSHIP	Request is rejected because cannot find alternate clearing relationship.
REJ - INVALID DATE	Request is rejected because Order Received Date format is invalid or Order Received Date format is in the future.
REJ - INVALID FORMAT	Message does not follow NASDAQ CTCI communications format.
REJ - INVALID GIVEUP ID	Request is rejected because giveup ID is invalid.
REJ - INVALID I1I2	Request is rejected because I1I2 is invalid.
REJ - INVALID REFERENCE NUMBER	Request is rejected because Reference Number is invalid.
REJ - INVALID RESERVE/REFRESH SIZE	Request is rejected because reserve size, refresh size or both is invalid.
REJ - INVALID SECURITY TYPE	Request is rejected because security type is invalid.
REJ - INVALID SHORT SALE CODE	Request is rejected because short sale code is invalid.

Message Text	Message Explanation
REJ - INVALID SIDE	Request is rejected because side code is invalid.
REJ - INVALID SIZE	Request is rejected because size is invalid.
REJ - INVALID TIF	Request is rejected because time-in-force is invalid.
REJ - MAX MMP EXCEEDED	Request is rejected because the maximum number of MMPs has been reached in this issue.
REJ - NO CHANGE TO DATA	Request is rejected because no change is detected in transaction.
REJ - NON-ATTRIBUTABLE ORDERS NOT ALLOWED	Request is rejected because nonattributable orders are not accepted.
REJ - NOT WITHIN ALLOWABLE TIME	Request is rejected because it is not within allowable time.
REJ - ORDER NOT CREATED	Cancel Replace Request is rejected and new order has not been created.
REJ - ORDER REJECTED DUE TO ANTI-INTERNALIZATION	Request is rejected due to anti-internalization.
REJ - SYSTEM SUSPENDED	Request is rejected because system is suspended.
REJ - ACTION REJECTED	Request is rejected.
REJ - AIQ NOT ALLOWED FOR PREFD ORDER	Anti Internalization Qualifier is not valid for a preferenced order.
REJ - ALT CLR NOT ALLOWED FOR GIVEUP	Alternate clearing number is not allowed for an order with a give up.
REJ - ATTRIBUTABLE INDICATOR REQUIRED	Attributable order ID is required on this order.
REJ - CAN'T REINSTATE - ORDER NOT PURGED	Cannot reinstate. Only purged orders may be reinstated.
REJ - CAN'T REINSTATE IOC AFTER MARKET OPEN	Cancel request is rejected because a system-generated order cannot be cancelled.
REJ - CAN'T REINSTATE ODD LOT WHILE IN EW	Odd lot order is rejected because it is not marketable.
REJ - CANNOT REINSTATE A QUOTE	Cannot reinstate. Quotes cannot be reinstated.
REJ - CAN'T FIND ORDER TO CANCEL	Order to cancel cannot be found.
REJ - CLOSED QUOTE	The quote in the security is currently closed.
REJ - DUPLICATE ENTRY	The first character of the Side field is <u>B</u> or <u>S</u> .

Message Text	Message Explanation
REJ - EXCEEDS TIER MAXIMUM*	Entered quantity is greater than maximum quantity allowed for this security.
REJ - EXCESSIVE OPEN ORDER QUANTITY	Cannot increment order because open size would exceed the Maximum Order Size.
REJ - FIRM NOT AUTHORIZED TO USE GIVEUPS	The firm is not authorized to use Give Up functionality.
REJ - GU FIRM NOT ACTIVE	The give-up firm is not in the GU table for the entering firm at execution time.
REJ - GU FIRM NOT AUTH	The give-up firm is not in the GU Table as authorized for the entering firm.
REJ - INVALID ACTION	An attempt to change the price is not within the Corporate Action time frame or An internal transaction code error has occurred.
REJ - INVALID AIQ INDICATOR	The Anti Internalization Qualifier on the order is not valid.
REJ - INVALID BRANCH ID	The branch office identifier is not 1-4 alpha characters.
REJ - INVALID BRANCH SEQ #	The branch office sequence number is not 1-4 numeric characters.
REJ - INVALID BUNCHED ID	Bunched indicator on the order is not valid.
REJ - INVALID CANCEL	Invalid format in the cancel portion of a Cancel or Cancel/Replace message.
REJ - INVALID DELTA UPDATE, NO RESERVE SIZE	Order rejected because delta update is not entered in a Round Lot multiple or not within Minimum/Maximum Reserve Amount
REJ - INVALID DNI/DNR	Invalid DNI or DNR indicator.
REJ - INVALID GIVEUP STATUS	The give-up firm is not in the GU table for the entering firm or not in an active state.
REJ - INVALID GU	An entry is made in the GU GUID field on Line 4B, and the entry is greater than four alpha characters or An entry is made in the GU GUID field on Line 4B, and the entry is alphanumeric.
REJ - INVALID IOC	The IOC flag on the order is not valid.
REJ - INVALID MMID*	The preferenced MMID is not in the SOES authorization table.

Message Text	Message Explanation
REJ - INVALID NON-ATTRIBUTABLE	The attributable indicator on the order is not valid.
REJ - INVALID ORD CATEGORY	Side field is not equal to "BUY", "B", "SL", "S", "SSHRT" or "SSHRT EXEMPT".
REJ - INVALID ORDER DESTINATION	Preferred MPID is not in the MPID table.
REJ - INVALID OVERRIDE	Override indicator on order is invalid.
REJ - INVALID PRICE	The price field is not numeric or is not equal to "MKT" or The whole price is greater than 999999 or The price field, if not "MKT", is equal to zero.
REJ - INVALID PRICE FOR PREFERRED ORDER	Request is rejected because preferred MPID's display quote at the inside.
REJ - INVALID PRICE IMPROVEMENT	Order is rejected because price improvement indicator is invalid.
REJ - INVALID PRIORITY CODE	Order is rejected because priority code is invalid. Priority code must be T (price/time), E (modified price/time for ECNs) or Z (price/size/time).
REJ - INVALID QUANTITY	The quantity field is other than numeric in the range of 1-999999.
REJ - INVALID REFRESH SIZE	Refresh size field is invalid because it is greater than Reserve size, is not a round lot multiple, is not within Min/Max range, or Reserve is zero.
REJ - INVALID RESERVE SIZE	The reserve size is other than numeric, in the range of 1-999999, not within minimum and maximum reserve size parameters, or price is MKT.
REJ - INVALID SECID	The security symbol is other than 1-5 alpha characters.
REJ - INVALID SOES SEC	The security is not in the SuperSoes/SOES database.
REJ - INVALID TIME-IN-FORCE	Time-in-force field is invalid.
REJ - INVALID UPDATE, NO OPEN QTY	Request is rejected because order has no open quantity.
REJ - INVALID USER ID	Request is rejected because User Id is not valid.
REJ - ISSUE NOT UTP ELIGIBLE	Order is rejected because the issues are not eligible for UTP participation.
REJ - ISSUE NOT UTP ELIGIBLE	Order is rejected because the issue is not eligible for UTP orders.

Message Text	Message Explanation
REJ - ISSUE SET TO DELETE	Order is rejected because the issue is deleted.
REJ - LMT AWAY FROM MKT	Order returned due to Limit Price being 50% or greater away from the Inside.
REJ - MARKET CLOSED	The general close message on Level 1 has been received by SuperSoes/SOES. DAY, FOK, or MKT orders cannot be entered after market close.
REJ - MMID NOT AUTHORIZED FOR FUNCTION	Firm is not authorized for this action.
REJ - NO DISPLAY QUOTE FOR DESTINATION MPID	Request is rejected because preferenced MPID does not have an active quote.
REJ - NO GIVEUP/MMID LINK FOUND*	Entering firm has no established link with the giveup firm in the SuperSoes/SOES database.
REJ - NO QUOTE	The Inside Quotation is "no quote".
REJ - ODDLOT INVALID FOR PREFERENCE ORDER	Odd lot orders cannot be preferenced.
REJ - OE FIRM NOT AUTHORIZED*	At the time of entry, the OE Authorization status for the entering firm is not active.
REJ - OE NOT AUTHORIZED	Order is rejected because the firm is not authorized for order entry.
REJ - OE NOT AUTHORIZED FOR GIVEUP	Entering firm is not authorized to enter a giveup.
REJ - ONLY IOC SELL ORDERS ALLOWED IN QT MD	Order rejected because position is in quote mode that does not allow sell orders.
REJ - ORDER EXCEEDS TIER THRESHOLD SIZE	Order exceeds tier threshold size.
REJ - ORDER EX-DIVIDEND NOT REINSTATED	The order was returned because the security went ex-dividend and the ordering firm did not reinstate the order.
REJ - ORDER NO LONGER OPEN	Order you are trying to cancel is no longer open and therefore cannot be canceled.
REJ - ORDER NOT ACCEPTED, NO ATTRIBUTABLE ORDERS	Non attributable order is rejected because there are no attributable orders on the book for this issue/side.
REJ - ORDER NOT EXECUTABLE	Order is rejected because it is not executable.
REJ - ORDER NOT EXECUTED	Request is rejected because order has already been executed.
REJ - ORDER NOT FOUND	Request is rejected because order cannot be found.
REJ - ORDER TIMED OUT	Time in Force expired.

Message Text	Message Explanation
REJ - PREF MMID DUPLICATE	The preferenced MMID was entered twice; once on line 1A and once on line 4C.
REJ - PREFERENCED ORDERS MUST BE IOC	Invalid TIF for a preferenced order. Preferenced orders must be IOC.
REJ - PRICE EXCEEDS ALLOWABLE DEVIATION FROM INSIDE	Order price exceeds the allowable deviation from the inside price.
REJ - PRINCIPAL NOT ALLOWED	Request is rejected because principal orders are not allowed from this firm.
REJ - QUOTE NOT FOUND	Request is rejected because quote cannot be found.
REJ - REFRESH SIZE NOT ALLOWED	Order is rejected because either the MP type is not eligible for reserve processing.
REJ - REJECT DUE TO ISSUE STATUS	Order rejected because issue is in registration or deleted.
REJ - RESERVE ENTRY NOT ALLOWED	Order rejected because either MP type is not eligible for reserve processing, or field not entered in a Round Lot multiple or not with in. Minimum/Maximum Reserve Amount.
REJ - SECURITY IN QUOTE HALT	Request is rejected because issue is in a quote halt.
REJ - SECURITY IN TRADE HALT	Request is rejected because issue is in a trade halt.
REJ - SIZE OVER LIMIT	Request is rejected because order size, reserve or refresh size must be equal to or less than maximum limit.
REJ - SIZE SMALLER THAN DEFAULT	Request is rejected because size must be equal to or greater than default size.
REJ - SOES INP SUSP	The entry of orders into SuperSoes/SOES has been suspended.
REJ - SYND/PBID/PRES BID	The quote in this security is one sided.
REJ - SYSTEM UNAVAILABLE	The SuperSoes/SOES system is not currently receiving input.
REJ - TOO LATE TO CANCEL	Cancel request is rejected because it is too late to cancel the order due to execution, prior cancellation etc.
REJ - USER ORDER ID REQUIRED	User Order ID is required on the order.
REJ - VIOLATION SHORT SALE RULE	Order is rejected because it violates the short sale rule.
REJ -ORDERS NOT ACCEPTED, QUTOES ONLY	Request is rejected because orders are not accepted.

Message Text	Message Explanation
REJ -SHORT SALE NOT ALLOWED	Order is rejected because it violates the short sale rule.

Rejects marked with an asterisk (*) may be rejected at order entry time or after they have been accepted and placed on the Open order File.

6 Risk Management Input Messages

In addition to Trade Reporting and Trade Comparison/Clearing functions, NASDAQ also provides a Risk Management function to clearing firms. Risk Management enables clearing firms to monitor their correspondent (execution brokers) firms' buy and sell trading activities, set and reset buy/sell thresholds for individual correspondent, allow or inhibit Blockbuster and Sizable trades, suspend or restore or delete clearing relationships, reset Super Cap Marker for their correspondents, receive pre-alert, alert, and other Risk Management related broadcast messages, access a real time data base of correspondent trading information. Clearing firms can choose between the standard risk management functions or the enhanced functionality that allows a clearing firm to define limits based on the security market class (i.e. NNM, SC, OTCBB, CQS) and define blockbuster and sizable amounts. Clearing firms can elect to receive all their correspondents' trade messages. These Risk Management capabilities are provided through the CTCI as well as NASDAQ Workstation II.

In 2003, NASDAQ introduced enhancements to the Risk Management function. The enhancements allow the clearing firm to customize the settings the risk management limits based on each individual correspondent. NASDAQ has created two additional CTCI messages to support the Enhanced Risk Management Functions, Function J and TCAJ, which are similar to Function K and TCAK.

6.1.1 Risk Management Information

The following Risk Management information and capabilities are provided to clearing firms on-line by the trade reporting service. All CTCI UM messages are described in section **Error! Reference source not found.**, and their respective exhibits are referenced here.

- (1) **Buy/Sell Thresholds/SuperCaps**
Clearing firms can assign Buy/Sell Thresholds/SuperCaps (limits) in dollar amount for each of their execution brokers or correspondents. Based on these clearing firms' assigned thresholds, NASDAQ will issue or disseminate various pre-alert and alert messages to the clearing firms and the trading community. Therefore, a clearing firm can manage its risks and liabilities through the assignment of these thresholds. A clearing firm can exempt an execution broker from the Risk Management process by assigning all 9's (unlimited credits) to these thresholds. Operations assigns all 9's to these thresholds for all self-clearing execution brokers.
- (2) **Buy/Sell Trade Amount**
NASDAQ continuously calculates, accumulates, and compares the Buy/Sell Trade Amount against the clearing firm assigned Buy/Sell Thresholds for the respective execution broker as trades are entered into ACT.
- (3) **Buy/Sell Compared Amount**
NASDAQ continuously calculates and accumulates the Buy/Sell Compared Amount for the respective execution broker as trades are locked-in (compared) in Trade Reporting. They are used to determine the Buy/Sell Super Cap Limits and the setting and broadcasting of the Super Cap Marker.
- (4) **Buy/Sell SuperCap Limits**
The SuperCap limits have been combined with the trading thresholds. Please refer to bullet 1 for more information.

