



November 10, 2020

Via Electronic Mail (rule-comments@sec.gov)

Ms. Vanessa Countryman, Secretary
U.S. Securities and Exchange Commission
100 F Street NE., Washington, DC 20549

Re: Partial Amendment No. 3, Wireless Fee Schedule Setting Forth Available Wireless Bandwidth Connections and Wireless Market Data Connections¹ File Nos. SR-NYSE-2020-05, SR-NYSEAMER-2020-05, SR-NYSEArca-2020-08, SR-NYSECHX-2020-02, SRNYSEAT-2020-03, SR-NYSE-2020-11, SR-NYSEAMER-2020-10, SR-NYSEArca2020-15, SR-NYSECHX-2020-05, SR-NYSEAT-2020-08 (Release #: 34-90209)

Dear Ms. Countryman:

On behalf of Data Boiler Technologies, I am pleased to provide the U.S. Securities and Exchange Commission (SEC) with our comments on this release concerning wireless bandwidth connections and wireless market data connections (hereby refer to as NYSE's proposal). We are deeply concerned about this NYSE's proposal. It seems like a **betrayal of the public's interest in favor of a 'predetermined' competition among elites.**

Per our December 2019 comments² to the SEC, and again pointing to the empirical research³ by Giovanni Cespa and Thierry Foucault, "Exchanges optimally restrict access to price information by charging a high fee so that only a fraction of speculators buy their proprietary products". Would that constitute as unreasonable, unfair and/or discriminatory?

While acknowledging that the Exchanges have made certain changes to the original proposal, such as withdrawing Partial Amendment No. 2 and replacing it in its entirety with Partial Amendment No. 3, there are still significant gaps.

Co-location ≠ Latency equalization ≠ Market data available Securely in Synchronized Time

Selective listening to only the elite firms and the low latency data vendors is a huge disrespect and disregard of public voices. It is naïve to blindly believe in competition using microwave, laser, or quantum technologies, the resulting effect only exacerbates the gap between the "haves" and "haves not". As long as NMS remains a "drag race", the rich will access connectivity that is not reasonably affordable to the average investors.

We disagree with the SEC's statement that said "the Commission believes the Exchanges have demonstrated that they are subject to significant competitive forces ..." when empirical research³ and available technology⁴ suggest otherwise! Once this principle is weakened to anything less than a secure and synchronized start line covering both proprietary feeds and the SIP, then all hell would break loose. Exchanges may no longer be required to "demonstrate that the terms of their proposal are equitable, fair, and not reasonably discriminatory" based on fulfilling the preceding condition of "subject to competitive forces" when they are not. The fight to break up Exchanges' alleged monopoly power over market data must continue.

As a quick recap⁵, the SEC's **Competing Decentralized Consolidation Model (DCM) proposal is impractical** because it merely based on 10G speed, while NYSE is allowed to implement 100G connections for their prop feed. This makes the SEC's proposal fundamentally flawed in its assumptions. The proposal of "same manner and methods" is merely a

¹ <https://www.sec.gov/rules/sro/nyse/2020/34-90209.pdf>

² <https://www.sec.gov/comments/4-729/4729-6510588-200169.pdf>

³ <https://pdfs.semanticscholar.org/b61b/597e0c4268eaec75fb744b4e1802c3beeb8aa.pdf>

⁴ <https://www.linkedin.com/pulse/market-data-available-securely-synchronized-time-kelvin-to/>

⁵ <https://www.linkedin.com/pulse/competing-decentralized-consolidation-model-impractical-kelvin-to/>



standard price list offered by Exchanges. It is not the equivalent to Latency Equalization⁶, nor can it achieve the same results as Market data available Securely in Synchronized time⁴. “Same format” hurts average investors and gives High Frequency Trading firms (HFTs) a permanent advantage because one can only attempt to match faster connectivity by altering data format and compression methods. DCM, transaction cost analyzers (TCA) and other BestEx tools are indeed added layers of costs and/or barriers for average market participants.

Some advocated for “Service Indirection”⁷, suggesting that “the services could wrap different levels of functionality, such as existing SIP and depth, including future functionality such as distributed SIP, snapshots and conflation⁸.” While we also echo the desire for faster evolution and less client impact we are uncertain if the path as prescribed achieves the needed cure. We do understand “indirection” or “dereferencing” as way to multi-task in computing. That being said, **real-time market data should still reference to an atomic clock** (e.g. NIST) in order to make market data available securely in synchronized time. Regardless of wireless connection or ports for different prop feeds, or SIPs, they should incorporate time-lock encryption to make certain there is no premature decryption of data. Forsaking a synchronized start-line is indeed unreasonable and against public interests.

