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1-7-09



UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-3010

DIVISION OF
CORPORATION FINANCE



09035372

William H. Aaronson
Davis Polk & Wardwell
450 Lexington Avenue
New York, NY 10017

Received SEC
MAR 04 2009
Washington, DC 20549

March 4, 2009

Re: Comcast Corporation
Incoming letter dated January 7, 2009

Act: 1934
Section: _____
Rule: 14a-8
Public
Availability: 3-4-09

Dear Mr. Aaronson:

This is in response to your letters dated January 7, 2009, January 15, 2009 and February 5, 2009 concerning the shareholder proposal submitted to Comcast by the New York City Employees' Retirement System, the New York City Police Pension Fund, the New York City Fire Department Pension Fund, the New York City Board of Education Retirement System and Trillium Asset Management Corporation on behalf of Louise Rice. We also have received letters on the proponents' behalf dated January 29, 2009 and February 9, 2009. Our response is attached to the enclosed photocopy of your correspondence. By doing this, we avoid having to recite or summarize the facts set forth in the correspondence. Copies of all of the correspondence also will be provided to the proponents.

In connection with this matter, your attention is directed to the enclosure, which sets forth a brief discussion of the Division's informal procedures regarding shareholder proposals.

Sincerely,

Heather L. Maples
Senior Special Counsel

Enclosures

Comcast Corporation
Incoming letter dated January 7, 2009
Page 2 of 2

cc: Deirdre Kessler
Associate General Counsel
The City of New York
Office of the Comptroller
1 Centre Street
New York, NY 10007-2341

Jonas Kron
Senior Social Research Analyst
Trillium Asset Management Corporation
711 Atlantic Avenue
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March 4, 2009

**Response of the Office of Chief Counsel
Division of Corporation Finance**

Re: Comcast Corporation
Incoming letter dated January 7, 2009

The proposal requests the board to issue a report examining the effects of Comcast's internet network management practices.

There appears to be some basis for your view that Comcast may exclude the proposal under rule 14a-8(i)(7), as relating to Comcast's ordinary business operations (i.e., procedures for protecting user information). Accordingly, we will not recommend enforcement action to the Commission if Comcast omits the proposal from its proxy materials in reliance on rule 14a-8(i)(7). In reaching this position, we have not found it necessary to address the alternative basis for omission upon which Comcast relies.

Sincerely,

Philip Rothenberg
Attorney-Adviser

**DIVISION OF CORPORATION FINANCE
INFORMAL PROCEDURES REGARDING SHAREHOLDER PROPOSALS**

The Division of Corporation Finance believes that its responsibility with respect to matters arising under Rule 14a-8 [17 CFR 240.14a-8], as with other matters under the proxy rules, is to aid those who must comply with the rule by offering informal advice and suggestions and to determine, initially, whether or not it may be appropriate in a particular matter to recommend enforcement action to the Commission. In connection with a shareholder proposal under Rule 14a-8, the Division's staff considers the information furnished to it by the Company in support of its intention to exclude the proposals from the Company's proxy materials, as well as any information furnished by the proponent or the proponent's representative.

Although Rule 14a-8(k) does not require any communications from shareholders to the Commission's staff, the staff will always consider information concerning alleged violations of the statutes administered by the Commission, including argument as to whether or not activities proposed to be taken would be violative of the statute or rule involved. The receipt by the staff of such information, however, should not be construed as changing the staff's informal procedures and proxy review into a formal or adversary procedure.

It is important to note that the staff's and Commission's no-action responses to Rule 14a-8(j) submissions reflect only informal views. The determinations reached in these no-action letters do not and cannot adjudicate the merits of a company's position with respect to the proposal. Only a court such as a U.S. District Court can decide whether a company is obligated to include shareholder proposals in its proxy materials. Accordingly a discretionary determination not to recommend or take Commission enforcement action, does not preclude a proponent, or any shareholder of a company, from pursuing any rights he or she may have against the company in court, should the management omit the proposal from the company's proxy material.



Deirdre Kessler
Associate General Counsel

THE CITY OF NEW YORK
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February 9, 2009

BY EMAIL AND EXPRESS MAIL

Office of the Chief Counsel
Division of Corporation Finance
Securities and Exchange Commission
100 F Street, N.E.
Washington, D.C. 20549

Re: Comcast Corporation;
Shareholder Proposal submitted by the New York City Pension Funds

To Whom It May Concern:

I write on behalf of the New York City Pension Funds (the "Funds") in response to the February 5, 2009 letter (the "February 5 Letter") that Comcast Corporation ("Comcast" or the "Company") submitted in further support of its January 15, 2009 no-action request.

The Company effectively concedes that its Board did not prepare any of the materials that Comcast cited in support of its contention that it has substantially implemented the Proposal's request for a Board report: "... Comcast's Board was (and remains) aware of and informed about the Company's network management practices ... [and subsequent changes]" (February 5 Letter at p. 2; emphasis added). Thus, under Rule 14a-8(i)(10), Comcast has not implemented the Proposal - which calls for the Board's report on the issues.

On its Rule 14a-8(i)(7) point, the Company now cites *Verizon Communications Inc.* (February 22, 2007), which it had chosen not to cite in its initial letter. The *Verizon* no-action letter, however, adds nothing significant to Comcast's ordinary business argument, as it dealt only with a proposal about disclosure of customer records to United States government agencies or private investigators. In contrast, the Funds' Proposal does not focus on legal compliance, but on Internet freedom and privacy.

The Funds reiterate their request that Comcast's request for "no-action" relief be denied.

Very truly yours,

Deirdre Kessler
Deirdre Kessler

Cc: William H. Aaronson, Esq.

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WILLIAM H. AARONSON
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February 5, 2009

Re: *Response to the January 29, 2009 letter submitted by the Comptroller of the City of New York, on behalf of several funds*

Office of Chief Counsel
Division of Corporation Finance
Securities and Exchange Commission
100 F Street, N.E.
Washington, D.C. 20549
via email: shareholderproposals@sec.gov

Ladies and Gentlemen:

On behalf of our client, Comcast Corporation (“Comcast” or the “Company”), we write to supplement our amended and restated letter of January 15, 2009 (the “Letter”), relating to the proposal (the “Proposal”) submitted by the Office of the Comptroller of the City of New York, on behalf of several funds (the “NYC Funds”), and Trillium Asset Management Corporation, on behalf of Ms. Louise Rice, as co-filers of the Proposal. In the Letter, we notified the Securities and Exchange Commission (the “Commission”) of the Company’s intention to omit the Proposal and related supporting statement from the Company’s proxy statement and form of proxy for the Company’s 2009 Annual Meeting of Shareholders (collectively, the “2009 Proxy Materials”) on the grounds set forth in Rule 14a-8(i)(10) and Rule 14a-8(i)(7) and requested that the staff of the Division of Corporation Finance (the “Staff”) confirm that it will not recommend any enforcement action to the Commission if Comcast omits the Proposal and related supporting statement from its 2009 Proxy Materials. In response to the Letter, the NYC Funds submitted a letter dated January 29, 2009 to the Commission (the “Response Letter”). We now submit this letter in reply to the Response Letter.

Omission on the basis of Rule 14a-8(i)(10): Substantial Implementation

The NYC Funds state in the Response Letter that Comcast has not substantially implemented the Proposal for a number of reasons, including that (i) certain of the reports posted on Comcast’s Web site were created and posted in conjunction with a proceeding

initiated by the Federal Communications Commission (“FCC”), (ii) the information is not presented as one report and (iii) information provided through Comcast’s Web site is “not the product of a board examination of the specific issues raised by the Proposal.” As noted in the Letter, Comcast has filed and posted on its Web site extremely detailed and forthcoming reports detailing its past and present network management practices and has undertaken to continue to provide updated information regarding changes in this area. While a portion of this information was indeed created and posted in conjunction with the FCC proceeding, this is no more relevant to the substantial implementation determination than Comcast’s prior network management practices. In addition, contrary to the assertions in the Response Letter, Comcast’s network management reports are not “scattered” on Comcast’s Web site, but rather are directly accessible through Comcast’s single Network Management information page, where the reports are clearly grouped together. Finally, Comcast’s Board was (and remains) aware of and informed about the Company’s network management practices, its decision voluntarily to move to a new network management technique, and the FCC process leading up to its order and the Company’s response to it.

In the Response Letter, the NYC Funds are critical of Comcast’s disclosure of its network management practices in the context of their privacy concerns. For clarification, Comcast notes that the various documents previously cited in the Letter confirm that Comcast’s network management practices operate in full compliance with Comcast’s privacy policy, which is easily accessible online. Comcast’s privacy policy and customer privacy notice disclose all relevant facts regarding customer privacy, including any privacy implications related to network management.

Omission on the basis of Rule 14a-8(i)(7): Management Functions

The NYC Funds state in the Response Letter that the Proposal “transcends the ordinary business of the Company by focusing on a significant social policy issue.” Comcast emphasizes that regardless of whether the Proposal touches upon a significant social policy issue, the Proposal is excludable pursuant to Rule 14a-8(i)(7) because it distinctly addresses ordinary business matters. Exchange Act Release No. 20091 (Aug. 16, 1983) clearly states that when a proposal seeks a report, “the Staff will consider whether the subject matter of the special report . . . involves a matter of ordinary business; where it does, the proposal will be excludable under Rule 14a-8(c)(7).” As previously articulated, Comcast’s network management practices are clearly within the realm of Comcast’s ordinary business operations, and therefore, a report describing such practices, even if requested in the context of social policy issues, is excludable pursuant to Rule 14a-8(i)(7).

The NYC Funds rely on the Staff’s denial of certain no-action requests made by Cisco and Yahoo! for the principle that privacy and censorship proposals like the Proposal are not excludable on the basis of relating to day-to-day operations. However, the Staff recently granted a no-action request regarding a shareholder proposal that requested a report about the policy issues surrounding the disclosure of customer records and communications content to government and non-government agencies, particularly with respect to privacy concerns. See *Verizon Communications Inc.* (February 22, 2007), stating that the proposal related to Verizon’s “ordinary business operations (i.e., procedures for protecting customer information).” It is clear that the Proposal raises issues related to Comcast’s ordinary business

February 5, 2009

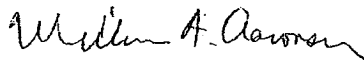
operations, particularly its network management practices, and therefore, despite the possible social policies issues raised, the Proposal should be excludable under Rule 14a-8(i)(7).

Conclusion

Comcast hereby restates that it believes that the Proposal may be properly excluded from the 2009 Proxy Materials pursuant to Rule 14a-8(i)(10) because the Proposal has been substantially implemented. Comcast also restates that it believes that the Proposal may be properly excluded from the 2009 Proxy Materials pursuant to Rule 14a-8(i)(7) because Comcast's network management practices fall squarely within the scope of Comcast's ordinary business operations.

We would be happy to provide you with any additional information and answer any questions that you may have regarding this subject. Should you disagree with the conclusions set forth herein, we respectfully request the opportunity to confer with you prior to the determination of the Staff's final position. Please do not hesitate to call me at (212) 450-4397 or Arthur R. Block, the Company's Senior Vice President, General Counsel and Secretary, at (215) 286-7564, if we may be of any further assistance in this matter.

Very truly yours,



William H. Aaronson

cc: The Office of the Comptroller of the City of New York
Trillium Asset Management Corporation
Arthur R. Block



Deirdre Kessler
Associate General Counsel

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January 29, 2009

BY EMAIL AND EXPRESS MAIL

Office of the Chief Counsel
Division of Corporation Finance
Securities and Exchange Commission
100 F Street, N.E.
Washington, D.C. 20549

Re: Comcast Corporation;
Shareholder Proposal submitted by the New York City Pension Funds

RECEIVED
2009 FEB -2 PM 3:09
OFFICE OF THE CHIEF COUNSEL
DIVISION OF CORPORATION FINANCE

To Whom It May Concern:

I write on behalf of the New York City Pension Funds (the "Funds" or the "Proponents") in response to the January 15, 2009 letter and supporting materials (the "Company Request Letter") submitted to the Securities and Exchange Commission (the "Commission") by William H. Aaronson of Davis Polk & Wardwell on behalf of Comcast Corporation ("Comcast" or the "Company") which seeks assurance that the Staff (the "Staff") of the Division of Corporation Finance (the "Division") of the Commission will not recommend any enforcement action if the Company excludes from its proxy statement for the 2009 annual meeting the Funds' shareholder proposal (the "Proposal"). The Company bases its request for exclusion on Rules 14a-8(i)(10) and 14a-8(i)(7).

I have reviewed the Proposal, as well as the Company Request Letter (which amends the Company's prior letter of January 7, 2009, to acknowledge the co-filer status of Trillium Asset Management Corporation). Based upon such review and review of Rule 14a-8, it is my opinion that the Proposal must be included in Comcast's 2009 proxy statement because the Proposal: 1) does not seek to "micro-manage" the Company or interfere with the Company's network management practices; 2) transcends the ordinary business of the Company by focusing on a significant social policy issue; and 3) has not been "substantially implemented" in any respect by the Company in its published materials on its Web site. Therefore, the Funds respectfully request that the Commission deny the relief that the Company seeks.

II. THE PROPOSAL

The Proposal begins with a series of Whereas clauses that note the key role of the Internet in modern American society and the important public interests in privacy and freedom of expression that are implicated by Internet usage. The Resolved clause then states:

Therefore, be it resolved, that shareholders request that the Board of Directors prepare a report, excluding proprietary and confidential information, and to be made available to shareholders no later than November 30, 2009, examining the effects of the company's Internet network management practices in the context of the significant public policy concerns regarding the public's expectations of privacy and freedom of expression on the Internet.

III. DISCUSSION

The Company seeks to omit the Proposal under Rules 14a-8(i)(7) (ordinary business exclusion) and 14a-8(i) (10) (proposal substantially implemented). Pursuant to Rule 14a-8(g), the Company bears the burden of proving that these exclusions apply. For the reasons set forth below, the Funds submit that the Company has failed to meet its burden of proving its entitlement to "no-action" relief on either of these grounds.

A. THE PROPOSAL RAISES SIGNIFICANT SOCIAL POLICY CONCERNS AND DOES NOT RELATE TO "ORDINARY BUSINESS" OF THE COMPANY UNDER RULE 14a-8(i)(7).

Comcast's request that the Proposal be excluded under Rule 14a-8(i)(7) rests upon three related arguments: that the Proposal seeks to "micro-manage" the Company and intrudes unduly upon the Company's ordinary business operations; that the Proposal, in focusing on Comcast's network management practices, intrudes upon the Company's ordinary business operations; and that the Proposal relates to complex matters that are central to the day-to-day business of Comcast and therefore best addressed by management. Finally, the Company cites cases that purport to show that the Proposal should be excluded because it calls for a report rather than specific actions. As will be shown below, the Company's arguments fail to provide any valid basis for exclusion.

The Division of Corporate Finance has stated that "ordinary business" cannot be used as a rationale to exclude under Rule 14a-8(i)(7) proposals that relate to matters of substantial public interest. The SEC advised in *Exchange Act Release No. 34-40018* (May 21, 1998) ("*1998 Interpretive Release*") that even proposals relating to daily business matters but "focusing on sufficiently significant social policy issues (e.g., significant discrimination

matters), generally would not be considered to be excludable, because the proposals would transcend the day-to-day business matters and raise policy issues so significant that it would be appropriate for a shareholder vote."

Subsequently, the July 12, 2002 *Staff Legal Bulletin 14A* ("SLB 14A"), which specified that Staff would no longer issue no-action letters for the exclusion of shareholder proposals relating to executive compensation, advised:

The fact that a proposal relates to ordinary business matters does not conclusively establish that a company may exclude the proposal from its proxy materials. As the Commission stated in Exchange Act Release No. 40018, proposals that relate to ordinary business matters but that focus on "sufficiently significant social policy issues . . . would not be considered to be excludable because the proposals would transcend the day-to-day business matters." See Amendments to Rules on Shareholder Proposals, Exchange Act Release No. 40018 (May 21, 1998).

(Footnotes omitted).

The Bulletin then reviewed the SEC's historical position of not permitting exclusion on ordinary business grounds of proposals relating to significant policy issues:

The Commission has previously taken the position that proposals relating to ordinary business matters "but focusing on sufficiently significant social policy issues . . . generally would not be considered to be excludable, because the proposals would transcend the day-to-day business matters and raise policy issues so significant that it would be appropriate for a shareholder vote." The Division has noted many times that the presence of widespread public debate regarding an issue is among the factors to be considered in determining whether proposals concerning that issue "transcend the day-to-day business matters."

Id.

1. **Intense public debate over Internet privacy and freedom shows that the Proposal addresses a significant social policy issue.**

In *SLB 14A*, the Staff noted "that the presence of widespread public debate regarding an issue is among the factors to be considered in determining whether proposals concerning that issue 'transcend the day-to-day business matters.'" As shown in *Yahoo!, Inc.* (April 13, 2007), if the legislative and executive branches of the United States government raise serious public policy concerns with respect to an issue (in the case of *Yahoo!*, the issues of Internet censorship and monitoring by repressive foreign governments), such attention demonstrates the existence of a significant public policy issue that will render a proposal appropriate for shareholder consideration. In the instant case, there is ample

evidence of legislative and executive branch focus and concern relating to Internet privacy and freedom of expression. Recent examples include:

- United States Representative Edward J. Markey (“Congressman Markey”) and 16 congressional co-sponsors introduced H.R. 5353 on February 12, 2008 (the “Online Privacy Bill of Rights”) that concerns the issues identified in the Proposal.
- Hearings were held in 2008 by the House Committee on Energy and Commerce (Subcommittee on Telecommunications and the Internet) on the issue of consumer privacy and new technology called “deep packet inspection” (“DPI”) coming to market through ISPs and their third party providers that facilitates “behavioral targeting” of consumers. (*Business Week*, Congress to Push Web Privacy, August 14, 2008).
- On August 1, 2008, the House Committee on Energy and Commerce sent letters to 33 leading Internet and broadband companies, including Comcast, Google, Microsoft, Qwest, Verizon and others, asking them for information about the extent to which they collect information about consumers’ use of their broadband services or Web sites. (See <http://markey.house.gov/index>.)
- On August 1, 2008, the Federal Communications Commission (“FCC”) adopted a Memorandum Opinion and Order (released on August 20, 2008) that ruled, *inter alia*, that Comcast’s “discriminatory and arbitrary practice [of interfering with connections of peer-to-peer applications] unduly squelches the dynamic benefits of an open and accessible Internet and does not constitute reasonable network management practices.” *In re Formal Complaint of Free Press and Public Knowledge Against Comcast Corporation*, 23 FCC Rcd 13028 (2008) (the “FCC Order”), Introduction, paragraph 1. The FCC noted in its Order that the “**Internet is an unprecedented communications medium...**” and quoted from statutory text in declaring the Internet “offer[s] a forum for a true diversity of political discourse, unique opportunities for cultural development, and myriad avenues for intellectual activity.” *Ibid.*, paragraph 12 (footnotes omitted). (emphasis added.)

In his press release accompanying the letter campaign to the 33 Internet and broadband companies, Congressman Markey, chairman of the House Subcommittee on Telecommunications and the Internet, is quoted as follows: “This information will allow the Congress to gain a more comprehensive understanding of the nature and extent to which user-tracking technologies are being implemented and the impact they could have on consumer privacy and Internet communications generally.” (*Markey Press Release*, August 1, 2009, <http://markey.house.gov/index>.) If legislators and regulators deem the issues of privacy and freedom of expression worthy of the attention indicated above, then surely Comcast’s shareholders should be entitled to vote on a proposal that calls for a comprehensive and comprehensible consideration of such issues by their Board of

Directors in the form of a report.

There has also been an enormous amount of mainstream media and business press coverage of the issue of surveillance, network management and censorship over the last six months, as demonstrated by the list of articles attached as **Exhibit A** to this letter. Recent polling data from the Consumers Union shows extremely high rates of public concern regarding privacy and the Internet (see information posted at www.consumersunion.org/pub/core_telecom_and_utilities/006189.html). News database searches for terms such as "ISP privacy"; "ISP censorship"; "ISP freedom of speech"; and "ISP surveillance" for 2008 result in over 1,000 additional stories. Review of the stories discloses that many of them involve the FCC's investigation of Comcast's network management practices. *

The highly-publicized Comcast case originated in 2007, when widespread press reports indicated problems reported by subscribers of Comcast, "the nation's second largest provider of broadband Internet services...." *FCC Order*, paragraph 6. In response to such reports, the Associated Press conducted its own tests and reported that the tests indicated Comcast "actively interferes with attempts by some of its high-speed Internet subscribers to share files online" via peer-to-peer ("P2P") applications. *FCC Order*, paragraph 7 (quoting Peter Svensson, "Comcast Blocks Some Internet Traffic, AP Testing Shows," *Associated Press*, October 19, 2007). Shortly thereafter, a formal complaint was filed and from November 2007 through January 2008 "over twenty thousand Americans similarly complained of Comcast's blatant and deceptive blocking of peer-to-peer communications." *FCC Order*, paragraph 10 (footnotes and internal quotations omitted).

In concluding that Comcast's actions ran "afoul of federal Internet policy" (*FCC Order*, paragraph 41), the FCC determined that the "P2P" network management practice at issue "is not 'minimally intrusive' [quoting Letter from Comcast's Vice President of Regulatory Affairs, July 10, 2008] but invasive and outright discriminatory." *Id.*, paragraph 42 (footnote omitted). The FCC described the effect of Comcast's network management practice on the public in this way:

In other words, Comcast determines how it will route some connections based not on their destinations but on their contents; in laymen's terms, Comcast opens its customers' mail because it wants to deliver mail not based on the address or type of stamp on the envelope but on the type of letter contained therein....Also, because [of] Comcast's method, ...a customer has no way of knowing when Comcast (rather than its peer) terminates a connection.

Id., paragraph 41.

* The extensive press coverage and controversy surrounding Comcast's practices after they were uncovered by the press and internet users can be found at, *Wall Street Journal Online*, "FCC to Rule Comcast Can't Block Web Videos," July 28, 2008; *New York Times*, "FCC Vote Sets Precedent on Unfettered Web Usage," August 2, 2008; and other citations in **Exhibit A** attached.

Ironically, the Company cites the FCC Order in seeking to support its assertion that anything relating to Comcast's network management practices falls within the scope of the Company's "ordinary business" operations. However, unlawful activities that resulted in a regulatory investigation, formal memorandum and order, Congressional hearings, extensive press coverage and four class actions suits (in California, Illinois, New Jersey and Oregon, respectively; see *The Seattle Times*, August 15, 2008) are hardly routine, ordinary or best relegated to the category of "routine management decisions," as such practices are characterized in the Company Request Letter. To the contrary, the terms of the FCC Order in the Comcast case and the significant Congressional and media attention referred to above and in the attached **Exhibit A** demonstrate that ISP network management practices have a profound impact upon freedom of speech and privacy; are significant social policy issues that are widely debated; are the subject of policy maker interest; and are appropriate subjects of shareholder proposals in general and the Proposal in particular. We respectfully request the Staff concur with this conclusion and find that the Proposal is not excludable under the ordinary business exception.

2. The Proposal does not seek to "micro-manage" the Company and does not interfere with day-to-day business.

The Proponents have not requested the Board to prepare a technical manual or to take actions that would otherwise impinge on day-to-day matters, but rather have framed the Proposal in appropriate terms that call for consideration of the impact of Comcast's network management practices in the context of privacy and freedom of expression. With the Internet increasingly becoming a necessity for ensuring full participation in the economic, social, and political spheres, the impact of network management practices on privacy and freedom of expression clearly transcends day-to-day business operations.

The Company argues that the Proposal is improper because it seeks to govern business conduct that management purportedly is in the best position to address. This argument mischaracterizes privacy and freedom of speech issues as day-to-day matters that are somehow within management's special competence. But if that were somehow true, the SEC made it clear in the 1998 *Interpretive Release* that "proposals relating to such [mundane] matters but focusing on sufficiently significant social policy issues generally would not be considered to be excludable." As demonstrated at length above, the issues of public expectations of privacy and censorship are significant social policy issues that, in the words of the Commission, "transcend the day-to-day business matters and raise policy issues so significant that it would be appropriate for a shareholder vote." *Id.*

There is support in previous Staff letters for the conclusion that proposals with significant public policy concerns will not be rejected as interfering with day-to-day business operations. In *Cisco Systems, Inc.* (Sep. 19, 2002), the Staff rejected a company's argument under Rule 14a-8(i)(7) that a proposal seeking a report about the hardware or software that the company provided to China or other nations to monitor, intercept or block Internet traffic could be excluded because it dealt with the "company's ordinary business operations." Similarly, in *Yahoo!* (April 13, 2007), that

company's argument was rejected where the proposal at issue addressed the same core policy issue as the proposal in *Cisco*, in the context of providing Internet services rather than hardware or software.

These two cases, *Cisco* and *Yahoo!*, demonstrate that Internet privacy and censorship proposals are not excludable on the basis of relating to day-to-day business.

The no-action letters cited by the Company are not pertinent to the Proposal. For example, the two main letters it cites – *Yahoo! Inc.* (April 5, 2007) and *Microsoft Corporation* (September 29, 2006) – granted no-action relief under Rule 14a-8(i)(7) as to two almost identical proposals that were about government Internet regulation, not the public's Internet rights and freedoms. Specifically, both proposals requested a report on the respective company's "rationale for supporting and/or advocating public policy measures" that would "increase government regulation..." (*Yahoo!*) or "result in expanded government regulation of the Internet, particularly concerning 'Net neutrality.'" (*Microsoft*.) These proposals are distinct from the instant Proposal because they clearly called for an evaluation only of possible company support for expanded government regulation of the Internet – a task of regulatory analysis often deemed subject to exclusion under Rule 14a-8(i)(7) by the Staff. *Id.* Likewise, in the *General Electric Company* (January 17, 2006) letter the Company cites, the proponent requested a report on the impact of a flat tax on the company. In contrast, the Proposal does not ask Comcast to evaluate the impact of any legislative or regulatory proposal on the Company, but rather how the Company's practices will impact the public's privacy and freedom of expression.

Finally, the Company Request Letter cites two no-action letters to support its argument that "the Commission has permitted the exclusion of shareholder proposals that seek to require a company to prepare and issue a report pertaining to its otherwise ordinary business operations but involving social policy issues, where such proposals call for reports but not action in furtherance of such social policy issue." Company Request Letter, p. 10. Both letters, *Washington Mutual, Inc.* (March 6, 2002), and *The Mead Corporation* (January 31, 2001), are readily distinguishable from the Proposal because they asked for a report on costs or risks. *Cf.*, *Washington Mutual* (proposal seeking a financial accounting of costs associated with land development projects), and *The Mead Corporation* (proposal seeking report on environmental risks of the company's business). Here, the Proposal seeks a report not on costs or risks, but rather on steps to address the public's rights of privacy and freedom of expression. Indeed, the Staff has declined to permit exclusion under Rule 14a-8(i)(7) of shareholder proposals seeking reports on matters of such significant public concern. *See, e.g., General Electric Co.* (January 28, 2005) (seeking report on investing in Iran); *BJ Services Co.* (December 10, 2003) (seeking report on investing in, and divesting from, Burma); *Cisco Systems, Inc.* (September 19, 2002) (seeking report on hardware or software provided by company to China and other countries to monitor, intercept or block Internet traffic).

For the foregoing reasons, Comcast has failed to meet its burden under Rule 14a-8(i)(7).

B. THE COMPANY HAS NOT SUBSTANTIALLY IMPLEMENTED THE PROPOSAL UNDER THE STANDARDS OF RULE 14a-8(i)(10).

The Company claims that the Proposal's request has been substantially implemented through the information published on its Web site. However, based on a review of the Web site references provided in the Company Request Letter and the applicable no-action letters issued by the Staff, it is clear that the Company has not met the Rule 14a-8(i)(10) standard. The scattered and largely irrelevant Comcast web pages cited do not examine privacy and freedom of speech issues, but provide only brief and conclusory references to those significant issues.

In sharp contrast to the Funds' requested examination of free speech and privacy issues, the Company's seven cited Exhibits and multiple Web pages (Company Request Letter, pp. 4-6) are overwhelmingly directed to the details of Comcast's congestion management practices in response to the FCC Order, or to the posting of various boilerplate and confusing usage policies, privacy notices and "privacy policies."* They do not examine any of the issues requested.

Indeed, the first five Exhibits (C through G) to the Company's Request Letter were expressly ordered by the FCC, which directed Comcast to develop and implement a "compliance plan" to stop its "discriminatory and arbitrary" network management practices by the end of 2008 and to disclose "to both the Commission and the public the details of the network management practices that it intends to deploy following termination of its current practices." *See FCC Order*, paragraph 1 (footnotes omitted from quoted material). *See also*, discussion of FCC Order in section III.A above. Those Exhibits, and much of the other materials cited by the Company or found on its Web site, pertain solely to Comcast's narrowly-focused efforts, before and after the FCC ruling, to convert its network management practices as they relate to congestion management so that such management tools 1) are protocol and application neutral, and 2) do not run afoul of regulatory and statutory standards. They emphatically do **not** examine the Company's overall network management practices as they may impact on the privacy or freedom of expression of Internet users.

Finally, the multiple scattered policies and notices the Company cites are confusing, contradictory and present no coherent examination of any issue raised in the Proposal, as the following summaries show:

- (i) The Customer Privacy Notice is limited to specified services and "does not cover information that may be collected through any other products, services, or Web sites, even if accessed through our services and even if co-branded with them. You should read the privacy policies for these other products, services,

* In addition to the Web pages cited in the Company's letter, the following Web pages relate to issues raised in the Company's argument, but also do not evidence substantial implementation of the Proposal

- 2009 Comcast Customer Privacy Notice ([at http://www.comcast.com/customerprivacy](http://www.comcast.com/customerprivacy))
- Comcast High-Speed Internet Privacy Information ([at http://www.comcast.net/privacy](http://www.comcast.net/privacy))

and Web sites to learn how they handle your personal information.” (Customer Privacy Notice, in answer to question “What kind of information does this notice apply to?”)

(ii) There are statements relating to statutory requirements for the protection of “customer proprietary network information” and how the Company complies with such requirements (Customer Privacy Notice) which are difficult to reconcile with other statements in the materials provided by the Company on its Web site, such as the Acceptable Use Policy, which states that “Comcast and its suppliers reserve the right at any time to monitor bandwidth, usage, transmissions, and content in order to, among other things, operate the Service; identify violations of this Policy, and/or protect the network, the Service and Comcast users.” (Acceptable Use Policy (Exhibit I of Company Request Letter), in answer to question “How does Comcast enforce this Policy?”).

(iii) The Company’s Acceptable Use Policy states that Comcast reserves the right to refuse to transmit and may block any information that it deems “in its sole discretion” to be in violation of its Acceptable Use Policy or otherwise harmful to its network or customers, regardless of whether the material or its dissemination is unlawful (Acceptable Use Policy (Exhibit I of Company Request Letter), in answer to question “How does Comcast address inappropriate content and transmission?”)

At best, the documents referred to by the Company contain a series of aspirational and conclusory statements about how the Company “uses reasonable network management practices that are consistent with industry standards [and] ...tries to use tools and technologies that are minimally intrusive and....among the best in class.” (Acceptable Use Policy, in answer to question “Why does Comcast manage its network?”) Thus, notwithstanding the Company’s assertion that the documents “not only provide extensive details ...but also directly and indirectly address the privacy and freedom of expression concerns raised by the Proposal,” (Company Request Letter, p. 5), they do **not** address those broader issues but are merely notices to customers, rather than the shareholder report requested by the Proponents. This is not a minor distinction; the concerns of shareholders are often broader or narrower in focus than those of customers, but in any event they are different concerns.

Further, the Proposal asks for a single report, while the Company points to a multiplicity of formats and materials that can be found at various locations within a Comcast Web site, none of which is a report. Prior Staff letters denying no-action relief under Rule 14a-8(i)(10) indicate that such efforts do not “substantially implement” a request for a comprehensive **report**. Thus, in *Newell Rubbermaid Inc.* (February 21, 2001), a proposal requesting a report on the company's "glass ceiling" progress, including a review of specified topics, was not substantially implemented by the company’s claim that it had publicly available plans in place to address the issue, when it was beyond dispute that the company had not prepared a **report** on the topic. *See also PPG Industries, Inc.* (January 22, 2001) (proposal deemed not substantially implemented by the company through a variety of policies when proponents argued that the essence of the proposal was to create a single document that explicitly and in one place committed the company to the enumerated principles);

and *Wendy's International* (February 21, 2006) (proposal for sustainability report not substantially implemented by information on company Web site, where Web site included no discussion of the issues, as requested, and only contained vague statements of policy.)

In addition, the policies and statements posted on the Web site are not the product of a board examination of the specific issues raised by the Proposal. On a number of occasions the Staff has concurred that when a proposal requests specific board level action, it is not sufficient for the company to argue that existing board or management efforts relate generally to the same issue. For example, in *NYNEX Corporation* (February 16, 1994), the proposal requested that a board committee evaluate the impact of various health care proposals on the company. The company unsuccessfully argued that it had substantially implemented the proposal because it had already established a Committee on Benefits, which oversaw the administration and effectiveness of all of the NYNEX employee benefits plans and programs, including the medical programs. In rejecting that argument, Staff stated that it "does not believe that the Company's existing director 'Committee on Benefits' and other efforts to explore and seek solutions to health care costs substantially implements the proponent's request for a committee specifically established to evaluate and report to shareholders on health care proposals."

Finally, the letters cited by Comcast for the grant of no-action relief are not relevant to the Proposal because each involved the actual, documented implementation of the essential objective of the proposal at issue – a result that is demonstrably absent in the instant situation. *Cf. ConAgra Foods, Inc.* (July 3, 2006) (publication on the company's Web site of a corporate Responsibility Report that focused on requested issues substantially implemented proposal for a sustainability report); *Nordstrom* (February 8, 1995) (company guidelines for suppliers substantially implemented proposal for supplier standards with certain minimum criteria) ; *The Gap, Inc.* (March 16, 2001) (proposal for report on child labor excluded due to existing code of vendor conduct and other indicia of implementation).

In sum, Comcast has not fulfilled any element of the Proposal, because the multiplicity of postings do not provide a lucid, unified Board level examination of the Company's Internet network management practices in the context of the policy concerns regarding public expectations of privacy and freedom of expression on the Internet.

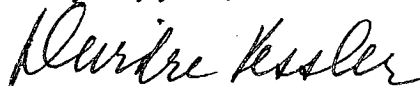
Consequently, the Company should not be permitted to exclude the Proposal as "substantially implemented" under Rule 14a-8(i)(10) grounds.

III. Conclusion

For the reasons set forth above, the Funds respectfully request that the Company's request for no-action relief be denied.

Thank you for your consideration.

Very truly yours,

A handwritten signature in cursive script that reads "Deirdre Kessler".

Deirdre Kessler

Cc: William H. Aaronson, Esq.
Davis Polk & Wardwell

Trillium Asset Management Corporation

EXHIBIT A

List of News Stories

(3 pages)

BUSINESS WEEK

AT&T to Get Tough on Piracy, November 7, 2007
Congress to Push Web Privacy, August 14, 2008
The Candidates are Monitoring your Mouse, August 28, 2008

CNN

Tracking Of Users Across Web Sites Could Face Strict Rules, July 14, 2008
Free speech is thorny online, December 17, 2008

CHRISTIAN SCIENCE MONITOR

YouTube to McCain: No DMCA pass for you, October 15, 2008

FINANCIAL TIMES

Google founders in web privacy warning, May 19, 2008
FCC signals its authority over web access, July 29, 2008

LOS ANGELES TIMES

Technology stokes new Web privacy fears, July 14, 2008
FCC slams Comcast for blocking Internet traffic, vows to police ISPs, August 1, 2008

MSNBC

ISPs pressed to become child porn cops, October 16, 2008
The trouble with 'deep packet inspection', October 16, 2008

NATIONAL PUBLIC RADIO

FCC Rules Against Comcast, August 4, 2008
Google violates its 'don't be evil' motto, November 18, 2008

NEW YORK TIMES

Ad-Targeting Companies and Critics Prepare for Senate Scrutiny, July 8, 2008
An Imminent Victory for 'Net Neutrality' Advocates, July 11, 2008
F.C.C. Vote Sets Precedent on Unfettered Web Usage, August, 2, 2008
Applications Spur Carriers to Relax Grip on Cellphones, August 4, 2008
Web Privacy on the Radar in Congress, August 11, 2008
AT&T Mulls Watching You Surf, August 14, 2008
Comcast Says No New Traffic Management Plan Yet, August 21, 2008
McCain Fights for the Right to Remix on YouTube, October 14, 2008
Banks Mine Data and Pitch to Troubled Borrowers, October 22, 2008
Big Tech Companies Back Global Plan to Shield Online Speech, October 28, 2008
Does AT&T's Newfound Interest in Privacy Hurt Google?, November 20, 2008
Campaigns in a Web 2.0 World, November 3, 2008
How Obama Tapped Into Social Network Power, November 9, 2008
You're leaving a digital trail – do you care?, November 29, 2008
Google's Gatekeepers, November 30, 2008
Proposed Web Filter Criticized in Australia, December 12, 2008
Yahoo Limits Retention of Search Data, December 18, 2008

JIM LEHER NEWS HOUR

FCC Rules Comcast Violated Internet Access Policy, August 1, 2008

PHILADELPHIA INQUIRER

Comcast agrees to sign New York's anti-porn code, July 21, 2008
FCC orders Comcast to change Internet practices, August 1, 2008

SAINT LOUIS POST-DISPATCH

FCC rules against Comcast for blocking Internet traffic, August 1, 2008

SAN FRANCISCO CHRONICLE

FCC ready to take on ISP limits, July 29, 2008
Tarnished tech firms to adopt code of conduct, October 25, 2008
Group hopes to shape nation's privacy policy, November 17, 2008

WASHINGTON POST

FCC Chairman Seeks to End Comcast's Delay of File Sharing, July 12, 2008

Lawmakers Probe Web Tracking, July 17, 2008
Who Should Solve This Internet Crisis?, July 28, 2008
Lawmakers Seek Data On Targeted Online Ads, August 5, 2008
Some Web Firms Say They Track Behavior Without Explicit Consent, August 12, 2008
Telecom Reporting Rule May Be Eased, September 5, 2008
Politics and Social Networks: Voters Make the Connection, November 3, 2008
Under Obama, Web Would Be the Way Unprecedented Online Outreach Expected, November 10, 2008
A New Voice in Online Privacy, November 17, 2008
Verizon Staff Viewed Obama's Account, November 21, 2008
Wikipedia Censorship Sparks Free Speech Debate, December 9, 2008
RIAA's New Piracy Plan Poses a New Set of Problems, December 19, 2008

WALL STREET JOURNAL

Cuomo's Probe Spurs Internet Providers to Target Child Porn, June 11, 2008
Limits on Web Tracking Sought, July 15, 2008
Charter Delays Plan for Targeted Web Ads, June 25, 2008
FCC to Rule Comcast Can't Block Web Videos, July 28, 2008
Editorial on net neutrality, July 30, 2008
Google, Yahoo, Microsoft Set Common Voice Abroad, October 28, 2008
Google Wants Its Own Fast Track on the Web, December 15, 2008
Music Industry to Abandon Mass Suits, December 19, 2008 (citing pivotal role of ISPs)

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January 15, 2009

Re: *Amended and Restated No-Action Request Concerning the Shareholder Proposal Submitted by The Office of the Comptroller of the City of New York and Trillium Asset Management Corporation as Co-Filers*

Office of Chief Counsel
Division of Corporation Finance
Securities and Exchange Commission
100 F Street, N.E.
Washington, D.C. 20549
via email: shareholderproposals@sec.gov

Ladies and Gentlemen:

On behalf of our client, Comcast Corporation (“Comcast” or the “Company”), we write to amend and restate our previous request for no-action concerning the Company’s intention to exclude from its proxy statement and form of proxy for the Company’s 2009 Annual Meeting of Shareholders (collectively, the “2009 Proxy Materials”) the shareholder proposal (the “Proposal”) and related supporting statement received from The Office of the Comptroller of the City of New York, on behalf of the New York City Employees’ Retirement System, the New York City Police Pension Fund, the New York City Fire Department Pension Fund and the New York City Board of Education Retirement System (“Proponent A”) and Trillium Asset Management Corporation, on behalf of Ms. Louise Rice, as co-filers of the Proposal (“Proponent B” and together with Proponent A, the “Proponents”).

Following the filing of our prior no-action request concerning the Proposal, which we submitted to the Office of Chief Counsel via electronic mail on January 7, 2009, Comcast received correspondence from Proponent B, informing Comcast that Proponent B, through its submission of a shareholder proposal identical to the shareholder proposal submitted by Proponent A, intended to be viewed as a co-filer of the Proposal (such correspondence is attached hereto as Exhibit J). After initially receiving no correspondence from Proponent A, on

Comcast's behalf we sent a letter via both electronic and overnight mail to Proponent A, requesting that Proponent A confirm Proponent B's position as a co-filer of the Proposal (such correspondence is attached hereto as Exhibit K). Proponent A subsequently confirmed Proponent B's position (such correspondence is attached hereto as Exhibit L).

We note that prior to the filing of our previous no-action request concerning the Proposal, neither Proponent A nor Proponent B indicated through their correspondence with Comcast that they intended to be viewed as co-filers of the Proposal. All correspondence exchanged between the Company and the Proponents has been attached hereto as Exhibit M (with respect to Proponent A) and Exhibit N (with respect to Proponent B).

We hereby again respectfully request that the Staff of the Division of Corporation Finance (the "Staff") concur in our opinion that the Company may, for the reasons set forth below, properly exclude the Proposal from the 2009 Proxy Materials. However, in light of the facts detailed above concerning the recently confirmed co-filer status of Proponent A and Proponent B and to facilitate the Staff's review, we hereby withdraw our previous argument under Rule 14a-8(i)(11) and otherwise amend and restate our no-action request to refer to only one proposal, the Proposal, submitted by the Proponents as co-filers. Thus, consistent with our prior no-action request, our request to confirm that the Proposal may be excluded from the Company's 2009 Proxy Materials applies with regards to Proponent B's submission as well Proponent A's submission.

Pursuant to Staff Legal Bulletin No. 14D (CF), Shareholder Proposals (November 7, 2008), question C, we have submitted this letter and the related correspondence from the Proponents to the Commission via email to shareholderproposals@sec.gov. Also, in accordance with Rule 14a-8(j), a copy of this letter and its attachments is being submitted simultaneously to the Proponents via electronic mail as notification of the Company's intention to amend its previous no-action request.

As noted in our prior no-action request concerning the Proposal, the Company plans to file its definitive proxy statement with the Securities and Exchange Commission (the "SEC") on or about March 30, 2009. Accordingly, though we are submitting this amended and restated no-action request less than 80 days before the Company intends to file its definitive proxy statement, we emphasize that the initial no-action request was timely submitted in accordance with Rule 14a-8(j). We also emphasize that neither we nor the Company received confirmation from both of the Proponents of their status as co-filers until January 14, 2009. The Company believes this constitutes a good reason for purposes of this letter.

Introduction

The Proposal, which as submitted by Proponent A is attached hereto as Exhibit A and as submitted by Proponent B is attached hereto as Exhibit B, requests that:

“[t]he Board of Directors prepare a report, excluding proprietary and confidential information, and to be made available to shareholders no later than November 30, 2009, examining the effects of the company’s Internet network management practices in the context of the significant public policy concerns regarding the public’s expectations of privacy and freedom of expression on the Internet.”

Comcast requests that the Staff of the SEC concur with its view that the Proposal may be properly omitted from the 2009 Proxy Materials pursuant to the provisions of Rule 14a-8(i)(10) because the Company has already substantially implemented the Proposal and/or Rule 14a-8(i)(7) because the Proposal concerns a matter relating to the Company’s ordinary business operations.

Grounds for Omission

The Company has substantially implemented the Proposal since adequate information regarding the Company’s network management practices is clearly published on the Company’s Web site and therefore the Proposal may be omitted from the 2009 Proxy Materials pursuant to Rule 14a-8(i)(10).

Pursuant to Rule 14a-8(i)(10), which permits the exclusion of a shareholder proposal if the company has already substantially implemented the proposal, the Proposal may be excluded from Comcast’s 2009 Proxy Materials if they have already been substantially implemented by Comcast. See, Exchange Act Release No. 34-20091 (August 16, 1983). According to the Commission, the exclusion provided for in Rule 14a-8(i)(10) “is designed to avoid the possibility of shareholders having to consider matters which already have been favorably acted upon by management.” See, Exchange Act Release No. 34-12598 (July 7, 1976). A shareholder proposal is considered to be substantially implemented if the company’s relevant “policies, practices and procedures compare favorably with the guidelines of the proposal.” *Texaco, Inc.* (March 28, 1991). The Staff does not require that every detail of a proposal have been implemented by a company in order to permit exclusion under Rule 14a-8(i)(10). Instead, the Staff has consistently taken the position that when a company already has policies and procedures in place relating to the subject matter of the proposal, or has implemented the essential objectives of the proposal, the shareholder proposal has been substantially implemented and may be excluded pursuant to Rule 14a-8(i)(10). See, *ConAgra Foods, Inc.* (July 3, 2006), *The Talbots, Inc.* (April 5, 2002), *The Gap, Inc.* (March 16, 2001) and *Kmart Corporation* (February 23, 2000).

Disclosure of Comcast's Network Management Practices

Through various documents posted on Comcast's Web site (accessible via the Web page www.comcast.net/terms/network) that pertain to Comcast's High-Speed Internet service, Comcast provides a significant amount of information regarding its network management practices. These documents contain detailed information about, among other topics, why Comcast manages its network, how it manages its network, and how customers are affected by network management. These documents also clearly state that Comcast's network management does not block customer applications or programs nor does it discriminate against particular types of online content. Collectively, these documents not only describe how Comcast's network management works, but also address how its network management practices relate to the public policy concerns regarding freedom of expression on the Internet. The Comcast Customer Privacy Notice at <http://www.comcast.com/customerprivacy/> contains the complete privacy policy for Comcast's cable television, High-Speed Internet, and phone services. A second privacy statement at <http://www.comcast.net/privacy/> contains additional privacy provisions that apply to Comcast's High-Speed Internet service and Comcast.net website. Comcast's network management practices are consistent with these privacy statements.

Network management in the present context describes the tools and techniques that an Internet service provider uses to deliver a high quality, consistent, and safe Internet experience to its customers. Comcast's network management practices include, among other things, identifying spam and preventing its delivery to customer e-mail accounts, detecting malicious Internet traffic and preventing the distribution of viruses or other harmful code or content, and temporarily lowering the priority of traffic for users who are the top contributors to current network congestion. A significant portion of Comcast's network management activities relate to congestion management. As part of Comcast's own initiatives and as part of its compliance with the Federal Communications Commission (the "FCC") order pertaining to network management, see *In re Formal Complaint of Free Press and Public Knowledge Against Comcast Corporation*, 23 FCC Rcd 13028 (2008), Comcast is continually evaluating and refining the ways in which it manages its network in order to continue providing high quality Internet service using reasonable network management tools and techniques that are consistent with industry standards. As stated above, Comcast keeps its users and investors clearly apprised of its activities in this area through information made available on its Web site.