- (5) **SuperCap Marker**
For a correspondent, when either its Buy/Sell Compared Amount is exceeded its corresponding Buy/Sell Super Cap Limit, a Super Cap Marker pertaining to the correspondent will be broadcast to the entire trading community and the Marker ("*" next to its MMID) will be displayed on every security that the correspondent makes a market. In the system, this Marker will have a value of "C" during the current trade date. The clearing firm can reset this Marker by increase the specified correspondent's Buy/Sell SuperCap Limits using the CTCI "K" Function (section 6.1.2), Function J (section 6.1.4) or using the NWII Risk Management Scan. If the clearing firm does not reset the Marker during the current trading date, the Marker will carry into the next trading date with the value of "P". The clearing firm may delete the previous date Marker by update the field to "*". The Marker resetting event will be broadcasted to trading community by the same media as above.
- (6) **Risk Management State**
A clearing firm may delete (by using the CTCI "K" or "J" Functions or the NWII Risk Management Scan Function by updating RMS Field to "D") a clearing relationship with anyone of its correspondents and cease its liability to clear that correspondent's trades. This deletion event will be broadcasted to the trading community through the TCPI message by setting the respective correspondent's RMI to "D" and a "MMID Clearing Delete" Workstation message (where MMID is the correspondent ID).
- (7) **Blockbuster Trade**
A Blockbuster Trade (BBT) message (TCBT, section 6.2.3) will be sent to the specified executing correspondents and their clearing firms when a correspondent trade meets the BBT conditions. NASDAQ will hold (i.e., assign a "H" Status) the BBT from normal trade comparison processing for a pre-determined time period (currently set at 15 minutes) pending clearing firms' actions. Clearing firms may inhibit or allow (section 6.1.3) the BBT during this time period. When this time period is expired and the clearing firms have not taken actions, the BBT will be accepted as normal trade (i.e., assign an "U" or "O" Status and process accordingly). If the firm is using the enhanced functionality NASDAQ will use the default Blockbuster action (allow or inhibit) defined by the clearing firm after the 15 minute held period is over and the user has not taken action on the trade.
- (8) **Sizable Trade**
A Sizable Trade message (TCST, section 6.2.4) will be sent to the specified executing correspondents and their clearing firms when a correspondent trade meets the Sizable Trade conditions. NASDAQ will hold (i.e., assign a "H" Status) the Sizable Trade from normal trade comparison processing for a pre-determined time period (currently set at 15 minutes) pending clearing firms' actions. Clearing firms may inhibit or allow (section 6.1.3) the Sizable Trade during this time period. When this time period is expired and the clearing firms have not taken actions, the Sizable Trade will be killed by NASDAQ (i.e., assign a "K" Status).
- 9) **Net Amount Traded Pre-Alert Message**
If a correspondent's Buy/Sell Net Amount Traded (NAT) is reaching 70% of the clearing firm assigned Buy/Sell SuperCap, a NAT Pre-Alert message (TTNP, section 6.2.5) will be sent to the specified executing correspondents and their clearing firms. This message will contain the trade that reached the Pre-Alert SuperCap Limit.

- (10) **Net Amount Traded Alert Message**
If a correspondent's Buy/Sell Net Amount Traded (NAT) is reaching 100% of the clearing firm assigned Buy/Sell SuperCap, a NAT Alert message (TTNT, section 6.2.5) will be sent to the specified executing correspondents and their clearing firms. This message will contain the trade that reached the Alert SuperCap Limit.
- (11) **Net Amount Compared Pre-Alert Fallback Message**
When a correspondent's Net Amount Compared (NAT) falls back to lower than the 70% of the clearing firm assigned Buy/Sell SuperCap due to trade cancellations or corrections, a NAT Pre-Alert Fallback message (TTFP, section 6.2.6) will be sent to the specified executing correspondents and their clearing firms. This message will contain the trade that caused the fallback of the Pre-Alert SuperCap Limit.
- (12) **Net Amount Traded Alert Fallback Message**
When a correspondent's Buy/Sell Net Amount Compared (NAT) falls back to lower than 100% of the clearing firm assigned Buy/Sell SuperCap due to trade cancellations or corrections, a NAT Alert Fallback message (TTFB, section 6.2.6) will be sent to the specified executing correspondents and their clearing firms. This message will contain the trade that reached the Pre-Alert SuperCap Limit.
- (13) **Participant Indicators Message**
In addition to the opening broadcast, a Participant Indicator message pertaining to a specific participant will be broadcast to the trading community if such participant's Super Cap Marker, Risk Management or clearing relationship state is changed during the trading date.
- (14) **Correspondent Trade Messages Available To Clearing Firm**
The following correspondent trade messages are available to clearing firms. To receive these correspondent trade messages, with the exception of TCBT and TCST that a clearing firm always receives, a clearing firm has to indicate its election to NASDAQ Operations to set up the Firm Profile record for such election. With these correspondent trade messages, it is possible for a clearing firm to build an image trade file for all its correspondents to meet its internal business requirements. In conjunction with the above Risk Management messages, a clearing firm also able to design a Risk Management System to meet its own Risk Management requirements.

Message Type (Exec. Broker)	Message Title	Message Type (Clr. Broker)
TTEN	Trade Entry	CTEN
TTAL	Alleged Trade	CTAL
TTUD	Trade Update	CTUD
TCLK	Locked-In Trade	CCLK
TCBK	Break Trade Notice	CCBK
TCER	Error Trade Notice	CCER
TCAN	Cancel Trade Notice	CCAN
TTNW	No/Was Trade Notice	CCNW
TCDE	Decline Trade	CCDE

Message Type (Exec. Broker)	Message Title	Message Type (Clr. Broker)
TCBT	Blockbuster Trade	CCBT, TCBT
TCST	Sizable Trade	CCST, TCST

The data content of the clearing firm messages is identical to that of the Executing Broker, except Memo and Reference Number fields will be spaced filled in the clearing firm messages. However, if the trade's origin is an external system, the mnemonic of that system will appear in the Reference Number field.

6.1.2 Risk Management Query and Update (Function K)

A clearing firm may enter this K Function message to query its correspondents' Risk Management information or update a correspondent's Buy/Sell Thresholds, reset the Super Cap Marker or change the RM State. A correspondent execution broker may use this message to query (only) its own risk management information. An acceptance of this message will result in a Risk Management Query/Update Response message (TCAK, refer to section 6.2.1) forwarded to the entering subscriber's CTCI.

The header Destination Code on Line 1A for this message must be ACTR.

Message Format

Field Names	Position	Format	Description
Function Code	1-1	X(1)	Function Code = K
Action Code	2-2	X(1)	Q = Query U = Update (for clearing firms only)
Clearing Broker	3-6	X(4)	Clearing firm ID.
Executing Broker	7-10	X(4)	Executing broker ID.
Buy-side Threshold	11-20	9(10)	For U = enter the clearing firm's assigned Buy Threshold in dollar value for the specified EXID. The entry is right-justified in the range of 0-9999999999 (unlimited). For Q = blank
Sell-side Threshold	21-30	9(10)	For U = enter the clearing firm's assigned Sell Threshold in dollar value for the specified EXID. The entry is right-justified in the range of 0-9999999999 (unlimited). For Q = blank
Super-Cap Marker	31-31	X(1)	For Q = blank For U = * for reset, or blank, "P" carried over from previous day.
Risk Management State	32-32	X(1)	For Q: blank For U: D = Delete A = Authorize/Activate clearing relation with EXID, correspondent firm cannot enter As-of T+2 to T+N trades (except self-clearing) Y = Authorize/Activate clearing relation with EXID, correspondent firm can enter As-of T+2 to T+N trades (except self-clearing) blank-no change

The CLID and EXID (CLID = EXID = self clearing) are required for query and update. For self-clearing execution brokers, there is no need to use this function because NASDAQ does not perform RM for them. For query, all other fields may leave blank filled.

The same day Marker (= "C") will be reset automatically if the respective Buy/Sell Thresholds are updated so that the related Super Cap Limits are no longer exceeded by the amount of compared trades on each side. If a marker is not caused to be reset on the day it was set, it carries over to the following business day, and it must then be reset by a clearing firm entry of " * " in the Super Cap Marker field. For an entry to be effective in resetting a marker that was carried over from a prior day, the reset must be entered at a time that the amount of compared trades is less than the respective Buy/Sell Super Cap Limits.

6.1.3 Clearing Firm Inhibit/Allow Blockbuster and Sizable Trade (Function I)

A clearing firm may inhibit or allow a Held Blockbuster (BBT) or Sizable trade via its CTCI facility by entering an I (inhibit) function message to the system within the Held Trade time period (currently set for 15 minutes). If the I function update action resulted in a change of the held trade status, an appropriate TCBT, CCBT, TCST, or CCST will be forwarded to the concerned execution brokers and clearing firms. This message will work the same way as the Workstation AI Function.

The header Destination Code on Line 1A for this message must be ACTB.

Message Format

Field Name	Position	Format	Description
Function Code	1-1	X(1)	Function Code = I
Reference Number	2-7	9(6)	Optional entry of clearing firm's reference number.
Control Number	8-17	X(10)	The system assigned control number of the BBT or Sizable trade.
Action Code	18-18	X(1)	Valid values: I = Inhibit A = Allow

6.1.4 Enhanced Risk Management Query and Update (Function J)

A clearing firm may enter this message to query a correspondent's Risk Management information or update the correspondent's Buy/Sell SuperCap, Blockbuster and Sizeable Amounts for the individual Mkt (Security Type) or ALL. The message is also used to reset the Super-Cap Marker or change the RM State. An execution broker may also use this message to query (only) its own Risk Management information. An acceptance of this message will result in a TTAJ Risk Management Query/Update Response message (TTAJ, section 6.2.2) to the entering subscriber's CTCI. Note: if multiple Markets have to be changed, a separate Function J Message is required for each market.

The header Destination Code on Line 1A for this message must be ACTR.

The CLID and EXID (CLID = EXID = self clearing) are required for query and update. For self-clearing execution brokers, there is no need to use this function because NASDAQ does not perform RM for them. For query, all other fields may leave blank filled.

The same day Marker (="C") will be reset automatically if the respective Buy/Sell Thresholds are updated so that the related Super Cap Limits are no longer exceeded by the amount of compared trades on each side. If a marker is not caused to be reset on the day it was set, it carries over to the following business day, and it must then be reset by a clearing firm entry of " * " in the Super Cap Marker field. For an entry to be effective in resetting a marker that was carried over from a prior day, the reset must be entered at a time that the amount of compared trades is less than the respective Buy/Sell Super Cap Limits.

Message Format

Field Names	Position	Format	Description
Function Code	1-1	X(1)	Function Code = J
Action Code	2-2	X(1)	Q = Query U = Update (for clearing firms only, not available to correspondent's query)
Clearing Broker	3-6	X(4)	Clearing firm ID.
Executing Broker	7-10	X(4)	Correspondent executing broker ID.
Market Type	11-11	X(1)	A clearing firm may set limits for the following market types: A = All N = NNM S = SmallCap O = OTCBB C = CQS All is an overall limit for a correspondent. Covers all clearing eligible securities. Required for each correspondent.
Super Cap Marker	12-12	X(1)	For update, enter the only allowable " * " to reset Marker = "P" carried over from previous day.

Field Names	Position	Format	Description
Risk Management State	32-32	X(1)	Blank = Query D = Delete clearing relation with EXID; A = Authorize/Activate clearing relation with EXID, correspondent firm cannot enter As-of T+2 to T+N trades (except self-clearing); Y = Authorize/Activate clearing relation with EXID, correspondent firm can enter As-of T+2 to T+N trades (except self-clearing)
Buy SuperCap			The clearing firm's assigned Buy Supercap/Threshold in dollar value for the specified EXID. The entry is right-justified in the range of 0-999999999999 (unlimited). blank = query
Sell SuperCap			The clearing firm's assigned Sell SuperCap/threshold in dollar value for the specified EXID. The entry is right-justified in the range of 0-999999999999 (unlimited). blank = query
Blockbuster Amount			Clearing firms may set a single trade dollar amount threshold for each of the market types. 0 - 999999999999 for this market type blank = query
Blockbuster Default Action			A clearing firm may define the default action to be taken on a held transaction after the 15-minute review period has ended without the clearing firm taking action on the trade. A = Allow trade I = Inhibit Trade
Sizable Amount			Clearing firms may set a single trade dollar amount threshold for each of the market types when the market has reached its SuperCap limit. 0 - 999999999999 for this market type blank = query
Sizable Default Action			A clearing firm may define the default action to be taken on a held transaction after the 15-minute review period has ended without the clearing firm taking action on the trade. A = Allow trade I = Inhibit Trade
Summarization Indicator		X(1)	Valid values: P = price point A = average price blank = none

Field Names	Position	Format	Description
Make Default			A clearing firm may use Function J to update limits for intraday use or for permanent limit update. N = the entered limits are for intraday use only and will not be carried to the next business day Y = the entered limits will be used as the default and will be carried to the next business day

6.2 Risk Management Output Messages

6.2.1 Risk Management Query Update Response (TCAK)

This message is transmitted to the executing broker and the corresponding clearing firm. The message includes the current or updated levels of the buy and sell side thresholds, amounts traded, Super-caps and compared amounts. Included as well, are the current status of the marker, the state of the clearing arrangement, and the date and time of the read-out.

Line 1: Other MMID cr lf

Line 2: TCAK cr lf

Line 3: (Action) (Clrg ID) (EXID) BT BAT BSC BCA ST SAT SSC SCA
(Marker)(State)(Date)(Time)

Message Format

Field Name	Position	Format	Description
Action Code	1-1	X(1)	Valid values: Action Codes: Q = Query U = Update
Clearing ID	2-5	X(4)	Clearing firm MMID
Executing MMID	6-9	X(4)	Correspondents MMID
Buy Threshold	10-19	9(10)	Buy side Threshold level entered by clearing firm
Buy Amount Traded	20-29	9(10)	Current dollar amount of reported Buy side trades of EXID
Buy Super-Cap	30-39	9(10)	
Buy Compared Amt	40-49	9(10)	Current dollar amount of compared Buy side trades of EXID
Sell Threshold	50-59	9(10)	Sell side Threshold level entered by clearing firm
Sell Amount Traded	60-69	9(10)	Current dollar amount of reported Sell side trades of EXID
Sell Super-Cap	70-79	9(10)	
Sell Compared Amt	80-89	9(10)	Current dollar amount of compared Sell side trades of EXID
Super-Cap Marker	90-90	X(1)	Current Status of Marker. Valid values: C = Marker set current day P = Marker set prior day, blank = no Marker set
State of Clearing	91-91	X(1)	State of Clearing arrangement. Valid values: A = Active no SuperCap Marker M = Active with SuperCap Marker D = Deleted

Field Name	Position	Format	Description
Date	92-97	9(6)	MMDDYY - current date
Time	98-103	9(6)	HHMMSS - current time of the record data

6.2.2 Enhanced Risk Management Query Update Response (TTAJ)

This message is transmitted to the executing broker and the corresponding clearing firm. For each accepted Risk Management query/update entry via the J Function, NASDAQ will respond with the current updated RM information for the specified EXID and forward to the requesting subscriber. One message will be sent for each security market type changed. The message will be generated when any of the modifiable fields below are changed.

