



November 15, 2019

**Securities Information Processor (SIP) Operating Committees**

Email: [oddlotcomments@forefrontcomms.com](mailto:oddlotcomments@forefrontcomms.com)

Subject: **Odd Lots Proposal<sup>1</sup> Comment**

Dear SIP Operating Committees:

On behalf of Data Boiler Technologies, I am pleased to provide the Operating Committee with our comments regarding the above-referenced proposal<sup>1</sup> to introduce odd lot quotations to the Plans. In the capacity of an entrepreneurial inventor of a patent pending solution for trade processing and analysis, I am advocating for making **market data available securely in synchronized time.**<sup>2</sup>

Included within the “Respond to requests for comment” section are detailed opinions and suggestions as to the committee’s questions. The following table summarizes our thoughts on how SIP should evolve along with the broader market ecosystem, as well as our suggestions to address the latency differentials issue, expand the core data to include liquidity beyond the top of each market’s order book, and striking appropriate balance on cost that affects the goal of fair and efficient access to markets at all venues:

| Issues                                                                                                                    | What’s missing / Controversies                                                                                                                                                                                                                                                                                                                                                          | Our Suggestions                                                                                                                                                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Interpretations of <b>17 CFR §242.603(a)</b> <sup>3</sup> is incomplete and requires clarification or appropriate updates | <b>“Transmitting</b> or releasing data no sooner than to a Network processor (SIP)” only describes one of the aspects of “fair and reasonable” and “not unreasonably discriminatory” principles required by Reg. NMS. It omitted the fact that market data is highly valuable (it reflects the price discovery created by exchanges) and it requires <b>proper security protection.</b> | SEC should mandate the use of time-lock encryption <sup>4</sup> (rest assure this is not another speed bump). It would allow proprietary feeds and SIP consolidated data to be <b>“available”</b> securely in synchronized time <sup>2</sup> . |

<sup>1</sup> [https://www.ctaplan.com/publicdocs/CTA\\_Odd\\_Lots\\_Proposal.pdf](https://www.ctaplan.com/publicdocs/CTA_Odd_Lots_Proposal.pdf)

<sup>2</sup> <https://www.linkedin.com/pulse/market-data-available-securely-synchronized-time-kelvin-to/>

<sup>3</sup> When adopting Regulation NMS and per [70 FR 37567](https://www.ecfr.gov/current/title-17/chapter-I/subchapter-A/part-242/subpart-1/section-242.603) in 2005, the Commission stated that “adopted Rule 603(a) prohibits an SRO or broker-dealer from transmitting data to a vendor or user any sooner than it transmits the data to a Network processor.” Then, in [Order 67857](https://www.ecfr.gov/current/title-17/chapter-I/subchapter-A/part-242/subpart-1/section-242.603) in 2012, the Commission stated that “exchanges have an obligation under Rule 603(a) to take reasonable steps to ensure—through system architecture, monitoring, or otherwise—that they release data relating to current best-priced quotations and trades through proprietary feeds no sooner than they release data to the Network Processor, including during periods of heavy trading.” The interpretations of [17 CFR §242.603\(a\)](https://www.ecfr.gov/current/title-17/chapter-I/subchapter-A/part-242/subpart-1/section-242.603) is incomplete and requires clarification or appropriate updates because “faster access” isn’t only about accelerating SIP’s processing speed, but there are issues with the current aggregation distance per this [market data revenue analysis](#) by TABB Group.

<sup>4</sup> See this for the general concept about time-lock encryption: <https://people.csail.mit.edu/rivest/pubs/RSW96.pdf>