In a September 19, 2008 letter from Comcast to the FCC (available on Comcast's Web site at http://downloads.comcast.net/docs/Cover_Letter.pdf and attached hereto as Exhibit C) (the, "**September 19 Letter**"), Comcast stated that, consistent with its prior voluntary commitment and the FCC's Order noted above, Comcast would transition away from its prior congestion management practices that managed certain types of peer-to-peer ("P2P") traffic. As of December 31, 2008, Comcast has completed its transition to new protocol-agnostic congestion management practices. In the September 19 Letter, Comcast affirmed its

commitment to “ensur[ing] continued delivery of a world-class service to all of [its] subscribers, while minimizing the impact on any individual user whose traffic must be managed as part of this process.”

As also noted in the September 19 Letter, in September 2008, Comcast submitted to the FCC and posted on the network management section of its Web site (i) a description of its prior approach to managing network congestion (available at http://downloads.comcast.net/docs/Attachment_A_Current_Practices.pdf and attached hereto as Exhibit D) (ii) a description of its new protocol-agnostic congestion management practices (available at http://downloads.comcast.net/docs/Attachment_B_Future_Practices.pdf and attached hereto as Exhibit E) and (iii) Comcast’s compliance plan for the transition from the prior approach to the new one (available at http://downloads.comcast.net/docs/Attachment_C_Compliance_Plan.pdf and attached hereto as Exhibit F). On January 5, 2009, Comcast filed a letter with the FCC (available on Comcast’s Web site at <http://downloads.comcast.net/docs/comcast-nm-transition-notification.pdf> and attached hereto as Exhibit G) notifying the FCC that it has ceased employing the prior congestion management practices and has instituted the new practices throughout its High-Speed Internet network. These documents not only provide extensive details regarding Comcast’s past and current practices, but also directly and indirectly address the privacy and freedom of expression concerns raised by the Proposal.

Exhibit D, Comcast’s description of its prior congestion management approach, describes Comcast’s former P2P-specific network management practices, from which Comcast fully transitioned away as of December 31, 2008. This document clearly explains the extent to which a given user’s online information could be inspected by such network management tools and reassures the reader that the techniques used by Comcast examined only the relevant packet header or addressing information in a given packet necessary to indicate what type of protocol (P2P in this case) was being used by a customer. The document emphasizes that this congestion management technique did not “read” the contents of customer communications in order to determine whether a packet was text, music, video, a voice conversation, or any other type of content, and certainly did not identify whether any packet contained political speech, commercial speech or entertainment, or try to discern whether a packet was personal or business, legal or illicit, etc. Comcast’s prior network management practices fully respected customer privacy and did not act based on the contents of any customer communications.

Exhibit E, Comcast’s description of its new congestion management approach, stresses that Comcast’s new congestion management technique is “protocol-agnostic” and focuses only on the extent to which a certain Comcast subscriber is using a high amount of bandwidth, not what type of protocol is being used. As was the case with Comcast’s prior congestion management practices, this new technique fully respects customer privacy and does not act based on the contents of any customer communications.

In addition to Comcast's various submissions to the FCC that it prominently displays on the network management portion of its Web site, Comcast publishes a Frequently Asked Questions ("FAQs") section on its Web site (available at <http://help.comcast.net/content/faq/Frequently-Asked-Questions-about-Network-Management#manage> and attached hereto as Exhibit H), which discusses why Comcast manages its network and the techniques utilized to do so. This portion of Comcast's Web site makes it clear to the reader that neither Comcast's previous network management practices nor the network management practices to which it has transitioned discriminate against particular types of online content.

Comcast clearly explains in the FAQ section (as it does elsewhere) that its new protocol-agnostic network management technique will not manage congestion based on the protocols in use, but rather it will focus on the heaviest users in near real time, such that periods of congestion will be "fleeting and sporadic." Most importantly in the context of the Proponents' concerns about freedom of expression, the FAQ section clearly indicates that the new practices will be "content neutral."

In addition to the statements and FCC letters discussed above, Comcast's Acceptable Use Policy (available at <http://www.comcast.net/terms/use/> and attached hereto as Exhibit I) provides additional disclosure to customers about the types of uses and activities that Comcast considers unacceptable (such as sending spam or spreading a computer virus) and how it will respond when it determines there is a violation of its Acceptable Use Policy. Taken together, all of these documents provide customers and others with a detailed, meaningful explanation of Comcast's network management and privacy practices and policies and how they affect customers. Comcast believes that its network management techniques reflect reasonable, industry standard practices and do so in a way that fully respects customer freedom of expression and privacy.

Analysis

In ConAgra Foods, Inc. (July 3, 2006), the Staff allowed the company to exclude a proposal requesting that the board issue a sustainability report to shareholders because the company had substantially implemented the essential objective of the proposal through its publication (on its Web site) of a Corporate Responsibility Report, which focused on certain issues discussed in the proposal. This is similar to the situation at hand, as the network management page of Comcast's Web site provides detailed information that explains Comcast's network management processes and also directly addresses the concerns raised by the Proposal.

In The Gap, Inc. (March 16, 2001), the Staff allowed the company to exclude a proposal (on substantial implementation grounds) that requested a report on the child labor practices of the company's vendors. The company had already established a code of vendor conduct, monitored vendor compliance, published related information and was willing to discuss the issue with

shareholders. Likewise, in Nordstrom, Inc. (February 8, 1995), the Staff allowed the company to exclude a proposal (on substantial implementation grounds) that requested that the company establish a set of standards for its suppliers that met certain minimum criteria and also that the company prepare a report to shareholders describing its policies as well as its current and future compliance efforts with respect to those policies. In that instance, Nordstrom was able to successfully argue that it had substantially implemented the proposal where it had in place existing company guidelines for suppliers and had issued a press release regarding such guidelines (despite the fact that the guidelines did not commit the company to conduct regular or random inspections to ensure compliance, as requested in the proposal). As indicated above, Comcast has clearly gone much further in substantially implementing the essential objectives of the Proposal and therefore respectfully submits that the Staff should allow Comcast to exclude the Proposal on such grounds.

In ITT Corporation (March 12, 2008), the Staff did not permit the exclusion of a proposal requesting a report on ITT Corporation's foreign sales of military and weapons-related products and services on substantial implementation grounds (or any other grounds). The company argued that it had substantially implemented the proposal by way of (i) availability of the requested information through the dissemination of such information by government agencies to the media, (ii) information provided to certain government agencies which was publicly available, (iii) information posted online by several government agencies and (iv) information contained in the company's SEC filings, as well as certain information on its own Web site. Comcast's claim of substantial implementation is distinguished from that of ITT Corporation because Comcast's network management information page directly supplies the information sought by the Proposal, as opposed to forcing an investor to search several locations for the desired information, and it directly responds to the issues raised by the Proposal. This information page not only links readers to certain of Comcast's FCC filings, but also provides updates regarding Comcast's network management practices and links to the FAQ section that provides plain language explanations of network management issues, including those related to the concerns raised by the Proposal. Comcast has collected all of its network management documents and related materials in one place at <http://www.comcast.net/terms/network>.

Also, in Terex Corporation (March 18, 2005), the Staff did not permit exclusion (on substantially implemented grounds) of a proposal substantially similar to that received by ConAgra Foods (discussed above). Terex claimed that it substantially implemented the proposal by including on its Web site its views regarding corporate citizenship and by making reference to a variety of its public disclosures, including filings made with the SEC. Again, Comcast's claim of substantial implementation is distinguished from the argument set forth by Terex because Comcast prepares and publishes on its Web site detailed summaries of its network management practices and also provides direct access to certain FCC filings by posting those filings on the network management page of its Web site (*i.e.*, the actions requested by the Proposal).

Comcast continues to publish and update information describing its network management practices, including how these practices relate to the public policy concerns regarding privacy and freedom of expression on the Internet and believes that through its current disclosures that it has implemented the essential objectives of the Proposal. The Proposal has therefore been substantially implemented.

The Proposal may also be omitted from the 2009 Proxy Materials under Rule 14a-8(i)(7) because, while the Proposal may relate to issues of public policy, the Proponents seek to “micro-manage” the Company with their request that would intrude unduly on the Company’s ordinary business operations.

Pursuant to Rule 14a-8(i)(7), the Proposal may be excluded from Comcast’s 2009 Proxy Materials because the Proposal deals with a matter relating to the company’s ordinary business operations.

Rule 14a-8(i)(7) allows a company to omit a shareholder proposal from its proxy materials if such proposal deals with a matter relating to the company’s ordinary business operations. The general policy underlying the “ordinary business” exclusion is “to confine the resolution of ordinary business problems to management and the board of directors, since it is impracticable for shareholders to decide how to solve such problems at annual shareholders meetings.” Exchange Act Release No. 34-40018 (May 21, 1998) (the “1998 Release”). This general policy reflects two central considerations: (i) “[c]ertain tasks are so fundamental to management’s ability to run a company on a day-to-day basis that they could not, as a practical matter, be subject to direct shareholder oversight”; and (ii) the “degree to which the proposal seeks to ‘micro-manage’ the company by probing too deeply into matters of a complex nature upon which shareholders, as a group, would not be in a position to make an informed judgment.” The 1998 Release, citing in part Exchange Act Release No. 12999 (November 22, 1976). Additionally, when a proposal seeks a report, “the Staff will consider whether the subject matter of the special report . . . involves a matter of ordinary business; where it does, the proposal will be excludable under Rule 14a-8(c)(7). Exchange Act Release 34-20091 (August 16, 1983).

The Proposal Relates to Comcast’s Network Management Practices, Implicating Comcast’s Business Operations

Comcast earns revenue by, among other things, providing high-quality High-Speed Internet service to both commercial and individual users. As the Internet continues to evolve and Comcast strives to provide its customers with the highest quality Internet service possible, Comcast must also continue to ensure that its network capabilities are able to provide such service.

As previously discussed in great detail, Comcast manages its network with the goal of delivering the best possible High-Speed Internet experience to all of its customers. Network management is essential for Comcast to promote the use and enjoyment of the Internet by all of its customers. Comcast uses various tools and

techniques to manage its network. These tools and techniques, like the network and its usage, are dynamic, and can and do change frequently.

Decisions regarding Comcast's network management policy depends on an intimate knowledge of Comcast's High-Speed Internet network. Only Comcast management and staff have the requisite knowledge of Comcast's network and user population in order to assess, set and refine its network management policies and tools. In addition, Comcast and its network management practices were the subject of a proceeding at the FCC, which resulted in the FCC's August 20, 2008 Memorandum Opinion and Order, FCC 08-183 noted above. As a result of that proceeding, Comcast committed to make certain disclosures regarding its current and future network management practices. Given that the type and content of these disclosures are part of Comcast's ongoing commitment to keep its customers and the public informed regarding one of Comcast's major services and revenue streams, it seems clear that disclosure of Comcast's network management policies falls squarely within the scope of Comcast's ordinary business operations.

In Yahoo! Inc. (April 5, 2007), the Staff concluded that a shareholder proposal which requested the Board of Directors to "report to shareholders as soon as practicable on the Company's rationale for supporting and/or advocating public policy measures that would increase government regulation of the Internet" fell within the purview of Yahoo!'s ordinary business operations.

Likewise, in Microsoft Corporation (September 29, 2006), the Staff concurred with Microsoft's view that a proposal almost identical to the Yahoo! proposal noted above could be excluded on the basis of Rule 14a-8(i)(7), where Microsoft argued that "[s]hareholders are simply not in a position to frame the company's policy on complex questions of business, technology advancement, policy, and regulation[,]” asserting that these activities are “properly reserved for management.” As was the case with Microsoft, the Proponents should not be allowed to improperly intervene in the day-to-day operations of one of the key areas of Comcast's business in order to advance their particular agenda.

As expressly indicated in Exchange Act Release 34-20091 (August 16, 1983), noted above, since the requested report clearly concerns an area of Comcast's ordinary business operations, Comcast believes that the Proposal may be properly excluded from Comcast's 2009 Proxy Materials under Rule 14a-8(i)(7).

The Proposal Relates to a Complex Matter That Is Most Appropriate for Management to Address

Issues related to network management are highly complex and require a detailed understanding of, among other things, Comcast's and other Internet Service Providers' network architectures, business practices, and available network technology. To make an informed judgment as to what types of network management practices are necessary and will promote the interests of Comcast, its

stockholders and its customers requires an intimate knowledge of these complex practices. The complexity and rapid evolution of the Internet and network management practices make network management a poor topic for action by stockholders at an annual meeting and are just the type of proposal that “seeks to ‘micro-manage’ the company by probing too deeply into matters of a complex nature upon which shareholders, as a group, would not be in a position to make an informed judgment” (as stated in the 1998 Release). Accordingly, the Company believes that it should be permitted to exclude the Proposal on the basis of Rule 14a-8(i)(7).

Comcast believes that the Proposal is exactly the type of matter that the “ordinary business” exception is Rule 14a-8(i)(7) was created to address. By requesting that the Board of Directors prepare a report regarding its network management practices, the Proponents are seeking to subject to shareholder oversight an aspect of Comcast’s business that is most appropriately handled by Comcast’s management. Additionally, the issues of how Comcast should properly maintain its network while still respecting users’ concerns regarding freedom of expression and privacy and how Comcast should respond to government regulation of this aspect of its business are central to the operation of the day-to-day business of Comcast. Executives and other managers routinely make decisions about how best to conduct Comcast’s business in compliance with current regulations and it would be highly unusual and impractical to interject Comcast’s shareholders into what is otherwise a routine management decision.

In General Electric Company (January 17, 2006) the proponent requested that the issuer prepare a report on the impact of a flat tax on the company. General Electric successfully argued that tax planning and compliance were “intricately interwoven with a company’s financial planning, day-to-day business operations and financial reporting.” In the same way, Comcast’s network management practices involve intricate systems related to the unique services that Comcast provides and Comcast’s selection and disclosures of its network management practices are a function of Comcast’s ongoing business practices and any applicable FCC rules or requirements.

Comcast is aware that the Staff will make an exception for proposals that pertain to significant social policy issues, even if they involve ordinary business operations. However, the Commission has permitted the exclusion of shareholder proposals that seek to require a company to prepare and issue a report pertaining to its otherwise ordinary business operations but involving social policy issues, where such proposals call for reports but not action in furtherance of such social policy issue. See, Washington Mutual, Inc. (March 6, 2002) (excluding a proposal requesting a report identifying all company costs associated with land development projects); The Mead Corporation (January 31, 2001) (excluding shareholder proposal requesting a report on the company’s environmental risks in financial terms).

In Washington Mutual, the shareholder proposal was excluded under Rule 14a-8(i)(7) where the proponent merely sought a report concerning the impact of

January 15, 2009

a portion of the company's business operations and did not request adoption of corporate policies regarding the environment. Like the shareholder proposal that was excluded under Rule 14a-8(i)(7) in Washington Mutual, the Proposal merely asks Comcast to issue a report regarding its network management practices in light of the public's concerns regarding privacy and freedom of expression on the Internet, but does not request that Comcast take any affirmative steps to attempt to modify its network management practices.

Accordingly, Comcast believes that the Proposal intrudes into the realm of the ordinary business operations of Comcast without calling for the necessary action that sometimes prevents the exclusion of social policy related proposals. For that reason, in addition to the reasons indicated in the subsection above, Comcast respectfully submits that it should be permitted to exclude the Proposal from its 2009 Proxy Materials in accordance with Rule 14a-8(i)(7).

Conclusion

Comcast believes that the Proposal may be properly excluded from the 2009 Proxy Materials pursuant to Rule 14a-8(i)(10) because the Proposal has been substantially implemented. Comcast also believes that the Proposal may be properly excluded from the 2009 Proxy Materials pursuant to Rule 14a-8(i)(7) because issues relating to network management are within the scope of Comcast's ordinary business operations and the Proposal does not satisfy the social policy exception to this rule.

We would be happy to provide you with any additional information and answer any questions that you may have regarding this subject. Should you disagree with the conclusions set forth herein, we respectfully request the opportunity to confer with you prior to the determination of the Staff's final position. Please do not hesitate to call me at (212) 450-4397 or Arthur R. Block, the Company's Senior Vice President, General Counsel and Secretary, at (215) 286-7564, if we may be of any further assistance in this matter.

Very truly yours,



William H. Aaronson

Enclosures

cc w/enc: The Office of the Comptroller of the City of New York
Trillium Asset Management Corporation
Arthur R. Block

Office of Chief Counsel

January 15, 2009

EXHIBIT A



THE CITY OF NEW YORK
OFFICE OF THE COMPTROLLER
1 CENTRE STREET
NEW YORK, N.Y. 10007-2341

WILLIAM C. THOMPSON, JR.
COMPTROLLER

November 12, 2008

Mr. Arthur R. Block
Secretary
Comcast Corporation
One Comcast Center
Philadelphia, PA 19103

Dear Mr. Block:

The Office of the Comptroller of New York City is the custodian and trustee of the New York City Employees' Retirement System, the New York City Police Pension Fund, and the New York City Fire Department Pension Fund, and custodian of the New York City Board of Education Retirement System (the "funds"). The funds' boards of trustees have authorized the Comptroller to inform you of their intention to offer the enclosed proposal for consideration of stockholders at the next annual meeting.

I submit the attached proposal to you in accordance with rule 14a-8 of the Securities Exchange Act of 1934 and ask that it be included in your proxy statement.

Letters from The Bank of New York certifying the funds' ownership, continually for over a year, of shares of Comcast Corporation common stock are enclosed. The funds intend to continue to hold at least \$2,000 worth of these securities through the date of the annual meeting.

We would be happy to discuss this initiative with you. Should the board decide to endorse its provisions as company policy, our funds will ask that the proposal be withdrawn from consideration at the annual meeting. Please feel free to contact me at (212) 669-2651 if you have any further questions on this matter.

Very truly yours,


Patrick Doherty

pd:ma

Enclosures

Comcast Corporation - internet censorship



New York City Office of the Comptroller
Bureau of Asset Management

Report on Our Company's Network Management Practices,
Public Expectations of Privacy and Freedom of Expression on the Internet

The Internet is becoming the defining infrastructure of our economy and society in the 21st century. Its potential to open new markets for commerce, new venues for cultural expression and new modalities of civic engagement is without historic parallel.

Internet Service Providers (ISPs) serve as gatekeepers to this infrastructure: providing access, managing traffic, insuring communication, and forging rules that shape, enable and limit the public's use of the Internet.

As such, ISPs have a weighty responsibility in devising network management practices. ISPs must give far-ranging thought to how these practices serve to promote--or inhibit--the public's participation in the economy and in civil society.

Of fundamental concern is the effect ISPs' network management practices have on public expectations of privacy and freedom of expression on the Internet.

Whereas:

- More than 211 million Americans--70% of the U.S. population--now use the Internet;
- The Internet serves as an engine of opportunity for social, cultural and civic participation in society;
- 46% of Americans report they have used the internet, e-mail or text messaging to participate in the 2008 political process;
- The Internet yields significant economic benefits to society, with online US retailing revenues -- only one gauge of e-commerce - exceeding \$200 billion in 2008;
- The Internet plays a critical role in addressing societal challenges such as provision of health care, with over 8 million Americans looking for health information online each day;
- 72% of Americans are concerned that their online behaviors are being tracked and profiled by companies;
- 53% of Americans are uncomfortable with companies using their email content or browsing history to send relevant ads;
- 54% of Americans are uncomfortable with third parties collecting information about their online behavior;
- Our Company provides Internet access to a very large number of subscribers and is considered a leading ISP;

- Our Company's network management practices have come under public scrutiny by consumer and civil liberties groups, regulatory authorities and shareholders.
- Class action lawsuits in several states are challenging the propriety of ISPs' network management practices;
- Internet network management is a significant public policy issue; failure to fully and publicly address this issue poses potential competitive, legal and reputational harm to our Company;
- Any perceived compromise by ISPs of public expectations of privacy and freedom of expression on the Internet could have a chilling effect on the use of the Internet and detrimental effects on society.

Therefore, be it resolved, that shareholders request that the Board of Directors prepare a report, excluding proprietary and confidential information, and to be made available to shareholders no later than November 30, 2009, examining the effects of the company's Internet network management practices in the context of the significant public policy concerns regarding the public's expectations of privacy and freedom of expression on the Internet.

Office of Chief Counsel

January 15, 2009

EXHIBIT B

November 26, 2008

Via Overnight Mail

Arthur R. Block
Senior Vice President, General Counsel and Secretary
Comcast Corporation
One Comcast Center
Philadelphia, PA 19103

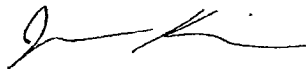
Dear Mr. Block:

Trillium Asset Management Corporation ("Trillium") is an investment firm based in Boston, Massachusetts specializing in socially responsible asset management.

I am authorized to notify you of our intention to file the enclosed shareholder resolution. Trillium submits this resolution for inclusion in the 2009 proxy statement, in accordance with Rule 14a-8 of the General Rules and Regulations of the Securities and Exchange Act of 1934. Trillium submits this proposal on behalf of our client Louise Rice, who is the beneficial owner, per Rule 14a-8, of more than \$2,000 worth of Comcast Corporation common stock acquired more than one year prior to this date. We will provide verification of ownership from our custodian separately upon request. We will send a representative to the stockholders' meeting to move the resolution as required by the SEC rules.

I can be reached at (917) 222-3366 and look forward to your response.

Sincerely,



Jonas Kron, J.D., M.S.E.L.
Senior Social Research Analyst

cc: Brian L. Roberts, Chairman and CEO, Comcast Corporation
Marlene S. Dooner, Senior Vice President, Investor Relations, Comcast Corporation

BOSTON	DURHAM	SAN FRANCISCO	BOISE
711 Atlantic Avenue Boston, Massachusetts 02111-2809 T: 617-423-6655 F: 617-482-6179 800-548-5684	353 West Main Street, Second Floor Durham, North Carolina 27701-3215 T: 919-688-1265 F: 919-688-1451 800-853-1311	369 Pine Street, Suite 711 San Francisco, California 94104-3310 T: 415-392-4806 F: 415-392-4535 800-933-4806	950 W. Bannock Street, Suite 530 Boise, Idaho 83702-6118 T: 208-387-0777 F: 208-387-0278 800-567-0538



Report on Our Company's Network Management Practices,
Public Expectations of Privacy and Freedom of Expression on the Internet

The Internet is becoming the defining infrastructure of our economy and society in the 21st century. Its potential to open new markets for commerce, new venues for cultural expression and new modalities of civic engagement is without historic parallel.

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As such, ISPs have a weighty responsibility in devising network management practices. ISPs must give far-ranging thought to how these practices serve to promote--or inhibit--the public's participation in the economy and in civil society.

Of fundamental concern is the effect ISPs' network management practices have on public expectations of privacy and freedom of expression on the Internet.

Whereas:

- More than 211 million Americans--70% of the U.S. population--now use the Internet;
- The Internet serves as an engine of opportunity for social, cultural and civic participation in society;
- 46% of Americans report they have used the internet, e-mail or text messaging to participate in the 2008 political process;
- The Internet yields significant economic benefits to society, with online US retailing revenues -- only one gauge of e-commerce - exceeding \$200 billion in 2008;
- The Internet plays a critical role in addressing societal challenges such as provision of health care, with over 8 million Americans looking for health information online each day;
- 72% of Americans are concerned that their online behaviors are being tracked and profiled by companies;
- 53% of Americans are uncomfortable with companies using their email content or browsing history to send relevant ads;
- 54% of Americans are uncomfortable with third parties collecting information about their online behavior;
- Our Company provides Internet access to a very large number of subscribers and is considered a leading ISP;

- Our Company's network management practices have come under public scrutiny by consumer and civil liberties groups, regulatory authorities and shareholders.
- Class action lawsuits in several states are challenging the propriety of ISPs' network management practices;
- Internet network management is a significant public policy issue; failure to fully and publicly address this issue poses potential competitive, legal and reputational harm to our Company;
- Any perceived compromise by ISPs of public expectations of privacy and freedom of expression on the Internet could have a chilling effect on the use of the Internet and detrimental effects on society.

Therefore, be it resolved, that shareholders request that the Board of Directors prepare a report, excluding proprietary and confidential information, and to be made available to shareholders no later than November 30, 2009, examining the effects of the company's Internet network management practices in the context of the significant public policy concerns regarding the public's expectations of privacy and freedom of expression on the Internet.

Office of Chief Counsel

January 15, 2009

EXHIBIT C



Comcast Corporation
2001 Pennsylvania Ave., NW
Suite 500
Washington, DC 20006
202.379.7100 Tel
202.466.7718 Fax
www.comcast.com

September 19, 2008

VIA ECFS AND HAND DELIVERY

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: **In the Matter of Formal Complaint of Free Press and Public Knowledge
Against Comcast Corporation for Secretly Degrading Peer-to-Peer
Applications, File No. EB-08-IH-1518**

**In the Matter of Broadband Industry Practices; Petition of Free Press et al.
for Declaratory Ruling that Degrading an Internet Application Violates the
FCC's Internet Policy Statement and Does Not Meet an Exception for
"Reasonable Network Management," WC Docket No. 07-52**

Dear Ms. Dortch:

In accordance with the Commission's August 20, 2008 *Memorandum Opinion and Order* regarding Comcast's network management practices for our High-Speed Internet ("HSI") service,¹ Comcast hereby complies with the three filing requirements set forth therein. Specifically, consistent with Paragraphs 54 and 59 of the Commission's *Order*, we submit the following:

- (1) a description of our current approach to managing network congestion (Attachment A);
- (2) a description of the new protocol-agnostic congestion management practices to which we are transitioning no later than year-end 2008 (Attachment B); and
- (3) a compliance plan setting forth the benchmarks that we will meet as part of this transition (Attachment C). We have also included in this document our plans for direct communication with our customers during this transition.

¹ *In re Formal Complaint of Free Press & Pub. Knowledge Against Comcast Corp. for Secretly Degrading Peer-to-Peer Applications; Broadband Industry Practices; Petition of Free Press et al. for Declaratory Ruling That Degrading an Internet Application Violates the FCC's Internet Policy Statement & Does Not Meet an Exception for "Reasonable Network Management,"* Mem. Op. and Order, FCC 08-183 (Aug. 20, 2008) ("Order").

Ms. Marlene Dortch
September 19, 2008
Page 2 of 3

These filings are consistent with our previously announced commitment to transition away from the congestion management practices we currently use to prevent peer-to-peer ("P2P") traffic from degrading our customers' use and enjoyment of our HSI service to a new set of protocol-agnostic congestion management practices, and to do so across our network by December 31, 2008. Over the last several months, we have conducted technical trials to determine how best to implement a new protocol-agnostic approach to congestion management. We are making excellent progress and are on track to complete the transition as scheduled. As in everything we do, our goal is to ensure continued delivery of a world-class service to all of our subscribers, while minimizing the impact on any individual users whose traffic must be managed as part of this process.

We continue to refine the details of our new practices, so we commit to make supplementary filings in this docket as necessary to keep the Commission (and the public) informed of any material changes in our plans before we complete the transition to protocol-agnostic congestion management by year-end. Separate and apart from the requirements of the *Order*, we have an ongoing commitment to our customers to provide a world-class Internet experience. To do so, we must always preserve the flexibility to manage our network in lawful and appropriate ways. Moreover, we know that clear communication with our customers is essential to a successful long-term relationship. So we are committed to ensuring that our customers receive clear, concise, and useful information about the services that we provide.

Even as we adopt the new network management practices described in Attachment B, we continue to make the investments in network upgrades that will permit us to better prevent congestion and meet our customers' ever-increasing demands for bandwidth. For example, earlier this year we doubled, and in many cases tripled, the upload speeds for almost all of our existing HSI customers. In addition, since our initial rollout of DOCSIS 3.0 (which currently offers consumers wideband download speeds of up to 50 Mbps and upload speeds of up to 5 Mbps) in the Twin Cities Region in April, we have continued preparations to deploy DOCSIS 3.0 to up to 20 percent of our footprint by the end of this year, and in many more markets in 2009.

As all of the Commissioners recognize, the Internet is an engine for innovation and economic growth. We are proud to be a leader in bringing broadband Internet to consumers all over the country, adding fuel to that engine. We will continue to work hard to deliver a world-class service that gives all of our subscribers access to the content, applications, and services that they demand.

Ms. Marlene Dortch
September 19, 2008
Page 3 of 3

Please contact me should you have any questions regarding this submission.

Sincerely,

/s/ Kathryn A. Zachem
Kathryn A. Zachem
Vice President, Regulatory Affairs
Comcast Corporation

cc: Chairman Kevin J. Martin
Commissioner Michael J. Copps
Commissioner Jonathan S. Adelstein
Commissioner Deborah T. Tate
Commissioner Robert M. McDowell
Daniel Gonzalez
Dana Shaffer
Scott Bergmann
Scott Deutchman

Kris Monteith
Amy Bender
Greg Orlando
Nick Alexander

Office of Chief Counsel

January 15, 2009

EXHIBIT D

ATTACHMENT A:
COMCAST CORPORATION
DESCRIPTION OF CURRENT NETWORK MANAGEMENT
PRACTICES

COMCAST CORPORATION
DESCRIPTION OF CURRENT NETWORK MANAGEMENT PRACTICES

Pursuant to Paragraphs 54 and 59 of the Commission's *Memorandum Opinion & Order* regarding how Comcast manages congestion on its High-Speed Internet ("HSI") network, Comcast hereby "disclose[s] to the Commission the precise contours of the network management practices at issue here, including what equipment has been utilized, when it began to be employed, when and under what circumstances it has been used, how it has been configured, what protocols have been affected, and where it has been deployed."¹

I. INTRODUCTION

Comcast's HSI network is a shared network. This means that our HSI customers share upstream and downstream bandwidth with their neighbors. Although the available bandwidth is substantial, so, too, is the demand. Thus, when a relatively small number of customers in a neighborhood place disproportionate demands on network resources, this can cause congestion that degrades their neighbors' Internet experience. In our experience, over the past several years, the primary cause of congestion (particularly in the upstream portion of our network) has been the high-volume consumption of bandwidth associated with use of certain peer-to-peer ("P2P") protocols. In order to tailor our network management efforts to this reality, Comcast's current congestion management practices were designed to address this primary contributor to congestion. Our objective in doing so was to provide all our customers with the best possible broadband Internet experience in the marketplace.

As described in Attachment B, in response to significant stated concerns of the Internet community, Comcast had already announced plans to transition away from its P2P-specific

¹ *In re Formal Complaint of Free Press & Pub. Knowledge Against Comcast Corp. for Secretly Degrading Peer-to-Peer Applications; Broadband Industry Practices; Petition of Free Press et al. for Declaratory Ruling That Degrading an Internet Application Violates the FCC's Internet Policy Statement & Does Not Meet an Exception for "Reasonable Network Management,"* Mem. Op. and Order, FCC 08-183 ¶¶ 54, 59 (Aug. 20, 2008) ("Order").

congestion management practices and terminate them entirely by December 31, 2008. Paragraph 54 of the *Order* directs Comcast to describe these current practices, and we do so here.²

At the outset, we provide some background on how these practices came into being and how they work in a general sense. We then provide the greater detail required by the *Order*.

II. BACKGROUND

To understand exactly how Comcast currently manages congestion on its network, it is helpful to have a general understanding of how Comcast's HSI network is designed.³ Comcast's HSI network is what is commonly referred to as a hybrid fiber-coax network, with coaxial cable connecting each subscriber's cable modem to an Optical Node, and fiber optic cables connecting the Optical Node, through distribution hubs, to the Cable Modem Termination System ("CMTS"), which is also known as the "data node." The CMTSes are then connected to higher-level routers, which in turn are connected to Comcast's Internet backbone facilities. Today, Comcast has approximately 3300 CMTSes deployed throughout our network, serving our 14.4 million HSI subscribers.

Each CMTS has multiple "ports" that handle traffic coming into and leaving the CMTS. In particular, each cable modem deployed on the Comcast HSI network is connected to the CMTS through the "ports" on the CMTS. These ports can be either "downstream" ports or "upstream" ports, depending on whether they send information to cable modems (downstream) or receive information from cable modems (upstream) attached to the port. Today, on average,

² Although the *Order* focuses entirely on Comcast's current practices with respect to controlling network congestion, Comcast's efforts to deliver a superior Internet experience involve a wide variety of other network management efforts beyond congestion control. As Comcast has previously explained, we actively manage our HSI network in order to enhance our customers' Internet experience by, among other things, blocking spam, preventing viruses from harming the network and our subscribers, thwarting denial-of-service attacks, and empowering our customers' ability to control the content that enters their homes.

³ The reader may find it useful to refer to the attached glossary for additional explanation of unfamiliar terms.

about 275 cable modems share the same downstream port and about 100 cable modems share the same upstream port. As will be described later in this document, Comcast's current congestion management practices focus solely on a subset of *upstream* traffic.

Internet usage patterns are dynamic and change constantly over time. As broadband networks deliver higher speeds, this enables the deployment of new content, applications, and services, which in turn leads more and more households to discover the benefits of broadband Internet services. Several years ago, Comcast became aware of a growing problem of congestion on its HSI network, as traffic volumes, particularly for upstream bandwidth (which is provisioned in lesser quantities than downstream bandwidth⁴), were growing rapidly and affecting the use of various applications and services that are particularly sensitive to latency (i.e., packets arriving slowly) or jitter (i.e., packets arriving with variable delay).

In order to diagnose the cause of the congestion and explore means to alleviate it, in May 2005, Comcast began trialing network management technology developed by Sandvine, Inc. The Sandvine technology identified which protocols were generating the most traffic and where in the network the congestion was occurring. After jointly reviewing significant amounts of usage data, Comcast and Sandvine determined that the use of several P2P protocols was regularly generating disproportionate burdens on the network, primarily on the upstream portion of the network, causing congestion that was affecting other users on the network.

As previously explained on the record and described in greater detail below, in order to mitigate congestion, Comcast determined that it should manage *only* those protocols that placed

⁴ This asymmetric provisioning of bandwidth is based on how the vast majority of consumers have historically used the Internet, i.e., most consumers have been far more interested in how fast they could surf the web, how fast they could download files, and whether they could watch streaming video than in uploading large files. Even today, with the widespread proliferation of services that place greater demand on upstream resources, most consumers still download much more than they upload, and so we continue to architect our network to optimize the experience of the vast majority of our users. As usage patterns change over time, so, too, will our provisioning practices.

excessive burdens on the network, and that it should manage those protocols in a minimally intrusive way utilizing the technology available at the time. More specifically, in an effort to avoid upstream congestion, Comcast established thresholds for the number of simultaneous unidirectional uploads that can be initiated for each of the managed protocols in any given geographic area; when the number of simultaneous sessions remains below those thresholds, uploads are not managed. The thresholds for each protocol vary depending upon a number of factors discussed in detail below, including how the particular protocol operates and the burden that the particular protocol was determined to place on our upstream bandwidth. These management practices were not based on the type (video, music, data, etc.) or content of traffic being uploaded.

The Sandvine equipment has been used (1) to determine when the number of simultaneous unidirectional upload sessions for a particular P2P protocol in a particular geographic area reaches its pre-determined threshold, and (2) when a threshold is reached, to temporarily delay the initiation of any new unidirectional upload sessions for that protocol until the number of simultaneous unidirectional upload sessions drops below that threshold.

III. WHAT EQUIPMENT IS UTILIZED?

The specific equipment Comcast uses to effectuate its network management practices is a device known as the Sandvine Policy Traffic Switch 8210 ("Sandvine PTS 8210"). Literature describing this product is attached. The following sections explain where and how Comcast uses the Sandvine PTS 8210.

IV. WHERE HAS THE EQUIPMENT BEEN DEPLOYED AND WHEN AND UNDER WHAT CIRCUMSTANCES HAS IT BEEN USED?

Comcast initially began technical trials with the Sandvine PTS 8210s starting in May 2005. Commercial (i.e., not trial) deployment of this equipment took place over an extended period of time, beginning in 2006. We achieved wide-scale deployment in 2007.⁵

On Comcast's network, the Sandvine PTS 8210 is deployed "out-of-line" (that is, out of the regular traffic flow)⁶ and is located adjacent to the CMTS. Upstream traffic from cable modems will pass through the CMTS on its way to upstream routers, and then, depending on the traffic's ultimate destination, onto Comcast's Internet backbone. A "mirror" replicates the traffic flow that is heading upstream from the CMTS without otherwise delaying it and sends it to the Sandvine PTS 8210, where the protocols in the traffic flow are identified and the congestion management policy is applied in the manner described in greater detail below. In some circumstances, two small CMTSes located near each other may be managed by a single Sandvine PTS 8210.⁷ The following graphics provide a simplified illustration of these two configurations:

⁵ Some locations currently have a network design that is different from the standard Comcast network design because we are trialing new protocol-agnostic congestion management practices in those locations, we are preparing those locations for evolution to DOCSIS 3.0 (which has already been launched in one market), or we acquired those systems from other operators and are in the process of standardizing them. The congestion management practices described herein are not used in those systems. The locations of our trials have been widely publicized, but disclosure of proprietary plans regarding the order and timing for network investments and service upgrades would cause substantial competitive harm.

⁶ Comcast deploys the Sandvine PTS 8210 "out-of-line" so as to not create an additional potential "point-of-failure" (i.e., a point in the network where the failure of a piece of equipment would cause the network to cease operating properly). The Sandvine equipment can also be deployed "in-line," which can make the management effectuated by the equipment nearly undetectable, but Comcast does not employ this configuration.

⁷ Although the PTS generally monitors traffic and effectuates policy at the CMTS level, the session management interface is administered at the Upstream Router, one layer higher in the overall architecture.

Comcast Optical Transport Node (OTN)

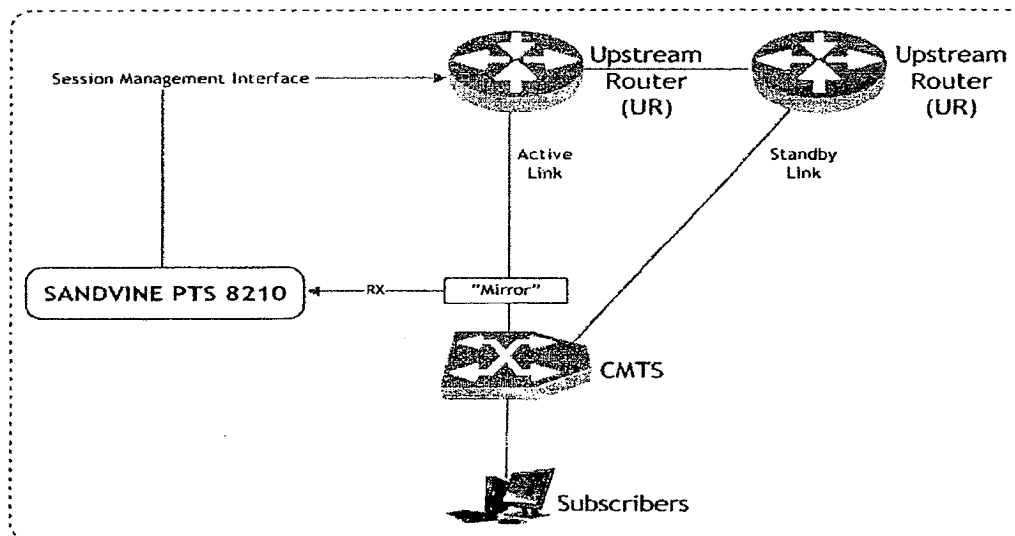


Diagram 1: Sandvine PTS Serving One CMTS.

Comcast Optical Transport Node (OTN)

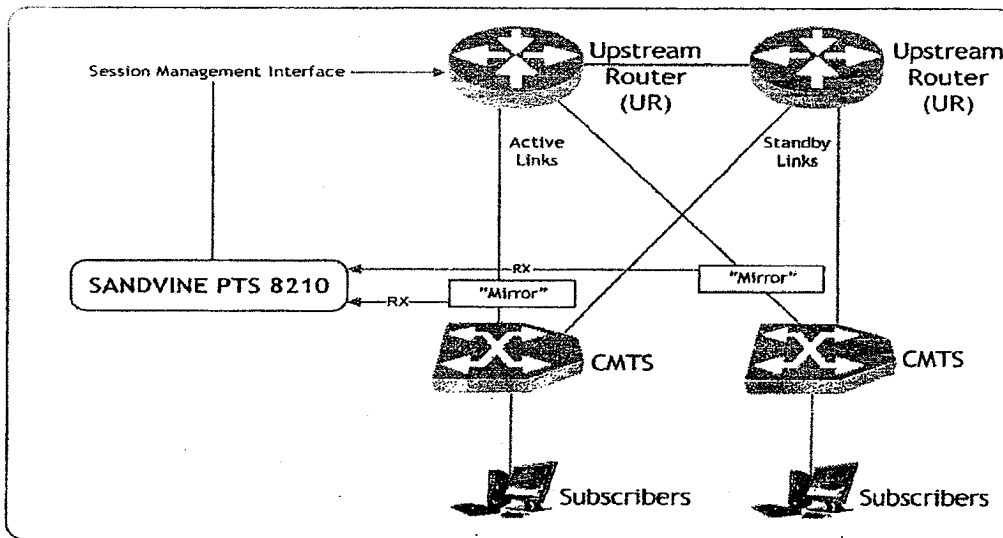


Diagram 2: Sandvine PTS Serving Two CMTSes.

V. HOW HAS THE EQUIPMENT BEEN CONFIGURED AND WHAT PROTOCOLS HAVE BEEN AFFECTED?

For purposes of managing network congestion,⁸ the Sandvine PTS 8210 has been configured to identify unidirectional P2P uploads for the protocols -- identified below -- that were determined to be the primary causes of upstream congestion.⁹ To do this, the Sandvine PTS uses technology that processes the addressing, protocol, and header information of a particular packet to determine the session type. The Sandvine PTSes, as deployed on Comcast's network, *do not inspect the content*. These devices only examine the relevant header information in the packet that indicates what type of protocol is being used (i.e., P2P, VoIP, e-mail, etc.). The equipment used does *not* read the contents of the message in order to determine whether the P2P packet is text, music, or video; listen to what is said in a VoIP packet; read the text of an e-mail packet; identify whether any packet contains political speech, commercial speech, or entertainment; or try to discern whether packets are personal or business, legal or illicit, etc.

The following diagram graphically depicts the session identification technique undertaken by the Sandvine PTS 8210 as deployed on Comcast's network. The first layers include addressing, protocol, and other "header" information that tells the network equipment what kind of packet it is. The "content" layer is the actual web page, music file, picture, video, etc., and is not examined by the Sandvine equipment.

⁸ The Sandvine PTS 8210 has not been used solely to manage congestion. It also performs numerous functions related to network management and security, including traffic analysis, anti-spam measures, denial-of-service attack prevention, and other similar functions.

⁹ A "unidirectional upload" session is different from an upload associated with a "bidirectional upload" session. A session is considered bidirectional when the user is simultaneously uploading to *and* downloading from another individual using a single TCP flow. Two of the protocols that are managed, BitTorrent and eDonkey, use bidirectional sessions; the other protocols only use unidirectional sessions. A large percentage of P2P traffic is bidirectional and is not managed by these techniques.

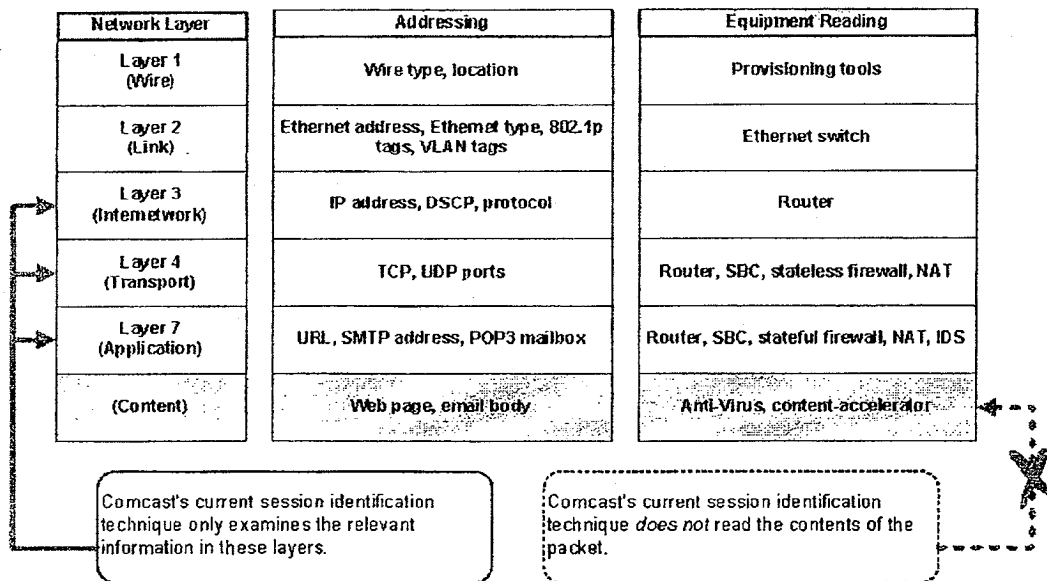


Diagram 3: Session Identification Technique.

In selecting which P2P protocol uploads to manage, network data were analyzed that identified the particular protocols that were generating disproportionate amounts of traffic. Based on that analysis, five P2P protocols were identified to be managed: Ares, BitTorrent, eDonkey, FastTrack, and Gnutella. Four of those protocols have been subject to Comcast's management practices since Comcast first implemented these practices. Ares was added in November 2007 after traffic analysis showed that it, too, was generating disproportionate demands on network resources.

For each of the managed P2P protocols, the PTS monitors and identifies the number of simultaneous unidirectional uploads that are passed from the CMTS to the upstream router. Because of the prevalence of P2P traffic on the upstream portion of our network, the number of simultaneous unidirectional upload sessions of any particular P2P protocol at any given time serves as a useful proxy for determining the level of overall network congestion. For each of the protocols, a session threshold is in place that is intended to provide for equivalently fair access

between the protocols, but still mitigate the likelihood of congestion that could cause service degradation for our customers.

Developing session thresholds for each P2P protocol must take into account the unique characteristics and behavior of each particular protocol. For example, BitTorrent and eDonkey use both bidirectional and unidirectional upload sessions, whereas Ares, FastTrack, and Gnutella only use unidirectional upload sessions.¹⁰ And even between BitTorrent and eDonkey, there are significant differences. The BitTorrent protocol more heavily promotes bidirectional uploads as compared to eDonkey, so, while they both may have the same total number of sessions, BitTorrent would have a much higher percentage of bidirectional sessions than eDonkey. Differences also arise between Ares, FastTrack, and Gnutella. For example, each protocol consumes different amounts of bandwidth per session (e.g., a high percentage of Ares unidirectional uploads consume negligible bandwidth).

The following table lays out by protocol the simultaneous unidirectional upload session thresholds for each protocol as well as the typical ratio of bidirectional to unidirectional traffic observed on our HSI network for those P2P protocols that use both, and other factors that contribute to the overall bandwidth consumption by protocol.

¹⁰ Session thresholds are not applied to bidirectional uploads so as to not interfere with the corresponding download.