Line 1: Other MMID cr lf

Line 2: TTAJ cr lf

Message Format

Field Name	Position	Format	Description
Action Code	1-1	X(1)	Valid values: Q = Query U = Update
Clearing ID	2-5	X(4)	Clearing firm MMID
Executing MMID	6-9	X(4)	Executing Firm's MPID
Risk Management State	91-91	X(1)	State of Clearing arrangement. Valid values: A= Active (No Super-Cap Marker) M= Active (With Super-Cap Marker) D = Deleted A = Authorize/Activate clearing relation with EXID, correspondent firm cannot enter As-of T+2 to T+N trades (except self-clearing) Y = Authorize/Activate clearing relation with EXID, correspondent firm can enter As-of T+2 to T+N trades (except self-clearing) blank-no change
Market Type	11-11	X(1)	A clearing firm may set limits for the following market types: A = All. This is an overall limit for a correspondent. Covers all clearing eligible securities. Required for each correspondent. N = Limit for NNM securities R = Limit for Small Cap securities P = OTCBB C = CQS S = SmallCap O = OTCBB
Buy Amount Traded	20-29	9(10)	Buy net amount traded by EXID
Buy Super-Cap	30-39	9(10)	Buy Super-Cap set by clearing firm

Field Name	Position	Format	Description
Buy Compared Amt	40-49	9(10)	Current dollar amount of compared Buy side trades of EXID
Sell Amount Traded	60-69	9(10)	Sell net amount traded by EXID
Sell Super-Cap	70-79	9(10)	
Sell Compared Amt	80-89	9(10)	Current dollar amount of compared Sell side trades of EXID.
Super-Cap Marker	90-90	X(1)	Current Status of Marker. Valid values: C = Marker set current day P = Marker set prior day, blank = no Marker set
Blockbuster Amount			0 - 999999999999 for this market type Clearing firms may set a single trade dollar amount threshold for each of the market types.
Blockbuster Default Action			A clearing firm may define the default action to be taken on a held transaction after the 15-minute review period has ended without the clearing firm taking action on the trade. Valid values: A = Allow. The trade is eligible for further trade reporting processing I = inhibit
Sizable Amount			0 - 999999999999 for this market type Clearing firms may set a single trade dollar amount threshold for each of the market types when the market has reached its SuperCap limit.
Sizable Default Action			A clearing firm may define the default action to be taken on a held transaction after the 15-minute review period has ended without the clearing firm taking action on the trade. Valid values: A = Allow. The trade is eligible for further trade reporting processing I = inhibit
Summarization Indicator		X(1)	Valid values: P = price point A = average price blank = none
Date			MMDDYY current date
Time			Time: HHMMSS

6.2.3 Blockbuster Trade Notification (TCBT)

A Blockbuster-Trade (BBT) is a correspondent trade with a Contract Amount equal to or greater than the Blockbuster Trade Dollar Volume set by NASD (currently set at one million dollars) or the blockbuster amount set by the clearing firms using NASDAQ's Enhanced Risk Management.

The following types of trades are not subject to blockbuster validation:

- Trades submitted with the .B or .SB modifier
- Trades submitted to NASDAQ by one of NASDAQ's execution systems
- QSR entries
- Trade Report Only transactions (no clearing)

Clearing firms will be notified of Blockbuster trades and the trades will not be eligible for matching until the clearing firm ALLOWS the trade or the 15-minute HELD period is over. If the correspondent's risk management capmark is on the trade will not be subjected to Blockbuster validation but will be subjected to SIZABLE validation.

Line 1: OTHER MMID cr lf

Line 2: TCBT cr lf

Line 3: (Ctrl Number)(Status)(ITI)(Time) cr lf

Message Format

Field Name	Position	Format	Description
Reference Number	1-6	9(6)	User assigned reference number
Control Number	7-16	X(10)	ACT System assigned number associated with the trade reporting record
Trade Status	17-17	X(1)	Valid values: H = Held (ACT automatically set "H" for 15 minutes pending clearing broker action) I = Inhibited (if clearing broker inhibited the BBT) U = Unanswered MM Entry (ACT set the MM entry to "U" after "H" period expired or if allowed by clearing firm) O = OE Entry trade (NASDAQ set the OE entry to "O" after "H" period expired or allowed by clearing firm) K = Killed
Inhibit Trade Indicator	18-18	X(1)	Valid values: B = Buy side Clearing firm inhibited the trade S = Sell side Clearing firm inhibited the trade blank = Neither clearing firm has inhibited the trade A = One or both Clearing firms have "allowed" the trade, as required.

Field Name	Position	Format	Description
Start Time	19-24	9(6)	HHMMSS Entry time of the BBT
Action Time	25-30	9(6)	HHMMSS Time of receipt of Action input or expiration of review period

6.2.4 Sizable Trade Notification (TCST)

A Sizable Trade is a correspondent trade with a Contract Amount equal to or greater than the Sizable Trade Dollar Volume set by NASD (currently set at two hundred thousand dollars) or by the sizable set by clearing firms using the NASDAQ's Enhanced Risk Management, and at least one of the executing broker has the Risk Management Capmark set.

Trades submitted to NASDAQ by one of NASDAQ's execution systems, QSR or Trade Report Only reports are not subject to Sizable validation. Clearing firms will be notified of Sizable trades and the trades will not be eligible for matching until the clearing firm ALLOWS the trade or the 15 minute HELD period is over. If the clearing firm does not ALLOW the trade within 15 minutes, NASDAQ will INHIBIT the transaction and it will not be eligible for NASDAQ's matching process. Clearing firms using NASDAQ's Enhanced Risk Management may set the default action to ALLOW for trades if no response has been received after the 15 minute HELD period.

Line 1: OTHER MMID cr If

Line 2: TCST cr If

Line 3: (Ref Number)(Ctrl Number)(Status)(I/A TI)(Time)(Action Time) cr If

Message Format

Field Name	Position	Format	Description
Reference Number	1-1	9(6)	User assigned reference number
Control Number	2-11	X(10)	ACT System assigned number associated with the trade reporting record
Trade Status	12-12	X(1)	Valid values: H = Held (ACT automatically set "H" for 15 minutes pending clearing broker action) I = Inhibited (if clearing broker inhibited the Sizable transaction) K = Killed (ACT set the entry to "K" after "H" period expired) U = Unanswered MM entry O = OE Entry
Inhibit Trade Indicator	13-13	X(1)	Valid values: B = Buy side Clearing firm inhibited the trade S = Sell side Clearing firm inhibited the trade blank = Neither clearing firm has inhibited the trade A = One or both Clearing firms have "allowed" the trade, as required
Start Time	14-19	9(6)	HHMMSS Entry time of the Sizable Trade
Action Time	20-25	9(6)	HHMMSS-Time of receipt of Action input or review period expiration time

6.2.5 Net Trade Threshold Notification (TTNT/TTNP)

Denotes that the dollar value of this trade has contributed to the cumulative Net Amount Traded (NAT) such that the resulting NAT exceeds one or both of the trading party's (i.e. the executing broker as MM, OE, MMGU, or OEGU) Net Trade Threshold (NTT). This threshold alert message shall be forwarded to each party of the trade whose NTT is exceeded and to its clearing firm if any.

Line 1: OTHER MMID cr If

Line 2: TTNT cr If

Line 3: (NTL Control Number) (Trade Text) cr If

Line 3A: (NTL Control Number) (Trade Text plus 14 character TMTR symbol) cr If

The trade text field contains an echo of the MM original Session or As-Of Session and shall be formatted as a MM Trade Entry Message (section **Error! Reference source not found.**).

Note 1: If the trade was in a CQS security, the 5-character CQS symbol will appear in the "Trade Text"; the 14-character TMTR symbol will be appended at the end of the message.

Note 2: If a firm's NAT is caused to exceed its NTT as the result of an update to its NTT, ""EXID" NTT UPDATED" will appear instead of the above fields, i.e. NTL Indicator, Control Number and Trade Text; where EXID is the MMID of the firm whose NTT was updated. (Will not be included in the initial phase implementation.)

Note 3: A Pre-Alert Trade Threshold message for correspondents and their clearing firms (TTNP) which is identical to TTNT, will be transmitted if the dollar value of trades exceeds the trade threshold percent established by the NASD.

Message Format

Field Name	Position	Format	Description
NTL Indicator	1-1	X(1)	Contains "M" when the dollar amount of this trade contributes to the MM's Net Amount Traded (NAT) so as to exceed the MM's Net Trade Limit (NTL), or "O" when the dollar amount of this trade contributes to the OE's NAT so as to exceed the OE's NTL. M = exceeds MM Trade Limit O = exceeds OE Trade Limit
Control Number	2-11	X(10)	Control number that the system had assigned to the transaction when it was originally received from the subscriber. The control number is required to uniquely identify the trade reporting record in the trade reporting File Control Number associated with the trade reporting record
As-of	12-12	X(1)	Valid values: Y = As-of (T+1 to T+n) space = Original (T Day entry)

Field Name	Position	Format	Description
Security Class	13-13	X(1)	Valid U.S. market values: N = National Market P = Non-NASDAQ OTC R = SmallCap
B/S/X	14-14	X(1)	Valid values: B = Bought S = Sold X = Crossed Z = Dealer Sold Short E = Dealer Sold Short Exempt C = Selling Customer Sold Short K = Selling Customer sold Short Exempt P = QSR or AGU Contra side sold short A = QSR or AGU Contra sold short exempt
Reference Number	15-20	X(6)	User assigned reference number
Volume	21-28	9(8)	Number of shares
Symbol	29-33	X(5)	NASDAQ SECID
Price:			This field includes dollar, numerator, and trade digit.
Dollar	34-37	9(4)	N/A
Numerator	38-40	9(3)	N/A
Trade Digit	41-41	X(1)	A = Decimal Unit Price B = Contract Amount
Trade Modifier	42-44	X(3)	Valid values: SLD = Late B = Bunched SB = Late Bunched SNN = Seller's Option C = Cash ND = Next Day T = .T PRP = Prior Reference Price space = Regular W = Average Price TS = T appended by system SLS = SLD appended by system If submitting a Clearing only transaction for matching of ex-clearing transactions (i.e. C, ND or Snn) the field will be redefined to: Trade modifier: X(1), space-filled Days: 9(2), 00 for Cash, 01 for ND, 02, 04-60 for Snn, space for normal 3 day settlement

Field Name	Position	Format	Description
Price Override	45-45	X(1)	Valid values: O = Override space = No override
OEID	46-49	X(4)	MMID of the OE side
OEGU	50-53	X(4)	MMID of give up on the OE side
OE Clear Number	54-57	9(4)	space = Major clear Number
MMID	58-61	X(4)	Required MMID of the MM side
MMGU	62-65	X(4)	MMID of give up on the MM side
MM Clear Number	66-69	9(4)	space = Major clear Number
MM PA Indicator	70-70	X(1)	Valid values: P or space = Principal A = agent R = Riskless Principal
Trade Report Flag	71-71	X(1)	space = Report by rules N = No Report On StepOut transactions, if the Trade Report Flag is set to space NASDAQ will make adjustments to the Section 31 fee for the transaction, if the Trade Report Flag is set to "N" no Section 31 fee adjustment will take place, and the Clearing Flag must be set to space or G.
Clearing Flag	72-72	X(1)	Valid values: space = clear G = Automatic Give-up Lock-in N = no clear Q = QSR no clear Z = QSR clear L = Ext. Sys. Locked-in (The "L" value is output for NASDAQ ESI executions) On StepOut transactions, if the Trade Report Flag is set to space NASDAQ will make adjustments to the Section 31 fee for the transaction, if the Trade Report Flag is set to "N" no Section 31 fee adjustment will take place, and the Clearing Flag must be set to space or G.
Special Trade Indicator	73-73	X(1)	Valid values: Y = Special trade S = Step-out trade X = Special and Step-out trade space = Not Special Trade (none of the above) On StepOut transactions, if the Trade Report

Field Name	Position	Format	Description
			Flag is set to space NASDAQ will make adjustments to the Section 31 fee for the transaction, if the Trade Report Flag is set to "N" no Section 31 fee adjustment will take place, and the Clearing Flag must be set to space or G.
Execution Time	74-79	9(6)	Required Military HHMMSS E.T.
Memo	80-89	X(10)	User Memo
Decimal Price	90-101	9(12)	Unit Price = 999999V999999 for Trade Digit "A" Contract Price = 0999999999V99 for Trade Digit "B"
Contra Branch Sequence	102-109	X(8)	Required by OATS for MM QSR or AGU trade only.
Trade Date	110-117	9(8)	Must be entered for T+2 or older, mmddyyyy format.
Reversal Indicator	118-118	X(1)	Valid values: space = not a Reversal R = Reversal
OE P/A Indicator	119	X(1)	
Filler	120-125	X(6)	space-filled (reserve for future use)
Clearing Price	126-137	X(12)	Price inclusive of commissions. This field will be included only for firms who select this option in their firm profiles.
TMTR Symbol		X(14)	The TMTR Symbol if CQS security. This field is included in the message if the Security Class is either C or Z. If not, the field is not sent.

6.2.6 Net Trade Threshold Fallback Notification (TTFB/TTFP)

Denotes that the dollar value of this trade has contributed to the cumulative NAT such that the resulting NAT has fallen back below one or both of the party's NTT. This threshold fallback message shall be forwarded to the party(s) of the trade whose NAT was now within its NTT limit and to its clearing firm, if the firm is not self-clearing.

This message is identical to the TTNT message except the NTL Indicator will refer to the party whose NAT has Fallen Back below the NTT.

If a firm's NAT is caused to be less than its NTT as the result of an update to its NTT, "EXID NTT UPDATED" will appear instead of the above fields, i.e. NTL Indicator, Control Number and Trade Text; where EXID is the MMID of the firm whose NTT was updated.

A Pre-Alert Fall-back message for correspondents and their clearing firms (TTFP) that is identical to TTFB will be transmitted if the dollar value of trades exceeding the trade threshold percent established by the NASD decreases (due to a trade correction or threshold adjustment).

In the event that one trade exceeds the threshold percentage both the TTNP and the TTFB message will be transmitted.