Besides, “wrap” may merely mean the SIP would add a header and trailer to messages from the SROs’ data feeds. It might be as simple as to state which Exchange this message is originally sourced from, before being published by the SIP. That may be one of the easiest and cheapest and fastest ways f to immediately expand the data (e.g. depth, auction imbalance, etc.) that the SIP would distribute. Over time, end-users, however would incur substantial costs to actually use the data.

We care about end-users’ experience and despise the NYSE’s proposal in **widening the inequalities gap between the “have” versus “have not”**. Why protect these low latency data vendors’ profits with the NYSE’s proposal and DCM? These telecom industry leaning middlemen do not necessarily have the best interest for our capital market. They add little to no value to the new NMS 2.0, hence it should not be included.

No doubt that selling data and connectivity are profitable revenue streams for the Exchanges. That being said, **ownership rights do not mean usage of private property without restrictions**. For example, one can say my house is my private property and I can burn it down if I want; however if that interferes or affects the neighbors it might be problematic. Should the right be perpetual or limited term life? Is it transferable/ alienable? Also, there is the question about rent dissipation over common property. If Exchanges have rights to income, then they should have no exculpation clause to escape related liabilities. They must carry the burden of not using such property rights outside of permissible limits. Therefore, in our opinion, the SEC can and should do more to uphold market integrity by imposing appropriate limits. In particular, Exchanges’ proprietary data products should have necessary cybersecurity protection and use time-lock encryption to make market data available securely in synchronized time with SIPs.

Do not get us wrong, it is not about forcefully taking something away from the Exchanges. Yet it is inevitable that the ecosystem continues to evolve, and our industry’s value chain deserves better than what is being proposed. We should learn from the Music industry, MP3 and streaming expanded music’s availability and audience. **NMS 2.0 should be a full-fledged exercise like the Music Modernization Act⁹** governing digital streaming and related copyrights and royalties issues. Exchanges are not necessary at a loss. As early adopters, one can become the next Spotify, Pandora, Apple Music, etc. with much advantage. It is already proven that both Artists and Record Label Companies make more money as the

⁶ <https://www.interxion.com/blogs/2018/082/latency-equalisation-the-need-for-fair-and-non-discriminatory-colocation-services>

⁷ <https://tabbforum.com/opinions/retooling-the-nms-sip-market-data-universe/>

⁸ <https://www.sec.gov/comments/s7-03-20/s70320-7489141-221756.pdf>

⁹ <https://www.congress.gov/bill/115th-congress/house-bill/5447>



Music industry migrated to streaming platforms. Users have been happy with streaming subscriptions while buying less Vinyl and CDs, saving money and storage space. Therefore, we encourage the Commission and the industry to **look at the smile curve¹⁰ – industry's value chain**. Stay tuned to our forthcoming comments on the SRO's CT Plan¹¹. We shall illustrate how we can turn the "frown" around and grow the overall pie.

We recognize the Commission has the best intentions to overhaul market data infrastructure. However, we are concerned this NYSE's proposal is impractical with adverse consequences which run counter to the public interest. Again, we disagree with the SEC's statement that said "the Commission believes the Exchanges have demonstrated that they are subject to significant competitive forces ..." because both empirical research³ and available technology⁴ suggest otherwise!

We hope the above comments are helpful to the SEC and benefit the broader industry. Feel free to contact us with any questions. Thank you and we look forward to engage in any opportunities where our expertise might be required.

Sincerely,

Kelvin To

MSc Banking, MGMT, BSc

Founder and President

Data Boiler Technologies, LLC

CC: The Honorable Jay Clayton, Chairman
The Honorable Hester M. Peirce, Commissioner
The Honorable Elad L. Roisman, Commissioner
The Honorable Allison Herren Lee, Commissioner
The Honorable Caroline A. Crenshaw, Commissioner
Mr. Brett Redfearn, Director, Division of Trading and Markets
Ms. Andrea Orr, Counsel to the Director of Trading and Markets

This letter is also available at:

https://www.DataBoiler.com/index_htm_files/DataBoiler%20SEC%20NYSE%20Wireless.pdf

¹⁰ <https://www.linkedin.com/pulse/smile-curve-changes-securities-value-chain-evolves-kelvin-to/>

¹¹ <https://www.sec.gov/rules/sro/nms/2020/34-90096.pdf>