Protocol	Ratio Bi:Uni	Session Equivalence ¹¹	Uni Threshold	Notes
Ares	(N/A)	150	150	Many overhead flows exist for signaling, using little or no bandwidth. The session limit is set higher to account for this. Ares is typically used for small files.
BitTorrent	~20:1	~160	8	High ratio of bidirectional to unidirectional flows. The bidirectional to unidirectional ratio varies. Typically used for large files.
eDonkey	~3:1	~42	32	Low ratio of bidirectional to unidirectional flows. Used for large files.
FastTrack	(N/A)	24	24	Typically used for large files.
Gnutella	(N/A)	80	80	Typically used for small files.

Table 1: Managed Protocols, Relevant Thresholds, and Other Notes

When the number of unidirectional upload sessions for any of the managed P2P protocols for a particular Sandvine PTS reaches the pre-determined session threshold, the Sandvine PTS issues instructions called “reset packets” that delay unidirectional uploads for that particular P2P protocol in the geographic area managed by that Sandvine PTS. The “reset” is a flag in the packet header used to communicate an error condition in communication between two computers on the Internet. As used in our current congestion management practices, the reset packet is used to convey that the system cannot, at that moment, process additional high-resource demands without creating risk of congestion. Once the number of simultaneous unidirectional uploads falls below the pre-determined session limit threshold for a particular protocol, new uploads using that protocol are allowed to proceed. Some significant percentage of P2P sessions last

¹¹ This number reflects the total number of sessions that we estimate are on-going at any moment in time when the number of simultaneous upload sessions has met the threshold that has been established for that protocol.

only a few seconds, so, even when the thresholds are met, new opportunities for unidirectional uploads generally occur quite frequently.

VI. CONCLUSION

Data collected from our HSI network demonstrate that, even with these current management practices in place, P2P traffic continues to comprise approximately half of all upstream traffic transmitted on our HSI network -- and, in some locations, P2P traffic is as much as two-thirds of total upstream traffic. The data also show that, even for the most heavily used P2P protocols, more than 90 percent of these flows are unaffected by the congestion management. Data recently collected from our network show that, when a P2P upload from a particular computer was delayed by a reset packet, that same computer successfully initiated a P2P upload within one minute in 80 percent of the cases. In fact, most of our customers using P2P protocols to upload on any given day never experienced any delay at all.

Nonetheless, as Comcast previously stated and as the Order now requires, *Comcast will end these protocol-specific congestion management practices throughout its network by the end of 2008.*

Basic Glossary

Cable Modem:

A device located at the customer premise used to access the Comcast High Speed Internet (HSI) network. In some cases, the cable modem is owned by the customer, and in other cases it is owned by the cable operator. This device has an interface (i.e., someplace to plug in a cable) for connecting the coaxial cable provided by the cable company to the modem, as well as one or more interfaces for connecting the modem to a customer's PC or home gateway device (e.g., router, firewall, access point, etc.). In some cases, the cable modem function, i.e., the ability to access the Internet, is integrated into a home gateway device or embedded multimedia terminal adapter (eMTA). Once connected, the cable modem links the customer to the HSI network and ultimately the broader Internet.

Cable Modem Termination System (CMTS):

A piece of hardware located in a cable operator's local network (generally in a "headend") that acts as the gateway to the Internet for cable modems in a particular geographic area. A simple way to think of the CMTS is as a router with interfaces on one side leading to the Internet and interfaces on the other connecting to Optical Nodes and then customers.

Cable Modem Termination System Port:

A CMTS has both upstream and downstream network interfaces to serve the local access network, which we refer to as upstream or downstream ports. A port generally serves a neighborhood of hundreds of homes.

Channel Bonding:

A technique for combining multiple downstream and/or upstream channels to increase customers' download and/or upload speeds, respectively. Multiple channels from the HFC network can be bonded into a single virtual port (called a bonded group), which acts as a large single channel or port to provide increased speeds for customers. Channel bonding is a feature of Data Over Cable Service Interface Specification (DOCSIS) version 3.

Coaxial Cable (Coax):

A type of cable used by a cable operator to connect customer premise equipment (CPE) -- such as TVs, cable modems (including embedded multimedia terminal adapters), and Set Top Boxes - - to the Hybrid Fiber Coax (HFC) network. There are many grades of coaxial cable that are used for different purposes. Different types of coaxial cable are used for different purposes on the network.

Comcast High Speed Internet (HSI):

A service/product offered by Comcast for delivering Internet service over a broadband connection.

Customer Premise Equipment (CPE):

Any device that resides at the customer's residence.

Data Over Cable Service Interface Specification (DOCSIS):

A reference standard that specifies how components on cable networks need to be built to enable HSI service over an HFC network. These standards define the specifications for the cable modem and the CMTS such that any DOCSIS certified cable modem will work on any DOCSIS certified CMTS independent of the selected vendor. The interoperability of cable modems and cable modem termination systems allows customers to purchase a DOCSIS certified modem from a retail outlet and use it on their cable-networked home. These standards are available to the public at the CableLabs website, at <http://www.cablelabs.com>.

Downstream:

Description of the direction in which a signal travels. Downstream traffic occurs when users are downloading something from the Internet, such as watching a YouTube video, reading web pages, or downloading software updates.

Headend:

A cable facility responsible for receiving TV signals for distribution over the HFC network to the end customers. This facility typically also houses the cable modem termination systems. This is sometimes also called a "hub."

Hybrid Fiber Coax (HFC):

Network architecture used primarily by cable companies, comprising of fiber optic and coaxial cables that deliver Voice, Video, and Internet services to customers.

Internet Protocol (IP):

Set of standards for sending data across a packet switched network like the Internet. In the Open System Interconnection Basic Reference Model (OSI) model, IP operates in the "Network Layer" or "Layer 3." The HSI product utilizes IP to provide Internet access to customers.

Internet Protocol Detail Record (IPDR):

Standardized technology for monitoring subscribers' upstream and downstream Internet usage data based on their cable modem. The data is collected from the CMTS and sent to a server for further processing. Additional information is available at: <http://www.ipdr.org>.

Optical Node:

A component of the HFC network generally located in customers' local neighborhoods that is used to convert the optical signals sent over fiber-optic cables to electrical signals that can be sent over coaxial cable to customers' cable modems, or vice versa. A fiber optic cable connects the Optical Node, through distribution hubs, to the CMTS and coaxial cable connects the Optical Node to customers' cable modems.

Open System Interconnection Basic Reference Model (OSI Model):

A framework for defining various aspects of a communications network in a layered approach. Each layer is a collection of conceptually similar functions that provide services to the layer above it, and receive services from the layer below it. The seven layers of the OSI model are listed below:

Layer 7 – Application
Layer 6 – Presentation
Layer 5 – Session
Layer 4 – Transport
Layer 3 – Network
Layer 2 – Data Link
Layer 1 – Physical

Port:

A port is a physical interface on a device used to connect cables in order to connect with other devices for transferring information/data. An example of a physical port is a CMTS port. Prior to DOCSIS version 3, a single CMTS physical port was used for either transmitting or receiving data downstream or upstream to a given neighborhood. With DOCSIS version 3, and the channel bonding feature, multiple CMTS physical ports can be combined to create a virtual port.

Provisioned Bandwidth:

Comcast-specific definition The peak speed associated with a tier of service purchased by a customer. For example, a customer with a 16 Mbps/2 Mbps (Down/Up) speed tier would be said to be provisioned with 16 Mbps of downstream bandwidth and 2 Mbps of upstream bandwidth.

Quality of Service (QoS):

Set of techniques to manage network resources to ensure a level of performance to specific data flows. One method for providing QoS to a network is by differentiating the type of traffic by class or flow and assigning priorities to each type. When the network becomes congested, the data packets that are marked as having higher priority will have higher likelihood of getting serviced.

Transmission Control Protocol (TCP):

Set of standard rules for reliably communicating data between programs operating on computers. TCP operates in the “Transport Layer” or “Layer 4” of the OSI model and deals with the ordered delivery of data to specific programs. If we compare the data communication network to the US Postal Service mail with delivery confirmation, the Network Layer would be analogous to the Postal Address of the recipient where the TCP Layer would be the ATTN field or the person that is to receive the mail. Once the receiving program receives the data, an acknowledgement is returned to the sending program.

Upstream:

Description of the direction in which a signal travels. Upstream traffic occurs when users are uploading something to the network, such as sending email, sharing P2P files, or uploading photos to a digital photo website.

Office of Chief Counsel

January 15, 2009

EXHIBIT E

ATTACHMENT B:
COMCAST CORPORATION
DESCRIPTION OF PLANNED NETWORK MANAGEMENT
PRACTICES TO BE DEPLOYED FOLLOWING THE
TERMINATION OF CURRENT PRACTICES

COMCAST CORPORATION
DESCRIPTION OF PLANNED NETWORK MANAGEMENT PRACTICES TO BE
DEPLOYED FOLLOWING THE TERMINATION OF CURRENT PRACTICES

Pursuant to Paragraphs 54 and 59 of the Commission's *Memorandum Opinion & Order* regarding how Comcast manages congestion on its High-Speed Internet ("HSI") network, Comcast hereby "disclose[s] to the Commission and the public the details of the network management practices that it intends to deploy following the termination of its current practices, including the thresholds that will trigger any limits on customers' access to bandwidth."¹

I. INTRODUCTION & SUMMARY

Comcast's HSI network is a shared network. This means that our HSI customers share upstream and downstream bandwidth with their neighbors. Although the available bandwidth is substantial, so, too, is the demand. Thus, when a relatively small number of customers in a neighborhood place disproportionate demands on network resources, this can cause congestion that degrades their neighbors' Internet experience.² The goal of Comcast's new congestion management practices will be to enable all users of our network resources to access a "fair share" of that bandwidth, in the interest of ensuring a high-quality online experience for all of Comcast's HSI customers.³

¹ *In re Formal Complaint of Free Press & Pub. Knowledge Against Comcast Corp. for Secretly Degrading Peer-to-Peer Applications; Broadband Industry Practices; Petition of Free Press et al. for Declaratory Ruling That Degrading an Internet Application Violates the FCC's Internet Policy Statement & Does Not Meet an Exception for "Reasonable Network Management,"* Mem. Op. and Order, FCC 08-183 ¶¶ 54, 59 (Aug. 20, 2008) ("Order").

² Although the *Order* focuses entirely on Comcast's current practices with respect to controlling network congestion, Comcast's efforts to deliver a superior Internet experience involve a wide variety of other network management efforts beyond congestion control. As Comcast has previously explained, we actively manage our HSI network in order to enhance our customers' Internet experience by, among other things, blocking spam, preventing viruses from harming the network and our subscribers, thwarting denial-of-service attacks, and empowering our customers' ability to control the content that enters their homes.

³ These congestion management practices are independent of, and should not be confused with, our recent announcement that we will amend the "excessive use" portion of our Acceptable Use Policy, effective October 1, 2008, to establish a specific monthly data usage threshold of 250 GB per account for all residential HSI customers. This excessive use threshold is designed to prevent any one residential account from consuming excessive amounts

Importantly, the new approach will be protocol-agnostic; that is, it *will not* manage congestion by focusing on the use of the specific protocols that place a disproportionate burden on network resources, or any other protocols. Rather, the new approach will focus on managing the traffic of those individuals who are using the most bandwidth at times when network congestion threatens to degrade subscribers' broadband experience and who are contributing disproportionately to such congestion at those points in time.

Specific details about these practices, including relevant threshold information, the type of equipment used, and other particulars, are discussed at some length later in this document. At the outset, however, we present a very high-level, simplified overview of how these practices will work once they are deployed. Despite all the detail provided further below, the fundamentals of this approach can be summarized succinctly:

1. Software installed in the Comcast network continuously examines aggregate traffic usage data for individual segments of Comcast's HSI network. If overall upstream or downstream usage on a particular segment of Comcast's HSI network reaches a pre-determined level, the software moves on to step two.
2. At step two, the software examines bandwidth usage data for subscribers in the affected network segment to determine which subscribers are using a disproportionate share of the bandwidth. If the software determines that a particular subscriber or subscribers have been the source of high volumes of network traffic during a recent period of minutes, traffic originating from that subscriber or those subscribers temporarily will be assigned a lower priority status.
3. During the time that a subscriber's traffic is assigned the lower priority status, such traffic will not be delayed so long as the network segment is not actually congested. If, however, the network segment becomes congested, such traffic could be delayed.
4. The subscriber's traffic returns to normal priority status once his or her bandwidth usage drops below a set threshold over a particular time interval.

of network resources as measured over the course of a month. That cap does not address the issue of network congestion, which results from traffic levels that vary from minute to minute. We have long had an "excessive use" limit in our Acceptable Use Policy but have been criticized for failing to specify what is considered to be "excessive." The new cap provides clarity to customers regarding the specific monthly consumption limit per account. As with the existing policy, a user who violates the excessive use policy twice within six months is subject to having his or her Internet service account terminated for one year.

We have made considerable progress in recent months in formulating our plans for this new approach, adjusting them, and subjecting them to real-world trials. Market trials in Chambersburg, PA; Warrenton, VA; Lake City, FL; East Orange, FL; and Colorado Springs, CO have enabled us to validate the utility of the general approach and collect substantial trial data to test multiple variations and alternative formulations.

Comcast appreciates the *Order*'s recognition that Comcast "may not have finalized the details of the network management practices that it intends to deploy following termination of its current practices" by the date of this report,⁴ but our progress to date is sufficient that we do not need to make the certification contemplated by the *Order* or postpone disclosing the details of our current plans. Certainly some additional adjustments -- and possibly material changes -- will be made as we continue our trials and move forward with implementation. Thus, consistent with the spirit of the language quoted above, Comcast commits that, until we have completed our transition to the protocol-agnostic congestion management practices described below, we will inform the Commission and the public of any material changes to the practices and plans detailed here, at least two weeks prior to implementation of any such changes.⁵

II. IMPLEMENTATION AND CONFIGURATION

To understand exactly how these new congestion management practices will work, it will be helpful to have a general understanding of how Comcast's HSI network is designed.

Comcast's HSI network is what is commonly referred to as a hybrid fiber-coax network, with coaxial cable connecting each subscriber's cable modem to an Optical Node, and fiber optic cables connecting the Optical Node, through distribution hubs, to the Cable Modem Termination

⁴ *Order* ¶ 55 n.246.

⁵ We recognize that clear communication with our customers is an important part of a successful long-term relationship. On an ongoing basis, we will provide our customers with clear, concise, and useful information about the services that we provide.

System (“CMTS”), which is also known as a “data node.”⁶ The CMTSes are then connected to higher-level routers, which in turn are connected to Comcast’s Internet backbone facilities. Today, Comcast has approximately 3300 CMTSes deployed throughout our network, serving our 14.4 million HSI subscribers.

Each CMTS has multiple “ports” that handle traffic coming into and leaving the CMTS. In particular, each cable modem deployed on the Comcast HSI network is connected to the CMTS through the ports on the CMTS. These ports can be either “downstream” ports or “upstream” ports, depending on whether they send information to cable modems (downstream) or receive information from cable modems (upstream) attached to the port.⁷ Today, on average, about 275 cable modems share the same downstream port and about 100 cable modems share the same upstream port. Both types of ports can experience congestion that could degrade the broadband experience of our subscribers and, unlike with the previous congestion management practices, both upstream and downstream traffic will be subject to management under these new practices.

To implement Comcast’s new protocol-agnostic congestion management practices, Comcast will purchase new hardware and software that will be deployed near the Regional Network Routers (“RNRs”) that are further upstream in Comcast’s network. This new hardware will consist of Internet Protocol Detail Record (“IPDR”) servers, Congestion Management servers, and PacketCable Multimedia (“PCMM”) servers. Further details about each of these pieces of equipment can be found below, in Section III. It is important to note here, however,

⁶ The reader may find it useful to refer to the attached glossary for additional explanation of unfamiliar terms.

⁷ The term “port” as used here generally contemplates single channels on a CMTS, but these statements will apply to virtual channels, also known as “bonded groups,” in a DOCSIS 3.0 environment.

that, even though the physical location of these servers is at the RNR, the servers will communicate with -- and manage individually -- multiple ports on multiple CMTSes to effectuate the practices described in this document. That is to say, bandwidth usage on one CMTS port will have no effect on whether the congestion management practices described herein are applied to a subscriber on a different CMTS port.

The following diagram provides a simplified graphical depiction of the network architecture just described:

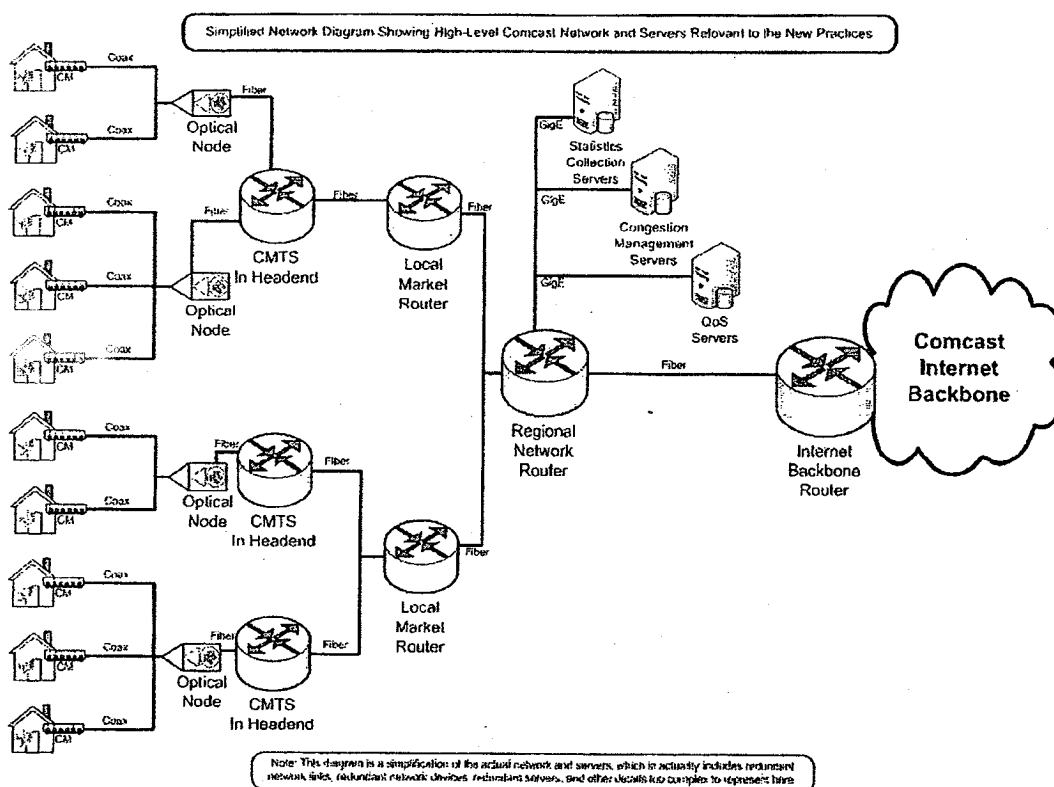


Diagram 1: Comcast Network Design

Each Comcast HSI subscriber's cable modem has a "bootfile" that contains certain pieces of information about the subscriber's service to ensure that the service functions properly.⁸ For example, the bootfile contains information about the maximum speed (what we refer to in this document as the "provisioned bandwidth") that a particular modem can achieve based on the tier (personal, commercial, etc.) the customer has purchased. Bootfiles are generally reset from time to time to account for changes in the network and other updates, and this is usually done through a command sent from the network and without any effect on the subscriber. In preparation for the transition to the new practices, Comcast will send new bootfiles to our HSI customers' cable modems that will create two Quality of Service ("QoS") levels for Internet traffic going to and from the cable modem: (1) "Priority Best-Effort" traffic ("PBE"); and (2) "Best-Effort" traffic ("BE"). As with previous changes to cable modem bootfiles, the replacement of the old bootfile with the new bootfile requires no active participation by Comcast customers.⁹

Thereafter, all traffic going to or coming from cable modems on the Comcast HSI network will be designated as either PBE or BE. PBE will be the default status for all Internet traffic coming from or going to a particular cable modem. Traffic will be designated BE for a particular cable modem only when both of two conditions are met:

- First, the usage level of a particular upstream or downstream port of a CMTS, as measured over a particular period of time, must be nearing the point where congestion could degrade users' experience. We refer to this as the "Near Congestion State" and, based on the technical trials we have conducted, we have established a threshold, described in more detail below, for when a particular CMTS port enters that state.

⁸ No personal information is included in the bootfile; it only includes information about the service that the subscriber has purchased.

⁹ A very small percentage of Comcast's HSI customers use first-generation cable modems that cannot support the new congestion management practices. These cable modems will not receive the new bootfiles and, after December 31, 2008, those cable modems will not be subject to congestion management and all their traffic effectively will be designated PBE. These older cable modems have less capability to utilize significant amounts of bandwidth and will, in any event, be replaced over time.

- Second, a particular subscriber must be making a significant contribution to the bandwidth usage on the particular port, as measured over a particular period of time. We refer to this as the “Extended High Consumption State” and, based on the technical trials we have conducted, we have established a threshold, described in more detail below, for when a particular user enters that state.

When, *and only when*, both conditions are met, a user’s upstream or downstream traffic (depending on which type of port is in the Near Congestion State) will be designated as BE.

Then, to the extent that actual congestion occurs, any delay resulting from the congestion will affect BE traffic before it affects PBE traffic.

We now explain the foregoing in greater detail.

A. Thresholds For Determining When a CMTS Port Is in a Near Congestion State

For a CMTS port to enter the Near Congestion State, traffic flowing to or from that CMTS port must exceed a specified level (the “Port Utilization Threshold”) for a specific period of time (the “Port Utilization Duration”). The Port Utilization Threshold on a CMTS port is measured as a percentage of the total aggregate upstream or downstream bandwidth for the particular port during the relevant timeframe. The Port Utilization Duration on the CMTS is measured in minutes.

Values for each of the thresholds to be used as part of this new management technique have been tentatively established after an extensive process of lab tests, simulations, technical trials, vendor evaluations, customer feedback, and a third-party consulting analysis. In the same way that specific anti-spam or other network management practices are adjusted to address new issues that arise, it is a near certainty that these values will change in both the short-term and the long-term, as Comcast gathers more data and performs additional analysis resulting from wide-scale deployment of the new technique. Moreover, as with any large network or software system, software bugs and/or unexpected errors may arise, requiring software patches or other

corrective actions. As always, our decisions on these matters will be driven by the marketplace imperative that we deliver the best possible experience to our HSI subscribers.

Given our experience so far, we have determined that a starting point for the upstream Port Utilization Threshold should be 70 percent and the downstream Port Utilization Threshold should be 80 percent. For the Port Utilization Duration, we have determined that the starting point should be approximately 15 minutes (although some technical limitations in some newer CMTSes deployed on Comcast's network may make this time period vary slightly). Thus, over any 15-minute period, if an average of more than 70 percent of a port's upstream bandwidth capacity or more than 80 percent of a port's downstream bandwidth capacity is utilized, that port will be determined to be in a Near Congestion State.

Based on the trials to date, we expect that a typical CMTS port on our HSI network will be in a Near Congestion State only for relatively small portions of the day, if at all, though there is no way to forecast what will be the busiest time on a particular port on a particular day. Moreover, the trial data indicate that, even when a particular port is in a Near Congestion State, the instances where the network *actually* becomes congested during the Port Utilization Duration are few, and managed users whose traffic is delayed during those congested periods perceive little, if any, effect, as discussed below.

B. Thresholds For Determining When a User Is in an Extended High Consumption State and for Release from that Classification

Once a particular CMTS port is in a Near Congestion State, the software examines whether any cable modems are consuming bandwidth disproportionately.¹⁰ For a user to enter an

¹⁰ Although each cable modem is typically assigned to a particular household, the software does not (and cannot) actually identify individual users or analyze particular users' traffic. For purposes of this report, we use "cable modem," "user," and "subscriber" interchangeably to mean a subscriber account or user account and not an individual person.

Extended High Consumption State, he or she must consume greater than a certain percentage of his or her provisioned upstream or downstream bandwidth (the “User Consumption Threshold”) for a specific length of time (the “User Consumption Duration”). The User Consumption Threshold is measured as a user’s consumption of a particular percentage of his or her total provisioned upstream or downstream bandwidth (the maximum speed that a particular modem can achieve based on the tier (personal, commercial, etc.) the customer has purchased, e.g., if a user buys a service with speeds of 8 Mbps downstream and 1 Mbps upstream, then his or her provisioned downstream speed is 8 Mbps and provisioned upstream speed is 1 Mbps).¹¹ The User Consumption Duration is measured in minutes.

Following lab tests, simulations, technical trials, customer feedback, vendor evaluations, and a third-party consulting analysis, we have determined that the appropriate starting point for the User Consumption Threshold is 70 percent of a subscriber’s provisioned upstream or downstream bandwidth, and that the appropriate starting point for the User Consumption Duration is 15 minutes. That is, when a subscriber uses an average of 70 percent or more of his or her provisioned upstream or downstream bandwidth over a particular 15-minute period, that user will be in an Extended High Consumption State.¹² As noted above, these values are subject to change as necessary in the same way that specific anti-spam or other network management practices are adjusted to address new issues that arise, or should unexpected software bugs or other problems arise.

¹¹ Because the User Consumption Threshold is a percentage of provisioned bandwidth for a particular user account, and not a static value, users of higher speed tiers will have correspondingly higher User Consumption Thresholds.

¹² The User Consumption Thresholds have been set sufficiently high that using the HSI connection for VoIP or most streaming video cannot alone cause subscribers to our standard-level HSI service to exceed the User Consumption Threshold. For example, while Comcast’s standard-level HSI service provisions downstream bandwidth at 6 Mbps, today, streaming video (even some HD video) from Hulu uses less than 2.5 Mbps, a Vonage or Skype VoIP call uses less than 131 Kbps, and streaming music uses less than 128 Kbps.

Based on data collected from the trial markets where the new management practices are being tested, on average less than one-third of one percent of subscribers have had their traffic priority status changed to the BE state on any given day. For example, in Colorado Springs, CO, the largest test market, on any given day in August 2008, an average of 22 users out of 6,016 total subscribers in the trial had their traffic priority status changed to BE at some point during the day.

A user's traffic is released from a BE state when the user's bandwidth consumption drops below 50 percent of his or her provisioned upstream or downstream bandwidth for a period of approximately 15 minutes. These release criteria are intended to minimize (and hopefully prevent) user QoS oscillation, i.e., a situation in which a particular user could cycle repeatedly between BE and PBE. NetForecast, Inc., an independent consultant retained to provide analysis and recommendations regarding Comcast's trials and related congestion management work, suggested this approach, which has worked well in our ongoing trials and lab testing.¹³ In trials, we have observed that user traffic rarely remains in a managed state longer than the initial 15-minute period.

Simply put, there are four steps to determining whether the traffic associated with a particular cable modem is designated as PBE or BE:

1. Determine if the CMTS port is in a Near Congestion State.
2. If yes, determine whether any users are in an Extended High Consumption State.
3. If yes, change those users' traffic to BE from PBE. If the answer at either step one or step two is no, no action is taken.

¹³ NetForecast, Inc. is an internationally recognized engineering consulting company that, among other things, advises network operators and technology vendors about technology issues and how to improve the performance of a network.

4. If a user's traffic has been designated BE, check user consumption at next interval. If user consumption has declined below predetermined threshold, reassign the user's traffic as PBE. If not, recheck at next interval.

The following diagram graphically depicts how this management process would work in the case of a situation where upstream port utilization may be reaching a Near Congestion State (the same diagram, with different values in the appropriate places, could be used to depict the management process for downstream ports, as well):

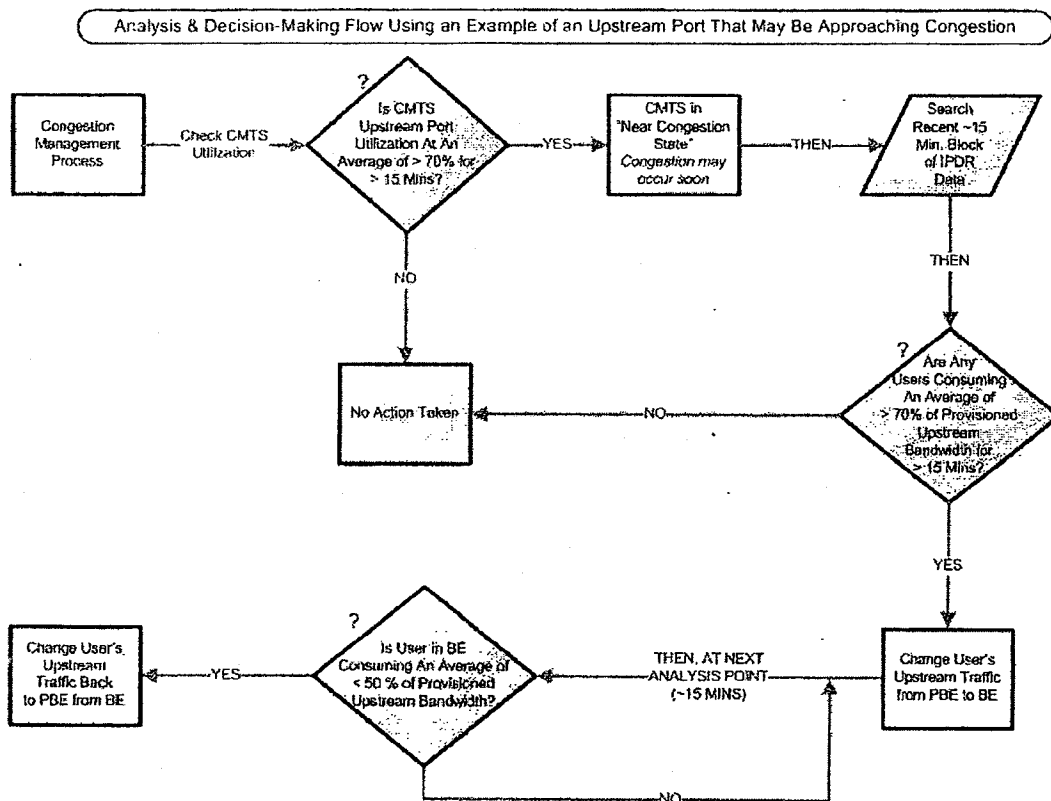


Diagram 2: Upstream Congestion Management Decision Flowchart

C. Effect of BE Quality of Service on Users' Broadband Experience

When a CMTS port is in a Near Congested State and a cable modem connected to that port is in an Extended High Consumption State, that cable modem's traffic will be designated as

BE. Depending upon the level of congestion in the CMTS port, this designation may or may not result in the user's traffic being delayed or, in extreme cases, dropped before PBE traffic is dropped.¹⁴ This is because of the way that the CMTS handles traffic. Specifically, CMTS ports have what is commonly called a "scheduler" that puts all the packets coming from or going to cable modems on that particular port in a queue and then handles them in turn. A certain number of packets can be processed by the scheduler in any given moment; for each time slot, PBE traffic will be given priority access to the available capacity, and BE traffic will be processed on a space-available basis.

A rough analogy would be to busses that empty and fill up at incredibly fast speeds. As empty busses arrive at the figurative "bus stop" -- every two milliseconds in this case -- they fill up with as many packets as are waiting for "seats" on the bus, to the limits of the bus' capacity. During non-congested periods, the bus will usually have several empty seats, but, during congested periods, the bus will fill up and packets will have to wait for the next bus. It is in the congested periods that BE packets will be affected. If there is no congestion, packets from a user in a BE state should have little trouble getting on the bus when they arrive at the bus stop. If, on the other hand, there is congestion in a particular instance, the bus may become filled by packets in a PBE state before any BE packets can get on. In that situation, the BE packets would have to wait for the next bus that is not filled by PBE packets. In reality, this all takes place in two-millisecond increments, so even if the packets miss 50 "busses," the delay only will be about *one-tenth of a second*.

¹⁴ Congestion can occur in any IP network, and, when it does, packets can be delayed or dropped. As a result, applications and protocols have been designed to deal with this reality. Our new congestion management practices will ensure that, in those rare cases where packets may be dropped, BE packets will be dropped before PBE packets are dropped.

During times of actual network congestion, when BE traffic might be delayed, there are a variety of effects that could be experienced by a user whose traffic is delayed, depending upon what applications he or she is using. Typically, a user whose traffic is in a BE state during actual congestion may find that a webpage loads sluggishly, a peer-to-peer upload takes somewhat longer to complete, or a VoIP call sounds choppy. Of course, the same thing could happen to the customers on a port that is congested *in the absence of any congestion management*; the difference here is that the effects of any such delays are shifted toward those who have been placing the greatest burden on the network, instead of being distributed randomly among the users of that port without regard to their consumption levels.

NetForecast, Inc. explored the potential risk of a worst-case scenario for users whose traffic is in a BE state: the possibility of “bandwidth starvation” in the theoretical case where 100 percent of the CMTS bandwidth is taken up by PBE traffic for an extended period of time. In theory, such a condition could mean that a given user whose traffic is designated BE would be unable to effectuate an upload or download (as noted above, both are managed separately) for some period of time. However, when these management techniques were tested, first in company testbeds and then in our real-world trials conducted in the five markets, such a theoretical condition did not occur. In addition, trial results demonstrated that these management practices have very modest real-world impacts. To date, *Comcast has yet to receive a single customer complaint in any of the trial markets that can be traced to the new congestion management practices*, despite having broadly publicized its trials.

Comcast will continue to monitor how user traffic is affected by these new congestion management techniques and will make the adjustments necessary to ensure that all Comcast HSI customers have a high-quality Internet experience.

III. EQUIPMENT/SOFTWARE USED AND LOCATION

The above-mentioned functions will be carried out using three different types of application servers, supplied by three different vendors. As mentioned above, these servers will be installed near Comcast's regional network routers. The *exact* locations of various servers have not been finalized, but this will not change the fact that they will manage individual CMTS ports.

The first application server will be an IPDR server, which will collect relevant cable modem volume usage information from the CMTS, such as how many aggregate upstream or downstream bytes a subscriber uses over a particular period of time.¹⁵ Comcast has not yet chosen a vendor for the IPDR servers, but is in active negotiations with several vendors.

The second application server is the Sandvine Congestion Management Fairshare ("CMF") server, which will use Simple Network Management Protocol ("SNMP") to measure CMTS port utilization and detect when a port is in a Near Congestion State. When this happens, the CMF server will then query the relevant IPDR data for a list of cable modems meeting the criteria set forth above for being in an Extended High Consumption State.

If one or more users meet the criteria to be managed, then the CMF server will notify a third application server, the PCMM application server developed by Camiant Technologies, as to which users have been in an Extended High Consumption State and whose traffic should be treated as BE. The PCMM servers are responsible for signaling a given CMTS to set the traffic for specific cable modems with a BE QoS, and for tracking and managing the state of such CMTS actions. *If no users meet the criteria to be managed, no users will have their traffic managed.*

¹⁵ IPDR has been adopted as a standard by many industry organizations and initiatives, such as CableLabs, ATIS, ITU, and 3GPP, among others.

The following diagram graphically depicts the high-level management flows among the congestion management components on Comcast's network, as described above:

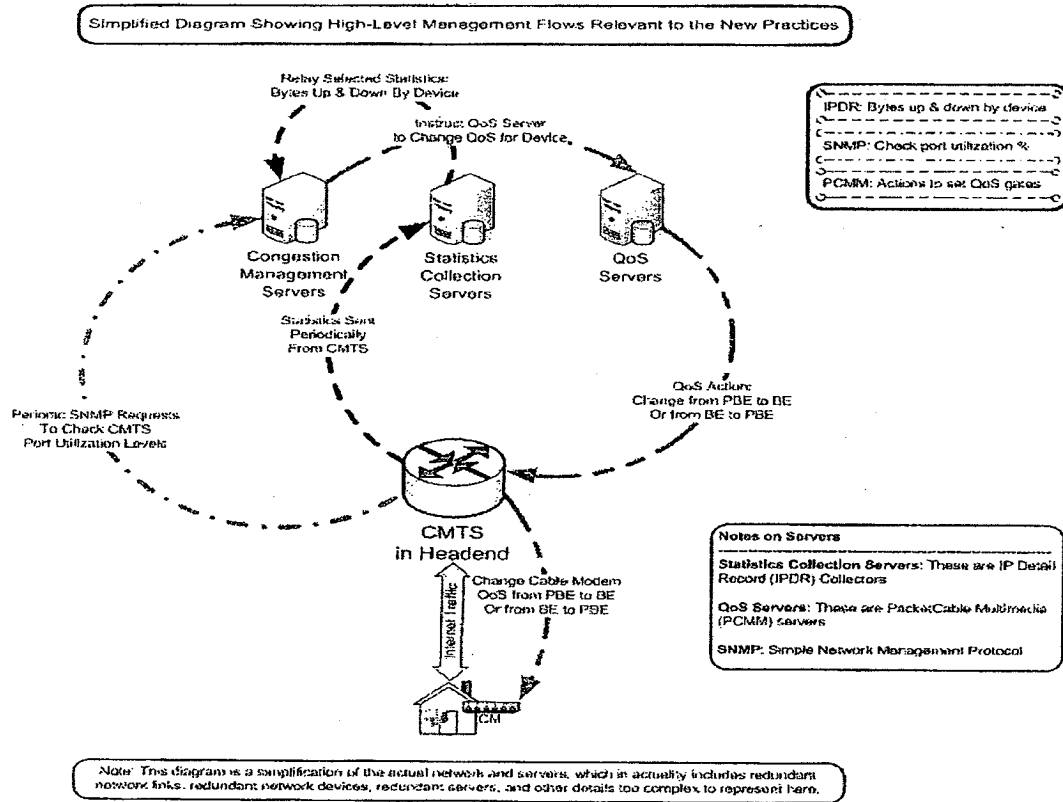


Diagram 3: High Level Management Flows

IV. CONCLUSION

Comcast's transition to protocol-agnostic congestion management is already underway, and Comcast is on schedule to meet the benchmarks set forth in Attachment C in order to complete the transition by December 31, 2008. As described above, the new approach will not manage congestion by focusing on managing the use of specific protocols. Nor will this approach use "reset packets." Rather, the new approach will (1) during periods when a CMTS port is in a Near Congestion State, (2) identify the subscribers on that port who have consumed a

disproportionate amount of bandwidth over the preceding 15 minutes, (3) lower the priority status of those subscribers' traffic to BE status until those subscribers meet the release criteria, and (4) during periods of congestion, delay BE traffic before PBE traffic is delayed. Our trials indicate that these new practices will ensure a quality online experience for all of our HSI customers.

Basic Glossary

Cable Modem:

A device located at the customer premise used to access the Comcast High Speed Internet (HSI) network. In some cases, the cable modem is owned by the customer, and in other cases it is owned by the cable operator. This device has an interface (i.e., someplace to plug in a cable) for connecting the coaxial cable provided by the cable company to the modem, as well as one or more interfaces for connecting the modem to a customer's PC or home gateway device (e.g., router, firewall, access point, etc.). In some cases, the cable modem function, i.e., the ability to access the Internet, is integrated into a home gateway device or embedded multimedia terminal adapter (eMTA). Once connected, the cable modem links the customer to the HSI network and ultimately the broader Internet.

Cable Modem Termination System (CMTS):

A piece of hardware located in a cable operator's local network (generally in a "headend") that acts as the gateway to the Internet for cable modems in a particular geographic area. A simple way to think of the CMTS is as a router with interfaces on one side leading to the Internet and interfaces on the other connecting to Optical Nodes and then customers.

Cable Modem Termination System Port:

A CMTS has both upstream and downstream network interfaces to serve the local access network, which we refer to as upstream or downstream ports. A port generally serves a neighborhood of hundreds of homes.

Channel Bonding:

A technique for combining multiple downstream and/or upstream channels to increase customers' download and/or upload speeds, respectively. Multiple channels from the HFC network can be bonded into a single virtual port (called a bonded group), which acts as a large single channel or port to provide increased speeds for customers. Channel bonding is a feature of Data Over Cable Service Interface Specification (DOCSIS) version 3.

Coaxial Cable (Coax):

A type of cable used by a cable operator to connect customer premise equipment (CPE) -- such as TVs, cable modems (including embedded multimedia terminal adapters), and Set Top Boxes - - to the Hybrid Fiber Coax (HFC) network. There are many grades of coaxial cable that are used for different purposes. Different types of coaxial cable are used for different purposes on the network.

Comcast High Speed Internet (HSI):

A service/product offered by Comcast for delivering Internet service over a broadband connection.

Customer Premise Equipment (CPE):

Any device that resides at the customer's residence.

Data Over Cable Service Interface Specification (DOCSIS):

A reference standard that specifies how components on cable networks need to be built to enable HSI service over an HFC network. These standards define the specifications for the cable modem and the CMTS such that any DOCSIS certified cable modem will work on any DOCSIS certified CMTS independent of the selected vendor. The interoperability of cable modems and cable modem termination systems allows customers to purchase a DOCSIS certified modem from a retail outlet and use it on their cable-networked home. These standards are available to the public at the CableLabs website, at <http://www.cablelabs.com>.

Downstream:

Description of the direction in which a signal travels. Downstream traffic occurs when users are downloading something from the Internet, such as watching a YouTube video, reading web pages, or downloading software updates.

Headend:

A cable facility responsible for receiving TV signals for distribution over the HFC network to the end customers. This facility typically also houses the cable modem termination systems. This is sometimes also called a "hub."

Hybrid Fiber Coax (HFC):

Network architecture used primarily by cable companies, comprising of fiber optic and coaxial cables that deliver Voice, Video, and Internet services to customers.

Internet Protocol (IP):

Set of standards for sending data across a packet switched network like the Internet. In the Open System Interconnection Basic Reference Model (OSI) model, IP operates in the "Network Layer" or "Layer 3." The HSI product utilizes IP to provide Internet access to customers.

Internet Protocol Detail Record (IPDR):

Standardized technology for monitoring subscribers' upstream and downstream Internet usage data based on their cable modem. The data is collected from the CMTS and sent to a server for further processing. Additional information is available at: <http://www.ipdr.org>.

Optical Node:

A component of the HFC network generally located in customers' local neighborhoods that is used to convert the optical signals sent over fiber-optic cables to electrical signals that can be sent over coaxial cable to customers' cable modems, or vice versa. A fiber optic cable connects the Optical Node, through distribution hubs, to the CMTS and coaxial cable connects the Optical Node to customers' cable modems.

Open System Interconnection Basic Reference Model (OSI Model):

A framework for defining various aspects of a communications network in a layered approach. Each layer is a collection of conceptually similar functions that provide services to the layer above it, and receive services from the layer below it. The seven layers of the OSI model are listed below:

Layer 7 – Application
Layer 6 – Presentation
Layer 5 – Session
Layer 4 – Transport
Layer 3 – Network
Layer 2 – Data Link
Layer 1 – Physical

Port:

A port is a physical interface on a device used to connect cables in order to connect with other devices for transferring information/data. An example of a physical port is a CMTS port. Prior to DOCSIS version 3, a single CMTS physical port was used for either transmitting or receiving data downstream or upstream to a given neighborhood. With DOCSIS version 3, and the channel bonding feature, multiple CMTS physical ports can be combined to create a virtual port.

Provisioned Bandwidth:

Comcast-specific definition The peak speed associated with a tier of service purchased by a customer. For example, a customer with a 16 Mbps/2 Mbps (Down/Up) speed tier would be said to be provisioned with 16 Mbps of downstream bandwidth and 2 Mbps of upstream bandwidth.

Quality of Service (QoS):

Set of techniques to manage network resources to ensure a level of performance to specific data flows. One method for providing QoS to a network is by differentiating the type of traffic by class or flow and assigning priorities to each type. When the network becomes congested, the data packets that are marked as having higher priority will have higher likelihood of getting serviced.

Transmission Control Protocol (TCP):

Set of standard rules for reliably communicating data between programs operating on computers. TCP operates in the “Transport Layer” or “Layer 4” of the OSI model and deals with the ordered delivery of data to specific programs. If we compare the data communication network to the US Postal Service mail with delivery confirmation, the Network Layer would be analogous to the Postal Address of the recipient where the TCP Layer would be the ATTN field or the person that is to receive the mail. Once the receiving program receives the data, an acknowledgement is returned to the sending program.

Upstream:

Description of the direction in which a signal travels. Upstream traffic occurs when users are uploading something to the network, such as sending email, sharing P2P files, or uploading photos to a digital photo website.

Office of Chief Counsel

January 15, 2009

EXHIBIT F

ATTACHMENT C:
COMCAST CORPORATION
NETWORK MANAGEMENT TRANSITION COMPLIANCE
PLAN

COMCAST CORPORATION
NETWORK MANAGEMENT TRANSITION COMPLIANCE PLAN

1. **New Network Management Practices.** Comcast is preparing to transition to new, protocol-agnostic practices for managing congestion on our High-Speed Internet (“HSI”) network (“congestion management”). We will complete that transition across our HSI network by December 31, 2008. We provide more details about these new practices, and detailed information about some of the hardware and software referenced in this document, in Attachment B.
2. **Trials.** Comcast is currently performing technical trials of the new congestion management practices in the following communities: Chambersburg, PA; Warrenton, VA; Lake City, FL; East Orange, FL; and Colorado Springs, CO. If Comcast management deems it necessary to conduct additional trials, they will be announced on Comcast’s Network Management Policy page, located at <http://www.comcast.net/networkmanagement/>.
3. **Benchmarks.** Comcast expects to meet the following benchmarks in our transition to the new protocol-agnostic congestion management practices:
 - a. **October 15, 2008.** Comcast will have completed installation of the PacketCable Multimedia and Internet Protocol Detail Record servers, and will have begun installation of the Congestion Management Fairshare servers. These servers, and other hardware used for the new congestion management practices, are described in detail in Attachment B.
 - b. **November 15, 2008.** Comcast will have begun commercial (i.e., not trial) “cut-overs” to the new congestion management practices on a market-by-market basis. Once the equipment is in place in a particular area, this involves Comcast installing a software update to our customers’ cable modems in that area, launching the software for the new protocol-agnostic congestion management practices in that area, and disabling the current congestion management techniques in that area.
 - c. **December 31, 2008.** Comcast will have completed the deployment of all hardware and software needed to implement our new congestion management practices, and will have completed the “cut-overs” to the new, protocol-agnostic congestion management practices. We will also have discontinued the protocol-specific congestion management practices throughout our network.
 - d. **January 5, 2009.** Comcast will report to the FCC that we have discontinued our protocol-specific congestion management practices throughout our network, and that we have completed transitioning to the new congestion management practices.
4. **Information Sharing.** Comcast will take the following steps to provide timely information to our customers about the transition to our new congestion management practices. We intend for our disclosures to be clear, concise, and useful to the average consumer.