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|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>According to an empirical research<sup>5</sup> by Giovanni Cespay and Thierry Foucault, “A for-profit exchange optimally restricts access to price information.” For that, <b>depth-of-book</b> information is needed</p> | <p>SIP currently, and under the above-referenced proposal<sup>1</sup>, only provides top-of-book data which is insufficient. However, providing too much information is going to drag the processing time of SIP from a technical perspective. Slowing the SIP’s processing time would mean delaying the availability of proprietary feeds – if everything was tied to a synchronized decryption mode.</p> | <p>Optimizing between processing speed and contents’ richness. My patent-pending methods reduce data storage and booster the efficiency in data distribution, while also enabling the <b>replicate the depth-of-book</b> information (relative strengths in bid/ask price and steepness of the price curve).</p>                       |
| <p>The buy-side wants the SIP to include all the <b>odd lot</b> details amid some hidden cost for high priced stocks<sup>6</sup></p>                                                                                         | <p>Asking for too much or insisting on “complete” transparency, may indeed be detrimental to price discovery and the sustainable development of a healthy market because <b>“No fish can survive when the water is too clear”</b>.</p>                                                                                                                                                                     | <p>Our solutions will help SIP preserve the richness of contents to the best we can, while making the tool fast, easy, secure and fit for the effective monitoring of trade activities. See later section for details.</p>                                                                                                             |
| <p><b>Fit-for-purpose:</b> consumption of market data by Institutional versus retail users</p>                                                                                                                               | <p>“There is big difference between what <b>professional</b> and <b>retail investors</b> pay for data. Brokers want to make sure any retail client doesn’t get hit with professional fees, while exchanges want to ensure that every professional consuming their data pays the higher rate. It is not easy to <b>classify</b> these different customer types correctly.”<sup>7</sup></p>                  | <p>Instead of tweaking the Prof. v. Non-Prof. definition, the emphasis should be about <b>democratizing technologies</b>, so that the overall industry would benefit from increasing market activities when average investors can also trade like the professionals with pattern recognition and other advanced computing methods.</p> |

I hope the above highlights and the detailed comments below will be helpful and positively enabling SIP developments. Feel free to contact us with any questions, or if our expertise might be required. Thank you.

Sincerely,

[Kelvin To](#)

MSc Banking, MGMT, BSc

**Founder and President**

**Data Boiler Technologies, LLC**

This letter and the enclosure are also available at:

[www.DataBoiler.com/index\\_htm\\_files/DataBoiler%20OddLots%20Comments.pdf](http://www.DataBoiler.com/index_htm_files/DataBoiler%20OddLots%20Comments.pdf)

<sup>5</sup> <https://pdfs.semanticscholar.org/b61b/597e0c4268eac75fb744b4e1802c3beb8aa.pdf>

<sup>6</sup> <https://jot.pm-research.com/content/12/1/35>

<sup>7</sup> <https://www.watertechnology.com/data-management/4623751/brokers-tackle-pro-v-non-pro-data-cost-compliance-challenges>



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### Respond to Specific Questions

1. **Do commenters support the publication of odd lot data by the SIPs? Why or why not? In particular:**

Yes and no, and it depends. In a market where odd lots are more like the “norms” than “outliers”, then it is essential to include the information in order for any investor to make an educated investment decision. Another consideration is: providing too much information is going to drag the processing time of SIP from a technical perspective. Slowing the SIP’s processing time would mean delaying the availability of proprietary feeds – if everything was tied to a “synchronized decryption mode”.<sup>2</sup> In the interest of deemphasizing speed as a key trading success<sup>8</sup> (while allowing trading venues have sufficient opportunity and flexibility to innovate under Reg. NMS), the industry ought to make some hard gives-and-takes choices in order to major in the majors. For that, I encourage the industry to consider the following suggested priorities:

- (i) First, address the speed differentials between the market data feeds provided by the SIPs and the proprietary products sold by the exchanges in order to get the biggest bang for the buck.
- (ii) Second, demand for the depth-of-book information (a replication of the relative strengths in bid/ask price and steepness of the price curve in real-time), so at least the content would be a bit more compatible with the proprietary products sold by the exchanges, while minimizing drags of the SIP processing speed.
- (iii) Third, pursuit market structure changes outside of the SIP that will make odd lots become true “outliers” rather than the “norms” and/or ask for a “delayed” odd lot trades and quotations statistics, so that experienced market participants may use reverse-engineering methods to “figure-out” or “project” how these odd lots would play out in sequence. This “alternative”, “compromise”, or “trade-off” is based on the condition of Exchanges willingness to adopt point (i) – making market data available securely in synchronized time<sup>2</sup>.

