Jerome Simonoff
5757 West Century Blvd. – Suite 700
Los Angeles CA 90045
███████████████████
███████████████

<u>**Via Electronic Mail:**</u>

September 17, 2012

The Honorable Mary L. Schapiro
Chairman
U.S. Securities and Exchange Commission
100 F. Street NE
Washington, D.C. 20549-1090

Re: File #4-652 Technology and Trading Roundtable

Dear Ms. Schapiro:

The most important challenge in today's technology-driven trading environment is not error prevention and response. Rather, it is the use of technology to restore fairness to the marketplace.

That the focus of the roundtable is on errors ignores a key fact of modern-day market practice: Many of the technology-driven "errors" that show up on the regulatory radar and can cause "flash crashes" are not the result of uncontrolled electrical impulses or computer code glitches.

In fact, much of the computer code in question isn't malfunctioning. It is doing exactly what its author intended: create opportunities to gain trading advantages while giving little consideration to the possible creation of instability in the market.

This destabilizing practice represents a far bigger problem for the effective functioning of the marketplace than technological problems in our current trading platforms. As a result, the focus on refining our current trading technology to prevent errors distracts us from the real task at hand: transforming our trading platforms to minimize the potential for disparities, excessive volatility, and disruption.

My concern about this issue is heightened by the reference to "real-time processes" in the description of the focus for the afternoon panel.

In the current state of computer technology, there really is no such thing as real-time processing. While a few years ago millisecond differences would be insignificant and thus it would for all practicable purposes be proper to assume communication was "real-time", in today's environment almost any intervening time interval is significant. Today microsecond intervals are significant and we are rapidly approaching processing speeds where pico seconds will be significant.

In fact, there are minute time differences involved in all trading communications. And those differences translate into multi-million-dollar advantages for those with the financial and technological resources to create and take advantage of them.

Much of the time differences stem from a simple, physical fact. The farther communication signals travel on our networks, the longer they take to reach their intended recipient. And even though communication speeds today approach the speed of light, traders located close to a trading platform have an infinitesimal, but extremely valuable advantage over others who are located farther away.

This incremental advantage gives them the ability to get information on the latest trades and react to the news faster than others. And that's exactly why they pay very high prices for the privilege of "collocating" their computing systems close to stock markets and other major trading venues.

In theory, the solution to this problem is obvious. You simply mandate that all traders operate at the same physical distance from a stock market. On a very small scale, that's what some collocation centers do. They make sure that the length of the physical communication path for all their collocated tenants is basically equal.

Of course that solution is completely impractical for a global marketplace with multiple trading or matching systems involved in managing the same assets. So, if we are serious about taking steps to ensure equal access to information, price discovery and to promote more equitable trading we have to find other ways to address the problem.

Unfortunately, well-intentioned remedies like the NBBO and rules for preventing trade-through, while once credible, are now ultimately doomed to failure because they don't take into account the incredible speeds of processing and also don't recognize or address the frenetic pace of current "algo" trading. If we have a database that is centrally located

to which multiple trading engines can send current offers or check for best bid or offer this will not fix the problem. Remember it takes time for the information to reach such a database. It takes more time for the data to be posted. It then takes more time for the querying of the data in the database. It takes time for the Query to be answered or the information disseminated. When the data is disseminated it will take additional time for all the subscribers to receive this data. Unless all trading were halted on a given asset after each such posting or query, by the time all subscribers were to receive the data, the data would no longer be meaningful because of ongoing trading activity.

All of this can be corrected by making a fundamental change to Regulation NMS. An asset should be restricted to trade on only one trading system (matching engine). Each trading system would set its own rules for matching and its rates for making the matches (trades). The rules for matching trades should be made public. Each issuer of an asset should be allowed to choose the trading system that bests suits its needs and be allowed to change this periodically. This will foster competition among trading system providers to minimize costs and maximize efficiency.

Each trading system would establish a "gateway" queue of bids and offers to regulate the flow by asset. It would, periodically, release batches of bids and offers to the trading engine for processing in an order determined by a publicly disclosed and carefully monitored "fairness algorithm.". The period (time interval) for each release could be set to negate the effect of raw processing speed, disparity of distances, transmission quality and other factors which now tend to discourage a global market place. The time interval could be automatically varied based upon price volatility so as to dampen the effect of momentary lapses in liquidity. This would also serve to avoid the "feedback" amplification effect of uncontrolled "algo" trading.

In addition, all trades on a network could be routed through a gateway device that would regulate the flow of bids and offers. This gateway device could be configured to place all trades in a queue for processing in an order determined by a publicly disclosed and carefully monitored "fairness algorithm."

This gateway-based approach would have another advantage. It would prevent the unethical price discovery methods employed by traders who engage in intentionally misleading order/cancellation practices.

It is important that we recognize that the architects of Regulation NMS did not envision and anticipate the evolution of computer and network speeds and the possibility that ultra-sophisticated traders could exploit microsecond advantages in communication

speeds. As a result, many of the commendable rules and principles involved in this important regulation need to be completely reengineered for our current trading environment.

Since the it is stated that a fundamental purpose of the SEC is to ensure a level playing field and uphold the interests of long-term investors over short-term traders whenever those interests conflict, it would make sense to hold a future Technology and Trading roundtable on the following theme: "How to use technology to promote stability, reduce volatility and restore fairness to the financial markets."

I think that would generate a far more valuable and productive discussion than error mitigation.

Sincerely,
(signature)
Jerome Simonoff

Notes on the Contributor. Mr. Simonoff is an investor, an IT consultant, and a technological innovator. He is also the President of CHAX, Inc., an independent software development company specializing in funds transfer software. Mr. Simonoff developed the underlying technology required for the Check 21 banking law enacted by Congress in 2003. In recognition of his innovative system design, he was awarded U.S. Patents 6,195,453, 6,647,512, and 7,702,144