- a. **Congestion Management Trials.** Comcast already provides information about the trials of our new congestion management practices on our Network Management Policy page. Information about any additional trials will be posted there.
 - b. **Revision of Acceptable Use Policy.** Comcast will take the following two steps with regard to revising our Acceptable Use Policy (“AUP”).
 - i. Comcast will revise our AUP to explain that our network congestion management practices may include temporarily lowering the priority of traffic for users who are the top contributors to current network congestion. This new AUP will be published on October 1, 2008.
 - ii. By January 1, 2009, Comcast will publish an amended AUP to reflect the discontinuation of the current protocol-specific congestion management practices, as well as any other necessary and appropriate updates.
 - c. **Customer Disclosures.** Comcast will take the following steps to inform our customers of the new congestion management practices.
 - i. Attachment B, detailing Comcast’s planned network management practices, as filed with the Commission on September 19, 2008, will be posted by midnight on that date to Comcast’s Network Management Policy web page.
 - ii. Comcast will, by midnight on September 19, 2008, provide new Frequently Asked Questions that explain these developments clearly, and will continue to post on our Network Management Policy web page updated information about the new congestion management practices.
 - iii. At least two weeks prior to the first commercial (i.e., not trial) deployment of the new congestion management practices, Comcast will send e-mail notifications to the primary Comcast.net e-mail address associated with each customer regarding the new congestion management practices, informing them of the AUP revisions, and directing them to Comcast’s Network Management Policy page for FAQs and other information. These developments will be further publicized through announcements at <http://www.comcast.net>.
 - d. **Customer Support.** Comcast will also answer customer questions on our Customer Support Forums page, located at <http://forums.comcast.net/>, which is available to all Comcast HSI customers. A link from the Network Management Policy page to the Customer Support Forums will also be provided.
5. **Management Responsibility.** The transition to these new practices and the discontinuation of the old practices is a high-priority effort. The project is being led and overseen at a senior executive level. The actual engineering and operations work is a joint project of the Office of the Chief Technology Officer and National Engineering & Technical Operations. In addition, regular customer communications and messaging are overseen by the company’s Online Services business unit representatives.

6. **Employee Training.** Educational materials about the new protocol-agnostic practices are being developed for broad distribution throughout the relevant business units in Comcast. All affected employees in those business units will receive appropriate training about Comcast's transition to the new protocol-agnostic congestion management practices. Detailed technical customer inquiries about the new practices will be directed to the representatives in the Online Services business unit who will be trained to deal with such questions.
7. **FCC Notification of Material Changes.** Comcast will make supplementary filings with the Commission as necessary to keep the FCC (and the public) informed of any material changes in our plans before the transition to protocol-agnostic congestion management is completed at year-end.

Office of Chief Counsel

January 15, 2009

EXHIBIT G



Comcast Corporation
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Suite 500
Washington, DC 20006
202.379.7100 Tel
202.466.7718 Fax
www.comcast.com

January 5, 2009

VIA ECFS

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

**Re: In the Matter of Formal Complaint of Free Press and Public Knowledge
Against Comcast Corporation for Secretly Degrading Peer-to-Peer
Applications, File No. EB-08-IH-1518**

**In the Matter of Broadband Industry Practices; Petition of Free Press et al.
for Declaratory Ruling That Degrading an Internet Application Violates the
FCC's Internet Policy Statement and Does Not Meet an Exception for
"Reasonable Network Management," WC Docket No. 07-52**

Dear Ms. Dortch:

In accordance with the Compliance Plan filed by Comcast on September 19, 2008,¹ and consistent with the voluntary agreement that Comcast announced on March 27, 2008,² Comcast hereby notifies the Commission that, as of December 31, 2008, Comcast has ceased employing the congestion management practices described in Attachment A of Comcast's filing of September 19, 2008.³ We have published a revised Acceptable Use Policy (<http://www.comcast.net/terms/use/>) and updated our Network Management web page (<http://www.comcast.net/networkmanagement>) to reflect the discontinuation of these practices. We also hereby notify the Commission that we have instituted the congestion management practices described in Attachment B of our September 19th filing throughout our high-speed Internet network.⁴ Consistent with our letter of September 19th, Comcast will continue to refine and optimize these congestion management practices to deliver the best possible broadband

¹ See Ex Parte Letter of Kathryn A. Zachem, Comcast Corp., to Marlene H. Dortch, Secretary, FCC, WC Docket No. 07-52, File No. EB-08-IH-1518, at 2 & Attachment C, at 1 (Sept. 19, 2008) ("Comcast Disclosures").

² See Ex Parte Letter of David L. Cohen, Comcast Corp., to Chairman Kevin J. Martin *et al.*, FCC, WC Docket No. 07-52 (Mar. 27, 2008).

³ See Comcast Disclosures, Attachment A.

⁴ See *id.* Attachment B.

Ms. Marlene Dortch
January 5, 2009
Page 2 of 2

experience for our customers, and we will continue to provide our customers with clear, concise, and useful information about the services we provide.

The Internet continues to be an engine for innovation and economic growth. We are proud to be a leader in bringing broadband Internet to consumers all over the country, serving some 14.7 million broadband subscribers, and adding fuel to that engine. We will continue to work hard to deliver a world-class service that gives all of our subscribers access to the content, applications, and services that they demand.

Please contact me should you have any questions regarding this submission.

Sincerely,

/s/ Kathryn A. Zachem
Kathryn A. Zachem
Vice President,
Regulatory and State Legislative Affairs
Comcast Corporation

cc: Chairman Kevin J. Martin
Commissioner Michael J. Copps
Commissioner Jonathan S. Adelstein
Commissioner Robert M. McDowell
Daniel Gonzalez
Dana Shaffer
Scott Bergmann
Nick Alexander

Kris Monteith
Ian Dillner
Scott Deutchman


Office of Chief Counsel

January 15, 2009

EXHIBIT H

comcast.net Help & Support

search help & support

change location  Zip

Overview

Billing High-Speed Internet Cable TV Digital Voice

 L

Frequently Asked Questions about Network Management

Comcast is committed to providing the best online experience possible for all of its customers. The company uses reasonable network management practices that are consistent with industry standards. Comcast maintains an Acceptable Use Policy ("AUP") located at <http://www.comcast.net/terms/useter> for its Comcast High-Speed Internet Service customers. The AUP and these FAQs discuss why Comcast manages its network and how it may do so.

The following Frequently Asked Questions are intended to help clarify what Comcast means by network management.

[Why does Comcast manage its network?](#)

[How does Comcast manage its network?](#)

[Does network management change over time?](#)

[How will the new technique work?](#)

[Will the technique target P2P or other applications, or make decisions about the content of my traffic?](#)

[How does the new network management technique impact me and my use of the Comcast High-Speed Internet service?](#)

[How often does Comcast expect to use this technique?](#)

[Can you give me some "real world" examples of how much bandwidth consumption would be considered too much? For example, how many movies would I have to download to be affected by this new technique?](#)

[How will customers know they are being managed?](#)

[Does this technique apply to both Commercial and Residential services?](#)

[How is this announcement related to the recent 250 GB monthly usage threshold?](#)

[Is Comcast Digital Voice affected by this technique? What about other VoIP providers?](#)

[What about Facebook.com and streaming video or video downloads? What will happen to them?](#)

[Does Comcast block peer-to-peer \("P2P"\) traffic or applications like BitTorrent, Gnutella, or others?](#)

[Does Comcast discriminate against particular types of online content?](#)

[Why does Comcast manage its network?](#)

Comcast manages its network with one goal: to deliver the best possible broadband Internet experience to all of its customers. High-speed bandwidth and network resources are not unlimited. Managing the network is essential to promote the use and enjoyment of the Internet by all of our customers. We use reasonable network management practices that are consistent with industry standards. We also try to use tools and technologies that are minimally intrusive. Just as the Internet continues to change and evolve, so too, will our network management practices to address the challenges and threats on the Internet.

All Internet service providers need to manage their networks and Comcast is no different. In fact, many of them use the same or similar tools that Comcast does. If we didn't manage our network, our customers would be subject to the negative effects of spam, viruses, security attacks, network congestion, and other risks and degradations of the service. By engaging in reasonable and responsible network management, Comcast can deliver the best possible broadband Internet experience to all of its customers.

Comcast uses various tools and techniques to manage its network, deliver the Service, and ensure compliance with the Acceptable Use Policy and the Comcast Agreement for Residential Services available at <http://www.comcast.net/terms/subscriber/>. These tools and techniques are dynamic, like the network and its usage, and can and do change frequently. For example, these network management activities may include identifying spam and preventing its delivery to customer e-mail accounts, detecting malicious Internet traffic and preventing the distribution of viruses or other harmful code or content and using other tools and techniques that Comcast may be required to implement in order to meet its goal of delivering the best possible broadband Internet experience to all of its customers.

[Does network management change over time?](#)

Yes. The Internet is highly dynamic. As the Internet and related technologies continue to evolve and advance, Comcast's network management tools will evolve and keep pace so that we can deliver an excellent, reliable, and safe online experience to all of our customers.

In March 2008, we announced that by the end of the year, Comcast would switch to a new network management technique for managing congestion on Comcast's High Speed Internet network. Effective December 31, 2008, we have completed this transition, which is now part of our daily business operations for managing congestion on our network. (See more FAQs about that in this section.)

Top Overall FAQs

- [If I have already d McAfee Security S...](#)
- [Why can't I view t Code on the Chang page in My Accou...](#)
- [Can I use Comcast check more than c account?](#)
- [What is my Person address?](#)
- [How can I resolve being 100% used?](#)
- [Getting started wi Web Pages](#)
- [How do I prevent...](#)
- [How do I determin IP address?](#)

How will the new technique work?

The new network congestion management practice works as follows:

If a certain area of the network nears a state of congestion, the technique will ensure that all customers have a fair share of access to the network. It will identify which customer accounts are using the greatest amounts of bandwidth and their Internet traffic will be temporarily managed until the period of congestion passes. Customers will still be able to do anything they want to online, and many activities will be unaffected, but they could experience things like: longer times to download or upload files, surfing the Web may seem somewhat slower, or playing games online may seem somewhat sluggish.

The new technique does not manage congestion based on the online activities, protocols or applications a customer uses, rather it only focuses on the heaviest users in real time, so the periods of congestion could be very fleeting and sporadic.

It is important to note that the effect of this technique is temporary and it has nothing to do with aggregate monthly data usage. Rather, it is dynamic and based on prevailing network conditions as well as very recent data usage.

Will the technique target P2P or other applications, or make decisions about the content of my traffic?

No. The new technique is "protocol-agnostic," which means that the system does not manage congestion based on the applications being used by customers. It is content neutral, so it does not depend on the type of content that is generating traffic congestion. Said another way, customer traffic is congestion-managed not based on their applications, but based on current network conditions and recent bytes transferred by users.

How does the new network management technique impact me and my use of the Comcast High Speed Internet service?

With this new technique, most customers will notice no change in their Internet experience. The goal of congestion management is to enable all users to have access to a fair share of the network at peak times, when congestion occasionally occurs. Congestion management focuses on the consumption activity of individual customer accounts that are using a disproportionate amount of bandwidth. As a result, and based on our technical trials of this technique, we expect that the large majority of customers will not be affected by it. In fact, based on consumer data collected from these trials, we found that on average less than 1% of our high-speed Internet customers are affected by the approach.

How often does Comcast expect to use this technique?

Based on market trials conducted this summer, Comcast expects that select portions of the network will be in a congested state only for relatively small portions of the day, if at all.

During these trials, Comcast did not receive a single customer complaint that could be traced to this new congestion management practice, despite having publicized the trials and notifying customers involved in the trials via e-mail.

Comcast will continue to monitor how user traffic is affected by these new congestion management techniques and will make the adjustments reasonably necessary to ensure that our Comcast High-Speed Internet customers have a high-quality online experience.

Can you give me some "real world" examples of how much bandwidth consumption would be considered too much? For example, how many movies would I have to download to be affected by this new technique?

Since the technique is dynamic and works in real time, the answer really depends on a number of factors including overall usage, time of day and the number of applications a customer might be running at the same time. First, the local network must be approaching a congested state for our new technique to even look for traffic to manage. Assuming that is the case, customers' accounts must exceed a certain percentage of their upstream or downstream (both currently set at 70%) bandwidth for longer than a certain period of time, currently set at fifteen minutes.

A significant amount of normal Internet usage by our customers does not last that long. For example, most downloads would have completed within that time, and the majority of streaming and downloading will not exceed the threshold to be eligible for congestion management. And the majority of longer-running applications, such as VoIP, video conferencing, and streaming video content (including HD streaming on most sites) will not exceed these thresholds either.

The point of the technique is to deliver the best overall online experience possible. The technique should help ensure that all customers get their fair share of bandwidth resources to enjoy all that the Internet has to offer and that includes surfing the web, reading emails, downloading movies, watching streaming video, gaming or listening to music.

How will customers know they are being managed?

We are exploring ways to create new tools that will let customers know when the management is occurring.

We believe this sort of congestion notification should be an Internet standard and have been discussing this issue in technical bodies like the Internet Engineering Task Force. We believe the use of Internet Standards for such a real-time notification is important as applications developers can write for networks beyond the Comcast network. However we are planning to develop a capability that may enable a customer to see if they were managed in the past, though this is not yet ready for testing.

Does this technique apply to both Commercial and Residential services?

Yes

How is this announcement related to the recent 250 GB monthly usage threshold?

The two are completely separate and distinct. The new congestion management technique is based on real-time Internet activity. The goal is to avoid congestion on our network that is being caused by the heaviest users. The technique is different from the recent announcement that 250 GB/month is the aggregate monthly usage threshold that defines excessive use.

Is Comcast Digital Voice affected by this technique? What about other VoIP providers?

Comcast Digital Voice is a separate facilities-based IP phone service that is not affected by this technique.

Comcast customers who use VoIP providers that rely on delivering calls over the public Internet who are also using a disproportionate amount of bandwidth during a period when this network management technique goes into effect may experience a degradation of their call quality at times of network congestion. It is important to note, however, that VoIP calling in and of itself does not use a significant amount of bandwidth. Furthermore, our real-world testing of this technique did not indicate any significant change in the quality of VoIP calls, even for managed customer traffic during periods of congestion.

What about Comcast.com and streaming video or video downloads? What will happen to them?

During periods of congestion, any customers who are using a disproportionate amount of bandwidth – no matter what type or content of the online activity (for example, it does not matter if the content is coming from a Comcast owned site like Comcast.com or not) – may be affected by this technique.

Our technique also has no ability to determine the applications or protocols being used or the content, source or destination.

Does Comcast block peer-to-peer ("P2P") traffic or applications like BitTorrent, Gnutella, or others?

No. Comcast does not block P2P traffic or applications like BitTorrent, Gnutella, or others as part of its current network congestion management technique.

Does Comcast discriminate against particular types of online content?

No. Comcast provides its customers with full access to all the content, services, and applications that the Internet has to offer. However, we are committed to protecting customers from spam, phishing, and other unwanted or harmful online content and activities. Comcast uses industry standard tools and generally accepted best practices and policies to help it meet this customer commitment. In cases where these tools and policies identify certain online content as harmful and unwanted, such as spam or phishing Web sites, this content is usually prevented from reaching customers. In other cases, these tools and policies may permit customers to identify certain content that is not clearly harmful or unwanted, such as bulk e-mails or Web sites with questionable security ratings, and enable those customers to inspect the content further if they want to do so.

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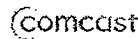
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Office of Chief Counsel

January 15, 2009

EXHIBIT I

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comcast.net Acceptable Use Policy

[TERMS OF SERVICE](#) | [Subscriber Agreement](#) | [Acceptable Use Policy](#) | [Network Management](#) | [Report Abuse to Comcast](#)

COMCAST ACCEPTABLE USE POLICY FOR HIGH-SPEED INTERNET SERVICES

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- [V. Applicable and Other Relevant Laws, Copyright Notices](#)

Why is Comcast providing this Policy to me?

Comcast's goal is to provide its customers with the best residential cable Internet service possible. In order to help accomplish this, Comcast has adopted this Acceptable Use Policy (the "Policy"). This Policy outlines acceptable use of the Comcast High-Speed Internet service (the "Service"). This Policy is in addition to any restrictions contained in the Comcast Agreement for Residential Services (the "Subscriber Agreement") available at <http://www.comcast.net/terms/subscriber/>. The Frequently Asked Questions ("FAQs") at <http://help.comcast.net/> include explanations of how Comcast implements and applies many of the provisions contained in this Policy. All capitalized terms used in this Policy that are not defined here have the meanings given to them in the Subscriber Agreement.

What obligations do I have under this Policy?

All Comcast High-Speed Internet customers and all others who use the Service (the "customer," "user," "you," or "your") must comply with this Policy. Your failure to comply with this Policy could result in the suspension or termination of your Service account. If you do not agree to comply with this Policy, you must immediately stop all use of the Service and notify Comcast so that it can close your account.

How will I know when Comcast changes this Policy and how do I report violations of it?

Comcast may revise this Policy from time to time by posting a new version on the Web site at <http://www.comcast.net/> or any successor URL(s) (the "Comcast.net Web site"). Comcast will use reasonable efforts to make customers aware of any changes to this Policy, which may include sending e-mail announcements or posting information on the Comcast.net Web site. Revised versions of this Policy are effective immediately upon posting. Accordingly, customers of the Comcast High-Speed Internet Service should read any Comcast announcements they receive and regularly visit the Comcast.net Web site and review this Policy to ensure that their activities conform to the most recent version. You can send questions regarding this Policy to, and report violations of it at, [http://www.comcast.net/help/contact/](mailto:help@comcast.net). To report a child exploitation incident involving the Internet, go to <http://security.comcast.net/gethelp/report-a-security-threat-or-scam.aspx?title=Persegmpf>.

I. Prohibited Uses and Activities

What uses and activities does Comcast prohibit?

In general, the Policy prohibits uses and activities involving the Service that are illegal, infringe the rights of others, or interfere with or diminish the use and enjoyment of the Service by others. For example, these prohibited uses and activities include, but are not limited to, using the Service, Customer Equipment, or the Comcast Equipment, either individually or in combination with one another, to:

Conduct and information restrictions

- undertake or accomplish any unlawful purpose. This includes, but is not limited to, posting, storing, transmitting or disseminating information, data or material which is libelous, obscene, unlawful, threatening or defamatory, or which infringes the intellectual property rights of any person or entity, or which in any way constitutes or encourages conduct that would constitute a criminal offense, or otherwise violate any local, state, federal, or non-U.S. law, order, or regulation;
- post, store, send, transmit, or disseminate any information or material which a reasonable person could deem to be unlawful;
- upload, post, publish, transmit, reproduce, create derivative works of, or distribute in any way information, software or other material obtained through the Service or otherwise that is protected by copyright or other proprietary right, without obtaining any required permission of the owner;
- transmit unsolicited bulk or commercial messages commonly known as "spam";
- send very large numbers of copies of the same or substantially similar messages, empty messages, or messages which contain no substantive content, or send very large messages or files that disrupt a server, account, blog, newsgroup, chat, or similar service;
- initiate, perpetuate, or in any way participate in any pyramid or other illegal scheme;
- participate in the collection of very large numbers of e-mail addresses, screen names, or other identifiers of others (without their prior consent), a practice sometimes known as spikfaring or harvesting, or participate in the use of software (including "spyware") designed to facilitate this activity;
- collect responses from unsolicited bulk messages;
- falsify, alter, or remove message headers;
- falsify references to Comcast or its network by name or other identifier, in messages;
- impersonate any person or entity, engage in sender address falsification, forge anyone else's digital or manual signature, or perform any other similar fraudulent activity (for example, "phishing");
- violate the rules, regulations, terms of service, or policies applicable to any network, server, computer database, service, application, system, or Web site that you access or use;

Technical restrictions

- access any other person's computer or computer system, network, software, or data without his or her knowledge and consent; breach the security of another user or system; or attempt to circumvent the user authentication or security of any host, network, or account. This includes, but is not limited to, accessing data not intended for you, logging into or making use of a server or account you are not expressly authorized to access, or probing the security of other hosts, networks, or accounts without express permission to do so;
- use or distribute tools or devices designed or used for compromising security or whose use is otherwise unauthorized, such as password guessing programs, decoders, password gatherers, keystroke loggers, analyzers, cracking tools, packet sniffers, encryption circumvention devices, or Trojan Horse programs. Unauthorized port scanning is strictly prohibited;
- copy, distribute, or sublicense any proprietary software provided in connection with the Service by Comcast or any third party, except that you may make one copy of each software program for back-up purposes only;
- distribute programs that make unauthorized changes to software (cracks);
- use or run dedicated, stand-alone equipment or servers from the Premises that provide network content or any other services to anyone outside of your Premises local area network ("Premises LAN"), also commonly referred to as public services or servers. Examples of prohibited equipment and servers include, but are not limited to, e-mail, Web hosting, file sharing, and proxy services and servers;
- use or run programs from the Premises that provide network content or any other services to anyone outside of your Premises LAN, except for personal and non-commercial residential use;
- service, alter, modify, or tamper with the Comcast Equipment or Service or permit any other person to do the same who is not authorized by Comcast;

Network and usage restrictions

- restrict, inhibit, or otherwise interfere with the ability of any other person, regardless of intent, purpose or knowledge, to use or enjoy the Service (except for tools for safety and security functions such as parental controls, for example), including, without limitation, posting or transmitting any information or software which contains a worm, virus, or other harmful feature, or generating levels of traffic sufficient to impede others' ability to use, send, or receive information;

- restrict, inhibit, interfere with, or otherwise disrupt or cause a performance degradation, regardless of intent, purpose or knowledge, to the Service or any Comcast (or Comcast supplier) host, server, backbone network, node or service, or otherwise cause a performance degradation to any Comcast (or Comcast supplier) facilities used to deliver the Service;
- reset the Service or otherwise make available to anyone outside the Premises the ability to use the Service (for example, through wi-fi or other methods of networking), in whole or in part, directly or indirectly. The Service is for personal and non-commercial residential use only and you agree not to use the Service for operation as an Internet service provider or for any business enterprise or purpose (whether or not for profit);
- connect the Comcast Equipment to any computer outside of your Premises;
- interfere with computer networking or telecommunications service to any user, host or network, including, without limitation, denial of service attacks, flooding of a network, overloading a service, improper seizing and abusing operator privileges, and attempts to "crash" a host; and
- accessing and using the Service with anything other than a dynamic Internet Protocol ("IP") address that adheres to the dynamic host configuration protocol ("DHCP"). You may not configure the Service or any related equipment to access or use a static IP address or use any protocol other than DHCP unless you are subject to a Service plan that expressly permits you to do so.

II. Customer Conduct and Features of the Service

What obligations do I have under this Policy?

In addition to being responsible for your own compliance with this Policy, you are also responsible for any use or misuse of the Service that violates this Policy, even if it was committed by a friend, family member, or guest with access to your Service account. Therefore, you must take steps to ensure that others do not use your account to gain unauthorized access to the Service by, for example, strictly maintaining the confidentiality of your Service login and password. In all cases, you are solely responsible for the security of any device you choose to connect to the Service, including any data stored or shared on that device. Comcast recommends against enabling file or printer sharing unless you do so in strict compliance with all security recommendations and features provided by Comcast and the manufacturer of the applicable file or printer sharing device. Any files or devices you choose to make available for shared access on a home LAN, for example, should be protected with a strong password or as otherwise appropriate.

It is also your responsibility to secure the Customer Equipment and any other Premises equipment or programs not provided by Comcast that connect to the Service from external threats such as viruses, spam, bot nets, and other methods of intrusion.

How does Comcast address inappropriate content and transmissions?

Comcast reserves the right to refuse to transmit or post, and to remove or block, any information or materials, in whole or in part, that it, in its sole discretion, deems to be in violation of Sections I or II of this Policy, or otherwise harmful to Comcast's network or customers using the Service, regardless of whether this material or its dissemination is unlawful so long as it violates this Policy. Neither Comcast nor any of its affiliates, suppliers, or agents have any obligation to monitor transmissions or postings (including, but not limited to, e-mail, file transfer, blog, newsgroup, and instant message transmissions as well as materials available on the Personal Web Pages and Online Storage features) made on the Service. However, Comcast and its affiliates, suppliers, and agents have the right to monitor these transmissions and postings from time to time for violations of this Policy and to disclose, block, or remove them in accordance with this Policy, the Subscriber Agreement, and applicable law.

What requirements apply to electronic mail?

The Service may not be used to communicate or distribute e-mail or other forms of communications in violation of Section I of this Policy. As described below in Section III of this Policy, Comcast uses reasonable network management tools and techniques to protect customers from receiving spam and from sending spam (often without their knowledge over an infected computer). Comcast's anti-spam approach is explained in the FAQs under the topic "What is Comcast doing about spam?" located at <http://help.comcast.net/content/faq/What-is-Comcast-doing-about-spam>.

Comcast is not responsible for deleting or forwarding any e-mail sent to the wrong e-mail address by you or by someone else trying to send e-mail to you. Comcast is also not responsible for forwarding e-mail sent to any account that has been suspended or terminated. This e-mail will be returned to the sender, ignored, deleted, or stored temporarily at Comcast's sole discretion. In the event that Comcast believes in its sole discretion that any subscriber name, account name, or e-mail address (collectively, an "identifier") on the Service may be used for, or is being used for, any misleading, fraudulent, or other improper or illegal purpose, Comcast (i) reserves the right to block access to and prevent the use of any of these identifiers and (ii) may at any time require any customer to change his or her identifier. In addition, Comcast may at any time reserve any identifiers on the Service for Comcast's own purposes. In the event that a Service account is terminated for any reason, all e-mail associated with that account (and any secondary accounts) will be permanently deleted as well.

What requirements apply to instant, video, and audio messages?

Each user is responsible for the contents of his or her instant, video, and audio messages and the consequences of any of these messages. Comcast assumes no responsibility for the timeliness, mis-delivery, deletion, or failure to store these messages. In the event that a Service account is terminated for any reason, all instant, video, and audio messages associated with that account (and any secondary accounts) will be permanently deleted as well.

What requirements apply to personal web pages and file storage?

As part of the Service, Comcast provides access to personal Web pages and storage space through the Personal Web Pages and Online Storage features (collectively, the "Personal Web Features"). You are solely responsible for any information that you or others publish or store on the Personal Web Features. You are also responsible for ensuring that all content made available through the Personal Web Features is appropriate for those who may have access to it. For example, you must take appropriate precautions to prevent minors from receiving or accessing inappropriate content. Comcast reserves the right to remove, block, or refuse to post or store any information or materials, in whole or in part, that it, in its sole discretion, deems to be in violation of Section I of this Policy. For purposes of this Policy, "material" refers to all forms of communications including text, graphics (including photographs, illustrations, images, drawings, logos), executable programs and scripts, video recordings, and audio recordings. Comcast may remove or block content contained on your Personal Web Features and terminate your Personal Web Features and/or your use of the Service if we determine that you have violated the terms of this Policy.

III. Network Management and Limitations on Data Consumption

Why does Comcast manage its network?

Comcast manages its network with one goal: to deliver the best possible broadband Internet experience to all of its customers. High-speed bandwidth and network resources are not unlimited. Managing the network is essential as Comcast works to promote the use and enjoyment of the Internet by all of its customers. The company uses reasonable network management practices that are consistent with industry standards. Comcast tries to use tools and technologies that are minimally intrusive and, in its independent judgment guided by industry experience, among the best in class. Of course, the company's network management practices will change and evolve along with the uses of the Internet and the challenges and threats on the Internet.

The need to engage in network management is not limited to Comcast. In fact, all large Internet service providers manage their networks. Many of them use the same or similar tools that Comcast does. If the company didn't manage its network, its customers would be subject to the negative effects of spam, viruses, security attacks, network congestion, and other risks and degradations of service. By engaging in responsible network management including enforcement of this Policy, Comcast can deliver the best possible broadband Internet experience to all of its customers. Visit Comcast's Network Management page at <http://www.comcast.net/terms/network/> for more information.

How does Comcast manage its network?

Comcast uses various tools and techniques to manage its network, deliver the Service, and ensure compliance with this Policy and the Subscriber Agreement. These tools and techniques are dynamic, like the network and its usage, and can and do change frequently. For example, these network management activities may include (i) identifying spam and preventing its delivery to customer e-mail

accounts, (g) detecting malicious Internet traffic and preventing the distribution of viruses or other harmful code or content, (h) temporarily lowering the priority of traffic for users who are the top contributors to current network congestion, and (iv) using other tools and techniques that Comcast may be required to implement in order to meet its goal of delivering the best possible broadband Internet experience to all of its customers.

Are there restrictions on data consumption that apply to the Service?

The Service is for personal and non-commercial residential use only. Therefore, Comcast reserves the right to suspend or terminate Service accounts where data consumption is not characteristic of a typical residential user of the Service as determined by the company in its sole discretion. Comcast has established a monthly data consumption threshold per Comcast High-Speed Internet account of 250 Gigabytes ("GB"). Use of the Service in excess of 250GB per month is excessive use and is a violation of the Policy. See the Network Management page at <http://www.comcast.net/terms/network> for more information and to learn how Comcast applies this Policy to excessive use. Common activities that may cause excessive data consumption in violation of this Policy include, but are not limited to, numerous or continuous bulk transfers of files and other high capacity traffic using (i) file transfer protocol ("FTP"), (ii) peer-to-peer applications, and (iii) newsgroups. You must also ensure that your use of the Service does not restrict, inhibit, interfere with, or degrade any other person's use of the Service, nor represent (as determined by Comcast in its sole discretion) an overly large burden on the network. In addition, you must ensure that your use of the Service does not limit or interfere with Comcast's ability to deliver and monitor the Service or any part of its network.

If you use the Service in violation of the restrictions referenced above, that is a violation of this Policy. In these cases, Comcast may, in its sole discretion, suspend or terminate your Service account or request that you subscribe to a version of the Service (such as a commercial grade Internet service, if appropriate) if you wish to continue to use the Service at higher data consumption levels. Comcast may also provide versions of the Service with different speed and data consumption limitations, among other characteristics, subject to applicable Service plans. Comcast's determination of the data consumption for Service accounts is final.

IV. Violation of this Acceptable Use Policy

What happens if you violate this Policy?

Comcast reserves the right immediately to suspend or terminate your Service account and terminate the Subscriber Agreement if you violate the terms of this Policy or the Subscriber Agreement.

How does Comcast enforce this Policy?

Comcast does not routinely monitor the activity of individual Service accounts for violations of this Policy, except for determining aggregate data consumption in connection with the data consumption provisions of this Policy. However, in the company's efforts to promote good citizenship within the Internet community, it will respond appropriately if it becomes aware of inappropriate use of the Service. Comcast has no obligation to monitor the Service and/or the network. However, Comcast and its suppliers reserve the right at any time to monitor bandwidth, usage, transmissions, and content in order to, among other things, operate the Service; identify violations of this Policy; and/or protect the network, the Service and Comcast users.

Comcast prefers to inform customers of inappropriate activities and give them a reasonable period of time in which to take corrective action. Comcast also prefers to have customers directly resolve any disputes or disagreements they may have with others, whether customers or not, without Comcast's intervention. However, if the Service is used in a way that Comcast or its suppliers, in their sole discretion, believe violates this Policy, Comcast or its suppliers may take any responsive actions they deem appropriate under the circumstances with or without notice. These actions include, but are not limited to, temporary or permanent removal of content, cancellation of newsgroup posts, filtering of Internet transmissions, and the immediate suspension or termination of all or any portion of the Service (including but not limited to newsgroups). Neither Comcast nor its affiliates, suppliers, or agents will have any liability for any of these responsive actions. These actions are not Comcast's exclusive remedies and Comcast may take any other legal or technical actions it deems appropriate with or without notice.

Comcast reserves the right to investigate suspected violations of this Policy, including the gathering of information from the user or users involved and the complaining party, if any, and examination of materials on Comcast's servers and network. During an investigation, Comcast may suspend the account or accounts involved and/or remove or block material that potentially violates this Policy. You expressly authorize and consent to Comcast and its suppliers cooperating with (i) law enforcement authorities in the investigation of suspected legal violations, and (ii) system administrators at other Internet service providers or other network or computing facilities in order to enforce this Policy. Upon termination of your Service account, Comcast is authorized to delete any files, programs, data, e-mail and other messages associated with your account (and any secondary accounts).

The failure of Comcast or its suppliers to enforce this Policy, for whatever reason, shall not be construed as a waiver of any right to do so at any time. You agree that if any portion of this Policy is held invalid or unenforceable, that portion will be construed consistent with applicable law as nearly as possible, and the remaining portions will remain in full force and effect.

You agree to indemnify, defend and hold harmless Comcast and its affiliates, suppliers, and agents against all claims and expenses (including reasonable attorney fees) resulting from any violation of this Policy. Your indemnification will survive any termination of the Subscriber Agreement.

V. Copyright and Digital Millennium Copyright Act Requirements

What is Comcast's DMCA policy?

Comcast is committed to complying with U.S. copyright and related laws, and requires all customers and users of the Service to comply with these laws. Accordingly, you may not store any material or content on, or disseminate any material or content over, the Service (or any part of the Service) in any manner that constitutes an infringement of third party intellectual property rights, including rights granted by U.S. copyright law. Owners of copyrighted works who believe that their rights under U.S. copyright law have been infringed may take advantage of certain provisions of the Digital Millennium Copyright Act of 1998 (the "DMCA") to report alleged infringements. It is Comcast's policy in accordance with the DMCA and other applicable laws to reserve the right to terminate the Service provided to any customer or user who is either found to infringe third party copyright or other intellectual property rights, including repeat infringers, or who Comcast, in its sole discretion, believes is infringing these rights. Comcast may terminate the Service at any time with or without notice for any affected customer or user.

How do copyright owners report alleged infringements to Comcast?

Copyright owners may report alleged infringements of their works that are stored on the Service or the Personal Web Features by sending Comcast's authorized agent a notification of claimed infringement that satisfies the requirements of the DMCA. Upon Comcast's receipt of a satisfactory notice of claimed infringement for these works, Comcast will respond expeditiously to either directly or indirectly (i) remove the allegedly infringing work(s) stored on the Service or the Personal Web Features or (ii) disable access to the work(s). Comcast will also notify the affected customer or user of the Service of the removal or disabling of access to the work(s).

Copyright owners may send Comcast a notification of claimed infringement to report alleged infringements of their works to:

J. Opperman & M. Molesti
Comcast Cable Communications, LLC
701 East Gate Drive, 3rd Floor
Mount Laurel, NJ 08054 U.S.A.
Phone: 888.565.4329
Fax: 856.324.2940

Email: dmcn@comcast.net

Copyright owners may use their own notification of claimed infringement form that satisfies the requirements of Section 512(c)(3) of the U.S. Copyright Act. Under the DMCA, anyone who knowingly makes misrepresentations regarding alleged copyright infringement may be liable to Comcast, the alleged infringer, and the affected copyright owner for any damages incurred in connection with the removal, blocking, or replacement of allegedly infringing material.

What can customers do if they receive a notification of alleged infringement?

If you receive a notification of alleged infringement as described above, and you believe in good faith that the allegedly infringing works have been removed or blocked by mistake or misidentification, then you may send a counter notification to Comcast. Upon Comcast's receipt of a counter notification that satisfies the requirements of DMCA, Comcast will provide a copy of the counter notification to the person who sent the original notification of claimed infringement and will follow the DMCA's procedures with respect to a received counter notification. In all events, you expressly agree that Comcast will not be a party to any disputes or lawsuits regarding alleged copyright infringement.

If a notification of claimed infringement has been filed against you, you can file a counter notification with Comcast's designated agent using the contact information shown above. All counter notifications must satisfy the requirements of Section 512(g)(3) of the U.S. Copyright Act.

Revised and effective: January 1, 2009

Have You Tried

- Site Index
- Top Hits & Pick Online
- Community Forums
- Anti-Virus and Firewall
- Photo Center
- Help

Quick Links

- Weather
- Local
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- Travel
- Jobs
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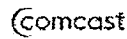
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Add Comcast Services:

Faster High-Speed Internet	Digital Cable	Digital Voice	High Definition TV
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Office of Chief Counsel

January 15, 2009

EXHIBIT J

Dengel, Hilary

From: Jonas Kron [jkron@trilliuminvest.com]
Sent: Wednesday, January 07, 2009 7:08 PM
To: Dengel, Hilary
Cc: lcadet@trilliuminvest.com
Subject: Re: Shareholder Proposal for the Comcast 2009 Annual Meeting

Hilary,

Thanks for the pdf of your filing letter. I appreciate Corp Fin's movement to electronic filing.

We are co-filers on this proposal with the New York City Comptroller being the lead filer so NYC's reply letter will cover our response, except for your last point about the proposals being duplicative. I apologize if there was any confusion about Trillium's role as co-filer on the Proposal, but I think our role as co-filer is self evident.

Best,

Jonas

Dengel, Hilary wrote:

>
> Lyell and Jonas:
>
>
>
> As Lyell and I discussed this afternoon, attached please find a
> No-Action Letter to be filed with the SEC pursuant to Rule 14a-8.
>
>
>
> Also as discussed with Lyell, hard copies of the attached will be send
> via overnight mail to each of you c/o Trillium Asset Management's
> Boston address.
>
>
>
> Thanks and kindest regards,
>
> Hilary
>
>
>
> Hilary A.E. Dengel
>
> Davis Polk & Wardwell
>
> 450 Lexington Avenue
>
> New York, NY 10017
>
> Phone: (212) 450-4354
>
> Fax: (212) 450-3354
>
> Email: hilary.dengel@dpw.com

>
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>

—
Jonas Kron, J.D., M.S.E.L.
Senior Social Research Analyst and Advocate
Trillium Asset Management Corp.
ph: (971) 222-3366
jkron@trilliuminvest.com
www.trilliuminvest.com

Office of Chief Counsel

January 15, 2009

EXHIBIT K

Dengel, Hilary

From: Dengel, Hilary
Sent: Tuesday, January 13, 2009 4:30 PM
To: 'pdohert@comptroller.nyc.gov'
Cc: 'ksylves@comptroller.nyc.gov'
Subject: Comcast Corporation: inquiry re joint proposal status
Attachments: no.action.ntwk.mgmt.follow.up.p.doherty.pdf

Mr. Doherty:

Attached please find a letter inquiring as to the potential joint proposal status of the shareholder proposal regarding network management that the Office of the Comptroller of the City of New York submitted to Comcast Corporation on behalf of several Funds. A hard copy of this letter is also being sent to you and Mr. Sylvester via overnight mail.

If you could please reply to the attached letter via email at your earliest convenience, it would be greatly appreciated.

Thanks and kind regards,
Hilary

Hilary A.E. Dengel
Davis Polk & Wardwell
450 Lexington Avenue
New York, NY 10017
Phone: (212) 450-4354
Fax: (212) 450-3354
Email: hilary.dengel@dpw.com

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TOKYO
BEIJING
HONG KONG

HILARY DENGEL
212 450 4354
HILARY.DENGEL@DPW.COM

January 13, 2009

Re: Shareholder Proposal for Comcast Corporation's 2009 Annual Meeting

Patrick Doherty
The City of New York
Office of the Comptroller
1 Centre Street
New York, New York 10007-2341

Dear Mr. Doherty:

We write this letter in connection with the no-action request we submitted to the SEC on behalf of Comcast Corporation on January 7, 2009, in connection with the shareholder proposal concerning network management that the Office of the Comptroller of the City of New York submitted on behalf of the New York City Police Pension Fund, the New York City Employees' Retirement System, the New York City Fire Department Pension Fund and the New York City Board of Education Retirement System (the "Funds").

Following the filing of our no-action request with the SEC, we received correspondence from Mr. Jonas Kron, on behalf of Trillium Asset Management Corporation and Ms. Louise Rice informing us that their proposal, referred to as "Proposal B" in our no-action request, was intended to be a joint proposal with the network management proposal submitted on behalf of the Funds (with the Office of the Comptroller of the City of New York on behalf of the Funds serving as the lead filer), notwithstanding the fact that the prior correspondence we received did not indicate these facts.

If you could please let me know at your earliest convenience whether you are in agreement with Mr. Kron's position, it would be greatly appreciated.

Sincerely,



Hilary Dengel

cc: Kenneth B. Sylvester

Office of Chief Counsel

January 15, 2009

EXHIBIT L

Dengel, Hilary

From: Doherty, Patrick [pdohert@comptroller.nyc.gov]
Sent: Wednesday, January 14, 2009 11:04 AM
To: Dengel, Hilary
Subject: RE: Comcast Corporation: inquiry re joint proposal status

Hilary –
This is to confirm that it is the intention of the New York City pension funds that Trillium Asset Management and Ms. Louise Rice be listed as co-sponsors of the stockholder proposal we submitted to you for consideration at your 2008 annual general meeting. The NYC funds will act as the lead sponsors for this resolution.
- Pat D.

From: Dengel, Hilary [mailto:hilary.dengel@dpw.com]
Sent: Tuesday, January 13, 2009 4:30 PM
To: Doherty, Patrick
Cc: Sylvester, Kenneth
Subject: Comcast Corporation: inquiry re joint proposal status

Mr. Doherty:

Attached please find a letter inquiring as to the potential joint proposal status of the shareholder proposal regarding network management that the Office of the Comptroller of the City of New York submitted to Comcast Corporation on behalf of several Funds. A hard copy of this letter is also being sent to you and Mr. Sylvester via overnight mail.

If you could please reply to the attached letter via email at your earliest convenience, it would be greatly appreciated.

Thanks and kind regards,
Hilary

Hilary A.E. Dengel
Davis Polk & Wardwell
450 Lexington Avenue
New York, NY 10017
Phone: (212) 450-4354
Fax: (212) 450-3354
Email: hilary.dengel@dpw.com

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Sent from the New York City Office of the Comptroller. This email and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed. This footnote also confirms that this email message has been swept for the presence of computer viruses.

Please consider the environment before printing this email.

Office of Chief Counsel

January 15, 2009

EXHIBIT M



THE CITY OF NEW YORK
OFFICE OF THE COMPTROLLER
1 CENTRE STREET
NEW YORK, N.Y. 10007-2341

WILLIAM C. THOMPSON, JR.
COMPTROLLER

November 12, 2008

Mr. Arthur R. Block
Secretary
Comcast Corporation
One Comcast Center
Philadelphia, PA 19103

Dear Mr. Block:

The Office of the Comptroller of New York City is the custodian and trustee of the New York City Employees' Retirement System, the New York City Police Pension Fund, and the New York City Fire Department Pension Fund, and custodian of the New York City Board of Education Retirement System (the "funds"). The funds' boards of trustees have authorized the Comptroller to inform you of their intention to offer the enclosed proposal for consideration of stockholders at the next annual meeting.

I submit the attached proposal to you in accordance with rule 14a-8 of the Securities Exchange Act of 1934 and ask that it be included in your proxy statement.

Letters from The Bank of New York certifying the funds' ownership, continually for over a year, of shares of Comcast Corporation common stock are enclosed. The funds intend to continue to hold at least \$2,000 worth of these securities through the date of the annual meeting.

We would be happy to discuss this initiative with you. Should the board decide to endorse its provisions as company policy, our funds will ask that the proposal be withdrawn from consideration at the annual meeting. Please feel free to contact me at (212) 669-2651 if you have any further questions on this matter.

Very truly yours,

Patrick Doherty

pd:ma

Enclosures

Comcast Corporation - internet censorship



Report on Our Company's Network Management Practices,
Public Expectations of Privacy and Freedom of Expression on the Internet

The Internet is becoming the defining infrastructure of our economy and society in the 21st century. Its potential to open new markets for commerce, new venues for cultural expression and new modalities of civic engagement is without historic parallel.

Internet Service Providers (ISPs) serve as gatekeepers to this infrastructure: providing access, managing traffic, insuring communication, and forging rules that shape, enable and limit the public's use of the Internet.

As such, ISPs have a weighty responsibility in devising network management practices. ISPs must give far-ranging thought to how these practices serve to promote—or inhibit—the public's participation in the economy and in civil society.

Of fundamental concern is the effect ISPs' network management practices have on public expectations of privacy and freedom of expression on the Internet.

Whereas:

- More than 211 million Americans--70% of the U.S. population--now use the Internet;
- The Internet serves as an engine of opportunity for social, cultural and civic participation in society;
- 46% of Americans report they have used the internet, e-mail or text messaging to participate in the 2008 political process;
- The Internet yields significant economic benefits to society, with online US retailing revenues – only one gauge of e-commerce - exceeding \$200 billion in 2008;
- The Internet plays a critical role in addressing societal challenges such as provision of health care, with over 8 million Americans looking for health information online each day;
- 72% of Americans are concerned that their online behaviors are being tracked and profiled by companies;
- 53% of Americans are uncomfortable with companies using their email content or browsing history to send relevant ads;
- 54% of Americans are uncomfortable with third parties collecting information about their online behavior;
- Our Company provides Internet access to a very large number of subscribers and is considered a leading ISP;

- Our Company's network management practices have come under public scrutiny by consumer and civil liberties groups, regulatory authorities and shareholders.
- Class action lawsuits in several states are challenging the propriety of ISPs' network management practices;
- Internet network management is a significant public policy issue; failure to fully and publicly address this issue poses potential competitive, legal and reputational harm to our Company;
- Any perceived compromise by ISPs of public expectations of privacy and freedom of expression on the Internet could have a chilling effect on the use of the Internet and detrimental effects on society.

Therefore, be it resolved, that shareholders request that the Board of Directors prepare a report, excluding proprietary and confidential information, and to be made available to shareholders no later than November 30, 2009, examining the effects of the company's Internet network management practices in the context of the significant public policy concerns regarding the public's expectations of privacy and freedom of expression on the Internet.



BNY MELLON
ASSET SERVICING

US Securities Services

November 12, 2008

To Whom It May Concern

Re: COMCAST CORP.

CUSIP#: 20030N200

Dear Madame/Sir:

The purpose of this letter is to provide you with the holdings for the above referenced asset continuously held in custody from November 09, 2007 through today at The Bank of New York Mellon in the name of Cede and Company for the New York City Board of Education Retirement System.

The New York City Board of Education Retirement System 30,524 shares

Please do not hesitate to contact me should you have any specific concerns or questions.

Sincerely,

Alice Tiedemann
Vice President





BNY MELLON
ASSET SERVICING

US Securities Services

November 12, 2008

To Whom It May Concern

Re: **COMCAST CORP.**

CUSIP#: 20030N200

Dear Madame/Sir:

The purpose of this letter is to provide you with the holdings for the above referenced asset continuously held in custody from November 09, 2007 through today at The Bank of New York Mellon in the name of Cede and Company for the New York City Police Pension Fund.

The New York City Police Pension Fund 115,654 shares

Please do not hesitate to contact me should you have any specific concerns or questions.

Sincerely,

Alice Tiedemann
Vice President





BNY MELLON
ASSET SERVICING

US Securities Services

November 12, 2008

To Whom It May Concern

Re: COMCAST CORP.

CUSIP#: 20030N200

Dear Madame/Sir:

The purpose of this letter is to provide you with the holdings for the above referenced asset continuously held in custody from November 09, 2007 through today at The Bank of New York Mellon in the name of Cede and Company for the New York City Employees' Retirement System.

The New York City Employees' Retirement System 314,631 shares

Please do not hesitate to contact me should you have any specific concerns or questions.

Sincerely,

Alice Tiedemann
Vice President





BNY MELLON
ASSET SERVICING

US Securities Services

November 12, 2008

To Whom It May Concern

Re: COMCAST CORP.

CUSIP#: 20030N200

Dear Madame/Sir:

The purpose of this letter is to provide you with the holdings for the above referenced asset continuously held in custody from November 09, 2007 through today at The Bank of New York Mellon in the name of Cede and Company for the New York City Fire Department Pension Fund.

The New York City Fire Department Pension Fund 42,144 shares

Please do not hesitate to contact me should you have any specific concerns or questions.

