



## IMPERATIVE EXECUTION

July 14, 2023

Ms. Vanessa Countryman  
Secretary  
Securities and Exchange Commission  
100 F Street, N.E.  
Washington, D.C. 20549-1090

Re: Alternative Display Facility New Entrant (SR-FINRA-2022-032)

Dear Ms. Countryman:

Imperative Execution is writing to respond to comments filed, and other issues that have been raised, since our previous letter on the FINRA proposed rule change to add the IntelligentCross ATS (“IntelligentCross”)<sup>1</sup> as a new entrant to the Alternative Display Facility (“ADF”).<sup>2</sup>

We welcome the opportunity to provide further information on IntelligentCross, but also refer back to our previous letters describing how IntelligentCross operates, why we believe the addition of our displayed liquidity to the public quote through the ADF will improve market efficiency, transparency, and execution quality, and why the proposed rule change is consistent with both the spirit of, and applicable requirements under, Regulation NMS, as many of the issues raised in the most recent comment letters reiterate many of the same arguments addressed in our prior letters.<sup>3</sup>

We continue to believe that the IntelligentCross ASPEN Fee/Fee quotations displayed on the ADF would meet the definition of an “automated quotation” under Regulation NMS and therefore should be considered a “protected quote.” In addition, the IntelligentCross matching mechanism utilizes a matching process that provides fair and efficient access to its quotations and any delay in the IntelligentCross matching process also is *de minimis*, i.e., so short as to not frustrate the purposes of Regulation NMS by impairing fair and efficient access to the IntelligentCross quotation. Finally, access to IntelligentCross’ displayed liquidity through the ADF is consistent with that of the quotations displayed through exchanges, i.e., there is a level playing field regarding the access to displayed liquidity between IntelligentCross and exchanges, and the proposed rule change is therefore consistent with the Exchange Act’s goals of fair competition among markets and the equal regulation of markets.

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<sup>1</sup> IntelligentCross is a SEC-registered US equities Alternative Trading System (“ATS”). Imperative Execution is a financial technology company that is the parent company of IntelligentCross. For further information on Imperative Execution and IntelligentCross, see <https://www.imperativex.com/intelligentcross>.

<sup>2</sup> See SEC Release No. 34-96550 (December 20, 2022), 87 FR 79401 (December 27, 2022); see also Order Instituting Proceedings to Determine Whether to Approve or Disapprove a Proposed Rule Change Relating to Alternative Display Facility New Entrant, SEC Release No. 34-97195 (March 24, 2023), 88 FR 19173 (March 30, 2023) and Notice of Designation of Longer Period for Commission Action on Proceedings To Determine Whether To Approve or Disapprove a Proposed Rule Change Relating to Alternative Display Facility New Entrant, SEC Release No. 34-97784 (June 21, 2023), 88 FR 41710 (June 27, 2023).

<sup>3</sup> See Letter from Ari Burstein, General Counsel, Imperative Execution, to Brendan Loonam, Senior Director, FINRA, dated December 15, 2022 and Letter from Ari Burstein, General Counsel, Imperative Execution, to Vanessa Countryman, Secretary, Securities and Exchange Commission, dated February 16, 2023.

## **I. IntelligentCross Displayed Liquidity – Why is a Protected Quote Needed?**

As we noted in our previous letters, IntelligentCross was created with the purpose of building a venue that optimizes price discovery, achieves maximum price stability after trades, and provides an opportunity for market participants to improve performance and achieve best execution by reducing market impact and adverse selection. Specifically, and pertinent to the consideration of the proposed rule change, IntelligentCross facilitates: (1) lower market impact and lower adverse selection through our matching process that schedules match times specifically to minimize price movement after trades; (2) lower risk by allowing both sides of the trade - taker and maker - to manage their orders by adapting to changing market conditions; and (3) a more level playing field between different types of participants, and different levels of technologies used by these participants.