Line 1: OTHER MMID cr If

Line 2: TTFB cr If

Line 3: (NTL Control Number) (Trade Text) cr If

Line 3A: (NTL Control Number) (Trade Text, plus 14 character TMTR symbol) cr If

Message Format

Field Name	Position	Format	Description
NTL Indicator	1-1	X(1)	Valid values: M = exceeds MM Trade Limit O = exceeds OE Trade Limit
Control Number	2-11	X(10)	Control Number associated with the trade reporting record
As-of	12-12	X(1)	Valid values: Y = As-of (T+1 to T+n) space = Original (T Day entry)
Security Class	13-13	X(1)	U. S. Market: Valid values: N = National Market P = Non-NASDAQ OTC R = SmallCap
B/S/X	14-14	X(1)	Valid values: B = Bought S = Sold X = Crossed Z = Dealer Sold Short

Field Name	Position	Format	Description
			E = Dealer Sold Short Exempt C = Selling Customer Sold Short K = Selling Customer Sold Short Exempt P = QSR or AGU Contra Side Sold short A = QSR or AGU Contra Sold Short exempt
Reference Number	15-20	X(6)	User assigned reference number
Volume	21-28	9(8)	Number of shares
Symbol	29-33	X(5)	NASDAQ SECID
Price:			This field includes dollar, numerator, and trade digit.
Dollar	34-37	9(4)	Dollar portion of the price
Numerator	38-40	9(3)	Numerator portion of the price
Trade Digit	41-41	X(1)	1 - 9 A = Decimal Unit Price B = Contract Amount
Trade Modifier	42-44	X(3)	Valid values: SLD = Late B = Bunched SB = Late Bunched SNN = Seller's Option C = Cash ND = Next Day T = .T PRP = Prior Reference Price space = Regular W = Average Price TS = T appended by system SLS = SLD appended by system If submitting a Clearing only transaction for matching of ex-clearing transactions (i.e. C, ND or Snn) the field will be redefined to: Trade modifier: X(1), space-filled Days: 9(2), 00 for Cash, 01 for ND, 02, 04-60 for Snn, space for normal 3-day settlement
Price Override	45-45	X(1)	Valid values: O = Override space = No override
OEID	46-49	X(4)	MMID of the OE side
OEGU	50-53	X(4)	MMID of give up on the OE side
OE Clear Number	54-57	9(4)	space = Major clear Number
MMID	58-61	X(4)	Required MMID of the MM side
MMGU	62-65	X(4)	MMID of give up on the MM side

Field Name	Position	Format	Description
MM Clear Number	66-69	9(4)	space = Major clear Number
MM PA Indicator	70-70	X(1)	Valid values: P or space = Principal A = agent R = Riskless Principal
Trade Report Flag	71-71	X(1)	Valid values: space = Report by rules N = No Report On StepOut transactions, if the Trade Report Flag is set to space NASDAQ will make adjustments to the Section 31 fee for the transaction, if the Trade Report Flag is set to "N" no Section 31 fee adjustment will take place, and the Clearing Flag must be set to space or G.
Clearing Flag	72-72	X(1)	Valid values: space = clear G = Automatic Give-up Lock-in N = no clear Q = QSR no clear Z = QSR clear L = Ext. Sys. Locked-in (The "L" value is output through TTEN/TTAL messages only for NASDAQ ESI executions.) On StepOut transactions, if the Trade Report Flag is set to space NASDAQ will make adjustments to the Section 31 fee for the transaction, if the Trade Report Flag is set to "N" no Section 31 fee adjustment will take place, and the Clearing Flag must be set to space or G.
Special Trade Indicator	73-73	X(1)	Valid values: Y = Special trade S = Step-out trade X = Special and Step-out trade space = Not Special Trade (none of the above) On StepOut transactions, if the Trade Report Flag is set to space NASDAQ will make adjustments to the Section 31 fee for the transaction, if the Trade Report Flag is set to "N" no Section 31 fee adjustment will take place, and the Clearing Flag must be set to space or G.
Execution Time	74-79	9(6)	Required HHMMSS
Memo	80-89	X(10)	User Memo

Field Name	Position	Format	Description
Decimal Price	90-101	9(12)	Unit Price = 999999V999999 for Trade Digit "A" Contract Price = 0999999999V99 for Trade Digit "B"
Contra Branch Sequence	102-109	X(8)	Required by OATS for MM QSR or AGU trade only.
Trade Date	110-117	9(8)	Must be entered for T+2 or older, mmddyyyy format.
Reversal Indicator	118-118	X(1)	Valid values: space = not a Reversal R = Reversal
OE P/A Indicator	119	X(1)	
Filler	120-125	X(6)	Space Filled (reserve for future use)
Clearing Price	126-137	X(12)	Price inclusive of commissions. This field will be included only for firms who select this option in their firm profiles.
TMTR Symbol		X(14)	The TMTR Symbol if CQS security. The TMTR Symbol field is included in the message if the Security Class is either C or Z. If not, the field is not sent.

6.3 Reject Message Format

If the application cannot process a message received from the subscriber, it will generate a Status Message for the originator that indicates why the message was rejected. The Status Message will be received by the originator as the text portion of a Standard Switch Output Message.

Line 1: MMID <CR/LF>
 Line 2: 'STATUS' <CR/LF>
 Line 3: 'REJ' - Reject Reason <CR/LF>
 Line 4: BRID SQNO HH:MM:SS <CR/LF>
 Line 5: Text of original input message <CR/LF>

Line	Field	Description	Req'd
1	Originator MMID	This is an optional line that may contain the 4-character MMID of the entering firm, or the MMID of the firm the Service Bureau is acting for. If this option is utilized for multi-station lines, it will equal the 4-character MMID associated with the station (select/poll address).	N
	CR LF	Required line delimiter.	Y
2	Category	This field identifies the message category and will contain "STATUS".	Y
	CR LF	Required line delimiter.	Y
3	'REJ'	This line contains ("REJ - Reason for Rejection"). See following table.	Y
	CR LF	Required line delimiter.	Y
4	Branch Office	1-8 character alphanumeric (A-Z, a-z, 0-9, embedded spaces, left justified, pad with trailing spaces)	Y
	CR LF	Required line delimiter.	Y
5		This line contains an echo of the original input message being rejected.	Y
	CR LF	Required line delimiter.	Y

Trade Reporting Reject Messages

Message	Description
ACT ENTRY SUSPENDED	NASDAQ has suspended trade reporting entry
ALL BLOCKBUSTER LESS THAN DEFAULT MKT BLOCKBUSTER	Enhanced risk mgmt message. The ALL category blockbuster amount cannot be less than the amount setup by NASDAQ.
ALL BLOCKBUSTER LESS THAN MKT BLOCKBUSTER	Enhanced risk mgmt message. The ALL category blockbuster amount cannot be less than any of the individual markets.
ALL SIZEABLE LESS THAN DEFAULT MKT SIZEABLE	Enhanced risk mgmt message. The ALL category sizable amount cannot be less than the amount setup by NASDAQ.
ALL SIZEABLE LESS THAN MKT SIZEABLE	Enhanced risk mgmt message. The ALL category sizable amount cannot be less than any of the individual markets.
ALL SUPERCAP LESS THAN DEFAULT MKT SUPERCAP	Enhanced risk mgmt message. The ALL category supercap amount cannot be less than the amount setup by NASDAQ.
ALL SUPERCAP LESS THAN MKT SUPERCAP	Enhanced risk mgmt message. The ALL category supercap amount cannot be less than any of the individual markets.
BLOCKBUSTER BELOW MINIMUM AMOUNT	Enhanced risk mgmt message. The ALL category blockbuster amount cannot be less than the amount setup by NASDAQ.
CANNOT CHANGE TO NON-MEDIA TRADE	A tape only transaction may not be changed to no tape no clearing.
CHANGE NOT ALLOWED - TRADE ALREADY SENT TO CLEARING	Transaction was already submitted as a locked in transaction to the DTCC for clearing.
CONTRA FIRM NOT AUTHORIZED	Contra firm entered is not active in ACT.
IMPROPER FORM T TRADE	The original MM trade has a ".T" trade modifier and it is not an NASDAQ National Market security or it is not entered within the Form T time (applicable to TRADE REPORTING 1 MM original trade entry).
INVALID AS-OF	The As-Of field entry is other than "Y".
INVALID B/S	The B/S field entry does not contain "B", "S", "X", "Z", "E", "C", "K", "P" or "A". OE may also receive it if submitting transaction with C, K, P or A.
INVALID BRANCH SEQ #	The branch sequence number field entry is not 1 to 4 alpha (from A-Z) characters, followed by a space and 1 to 4 digit numeric character (from 0-9) or Contra branch sequence number entered on a non-QSR or AGU transaction.
INVALID CLEARANCE ENTRY	The clearing field is entered and the entry is other than "N", "M" or "L"

Message	Description
INVALID CLEARING NUMBER	The MM CLEAR Number field or the OE CLEAR Number field is entered and either entry is other than four numeric characters, or the clearing number does not point to a clearing broker relating to the respective MM or OE in the Risk Management File.
INVALID CONTRA P/A	Contra P/A allowed only on locked in trades - QSR or AGU.
INVALID MM GIVE-UP	The MM GIVE-UP entry does not have a give-up relationship with the MM.
INVALID OE GIVE-UP	The OE GIVE-UP entered does not have a give-up relationship with the OE.
INVALID P/A	The PA field entry is other than "P", "A" or blank.
INVALID PRICE	<ol style="list-style-type: none"> 1. The price field entry has non-numeric or non-decimal characters, or a zero price, or 2. The whole price is greater than 9999, or 3. The period is the first or last character of the price, or 4. The fraction or decimal portion of the price is other than numeric.
INVALID PRICE OVERRIDE	The price override entered by the subscriber is other than ".O".
INVALID QSR ENTRY	A relationship between a QSR trade entry firm and the contra side has not been established
INVALID SECURITY ID	The entered SECID is not in the trade reporting Security File, or the ACT AUTHORIZATION INDICATOR for the security is not set to "A".
INVALID TIME	The TIME entry is not in HH:MM:SS time format
INVALID TRADE MODIFIER	The entry is an original MM trade and the modifier other than ".SLD", ".B", ".SNN" (where "NN" is between 02, 04 and 60), ".C", ".ND", ".T", PRP, or ".SB" (applicable to TRADE REPORTING 1 MM entry).
INVALID TRADE REPORT OVERRIDE	The RPT field entry is other than "N", or if "N" is entered and the trade is not original MM trade, or if "N" is entered and a ".SNN", ".C", or ".ND" trade modifier is also entered.
INVALID TRADING DIGIT	Only A (decimal price) or B (contract amount) allowed.
INVALID VOLUME	The volume field is not in the range of 1 to 99,999,999.
MM NOT ACT AUTHORIZED	The I ₁ I ₂ of the entering device points to the entering MM that is not trade reporting authorized in the trade reporting Authorization Table.
MMID REQUIRED	An MMID has not been entered.

Message	Description
NO CONTROL NUMBER	The control number parameter is required and must be 10 alphanumeric characters.
NO MODIFIER FOR AS-OF	The trade is an As-Of trade (i.e., "Y" is entered in the As-Of field) and a trade modifier was entered.
NO NO/WAS FOR AS-OF TRADES	The control number must point to a TRADE REPORTING 1 trade entry.
NO SECID CHANGE IN NO/WAS	A NO/WAS correction entry cannot be entered to change a SECID.
NOT AN OPEN TRADE	The control number must point to a market maker trade entry with status of U (Unanswered) or T (Trade report only) which is not the Was portion of a previous No/Was entry.
NOT CROSS TRADE	The entry in the B/S field is "X" and the OEID is not blank or equal to MMID.
NOT WITHIN ALLOWABLE TIME	<ol style="list-style-type: none"> 1. The trade is entered before trade reporting ENTRY START time, or 2. The original MM trade is for an NASDAQ National Market issue and is not marked as a Form T trade when it is entered after NASDAQ National Market ENTRY END time (i.e., 4:10), or 3. The trade is for a NASDAQ SmallCap security and is entered after REGULAR ENTRY END time.
OE NOT ACT AUTHORIZED	The MMID entered in the OEID field is not authorized in the trade reporting Authorization Table.
OEID REQUIRED	The OEID was not entered for a trade that is subject to matching and clearing.
ONLY MM MAY CORRECT THIS TRADE	The function must be submitted by the firm designated as the MM side responsible party on a MM trade entry.
PRICE OUT OF OVERRIDE RANGE	A trade with the ".O" price override is beyond the bounds of the override range.
PRICE OUT OF RANGE	The PRICE fails the price range check.
TIME FIELD REQUIRED	A TIME entry has not been entered for an NASDAQ National Market trade marked ".SLD", ".SB" or ".T"; or a TIME entry has not been entered for an As-Of entry
TRADE DETAIL MUST BE UPDATED	At least one field on the trade line, excluding override, must be updated.

Other Trade Reporting Reject Messages

Message
ACCEPT
ACCEPT - CONTRA NOT READY
ACCEPT - NOT CLEARING ELIGIBLE
BLOCKBUSTER EXCEEDS DEFAULT MKT SUPERCAP Blank - may be used
BLOCKBUSTER EXCEEDS MKT SUPERCAP
BLOCKBUSTER LESS THAN SIZEABLE AMT
BRANCH SEQ# REQUIRED
ENTRY REQUIRED
EXCEEDS MAXIMUM CONTRACT AMOUNT
EXECUTION TIME GREATER THAN TRADE REPORT TIME
EXECUTION TIME REQUIRED
FIRM NOT AUTHORIZED
FIRM REQUIRED
INTERNAL ERROR
INVALID ACT ENTRY
INVALID AMOUNT
INVALID B/A INDICATOR
INVALID BLOCKBUSTER ACTION
INVALID BLOCKBUSTER AMOUNT
INVALID CAP MARK
INVALID CLEARING ACCT #
INVALID CONTRA BRANCH SEQUENCE
INVALID CONTRA PARTY
INVALID CONTROL NUMBER
INVALID DATE
INVALID ENTRY
INVALID FIRM
INVALID FORMAT
INVALID FUNCTION CODE
INVALID GIVEUP CODE
INVALID MAKE DEF VALUE
INVALID MARKET ID
INVALID MARKET TYPE
INVALID MEMO FIELD
INVALID OEID
INVALID PRICE/CONTRACT INDICATOR

Message
INVALID REFERENCE NUMBER
INVALID RISK MANAGEMENT
INVALID SECURITY CLASS
INVALID SELECTION
INVALID SHORT SALE INDICATOR
INVALID SIZEABLE ACTION
INVALID SIZEABLE AMOUNT
INVALID SPECIAL TRADE IND
INVALID STATUS ENTRY
INVALID SUPERCAP AMOUNT
INVALID SYSTEM DESIGNATION
INVALID TIME COMBINATION
INVALID TRADE REPORT FLAG
INVALID TRADE TYPE
INVALID TYPE
INVALID UPDATE
ISSUE NOT ACT AUTHORIZED
LAST SALE OK - CLEARING REJECT
LAST SALE OK - NOT CLEARING ELIGIBLE
LAST SALE OK -NO CLEARING
MEMO FIELD CANNOT BE CHANGED
MKT BLOCKBUSTER EXCEEDS ALL BLOCKBUSTER
MKT BLOCKBUSTER EXCEEDS DEFAULT ALL BLOCKBUSTER
MKT SIZEABLE EXCEEDS ALL SIZEABLE
MKT SIZEABLE EXCEEDS DEFAULT ALL SIZEABLE
MMCLR NOT ACT AUTHORIZED
MMGU NOT ACT AUTHORIZED
MOD SLD REQUIRED
MOD T NOT ALLOWED
MOD T REQUIRED
NO CLEARING RELATION WITH THIS EXECUTION BROKER
NO ENTRY DATA WAS UPDATED
NO MORE DATA FOR SELECTION CRITERIA
NO MORE RECORDS
NO MORE RECORDS FOR CLEARING FIRM
NO NEW DATA ENTERED
NO NO/WAS FOR MOD T TRADES