Sincerely,

Alice Tiedemann
Vice President



Comcast Corporation
One Comcast Center
Philadelphia, PA 19103-2838
November 25, 2008

Re: **Notice of deficiency regarding shareholder proposal for inclusion in Comcast's 2009 Proxy Statement**

VIA FAX AND OVERNIGHT MAIL

Patrick Doherty
The City of New York
Office of the Comptroller
1 Centre Street
New York, N.Y. 10007-2341

Dear Mr. Doherty:

I refer to your letter dated November 12, 2008, on behalf of the New York City Employees' Retirement System, the New York City Police Pension Fund, the New York City Fire Department Pension Fund, and the New York City Board of Education Retirement System (the "Funds"), requesting that the Comcast Board of Directors prepare a report examining the effects of Comcast's Internet network management practices in the context of the significant policy concerns regarding the public's expectations of privacy and freedom of expression on the Internet.

Rule 14a-8(b)(1) of the Securities Exchange Act of 1934, as amended, requires that, to be eligible to submit a proposal for a company's annual meeting, a shareholder must (i) have continuously held at least \$2,000 in market value, or 1%, of the company's securities entitled to be voted on the proposal at the meeting for at least one year by the date such shareholder submits the proposal and (ii) continue to hold those securities through the date of the meeting.

The Funds have not satisfied the proof of ownership requirements of Rule 14a-8. Your November 12th letter states only that the Funds have held for the required period the requisite amount of "Comcast Corporation common stock" and the proof of ownership submitted for each Fund references the CUSIP number 20030N200, which applies only to the Class A Special Common Stock of Comcast. This does not satisfy Rule 14a-8 because it does not indicate that the Funds hold the requisite amount of **voting** common stock of Comcast. The Funds must prove their beneficial ownership of the requisite amount of voting securities (i.e. Comcast Class A Common Stock). Comcast has two publicly traded classes of common stock – Class A Common Stock and Class A Special Common Stock. **Of these two classes, only the Class A Common Stock is voting stock under Rule 14a-8 (i.e. entitled to vote at the 2009 annual meeting).**

Pursuant to Rule 14a-8, if we do not receive the necessary proof of the Funds' ownership of Comcast Class A Common Stock, we will not be able to consider the Funds' proposal for inclusion in Comcast's 2009 proxy statement. If we do not receive such proof within 14 calendar days of your receipt of this letter, we will submit a no action request letter to the Securities and Exchange Commission indicating that we do not intend to include the Funds' proposal in our proxy.

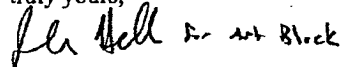
Patrick Doherty

2

November 25, 2008

A copy of Rule 14a-8 is enclosed for your reference. We thank you for your interest in Comcast. Should you wish to discuss this further, please do not hesitate to contact me at (215) 286-7564.

Very truly yours,

Handwritten signature of Arthur R. Block in cursive.

Arthur R. Block
Senior Vice President, General
Counsel and Secretary

cc: William H. Aaronson
Hilary Dengel

When providing the information required by Exchange Act Rule 14a-7(a)(1)(ii), if the registrant has received affirmative written or implied consent to delivery of a single copy of proxy materials to a shared address in accordance with Exchange Act Rule 14a-3(c)(1), it shall exclude from the number of record holders those to whom it does not have to deliver a separate proxy statement.

If the registrant is sending the requesting security holder's materials under § 240.14a-7 and receives a request from the security holder to furnish the materials in the form and manner described in § 240.14a-16, the registrant must accommodate that request.

Rule 14a-8. Shareholder Proposals.**

This section addresses when a company must include a shareholder's proposal in its proxy statement and identify the proposal in its form of proxy when the company holds an annual or special meeting of shareholders. In summary, in order to have your shareholder proposal included on a company's proxy card, and included along with any supporting statement in its proxy statement, you must be eligible and follow certain procedures. Under a few specific circumstances, the company is permitted to exclude your proposal, but only after submitting its reasons to the Commission. We structured this section in a question-and-answer format so that it is easier to understand. The references to "you" are to a shareholder seeking to submit the proposal.

(a) Question 1: What is a proposal?

A shareholder proposal is your recommendation or requirement that the company and/or its board of directors take action, which you intend to present at a meeting of the company's shareholders. Your proposal should state as clearly as possible the course of action that you believe the company should follow. If your proposal is placed on the company's proxy card, the company must also provide in the form of proxy means for shareholders to specify by boxes a choice between approval or disapproval, or abstention. Unless otherwise indicated, the word "proposal" as used in this section refers both to your proposal, and to your corresponding statement in support of your proposal (if any).

(b) Question 2: Who is eligible to submit a proposal, and how do I demonstrate to the company that I am eligible?

*Effective January 1, 2008, Rule 14a-7 was amended by removing Note 3 to § 240.14a-7 as part of the amendments relating to shareholder choice regarding proxy material. See SEC Release Nos. 34-56135; IC-27911; July 26, 2007. *Compliance Dates:* "Large accelerated filers," as that term is defined in Rule 12b-2 under the Securities Exchange Act, not including registered investment companies, must comply with the amendments regarding proxy solicitations commencing on or after January 1, 2008. Registered investment companies, persons other than issuers, and issuers that are not large accelerated filers conducting proxy solicitations (1) may comply with the amendments regarding proxy solicitations commencing on or after January 1, 2008 and (2) must comply with the amendments regarding proxy solicitations commencing on or after January 1, 2009.

**Effective February 4, 2008, Rule 14a-8 was amended by revising paragraph (e)(1) as part of the smaller reporting company regulatory relief and simplification rules. See SEC Release Nos. 33-8876; 34-56994; 39-2451; December 19, 2007. For compliance dates, see SEC Release No. 33-8876 and the note in the *Red Box Regulation S-B* booklet.

Effective January 10, 2008, Rule 14a-8 was amended by revising paragraph (i)(8) to permit the exclusion of certain shareholder proposals related to the election of directors. The SEC adopted the amendment to provide certainty regarding the meaning of this provision in response to the district court decision in *AFSCME v. AIG*, No. 05-2825-cv (2d Cir., Sept. 5, 2006). See SEC Release No. 34-56914; IC-28075; December 6, 2007.

(1) In order to be eligible to submit a proposal, you must have continuously held at least \$2,000 in market value, or 1%, of the company's securities entitled to be voted on the proposal at the meeting for at least one year by the date you submit the proposal. You must continue to hold those securities through the date of the meeting.

(2) If you are the registered holder of your securities, which means that your name appears in the company's records as a shareholder, the company can verify your eligibility on its own, although you will still have to provide the company with a written statement that you intend to continue to hold the securities through the date of the meeting of shareholders. However, if like many shareholders you are not a registered holder, the company likely does not know that you are a shareholder, or how many shares you own. In this case, at the time you submit your proposal, you must prove your eligibility to the company in one of two ways:

(i) The first way is to submit to the company a written statement from the "record" holder of your securities (usually a broker or bank) verifying that, at the time you submitted your proposal, you continuously held the securities for at least one year. You must also include your own written statement that you intend to continue to hold the securities through the date of the meeting of shareholders; or

(ii) The second way to prove ownership applies only if you have filed a Schedule 13D, Schedule 13G, Form 3, Form 4 and/or Form 5, or amendments to those documents or updated forms, reflecting your ownership of the shares as of or before the date on which the one-year eligibility period begins. If you have filed one of these documents with the SEC, you may demonstrate your eligibility by submitting to the company:

(A) A copy of the schedule and/or form, and any subsequent amendments reporting a change in your ownership level;

(B) Your written statement that you continuously held the required number of shares for the one-year period as of the date of the statement; and

(C) Your written statement that you intend to continue ownership of the shares through the date of the company's annual or special meeting.

(c) Question 3: How many proposals may I submit?

Each shareholder may submit no more than one proposal to a company for a particular shareholders' meeting.

(d) Question 4: How long can my proposal be?

The proposal, including any accompanying supporting statement, may not exceed 500 words.

(e) Question 5: What is the deadline for submitting a proposal?

*(1) If you are submitting your proposal for the company's annual meeting, you can in most cases find the deadline in last year's proxy statement. However, if the company did not hold an annual meeting last year, or has changed the date of its meeting for this year more than 30 days from last year's meeting, you can usually find the deadline in one of the company's quarterly reports on Form 10-Q (§ 249.308a of this chapter), or in

*Effective February 4, 2008, Rule 14a-8 was amended by revising paragraph (c)(1) as part of the smaller reporting company regulatory relief and simplification rules. See SEC Release Nos. 33-8876; 34-56994; 39-2451; December 19, 2007. For compliance dates, see SEC Release No. 33-8876 and the note in the *Red Box* Regulation S-B booklet.

shareholder reports of investment companies under § 270.30d-1 of this chapter of the Investment Company Act of 1940. In order to avoid controversy, shareholders should submit their proposals by means, including electronic means, that permit them to prove the date of delivery.

(2) The deadline is calculated in the following manner if the proposal is submitted for a regularly scheduled annual meeting. The proposal must be received at the company's principal executive offices not less than 120 calendar days before the date of the company's proxy statement released to shareholders in connection with the previous year's annual meeting. However, if the company did not hold an annual meeting the previous year, or if the date of this year's annual meeting has been changed by more than 30 days from the date of the previous year's meeting, then the deadline is a reasonable time before the company begins to print and send its proxy materials.

(3) If you are submitting your proposal for a meeting of shareholders other than a regularly scheduled annual meeting, the deadline is a reasonable time before the company begins to print and send its proxy materials.

(f) Question 6: What if I fail to follow one of the eligibility or procedural requirements explained in answers to Questions 1 through 4 of this Rule 14a-8?

(1) The company may exclude your proposal, but only after it has notified you of the problem, and you have failed adequately to correct it. Within 14 calendar days of receiving your proposal, the company must notify you in writing of any procedural or eligibility deficiencies, as well as of the time frame for your response. Your response must be postmarked, or transmitted electronically, no later than 14 days from the date you received the company's notification. A company need not provide you such notice of a deficiency if the deficiency cannot be remedied, such as if you fail to submit a proposal by the company's properly determined deadline. If the company intends to exclude the proposal, it will later have to make a submission under Rule 14a-8 and provide you with a copy under Question 10 below, Rule 14a-8(j).

(2) If you fail in your promise to hold the required number of securities through the date of the meeting of shareholders, then the company will be permitted to exclude all of your proposals from its proxy materials for any meeting held in the following two calendar years.

(g) Question 7: Who has the burden of persuading the Commission or its staff that my proposal can be excluded?

Except as otherwise noted, the burden is on the company to demonstrate that it is entitled to exclude a proposal.

(h) Question 8: Must I appear personally at the shareholders' meeting to present the proposal?

(1) Either you, or your representative who is qualified under state law to present the proposal on your behalf, must attend the meeting to present the proposal. Whether you attend the meeting yourself or send a qualified representative to the meeting in your place, you should make sure that you, or your representative, follow the proper state law procedures for attending the meeting and/or presenting your proposal.

(2) If the company holds its shareholder meeting in whole or in part via electronic media, and the company permits you or your representative to present your proposal via such media, then you may appear through electronic media rather than traveling to the meeting to appear in person.

(3) If you or your qualified representative fail to appear and present the proposal, without good cause, the company will be permitted to exclude all of your proposals from its proxy materials for any meetings held in the following two calendar years.

(i) Question 9: If I have complied with the procedural requirements, on what other bases may a company rely to exclude my proposal?

(1) *Improper Under State Law:* If the proposal is not a proper subject for action by shareholders under the laws of the jurisdiction of the company's organization;

Depending on the subject matter, some proposals are not considered proper under state law if they would be binding on the company if approved by shareholders. In our experience, most proposals that are cast as recommendations or requests that the board of directors take specified action are proper under state law. Accordingly, we will assume that a proposal drafted as a recommendation or suggestion is proper unless the company demonstrates otherwise.

(2) *Violation of Law:* If the proposal would, if implemented, cause the company to violate any state, federal, or foreign law to which it is subject;

We will not apply this basis for exclusion to permit exclusion of a proposal on grounds that it would violate foreign law if compliance with the foreign law would result in a violation of any state or federal law.

(3) *Violation of Proxy Rules:* If the proposal or supporting statement is contrary to any of the Commission's proxy rules, including Rule 14a-9, which prohibits materially false or misleading statements in proxy soliciting materials;

(4) *Personal Grievance; Special Interest:* If the proposal relates to the redress of a personal claim or grievance against the company or any other person, or if it is designed to result in a benefit to you, or to further a personal interest, which is not shared by the other shareholders at large;

(5) *Relevance:* If the proposal relates to operations which account for less than 5 percent of the company's total assets at the end of its most recent fiscal year, and for less than 5 percent of its net earnings and gross sales for its most recent fiscal year, and is not otherwise significantly related to the company's business;

(6) *Absence of Power/Authority:* If the company would lack the power or authority to implement the proposal;

(7) *Management Functions:* If the proposal deals with a matter relating to the company's ordinary business operations;

(8) *Relates to Election: If the proposal relates to a nomination or an election for membership on the company's board of directors or analogous governing body or a procedure for such nomination or election;

(9) *Conflicts with Company's Proposal:* If the proposal directly conflicts with one of the company's own proposals to be submitted to shareholders at the same meeting;

A company's submission to the Commission under this Rule 14a-8 should specify the points of conflict with the company's proposal.

*Effective January 10, 2008, paragraph (i)(8) of Rule 14a-8 was amended to permit the exclusion of certain shareholder proposals related to the election of directors. The SEC adopted the amendment to provide certainty regarding the meaning of this provision in response to the district court decision in *AFSCME v. AIG*, No. 05-2825-cv (2d Cir., Sept. 5, 2006). See SEC Release No. 34-56914; IC-28075; December 6, 2007.

(10) **Substantially Implemented:** If the company has already substantially implemented the proposal;

(11) **Duplication:** If the proposal substantially duplicates another proposal previously submitted to the company by another proponent that will be included in the company's proxy materials for the same meeting;

(12) **Resubmissions:** If the proposal deals with substantially the same subject matter as another proposal or proposals that has or have been previously included in the company's proxy materials within the preceding 5 calendar years, a company may exclude it from its proxy materials for any meeting held within 3 calendar years of the last time it was included if the proposal received:

(i) Less than 3% of the vote if proposed once within the preceding 5 calendar years;

(ii) Less than 6% of the vote on its last submission to shareholders if proposed twice previously within the preceding 5 calendar years; or

(iii) Less than 10% of the vote on its last submission to shareholders if proposed three times or more previously within the preceding 5 calendar years; and

(13) **Specific Amount of Dividends:** If the proposal relates to specific amounts of cash or stock dividends.

(j) Question 10: What procedures must the company follow if it intends to exclude my proposal?

(1) If the company intends to exclude a proposal from its proxy materials, it must file its reasons with the Commission no later than 80 calendar days before it files its definitive proxy statement and form of proxy with the Commission. The company must simultaneously provide you with a copy of its submission. The Commission staff may permit the company to make its submission later than 80 days before the company files its definitive proxy statement and form of proxy, if the company demonstrates good cause for missing the deadline.

(2) The company must file six paper copies of the following:

(i) The proposal;

(ii) An explanation of why the company believes that it may exclude the proposal, which should, if possible, refer to the most recent applicable authority, such as prior Division letters issued under the rule; and

(iii) A supporting opinion of counsel when such reasons are based on matters of state or foreign law.

(k) Question 11: May I submit my own statement to the Commission responding to the company's arguments?

Yes, you may submit a response, but it is not required. You should try to submit any response to us, with a copy to the company, as soon as possible after the company makes its submission. This way, the Commission staff will have time to consider fully your submission before it issues its response. You should submit six paper copies of your response.

(l) Question 12: If the company includes my shareholder proposal with its proxy materials, what information about me must it include along with the proposal itself?

(1) The company's proxy statement must include your name and address, as well as the number of the company's voting securities that you hold. However, instead of providing that information, the company may instead include a statement that it will provide the information to shareholders promptly upon receiving an oral or written request.

(2) The company is not responsible for the contents of your proposal or supporting statement.

(m) Question 13: What can I do if the company includes in its proxy statement reasons why it believes shareholders should not vote in favor of my proposal, and I disagree with some of its statements?

(1) The company may elect to include in its proxy statement reasons why it believes shareholders should vote against your proposal. The company is allowed to make arguments reflecting its own point of view, just as you may express your own point of view in your proposal's supporting statement.

(2) However, if you believe that the company's opposition to your proposal contains materially false or misleading statements that may violate our anti-fraud rule, Rule 14a-9, you should promptly send to the Commission staff and the company a letter explaining the reasons for your view, along with a copy of the company's statements opposing your proposal. To the extent possible, your letter should include specific factual information demonstrating the inaccuracy of the company's claims. Time permitting, you may wish to try to work out your differences with the company by yourself before contacting the Commission staff.

(3) We require the company to send you a copy of its statements opposing your proposal before it sends its proxy materials, so that you may bring to our attention any materially false or misleading statements, under the following timeframes:

(i) If our no-action response requires that you make revisions to your proposal or supporting statement as a condition to requiring the company to include it in its proxy materials, then the company must provide you with a copy of its opposition statements no later than 5 calendar days after the company receives a copy of your revised proposal; or

(ii) In all other cases, the company must provide you with a copy of its opposition statements no later than 30 calendar days before it files definitive copies of its proxy statement and form of proxy under Rule 14a-6.

Rule 14a-9. False or Misleading Statements.

(a) No solicitation subject to this regulation shall be made by means of any proxy statement, form of proxy, notice of meeting or other communication, written or oral, containing any statement which, at the time and in the light of the circumstances under which it is made, is false or misleading with respect to any material fact, or which omits to state any material fact necessary in order to make the statements therein not false or misleading or necessary to correct any statement in any earlier communication with respect to the solicitation of a proxy for the same meeting or subject matter which has become false or misleading.

(b) The fact that a proxy statement, form of proxy or other soliciting material has been filed with or examined by the Commission shall not be deemed a finding by the Commission that such material is accurate or complete or not false or misleading, or that the Commission has passed upon the merits of or approved any statement contained therein or any matter to be acted upon by security holders. No representation contrary to the foregoing shall be made.

FAX

FROM THE

New York City Office of the Comptroller

Date December 2, 2008

Pages (cover +) _____

To Mr. Arthur R. Block

Fax 212-286-7794

From Kenneth B. Sylvester

Phone (212) 669-2013

SPECIAL INSTRUCTIONS



Kenneth B. Sylvester
ASSISTANT COMPTROLLER
FOR PENSION POLICY

THE CITY OF NEW YORK
OFFICE OF THE COMPTROLLER
BUREAU OF ASSET MANAGEMENT
1 CENTRE STREET ROOM 736
NEW YORK, N.Y. 10007-2341

TELEPHONE: (212) 669-2013
FAX NUMBER: (212) 669-4072
WWW.COMPTROLLER.NYC.GOV

EMAIL: KSYLVES@comptroller.nyc.gov

WILLIAM C. THOMPSON, JR.
COMPTROLLER

VIA FAX AND EXPRESS MAIL

December 1, 2008

Arthur R. Block
Senior Vice President, General
Counsel and Secretary
Comcast Corporation
One Comcast Center
Philadelphia, PA 19103-2838

Dear Mr. Block:

Re: New York City Pension Funds' Eligibility to Submit a Shareholder Proposal for
Inclusion in Comcast's 2009 Proxy Statement

In response to your letter to Mr. Patrick Doherty, dated November 25, 2008, regarding the eligibility of the New York City Employees' Retirement System, the New York City Police Pension Fund, the New York City Fire Department Pension Fund, and the New York City Board of Education Retirement System (the "Funds") to submit the proposal which was submitted to you, with a cover letter dated November 12, 2008, for inclusion in Comcast's 2009 Proxy Statement, I attach letters of ownership from the Funds' custodian bank, BNY Mellon, certifying, pursuant to Rule 14a-8, that each Fund continuously held the requisite amount of shares of Comcast voting common stock for one year as of November 12, 2008, and continued to hold the shares through December 1, 2008. Please be advised that the each Fund intends to continue to hold the shares of Comcast voting common stock through the date of Comcast's 2009 Annual Meeting of Shareholders.

Please do not hesitate to contact me should you have any further concerns.

Sincerely,

Kenneth B. Sylvester
Assistant Comptroller for Pension Policy



BNY MELLON
ASSET SERVICING

US Securities Services

December 01, 2008

To Whom It May Concern

Re: COMCAST CORP.

CUSIP#: 20030N101

Dear Madame/Sir:

The purpose of this letter is to provide you with the holdings for the above referenced asset continuously held in custody from October 12, 2007 to November 12, 2008 and continues through December 01, 2008 at The Bank of New York Mellon in the name of Cede and Company for The New York City Board of Education Retirement System.

The New York City Board of Education Retirement System 123,771 shares

Please do not hesitate to contact me should you have any specific concerns or questions.

Sincerely,

Richard Blanco
Vice President



BNY MELLON
ASSET SERVICING

US Securities Services

December 01, 2008

To Whom It May Concern

Re: COMCAST CORP.

CUSIP#: 20030N101

Dear Madame/Sir:

The purpose of this letter is to provide you with the holdings for the above referenced asset continuously held in custody from October 12, 2007 to November 12, 2008 and continues through December 01, 2008 at The Bank of New York Mellon in the name of Cede and Company for the New York City Police Pension Fund.

The New York City Police Pension Fund 1,253,353 shares

Please do not hesitate to contact me should you have any specific concerns or questions.

Sincerely,

Richard Blanco
Vice President



BNY MELLON
ASSET SERVICING

US Securities Services

December 01, 2008

To Whom It May Concern

Re: COMCAST CORP.

CUSIP#: 20030N101

Dear Madame/Sir:

The purpose of this letter is to provide you with the holdings for the above referenced asset continuously held in custody from October 12, 2007 to November 12, 2008 and continues through December 01, 2008 at The Bank of New York Mellon in the name of Cede and Company for the New York City Employees' Retirement System.

The New York City Employees' Retirement System 2,993,412 shares

Please do not hesitate to contact me should you have any specific concerns or questions.

Sincerely,

Richard Blanco
Vice President



BNY MELLON
ASSET SERVICING

US Securities Services

December 01, 2008

To Whom It May Concern

Re: COMCAST CORP.

CUSIP#: 20030N101

Dear Madame/Sir:

The purpose of this letter is to provide you with the holdings for the above referenced asset continuously held in custody from October 12, 2007 to November 12, 2008 and continues through December 01, 2008 at The Bank of New York Mellon in the name of Cede and Company for the New York City Fire Department Pension Fund.

The New York City Fire Department Pension Fund 393,337 shares

Please do not hesitate to contact me should you have any specific concerns or questions.

Sincerely,

Richard Blanco
Vice President

Office of Chief Counsel

January 15, 2009

EXHIBIT N

November 26, 2008

Via Overnight Mail

Arthur R. Block
Senior Vice President, General Counsel and Secretary
Comcast Corporation
One Comcast Center
Philadelphia, PA 19103

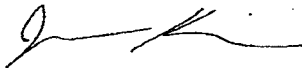
Dear Mr. Block:

Trillium Asset Management Corporation ("Trillium") is an investment firm based in Boston, Massachusetts specializing in socially responsible asset management.

I am authorized to notify you of our intention to file the enclosed shareholder resolution. Trillium submits this resolution for inclusion in the 2009 proxy statement, in accordance with Rule 14a-8 of the General Rules and Regulations of the Securities and Exchange Act of 1934. Trillium submits this proposal on behalf of our client Louise Rice, who is the beneficial owner, per Rule 14a-8, of more than \$2,000 worth of Comcast Corporation common stock acquired more than one year prior to this date. We will provide verification of ownership from our custodian separately upon request. We will send a representative to the stockholders' meeting to move the resolution as required by the SEC rules.

I can be reached at (917) 222-3366 and look forward to your response.

Sincerely,



Jonas Kron, J.D., M.S.E.L.
Senior Social Research Analyst

cc: Brian L. Roberts, Chairman and CEO, Comcast Corporation
Marlene S. Dooner, Senior Vice President, Investor Relations, Comcast Corporation

BOSTON	DURHAM	SAN FRANCISCO	BOISE
711 Atlantic Avenue Boston, Massachusetts 02111-2809 T: 617-423-6655 F: 617-482-6179 800-548-5684	353 West Main Street, Second Floor Durham, North Carolina 27701-3215 T: 919-688-1265 F: 919-688-1451 800-853-1311	369 Pine Street, Suite 711 San Francisco, California 94104-3310 T: 415-392-4806 F: 415-392-4535 800-933-4806	950 W. Bannock Street, Suite 530 Boise, Idaho 83702-6118 T: 208-387-0777 F: 208-387-0278 800-567-0538



Report on Our Company's Network Management Practices,
Public Expectations of Privacy and Freedom of Expression on the Internet

The Internet is becoming the defining infrastructure of our economy and society in the 21st century. Its potential to open new markets for commerce, new venues for cultural expression and new modalities of civic engagement is without historic parallel.

Internet Service Providers (ISPs) serve as gatekeepers to this infrastructure: providing access, managing traffic, insuring communication, and forging rules that shape, enable and limit the public's use of the Internet.

As such, ISPs have a weighty responsibility in devising network management practices. ISPs must give far-ranging thought to how these practices serve to promote--or inhibit--the public's participation in the economy and in civil society.

Of fundamental concern is the effect ISPs' network management practices have on public expectations of privacy and freedom of expression on the Internet.

Whereas:

- More than 211 million Americans--70% of the U.S. population--now use the Internet;
- The Internet serves as an engine of opportunity for social, cultural and civic participation in society;
- 46% of Americans report they have used the internet, e-mail or text messaging to participate in the 2008 political process;
- The Internet yields significant economic benefits to society, with online US retailing revenues -- only one gauge of e-commerce - exceeding \$200 billion in 2008;
- The Internet plays a critical role in addressing societal challenges such as provision of health care, with over 8 million Americans looking for health information online each day;
- 72% of Americans are concerned that their online behaviors are being tracked and profiled by companies;
- 53% of Americans are uncomfortable with companies using their email content or browsing history to send relevant ads;
- 54% of Americans are uncomfortable with third parties collecting information about their online behavior;
- Our Company provides Internet access to a very large number of subscribers and is considered a leading ISP;

- Our Company's network management practices have come under public scrutiny by consumer and civil liberties groups, regulatory authorities and shareholders.
- Class action lawsuits in several states are challenging the propriety of ISPs' network management practices;
- Internet network management is a significant public policy issue; failure to fully and publicly address this issue poses potential competitive, legal and reputational harm to our Company;
- Any perceived compromise by ISPs of public expectations of privacy and freedom of expression on the Internet could have a chilling effect on the use of the Internet and detrimental effects on society.

Therefore, be it resolved, that shareholders request that the Board of Directors prepare a report, excluding proprietary and confidential information, and to be made available to shareholders no later than November 30, 2009, examining the effects of the company's Internet network management practices in the context of the significant public policy concerns regarding the public's expectations of privacy and freedom of expression on the Internet.



Comcast Corporation
One Comcast Center
Philadelphia, PA 19103-2838

December 8, 2008

Re: **Notice of deficiency regarding shareholder proposal for inclusion in Comcast's 2009 Proxy Statement**

VIA FAX (617-482-6179) AND OVERNIGHT MAIL

Mr. Jonas Kron
Trillium Asset Management Corporation
711 Atlantic Avenue
Boston, Massachusetts 02111-2809

Dear Mr. Kron:

I refer to your letter dated November 26, 2008, on behalf of Ms. Louise Rice, proposing that Comcast prepare a report examining the effects of the company's Internet network management practices in the context of the significant public policy concerns regarding the public's expectations of privacy and freedom of expression on the Internet.

Rule 14a-8(b)(1) of the Securities Exchange Act of 1934, as amended, requires that, to be eligible to submit a proposal for a company's annual meeting, a shareholder must (i) have continuously held at least \$2,000 in market value, or 1%, of the company's securities entitled to be voted on the proposal at the meeting for at least one year by the date such shareholder submits the proposal and (ii) continue to hold those securities through the date of the meeting.

While you indicated in your letter that Ms. Rice meets these eligibility requirements, Ms. Rice did not provide the necessary proof of ownership required by Rule 14a-8(b)(2). Under this Rule, a beneficial holder may prove its beneficial ownership of the requisite amount of voting securities (in this case, Comcast Class A Common Stock) in one of two ways, by submitting to the company (i) a written statement from the "record" holder of the securities (usually a broker or bank) verifying that, at the time the beneficial holder submitted its proposal, it continuously held the requisite amount of such securities for at least one year or (ii) if the beneficial holder has filed a Schedule 13D, Schedule 13G, Form 3, Form 4 and/or Form 5, or amendments to those documents or updated forms, reflecting its ownership of the shares as of or before the date on which the one-year eligibility period begins, a copy of the schedule and/or form, and any subsequent amendments reporting a change in the beneficial holder's ownership level, along with a written statement by the beneficial holder that it continuously held the required number of shares for the one-year period as of the date of the statement. To date Ms. Rice has not proven her beneficial ownership of the required securities in either of the ways described above. In addition, your letter states only that Ms. Rice is the owner of a sufficient amount of "Comcast Corporation common stock." It does not specify that this stock is Comcast Class A Common Stock, which is voting stock. Comcast also has

Mr. Jonas Kron
December 8, 2008
Page 2

another class of publicly-traded stock, Comcast Class A Special Common Stock, which does not possess voting rights and accordingly may not be used to satisfy the procedural and eligibility requirements under Rule 14a-8.

In addition, Rule 14a-8(b)(2) provides that Ms. Rice (and not the record holder) must provide to Comcast a written statement that she intends to continue to hold the securities through the date of the 2009 annual meeting.

Pursuant to Rule 14a-8, if within 14 calendar days of your receipt hereof we do not receive the necessary proof of ownership and a statement from Ms. Rice that she intends to continue to hold the securities through the date of the 2009 annual meeting of shareholders, we will not be able to consider Ms. Rice's proposal for inclusion in Comcast's 2009 proxy statement and we will submit a no action request letter to the Securities and Exchange Commission indicating that we do not intend to include Ms. Rice's proposal in our proxy.

A copy of Rule 14a-8 is enclosed for your reference. We thank you for your interest in Comcast. Should you wish to discuss this further, please do not hesitate to contact me at (215) 286-7564.

Very truly yours,



Arthur R. Block
Senior Vice President, General
Counsel and Secretary

cc: Lyell Cadet
Trillium Asset Management

William Aaronson
Hilary Dengel
Davis Polk & Wardwell

Note 2 to § 240.14a-7. When providing the information required by Exchange Act Rule 14a-7(a)(1)(ii), if the registrant has received affirmative written or implied consent to delivery of a single copy of proxy materials to a shared address in accordance with Exchange Act Rule 14a-3(e)(1), it shall exclude from the number of record holders those to whom it does not have to deliver a separate proxy statement.

Note 3 to § 240.14a-7. If the registrant is sending the requesting security holder's materials under § 240.14a-7 and receives a request from the security holder to furnish the materials in the form and manner described in § 240.14a-16, the registrant must accommodate that request.

Rule 14a-8. Shareholder Proposals.**

This section addresses when a company must include a shareholder's proposal in its proxy statement and identify the proposal in its form of proxy when the company holds an annual or special meeting of shareholders. In summary, in order to have your shareholder proposal included on a company's proxy card, and included along with any supporting statement in its proxy statement, you must be eligible and follow certain procedures. Under a few specific circumstances, the company is permitted to exclude your proposal, but only after submitting its reasons to the Commission. We structured this section in a question-and-answer format so that it is easier to understand. The references to "you" are to a shareholder seeking to submit the proposal.

(a) Question 1: What is a proposal?

A shareholder proposal is your recommendation or requirement that the company and/or its board of directors take action, which you intend to present at a meeting of the company's shareholders. Your proposal should state as clearly as possible the course of action that you believe the company should follow. If your proposal is placed on the company's proxy card, the company must also provide in the form of proxy means for shareholders to specify by boxes a choice between approval or disapproval, or abstention. Unless otherwise indicated, the word "proposal" as used in this section refers both to your proposal, and to your corresponding statement in support of your proposal (if any).

(b) Question 2: Who is eligible to submit a proposal, and how do I demonstrate to the company that I am eligible?

*Effective January 1, 2008, Rule 14a-7 was amended by removing Note 3 to § 240.14a-7 as part of the amendments relating to shareholder choice regarding proxy material. See SEC Release Nos. 34-56135; IC-27911; July 26, 2007. *Compliance Dates:* "Large accelerated filers," as that term is defined in Rule 12b-2 under the Securities Exchange Act, not including registered investment companies, must comply with the amendments regarding proxy solicitations commencing on or after January 1, 2008. Registered investment companies, persons other than issuers, and issuers that are not large accelerated filers conducting proxy solicitations (1) may comply with the amendments regarding proxy solicitations commencing on or after January 1, 2008 and (2) must comply with the amendments regarding proxy solicitations commencing on or after January 1, 2009.

**Effective February 4, 2008, Rule 14a-8 was amended by revising paragraph (e)(1) as part of the smaller reporting company regulatory relief and simplification rules. See SEC Release Nos. 33-8876; 34-56994; 39-2451; December 19, 2007. For compliance dates, see SEC Release No. 33-8876 and the note in the *Red Box Regulation S-B* booklet.

Effective January 10, 2008, Rule 14a-8 was amended by revising paragraph (i)(8) to permit the exclusion of certain shareholder proposals related to the election of directors. The SEC adopted the amendment to provide certainty regarding the meaning of this provision in response to the district court decision in *AFSCME v. AIG*, No. 05-2825-cv (2d Cir., Sept. 5, 2006). See SEC Release No. 34-56914; IC-28075; December 6, 2007.

(1) In order to be eligible to submit a proposal, you must have continuously held at least \$2,000 in market value, or 1%, of the company's securities entitled to be voted on the proposal at the meeting for at least one year by the date you submit the proposal. You must continue to hold those securities through the date of the meeting.

(2) If you are the registered holder of your securities, which means that your name appears in the company's records as a shareholder, the company can verify your eligibility on its own, although you will still have to provide the company with a written statement that you intend to continue to hold the securities through the date of the meeting of shareholders. However, if like many shareholders you are not a registered holder, the company likely does not know that you are a shareholder, or how many shares you own. In this case, at the time you submit your proposal, you must prove your eligibility to the company in one of two ways:

(i) The first way is to submit to the company a written statement from the "record" holder of your securities (usually a broker or bank) verifying that, at the time you submitted your proposal, you continuously held the securities for at least one year. You must also include your own written statement that you intend to continue to hold the securities through the date of the meeting of shareholders; or

(ii) The second way to prove ownership applies only if you have filed a Schedule 13D, Schedule 13G, Form 3, Form 4 and/or Form 5, or amendments to those documents or updated forms, reflecting your ownership of the shares as of or before the date on which the one-year eligibility period begins. If you have filed one of these documents with the SEC, you may demonstrate your eligibility by submitting to the company:

(A) A copy of the schedule and/or form, and any subsequent amendments reporting a change in your ownership level;

(B) Your written statement that you continuously held the required number of shares for the one-year period as of the date of the statement; and

(C) Your written statement that you intend to continue ownership of the shares through the date of the company's annual or special meeting.

(c) Question 3: How many proposals may I submit?

Each shareholder may submit no more than one proposal to a company for a particular shareholders' meeting.

(d) Question 4: How long can my proposal be?

The proposal, including any accompanying supporting statement, may not exceed 500 words.

(e) Question 5: What is the deadline for submitting a proposal?

* (1) If you are submitting your proposal for the company's annual meeting, you can in most cases find the deadline in last year's proxy statement. However, if the company did not hold an annual meeting last year, or has changed the date of its meeting for this year more than 30 days from last year's meeting, you can usually find the deadline in one of the company's quarterly reports on Form 10-Q (§ 249.308a of this chapter), or in

*Effective February 4, 2008, Rule 14a-8 was amended by revising paragraph (e)(1) as part of the smaller reporting company regulatory relief and simplification rules. See SEC Release Nos. 33-8876; 34-56994; 39-2451; December 19, 2007. For compliance dates, see SEC Release No. 33-8876 and the note in the *Red Box* Regulation S-B booklet.

shareholder reports of investment companies under § 270.30d-1 of this chapter of the Investment Company Act of 1940. In order to avoid controversy, shareholders should submit their proposals by means, including electronic means, that permit them to prove the date of delivery.

(2) The deadline is calculated in the following manner if the proposal is submitted for a regularly scheduled annual meeting. The proposal must be received at the company's principal executive offices not less than 120 calendar days before the date of the company's proxy statement released to shareholders in connection with the previous year's annual meeting. However, if the company did not hold an annual meeting the previous year, or if the date of this year's annual meeting has been changed by more than 30 days from the date of the previous year's meeting, then the deadline is a reasonable time before the company begins to print and send its proxy materials.

(3) If you are submitting your proposal for a meeting of shareholders other than a regularly scheduled annual meeting, the deadline is a reasonable time before the company begins to print and send its proxy materials.

(f) Question 6: What if I fail to follow one of the eligibility or procedural requirements explained in answers to Questions 1 through 4 of this Rule 14a-8?

(1) The company may exclude your proposal, but only after it has notified you of the problem, and you have failed adequately to correct it. Within 14 calendar days of receiving your proposal, the company must notify you in writing of any procedural or eligibility deficiencies, as well as of the time frame for your response. Your response must be postmarked, or transmitted electronically, no later than 14 days from the date you received the company's notification. A company need not provide you such notice of a deficiency if the deficiency cannot be remedied, such as if you fail to submit a proposal by the company's properly determined deadline. If the company intends to exclude the proposal, it will later have to make a submission under Rule 14a-8 and provide you with a copy under Question 10 below, Rule 14a-8(j).

(2) If you fail in your promise to hold the required number of securities through the date of the meeting of shareholders, then the company will be permitted to exclude all of your proposals from its proxy materials for any meeting held in the following two calendar years.

(g) Question 7: Who has the burden of persuading the Commission or its staff that my proposal can be excluded?

Except as otherwise noted, the burden is on the company to demonstrate that it is entitled to exclude a proposal.

(h) Question 8: Must I appear personally at the shareholders' meeting to present the proposal?

(1) Either you or your representative who is qualified under state law to present the proposal on your behalf, must attend the meeting to present the proposal. Whether you attend the meeting yourself or send a qualified representative to the meeting in your place, you should make sure that you, or your representative, follow the proper state law procedures for attending the meeting and/or presenting your proposal.

(2) If the company holds its shareholder meeting in whole or in part via electronic media, and the company permits you or your representative to present your proposal via such media, then you may appear through electronic media rather than traveling to the meeting to appear in person.

(3) If you or your qualified representative fail to appear and present the proposal, without good cause, the company will be permitted to exclude all of your proposals from its proxy materials for any meetings held in the following two calendar years.

(i) **Question 9: If I have complied with the procedural requirements, on what other bases may a company rely to exclude my proposal?**

(1) **Improper Under State Law:** If the proposal is not a proper subject for action by shareholders under the laws of the jurisdiction of the company's organization;

Note to paragraph (1)(1): Depending on the subject matter, some proposals are not considered proper under state law if they would be binding on the company if approved by shareholders. In our experience, most proposals that are cast as recommendations or requests that the board of directors take specified action are proper under state law. Accordingly, we will assume that a proposal drafted as a recommendation or suggestion is proper unless the company demonstrates otherwise.

(2) **Violation of Law:** If the proposal would, if implemented, cause the company to violate any state, federal, or foreign law to which it is subject;

Note to paragraph (1)(2): We will not apply this basis for exclusion to permit exclusion of a proposal on grounds that it would violate foreign law if compliance with the foreign law would result in a violation of any state or federal law.

(3) **Violation of Proxy Rules:** If the proposal or supporting statement is contrary to any of the Commission's proxy rules, including Rule 14a-9, which prohibits materially false or misleading statements in proxy soliciting materials;

(4) **Personal Grievance; Special Interest:** If the proposal relates to the redress of a personal claim or grievance against the company or any other person, or if it is designed to result in a benefit to you, or to further a personal interest, which is not shared by the other shareholders at large;

(5) **Relevance:** If the proposal relates to operations which account for less than 5 percent of the company's total assets at the end of its most recent fiscal year, and for less than 5 percent of its net earnings and gross sales for its most recent fiscal year, and is not otherwise significantly related to the company's business;

(6) **Absence of Power/Authority:** If the company would lack the power or authority to implement the proposal;

(7) **Management Functions:** If the proposal deals with a matter relating to the company's ordinary business operations;

** (8) Relates to Election:* If the proposal relates to a nomination or an election for membership on the company's board of directors or analogous governing body or a procedure for such nomination or election;

(9) **Conflicts with Company's Proposal:** If the proposal directly conflicts with one of the company's own proposals to be submitted to shareholders at the same meeting;

Note to paragraph (1)(9): A company's submission to the Commission under this Rule 14a-8 should specify the points of conflict with the company's proposal.

*Effective January 10, 2008, paragraph (i)(8) of Rule 14a-8 was amended to permit the exclusion of certain shareholder proposals related to the election of directors. The SEC adopted the amendment to provide certainty regarding the meaning of this provision in response to the district court decision in *AFSCME v. AIG*, No. 05-2825-cv (2d Cir., Sept. 5, 2006). See SEC Release No. 34-56914; IC-28075; December 6, 2007.

(10) **Substantially Implemented:** If the company has already substantially implemented the proposal;

(11) **Duplication:** If the proposal substantially duplicates another proposal previously submitted to the company by another proponent that will be included in the company's proxy materials for the same meeting;

(12) **Resubmissions:** If the proposal deals with substantially the same subject matter as another proposal or proposals that has or have been previously included in the company's proxy materials within the preceding 5 calendar years, a company may exclude it from its proxy materials for any meeting held within 3 calendar years of the last time it was included if the proposal received:

- (i) Less than 3% of the vote if proposed once within the preceding 5 calendar years;
- (ii) Less than 6% of the vote on its last submission to shareholders if proposed twice previously within the preceding 5 calendar years; or
- (iii) Less than 10% of the vote on its last submission to shareholders if proposed three times or more previously within the preceding 5 calendar years; and

(13) **Specific Amount of Dividends:** If the proposal relates to specific amounts of cash or stock dividends.

(j) Question 10: What procedures must the company follow if it intends to exclude my proposal?

(1) If the company intends to exclude a proposal from its proxy materials, it must file its reasons with the Commission no later than 80 calendar days before it files its definitive proxy statement and form of proxy with the Commission. The company must simultaneously provide you with a copy of its submission. The Commission staff may permit the company to make its submission later than 80 days before the company files its definitive proxy statement and form of proxy, if the company demonstrates good cause for missing the deadline.

(2) The company must file six paper copies of the following:

- (i) The proposal;
- (ii) An explanation of why the company believes that it may exclude the proposal, which should, if possible, refer to the most recent applicable authority, such as prior Division letters issued under the rule; and
- (iii) A supporting opinion of counsel when such reasons are based on matters of state or foreign law.

(k) Question 11: May I submit my own statement to the Commission responding to the company's arguments?

Yes, you may submit a response, but it is not required. You should try to submit any response to us, with a copy to the company, as soon as possible after the company makes its submission. This way, the Commission staff will have time to consider fully your submission before it issues its response. You should submit six paper copies of your response.

(l) Question 12: If the company includes my shareholder proposal with its proxy materials, what information about me must it include along with the proposal itself?

(1) The company's proxy statement must include your name and address, as well as the number of the company's voting securities that you hold. However, instead of providing that information, the company may instead include a statement that it will provide the information to shareholders promptly upon receiving an oral or written request.

(2) The company is not responsible for the contents of your proposal or supporting statement.

(m) **Question 13: What can I do if the company includes in its proxy statement reasons why it believes shareholders should not vote in favor of my proposal, and I disagree with some of its statements?**

(1) The company may elect to include in its proxy statement reasons why it believes shareholders should vote against your proposal. The company is allowed to make arguments reflecting its own point of view, just as you may express your own point of view in your proposal's supporting statement.

(2) However, if you believe that the company's opposition to your proposal contains materially false or misleading statements that may violate our anti-fraud rule, Rule 14a-9, you should promptly send to the Commission staff and the company a letter explaining the reasons for your view, along with a copy of the company's statements opposing your proposal. To the extent possible, your letter should include specific factual information demonstrating the inaccuracy of the company's claims. Time permitting, you may wish to try to work out your differences with the company by yourself before contacting the Commission staff.

(3) We require the company to send you a copy of its statements opposing your proposal before it sends its proxy materials, so that you may bring to our attention any materially false or misleading statements, under the following timeframes:

(i) If our no-action response requires that you make revisions to your proposal or supporting statement as a condition to requiring the company to include it in its proxy materials, then the company must provide you with a copy of its opposition statements no later than 5 calendar days after the company receives a copy of your revised proposal; or

(ii) In all other cases, the company must provide you with a copy of its opposition statements no later than 30 calendar days before it files definitive copies of its proxy statement and form of proxy under Rule 14a-6.

Rule 14a-9. False or Misleading Statements.

(a) No solicitation subject to this regulation shall be made by means of any proxy statement, form of proxy, notice of meeting or other communication, written or oral, containing any statement which, at the time and in the light of the circumstances under which it is made, is false or misleading with respect to any material fact, or which omits to state any material fact necessary in order to make the statements therein not false or misleading or necessary to correct any statement in any earlier communication with respect to the solicitation of a proxy for the same meeting or subject matter which has become false or misleading.

(b) The fact that a proxy statement, form of proxy or other soliciting material has been filed with or examined by the Commission shall not be deemed a finding by the Commission that such material is accurate or complete or not false or misleading, or that the Commission has passed upon the merits of or approved any statement contained therein or any matter to be acted upon by security holders. No representation contrary to the foregoing shall be made.

charles SCHWAB
INSTITUTIONAL

PO Box 628290 Orlando Florida 32862-8290

December 16, 2008

Arthur R. Block
Senior Vice President, General Counsel and Secretary
Comcast Corporation
One Comcast Center
Philadelphia, PA 19103-2838

Re: Louise B. Rice / Schwab Account #

*** FISMA & OMB Memorandum M-07-16 ***

Dear Mr. Block:

This letter is to confirm that Charles Schwab & Company holds as custodian for the above account more than \$2,000 (two thousand dollars) worth of **Class A** common stock in Comcast Corporation (CMCSA). These shares have been held continuously for at least one year prior to and through November 26, 2008.

The shares are held at Depository Trust Company under the nominee name of Charles Schwab and Company, Inc.

This letter services as confirmation that the account holder listed above is the beneficial owner of the above referenced stock.

Sincerely,



Jake Carris

December 16, 2008

Arthur R. Block
Senior Vice President, General Counsel and Secretary
Comcast Corporation
One Comcast Center
Philadelphia, PA 19103-2838

Re: Response to notice of deficiency regarding shareholder proposal for inclusion in Comcast's 2009 Proxy Statement.

Dear Mr. Block:

Pursuant to your letter dated December 8, 2008, on Louise Rice's proposal that Comcast prepare a report examining the effects of the company's Internet network management practices in the context of the significant public policy concerns regarding the public's expectations of privacy and freedom of expression on the Internet, I have enclosed the following:

- Proof of ownership required by Rule 14a-8(b)(1). Provided by Louise Rice's custodian, Charles Schwab & Company, confirming she has held at least \$2,000 in market value of Comcast Corporation Class A common stock (voting), for at least one year prior to and through the date of our filing dated November 26, 2008.
- Signed authorization from Louise Rice to file the shareholder resolution on her behalf and also confirming she is a holder of Comcast Corporation Class A common stock and will continue to hold the stock through the date of Comcast's annual meeting in 2009.