Since our most recent letter, our average daily market share has continued to grow due to the value proposition that the IntelligentCross matching process brings to the markets.<sup>4</sup> As of the date of this submission, IntelligentCross reached its highest daily market share versus total consolidated volume on June 6, 2023 at 146bps and has averaged over 124bps daily for the first six months of 2023.<sup>5</sup> IntelligentCross continues to be consistently listed among the top three in total shares traded by ATSs of NMS Tier 1 and Tier 2 stocks in the FINRA ATS weekly statistics,<sup>6</sup> averaging \$6.5 billion notional traded per day single counted.<sup>7</sup> In addition, a recent study found that: (1) for displayed orders in S&P 500 stocks, quotations in the ASPEN Fee/Fee book were available strictly inside the NBB/NBO more than 12 percent of the time, with an average improvement of over 2.5 basis points, and (2) for displayed orders in Russell 3000 stocks and the top 100 ETFs, bids and offers strictly inside the NBB/NBO were available over 9 percent of the time, with an average improvement of over 10 basis points.<sup>8</sup> This translates to lower net costs, valuable price improvement, and better price discovery.

So why is IntelligentCross seeking a protected quote for our displayed liquidity? For several reasons that oftentimes may be unknown to many market participants and are seemingly ignored or misunderstood by commenters on the proposed rule change who question the benefits of an IntelligentCross protected quote.

- **ASPEN Fee/Fee publishes displayed prices from round lot or larger orders in over 6,625 securities daily and improves the NBBO over 4.73 million times per day (for orders of round-lot size or larger on arrival).<sup>9</sup>**
- **During the first six months of 2023, approximately 86 million shares, valued at \$5.7 billion per day, were printed to the SIP at prices worse than those displayed by ASPEN Fee/Fee (as a round lot size or larger) at that time.**
- **During the first six months of 2023, IntelligentCross quotes were “traded-through” 453 thousand times per day on average, meaning those trades missed the best displayed prices that were available.**

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<sup>4</sup> As we noted in our previous letters, IntelligentCross is already widely used by most major US broker-dealers and electronic trading firms. Orders are provided by a variety of market participants covering all facets of the markets, including long-only institutional investors, hedge funds, algorithmic traders, and market makers.

<sup>5</sup> Represents the combined share of the IntelligentCross ASPEN and Midpoint books matched shares, single counted.

<sup>6</sup> See <https://otctransparency.finra.org/otctransparency/AtsData>

<sup>7</sup> Based on platform statistics for January 2023 through June 2023.

<sup>8</sup> For more information, see <https://www.imperativex.com/news/picos-data-science-team-analyzes-intelligentcross-aspen-for-price-improvement-performance-quality-and-market-impact>.

<sup>9</sup> Based on platform statistics for January 2023 through June 2023.

The prices displayed on ASPEN Fee/Fee, however, are currently not visible to most investors because the orders displayed on IntelligentCross, while accessible via our free IQX market data feed, are not disseminated over the SIP and therefore are not part of the NBBO. As illustrated above, this has allowed market participants to miss or effectively “ignore” the IntelligentCross quote, even when it is the best displayed quote in the market.

At a time when best execution is in the spotlight and receives considerable regulatory scrutiny, and under examination as to whether changes need to be made to reflect changes in the securities markets,<sup>10</sup> it is unclear why market participants would not want to access published displayed quotes that improve the NBBO. Nevertheless, this is what occurs on a regular basis with respect to the non-protected displayed quotes on IntelligentCross. Approving the proposed rule change would rectify this situation and ensure these quotations are shared with all market participants. This is an outcome that would directly and appreciably benefit execution performance for many participants in the market.

## II. IntelligentCross ASPEN Quotations Qualify as Automated Quotations

Since our last response, several commenters have reasserted many of the same arguments previously raised regarding whether IntelligentCross’ ASPEN Fee/Fee quotations qualify as “automated quotations.”<sup>11</sup> For the reasons discussed in our previous letters, we continue to believe that the IntelligentCross ASPEN Fee/Fee quotations displayed on the ADF would meet the definition of an “automated quotation” under Regulation NMS and therefore should be considered a “protected quote.” We will not reiterate all of our comments surrounding these arguments but discuss below certain of the arguments not previously addressed.

As background, and as discussed in our previous letters, Rule 611 of Regulation NMS provides for price protection across markets against trade-throughs for “automated quotations” in NMS stocks. Under Regulation NMS, an “automated quotation” is one that, among other things, can be executed “immediately and automatically” against an incoming immediate-or-cancel (“IOC”) order.