Message
NO NO/WAS FOR NON-MEDIA TRADES
NO OTHER UPDATE WHEN STATE IS D
NO RECORDS FOUND
NO STATISTICS AVAILABLE
NO UPDATES AFTER LAST SALE END TIME
NOT A REPORTABLE OPEN TRADE
NOT AUTHORIZED
OECLR NOT ACT AUTHORIZED
OEGU NOT ACT AUTHORIZED
POTENTIAL VOL ERR
POTENTIAL VOLUME ERROR
REVERSAL NOT ALLOWED
SIZEABLE BELOW MINIMUM AMOUNT
SIZEABLE EXCEEDS DEFAULT MKT BLOCKBUSTER AMT
SIZEABLE EXCEEDS MKT BLOCKBUSTER AMT
SUPER CAP STILL EXCEEDED
SUPERCAP EXCEEDS ALL VALUE
SUPERCAP EXCEEDS DEFAULT ALL VALUE
SUPERCAP LESS THAN BLOCKBUSTER
SUPERCAP LESS THAN DEFAULT BLOCKBUSTER
TERMINAL NOT AUTHORIZED
TRADE ALREADY CANCELLED, ERRORED, OR CORRECTED
TRADE ALREADY LOCKED-IN
TRADE STATUS INVALID FOR ACTION
TRDE HELD
UPDATE OF FIELD REQUIRED

6.4 End of Day Recaps

6.4.1 End of Day Participant Recap (TCRC)

Line 1: OTHER MMID cr lf

Line 2: TCRC cr lf

Line 3: (Number of Trades) Session (REF Number) (Control Number) Status (SOT) More cr lf

Session, Reference Number, Control Number, and Status will be repeated for each trade within a TCRC Message. Each TCRC Message will be a fixed length message, containing a maximum of five trades. The NUM Field will be in the range of 01-05. There will be as many TCRC Messages as necessary to accommodate and transmit all trades pertaining to a subscriber as MM and as OE. SOT and MORE fields will appear at the end of the message.

Message Format

Field Name	Position	Format	Description
NUM	1-2	9(2)	Indicates the number of trades contained in this message.
Session	3	9(1)	Blank = TRADE REPORTING 1 2 = TRADE REPORTING 2
Reference Number	4-9	X(6)	Contains the Reference Number, if any, that was last provided by the party to which this message is directed in connection with this entry's Control Number. The field will be space-filled if the Control Number refers to an entry by a contra party.
Control Number	10-19	X(10)	Control number that the system had assigned to the trade reporting transaction when it was originally received from the subscriber. The control number is required to uniquely identify the trade reporting record in the trade reporting file.
Status	20	X(1)	The status that the trade had at the time of its transmission to the subscriber. For further information on trade reporting Status Codes see 6.6. Valid values: A = Accepted (locked-in trade) B = Broken C = Canceled D = Declined E = Errored G = Trades forwarded as One-sided to DTCC I = A BBT or Sizeable trade that has been inhibited from being locked-in by a clearing firm K = Killed by NASDAQ at the end of inhibit period if it is a Sizable trade

Field Name	Position	Format	Description
			L = Automatic Locked-in trade (next business date after entry date) M = M1 Matched (locked-in trade) N = No/Was O = OE Entered trade R = Locked-in trades from other NASDAQ systems or QSR trades T = Trades entered for Ticker only U = Unanswered (MM entry) X = Trades purged from trade reporting file trade reporting at the end of inhibit period if it is a sizable trade
Sum of Trades	21-26	9(6)	Sum Of Trades: This six-digit field will contain the total number of trades in the recap until and including the last trade in this message.
MORE	27-27	X(1)	Contains a "+" when more messages are to be transmitted in the recap; a blank in this field will denote the end of recap. Trades will be presented in the following order: T+2..N, T+1, and T date. Note that this field will NOT be space filled for the last T+2 record.+ = more, blank = end of recap

6.4.2 Short Form Clearing Firm Recap (TCSR)

Line 1: OTHER MMID cr lf

Line 2: TCSR cr lf

Line 3: (NUM) Session (Origin) (Control Number) Status (Sum of Trades) More cr lf

Session, Origin, Control Number, and Status will be repeated for each trade within a TCSR Message. Each TCSR Message will be a fixed length message, containing a maximum of five trades. The NUM Field will be in the range of 01-05. There will be as many TCSR Messages as necessary to accommodate and transmit all trades pertaining to a subscriber as MM and as OE. SOT and MORE fields will appear at the end of the message.

Message Format

Field Name	Position	Format	Description
NUM	1-2	9(2)	Indicates the number of trades contained in this message.
Session	3-3	9(1)	Blank = TRADE REPORTING 1 2 = TRADE REPORTING 2
Origin	4-9	X(6)	External system identifier, if applicable, else blank.
Control Number	10-19	X(10)	Control Number associated with the trade reporting record originally received from the subscriber. The control number is required to uniquely identify the trade reporting record in the trade reporting file.
Status	20-20	X(1)	Status of original trade Contains the trade reporting Status that the trade had at the time of its transmission to the subscriber. For further information on trade reporting Status Codes see section 6.6. Valid values: U = Unanswered (MM entry) M = M1 Matched (locked-in trade) A = Accepted (locked-in trade) L = Automatic Locked-in trade (end of T+1) E = Errored N = No/Was C = Canceled B = Broken D = Declined O = OE Entered trade G = Trades forwarded as One-sided to DTCC R = Locked-in trades from other

Field Name	Position	Format	Description
			NASDAQ systems or QSR trades T = Trades entered for Ticker only X = Trades purged from trade reporting file I = Inhibited from being locked-in by a clearing firm H = Held pending expiration of inhibit period K = Killed by the clearing broker if it is a BBT or killed by trade reporting at the end of inhibit period if it is a sizable trade
Sum of Trades	21-26	9(6)	Contains the total number of trades in the recap until and including the last trade in this message.
MORE	27-27	X(1)	Contains a "+" when more messages are to be transmitted in the recap; a blank in this field will denote the end of recap. Trades will be presented in the following order: T+2..N, T+1, and T date. Note that this field will not be space filled for the last T+2 record. + = more blank = end of recap

6.4.3 Clearing Firm Recap of Trades (TTFR)

Denotes an End of Day recap sent to Clearing Firms. This recap will contain the trade information and EOD status for each trade of each of the Clearing Firm's correspondents.

Line 1: MMID cr If (Clearing Firms ID)

Line 2: TTFR (Echo Browse request parameters) cr If

Line 3: (S) (SEC CLS) (As/Of)(SPEC) Trade Text M cr If

The Trade Text includes all the trade detail including: Execution Broker (Correspondent of the clearing agent), B/S Indicator, trade reporting Control Number, Volume, SECID, Fractional Price, Contra Party (executing broker), Contra Clearing Number, Branch-Sequence number, Execution Time, Decimal Price, Contra Branch Sequence, Trade Date, Reversal Indicator, Filler.

In the case a trade was a CQS security (i.e. STAT field = F and/or SEC CLS Field = C), the message will also contain the 14 character TMTR symbol, as well as the Status, Control Number and Volume of the Split trade, if any. In the case when STAT = F and/or SEC CLS = C, if any of these fields are not applicable, they will be space filled.

Message Format

Field Name	Position	Format	Description
Status	1-1	X(1)	The end-of-day status of the trade. Valid values: A = Accepted (locked-in trade) B = Broken C = Canceled D = Declined E = Errored G = Trades forwarded as One-sided to DTCC I = A BBT or Sizeable trade that has been inhibited from being locked-in by a clearing firm K = Killed by NASDAQ at the end of inhibit period if it is a Sizable trade L = Automatic Locked-in trade (next business date after entry date) M = M1 Matched (locked-in trade) N = No/Was O = OE Entered trade R = Locked-in trades from other NASDAQ systems or QSR trades T = Trades entered for Ticker only U = Unanswered (MM entry) X = Trades purged from trade reporting file

Field Name	Position	Format	Description
Security Class	2-2	X(1)	N = National Market R = SmallCap NASDAQ C = CQS P = OTC T = TARS/DTCC Reconciliation Symbol
As-Of Flag	3-3	X(1)	blank = T day Y = As-of Trade (T = T+2 to T+n) R = Reversal
Special Trade Indicator	4-4	X(1)	Non-CNS settlement trade Y = special (non-CNS settlement) S = step-out trade X = special and step-out (non-CNS settlement) F = fee transfer for a trade that occurred on NASDAQ O = fee transfer for a trade that occurred off NASDAQ " " = none of the above When this field value is S or X, then: If the Trade Report Flag is set to space, NASDAQ will make adjustments to the Section 31 fee for the transaction. If the Trade Report Flag is set to "N" no Section 31 fee adjustment will take place. The Clearing Flag must be set to space or G.
Executing Broker MMID	5-8	X(4)	MMID of execution broker
Buy/Sell Code	9-9	X(1)	Buy/Sell pertaining to Executing Broker MMID
Control Number	10-19	X(10)	ACT-assigned transaction number
Volume	20-27	9(8)	Number of shares
Symbol	28-32	X(5)	NASDAQ SECID
Price:			This field includes dollar, numerator, and trade digit. For Trading Digit = A or B, the Trade Decimal Price Field is included in the message, the dollar and numerator fields are blank-filled.
Dollar	33-36	9(4)	
Numerator	37-39	9(3)	
Trade Digit	40-40	X(1)	A = Decimal Unit Price B = Contract Amount For Trading Digit = A or B, the Trade Decimal Price Field is included in the message, the dollar and numerator fields in the price field are blank-filled.

Field Name	Position	Format	Description
Contra MMID	41-44	X(4)	MMID of the Contra Execution Broker
Contra Clear Number	45-48	9(4)	Clear Number of Contra
Branch Sequence	49-56	X(8)	The Branch Sequence Number will be formatted as in the trade entry: 1 -8 Alphanumeric (0 - 9, A - Z, a - z, and space).
Execution Time	57-62	X(6)	Execution Time
Contra Branch Sequence	63-70	X(8)	Required by OATS for MM QSR or AGU trade only.
Trade Date	71-78	9(8)	Must be entered for T+2 or older, mmddyyyy format.
Reversal Indicator	79-79	X(1)	∅ = not a Reversal R = Reversal
Filler	80-86	X(7)	Space-filled (reserve for future use)
TMTR Symbol		X(14)	TMTR Symbol if CQS issue. This field is included in the message only if the Security Class is C or Z.
Split Trade Status		X(1)	S = Split Trade This and the following two fields are sent when the trade is a split trade.
Split Trade control Number		X(10)	Control Number associated with Split Trade
Split Trade Volume		9(8)	Volume of Split Trade
Trade Decimal Price		9(12)	Unit Price = 999999V999999 for Trade Digit "A" Contract Price = 0999999999V99 for Trade Digit "B" For Trading Digit = A or B, the Trade Decimal Price Field is included in the message, the dollar and numerator fields in the price field are blank-filled.
More	Last	X(1)	A "+" character will appear when more messages in the recap are forthcoming. If it is the end of the recap this field will be space filled. Trades will be presented in the following order: T+2..N, T+1, and T date. Note that this field will not be space-filled for the last T+2 record. + = more blank = end of recap

6.5 Short Sale Reporting

Firms are obligated to include an indication of a short sale transaction as part of their trade entry. In those cases where a participant represents the short sale side but does not make a trade report entry, such an indication may be made via a Browse Accept or Browse Update entry.

Firms affecting a short sale transaction are able to indicate it as part of an MM Function V, an OE Function W, or a No/Was Function X message.

The CTCI accept entry message will not be available for the OE side to indicate a short sale by the OE firm. The OE may use the Trade Scan in the NWII, Weblink, or Trade Reporting Workstation to ACCEPT SHORT or ACCEPT EXEMPT.

The short sale and short sale exempt information is encoded in the B/S/X field of the V, W, and X input functions and the TTEN, TTAL, and TTNW output response messages. The existing side codes for buy, sell, and cross continue to apply to all entries for trades that do not involve short sales. To report a short sale transaction using CTCI, subscribers should use one of the following appropriate side codes:

- Z = Sold Short
- E = Sold Short Exempt
- C = Cross Short (Reporting MM Bought or Crossed, Customer Sold Short)
- K = Cross Short Exempt (Reporting MM Bought or Crossed, Customer Sold Short Exempt)
- P = Reporting MM Bought - OE Sold Short (QSR or AGU trade only)
- A = Reporting MM Bought - OE Sold Short Exempt (QSR or AGU trade only)

These codes are not applicable when reporting via NWII, Weblink, or Trade Reporting Workstation.

Since a short sale is proprietary information, it will be returned to the submitting firm only, unless the report is QSR locked in entry. QSR reporting the QSR firm (acting as MM & Buyer) will receive a TTEN and the contra OE short seller will receive a TTAL that contains the short sale side code.

For a NASDAQ market center trade, the "P" or "A" side code is automatically entered into NASDAQ when the Order Entry side is being executed as a short seller. It will, therefore, be included as the side code in a TTAL (alleged trade) message to the OE/contra side, while the standard buy side code is included in the TTEN acknowledgment message to the MM side. The following table summarizes the input and output Short Sales Side Codes information that is required for CTCI trade reports.

CTCI Short Sales I/O Side Codes

Entering Firm Perspective	Input			Output			
	"V"	"W"	"X"	TTEN	TTAL	TTNW MM	TTNW OE
MM Sold Short	Z	n/a	Z	Z	S	Z	S
MM Sold Short Exempt	E	n/a	E	E	S	E	S
OE Sold Short	n/a	Z	n/a	Z	S	n/a	n/a
OE Sold Short Exempt	n/a	E	n/a	E	S	n/a	n/a
MM Buy/Cross – Customer Sold Short	C	n/a	C	C	n/a	C	n/a
MM Buy/Cross – Customer Sold Short Exempt	K	n/a	K	K	n/a	K	n/a
MM Buy - OE Sold Short	n/a	n/a	n/a	B	P	n/a	n/a
MM Buy - OE Sold Short Exempt	n/a	n/a	n/a	B	P	n/a	n/a
MM Buy - OE Sold Short (QSR, AGU)	P	n/a	P	P	P	P	P
MM Buy - OE Sold Short Exempt (QSR, AGU)	A	n/a	A	A	A	A	A

6.6 Trade Status Tables

The Control Number, used to identify the trade throughout the trade reporting processing cycles, and Trade Status, used to identify the processing state of the trade, are two important elements in trade reporting.