Please feel free to contact me with any questions.

Sincerely,



Lyell Cadet, Jr.
Social Research Administrator

BOSTON	DURHAM	SAN FRANCISCO	BOISE
711 Atlantic Avenue Boston, Massachusetts 02111-2809 T: 617-423-6655 F: 617-482-6179 800-548-5684	353 West Main Street, Second Floor Durham, North Carolina 27701-3215 T: 919-688-1265 F: 919-688-1451 800-853-1311	369 Pine Street, Suite 711 San Francisco, California 94104-3910 T: 415-392-4806 F: 415-392-4535 800-933-4806	950 W. Bannock Street, Suite 530 Boise, Idaho 83702-6118 T: 208-387-0777 F: 208-387-0278 800-567-0538



PO Box 628290 Orlando Florida 32862-8290

charles SCHWAB
INSTITUTIONAL

December 16, 2008

Arthur R. Block
Senior Vice President, General Counsel and Secretary
Comcast Corporation
One Comcast Center
Philadelphia, PA 19103-2838

Re: Louise B. Rice / Schwab Account #

*** FISMA & OMB Memorandum M-07-16 ***

Dear Mr. Block:

This letter is to confirm that Charles Schwab & Company holds as custodian for the above account more than \$2,000 (two thousand dollars) worth of **Class A** common stock in Comcast Corporation (CMCSA). These shares have been held continuously for at least one year prior to and through November 26, 2008.

The shares are held at Depository Trust Company under the nominee name of Charles Schwab and Company, Inc.

This letter services as confirmation that the account holder listed above is the beneficial owner of the above referenced stock.

Sincerely,



Jake Carris



Comcast Corporation
One Comcast Center
Philadelphia, PA 19103-2838

COPY

December 8, 2008

Re: Notice of deficiency regarding shareholder proposal for inclusion in Comcast's 2009 Proxy Statement

VIA FAX (617-482-6179) AND OVERNIGHT MAIL

Mr. Jonas Kron
Trillium Asset Management Corporation
711 Atlantic Avenue
Boston, Massachusetts 02111-2809

Dear Mr. Kron:

I refer to your letter dated November 26, 2008, on behalf of Ms. Louise Rice, proposing that Comcast prepare a report examining the effects of the company's Internet network management practices in the context of the significant public policy concerns regarding the public's expectations of privacy and freedom of expression on the Internet.

Rule 14a-8(b)(1) of the Securities Exchange Act of 1934, as amended, requires that, to be eligible to submit a proposal for a company's annual meeting, a shareholder must (i) have continuously held at least \$2,000 in market value, or 1%, of the company's securities entitled to be voted on the proposal at the meeting for at least one year by the date such shareholder submits the proposal and (ii) continue to hold those securities through the date of the meeting.

While you indicated in your letter that Ms. Rice meets these eligibility requirements, Ms. Rice did not provide the necessary proof of ownership required by Rule 14a-8(b)(2). Under this Rule, a beneficial holder may prove its beneficial ownership of the requisite amount of voting securities (in this case, Comcast Class A Common Stock) in one of two ways, by submitting to the company (i) a written statement from the "record" holder of the securities (usually a broker or bank) verifying that, at the time the beneficial holder submitted its proposal, it continuously held the requisite amount of such securities for at least one year or (ii) if the beneficial holder has filed a Schedule 13D, Schedule 13G, Form 3, Form 4 and/or Form 5, or amendments to those documents or updated forms, reflecting its ownership of the shares as of or before the date on which the one-year eligibility period begins, a copy of the schedule and/or form, and any subsequent amendments reporting a change in the beneficial holder's ownership level, along with a written statement by the beneficial holder that it continuously held the required number of shares for the one-year period as of the date of the statement. To date Ms. Rice has not proven her beneficial ownership of the required securities in either of the ways described above. In addition, your letter states only that Ms. Rice is the owner of a sufficient amount of "Comcast Corporation common stock." It does not specify that this stock is Comcast Class A Common Stock, which is voting stock. Comcast also has

Mr. Jonas Kron
December 8, 2008
Page 2

another class of publicly-traded stock, Comcast Class A Special Common Stock, which does not possess voting rights and accordingly may not be used to satisfy the procedural and eligibility requirements under Rule 14a-8.

In addition, Rule 14a-8(b)(2) provides that Ms. Rice (and not the record holder) must provide to Comcast a written statement that she intends to continue to hold the securities through the date of the 2009 annual meeting.

Pursuant to Rule 14a-8, if within 14 calendar days of your receipt hereof we do not receive the necessary proof of ownership and a statement from Ms. Rice that she intends to continue to hold the securities through the date of the 2009 annual meeting of shareholders, we will not be able to consider Ms. Rice's proposal for inclusion in Comcast's 2009 proxy statement and we will submit a no action request letter to the Securities and Exchange Commission indicating that we do not intend to include Ms. Rice's proposal in our proxy.

A copy of Rule 14a-8 is enclosed for your reference. We thank you for your interest in Comcast. Should you wish to discuss this further, please do not hesitate to contact me at (215) 286-7564.

Very truly yours,



Arthur R. Block
Senior Vice President, General
Counsel and Secretary

cc: Lyell Cadet
Trillium Asset Management

William Aaronson
Hilary Dengel
Davis Polk & Wardwell

Shelley Alpern
Director of Social Research & Advocacy
Trillium Asset Management Corp.
711 Atlantic Avenue
Boston, MA 02111

Fax: 617 482 6179


Dear Ms. Alpern:

I hereby authorize Trillium Asset Management Corporation to file a shareholder resolution on my behalf at Comcast (CMCSA).

I am the beneficial owner of 162 shares of Comcast (CMCSA) common stock that I have held for more than one year. I intend to hold the aforementioned shares of stock through the date of the company's annual meeting in 2009.

I specifically give Trillium Asset Management Corporation full authority to deal, on my behalf, with any and all aspects of the aforementioned shareholder resolution. I understand that my name may appear on the corporation's proxy statement as the filer of the aforementioned resolution.

Sincerely,



Louise Rice
c/o Trillium Asset Management Corporation
711 Atlantic Avenue, Boston, MA 02111

12/10/08

Date

DAVIS POLK & WARDWELL

450 LEXINGTON AVENUE
NEW YORK, NY 10017

212 450 4000
FAX 212 450 3800

MENLO PARK
WASHINGTON, D.C.

LONDON

PARIS

FRANKFURT

MADRID

TOKYO

BEIJING

HONG KONG

WILLIAM H. AARONSON
212 450 4397
WILLIAM.AARONSON@DPW.COM

January 7, 2009

Re: *Shareholder Proposals Submitted by The Office of the Comptroller of the City of New York and Trillium Asset Management Corporation*

Office of Chief Counsel
Division of Corporation Finance
Securities and Exchange Commission
100 F Street N.E.
Washington, D.C. 20549
via email: shareholderproposals@sec.gov

Ladies and Gentlemen:

On behalf of our client, Comcast Corporation (“**Comcast**” or the “**Company**”), we write to inform you of the Company’s intention to exclude from its proxy statement and form of proxy for the Company’s 2009 Annual Meeting of Shareholders (collectively, the “**2009 Proxy Materials**”) shareholder proposals (the “**Proposals**” and each a “**Proposal**”) and related supporting statements received from The Office of the Comptroller of the City of New York, on behalf of the New York City Employees’ Retirement System, the New York City Police Pension Fund, the New York City Fire Department Pension Fund and the New York City Board of Education Retirement System (“**Proponent A**” and its Proposal, “**Proposal A**”) and Trillium Asset Management Corporation, on behalf of Ms. Louise Rice (“**Proponent B**” and together with Proponent A, the “**Proponents**” and Proponent B’s Proposal, “**Proposal B**”).

We hereby respectfully request that the Staff of the Division of Corporation Finance (the “**Staff**”) concur in our opinion that the Company may, for the reasons set forth below, properly exclude the Proposals from the 2009 Proxy Materials. The Company has advised us as to the factual matters set forth below.

Pursuant to Staff Legal Bulletin No. 14D (CF), Shareholder Proposals (November 7, 2008), question C, we have submitted this letter and the related

correspondence from the Proponents to the Commission via email to shareholderproposals@sec.gov. Also, in accordance with Rule 14a-8(j), a copy of this letter and its attachments is being mailed on this date to each of the Proponents informing each of them of the Company's intention to exclude their respective Proposals from the 2009 Proxy Materials. The Company plans to file its definitive proxy statement with the Securities and Exchange Commission (the "SEC") on or about March 30, 2009. Accordingly, we are submitting this letter not less than 80 days before the Company intends to file its definitive proxy statement.

Introduction

The Proposals, which are attached hereto as Exhibit A and Exhibit B respectively, request that:

"[t]he Board of Directors prepare a report, excluding proprietary and confidential information, and to be made available to shareholders no later than November 30, 2009, examining the effects of the company's Internet network management practices in the context of the significant public policy concerns regarding the public's expectations of privacy and freedom of expression on the Internet."

Comcast requests that the Staff of the SEC concur with its view that the Proposals may be properly omitted from the 2009 Proxy Materials pursuant to the provisions of Rule 14a-8(i)(10) because the Company has already substantially implemented the Proposals and/or Rule 14a-8(i)(7) because the Proposals concern a matter relating to the Company's ordinary business operations.

Additionally, Proposal A and Proposal B are identical. Therefore, Comcast requests that the Staff concur with its view that if Proposal A must be included in the 2009 Proxy Materials, then Proposal B may be properly omitted from the Company's 2009 Proxy Materials pursuant to Rule 14a-8(i)(11) because Proposal B substantially duplicates Proposal A.

Grounds for Omission

The Company has substantially implemented the Proposals since adequate information regarding the Company's network management practices is clearly published on the Company's Web site and therefore the Proposals may be omitted from the 2009 Proxy Materials pursuant to Rule 14a-8(i)(10).

Pursuant to Rule 14a-8(i)(10), which permits the exclusion of a shareholder proposal if the company has already substantially implemented the proposal, the Proposals may be excluded from Comcast's 2009 Proxy Materials if they have already been substantially implemented by Comcast. See, Exchange Act Release No. 34-20091 (August 16, 1983). According to the Commission, the exclusion provided for in Rule 14a-8(i)(10) "is designed to avoid the possibility of shareholders having to consider matters which already have been favorably acted

upon by management.” See, Exchange Act Release No. 34-12598 (July 7, 1976). A shareholder proposal is considered to be substantially implemented if the company’s relevant “policies, practices and procedures compare favorably with the guidelines of the proposal.” Texaco, Inc. (March 28, 1991). The Staff does not require that every detail of a proposal have been implemented by a company in order to permit exclusion under Rule 14a-8(i)(10). Instead, the Staff has consistently taken the position that when a company already has policies and procedures in place relating to the subject matter of the proposal, or has implemented the essential objectives of the proposal, the shareholder proposal has been substantially implemented and may be excluded pursuant to Rule 14a-8(i)(10). See, ConAgra Foods, Inc. (July 3, 2006), The Talbots, Inc. (April 5, 2002), The Gap, Inc. (March 16, 2001) and Kmart Corporation (February 23, 2000).

Disclosure of Comcast’s Network Management Practices

Through various documents posted on Comcast’s Web site (accessible via the Web page www.comcast.net/terms/network) that pertain to Comcast’s High-Speed Internet service, Comcast provides a significant amount of information regarding its network management practices. These documents contain detailed information about, among other topics, why Comcast manages its network, how it manages its network, and how customers are affected by network management. These documents also clearly state that Comcast’s network management does not block customer applications or programs nor does it discriminate against particular types of online content. Collectively, these documents not only describe how Comcast’s network management works, but also address how its network management practices relate to the public policy concerns regarding freedom of expression on the Internet. The Comcast Customer Privacy Notice at <http://www.comcast.com/customerprivacy/> contains the complete privacy policy for Comcast’s cable television, High-Speed Internet, and phone services. A second privacy statement at <http://www.comcast.net/privacy/> contains additional privacy provisions that apply to Comcast’s High-Speed Internet service and Comcast.net website. Comcast’s network management practices are consistent with these privacy statements.

Network management in the present context describes the tools and techniques that an Internet service provider uses to deliver a high quality, consistent, and safe Internet experience to its customers. Comcast’s network management practices include, among other things, identifying spam and preventing its delivery to customer e-mail accounts, detecting malicious Internet traffic and preventing the distribution of viruses or other harmful code or content, and temporarily lowering the priority of traffic for users who are the top contributors to current network congestion. A significant portion of Comcast’s network management activities relate to congestion management. As part of Comcast’s own initiatives and as part of its compliance with the Federal Communications Commission (the “FCC”) order pertaining to network management, see *In re Formal Complaint of Free Press and Public Knowledge Against Comcast Corporation*, 23 FCC Rcd 13028 (2008), Comcast is continually

evaluating and refining the ways in which it manages its network in order to continue providing high quality Internet service using reasonable network management tools and techniques that are consistent with industry standards. As stated above, Comcast keeps its users and investors clearly apprised of its activities in this area through information made available on its Web site.

In a September 19, 2008 letter from Comcast to the FCC (available on Comcast's Web site at http://downloads.comcast.net/docs/Cover_Letter.pdf and attached hereto as Exhibit C) (the, "**September 19 Letter**"), Comcast stated that, consistent with its prior voluntary commitment and the FCC's Order noted above, Comcast would transition away from its prior congestion management practices that managed certain types of peer-to-peer ("P2P") traffic. As of December 31, 2008, Comcast has completed its transition to new protocol-agnostic congestion management practices. In the September 19 Letter, Comcast affirmed its commitment to "ensur[ing] continued delivery of a world-class service to all of [its] subscribers, while minimizing the impact on any individual user whose traffic must be managed as part of this process."

As also noted in the September 19 Letter, in September 2008, Comcast submitted to the FCC and posted on the network management section of its Web site (i) a description of its prior approach to managing network congestion (available at http://downloads.comcast.net/docs/Attachment_A_Current_Practices.pdf and attached hereto as Exhibit D) (ii) a description of its new protocol-agnostic congestion management practices (available at http://downloads.comcast.net/docs/Attachment_B_Future_Practices.pdf and attached hereto as Exhibit E) and (iii) Comcast's compliance plan for the transition from the prior approach to the new one (available at http://downloads.comcast.net/docs/Attachment_C_Compliance_Plan.pdf and attached hereto as Exhibit F). On January 5, 2009, Comcast filed a letter with the FCC (available on Comcast's Web site at <http://downloads.comcast.net/docs/comcast-nm-transition-notification.pdf> and attached hereto as Exhibit G) notifying the FCC that it has ceased employing the prior congestion management practices and has instituted the new practices throughout its High-Speed Internet network. These documents not only provide extensive details regarding Comcast's past and current practices, but also directly and indirectly address the privacy and freedom of expression concerns raised by the Proposals.

Exhibit D, Comcast's description of its prior congestion management approach, describes Comcast's former P2P-specific network management practices, from which Comcast fully transitioned away as of December 31, 2008. This document clearly explains the extent to which a given user's online information could be inspected by such network management tools and reassures the reader that the techniques used by Comcast examined only the relevant packet header or addressing information in a given packet necessary to indicate what type of protocol (P2P in this case) was being used by a customer. The document emphasizes that this congestion management technique did not "read" the contents of customer communications in order to determine whether a packet was text, music, video, a voice conversation, or any other type of content, and

certainly did not identify whether any packet contained political speech, commercial speech or entertainment, or try to discern whether a packet was personal or business, legal or illicit, etc. Comcast's prior network management practices fully respected customer privacy and did not act based on the contents of any customer communications.

Exhibit E, Comcast's description of its new congestion management approach, stresses that Comcast's new congestion management technique is "protocol-agnostic" and focuses only on the extent to which a certain Comcast subscriber is using a high amount of bandwidth, not what type of protocol is being used. As was the case with Comcast's prior congestion management practices, this new technique fully respects customer privacy and does not act based on the contents of any customer communications.

In addition to Comcast's various submissions to the FCC that it prominently displays on the network management portion of its Web site, Comcast publishes a Frequently Asked Questions ("FAQs") section on its Web site (available at <http://help.comcast.net/content/faq/Frequently-Asked-Questions-about-Network-Management#manage> and attached hereto as Exhibit H), which discusses why Comcast manages its network and the techniques utilized to do so. This portion of Comcast's Web site makes it clear to the reader that neither Comcast's previous network management practices nor the network management practices to which it has transitioned discriminate against particular types of online content.

Comcast clearly explains in the FAQ section (as it does elsewhere) that its new protocol-agnostic network management technique will not manage congestion based on the protocols in use, but rather it will focus on the heaviest users in near real time, such that periods of congestion will be "fleeting and sporadic." Most importantly in the context of the Proponents' concerns about freedom of expression, the FAQ section clearly indicates that the new practices will be "content neutral."

In addition to the statements and FCC letters discussed above, Comcast's Acceptable Use Policy (available at <http://www.comcast.net/terms/use/> and attached hereto as Exhibit I) provides additional disclosure to customers about the types of uses and activities that Comcast considers unacceptable (such as sending spam or spreading a computer virus) and how it will respond when it determines there is a violation of its Acceptable Use Policy. Taken together, all of these documents provide customers and others with a detailed, meaningful explanation of Comcast's network management and privacy practices and policies and how they affect customers. Comcast believes that its network management techniques reflect reasonable, industry standard practices and do so in a way that fully respects customer freedom of expression and privacy.

Analysis

In ConAgra Foods, Inc. (July 3, 2006), the Staff allowed the company to exclude a proposal requesting that the board issue a sustainability report to shareholders because the company had substantially implemented the essential objective of the proposal through its publication (on its Web site) of a Corporate Responsibility Report, which focused on certain issues discussed in the proposal. This is similar to the situation at hand, as the network management page of Comcast's Web site provides detailed information that explains Comcast's network management processes and also directly addresses the concerns raised by the Proposals.

In The Gap, Inc. (March 16, 2001), the Staff allowed the company to exclude a proposal (on substantial implementation grounds) that requested a report on the child labor practices of the company's vendors. The company had already established a code of vendor conduct, monitored vendor compliance, published related information and was willing to discuss the issue with shareholders. Likewise, in Nordstrom, Inc. (February 8, 1995), the Staff allowed the company to exclude a proposal (on substantial implementation grounds) that requested that the company establish a set of standards for its suppliers that met certain minimum criteria and also that the company prepare a report to shareholders describing its policies as well as its current and future compliance efforts with respect to those policies. In that instance, Nordstrom was able to successfully argue that it had substantially implemented the proposal where it had in place existing company guidelines for suppliers and had issued a press release regarding such guidelines (despite the fact that the guidelines did not commit the company to conduct regular or random inspections to ensure compliance, as requested in the proposal). As indicated above, Comcast has clearly gone much further in substantially implementing the essential objectives of the Proposals and therefore respectfully submits that the Staff should allow Comcast to exclude the Proposals on such grounds.

In ITT Corporation (March 12, 2008), the Staff did not permit the exclusion of a proposal requesting a report on ITT Corporation's foreign sales of military and weapons-related products and services on substantial implementation grounds (or any other grounds). The company argued that it had substantially implemented the proposal by way of (i) availability of the requested information through the dissemination of such information by government agencies to the media, (ii) information provided to certain government agencies which was publicly available, (iii) information posted online by several government agencies and (iv) information contained in the company's SEC filings, as well as certain information on its own Web site. Comcast's claim of substantial implementation is distinguished from that of ITT Corporation because Comcast's network management information page directly supplies the information sought by the Proposals, as opposed to forcing an investor to search several locations for the desired information, and it directly responds to the issues raised by the Proposals. This information page not only links readers to certain of Comcast's FCC filings, but also provides updates regarding Comcast's network management practices

and links to the FAQ section that provides plain language explanations of network management issues, including those related to the concerns raised by the Proposals. Comcast has collected all of its network management documents and related materials in one place at <http://www.comcast.net/terms/network>.

Also, in Terex Corporation (March 18, 2005), the Staff did not permit exclusion (on substantially implemented grounds) of a proposal substantially similar to that received by ConAgra Foods (discussed above). Terex claimed that it substantially implemented the proposal by including on its Web site its views regarding corporate citizenship and by making reference to a variety of its public disclosures, including filings made with the SEC. Again, Comcast's claim of substantial implementation is distinguished from the argument set forth by Terex because Comcast prepares and publishes on its Web site detailed summaries of its network management practices and also provides direct access to certain FCC filings by posting those filings on the network management page of its Web site (*i.e.*, the actions requested by the Proposals).

Comcast continues to publish and update information describing its network management practices, including how these practices relate to the public policy concerns regarding privacy and freedom of expression on the Internet and believes that through its current disclosures that it has implemented the essential objectives of the Proposals. The Proposals have therefore been substantially implemented.

The Proposals may also be omitted from the 2009 Proxy Materials under Rule 14a-8(i)(7) because, while the Proposals may relate to issues of public policy, the Proponents seek to "micro-manage" the Company with their request that would intrude unduly on the Company's ordinary business operations.

Pursuant to Rule 14a-8(i)(7), the Proposals may be excluded from Comcast's 2009 Proxy Materials because the Proposals deal with a matter relating to the company's ordinary business operations.

Rule 14a-8(i)(7) allows a company to omit a shareholder proposal from its proxy materials if such proposal deals with a matter relating to the company's ordinary business operations. The general policy underlying the "ordinary business" exclusion is "to confine the resolution of ordinary business problems to management and the board of directors, since it is impracticable for shareholders to decide how to solve such problems at annual shareholders meetings." Exchange Act Release No. 34-40018 (May 21, 1998) (the "1998 Release"). This general policy reflects two central considerations: (i) "[c]ertain tasks are so fundamental to management's ability to run a company on a day-to-day basis that they could not, as a practical matter, be subject to direct shareholder oversight"; and (ii) the "degree to which the proposal seeks to 'micro-manage' the company by probing too deeply into matters of a complex nature upon which shareholders, as a group, would not be in a position to make an informed judgment." The 1998 Release, citing in part Exchange Act Release No. 12999 (November 22, 1976).

Additionally, when a proposal seeks a report, “the Staff will consider whether the subject matter of the special report . . . involves a matter of ordinary business; where it does, the proposal will be excludable under Rule 14a-8(c)(7). Exchange Act Release 34-20091 (August 16, 1983).

The Proposals Relate to Comcast’s Network Management Practices, Implicating Comcast’s Business Operations

Comcast earns revenue by, among other things, providing high-quality High-Speed Internet service to both commercial and individual users. As the Internet continues to evolve and Comcast strives to provide its customers with the highest quality Internet service possible, Comcast must also continue to ensure that its network capabilities are able to provide such service.

As previously discussed in great detail, Comcast manages its network with the goal of delivering the best possible High-Speed Internet experience to all of its customers. Network management is essential for Comcast to promote the use and enjoyment of the Internet by all of its customers. Comcast uses various tools and techniques to manage its network. These tools and techniques, like the network and its usage, are dynamic, and can and do change frequently.

Decisions regarding Comcast’s network management policy depends on an intimate knowledge of Comcast’s High-Speed Internet network. Only Comcast management and staff have the requisite knowledge of Comcast’s network and user population in order to assess, set and refine its network management policies and tools. In addition, Comcast and its network management practices were the subject of a proceeding at the FCC, which resulted in the FCC’s August 20, 2008 Memorandum Opinion and Order, FCC 08-183 noted above. As a result of that proceeding, Comcast committed to make certain disclosures regarding its current and future network management practices. Given that the type and content of these disclosures are part of Comcast’s ongoing commitment to keep its customers and the public informed regarding one of Comcast’s major services and revenue streams, it seems clear that disclosure of Comcast’s network management policies falls squarely within the scope of Comcast’s ordinary business operations.

In Yahoo! Inc. (April 5, 2007), the Staff concluded that a shareholder proposal which requested the Board of Directors to “report to shareholders as soon as practicable on the Company’s rationale for supporting and/or advocating public policy measures that would increase government regulation of the Internet” fell within the purview of Yahoo!’s ordinary business operations.

Likewise, in Microsoft Corporation (September 29, 2006), the Staff concurred with Microsoft’s view that a proposal almost identical to the Yahoo! proposal noted above could be excluded on the basis of Rule 14a-8(i)(7), where Microsoft argued that “[s]hareholders are simply not in a position to frame the company’s policy on complex questions of business, technology advancement, policy, and regulation[,]” asserting that these activities are “properly reserved for

management.” As was the case with Microsoft, the Proponents should not be allowed to improperly intervene in the day-to-day operations of one of the key areas of Comcast’s business in order to advance their particular agenda.

As expressly indicated in Exchange Act Release 34-20091 (August 16, 1983), noted above, since the requested report clearly concerns an area of Comcast’s ordinary business operations, Comcast believes that the Proposals may be properly excluded from Comcast’s 2009 Proxy Materials under Rule 14a-8(i)(7).

The Proposals Relate to a Complex Matter That Is Most Appropriate for Management to Address

Issues related to network management are highly complex and require a detailed understanding of, among other things, Comcast’s and other Internet Service Providers’ network architectures, business practices, and available network technology. To make an informed judgment as to what types of network management practices are necessary and will promote the interests of Comcast, its stockholders and its customers requires an intimate knowledge of these complex practices. The complexity and rapid evolution of the Internet and network management practices make network management a poor topic for action by stockholders at an annual meeting and are just the type of proposal that “seeks to ‘micro-manage’ the company by probing too deeply into matters of a complex nature upon which shareholders, as a group, would not be in a position to make an informed judgment” (as stated in the 1998 Release). Accordingly, the Company believes that it should be permitted to exclude the Proposals on the basis of Rule 14a-8(i)(7).

Comcast believes that the Proposals are exactly the type of matter that the “ordinary business” exception in Rule 14a-8(i)(7) was created to address. By requesting that the Board of Directors prepare a report regarding its network management practices, the Proponents are seeking to subject to shareholder oversight an aspect of Comcast’s business that is most appropriately handled by Comcast’s management. Additionally, the issues of how Comcast should properly maintain its network while still respecting users’ concerns regarding freedom of expression and privacy and how Comcast should respond to government regulation of this aspect of its business are central to the operation of the day-to-day business of Comcast. Executives and other managers routinely make decisions about how best to conduct Comcast’s business in compliance with current regulations and it would be highly unusual and impractical to interject Comcast’s shareholders into what is otherwise a routine management decision.

In General Electric Company (January 17, 2006) the proponent requested that the issuer prepare a report on the impact of a flat tax on the company. General Electric successfully argued that tax planning and compliance were “intricately interwoven with a company’s financial planning, day-to-day business operations and financial reporting.” In the same way, Comcast’s network management practices involve intricate systems related to the unique services that

Comcast provides and Comcast's selection and disclosures of its network management practices are a function of Comcast's ongoing business practices and any applicable FCC rules or requirements.

Comcast is aware that the Staff will make an exception for proposals that pertain to significant social policy issues, even if they involve ordinary business operations. However, the Commission has permitted the exclusion of shareholder proposals that seek to require a company to prepare and issue a report pertaining to its otherwise ordinary business operations but involving social policy issues, where such proposals call for reports but not action in furtherance of such social policy issue. See, Washington Mutual, Inc. (March 6, 2002) (excluding a proposal requesting a report identifying all company costs associated with land development projects); The Mead Corporation (January 31, 2001) (excluding shareholder proposal requesting a report on the company's environmental risks in financial terms).

In Washington Mutual, the shareholder proposal was excluded under Rule 14a-8(i)(7) where the proponent merely sought a report concerning the impact of a portion of the company's business operations and did not request adoption of corporate policies regarding the environment. Like the shareholder proposal that was excluded under Rule 14a-8(i)(7) in Washington Mutual, the Proposals merely ask Comcast to issue a report regarding its network management practices in light of the public's concerns regarding privacy and freedom of expression on the Internet, but do not request that Comcast take any affirmative steps to attempt to modify its network management practices.

Accordingly, Comcast believes that the Proposals intrude into the realm of the ordinary business operations of Comcast without calling for the necessary action that sometimes prevents the exclusion of social policy related proposals. For that reason, in addition to the reasons indicated in the subsection above, Comcast respectfully submits that it should be permitted to exclude the Proposals from its 2009 Proxy Materials in accordance with Rule 14a-8(i)(7).

If Proposal A may not be excluded under either Rule 14a-8(i)(10) or Rule 14a-8(i)(7) and must be included in the 2009 Proxy Materials, Proposal B may be excluded from the Company's 2009 Proxy Materials because it is substantially duplicative of Proposal A.

Pursuant to Rule 14a-8(i)(11), if Proposal A is included in the 2009 Proxy Materials, Proposal B may be excluded from Comcast's 2009 Proxy Materials because the proposal substantially duplicates another proposal previously submitted to the company by another proponent that will be included in the company's proxy materials for the same meeting (*i.e.*, Proposal A).

In this case, the Proposals are not only substantially duplicative, but are identical and therefore squarely fit into the exclusion provided by Rule 14a-8(i)(11). For that reason, if Proposal A must be included in the 2009 Proxy

Materials, Comcast believes that it may properly exclude Proposal B in accordance with Rule 14a-8(i)(11).

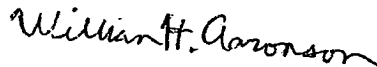
Conclusion

Comcast believes that the Proposals may be properly excluded from the 2009 Proxy Materials pursuant to Rule 14a-8(i)(10) because the Proposals have been substantially implemented. Comcast also believes that the Proposals may be properly excluded from the 2009 Proxy Materials pursuant to Rule 14a-8(i)(7) because issues relating to network management are within the scope of Comcast's ordinary business operations and the Proposals do not satisfy the social policy exception to this rule.

If the Staff does not concur with Comcast's belief that the Proposals may be properly excluded pursuant to either Rule 14a-8(i)(10) or Rule 14a-8(i)(7), Comcast believes that if Proposal A must be included in its 2009 Proxy Materials, then Proposal B may be properly excluded from its 2009 Proxy Materials pursuant to Rule 14a-8(i)(11) because Proposal B is substantially duplicative of Proposal A.

We would be happy to provide you with any additional information and answer any questions that you may have regarding this subject. Should you disagree with the conclusions set forth herein, we respectfully request the opportunity to confer with you prior to the determination of the Staff's final position. Please do not hesitate to call me at (212) 450-4397 or Arthur R. Block, the Company's Senior Vice President, General Counsel and Secretary, at (215) 286-7564, if we may be of any further assistance in this matter.

Very truly yours,



William H. Aaronson

Enclosures

cc w/enc: The Office of the Comptroller of the City of New York
Trillium Asset Management Corporation
Arthur R. Block

Office of Chief Counsel

January 7, 2009

EXHIBIT A



THE CITY OF NEW YORK
OFFICE OF THE COMPTROLLER
1 CENTRE STREET
NEW YORK, N.Y. 10007-2341

WILLIAM C. THOMPSON, JR.
COMPTROLLER

November 12, 2008

Mr. Arthur R. Block
Secretary
Comcast Corporation
One Comcast Center
Philadelphia, PA 19103

Dear Mr. Block:

The Office of the Comptroller of New York City is the custodian and trustee of the New York City Employees' Retirement System, the New York City Police Pension Fund, and the New York City Fire Department Pension Fund, and custodian of the New York City Board of Education Retirement System (the "funds"). The funds' boards of trustees have authorized the Comptroller to inform you of their intention to offer the enclosed proposal for consideration of stockholders at the next annual meeting.

I submit the attached proposal to you in accordance with rule 14a-8 of the Securities Exchange Act of 1934 and ask that it be included in your proxy statement.

Letters from The Bank of New York certifying the funds' ownership, continually for over a year, of shares of Comcast Corporation common stock are enclosed. The funds intend to continue to hold at least \$2,000 worth of these securities through the date of the annual meeting.

We would be happy to discuss this initiative with you. Should the board decide to endorse its provisions as company policy, our funds will ask that the proposal be withdrawn from consideration at the annual meeting. Please feel free to contact me at (212) 669-2651 if you have any further questions on this matter.

Very truly yours,


Patrick Doherty

pd:ma

Enclosures

Comcast Corporation - internet censorship



New York City Office of the Comptroller
Bureau of Asset Management

Report on Our Company's Network Management Practices,
Public Expectations of Privacy and Freedom of Expression on the Internet

The Internet is becoming the defining infrastructure of our economy and society in the 21st century. Its potential to open new markets for commerce, new venues for cultural expression and new modalities of civic engagement is without historic parallel.

Internet Service Providers (ISPs) serve as gatekeepers to this infrastructure: providing access, managing traffic, insuring communication, and forging rules that shape, enable and limit the public's use of the Internet.

As such, ISPs have a weighty responsibility in devising network management practices. ISPs must give far-ranging thought to how these practices serve to promote—or inhibit—the public's participation in the economy and in civil society.

Of fundamental concern is the effect ISPs' network management practices have on public expectations of privacy and freedom of expression on the Internet.

Whereas:

- More than 211 million Americans--70% of the U.S. population--now use the Internet;
- The Internet serves as an engine of opportunity for social, cultural and civic participation in society;
- 46% of Americans report they have used the internet, e-mail or text messaging to participate in the 2008 political process;
- The Internet yields significant economic benefits to society, with online US retailing revenues – only one gauge of e-commerce - exceeding \$200 billion in 2008;
- The Internet plays a critical role in addressing societal challenges such as provision of health care, with over 8 million Americans looking for health information online each day;
- 72% of Americans are concerned that their online behaviors are being tracked and profiled by companies;
- 53% of Americans are uncomfortable with companies using their email content or browsing history to send relevant ads;
- 54% of Americans are uncomfortable with third parties collecting information about their online behavior;
- Our Company provides Internet access to a very large number of subscribers and is considered a leading ISP;

- Our Company's network management practices have come under public scrutiny by consumer and civil liberties groups, regulatory authorities and shareholders.
- Class action lawsuits in several states are challenging the propriety of ISPs' network management practices;
- Internet network management is a significant public policy issue; failure to fully and publicly address this issue poses potential competitive, legal and reputational harm to our Company;
- Any perceived compromise by ISPs of public expectations of privacy and freedom of expression on the Internet could have a chilling effect on the use of the Internet and detrimental effects on society.

Therefore, be it resolved, that shareholders request that the Board of Directors prepare a report, excluding proprietary and confidential information, and to be made available to shareholders no later than November 30, 2009, examining the effects of the company's Internet network management practices in the context of the significant public policy concerns regarding the public's expectations of privacy and freedom of expression on the Internet.

Office of Chief Counsel

January 7, 2009

EXHIBIT B

November 26, 2008

Via Overnight Mail

Arthur R. Block
Senior Vice President, General Counsel and Secretary
Comcast Corporation
One Comcast Center
Philadelphia, PA 19103

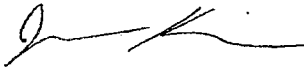
Dear Mr. Block:

Trillium Asset Management Corporation ("Trillium") is an investment firm based in Boston, Massachusetts specializing in socially responsible asset management.

I am authorized to notify you of our intention to file the enclosed shareholder resolution. Trillium submits this resolution for inclusion in the 2009 proxy statement, in accordance with Rule 14a-8 of the General Rules and Regulations of the Securities and Exchange Act of 1934. Trillium submits this proposal on behalf of our client Louise Rice, who is the beneficial owner, per Rule 14a-8, of more than \$2,000 worth of Comcast Corporation common stock acquired more than one year prior to this date. We will provide verification of ownership from our custodian separately upon request. We will send a representative to the stockholders' meeting to move the resolution as required by the SEC rules.

I can be reached at (917) 222-3366 and look forward to your response.

Sincerely,



Jonas Kron, J.D., M.S.E.L.
Senior Social Research Analyst

cc: Brian L. Roberts, Chairman and CEO, Comcast Corporation
Marlene S. Dooner, Senior Vice President, Investor Relations, Comcast Corporation

BOSTON	DURHAM	SAN FRANCISCO	BOISE
711 Atlantic Avenue Boston, Massachusetts 02111-2809 T: 617-423-6655 F: 617-482-6179 800-548-5684	353 West Main Street, Second Floor Durham, North Carolina 27701-3215 T: 919-688-1265 F: 919-688-1451 800-853-1311	369 Pine Street, Suite 711 San Francisco, California 94104-3310 T: 415-392-4806 F: 415-392-4535 800-933-4806	950 W. Bannock Street, Suite 530 Boise, Idaho 83702-6118 T: 208-387-0777 F: 208-387-0278 800-567-0538



Report on Our Company's Network Management Practices,
Public Expectations of Privacy and Freedom of Expression on the Internet

The Internet is becoming the defining infrastructure of our economy and society in the 21st century. Its potential to open new markets for commerce, new venues for cultural expression and new modalities of civic engagement is without historic parallel.

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Office of Chief Counsel

January 7, 2009

EXHIBIT C



Comcast Corporation
2001 Pennsylvania Ave., NW
Suite 500
Washington, DC 20006
202.379.7100 Tel
202.466.7718 Fax
www.comcast.com

September 19, 2008

VIA ECFS AND HAND DELIVERY

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

**Re: In the Matter of Formal Complaint of Free Press and Public Knowledge
Against Comcast Corporation for Secretly Degrading Peer-to-Peer
Applications, File No. EB-08-IH-1518**

**In the Matter of Broadband Industry Practices; Petition of Free Press et al.
for Declaratory Ruling that Degrading an Internet Application Violates the
FCC's Internet Policy Statement and Does Not Meet an Exception for
"Reasonable Network Management," WC Docket No. 07-52**

Dear Ms. Dortch:

In accordance with the Commission's August 20, 2008 *Memorandum Opinion and Order* regarding Comcast's network management practices for our High-Speed Internet ("HSI") service,¹ Comcast hereby complies with the three filing requirements set forth therein. Specifically, consistent with Paragraphs 54 and 59 of the Commission's *Order*, we submit the following:

- (1) a description of our current approach to managing network congestion (Attachment A);
- (2) a description of the new protocol-agnostic congestion management practices to which we are transitioning no later than year-end 2008 (Attachment B); and
- (3) a compliance plan setting forth the benchmarks that we will meet as part of this transition (Attachment C). We have also included in this document our plans for direct communication with our customers during this transition.

¹ *In re Formal Complaint of Free Press & Pub. Knowledge Against Comcast Corp. for Secretly Degrading Peer-to-Peer Applications; Broadband Industry Practices; Petition of Free Press et al. for Declaratory Ruling That Degrading an Internet Application Violates the FCC's Internet Policy Statement & Does Not Meet an Exception for "Reasonable Network Management,"* Mem. Op. and Order, FCC 08-183 (Aug. 20, 2008) ("Order").

These filings are consistent with our previously announced commitment to transition away from the congestion management practices we currently use to prevent peer-to-peer ("P2P") traffic from degrading our customers' use and enjoyment of our HSI service to a new set of protocol-agnostic congestion management practices, and to do so across our network by December 31, 2008. Over the last several months, we have conducted technical trials to determine how best to implement a new protocol-agnostic approach to congestion management. We are making excellent progress and are on track to complete the transition as scheduled. As in everything we do, our goal is to ensure continued delivery of a world-class service to all of our subscribers, while minimizing the impact on any individual users whose traffic must be managed as part of this process.

We continue to refine the details of our new practices, so we commit to make supplementary filings in this docket as necessary to keep the Commission (and the public) informed of any material changes in our plans before we complete the transition to protocol-agnostic congestion management by year-end. Separate and apart from the requirements of the *Order*, we have an ongoing commitment to our customers to provide a world-class Internet experience. To do so, we must always preserve the flexibility to manage our network in lawful and appropriate ways. Moreover, we know that clear communication with our customers is essential to a successful long-term relationship. So we are committed to ensuring that our customers receive clear, concise, and useful information about the services that we provide.

Even as we adopt the new network management practices described in Attachment B, we continue to make the investments in network upgrades that will permit us to better prevent congestion and meet our customers' ever-increasing demands for bandwidth. For example, earlier this year we doubled, and in many cases tripled, the upload speeds for almost all of our existing HSI customers. In addition, since our initial rollout of DOCSIS 3.0 (which currently offers consumers wideband download speeds of up to 50 Mbps and upload speeds of up to 5 Mbps) in the Twin Cities Region in April, we have continued preparations to deploy DOCSIS 3.0 to up to 20 percent of our footprint by the end of this year, and in many more markets in 2009.

As all of the Commissioners recognize, the Internet is an engine for innovation and economic growth. We are proud to be a leader in bringing broadband Internet to consumers all over the country, adding fuel to that engine. We will continue to work hard to deliver a world-class service that gives all of our subscribers access to the content, applications, and services that they demand.

Ms. Marlene Dortch
September 19, 2008
Page 3 of 3

Please contact me should you have any questions regarding this submission.

Sincerely,

/s/ Kathryn A. Zchem
Kathryn A. Zchem
Vice President, Regulatory Affairs
Comcast Corporation

cc: Chairman Kevin J. Martin
Commissioner Michael J. Copps
Commissioner Jonathan S. Adelstein
Commissioner Deborah T. Tate
Commissioner Robert M. McDowell
Daniel Gonzalez
Dana Shaffer
Scott Bergmann
Scott Deutchman

Kris Monteith
Amy Bender
Greg Orlando
Nick Alexander

Office of Chief Counsel

January 7, 2009

EXHIBIT D

ATTACHMENT A:
COMCAST CORPORATION
DESCRIPTION OF CURRENT NETWORK MANAGEMENT
PRACTICES

COMCAST CORPORATION
DESCRIPTION OF CURRENT NETWORK MANAGEMENT PRACTICES

Pursuant to Paragraphs 54 and 59 of the Commission's *Memorandum Opinion & Order* regarding how Comcast manages congestion on its High-Speed Internet ("HSI") network, Comcast hereby "disclose[s] to the Commission the precise contours of the network management practices at issue here, including what equipment has been utilized, when it began to be employed, when and under what circumstances it has been used, how it has been configured, what protocols have been affected, and where it has been deployed."¹

I. INTRODUCTION

Comcast's HSI network is a shared network. This means that our HSI customers share upstream and downstream bandwidth with their neighbors. Although the available bandwidth is substantial, so, too, is the demand. Thus, when a relatively small number of customers in a neighborhood place disproportionate demands on network resources, this can cause congestion that degrades their neighbors' Internet experience. In our experience, over the past several years, the primary cause of congestion (particularly in the upstream portion of our network) has been the high-volume consumption of bandwidth associated with use of certain peer-to-peer ("P2P") protocols. In order to tailor our network management efforts to this reality, Comcast's current congestion management practices were designed to address this primary contributor to congestion. Our objective in doing so was to provide all our customers with the best possible broadband Internet experience in the marketplace.

As described in Attachment B, in response to significant stated concerns of the Internet community, Comcast had already announced plans to transition away from its P2P-specific

¹ *In re Formal Complaint of Free Press & Pub. Knowledge Against Comcast Corp. for Secretly Degrading Peer-to-Peer Applications; Broadband Industry Practices; Petition of Free Press et al. for Declaratory Ruling That Degrading an Internet Application Violates the FCC's Internet Policy Statement & Does Not Meet an Exception for "Reasonable Network Management,"* Mem. Op. and Order, FCC 08-183 ¶¶ 54, 59 (Aug. 20, 2008) ("Order").

congestion management practices and terminate them entirely by December 31, 2008. Paragraph 54 of the *Order* directs Comcast to describe these current practices, and we do so here.²

At the outset, we provide some background on how these practices came into being and how they work in a general sense. We then provide the greater detail required by the *Order*.

II. BACKGROUND

To understand exactly how Comcast currently manages congestion on its network, it is helpful to have a general understanding of how Comcast's HSI network is designed.³ Comcast's HSI network is what is commonly referred to as a hybrid fiber-coax network, with coaxial cable connecting each subscriber's cable modem to an Optical Node, and fiber optic cables connecting the Optical Node, through distribution hubs, to the Cable Modem Termination System ("CMTS"), which is also known as the "data node." The CMTSes are then connected to higher-level routers, which in turn are connected to Comcast's Internet backbone facilities. Today, Comcast has approximately 3300 CMTSes deployed throughout our network, serving our 14.4 million HSI subscribers.

Each CMTS has multiple "ports" that handle traffic coming into and leaving the CMTS. In particular, each cable modem deployed on the Comcast HSI network is connected to the CMTS through the "ports" on the CMTS. These ports can be either "downstream" ports or "upstream" ports, depending on whether they send information to cable modems (downstream) or receive information from cable modems (upstream) attached to the port. Today, on average,

² Although the *Order* focuses entirely on Comcast's current practices with respect to controlling network congestion, Comcast's efforts to deliver a superior Internet experience involve a wide variety of other network management efforts beyond congestion control. As Comcast has previously explained, we actively manage our HSI network in order to enhance our customers' Internet experience by, among other things, blocking spam, preventing viruses from harming the network and our subscribers, thwarting denial-of-service attacks, and empowering our customers' ability to control the content that enters their homes.

³ The reader may find it useful to refer to the attached glossary for additional explanation of unfamiliar terms.

about 275 cable modems share the same downstream port and about 100 cable modems share the same upstream port. As will be described later in this document, Comcast's current congestion management practices focus solely on a subset of *upstream* traffic.

Internet usage patterns are dynamic and change constantly over time. As broadband networks deliver higher speeds, this enables the deployment of new content, applications, and services, which in turn leads more and more households to discover the benefits of broadband Internet services. Several years ago, Comcast became aware of a growing problem of congestion on its HSI network, as traffic volumes, particularly for upstream bandwidth (which is provisioned in lesser quantities than downstream bandwidth⁴), were growing rapidly and affecting the use of various applications and services that are particularly sensitive to latency (i.e., packets arriving slowly) or jitter (i.e., packets arriving with variable delay).

In order to diagnose the cause of the congestion and explore means to alleviate it, in May 2005, Comcast began trialing network management technology developed by Sandvine, Inc. The Sandvine technology identified which protocols were generating the most traffic and where in the network the congestion was occurring. After jointly reviewing significant amounts of usage data, Comcast and Sandvine determined that the use of several P2P protocols was regularly generating disproportionate burdens on the network, primarily on the upstream portion of the network, causing congestion that was affecting other users on the network.

As previously explained on the record and described in greater detail below, in order to mitigate congestion, Comcast determined that it should manage *only* those protocols that placed

⁴ This asymmetric provisioning of bandwidth is based on how the vast majority of consumers have historically used the Internet, i.e., most consumers have been far more interested in how fast they could surf the web, how fast they could download files, and whether they could watch streaming video than in uploading large files. Even today, with the widespread proliferation of services that place greater demand on upstream resources, most consumers still download much more than they upload, and so we continue to architect our network to optimize the experience of the vast majority of our users. As usage patterns change over time, so, too, will our provisioning practices.

excessive burdens on the network, and that it should manage those protocols in a minimally intrusive way utilizing the technology available at the time. More specifically, in an effort to avoid upstream congestion, Comcast established thresholds for the number of simultaneous unidirectional uploads that can be initiated for each of the managed protocols in any given geographic area; when the number of simultaneous sessions remains below those thresholds, uploads are not managed. The thresholds for each protocol vary depending upon a number of factors discussed in detail below, including how the particular protocol operates and the burden that the particular protocol was determined to place on our upstream bandwidth. These management practices were not based on the type (video, music, data, etc.) or content of traffic being uploaded.