Given the above dilemma, asking for too much or insisting on “complete” transparency, may indeed be detrimental to price discovery and the sustainable development of a healthy market in my humble opinion. Again, “No fish can survive when the water is too clear”.

a) **Do commenters believe that this additional information will be useful to investors? If so, what types of investors (e.g., institutional, retail, etc.) would benefit from the data and in what ways?**

Enhancing the content of SIP will always be useful to investors, but at what costs? Institutional investors would likely benefit from the data from improved transparency and compliance standpoints. However, as mentioned earlier, it is not easy to classify between professional versus non-professional investors.<sup>7</sup> More importantly, we are concerned about possible drags to SIP processing speed.

If we can have a wish list, we would prioritize (1) making market data available securely in synchronized time<sup>2</sup>; (2) having depth-of-book information available in SIP in real-time; and then (3) access to an archive of odd-lot trades and quotations statistics for FREE.

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<sup>8</sup> <https://www.sec.gov/news/speech/2014-spch060514mjw>



- b) Do commenters believe that publication of this additional data could potentially be confusing or otherwise problematic for investors? Is there a minimum odd lot size (e.g., 1 share for lower priced securities) where potential confusion may outweigh the benefits? Do commenters feel that notional value is important in determining the threshold of price transparency (e.g. is 2 shares in a \$2 priced stock important = \$4 of notional value)

We concur with the comment submitted by Charles Schwab, “displaying an odd lot bid or ask inside the NBBO could lead to confusion and questioning.” Also, we agreed that protected quote data is important, and understand their supportive of redefining the round lot size for higher priced shares to be some number lower than 100. Yet, it goes back to my earlier point (iii) – i.e. pursuit market structure changes outside of the SIP that will make odd lots become true “outliers” rather than the “norms” and/or ask for a “delayed” odd lot trades and quotations statistics, so that experienced market participants may use reverse-engineering methods to “figure-out” or “project” how these odd lots would play out in sequence. Again, the priority focus should be making market data available securely in synchronized time<sup>2</sup> to deemphasize speed as a key trading success<sup>8</sup>.

2. How would commenters anticipate using the odd lot data? For example, would market participants display this new data to their retail customers?

Most likely brokerage firms would NOT display the odd lot quote data to retail customers. For professional trade analysts, they would use the information to improve their fill-rate in moving lots, detect and avoid toxic orders<sup>9</sup>, etc.

3. Do commenters obtain and use this data from other sources today, for example from exchange proprietary data feeds? If so, would publication of the data in the SIP feeds provide an additional benefit? Would commenters use the SIP odd lot data for the same uses as data obtained from other sources today or would commenters anticipate using both the SIP and other sources for different purposes?

I envisage the industry will have no change to the subscriptions of Exchanges’ proprietary products if SIP is going to introduce odd lot quotations to the Plans according to the current proposal<sup>1</sup>. Besides, an empirical research<sup>5</sup> by Giovanni Cespay and Thierry Foucault suggests, “A for-profit exchange optimally restricts access to price information.”

4. How would commenters prefer to see the new odd lot data presented? Would the proposal described above to provide Odd Lot NBBO-equivalent fields be useful? Why or why not?

Please refer to our comments in Q.1 and point (b) in particular.

5. Should the Participants consider any alternatives to the manner of dissemination for odd lot data described above? For example, should multiple price points of odd lots above the round lot NBBO be displayed? Should odd lots be aggregated across exchanges and displayed in total?

Ideally, market participants would want all the odd lot details for FREE in real-time, yet this isn’t practical. If we can have a wish list, we are willing to settle for a delayed odd lot trades and quotations statistics, while

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<sup>9</sup> <https://patents.google.com/patent/US7587347B2/>



getting the Exchanges to agree on making market data available securely in synchronized time<sup>2</sup> and having depth-of-book information available. Please refer to our comments in Q.1 for further explanation.

6. Should the Participants consider any other changes to facilitate additional transparency of odd lot orders and associated market data? For example, should exchanges consider reducing the round lot size for higher-priced securities? If so, why?

Please refer to our comments in Q.1 and point (b) in particular.

7. Do commenters have other proposals that may present a better solution than the proposal above? Please describe.

Yes, please see footnote 2 – “Market Data Available Securely in Synchronized Time”.

**\*\*\* END \*\*\***