The two tables on the following pages explain and summarize the processing logic that NASDAQ applies to a trade in the TRADE REPORTING 1 and TRADE REPORTING 2 cycles and the resolutions of the trade at the end of that cycle.

These two tables are read in the following ways:

- On the top of the column is the starting Status of a trade.
- On the left of the row is the process applied to the trade and its resulting Status (equal to process name).
- The intersection between a column and a row is the one that (identified by one character, refer to Note 1 in the table) initiates or triggers the process.
- On the right-most two columns are the clearing or "Go To TRADE REPORTING 2" (applicable to TRADE REPORTING 1 Trade Status Table) resolutions of the trade if it stays on its resulting Status.

TRADE REPORTING 1 STARTING STATUS

ACTION	UNAN	OE ENT	M1	MATCH	ACCEPT	DECLINE	+DECLINE	BROKEN	ERROR	CANCEL	NO/WAS	GONE	EXT LOCK	TRADE REPORT	CLEARING HELD	FIRM		CLEARING	GO TO
																INHIBIT	KILLED		
R UNAN	(U)	(O)	(M)	(A)	(D)	(D)	(D)	(B)	(E)		(N)	(G)	(R)	(T)	(H)	(J)	(K)		TR 2
E OE ENTRY														M	A(7),C			N	Y(6)
S M1 MATCH	A	A													A(7),C			N	Y
L ACCEPT	O				O													L	N
T DECLINE	O																	N	N
+DECLINE		M																N	N
BROKEN			M/O	M/O								E						N	N
S ERROR	M				M									M				N	N
T CANCEL	M	O			M								E	M				N	N
A NO	M(2)													M(2)				N	N
T GONE	A	A																O	N
U EXT LOCK																		L	N
S TRADE RPT																		N	N
HELD																		N	N
INHIBIT															C			N	N
KILLED															A(8),C			N	N

NOTE 1: Except for the TRADE REPORTING 2 and clearing column, the table shows the permissible changes from Starting Status (across the top) to Result Status (along the left) where: "O" = OE Action, "M" = MM action, "M/O" = MM and OE action, "A" = trade reporting system action, "E" = external system action and "C" = clearing firm action.

NOTE 2: A MM original trade in "U", "R", and "T" statuses can be changed into a "N/U" "N/R", or "N/T" pair of No/Was trades by the MM via the trade reporting Correction by entering a "No/Was" transaction, but cannot be further changed.

NOTE 3: "D" = OE declined MM entered trade, and "D+" = MM declined OE entered trade. Both kinds of declined trades have the "D" status in the trade reporting file. The "+" is for description purpose only.

NOTE 4: Clearing (submission to DTCC at the end of trade reporting I): L = locked-in, N = no submission, O = one-sided submission to clearing. These clearing statuses do not apply to trades that have trade modifier "C", "ND" or "SNN", or overridden by the Clearing Flag (i.e. CLR set to "N" or "M"), these trades will not be forwarded to clearing regardless of their trade statuses. Locked-in trades will be forwarded to DTCC at the end of trade reporting I (i.e. T-day)

NOTE 5: Only "U" and "O" trades (i.e. open trades) will be forwarded to trade reporting II for further trade reconciliation processing as shown by the "GO TO trade reconciliation cycle at the end of trade reporting I.

NOTE 6: An unanswered trade or one with "C", "ND", or "SNN" trade modifier will not be forwarded to trade reporting II. These trades and "T" trades will be processed for trade reporting only.

NOTE 7: A Blockbuster Trade will become an Unanswered or OE Entered trade after a 15-minute period.

NOTE 8: A Sizeable Trade will be killed after the 15-minute period.

TRADE REPORTING 2 STARTING STATUS

PROCESS	UNAN (U)	OE ENT (O)	M1 MATC (M)	ACCEP T (A)	DECLIN E (D)	+DECLIN E (D)	BROKE N (B)	ERRO R (E)	CANCEL □	AUTO LOCK (L)	GON E (G)	EXT LOCK (R)	SPLIT LOCK (S)	TRADE REPORT (T)	PURGE (X)	CLEARI NG		FIRM ENTERE D	CLEARIN G
																HELD (H)	(K)		
R UNAN																	A(7),C		L
E OE ENT																	A(7),C		L
S M1 MATCH	A	A																	L(O), N (A)
L ACCEPT	O				O														L
T DECLINE	O																		N
+DECLINE		M																	N
BROKEN			M/O	M/O							E								N
S ERROR	M				M									M					N
T CANCEL	M	O			M						E			M					N
A AUTO LOCK	A	A																	L
T GONE	A	A																	O
U EXT LOCK																			L
S TRADE RPT																			N
SPLIT	A	A																	L(O), N
PURGE	A(6)	A(6)																	N
HELD																			N
INHIBIT																	C		N
KILLED																	A(8),C		N

NOTE 1: The table shows the permissible changes from Starting Status (across the top) to Result Status (along the left) where: "O" = OE Action, "M" = MM action, "M/O" = MM and OE action, "A" = trade reporting system action, "E" = external system action and "C" = clearing firm action.

NOTE 2: At the beginning of trade reporting II, the trade reporting II file will contain only original open trades from trade reporting I. During the course of trade reconciliation in trade reporting II, As-Of trades will be entered.

NOTE 3: ACT "No/Was" transactions, are not allowed in trade reporting II.

NOTE 4: Clearing (submission to DTCC at the end of trade reporting II): L (O) = Automatic locked-in original open trade, N (A) = submission to clearing for As-Of open trades. L = Locked in (by transaction). N = no submission to clearing. Locked-in trades will be forwarded to DTCC at the end of trade reporting II (i.e. T+1 day)

NOTE 5: A Blockbuster Trade will become an Unanswered or OE Entered trade after a 15-minute period.

NOTE 6: A Sizeable Trade will be killed after the 15-minute period

Appendix A: TCP/IP Connection

This appendix describes how a subscriber can submit and receive messages to and from The NASDAQ Stock Market's Computer-to-Computer Interface (CTCI) using the TCP/IP protocol.

The information contained in this appendix is presented in a step-by-step sequence that describes what must be done to setup and to configure a TCP/IP connection with NASDAQ, how to establish a TCP/IP connection, what control messages and associated protocol must be supported for CTCI TCP/IP session management, and ultimately how to send and receive CTCI messages over a TCP/IP connection.

The document is organized as follows:

- The business of contacting NASDAQ and configuring how the subscriber will access NASDAQ through TCP/IP is discussed first under Setup and Testing.
- The basics of establishing a TCP/IP connection with NASDAQ are discussed in Establishing a TCP/IP Connection.
- The format of the CTCI TCP/IP Message is presented next in the CTCI TCP/IP Message Format. This format is used for sending and receiving the CTCI message itself and also for sending and receiving control messages necessary for session management.
- A discussion of session management follows in CTCI TCP/IP Session Management, followed by detailed descriptions and examples of each control message in Control Messages.
- Finally, the method and format for sending and receiving CTCI messages is described in Sending a CTCI Message, Receiving a CTCI Message, and CTCI Message Sequence Verification.
- Appendix A contains the Glossary. While it is sometimes redundant, it should read also, as it does contain some information that does not appear anywhere else in the document.

The subscriber should read this appendix in its entirety to ensure that the rules of the protocol and what the subscriber is required to do to use it are clearly understood prior to contacting NASDAQ for Setup.

Setup

Before attempting to establish a connection over TCP/IP, the subscriber must first contact NASDAQ to configure the connection. If necessary, more than one TCP/IP connection can be configured for the same subscriber. For each connection, NASDAQ will provide the subscriber with two pairs of IP Addresses and a Well Known Port to connect to. The same port is used for all four addresses. At the same time, the subscriber must provide NASDAQ with the IP Address that they will be connecting from when they establish the connection.

Please note that the four IP Addresses consist of a Primary address and an Alternate address for use in connecting to NASDAQ and a backup address pair for use in

connecting to the NASDAQ Disaster Recovery (D.R.) site. Please see the section Retrying failed connection attempts for more details.

For each TCP/IP connection, a client profile must be established. This process involves assigning an agreed upon ten-character logon identifier and assigning meaning to the "logical channels" that the subscriber will use to exchange CTCI messages with NASDAQ. *Note: A method of encryption will be introduced in a future release.*

The logon identifier will be associated with the client's IP Address and the IP Addresses and Well Known Port the client should be connecting to. This information will be verified when the client establishes the connection and sends a Logon control message to NASDAQ.

Over one TCP/IP connection, a subscriber can submit and receive CTCI messages on behalf of up to 63 different users and/or device locations. Messages for each user or device location are kept separated from each other by assigning them each to their own logical channel. Together with NASDAQ, the subscriber assigns a logical channel number from 1 to 63 to each of the users or device locations that the subscriber will be submitting and receiving CTCI messages on behalf of.

Use of a logical channel is up to the subscriber. A logical channel may be used for sending-only, receiving-only or both. This is solely under control of the subscriber.

Please note that a subscriber may establish multiple TCP sessions with NASDAQ over a single line if they choose to use Network Address Translation (NAT). NASDAQ will assign a unique Well Known Port for each session.

Testing

The Customer Subscriber Test System will be available, but the subscriber will have to connect to a different IP Address and Well Known Port from production. The subscriber should contact NASDAQ to obtain an IP Address and Well Known Port to connect to for testing. This means the subscriber must maintain the ability to dynamically connect to different sockets.

Establishing a TCP/IP Connection

The client (the subscriber) establishes a TCP/IP connection with the server (NASDAQ) by connecting to an IP Address and Well Known Port provided by NASDAQ, from the IP Address that the subscriber told NASDAQ they would be connecting from.

Note: The NASDAQ server follows the *Berkley Model* for establishing a socket connection.

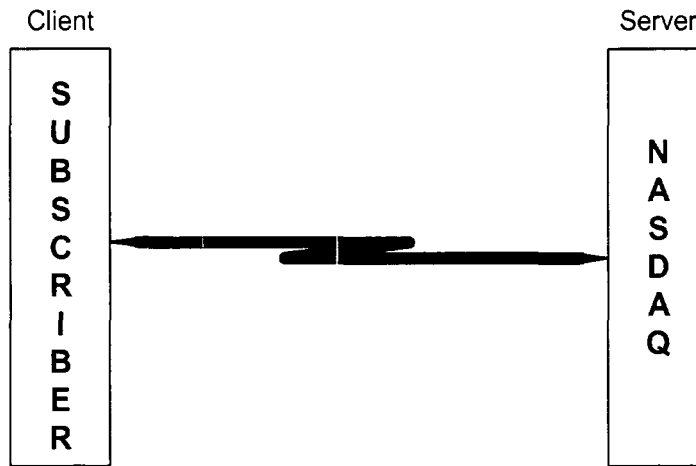
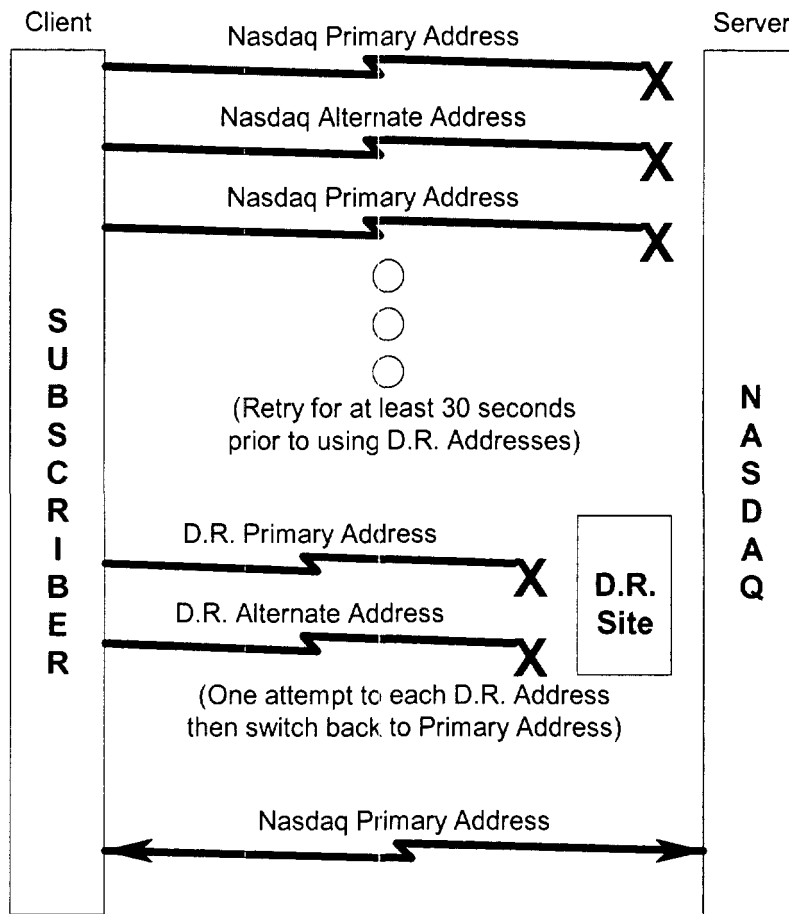


Figure Appendix A- 1 Client-Server TCP/IP Connection

Retrying failed connection attempts

The initial attempt to establish a TCP/IP connection should be to the NASDAQ Primary Address. If this attempt fails, the subscriber should delay briefly (3 seconds is recommended) and then try the NASDAQ Alternate Address. Subsequent attempts should alternate between the Primary and Alternate addresses until at least 30 seconds have elapsed. At that point the subscriber should make one attempt using the Disaster Recovery Primary Address, followed by one attempt to the Disaster Recovery Alternate Address. If a session still cannot be established, the entire cycle should begin again, starting with the NASDAQ Primary Address.



X = Connection Refused or Timedout

Figure Appendix A- 2 Connection Attempts

CTCI TCP/IP Message Format

The CTCI TCP/IP Message is used for sending and receiving CTCI messages, as well as session management control messages. The CTCI TCP/IP Message consists of a message "envelope" and the CTCI or control message data.