The Sandvine equipment has been used (1) to determine when the number of simultaneous unidirectional upload sessions for a particular P2P protocol in a particular geographic area reaches its pre-determined threshold, and (2) when a threshold is reached, to temporarily delay the initiation of any new unidirectional upload sessions for that protocol until the number of simultaneous unidirectional upload sessions drops below that threshold.

III. WHAT EQUIPMENT IS UTILIZED?

The specific equipment Comcast uses to effectuate its network management practices is a device known as the Sandvine Policy Traffic Switch 8210 ("Sandvine PTS 8210"). Literature describing this product is attached. The following sections explain where and how Comcast uses the Sandvine PTS 8210.

IV. WHERE HAS THE EQUIPMENT BEEN DEPLOYED AND WHEN AND UNDER WHAT CIRCUMSTANCES HAS IT BEEN USED?

Comcast initially began technical trials with the Sandvine PTS 8210s starting in May 2005. Commercial (i.e., not trial) deployment of this equipment took place over an extended period of time, beginning in 2006. We achieved wide-scale deployment in 2007.⁵

On Comcast's network, the Sandvine PTS 8210 is deployed "out-of-line" (that is, out of the regular traffic flow)⁶ and is located adjacent to the CMTS. Upstream traffic from cable modems will pass through the CMTS on its way to upstream routers, and then, depending on the traffic's ultimate destination, onto Comcast's Internet backbone. A "mirror" replicates the traffic flow that is heading upstream from the CMTS without otherwise delaying it and sends it to the Sandvine PTS 8210, where the protocols in the traffic flow are identified and the congestion management policy is applied in the manner described in greater detail below. In some circumstances, two small CMTSes located near each other may be managed by a single Sandvine PTS 8210.⁷ The following graphics provide a simplified illustration of these two configurations:

⁵ Some locations currently have a network design that is different from the standard Comcast network design because we are trialing new protocol-agnostic congestion management practices in those locations, we are preparing those locations for evolution to DOCSIS 3.0 (which has already been launched in one market), or we acquired those systems from other operators and are in the process of standardizing them. The congestion management practices described herein are not used in those systems. The locations of our trials have been widely publicized, but disclosure of proprietary plans regarding the order and timing for network investments and service upgrades would cause substantial competitive harm.

⁶ Comcast deploys the Sandvine PTS 8210 "out-of-line" so as to not create an additional potential "point-of-failure" (i.e., a point in the network where the failure of a piece of equipment would cause the network to cease operating properly). The Sandvine equipment can also be deployed "in-line," which can make the management effectuated by the equipment nearly undetectable, but Comcast does not employ this configuration.

⁷ Although the PTS generally monitors traffic and effectuates policy at the CMTS level, the session management interface is administered at the Upstream Router, one layer higher in the overall architecture.

Comcast Optical Transport Node (OTN)

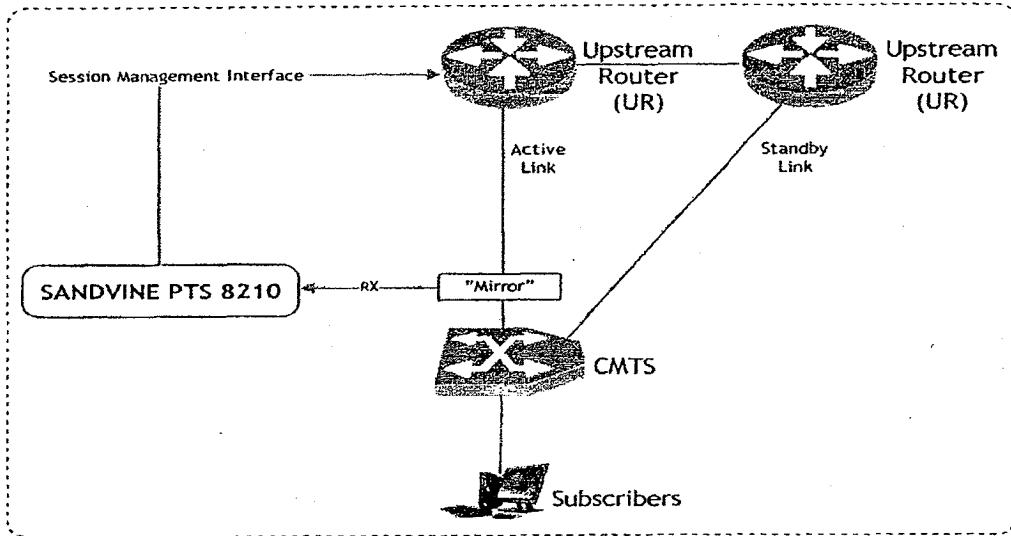


Diagram 1: Sandvine PTS Serving One CMTS.

Comcast Optical Transport Node (OTN)

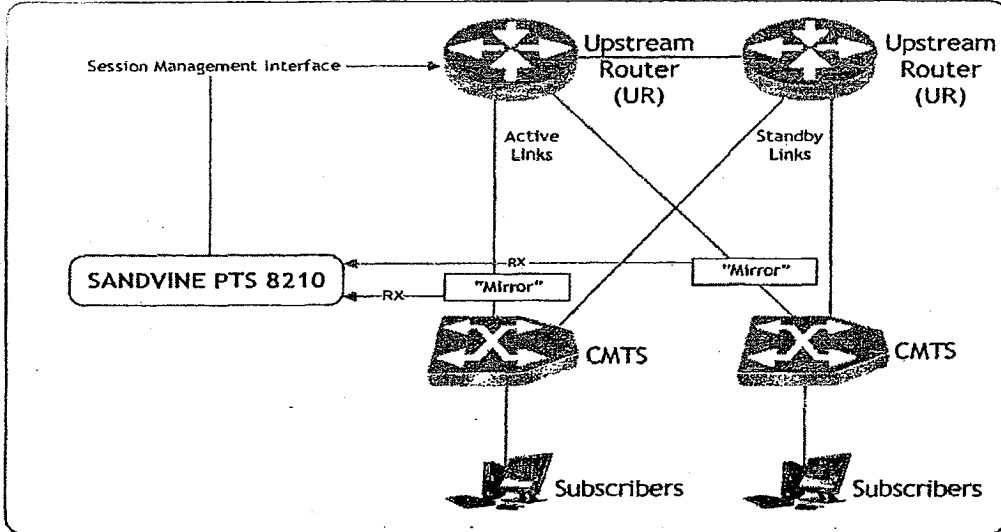


Diagram 2: Sandvine PTS Serving Two CMTSes.

V. HOW HAS THE EQUIPMENT BEEN CONFIGURED AND WHAT PROTOCOLS HAVE BEEN AFFECTED?

For purposes of managing network congestion,⁸ the Sandvine PTS 8210 has been configured to identify unidirectional P2P uploads for the protocols -- identified below -- that were determined to be the primary causes of upstream congestion.⁹ To do this, the Sandvine PTS uses technology that processes the addressing, protocol, and header information of a particular packet to determine the session type. The Sandvine PTSes, as deployed on Comcast's network, *do not inspect the content*. These devices only examine the relevant header information in the packet that indicates what type of protocol is being used (i.e., P2P, VoIP, e-mail, etc.). The equipment used does *not* read the contents of the message in order to determine whether the P2P packet is text, music, or video; listen to what is said in a VoIP packet; read the text of an e-mail packet; identify whether any packet contains political speech, commercial speech, or entertainment; or try to discern whether packets are personal or business, legal or illicit, etc.

The following diagram graphically depicts the session identification technique undertaken by the Sandvine PTS 8210 as deployed on Comcast's network. The first layers include addressing, protocol, and other "header" information that tells the network equipment what kind of packet it is. The "content" layer is the actual web page, music file, picture, video, etc., and is not examined by the Sandvine equipment.

⁸ The Sandvine PTS 8210 has not been used solely to manage congestion. It also performs numerous functions related to network management and security, including traffic analysis, anti-spam measures, denial-of-service attack prevention, and other similar functions.

⁹ A "unidirectional upload" session is different from an upload associated with a "bidirectional upload" session. A session is considered bidirectional when the user is simultaneously uploading to *and* downloading from another individual using a single TCP flow. Two of the protocols that are managed, BitTorrent and eDonkey, use bidirectional sessions; the other protocols only use unidirectional sessions. A large percentage of P2P traffic is bidirectional and is not managed by these techniques.

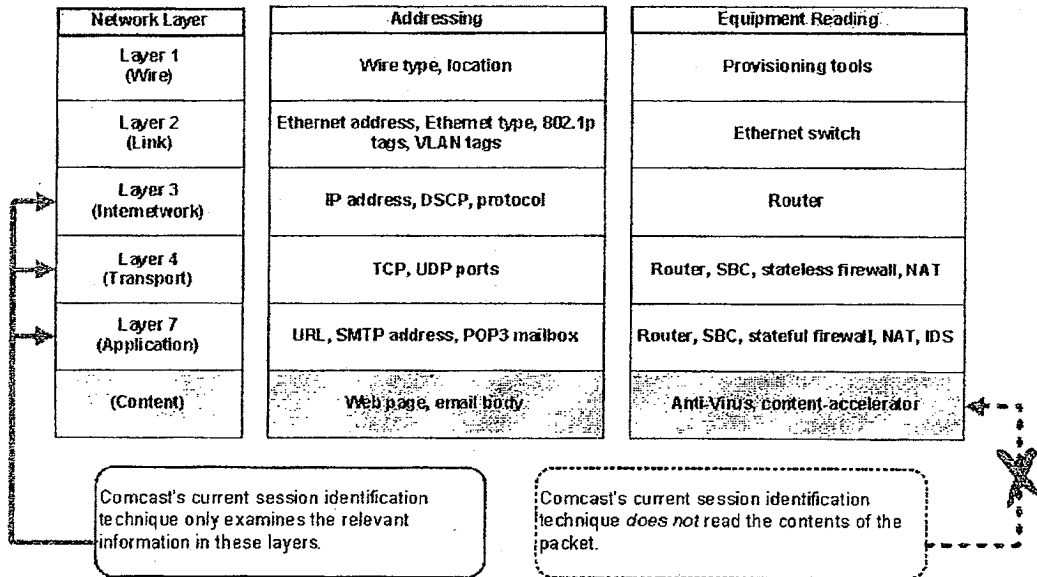


Diagram 3: Session Identification Technique.

In selecting which P2P protocol uploads to manage, network data were analyzed that identified the particular protocols that were generating disproportionate amounts of traffic. Based on that analysis, five P2P protocols were identified to be managed: Ares, BitTorrent, eDonkey, FastTrack, and Gnutella. Four of those protocols have been subject to Comcast's management practices since Comcast first implemented these practices. Ares was added in November 2007 after traffic analysis showed that it, too, was generating disproportionate demands on network resources.

For each of the managed P2P protocols, the PTS monitors and identifies the number of simultaneous unidirectional uploads that are passed from the CMTS to the upstream router. Because of the prevalence of P2P traffic on the upstream portion of our network, the number of simultaneous unidirectional upload sessions of any particular P2P protocol at any given time serves as a useful proxy for determining the level of overall network congestion. For each of the protocols, a session threshold is in place that is intended to provide for equivalently fair access

between the protocols, but still mitigate the likelihood of congestion that could cause service degradation for our customers.

Developing session thresholds for each P2P protocol must take into account the unique characteristics and behavior of each particular protocol. For example, BitTorrent and eDonkey use both bidirectional and unidirectional upload sessions, whereas Ares, FastTrack, and Gnutella only use unidirectional upload sessions.¹⁰ And even between BitTorrent and eDonkey, there are significant differences. The BitTorrent protocol more heavily promotes bidirectional uploads as compared to eDonkey, so, while they both may have the same total number of sessions, BitTorrent would have a much higher percentage of bidirectional sessions than eDonkey. Differences also arise between Ares, FastTrack, and Gnutella. For example, each protocol consumes different amounts of bandwidth per session (e.g., a high percentage of Ares unidirectional uploads consume negligible bandwidth).

The following table lays out by protocol the simultaneous unidirectional upload session thresholds for each protocol as well as the typical ratio of bidirectional to unidirectional traffic observed on our HSI network for those P2P protocols that use both, and other factors that contribute to the overall bandwidth consumption by protocol.

¹⁰ Session thresholds are not applied to bidirectional uploads so as to not interfere with the corresponding download.

Protocol	Ratio Bi:Uni	Session Equivalence ¹¹	Uni-Threshold	Notes
Ares	(N/A)	150	150	Many overhead flows exist for signaling, using little or no bandwidth. The session limit is set higher to account for this. Ares is typically used for small files.
BitTorrent	~20:1	~160	8	High ratio of bidirectional to unidirectional flows. The bidirectional to unidirectional ratio varies. Typically used for large files.
eDonkey	~3:1	~42	32	Low ratio of bidirectional to unidirectional flows. Used for large files.
FastTrack	(N/A)	24	24	Typically used for large files.
Gnutella	(N/A)	80	80	Typically used for small files.

Table 1: Managed Protocols, Relevant Thresholds, and Other Notes

When the number of unidirectional upload sessions for any of the managed P2P protocols for a particular Sandvine PTS reaches the pre-determined session threshold, the Sandvine PTS issues instructions called “reset packets” that delay unidirectional uploads for that particular P2P protocol in the geographic area managed by that Sandvine PTS. The “reset” is a flag in the packet header used to communicate an error condition in communication between two computers on the Internet. As used in our current congestion management practices, the reset packet is used to convey that the system cannot, at that moment, process additional high-resource demands without creating risk of congestion. Once the number of simultaneous unidirectional uploads falls below the pre-determined session limit threshold for a particular protocol, new uploads using that protocol are allowed to proceed. Some significant percentage of P2P sessions last

¹¹ This number reflects the total number of sessions that we estimate are on-going at any moment in time when the number of simultaneous upload sessions has met the threshold that has been established for that protocol.

only a few seconds, so, even when the thresholds are met, new opportunities for unidirectional uploads generally occur quite frequently.

VI. CONCLUSION

Data collected from our HSI network demonstrate that, even with these current management practices in place, P2P traffic continues to comprise approximately half of all upstream traffic transmitted on our HSI network -- and, in some locations, P2P traffic is as much as two-thirds of total upstream traffic. The data also show that, even for the most heavily used P2P protocols, more than 90 percent of these flows are unaffected by the congestion management. Data recently collected from our network show that, when a P2P upload from a particular computer was delayed by a reset packet, that same computer successfully initiated a P2P upload within one minute in 80 percent of the cases. In fact, most of our customers using P2P protocols to upload on any given day never experienced any delay at all.

Nonetheless, as Comcast previously stated and as the Order now requires, *Comcast will end these protocol-specific congestion management practices throughout its network by the end of 2008.*

Basic Glossary

Cable Modem:

A device located at the customer premise used to access the Comcast High Speed Internet (HSI) network. In some cases, the cable modem is owned by the customer, and in other cases it is owned by the cable operator. This device has an interface (i.e., someplace to plug in a cable) for connecting the coaxial cable provided by the cable company to the modem, as well as one or more interfaces for connecting the modem to a customer's PC or home gateway device (e.g., router, firewall, access point, etc.). In some cases, the cable modem function, i.e., the ability to access the Internet, is integrated into a home gateway device or embedded multimedia terminal adapter (eMTA). Once connected, the cable modem links the customer to the HSI network and ultimately the broader Internet.

Cable Modem Termination System (CMTS):

A piece of hardware located in a cable operator's local network (generally in a "headend") that acts as the gateway to the Internet for cable modems in a particular geographic area. A simple way to think of the CMTS is as a router with interfaces on one side leading to the Internet and interfaces on the other connecting to Optical Nodes and then customers.

Cable Modem Termination System Port:

A CMTS has both upstream and downstream network interfaces to serve the local access network, which we refer to as upstream or downstream ports. A port generally serves a neighborhood of hundreds of homes.

Channel Bonding:

A technique for combining multiple downstream and/or upstream channels to increase customers' download and/or upload speeds, respectively. Multiple channels from the HFC network can be bonded into a single virtual port (called a bonded group), which acts as a large single channel or port to provide increased speeds for customers. Channel bonding is a feature of Data Over Cable Service Interface Specification (DOCSIS) version 3.

Coaxial Cable (Coax):

A type of cable used by a cable operator to connect customer premise equipment (CPE) -- such as TVs, cable modems (including embedded multimedia terminal adapters), and Set Top Boxes - to the Hybrid Fiber Coax (HFC) network. There are many grades of coaxial cable that are used for different purposes. Different types of coaxial cable are used for different purposes on the network.

Comcast High Speed Internet (HSI):

A service/product offered by Comcast for delivering Internet service over a broadband connection.

Customer Premise Equipment (CPE):

Any device that resides at the customer's residence.

Data Over Cable Service Interface Specification (DOCSIS):

A reference standard that specifies how components on cable networks need to be built to enable HSI service over an HFC network. These standards define the specifications for the cable modem and the CMTS such that any DOCSIS certified cable modem will work on any DOCSIS certified CMTS independent of the selected vendor. The interoperability of cable modems and cable modem termination systems allows customers to purchase a DOCSIS certified modem from a retail outlet and use it on their cable-networked home. These standards are available to the public at the CableLabs website, at <http://www.cablelabs.com>.

Downstream:

Description of the direction in which a signal travels. Downstream traffic occurs when users are downloading something from the Internet, such as watching a YouTube video, reading web pages, or downloading software updates.

Headend:

A cable facility responsible for receiving TV signals for distribution over the HFC network to the end customers. This facility typically also houses the cable modem termination systems. This is sometimes also called a "hub."

Hybrid Fiber Coax (HFC):

Network architecture used primarily by cable companies, comprising of fiber optic and coaxial cables that deliver Voice, Video, and Internet services to customers.

Internet Protocol (IP):

Set of standards for sending data across a packet switched network like the Internet. In the Open System Interconnection Basic Reference Model (OSI) model, IP operates in the "Network Layer" or "Layer 3." The HSI product utilizes IP to provide Internet access to customers.

Internet Protocol Detail Record (IPDR):

Standardized technology for monitoring subscribers' upstream and downstream Internet usage data based on their cable modem. The data is collected from the CMTS and sent to a server for further processing. Additional information is available at: <http://www.ipdr.org>.

Optical Node:

A component of the HFC network generally located in customers' local neighborhoods that is used to convert the optical signals sent over fiber-optic cables to electrical signals that can be sent over coaxial cable to customers' cable modems, or vice versa. A fiber optic cable connects the Optical Node, through distribution hubs, to the CMTS and coaxial cable connects the Optical Node to customers' cable modems.

Open System Interconnection Basic Reference Model (OSI Model):

A framework for defining various aspects of a communications network in a layered approach. Each layer is a collection of conceptually similar functions that provide services to the layer above it, and receive services from the layer below it. The seven layers of the OSI model are listed below:

Layer 7 – Application
Layer 6 – Presentation
Layer 5 – Session
Layer 4 – Transport
Layer 3 – Network
Layer 2 – Data Link
Layer 1 – Physical

Port:

A port is a physical interface on a device used to connect cables in order to connect with other devices for transferring information/data. An example of a physical port is a CMTS port. Prior to DOCSIS version 3, a single CMTS physical port was used for either transmitting or receiving data downstream or upstream to a given neighborhood. With DOCSIS version 3, and the channel bonding feature, multiple CMTS physical ports can be combined to create a virtual port.

Provisioned Bandwidth:

Comcast-specific definition The peak speed associated with a tier of service purchased by a customer. For example, a customer with a 16 Mbps/2 Mbps (Down/Up) speed tier would be said to be provisioned with 16 Mbps of downstream bandwidth and 2 Mbps of upstream bandwidth.

Quality of Service (QoS):

Set of techniques to manage network resources to ensure a level of performance to specific data flows. One method for providing QoS to a network is by differentiating the type of traffic by class or flow and assigning priorities to each type. When the network becomes congested, the data packets that are marked as having higher priority will have higher likelihood of getting serviced.

Transmission Control Protocol (TCP):

Set of standard rules for reliably communicating data between programs operating on computers. TCP operates in the “Transport Layer” or “Layer 4” of the OSI model and deals with the ordered delivery of data to specific programs. If we compare the data communication network to the US Postal Service mail with delivery confirmation, the Network Layer would be analogous to the Postal Address of the recipient where the TCP Layer would be the ATTN field or the person that is to receive the mail. Once the receiving program receives the data, an acknowledgement is returned to the sending program.

Upstream:

Description of the direction in which a signal travels. Upstream traffic occurs when users are uploading something to the network, such as sending email, sharing P2P files, or uploading photos to a digital photo website.

Office of Chief Counsel

January 7, 2009

EXHIBIT E

ATTACHMENT B:

**COMCAST CORPORATION
DESCRIPTION OF PLANNED NETWORK MANAGEMENT
PRACTICES TO BE DEPLOYED FOLLOWING THE
TERMINATION OF CURRENT PRACTICES**

COMCAST CORPORATION
DESCRIPTION OF PLANNED NETWORK MANAGEMENT PRACTICES TO BE
DEPLOYED FOLLOWING THE TERMINATION OF CURRENT PRACTICES

Pursuant to Paragraphs 54 and 59 of the Commission's *Memorandum Opinion & Order* regarding how Comcast manages congestion on its High-Speed Internet ("HSI") network, Comcast hereby "disclose[s] to the Commission and the public the details of the network management practices that it intends to deploy following the termination of its current practices, including the thresholds that will trigger any limits on customers' access to bandwidth."¹

I. INTRODUCTION & SUMMARY

Comcast's HSI network is a shared network. This means that our HSI customers share upstream and downstream bandwidth with their neighbors. Although the available bandwidth is substantial, so, too, is the demand. Thus, when a relatively small number of customers in a neighborhood place disproportionate demands on network resources, this can cause congestion that degrades their neighbors' Internet experience.² The goal of Comcast's new congestion management practices will be to enable all users of our network resources to access a "fair share" of that bandwidth, in the interest of ensuring a high-quality online experience for all of Comcast's HSI customers.³

¹ *In re Formal Complaint of Free Press & Pub. Knowledge Against Comcast Corp. for Secretly Degrading Peer-to-Peer Applications; Broadband Industry Practices; Petition of Free Press et al. for Declaratory Ruling That Degrading an Internet Application Violates the FCC's Internet Policy Statement & Does Not Meet an Exception for "Reasonable Network Management,"* Mem. Op. and Order, FCC 08-183 ¶¶ 54, 59 (Aug. 20, 2008) ("Order").

² Although the *Order* focuses entirely on Comcast's current practices with respect to controlling network congestion, Comcast's efforts to deliver a superior Internet experience involve a wide variety of other network management efforts beyond congestion control. As Comcast has previously explained, we actively manage our HSI network in order to enhance our customers' Internet experience by, among other things, blocking spam, preventing viruses from harming the network and our subscribers, thwarting denial-of-service attacks, and empowering our customers' ability to control the content that enters their homes.

³ These congestion management practices are independent of, and should not be confused with, our recent announcement that we will amend the "excessive use" portion of our Acceptable Use Policy, effective October 1, 2008, to establish a specific monthly data usage threshold of 250 GB per account for all residential HSI customers. This excessive use threshold is designed to prevent any one residential account from consuming excessive amounts

Importantly, the new approach will be protocol-agnostic; that is, it *will not* manage congestion by focusing on the use of the specific protocols that place a disproportionate burden on network resources, or any other protocols. Rather, the new approach will focus on managing the traffic of those individuals who are using the most bandwidth at times when network congestion threatens to degrade subscribers' broadband experience and who are contributing disproportionately to such congestion at those points in time.

Specific details about these practices, including relevant threshold information, the type of equipment used, and other particulars, are discussed at some length later in this document. At the outset, however, we present a very high-level, simplified overview of how these practices will work once they are deployed. Despite all the detail provided further below, the fundamentals of this approach can be summarized succinctly:

1. Software installed in the Comcast network continuously examines aggregate traffic usage data for individual segments of Comcast's HSI network. If overall upstream or downstream usage on a particular segment of Comcast's HSI network reaches a pre-determined level, the software moves on to step two.
2. At step two, the software examines bandwidth usage data for subscribers in the affected network segment to determine which subscribers are using a disproportionate share of the bandwidth. If the software determines that a particular subscriber or subscribers have been the source of high volumes of network traffic during a recent period of minutes, traffic originating from that subscriber or those subscribers temporarily will be assigned a lower priority status.
3. During the time that a subscriber's traffic is assigned the lower priority status, such traffic will not be delayed so long as the network segment is not actually congested. If, however, the network segment becomes congested, such traffic could be delayed.
4. The subscriber's traffic returns to normal priority status once his or her bandwidth usage drops below a set threshold over a particular time interval.

of network resources as measured over the course of a month. That cap does not address the issue of network congestion, which results from traffic levels that vary from minute to minute. We have long had an "excessive use" limit in our Acceptable Use Policy but have been criticized for failing to specify what is considered to be "excessive." The new cap provides clarity to customers regarding the specific monthly consumption limit per account. As with the existing policy, a user who violates the excessive use policy twice within six months is subject to having his or her Internet service account terminated for one year.

We have made considerable progress in recent months in formulating our plans for this new approach, adjusting them, and subjecting them to real-world trials. Market trials in Chambersburg, PA; Warrenton, VA; Lake City, FL; East Orange, FL; and Colorado Springs, CO have enabled us to validate the utility of the general approach and collect substantial trial data to test multiple variations and alternative formulations.

Comcast appreciates the *Order*'s recognition that Comcast "may not have finalized the details of the network management practices that it intends to deploy following termination of its current practices" by the date of this report,⁴ but our progress to date is sufficient that we do not need to make the certification contemplated by the *Order* or postpone disclosing the details of our current plans. Certainly some additional adjustments -- and possibly material changes -- will be made as we continue our trials and move forward with implementation. Thus, consistent with the spirit of the language quoted above, Comcast commits that, until we have completed our transition to the protocol-agnostic congestion management practices described below, we will inform the Commission and the public of any material changes to the practices and plans detailed here, at least two weeks prior to implementation of any such changes.⁵

II. IMPLEMENTATION AND CONFIGURATION

To understand exactly how these new congestion management practices will work, it will be helpful to have a general understanding of how Comcast's HSI network is designed. Comcast's HSI network is what is commonly referred to as a hybrid fiber-coax network, with coaxial cable connecting each subscriber's cable modem to an Optical Node, and fiber optic cables connecting the Optical Node, through distribution hubs, to the Cable Modem Termination

⁴ *Order* ¶ 55 n.246.

⁵ We recognize that clear communication with our customers is an important part of a successful long-term relationship. On an ongoing basis, we will provide our customers with clear, concise, and useful information about the services that we provide.

System (“CMTS”), which is also known as a “data node.”⁶ The CMTSes are then connected to higher-level routers, which in turn are connected to Comcast’s Internet backbone facilities. Today, Comcast has approximately 3300 CMTSes deployed throughout our network, serving our 14.4 million HSI subscribers.

Each CMTS has multiple “ports” that handle traffic coming into and leaving the CMTS. In particular, each cable modem deployed on the Comcast HSI network is connected to the CMTS through the ports on the CMTS. These ports can be either “downstream” ports or “upstream” ports, depending on whether they send information to cable modems (downstream) or receive information from cable modems (upstream) attached to the port.⁷ Today, on average, about 275 cable modems share the same downstream port and about 100 cable modems share the same upstream port. Both types of ports can experience congestion that could degrade the broadband experience of our subscribers and, unlike with the previous congestion management practices, both upstream and downstream traffic will be subject to management under these new practices.

To implement Comcast’s new protocol-agnostic congestion management practices, Comcast will purchase new hardware and software that will be deployed near the Regional Network Routers (“RNRs”) that are further upstream in Comcast’s network. This new hardware will consist of Internet Protocol Detail Record (“IPDR”) servers, Congestion Management servers, and PacketCable Multimedia (“PCMM”) servers. Further details about each of these pieces of equipment can be found below, in Section III. It is important to note here, however,

⁶ The reader may find it useful to refer to the attached glossary for additional explanation of unfamiliar terms.

⁷ The term “port” as used here generally contemplates single channels on a CMTS, but these statements will apply to virtual channels, also known as “bonded groups,” in a DOCSIS 3.0 environment.

that, even though the physical location of these servers is at the RNR, the servers will communicate with -- and manage individually -- multiple ports on multiple CMTSes to effectuate the practices described in this document. That is to say, bandwidth usage on one CMTS port will have no effect on whether the congestion management practices described herein are applied to a subscriber on a different CMTS port.

The following diagram provides a simplified graphical depiction of the network architecture just described:

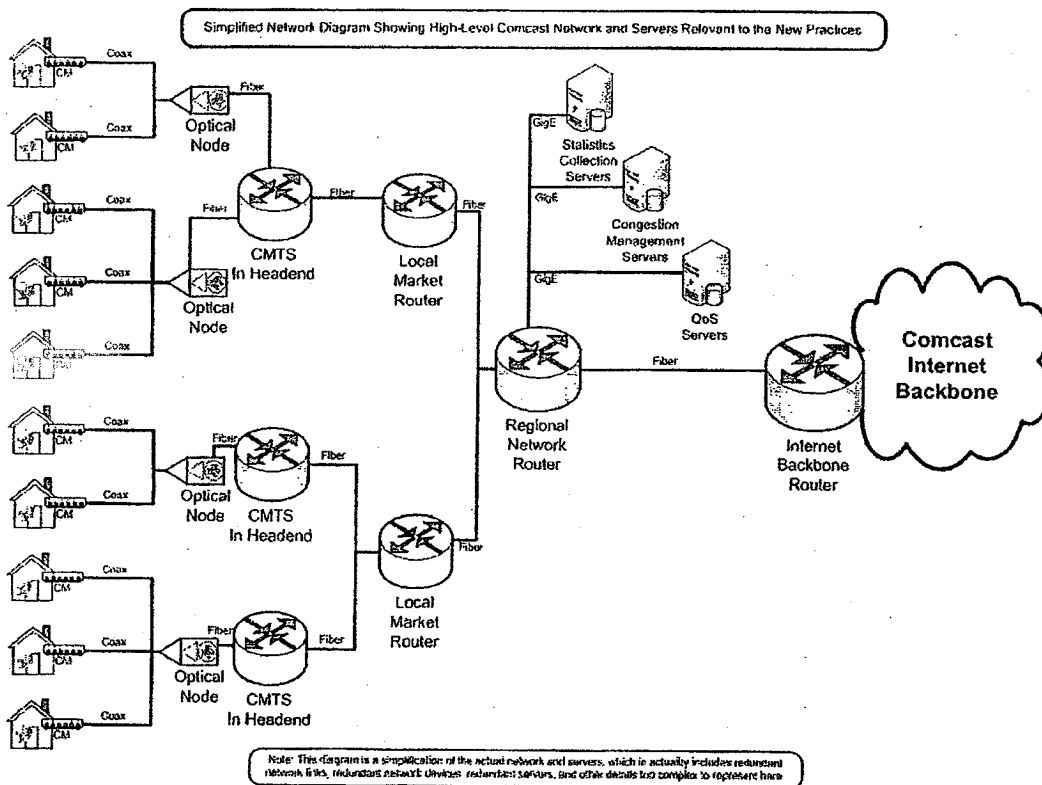


Diagram 1: Comcast Network Design

Each Comcast HSI subscriber's cable modem has a "bootfile" that contains certain pieces of information about the subscriber's service to ensure that the service functions properly.⁸ For example, the bootfile contains information about the maximum speed (what we refer to in this document as the "provisioned bandwidth") that a particular modem can achieve based on the tier (personal, commercial, etc.) the customer has purchased. Bootfiles are generally reset from time to time to account for changes in the network and other updates, and this is usually done through a command sent from the network and without any effect on the subscriber. In preparation for the transition to the new practices, Comcast will send new bootfiles to our HSI customers' cable modems that will create two Quality of Service ("QoS") levels for Internet traffic going to and from the cable modem: (1) "Priority Best-Effort" traffic ("PBE"); and (2) "Best-Effort" traffic ("BE"). As with previous changes to cable modem bootfiles, the replacement of the old bootfile with the new bootfile requires no active participation by Comcast customers.⁹

Thereafter, all traffic going to or coming from cable modems on the Comcast HSI network will be designated as either PBE or BE. PBE will be the default status for all Internet traffic coming from or going to a particular cable modem. Traffic will be designated BE for a particular cable modem only when both of two conditions are met:

- First, the usage level of a particular upstream or downstream port of a CMTS, as measured over a particular period of time, must be nearing the point where congestion could degrade users' experience. We refer to this as the "Near Congestion State" and, based on the technical trials we have conducted, we have established a threshold, described in more detail below, for when a particular CMTS port enters that state.

⁸ No personal information is included in the bootfile; it only includes information about the service that the subscriber has purchased.

⁹ A very small percentage of Comcast's HSI customers use first-generation cable modems that cannot support the new congestion management practices. These cable modems will not receive the new bootfiles and, after December 31, 2008, those cable modems will not be subject to congestion management and all their traffic effectively will be designated PBE. These older cable modems have less capability to utilize significant amounts of bandwidth and will, in any event, be replaced over time.

- Second, a particular subscriber must be making a significant contribution to the bandwidth usage on the particular port, as measured over a particular period of time. We refer to this as the “Extended High Consumption State” and, based on the technical trials we have conducted, we have established a threshold, described in more detail below, for when a particular user enters that state.

When, *and only when*, both conditions are met, a user’s upstream or downstream traffic (depending on which type of port is in the Near Congestion State) will be designated as BE. Then, to the extent that actual congestion occurs, any delay resulting from the congestion will affect BE traffic before it affects PBE traffic.

We now explain the foregoing in greater detail.

A. Thresholds For Determining When a CMTS Port Is in a Near Congestion State

For a CMTS port to enter the Near Congestion State, traffic flowing to or from that CMTS port must exceed a specified level (the “Port Utilization Threshold”) for a specific period of time (the “Port Utilization Duration”). The Port Utilization Threshold on a CMTS port is measured as a percentage of the total aggregate upstream or downstream bandwidth for the particular port during the relevant timeframe. The Port Utilization Duration on the CMTS is measured in minutes.

Values for each of the thresholds to be used as part of this new management technique have been tentatively established after an extensive process of lab tests, simulations, technical trials, vendor evaluations, customer feedback, and a third-party consulting analysis. In the same way that specific anti-spam or other network management practices are adjusted to address new issues that arise, it is a near certainty that these values will change in both the short-term and the long-term, as Comcast gathers more data and performs additional analysis resulting from wide-scale deployment of the new technique. Moreover, as with any large network or software system, software bugs and/or unexpected errors may arise, requiring software patches or other

corrective actions. As always, our decisions on these matters will be driven by the marketplace imperative that we deliver the best possible experience to our HSI subscribers.

Given our experience so far, we have determined that a starting point for the upstream Port Utilization Threshold should be 70 percent and the downstream Port Utilization Threshold should be 80 percent. For the Port Utilization Duration, we have determined that the starting point should be approximately 15 minutes (although some technical limitations in some newer CMTSes deployed on Comcast's network may make this time period vary slightly). Thus, over any 15-minute period, if an average of more than 70 percent of a port's upstream bandwidth capacity or more than 80 percent of a port's downstream bandwidth capacity is utilized, that port will be determined to be in a Near Congestion State.

Based on the trials to date, we expect that a typical CMTS port on our HSI network will be in a Near Congestion State only for relatively small portions of the day, if at all, though there is no way to forecast what will be the busiest time on a particular port on a particular day. Moreover, the trial data indicate that, even when a particular port is in a Near Congestion State, the instances where the network *actually* becomes congested during the Port Utilization Duration are few, and managed users whose traffic is delayed during those congested periods perceive little, if any, effect, as discussed below.

B. Thresholds For Determining When a User Is in an Extended High Consumption State and for Release from that Classification

Once a particular CMTS port is in a Near Congestion State, the software examines whether any cable modems are consuming bandwidth disproportionately.¹⁰ For a user to enter an

¹⁰ Although each cable modem is typically assigned to a particular household, the software does not (and cannot) actually identify individual users or analyze particular users' traffic. For purposes of this report, we use "cable modem," "user," and "subscriber" interchangeably to mean a subscriber account or user account and not an individual person.

Extended High Consumption State, he or she must consume greater than a certain percentage of his or her provisioned upstream or downstream bandwidth (the “User Consumption Threshold”) for a specific length of time (the “User Consumption Duration”). The User Consumption Threshold is measured as a user’s consumption of a particular percentage of his or her total provisioned upstream *or* downstream bandwidth (the maximum speed that a particular modem can achieve based on the tier (personal, commercial, etc.) the customer has purchased, e.g., if a user buys a service with speeds of 8 Mbps downstream and 1 Mbps upstream, then his or her provisioned downstream speed is 8 Mbps and provisioned upstream speed is 1 Mbps).¹¹ The User Consumption Duration is measured in minutes.

Following lab tests, simulations, technical trials, customer feedback, vendor evaluations, and a third-party consulting analysis, we have determined that the appropriate starting point for the User Consumption Threshold is 70 percent of a subscriber’s provisioned upstream or downstream bandwidth, and that the appropriate starting point for the User Consumption Duration is 15 minutes. That is, when a subscriber uses an average of 70 percent or more of his or her provisioned upstream or downstream bandwidth over a particular 15-minute period, that user will be in an Extended High Consumption State.¹² As noted above, these values are subject to change as necessary in the same way that specific anti-spam or other network management practices are adjusted to address new issues that arise, or should unexpected software bugs or other problems arise.

¹¹ Because the User Consumption Threshold is a percentage of provisioned bandwidth for a particular user account, and not a static value, users of higher speed tiers will have correspondingly higher User Consumption Thresholds.

¹² The User Consumption Thresholds have been set sufficiently high that using the HSI connection for VoIP or most streaming video cannot alone cause subscribers to our standard-level HSI service to exceed the User Consumption Threshold. For example, while Comcast’s standard-level HSI service provisions downstream bandwidth at 6 Mbps, today, streaming video (even some HD video) from Hulu uses less than 2.5 Mbps, a Vonage or Skype VoIP call uses less than 131 Kbps, and streaming music uses less than 128 Kbps.

Based on data collected from the trial markets where the new management practices are being tested, on average less than one-third of one percent of subscribers have had their traffic priority status changed to the BE state on any given day. For example, in Colorado Springs, CO, the largest test market, on any given day in August 2008, an average of 22 users out of 6,016 total subscribers in the trial had their traffic priority status changed to BE at some point during the day.

A user's traffic is released from a BE state when the user's bandwidth consumption drops below 50 percent of his or her provisioned upstream or downstream bandwidth for a period of approximately 15 minutes. These release criteria are intended to minimize (and hopefully prevent) user QoS oscillation, i.e., a situation in which a particular user could cycle repeatedly between BE and PBE. NetForecast, Inc., an independent consultant retained to provide analysis and recommendations regarding Comcast's trials and related congestion management work, suggested this approach, which has worked well in our ongoing trials and lab testing.¹³ In trials, we have observed that user traffic rarely remains in a managed state longer than the initial 15-minute period.

Simply put, there are four steps to determining whether the traffic associated with a particular cable modem is designated as PBE or BE:

1. Determine if the CMTS port is in a Near Congestion State.
2. If yes, determine whether any users are in an Extended High Consumption State.
3. If yes, change those users' traffic to BE from PBE. If the answer at either step one or step two is no, no action is taken.

¹³ NetForecast, Inc. is an internationally recognized engineering consulting company that, among other things, advises network operators and technology vendors about technology issues and how to improve the performance of a network.

4. If a user's traffic has been designated BE, check user consumption at next interval. If user consumption has declined below predetermined threshold, reassign the user's traffic as PBE. If not, recheck at next interval.

The following diagram graphically depicts how this management process would work in the case of a situation where upstream port utilization may be reaching a Near Congestion State (the same diagram, with different values in the appropriate places, could be used to depict the management process for downstream ports, as well):

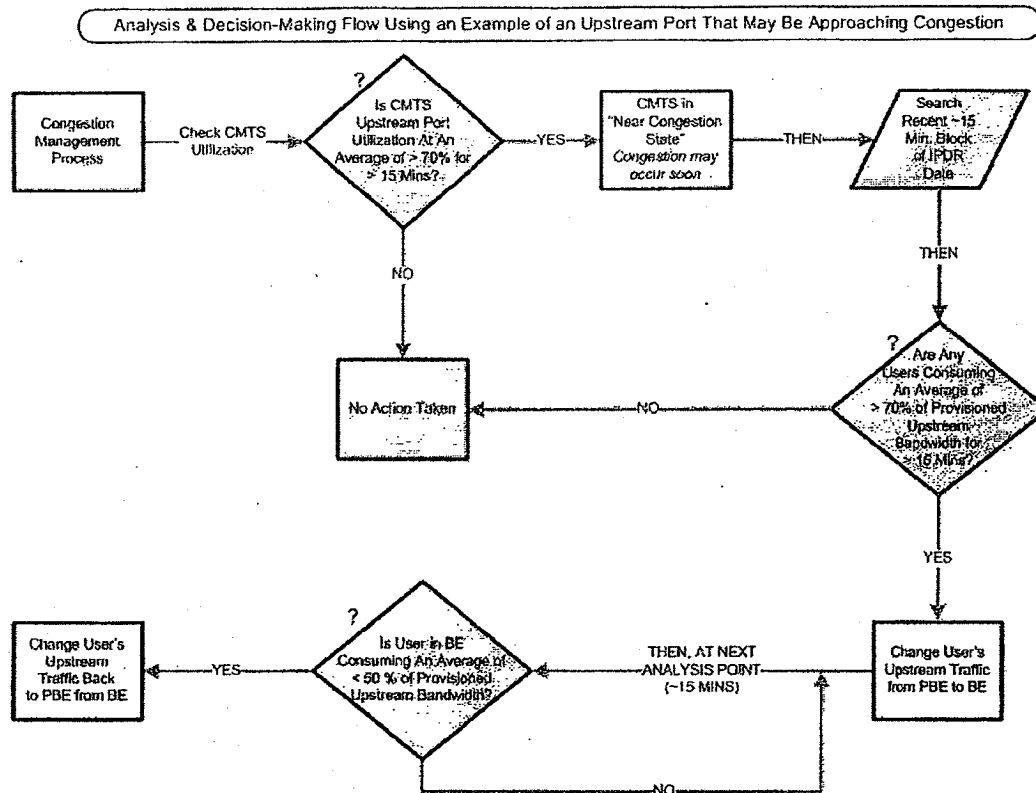


Diagram 2: Upstream Congestion Management Decision Flowchart

C. Effect of BE Quality of Service on Users' Broadband Experience

When a CMTS port is in a Near Congested State and a cable modem connected to that port is in an Extended High Consumption State, that cable modem's traffic will be designated as

BE. Depending upon the level of congestion in the CMTS port, this designation may or may not result in the user's traffic being delayed or, in extreme cases, dropped before PBE traffic is dropped.¹⁴ This is because of the way that the CMTS handles traffic. Specifically, CMTS ports have what is commonly called a "scheduler" that puts all the packets coming from or going to cable modems on that particular port in a queue and then handles them in turn. A certain number of packets can be processed by the scheduler in any given moment; for each time slot, PBE traffic will be given priority access to the available capacity, and BE traffic will be processed on a space-available basis.

A rough analogy would be to busses that empty and fill up at incredibly fast speeds. As empty busses arrive at the figurative "bus stop" -- every two milliseconds in this case -- they fill up with as many packets as are waiting for "seats" on the bus, to the limits of the bus' capacity. During non-congested periods, the bus will usually have several empty seats, but, during congested periods, the bus will fill up and packets will have to wait for the next bus. It is in the congested periods that BE packets will be affected. If there is no congestion, packets from a user in a BE state should have little trouble getting on the bus when they arrive at the bus stop. If, on the other hand, there is congestion in a particular instance, the bus may become filled by packets in a PBE state before any BE packets can get on. In that situation, the BE packets would have to wait for the next bus that is not filled by PBE packets. In reality, this all takes place in two-millisecond increments, so even if the packets miss 50 "busses," the delay only will be about *one-tenth of a second*.

¹⁴ Congestion can occur in any IP network, and, when it does, packets can be delayed or dropped. As a result, applications and protocols have been designed to deal with this reality. Our new congestion management practices will ensure that, in those rare cases where packets may be dropped, BE packets will be dropped before PBE packets are dropped.

During times of actual network congestion, when BE traffic might be delayed, there are a variety of effects that could be experienced by a user whose traffic is delayed, depending upon what applications he or she is using. Typically, a user whose traffic is in a BE state during actual congestion may find that a webpage loads sluggishly, a peer-to-peer upload takes somewhat longer to complete, or a VoIP call sounds choppy. Of course, the same thing could happen to the customers on a port that is congested *in the absence of any congestion management*; the difference here is that the effects of any such delays are shifted toward those who have been placing the greatest burden on the network, instead of being distributed randomly among the users of that port without regard to their consumption levels.

NetForecast, Inc. explored the potential risk of a worst-case scenario for users whose traffic is in a BE state: the possibility of “bandwidth starvation” in the theoretical case where 100 percent of the CMTS bandwidth is taken up by PBE traffic for an extended period of time. In theory, such a condition could mean that a given user whose traffic is designated BE would be unable to effectuate an upload or download (as noted above, both are managed separately) for some period of time. However, when these management techniques were tested, first in company testbeds and then in our real-world trials conducted in the five markets, such a theoretical condition did not occur. In addition, trial results demonstrated that these management practices have very modest real-world impacts. To date, *Comcast has yet to receive a single customer complaint in any of the trial markets that can be traced to the new congestion management practices*, despite having broadly publicized its trials.

Comcast will continue to monitor how user traffic is affected by these new congestion management techniques and will make the adjustments necessary to ensure that all Comcast HSI customers have a high-quality Internet experience.

III. EQUIPMENT/SOFTWARE USED AND LOCATION

The above-mentioned functions will be carried out using three different types of application servers, supplied by three different vendors. As mentioned above, these servers will be installed near Comcast's regional network routers. The *exact* locations of various servers have not been finalized, but this will not change the fact that they will manage individual CMTS ports.

The first application server will be an IPDR server, which will collect relevant cable modem volume usage information from the CMTS, such as how many aggregate upstream or downstream bytes a subscriber uses over a particular period of time.¹⁵ Comcast has not yet chosen a vendor for the IPDR servers, but is in active negotiations with several vendors.

The second application server is the Sandvine Congestion Management Fairshare ("CMF") server, which will use Simple Network Management Protocol ("SNMP") to measure CMTS port utilization and detect when a port is in a Near Congestion State. When this happens, the CMF server will then query the relevant IPDR data for a list of cable modems meeting the criteria set forth above for being in an Extended High Consumption State.

If one or more users meet the criteria to be managed, then the CMF server will notify a third application server, the PCMM application server developed by Camiant Technologies, as to which users have been in an Extended High Consumption State and whose traffic should be treated as BE. The PCMM servers are responsible for signaling a given CMTS to set the traffic for specific cable modems with a BE QoS, and for tracking and managing the state of such CMTS actions. *If no users meet the criteria to be managed, no users will have their traffic managed.*

¹⁵ IPDR has been adopted as a standard by many industry organizations and initiatives, such as CableLabs, ATIS, ITU, and 3GPP, among others.