When the CTCI TCP/IP Message contains CTCI message data it is referred to as a CTCI message, and when it contains a control message it is referred to by the name of the control message (Logon, Heartbeat Query, etc.). The format of the CTCI TCP/IP Message is as follows:

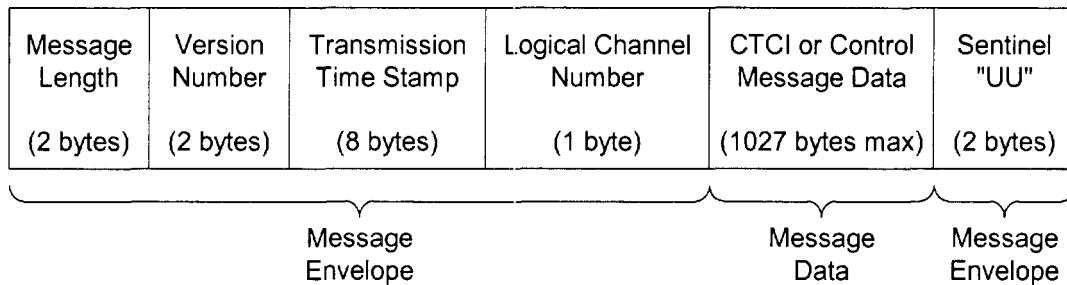


Figure Appendix A- 3 CTCI TCP/IP Message Format

The *Message Length* is a binary field that contains the total length (bytes) of the CTCI TCP/IP Message including the Message Length field at the beginning and the Sentinel field at the end. It is an unsigned integer in network byte order (NBO). Network byte order (NBO), also known as "big endian," is one standard form for transmitting binary values (including integers) in a network message. Since it is used in all TCP/IP headers uniformly, without regard to originating or receiving platform, it is also adopted for use in the CTCI TCP/IP message protocol. Technically, the most arithmetically significant bit of each byte is transmitted first, followed in order of descending significance by the remaining bits; the most significant byte of each multi-byte binary field is transmitted first, followed in order of descending significance by the remaining bytes. If a 32-bit number is to be transmitted, and the bits are numbered 0-31 in order, left to right, where the 0th bit represents 2³¹, and the 31st bit represents the least significant binary digit, i.e., 0 or 1.

Currently, the largest message that can be sent is 1042 bytes. The Message Length field is the "sentinel boundary" of the message. Data flow must begin on a sentinel boundary whenever a connection is established.

The *Version Number* contains a two-character ASCII string. The first character contains the integer portion of the version number and the second character contains the decimal portion of the version number. This is version 1.0 of the interface, so the value in the first byte will be one and the value in the second byte will be zero.

The *Transmission Time Stamp* is an ASCII numeric field containing the time the CTCI TCP/IP Message was transmitted in HHMMSSCC (see Glossary) format.

The *Logical Channel Number* is a binary field that contains a value from zero through 63. If the logical channel number is zero, the CTCI TCP/IP Message is a control message. If the logical channel number is one through 63, the message is a CTCI message, and the logical channel number indicates which user or device location that the CTCI message belongs to.

CTCI or Control Message Data contains the CTCI or control message data. When the logical channel number is one through 63 it contains CTCI message data. When the

logical channel number is zero, CTCI or Control Message Data contains the fields of one of the control messages described in the following pages.

The *Sentinel* is an ASCII field that always contains a constant of "UU".

CTCI TCP/IP Session Management

The control messages – Logon, Logon Response, Heartbeat Query, Heartbeat Response, Flow Control, Logical Channel State Query, and Logical Channel State Response – are used for session management and will be sent over logical channel zero exclusively. The format, content, and further details about how each control message should be used is described in the pages that follow the session management discussion.

Once a socket connection is established, the very first thing the client must do is send a Logon control message to the server. The Logon Identifier field tells the server who the client is, the Logical Channel State fields tell the server on which logical channels the client is ready to receive CTCI messages. If the Logon fails, NASDAQ will break the connection. If the Logon is successful the server will send a Logon Response control message back to the client.

On the Logon Response control message the Logical Channel State fields tell the client on which logical channels the server is ready to receive CTCI messages. The client must not send CTCI messages to the server over any logical channel that is in not in a "ready to receive" state. If a logical channel is not in a "ready to receive" state, and the client sends CTCI messages over it to the server, the messages will be discarded.

Note: It is not necessary to verify that logical channel zero is ready to receive. This logical channel must always be in a "ready to receive" state, as there must always be a dedicated path open for control message exchange.

The client can now send CTCI messages over any logical channel that the server has indicated is ready to receive. If the client has no CTCI or control messages to be sent over any logical channel on a connection, or there are no logical channels (1-63) that server is ready to receive them on, the client must send a Heartbeat Query control message on logical channel zero every 10 seconds.

For logical channels that the server has indicated are not ready to receive, the client must wait until the server changes the logical channel state to ready to receive. The server will do this by sending the client a Flow Control message on logical channel zero.

In the event that the volume of CTCI message traffic over a logical channel becomes too much for a message receiver (client or server) to buffer and process, the message receiver can instruct the sender to suspend transmission on the logical channel by sending a Flow Control control message that places the logical channel in a "not ready to receive" state. When the receiver is ready to resume receiving messages on the logical channel again, the receiver sends a Flow Control control message that returns the logical channel to a "ready to receive" state.

At any time during the session, the client (or server) may request the state of a logical channel by sending a Logical Channel State Query Request to the server (or

client). The server (or client) must respond with a Logical Channel State Query Response that informs the receiver whether the logical channel is in a "ready to receive", "not ready to receive" or "not configured" state.

The last two bytes of every CTCI TCP/IP Message received should always be checked for the sentinel character string of "UU". If the last two bytes are not equal to the sentinel, the TCP/IP connection is considered no longer reliable and should be terminated.

Control Messages

Logon and Logon Response

Once a socket connection is established, the client must first send a Logon control message to the server.

If the server does not recognize the Logon Identifier as being associated with the IP Address the client has connected from or does not recognize the Logon Identifier as being associated the IP Address and Well Known Port the client is connected to, it will terminate the connection. If the Logon is successful a Logon Response control message will be returned.

Here is an example of a *Logon* control message sent on logical channel zero at 9:30 a.m.:

Message Length (2 bytes) Value: 92	Version Number (2 bytes) Value: 10	Transmission Time Stamp (8 bytes) Value: 09300000	Logical Channel Number (1 byte) Value: zero	Control Message Data (77 bytes)	Sentinel (2 bytes) Value: UU			
				<table border="1"> <tr> <td>Control Message Type (3 bytes) Value: LGQ</td> <td>Logon Identifier (10 bytes) Value: ABCD</td> <td>Logical Channel States (64 bytes) Values: 1,2,1,zero,zero...</td> </tr> </table>		Control Message Type (3 bytes) Value: LGQ	Logon Identifier (10 bytes) Value: ABCD	Logical Channel States (64 bytes) Values: 1,2,1,zero,zero...
Control Message Type (3 bytes) Value: LGQ	Logon Identifier (10 bytes) Value: ABCD	Logical Channel States (64 bytes) Values: 1,2,1,zero,zero...						

Figure Appendix A- 4 Logon control message, channel zero, 9:30 a.m.

In this example, the *Logical Channel Number* contains a value of zero, indicating the message is a control message.

The *Control Message Type* is an ASCII field that appears in every control message that indicates which control message is being sent. In this case "LGQ" represents Logon.

The *Logon Identifier* field is an ASCII field that must contain the logon identifier assigned during setup for use with the IP Address and Well Known Port. The value ABCD is shown just as an example.

In the *Logical Channel States* field, each byte contains a binary value that represents the state of a logical channel. The first byte contains the state of logical channel zero, the second the state of logical channel one, the third the state of logical channel three, up to the 64th byte that contains the state of logical channel 63. If the logical channel is ready to receive the value will be one. If it is not ready to receive the value will be 2. If the logical channel was not configured during Setup, the value will be zero.

In this example the value of the state of logical channel zero and two is one. The value of the state of logical channel one is two. The value of the state of logical channels three through 63 is zero. This means the client is ready to receive control messages on logical channel zero (always the case), not ready to receive CTCI messages on logical channel one, ready to receive CTCI messages on logical channel two, and the remaining logical channels are not configured.

Here is an example of a *Logon Response* control message sent on logical channel zero at 2/100 of a second past 9:30 a.m.:

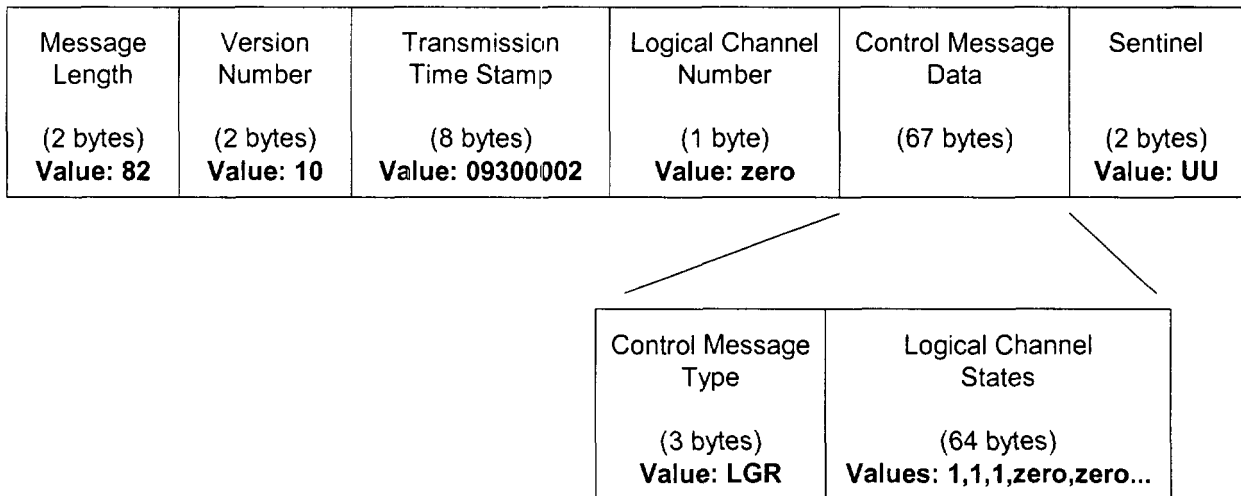


Figure Appendix A- 5 Logon Response control message

In this example, the *Logical Channel Number* contains a value of zero, indicating the message is a control message.

The *Control Message Type* is an ASCII field that appears in every control message that indicates which control message is being sent. In this case "LGR" represents Logon Response.

In the *Logical Channel States* field, each byte contains a binary value that represents the state of a logical channel. The first byte contains the state of logical channel zero, the second the state of logical channel one, the third the state of logical channel three, up to the 64th byte that contains the state of logical channel 63. If the

logical channel is ready to receive the value will be one. If it is not ready to receive the value will be 2. If the logical channel was not configured during Setup, the value will be zero.

In this example the value of the state of logical channel zero is one. The value of the state of logical channel one and two is one. The value of the state of logical channels three through 63 is zero. This means the server is ready to receive control messages on logical channel zero (always the case) and CTCI messages on logical channels one and two. The remaining logical channels are not configured.

Heartbeat Query and Response

The integrity of the data transfer connection must be constantly checked with the periodic exchange of client-issued Heartbeat Query and server-issued Heartbeat Response control messages.

If there are no other messages to be sent the client must send a Heartbeat Query every 10 seconds. The server does not require heartbeat queries during the 10-second interval if any properly formatted message has been received within the last 10 seconds, but will terminate the connection if no message is received for the duration of two, 10-second intervals.

Here is an example of a *Heartbeat Query* control message sent on logical channel zero at 2 seconds past 9:30 a.m.:

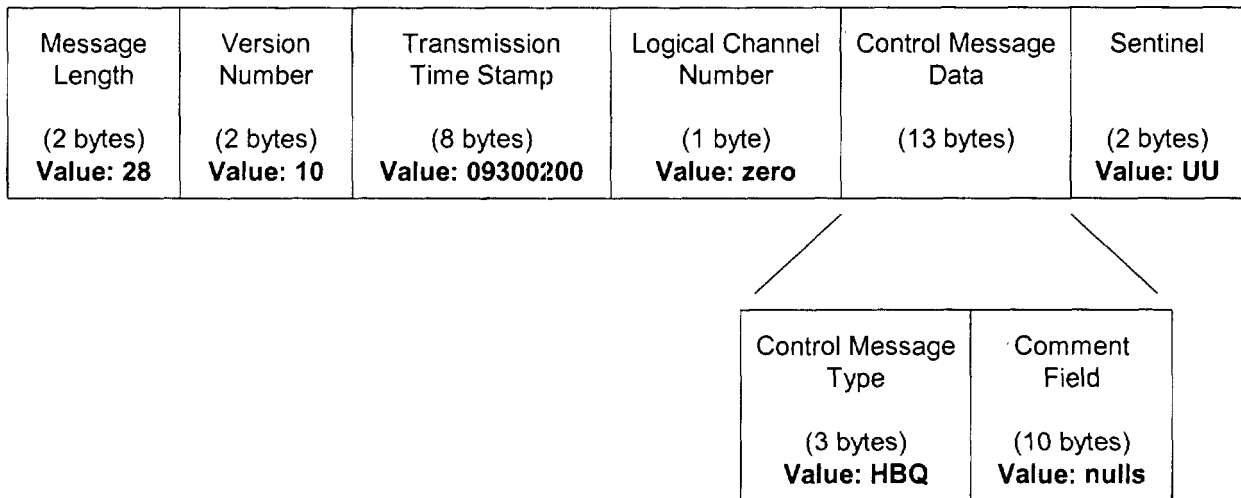


Figure Appendix A- 6 Heartbeat Query control message

In this example, the *Logical Channel Number* contains a value of zero, indicating the message is a control message.

The *Control Message Type* is an ASCII field that appears in every control message that indicates which control message is being sent. In this case "HBQ" represents Heartbeat Query.

The *Comment* field is an ASCII field that the client can use. Any data in it will be echoed back in the *Comment* field of the Heartbeat Response. The complete ASCII character set can be used. If the field is not used, it should be filled with ASCII nulls (binary zeros). In this example, there is no data in the *Comment* field, so it is filled with nulls.

Here is an example of a *Heartbeat Response* control message sent on logical channel zero at 2 and 2/100 seconds past 9:36 a.m.:

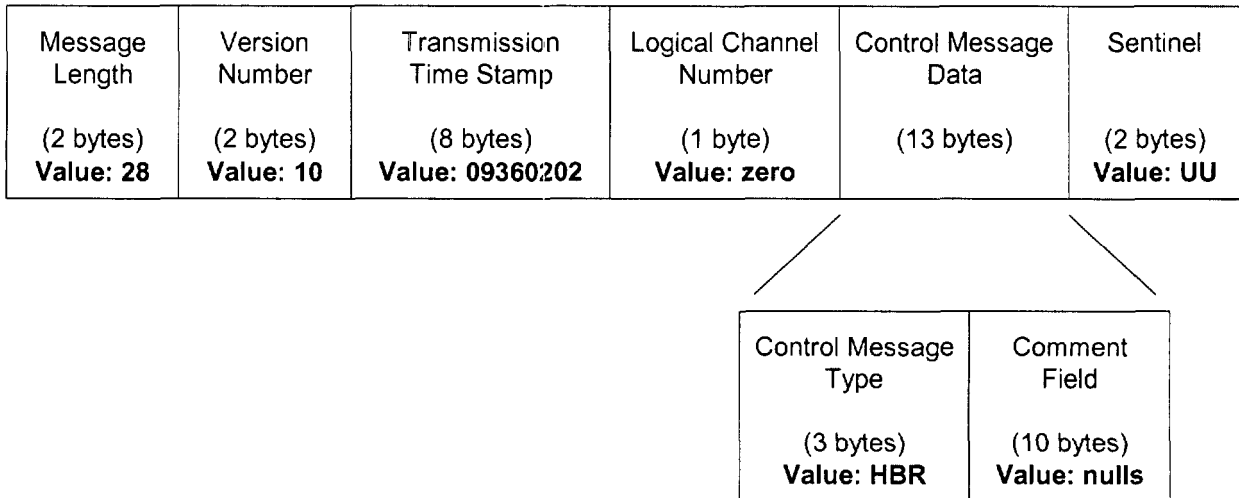


Figure Appendix A- 7 Heartbeat Response control message

In this example, the *Logical Channel Number* contains a value of zero, indicating the message is a control message.

The *Control Message Type* is an ASCII field that appears in every control message that indicates which control message is being sent. In this case "HBR" represents Heartbeat Response.

The *Comment* field is an ASCII field that contains the data sent by the client in the *Comment* field of the Heartbeat Query. In this example the field contains nulls, echoing this area of the input message.

Flow Control

In the event that the volume of CTCI message traffic over a logical channel becomes too much for a message receiver (client or server) to buffer and process, the message receiver can instruct the sender to suspend transmission on the logical channel by sending a Flow Control message that places the logical channel in a "not ready to receive" state. When the receiver is ready to resume receiving messages on the logical channel again, the receiver sends a Flow Control message that returns the logical channel to a "ready to receive" state.

Note: Flow control of logical channel zero is not allowed, as there must always be a dedicated path open for control message exchange. Client processing of flow control messages from the NASDAQ server is mandatory. It is not mandatory, but strongly

advised, that the client be designed with a mechanism to initiate flow control commands. Under no circumstance should the client ever stop reading the connection with a NASDAQ server while at the same time continuing to transmit data to the NASDAQ server.

Here is an example of a *Flow Control* message sent on logical channel zero at 1:30 p.m. that places logical channel one in a "not ready to receive" state:

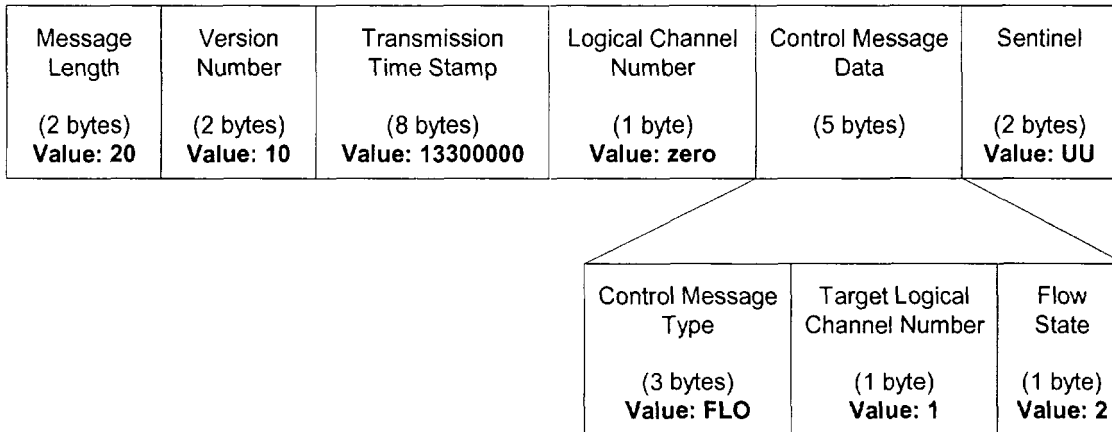


Figure Appendix A- 8 Flow Control message

In this example, the *Logical Channel Number* contains a value of zero, indicating the message is a control message.

The *Control Message Type* is an ASCII field that appears in every control message that indicates which control message is being sent. In this case "FLO" represents Flow Control.

The *Target Logical Channel Number* is a binary field that contains a value from one through 63 and indicates which logical channel should be affected. In this example, logical channel one is being affected.

The *Flow State* field is a binary field that changes the state of a logical channel to ready to receive or not ready to receive CTCI messages. A value of one changes the state to ready to receive. A value of two changes the state to not ready to receive. In this case the value is two, changing the state of the logical channel to "not ready to receive" CTCI messages.

Logical Channel State Query and Response

The client or server can request the state of a particular logical channel by sending a Logical Channel State Query control message over logical channel zero. A Logical Channel State Response must be sent back by the query recipient.

Here is an example of a *Logical Channel State Query* control message requesting the state of logical channel one, sent on logical channel zero at 23 and 85/100 seconds past 1:45 p.m.:

Message Length	Version Number	Transmission Time Stamp	Logical Channel Number	Control Message Data	Sentinel
(2 bytes) Value: 28	(2 bytes) Value: 10	(8 bytes) Value: 13452385	(1 byte) Value: zero	(13 bytes)	(2 bytes) Value: UU

Control Message Type	Target Logical Channel Number	Unused	Comment
(3 bytes) Value: LCQ	(1 byte) Value: 1	(1 byte) Value: nulls	(8 bytes) Value: nulls

Figure Appendix A- 9 Logical Channel State Query control message

In this example, the *Logical Channel Number* contains a value of zero, indicating the message is a control message.

The *Control Message Type* is an ASCII field that appears in every control message that indicates which control message is being sent. In this case "LCQ" represents Logical Channel State Query.

The *Target Logical Channel Number* is a binary field that contains a value from one through 63 and indicates for which logical channel the state is being requested. In this example the state of logical channel one is being requested.

The *Unused* field is an ASCII field that should always be filled with ASCII nulls (binary zeros).

The *Comment* field is an ASCII field that the message initiator can use. Any data present must be echoed back in the Comment field of the Logical Channel State Response. The complete ASCII character set can be used. If the field is not used, it should be filled with ASCII nulls (binary zeros).

Here is an example of a *Logical Channel State Response* control message returning the state of logical channel one, sent on logical channel zero at 24 seconds past 1:45 p.m.:

Message Length (2 bytes) Value: 28	Version Number (2 bytes) Value: 10	Transmission Time Stamp (8 bytes) Value: 13452400	Logical Channel Number (1 byte) Value: zero	Control Message Data (13 bytes)	Sentinel (2 bytes) Value: UU
--	--	---	---	------------------------------------	------------------------------------

Control Message Type (3 bytes) Value: LCR	Target Logical Channel Number (1 byte) Value: 1	Logical Channel State (1 byte) Value: 2	Comment (8 bytes) Value: nulls
---	---	---	--------------------------------------

Figure Appendix A- 10 Logical Channel State Response control message

In this example, the *Logical Channel Number* contains a value of zero, indicating the message is a control message.

The *Control Message Type* is an ASCII field that appears in every control message that indicates which control message is being sent. In this case "LCR" represents Logical Channel State Response.

The *Target Logical Channel Number* is a binary field that contains a value from one through 63 and indicates for which logical channel the state is being reported. In this example, the state of logical channel one is being reported.

The *Logical Channel State* is a binary field that contains a value that represents the state of the logical channel. If the logical channel is ready to receive, the value will be one. If it is not ready to receive, the value will be 2. If the logical channel was not configured during Setup, the value will be zero. In this example the value is two, indicating logical channel is "not ready to receive" CTCI messages.

The *Comment* field is an ASCII field that must always contain the data sent in the Comment field of the Logical Channel State Query. In this example the field contains nulls because that's what was sent in the query.

Sending a CTCI Message

The client should format a CTCI message as usual (refer to *Subscriber Requirements for Computer to Computer Interface Utilizing the NASDMS Switch*), but to deliver it over a TCP/IP connection it must be imbedded in a CTCI TCP/IP Message "envelope."

Here is an example of a CTCI message 100 bytes long sent on logical channel 31 at 9:31 a.m.:

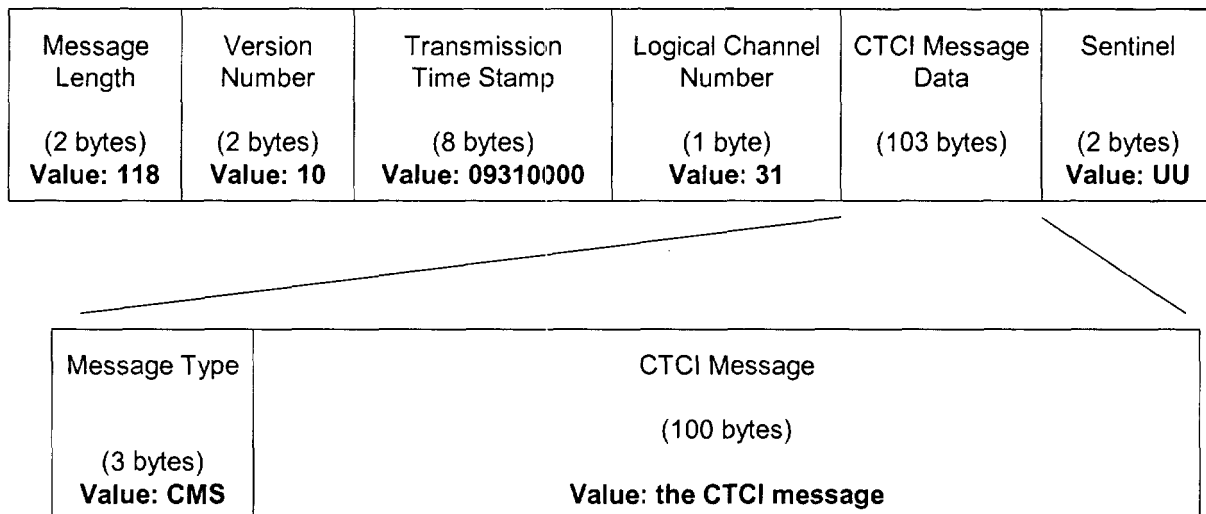


Figure Appendix A- 11 CTCI message

In this example, the *Logical Channel Number* contains a value of 31, in the range of one through 63, indicating that the message is a CTCI message.

The *Message Type* field is an ASCII field that should always have the value "CMS".

CTCI Message is the actual CTCI message itself, beginning with line zero, line two, etc., as described in *Subscriber Requirements for Computer to Computer Interface Utilizing the NASDMS Switch*. Do not include any control characters other than those specific the composition of the CTCI message (i.e. carriage return and line feed).

Receiving a CTCI Message

NASDAQ will send CTCI messages to subscribers using the same format as described above in Sending a CTCI Message. The *CTCI Message* field will include any user-specified header line(s) followed by line zero, line two, etc., through any user-specified trailer line(s).

CTCI Message Sequence Verification

It is the responsibility of the client to detect and recover lost data by implementing CTCI message sequence number checking and message retrieval processing. It is also the responsibility of the client to respond to gap fill requests from the server for lost or discarded client to server messages. Refer to *Subscriber Requirements for Computer to Computer Interface Utilizing the NASDMS Switch* for a detailed description of these procedures. Message sequence numbers continue to be the last part of the *CTCI Message* in *CTCI Message Data*.

Glossary

Client: The Subscriber side of the TCP/IP connection.

Connection: Transmission path (including all equipment) between a sender and receiver, ready and able to exchange data.

CTCI: Computer to Computer Interface; the protocol, message standards and underlying physical structure which allows subscribers to send and receive NASDAQ transactions from/to a subscriber host computer.

Flow Control: Mechanism by which the recipient of incoming data notifies the sender to stop or start transmitting data over a specified logical channel.

Flow State: The flow state changes the state of a logical channel to ready to receive or not ready to receive CTCI messages. A value of one changes the state to ready to receive (RR - Receiver Ready to receive). A value of two changes the state to not ready to receive (RNR - Receiver Not Ready).

HHMMSSCC: Method of formatting the time day in hours, minutes, seconds and hundredths of seconds. HH = Hours in military time (00-23), MM = Minutes (00-59), SS = Seconds (00-59) CC = hundredths of seconds (00-99). For example: 9AM is 09000000, 1:35PM is 13350000, 35 and 98/100 seconds past midnight is 00003598.

IP Address: The IP Address together with the Well Known Port, is used to establish a connection to NASDAQ in order to send and receive CTCI TCP/IP Messages. Will be assigned by NASDAQ.

Logical Channel: Over one TCP/IP connection, a subscriber can submit and receive CTCI messages on behalf of 63 different users or device locations. Each logical channel represents one user or device location. Logical channel zero is reserved for session management control messages.

Logical Channel Number: Number from zero through 63 assigned to a logical channel to uniquely identify it.

Logical Channel State: A logical channel can be in one of three states:

Ready to receive CTCI messages (RR - Receiver Ready to receive).

Not ready to receive CTCI messages (RNR - Receiver Not Ready).

Not assigned a user or device location during Setup (NC - Not Configured).

Nulls: The value of the lowest occurrence in the ASCII character set (Binary zero).

Session: Synonymous with Connection.

Sentinel: A character string constant used to verify that a complete CTCI TCP/IP Message has been received. The last two characters of every CTCI TCP/IP Message must be "UU".

Sentinel Boundary: Term used to indicate that the next data to be sent (or received) on a connection must begin with the Message Length field of a CTCI TCP/IP

Message. Data flow must begin on a sentinel boundary whenever a connection is established.

Server: The NASDAQ side of the TCP/IP connection.

TCP/IP: Transmission Control Process/Internet Protocol, a method that allows communications to take place between heterogeneous systems in a multinetwork environment (Internet).

Well Known Port: A signed 16 bit binary value combined with an IP Address to form a socket (connection) name. Will be assigned by NASDAQ.

7 Appendix B: IBM WebSphere MQ

The *CTCI WebSphere MQ V1.1 Subscriber Intercommunication Specification* describes how you can submit and receive CTCI messages using the NASDMS (Switch) through IBM WebSphere MQ Middleware using WebSphere MQ API calls over TCP/IP protocol. The document also describes the required CTCI-MQ intercommunication specifications. The CTCI-MQ Interface uses the WebSphere MQ Distributed Queuing technique.

To access the document, select this link:

<http://www.nasdaqtrader.com/trader/tradingservices/specsinstallguides/CTCIMQSpecs.pdf>