The following diagram graphically depicts the high-level management flows among the congestion management components on Comcast's network, as described above:

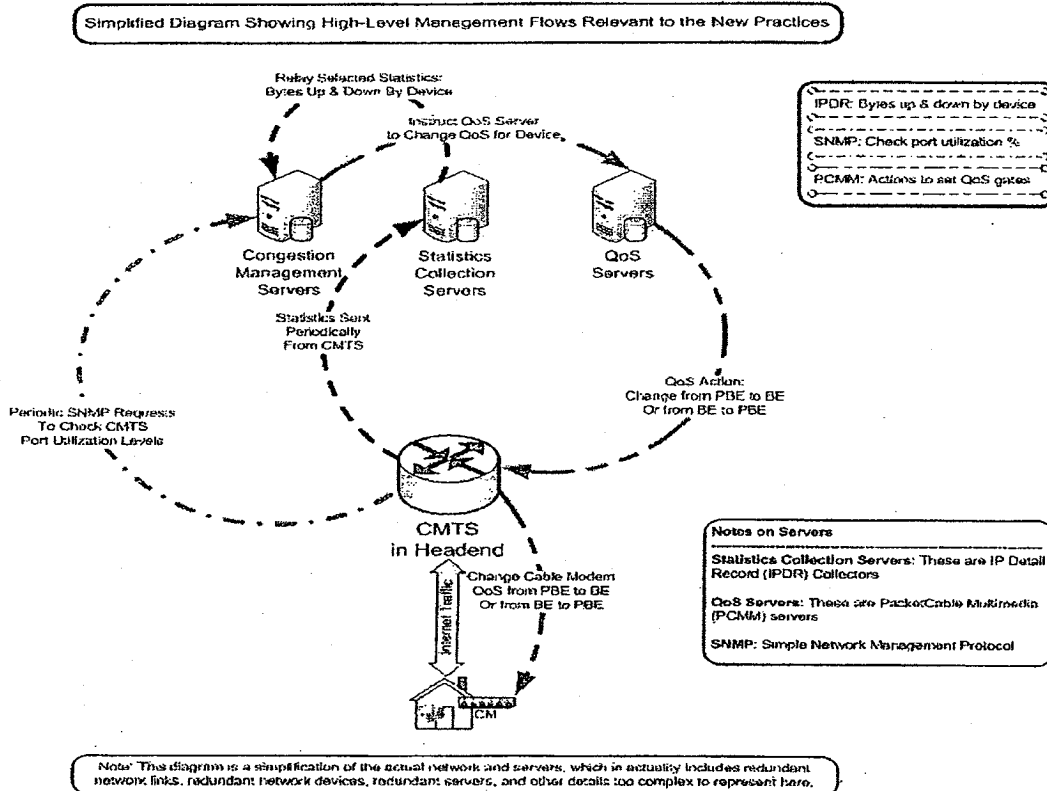


Diagram 3: High Level Management Flows

IV. CONCLUSION

Comcast's transition to protocol-agnostic congestion management is already underway, and Comcast is on schedule to meet the benchmarks set forth in Attachment C in order to complete the transition by December 31, 2008. As described above, the new approach will not manage congestion by focusing on managing the use of specific protocols. Nor will this approach use "reset packets." Rather, the new approach will (1) during periods when a CMTS port is in a Near Congestion State, (2) identify the subscribers on that port who have consumed a

disproportionate amount of bandwidth over the preceding 15 minutes, (3) lower the priority status of those subscribers' traffic to BE status until those subscribers meet the release criteria, and (4) during periods of congestion, delay BE traffic before PBE traffic is delayed. Our trials indicate that these new practices will ensure a quality online experience for all of our HSI customers.

Basic Glossary

Cable Modem:

A device located at the customer premise used to access the Comcast High Speed Internet (HSI) network. In some cases, the cable modem is owned by the customer, and in other cases it is owned by the cable operator. This device has an interface (i.e., someplace to plug in a cable) for connecting the coaxial cable provided by the cable company to the modem, as well as one or more interfaces for connecting the modem to a customer's PC or home gateway device (e.g., router, firewall, access point, etc.). In some cases, the cable modem function, i.e., the ability to access the Internet, is integrated into a home gateway device or embedded multimedia terminal adapter (eMTA). Once connected, the cable modem links the customer to the HSI network and ultimately the broader Internet.

Cable Modem Termination System (CMTS):

A piece of hardware located in a cable operator's local network (generally in a "headend") that acts as the gateway to the Internet for cable modems in a particular geographic area. A simple way to think of the CMTS is as a router with interfaces on one side leading to the Internet and interfaces on the other connecting to Optical Nodes and then customers.

Cable Modem Termination System Port:

A CMTS has both upstream and downstream network interfaces to serve the local access network, which we refer to as upstream or downstream ports. A port generally serves a neighborhood of hundreds of homes.

Channel Bonding:

A technique for combining multiple downstream and/or upstream channels to increase customers' download and/or upload speeds, respectively. Multiple channels from the HFC network can be bonded into a single virtual port (called a bonded group), which acts as a large single channel or port to provide increased speeds for customers. Channel bonding is a feature of Data Over Cable Service Interface Specification (DOCSIS) version 3.

Coaxial Cable (Coax):

A type of cable used by a cable operator to connect customer premise equipment (CPE) -- such as TVs, cable modems (including embedded multimedia terminal adapters), and Set Top Boxes -- to the Hybrid Fiber Coax (HFC) network. There are many grades of coaxial cable that are used for different purposes. Different types of coaxial cable are used for different purposes on the network.

Comcast High Speed Internet (HSI):

A service/product offered by Comcast for delivering Internet service over a broadband connection.

Customer Premise Equipment (CPE):

Any device that resides at the customer's residence.

Data Over Cable Service Interface Specification (DOCSIS):

A reference standard that specifies how components on cable networks need to be built to enable HSI service over an HFC network. These standards define the specifications for the cable modem and the CMTS such that any DOCSIS certified cable modem will work on any DOCSIS certified CMTS independent of the selected vendor. The interoperability of cable modems and cable modem termination systems allows customers to purchase a DOCSIS certified modem from a retail outlet and use it on their cable-networked home. These standards are available to the public at the CableLabs website, at <http://www.cablelabs.com>.

Downstream:

Description of the direction in which a signal travels. Downstream traffic occurs when users are downloading something from the Internet, such as watching a YouTube video, reading web pages, or downloading software updates.

Headend:

A cable facility responsible for receiving TV signals for distribution over the HFC network to the end customers. This facility typically also houses the cable modem termination systems. This is sometimes also called a "hub."

Hybrid Fiber Coax (HFC):

Network architecture used primarily by cable companies, comprising of fiber optic and coaxial cables that deliver Voice, Video, and Internet services to customers.

Internet Protocol (IP):

Set of standards for sending data across a packet switched network like the Internet. In the Open System Interconnection Basic Reference Model (OSI) model, IP operates in the "Network Layer" or "Layer 3." The HSI product utilizes IP to provide Internet access to customers.

Internet Protocol Detail Record (IPDR):

Standardized technology for monitoring subscribers' upstream and downstream Internet usage data based on their cable modem. The data is collected from the CMTS and sent to a server for further processing. Additional information is available at: <http://www.ipdr.org>.

Optical Node:

A component of the HFC network generally located in customers' local neighborhoods that is used to convert the optical signals sent over fiber-optic cables to electrical signals that can be sent over coaxial cable to customers' cable modems, or vice versa. A fiber optic cable connects the Optical Node, through distribution hubs, to the CMTS and coaxial cable connects the Optical Node to customers' cable modems.

Open System Interconnection Basic Reference Model (OSI Model):

A framework for defining various aspects of a communications network in a layered approach. Each layer is a collection of conceptually similar functions that provide services to the layer above it, and receive services from the layer below it. The seven layers of the OSI model are listed below:

Layer 7 – Application
Layer 6 – Presentation
Layer 5 – Session
Layer 4 – Transport
Layer 3 – Network
Layer 2 – Data Link
Layer 1 – Physical

Port:

A port is a physical interface on a device used to connect cables in order to connect with other devices for transferring information/data. An example of a physical port is a CMTS port. Prior to DOCSIS version 3, a single CMTS physical port was used for either transmitting or receiving data downstream or upstream to a given neighborhood. With DOCSIS version 3, and the channel bonding feature, multiple CMTS physical ports can be combined to create a virtual port.

Provisioned Bandwidth:

Comcast-specific definition The peak speed associated with a tier of service purchased by a customer. For example, a customer with a 16 Mbps/2 Mbps (Down/Up) speed tier would be said to be provisioned with 16 Mbps of downstream bandwidth and 2 Mbps of upstream bandwidth.

Quality of Service (QoS):

Set of techniques to manage network resources to ensure a level of performance to specific data flows. One method for providing QoS to a network is by differentiating the type of traffic by class or flow and assigning priorities to each type. When the network becomes congested, the data packets that are marked as having higher priority will have higher likelihood of getting serviced.

Transmission Control Protocol (TCP):

Set of standard rules for reliably communicating data between programs operating on computers. TCP operates in the “Transport Layer” or “Layer 4” of the OSI model and deals with the ordered delivery of data to specific programs. If we compare the data communication network to the US Postal Service mail with delivery confirmation, the Network Layer would be analogous to the Postal Address of the recipient where the TCP Layer would be the ATTN field or the person that is to receive the mail. Once the receiving program receives the data, an acknowledgement is returned to the sending program.

Upstream:

Description of the direction in which a signal travels. Upstream traffic occurs when users are uploading something to the network, such as sending email, sharing P2P files, or uploading photos to a digital photo website.

Office of Chief Counsel

January 7, 2009

EXHIBIT F

ATTACHMENT C:
COMCAST CORPORATION
NETWORK MANAGEMENT TRANSITION COMPLIANCE
PLAN

COMCAST CORPORATION
NETWORK MANAGEMENT TRANSITION COMPLIANCE PLAN

1. **New Network Management Practices.** Comcast is preparing to transition to new, protocol-agnostic practices for managing congestion on our High-Speed Internet (“HSI”) network (“congestion management”). We will complete that transition across our HSI network by December 31, 2008. We provide more details about these new practices, and detailed information about some of the hardware and software referenced in this document, in Attachment B.
2. **Trials.** Comcast is currently performing technical trials of the new congestion management practices in the following communities: Chambersburg, PA; Warrenton, VA; Lake City, FL; East Orange, FL; and Colorado Springs, CO. If Comcast management deems it necessary to conduct additional trials, they will be announced on Comcast’s Network Management Policy page, located at <http://www.comcast.net/networkmanagement/>.
3. **Benchmarks.** Comcast expects to meet the following benchmarks in our transition to the new protocol-agnostic congestion management practices:
 - a. **October 15, 2008.** Comcast will have completed installation of the PacketCable Multimedia and Internet Protocol Detail Record servers, and will have begun installation of the Congestion Management Fairshare servers. These servers, and other hardware used for the new congestion management practices, are described in detail in Attachment B.
 - b. **November 15, 2008.** Comcast will have begun commercial (i.e., not trial) “cut-overs” to the new congestion management practices on a market-by-market basis. Once the equipment is in place in a particular area, this involves Comcast installing a software update to our customers’ cable modems in that area, launching the software for the new protocol-agnostic congestion management practices in that area, and disabling the current congestion management techniques in that area.
 - c. **December 31, 2008.** Comcast will have completed the deployment of all hardware and software needed to implement our new congestion management practices, and will have completed the “cut-overs” to the new, protocol-agnostic congestion management practices. We will also have discontinued the protocol-specific congestion management practices throughout our network.
 - d. **January 5, 2009.** Comcast will report to the FCC that we have discontinued our protocol-specific congestion management practices throughout our network, and that we have completed transitioning to the new congestion management practices.
4. **Information Sharing.** Comcast will take the following steps to provide timely information to our customers about the transition to our new congestion management practices. We intend for our disclosures to be clear, concise, and useful to the average consumer.

- a. **Congestion Management Trials.** Comcast already provides information about the trials of our new congestion management practices on our Network Management Policy page. Information about any additional trials will be posted there.
 - b. **Revision of Acceptable Use Policy.** Comcast will take the following two steps with regard to revising our Acceptable Use Policy (“AUP”).
 - i. Comcast will revise our AUP to explain that our network congestion management practices may include temporarily lowering the priority of traffic for users who are the top contributors to current network congestion. This new AUP will be published on October 1, 2008.
 - ii. By January 1, 2009, Comcast will publish an amended AUP to reflect the discontinuation of the current protocol-specific congestion management practices, as well as any other necessary and appropriate updates.
 - c. **Customer Disclosures.** Comcast will take the following steps to inform our customers of the new congestion management practices.
 - i. Attachment B, detailing Comcast’s planned network management practices, as filed with the Commission on September 19, 2008, will be posted by midnight on that date to Comcast’s Network Management Policy web page.
 - ii. Comcast will, by midnight on September 19, 2008, provide new Frequently Asked Questions that explain these developments clearly, and will continue to post on our Network Management Policy web page updated information about the new congestion management practices.
 - iii. At least two weeks prior to the first commercial (i.e., not trial) deployment of the new congestion management practices, Comcast will send e-mail notifications to the primary Comcast.net e-mail address associated with each customer regarding the new congestion management practices, informing them of the AUP revisions, and directing them to Comcast’s Network Management Policy page for FAQs and other information. These developments will be further publicized through announcements at <http://www.comcast.net>.
 - d. **Customer Support.** Comcast will also answer customer questions on our Customer Support Forums page, located at <http://forums.comcast.net/>, which is available to all Comcast HSI customers. A link from the Network Management Policy page to the Customer Support Forums will also be provided.
5. **Management Responsibility.** The transition to these new practices and the discontinuation of the old practices is a high-priority effort. The project is being led and overseen at a senior executive level. The actual engineering and operations work is a joint project of the Office of the Chief Technology Officer and National Engineering & Technical Operations. In addition, regular customer communications and messaging are overseen by the company’s Online Services business unit representatives.

6. **Employee Training.** Educational materials about the new protocol-agnostic practices are being developed for broad distribution throughout the relevant business units in Comcast. All affected employees in those business units will receive appropriate training about Comcast's transition to the new protocol-agnostic congestion management practices. Detailed technical customer inquiries about the new practices will be directed to the representatives in the Online Services business unit who will be trained to deal with such questions.
7. **FCC Notification of Material Changes.** Comcast will make supplementary filings with the Commission as necessary to keep the FCC (and the public) informed of any material changes in our plans before the transition to protocol-agnostic congestion management is completed at year-end.

Office of Chief Counsel

January 7, 2009

EXHIBIT G



Comcast Corporation
2001 Pennsylvania Ave., NW
Suite 500
Washington, DC 20006
202.379.7100 Tel
202.466.7718 Fax
www.comcast.com

January 5, 2009

VIA ECFS

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

**Re: In the Matter of Formal Complaint of Free Press and Public Knowledge
Against Comcast Corporation for Secretly Degrading Peer-to-Peer
Applications, File No. EB-08-IH-1518**

**In the Matter of Broadband Industry Practices; Petition of Free Press et al.
for Declaratory Ruling That Degrading an Internet Application Violates the
FCC's Internet Policy Statement and Does Not Meet an Exception for
"Reasonable Network Management," WC Docket No. 07-52**

Dear Ms. Dortch:

In accordance with the Compliance Plan filed by Comcast on September 19, 2008,¹ and consistent with the voluntary agreement that Comcast announced on March 27, 2008,² Comcast hereby notifies the Commission that, as of December 31, 2008, Comcast has ceased employing the congestion management practices described in Attachment A of Comcast's filing of September 19, 2008.³ We have published a revised Acceptable Use Policy (<http://www.comcast.net/terms/use/>) and updated our Network Management web page (<http://www.comcast.net/networkmanagement>) to reflect the discontinuation of these practices. We also hereby notify the Commission that we have instituted the congestion management practices described in Attachment B of our September 19th filing throughout our high-speed Internet network.⁴ Consistent with our letter of September 19th, Comcast will continue to refine and optimize these congestion management practices to deliver the best possible broadband

¹ See Ex Parte Letter of Kathryn A. Zachen, Comcast Corp., to Marlene H. Dortch, Secretary, FCC, WC Docket No. 07-52, File No. EB-08-IH-1518, at 2 & Attachment C, at 1 (Sept. 19, 2008) ("Comcast Disclosures").

² See Ex Parte Letter of David L. Cohen, Comcast Corp., to Chairman Kevin J. Martin *et al.*, FCC, WC Docket No. 07-52 (Mar. 27, 2008).

³ See Comcast Disclosures, Attachment A.

⁴ See *id.* Attachment B.

Ms. Marlene Dortch
January 5, 2009
Page 2 of 2

experience for our customers, and we will continue to provide our customers with clear, concise, and useful information about the services we provide.

The Internet continues to be an engine for innovation and economic growth. We are proud to be a leader in bringing broadband Internet to consumers all over the country, serving some 14.7 million broadband subscribers, and adding fuel to that engine. We will continue to work hard to deliver a world-class service that gives all of our subscribers access to the content, applications, and services that they demand.

Please contact me should you have any questions regarding this submission.

Sincerely,

/s/ Kathryn A. Zachem

Kathryn A. Zachem
Vice President,
Regulatory and State Legislative Affairs
Comcast Corporation

cc: Chairman Kevin J. Martin
Commissioner Michael J. Copps
Commissioner Jonathan S. Adelstein
Commissioner Robert M. McDowell
Daniel Gonzalez
Dana Shaffer
Scott Bergmann
Nick Alexander

Kris Monteith
Ian Dillner
Scott Deutchman

Office of Chief Counsel

January 7, 2009

EXHIBIT H

comcast.net Help & Support

search help & support

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[Overview](#)
[Billing](#)
[High-Speed Internet](#)
[Cable TV](#)
[Digital Voice](#)

» L

Frequently Asked Questions about Network Management

Comcast is committed to providing the best online experience possible for all of its customers. The company uses reasonable network management practices that are consistent with industry standards. Comcast maintains an Acceptable Use Policy ("AUP") located at <http://www.comcast.net/terms/use/> for its Comcast High-Speed Internet Service customers. The AUP and these FAQs discuss why Comcast manages its network and how it may do so.

The following Frequently Asked Questions are intended to help clarify what Comcast means by network management.

[Why does Comcast manage its network?](#)

[How does Comcast manage its network?](#)

[Does network management change over time?](#)

[How will the new technique work?](#)

[Will the technique target P2P or other applications, or make decisions about the content of my traffic?](#)

[How does the new network management technique impact me and my use of the Comcast High Speed Internet service?](#)

[How often does Comcast expect to use this technique?](#)

[Can you give me some "real world" examples of how much bandwidth consumption would be considered too much? For example, how many movies would I have to download to be affected by this new technique?](#)

[How will customers know they are being managed?](#)

[Does this technique apply to both Commercial and Residential services?](#)

[How is this announcement related to the recent 250 GB monthly usage threshold?](#)

[Is Comcast Digital Voice affected by this technique? What about other VoIP providers?](#)

[What about Comcast.com and streaming video or video downloads? What will happen to them?](#)

[Does Comcast block peer-to-peer \("P2P"\) traffic or applications like BitTorrent, Gnutella, or others?](#)

[Does Comcast discriminate against particular types of online content?](#)

[Why does Comcast manage its network?](#)

Comcast manages its network with one goal: to deliver the best possible broadband Internet experience to all of its customers. High-speed bandwidth and network resources are not unlimited. Managing the network is essential to promote the use and enjoyment of the Internet by all of our customers. We use reasonable network management practices that are consistent with industry standards. We also try to use tools and technologies that are minimally intrusive. Just as the Internet continues to change and evolve, so too, will our network management practices to address the challenges and threats on the Internet.

All Internet service providers need to manage their networks and Comcast is no different. In fact, many of them use the same or similar tools that Comcast does. If we didn't manage our network, our customers would be subject to the negative effects of spam, viruses, security attacks, network congestion, and other risks and degradations of the service. By engaging in reasonable and responsible network management, Comcast can deliver the best possible broadband Internet experience to all of its customers.

Comcast uses various tools and techniques to manage its network, deliver the Service, and ensure compliance with the Acceptable Use Policy and the Comcast Agreement for Residential Services available at <http://www.comcast.net/terms/subscriber/>. These tools and techniques are dynamic, like the network and its usage, and can and do change frequently. For example, these network management activities may include identifying spam and preventing its delivery to customer e-mail accounts, detecting malicious Internet traffic and preventing the distribution of viruses or other harmful code or content and using other tools and techniques that Comcast may be required to implement in order to meet its goal of delivering the best possible broadband Internet experience to all of its customers.

[Does network management change over time?](#)

Yes. The Internet is highly dynamic. As the Internet and related technologies continue to evolve and advance, Comcast's network management tools will evolve and keep pace so that we can deliver an excellent, reliable, and safe online experience to all of our customers.

In March 2008, we announced that by the end of the year, Comcast would switch to a new network management technique for managing congestion on Comcast's High Speed Internet network. Effective December 31, 2008, we have completed this transition, which is now part of our daily business operations for managing congestion on our network. (See more FAQs about that in this section.)

Top Overall FAQs

- If I have already d McAfee Security S-reinstall all or part
- Why can't I view t Code on the Chan page in My Accou
- Can I use Comcast check more than o account?
- What is my Person address?
- How can I resolve being 100% used?
- Getting started w Web Pages
- How do I prevent:
- How do I determin IP address?

How will the new technique work?

The new network congestion management practice works as follows:

If a certain area of the network nears a state of congestion, the technique will ensure that all customers have a fair share of access to the network. It will identify which customer accounts are using the greatest amounts of bandwidth and their Internet traffic will be temporarily managed until the period of congestion passes. Customers will still be able to do anything they want to online, and many activities will be unaffected, but they could experience things like: longer times to download or upload files, surfing the Web may seem somewhat slower, or playing games online may seem somewhat sluggish.

The new technique does not manage congestion based on the online activities, protocols or applications a customer uses, rather it only focuses on the heaviest users in real time, so the periods of congestion could be very fleeting and sporadic.

It is important to note that the effect of this technique is temporary and it has nothing to do with aggregate monthly data usage. Rather, it is dynamic and based on prevailing network conditions as well as very recent data usage.

Will the technique target P2P or other applications, or make decisions about the content of my traffic?

No. The new technique is "protocol-agnostic," which means that the system does not manage congestion based on the applications being used by customers. It is content neutral, so it does not depend on the type of content that is generating traffic congestion. Said another way, customer traffic is congestion-managed not based on their applications, but based on current network conditions and recent bytes transferred by users.

How does the new network management technique impact me and my use of the Comcast High Speed Internet service?

With this new technique, most customers will notice no change in their Internet experience. The goal of congestion management is to enable all users to have access to a fair share of the network at peak times, when congestion occasionally occurs. Congestion management focuses on the consumption activity of individual customer accounts that are using a disproportionate amount of bandwidth. As a result, and based on our technical trials of this technique, we expect that the large majority of customers will not be affected by it. In fact, based on consumer data collected from these trials, we found that on average less than 1% of our high-speed Internet customers are affected by the approach.

How often does Comcast expect to use this technique?

Based on market trials conducted this summer, Comcast expects that select portions of the network will be in a congested state only for relatively small portions of the day, if at all.

During these trials, Comcast did not receive a single customer complaint that could be traced to this new congestion management practice, despite having publicized the trials and notifying customers involved in the trials via e-mail.

Comcast will continue to monitor how user traffic is affected by these new congestion management techniques and will make the adjustments reasonably necessary to ensure that our Comcast High-Speed Internet customers have a high-quality online experience.

Can you give me some "real world" examples of how much bandwidth consumption would be considered too much? For example, how many movies would I have to download to be affected by this new technique?

Since the technique is dynamic and works in real time, the answer really depends on a number of factors including overall usage, time of day and the number of applications a customer might be running at the same time. First, the local network must be approaching a congested state for our new technique to even look for traffic to manage. Assuming that is the case, customers' accounts must exceed a certain percentage of their upstream or downstream (both currently set at 70%) bandwidth for longer than a certain period of time, currently set at fifteen minutes.

A significant amount of normal Internet usage by our customers does not last that long. For example, most downloads would have completed within that time, and the majority of streaming and downloading will not exceed the threshold to be eligible for congestion management. And the majority of longer-running applications, such as VoIP, video conferencing, and streaming video content (including HD streaming on most sites) will not exceed these thresholds either.

The point of the technique is to deliver the best overall online experience possible. The technique should help ensure that all customers get their fair share of bandwidth resources to enjoy all that the Internet has to offer and that includes surfing the web, reading emails, downloading movies, watching streaming video, gaming or listening to music.

How will customers know they are being managed?

We are exploring ways to create new tools that will let customers know when the management is occurring.

We believe this sort of congestion notification should be an Internet standard and have been discussing this issue in technical bodies like the Internet Engineering Task Force. We believe the use of Internet Standards for such a real-time notification is important as applications developers can write for networks beyond the Comcast network. However we are planning to develop a capability that may enable a customer to see if they were managed in the past, though this is not yet ready for testing.

Does this technique apply to both Commercial and Residential services?

Yes

How is this announcement related to the recent 250 GB monthly usage threshold?

The two are completely separate and distinct. The new congestion management technique is based on real-time Internet activity. The goal is to avoid congestion on our network that is being caused by the heaviest users. The technique is different from the recent announcement that 250 GB/month is the aggregate monthly usage threshold that defines excessive use.

Is Comcast Digital Voice affected by this technique? What about other VoIP providers?

Comcast Digital Voice is a separate facilities-based IP phone service that is not affected by this technique.

Comcast customers who use VoIP providers that rely on delivering calls over the public Internet who are also using a disproportionate amount of bandwidth during a period when this network management technique goes into effect may experience a degradation of their call quality at times of network congestion. It is important to note, however, that VoIP calling in and of itself does not use a significant amount of bandwidth. Furthermore, our real-world testing of this technique did not indicate any significant change in the quality of VoIP calls, even for managed customer traffic during periods of congestion.

What about Fancast.com and streaming video or video downloads? What will happen to them?

During periods of congestion, any customers who are using a disproportionate amount of bandwidth – no matter what type or content of the online activity (for example, it does not matter if the content is coming from a Comcast owned site like Fancast.com or not) – may be affected by this technique.

Our technique also has no ability to determine the applications or protocols being used or the content, source or destination.

Does Comcast block peer-to-peer ("P2P") traffic or applications like BitTorrent, Gnutella, or others?

No. Comcast does not block P2P traffic or applications like BitTorrent, Gnutella, or others as part of its current network congestion management technique.

Does Comcast discriminate against particular types of online content?

No. Comcast provides its customers with full access to all the content, services, and applications that the Internet has to offer. However, we are committed to protecting customers from spam, phishing, and other unwanted or harmful online content and activities. Comcast uses industry standard tools and generally accepted best practices and policies to help it meet this customer commitment. In cases where these tools and policies identify certain online content as harmful and unwanted, such as spam or phishing Web sites, this content is usually prevented from reaching customers. In other cases, these tools and policies may permit customers to identify certain content that is not clearly harmful or unwanted, such as bulk e-mails or Web sites with questionable security ratings, and enable those customers to inspect the content further if they want to do so.

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Office of Chief Counsel

January 7, 2009

EXHIBIT I

comcast.net Acceptable Use Policy

TERMS OF SERVICE: [Subscriber Agreement](#) | [Acceptable Use Policy](#) | [Network Management](#) | [Report Abuse To Comcast](#)

COMCAST ACCEPTABLE USE POLICY FOR HIGH-SPEED INTERNET SERVICES

Contents

[I. Prohibited Uses and Activities](#)
[II. Customer Conduct and Features of the Service](#)
[III. Network Management and Maintenance or Data Consumption](#)
[IV. Violation of this Acceptable Use Policy](#)
[V. Copyright and Digital Millennium Copyright Act Requirements](#)

Why is Comcast providing this Policy to me?

Comcast's goal is to provide its customers with the best residential cable Internet service possible. In order to help accomplish this, Comcast has adopted this Acceptable Use Policy (the "Policy"). This Policy outlines acceptable use of the Comcast High-Speed Internet service (the "Service"). This Policy is in addition to any restrictions contained in the Comcast Agreement for Residential Services (the "Subscriber Agreement") available at <http://www.comcast.net/terms/subscriber/>. The Frequently Asked Questions ("FAQs") at <http://help.comcast.net/> include explanations of how Comcast implements and applies many of the provisions contained in this Policy. All capitalized terms used in this Policy that are not defined here have the meanings given to them in the Subscriber Agreement.

What obligations do I have under this Policy?

All Comcast High-Speed Internet customers and all others who use the Service (the "customer," "user," "you," or "your") must comply with this Policy. Your failure to comply with this Policy could result in the suspension or termination of your Service account. If you do not agree to comply with this Policy, you must immediately stop all use of the Service and notify Comcast so that it can close your account.

How will I know when Comcast changes this Policy and how do I report violations of it?

Comcast may revise this Policy from time to time by posting a new version on the Web site at <http://www.comcast.net/> or any successor URL(s) (the "Comcast.net Web site"). Comcast will use reasonable efforts to make customers aware of any changes to this Policy, which may include sending e-mail announcements or posting information on the Comcast.net Web site. Revised versions of this Policy are effective immediately upon posting. Accordingly, customers of the Comcast High-Speed Internet Service should read any Comcast announcements they receive and regularly visit the Comcast.net Web site and review this Policy to ensure that their activities conform to the most recent version. You can send questions regarding this Policy to, and report violations of it at, <http://www.comcast.net/help/contact/>. To report a child exploitation incident involving the internet, go to <http://security.comcast.net/get-help/report-a-security-threat-or-scams.aspx?chlid=IPromgrptbly>.

I. Prohibited Uses and Activities

What uses and activities does Comcast prohibit?

In general, the Policy prohibits uses and activities involving the Service that are illegal, infringe the rights of others, or interfere with or diminish the use and enjoyment of the Service by others. For example, these prohibited uses and activities include, but are not limited to, using the Service, Customer Equipment, or the Comcast Equipment, either individually or in combination with one another, to:

Conduct and information restrictions

- undertake or accomplish any unlawful purpose. This includes, but is not limited to, posting, storing, transmitting or disseminating information, data or material which is libelous, obscene, unlawful, threatening or defamatory, or which infringes the intellectual property rights of any person or entity, or which in any way constitutes or encourages conduct that would constitute a criminal offense, or otherwise violate any local, state, federal, or non-U.S. law, order, or regulation;
- post, store, send, transmit, or disseminate any information or material which a reasonable person could deem to be unlawful;
- upload, post, publish, transmit, reproduce, create derivative works of, or distribute in any way information, software or other material obtained through the Service or otherwise that is protected by copyright or other proprietary right, without obtaining any required permission of the owner;
- transmit unsolicited bulk or commercial messages commonly known as "spam";
- send very large numbers of copies of the same or substantially similar messages, empty messages, or messages which contain no substantive content, or send very large messages or files that disrupts a server, account, blog, newsgroup, chat, or similar service;
- initiate, perpetuate, or in any way participate in any pyramid or other illegal scheme;
- participate in the collection of very large numbers of e-mail addresses, screen names, or other identifiers of others (without their prior consent), a practice sometimes known as spittering or harvesting, or participate in the use of software (including "spyware") designed to facilitate this activity;
- collect responses from unsolicited bulk messages;
- falsify, alter, or remove message headers;
- falsify references to Comcast or its network, by name or other identifier, in messages;
- impersonate any person or entity, engage in sender address falsification, forge anyone else's digital or manual signature, or perform any other similar fraudulent activity (for example, "phishing");
- violate the rules, regulations, terms of service, or policies applicable to any network, server, computer database, service, application, system, or Web site that you access or use;

Technical restrictions

- access any other person's computer or computer system, network, software, or data without his or her knowledge and consent, breach the security of another user or system, or attempt to circumvent the user authentication or security of any host, network, or account. This includes, but is not limited to, accessing data not intended for you, logging into or making use of a server or account you are not expressly authorized to access, or probing the security of other hosts, networks, or accounts without express permission to do so;
- use or distribute tools or devices designed or used for compromising security or whose use is otherwise unauthorized, such as password guessing programs, decoders, password gatherers, keystroke loggers, analyzers, cracking tools, packet sniffers, encryption circumvention devices, or Trojan Horse programs. Unauthorized port scanning is strictly prohibited;
- copy, distribute, or sublicense any proprietary software provided in connection with the Service by Comcast or any third party, except that you may make one copy of each software program for back-up purposes only;
- distribute programs that make unauthorized changes to software (cracks);
- use or run dedicated, stand-alone equipment or servers from the Premises that provide network content or any other services to anyone outside of your Premises local area network ("Premises LAN"), also commonly referred to as public services or servers. Examples of prohibited equipment and servers include, but are not limited to, e-mail, Web hosting, file sharing, and proxy services and servers;
- use or run programs from the Premises that provide network content or any other services to anyone outside of your Premises LAN, except for personal and non-commercial residential use;
- service, alter, modify, or tamper with the Comcast Equipment or Service or permit any other person to do the same who is not authorized by Comcast;

Network and usage restrictions

- restrict, inhibit, or otherwise interfere with the ability of any other person, regardless of intent, purpose or knowledge, to use or enjoy the Service (except for tools for safety and security functions such as parental controls, for example), including, without limitation, posing or transmitting any information or software which contains a worm, virus, or other harmful feature, or generating levels of traffic sufficient to impede others' ability to use, send, or receive information;

- restrict, inhibit, interfere with, or otherwise disrupt or cause a performance degradation, regardless of intent, purpose or knowledge, to the Service or any Comcast (or Comcast supplier) host, server, backbone network, node or service, or otherwise cause a performance degradation to any Comcast (or Comcast supplier) facilities used to deliver the Service;
- resell the Service or otherwise make available to anyone outside the Premises the ability to use the Service (for example, through wi-fi or other methods of networking), in whole or in part, directly or indirectly. The Service is for personal and non-commercial residential use only and you agree not to use the Service for operation as an Internet service provider or for any business enterprise or purpose (whether or not for profit);
- connect the Comcast Equipment to any computer outside of your Premises;
- interfere with computer networking or telecommunications service to any user, host or network, including, without limitation, denial of service attacks, flooding of a network, overloading a service, improper seeding and abusing operator privileges, and attempts to "crash" a host; and
- accessing and using the Service with anything other than a dynamic Internet Protocol ("IP") address that adheres to the dynamic host configuration protocol ("DHCP"). You may not configure the Service or any related equipment to access or use a static IP address or use any protocol other than DHCP unless you are subject to a Service plan that expressly permits you to do so.

II. Customer Conduct and Features of the Service

What obligations do I have under this Policy?

In addition to being responsible for your own compliance with this Policy, you are also responsible for any use or misuse of the Service that violates this Policy, even if it was committed by a friend, family member, or guest with access to your Service account. Therefore, you must take steps to ensure that others do not use your account to gain unauthorized access to the Service by, for example, strictly maintaining the confidentiality of your Service login and password. In all cases, you are solely responsible for the security of any device you choose to connect to the Service, including any data stored or shared on that device. Comcast recommends against enabling file or printer sharing unless you do so in strict compliance with all security recommendations and features provided by Comcast and the manufacturer of the applicable file or printer sharing devices. Any files or devices you choose to make available for shared access on a home LAN, for example, should be protected with a strong password or as otherwise appropriate.

It is also your responsibility to secure the Customer Equipment and any other Premises equipment or programs not provided by Comcast that connect to the Service from external threats such as viruses, spam, bot nets, and other methods of intrusion.

How does Comcast address inappropriate content and transmissions?

Comcast reserves the right to refuse to transmit or post, and to remove or block, any information or materials, in whole or in part, that it, in its sole discretion, deems to be in violation of Sections I or II of this Policy, or otherwise harmful to Comcast's network or customers using the Service, regardless of whether this material or its dissemination is unlawful so long as it violates this Policy. Neither Comcast nor any of its affiliates, suppliers, or agents have any obligation to monitor transmissions or postings (including, but not limited to, e-mail, file transfer, blog, newsgroup, and instant message transmissions as well as materials available on the Personal Web Pages and Online Storage features) made on the Service. However, Comcast and its affiliates, suppliers, and agents have the right to monitor these transmissions and postings from time to time for violations of this Policy and to disclose, block, or remove them in accordance with this Policy, the Subscriber Agreement, and applicable law.

What requirements apply to electronic mail?

The Service may not be used to communicate or distribute e-mail or other forms of communications in violation of Section I of this Policy. As described below in Section III of this Policy, Comcast uses reasonable network management tools and techniques to protect customers from receiving spam and from sending spam (often without their knowledge over an infected computer). Comcast's anti-spam approach is explained in the FAQs under the topic "What is Comcast doing about spam?" located at <http://help.comcast.net/content/faq/What-is-Comcast-doing-about-spam>.

Comcast is not responsible for deleting or forwarding any e-mail sent to the wrong e-mail address by you or by someone else trying to send e-mail to you. Comcast is also not responsible for forwarding e-mail sent to any account that has been suspended or terminated. This e-mail will be returned to the sender, ignored, deleted, or stored temporarily at Comcast's sole discretion. In the event that Comcast believes in its sole discretion that any subscriber name, account name, or e-mail address (collectively, an "Identifier") on the Service may be used for, or is being used for, any misleading, fraudulent, or other improper or illegal purpose, Comcast (i) reserves the right to block access to and prevent the use of any of these Identifiers and (ii) may at any time require any customer to change his or her Identifiers. In addition, Comcast may at any time reserve any Identifiers on the Service for Comcast's own purposes. In the event that a Service account is terminated for any reason, all e-mail associated with that account (and any secondary accounts) will be permanently deleted as well.

What requirements apply to instant, video, and audio messages?

Each user is responsible for the contents of his or her instant, video, and audio messages and the consequences of any of these messages. Comcast assumes no responsibility for the timeliness, mis-delivery, deletion, or failure to store these messages. In the event that a Service account is terminated for any reason, all instant, video, and audio messages associated with that account (and any secondary accounts) will be permanently deleted as well.

What requirements apply to personal web pages and file storage?

As part of the Service, Comcast provides access to personal Web pages and storage space through the Personal Web Pages and Online Storage features (collectively, the "Personal Web Features"). You are solely responsible for any information that you or others publish or store on the Personal Web Features. You are also responsible for ensuring that all content made available through the Personal Web Features is appropriate for those who may have access to it. For example, you must take appropriate precautions to prevent minors from receiving or accessing inappropriate content. Comcast reserves the right to remove, block, or refuse to post or store any information or materials, in whole or in part, that it, in its sole discretion, deems to be in violation of Section I of this Policy. For purposes of this Policy, "material" refers to all forms of communications including text, graphics (including photographs, illustrations, images, drawings, logos), executable programs and scripts, video recordings, and audio recordings. Comcast may remove or block content contained on your Personal Web Features and terminate your Personal Web Features and/or your use of the Service if we determine that you have violated the terms of this Policy.

III. Network Management and Limitations on Data Consumption

Why does Comcast manage its network?

Comcast manages its network with one goal: to deliver the best possible broadband Internet experience to all of its customers. High-speed bandwidth and network resources are not unlimited. Managing the network is essential as Comcast works to promote the use and enjoyment of the Internet by all of its customers. The company uses reasonable network management practices that are consistent with industry standards. Comcast tries to use tools and technologies that are minimally intrusive and, in its independent judgment guided by industry experience, among the best in class. Of course, the company's network management practices will change and evolve along with the uses of the Internet and the challenges and threats on the Internet.

The need to engage in network management is not limited to Comcast. In fact, all large Internet service providers manage their networks. Many of them use the same or similar tools that Comcast does. If the company didn't manage its network, its customers would be subject to the negative effects of spam, viruses, security attacks, network congestion, and other risks and degradations of service. By engaging in responsible network management including enforcement of this Policy, Comcast can deliver the best possible broadband Internet experience to all of its customers. Visit Comcast's Network Management page at <http://www.comcast.net/terms/network/> for more information.

How does Comcast manage its network?

Comcast uses various tools and techniques to manage its network, deliver the Service, and ensure compliance with this Policy and the Subscriber Agreement. These tools and techniques are dynamic, like the network and its usage, and can and do change frequently. For example, these network management activities may include (i) identifying spam and preventing its delivery to customer e-mail

accounts, (ii) detecting malicious Internet traffic and preventing the distribution of viruses or other harmful code or content, (iii) temporarily lowering the priority of traffic for users who are the top contributors to current network congestion, and (iv) using other tools and techniques that Comcast may be required to implement in order to meet its goal of delivering the best possible broadband Internet experience to all of its customers.

Are there restrictions on data consumption that apply to the Service?

The Service is for personal and non-commercial residential use only. Therefore, Comcast reserves the right to suspend or terminate Service accounts where data consumption is not characteristic of a typical residential user of the Service as determined by the company in its sole discretion. Comcast has established a monthly data consumption threshold per Comcast High-Speed Internet account of 250 Gigabytes ("GB"). Use of the Service in excess of 250GB per month is excessive use and is a violation of the Policy. See the Network Management page at <http://www.comcast.net/terms/network> for more information and to learn how Comcast applies this Policy to excessive use. Common activities that may cause excessive data consumption in violation of this Policy include, but are not limited to, numerous or continuous bulk transfers of files and other high capacity traffic using (i) file transfer protocol ("FTP"), (ii) peer-to-peer applications, and (iii) newsgroups. You must also ensure that your use of the Service does not restrict, inhibit, interfere with, or degrade any other person's use of the Service, nor represent (as determined by Comcast in its sole discretion) an overly large burden on the network. In addition, you must ensure that your use of the Service does not limit or interfere with Comcast's ability to deliver and monitor the Service or any part of its network.

If you use the Service in violation of the restrictions referenced above, that is a violation of this Policy. In these cases, Comcast may, in its sole discretion, suspend or terminate your Service account or request that you subscribe to a variation of the Service (such as a commercial grade Internet service, if appropriate) if you wish to continue to use the Service at higher data consumption levels. Comcast may also provide variations of the Service with different speed and data consumption limitations, among other characteristics, subject to applicable Service plans. Comcast's determination of the data consumption for Service accounts is final.

IV. Violation of this Acceptable Use Policy

What happens if you violate this Policy?

Comcast reserves the right immediately to suspend or terminate your Service account and terminate the Subscriber Agreement if you violate the terms of this Policy or the Subscriber Agreement.

How does Comcast enforce this Policy?

Comcast does not routinely monitor the activity of Individual Service accounts for violations of this Policy, except for determining aggregate data consumption in connection with the data consumption provisions of this Policy. However, in the company's efforts to promote good citizenship within the Internet community, it will respond appropriately if it becomes aware of inappropriate use of the Service. Comcast has no obligation to monitor the Service and/or the network. However, Comcast and its suppliers reserve the right at any time to monitor bandwidth, usage, transmissions, and content in order to, among other things, operate the Service; identify violations of this Policy; and/or protect the network, the Service and Comcast users.

Comcast prefers to inform customers of inappropriate activities and give them a reasonable period of time in which to take corrective action. Comcast also prefers to have customers directly resolve any disputes or disagreements they may have with others, whether customers or not, without Comcast's intervention. However, if the Service is used in a way that Comcast or its suppliers, in their sole discretion, believe violates this Policy, Comcast or its suppliers may take any responsive actions they deem appropriate under the circumstances with or without notice. These actions include, but are not limited to, temporary or permanent removal of content, cancellation of newsgroup posts, filtering of Internet transmissions, and the immediate suspension or termination of all or any portion of the Service (including but not limited to newsgroups). Neither Comcast nor its affiliates, suppliers, or agents will have any liability for any of these responsive actions. These actions are not Comcast's exclusive remedies and Comcast may take any other legal or technical actions it deems appropriate with or without notice.

Comcast reserves the right to investigate suspected violations of this Policy, including the gathering of information from the user or users involved and the complaining party, if any, and examination of Comcast's servers and network. During an investigation, Comcast may suspend the account or accounts involved and/or remove or block material that potentially violates this Policy. You expressly authorize and consent to Comcast and its suppliers cooperating with (i) law enforcement authorities in the investigation of suspected legal violations, and (ii) and system administrators at other Internet service providers or other network or computing facilities in order to enforce this Policy. Upon termination of your Service account, Comcast is authorized to delete any files, programs, data, e-mail and other messages associated with your account (and any secondary accounts).

The failure of Comcast or its suppliers to enforce this Policy, for whatever reason, shall not be construed as a waiver of any right to do so at any time. You agree that if any portion of this Policy is held invalid or unenforceable, that portion will be construed consistent with applicable law as nearly as possible, and the remaining portions will remain in full force and effect.

You agree to indemnify, defend and hold harmless Comcast and its affiliates, suppliers, and agents against all claims and expenses (including reasonable attorney fees) resulting from any violation of this Policy. Your indemnification will survive any termination of the Subscriber Agreement.

V. Copyright and Digital Millennium Copyright Act Requirements

What is Comcast's DMCA policy?

Comcast is committed to complying with U.S. copyright and related laws, and requires all customers and users of the Service to comply with these laws. Accordingly, you may not store any material or content on, or disseminate any material or content over, the Service (or any part of the Service) in any manner that constitutes an infringement of third party intellectual property rights, including rights granted by U.S. copyright law. Owners of copyrighted works who believe that their rights under U.S. copyright law have been infringed may take advantage of certain provisions of the Digital Millennium Copyright Act of 1998 (the "DMCA") to report alleged infringements. It is Comcast's policy in accordance with the DMCA and other applicable laws to reserve the right to terminate the Service provided to any customer or user who is either found to infringe third party copyright or other intellectual property rights, including repeat infringers, or who Comcast, in its sole discretion, believes is infringing these rights. Comcast may terminate the Service at any time with or without notice for any affected customer or user.

How do copyright owners report alleged infringements to Comcast?

Copyright owners may report alleged infringements of their works that are stored on the Service or the Personal Web Features by sending Comcast's authorized agent a notification of claimed infringement that satisfies the requirements of the DMCA. Upon Comcast's receipt of a satisfactory notice of claimed infringement for these works, Comcast will respond expeditiously to either directly or indirectly (i) remove the allegedly infringing work(s) stored on the Service or the Personal Web Features or (ii) disable access to the work(s). Comcast will also notify the affected customer or user of the Service of the removal or disabling of access to the work(s).

Copyright owners may send Comcast a notification of claimed infringement to report alleged infringements of their works to:

J. Opperman & M. Molaszk
Comcast Cable Communications, LLC
701 East Gate Drive, 3rd Floor
Mount Laurel, NJ 08054 U.S.A.
Phone: 888.565.4329
Fax: 856.324.2940

Email: dmcra@comcast.net

Copyright owners may use their own notification of claimed infringement form that satisfies the requirements of Section 512(c)(3) of the U.S. Copyright Act. Under the DMCA, anyone who knowingly makes misrepresentations regarding alleged copyright infringement may be liable to Comcast, the alleged infringer, and the affected copyright owner for any damages incurred in connection with the removal, blocking, or replacement of allegedly infringing material.

What can customers do if they receive a notification of alleged infringement?

If you receive a notification of alleged infringement as described above, and you believe in good faith that the allegedly infringing works have been removed or blocked by mistake or misidentification, then you may send a counter notification to Comcast. Upon Comcast's receipt of a counter notification that satisfies the requirements of DMCA, Comcast will provide a copy of the counter notification to the person who sent the original notification of claimed infringement and will follow the DMCA's procedures with respect to a received counter notification. In all events, you expressly agree that Comcast will not be a party to any disputes or lawsuits regarding alleged copyright infringement.

If a notification of claimed infringement has been filed against you, you can file a counter notification with Comcast's designated agent using the contact information shown above. All counter notifications must satisfy the requirements of Section 512(g)(3) of the U.S. Copyright Act.

Revised and effective: January 1, 2009

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