The Commission provided an interpretation of Regulation NMS’ immediacy requirement, stating that:

*In the context of Regulation NMS, the term “immediate” does not preclude all intentional delays regardless of their duration, and such preclusion is not necessary to achieve the objectives of Rule 611. As long as any intentional delay is de minimis - i.e., does not impair fair and efficient access to an exchange’s protected quotations - it is consistent with both the text and purpose of Rule 611.*<sup>12</sup>

SEC staff further elaborated on the Commission’s interpretation, stating that “consistent with the Commission’s interpretation regarding an automated quotation under Rule 600(b)(3) of Regulation NMS, delays of less than a millisecond are at a de minimis level that would not impair fair and efficient access to a quotation, consistent with the goals of Rule 611.”<sup>13</sup>

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<sup>10</sup> See, e.g., Statement on Best Execution Proposal, SEC Chair Gary Gensler, at <https://www.sec.gov/news/statement/gensler-best-execution-20221214>

<sup>11</sup> See, e.g., Letter from Stephen John Berger, Managing Director, Global Head of Government & Regulatory Policy, Citadel Securities, to Vanessa A. Countryman, Secretary, Securities and Exchange Commission, dated May 4, 2023 (“Citadel Letter II”).

<sup>12</sup> Commission Interpretation Regarding Automated Quotations Under Regulation NMS, Securities Exchange Act Release No. 78102 (June 17, 2016), 81 FR 40785 (June 23, 2016).

<sup>13</sup> At the same time, the Commission’s interpretation did not enumerate a specific threshold for the maximum permissible latency that could be imposed by an intentional access delay. See also SEC Staff Guidance, which states that “While the Staff believes that intentional access delays that are less than one millisecond are *de minimis*, that does not necessarily mean that all intentional delays

The IntelligentCross matching mechanism utilizes a matching process that provides fair and efficient access to its quotations and any delay in the IntelligentCross matching process is *de minimis*, i.e., so short as to not frustrate the purposes of Regulation NMS by impairing fair and efficient access to the IntelligentCross quotation. In addition, as we previously discussed, while the Commission did not establish a bright line *de minimis* threshold, IntelligentCross' ASPEN Fee/Fee's matching engine operates near-continuously and when a new order arrives in the ASPEN Fee/Fee book, it will participate in the next scheduled match event by interacting with existing orders in the order book within a maximum time capped at 900 microseconds.

## **A. The IntelligentCross Delay Mechanism Does Not Impair Fair and Efficient Access**

Several commenters reiterate concerns regarding the “non-match” events on IntelligentCross as well as the ability for market participants to adapt to the randomized nature of the IntelligentCross matching process. As we previously discussed, we believe these concerns are unwarranted.

### **1. The Ability for Taker or Maker to Cancel Does Not Harm the Markets**

Several commenters again raise issues surrounding the ability for a liquidity provider to cancel an order and the probability of executions. Specifically, one commenter states that whether the IntelligentCross delay mechanism “unduly” inhibits market participants from successfully executing against displayed quotations includes assessing the probability of execution given the delay, as well as the specific reasons why an IOC order will fail to execute, when determining whether the delay meets the *de minimis* standard.<sup>14</sup>

As previously discussed, non-match events may occur in IntelligentCross in a minority of cases, and we continue to believe that such occurrences are not “material” in nature and certainly do not “unduly” inhibit market participants from executing against displayed quotations. As we stated in our previous letter, the protected quote regime under Regulation NMS does not provide a guarantee of an execution.<sup>15</sup> A market participant may route an order to any market with a protected quote with the intention of matching against a displayed order and ultimately not receive an execution. The fact that a market participant may not receive an execution when routing to a market is not unique to IntelligentCross and is not indicative of the absence of fair and efficient access.<sup>16</sup>

One commenter reasserted its argument that by giving liquidity providers the ability to cancel, the IntelligentCross delay mechanism resembles an asymmetric delay.<sup>17</sup> IntelligentCross previously addressed

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that are one millisecond or more are not *de minimis*.” Staff Guidance on Automated Quotations under Regulation NMS (June 17, 2016), available at: <https://www.sec.gov/divisions/marketreg/automated-quotations-under-regulation-nms.htm> (“SEC Staff Guidance”).

<sup>14</sup> See Citadel Letter II.

<sup>15</sup> As the Commission has previously stated, “the ability of any market participant to successfully execute against any particular displayed quote is subject to a number of factors and is not guaranteed on any market, as at any time any market participant can be seeking to execute against an order that is being repriced, changed, cancelled, or executed by a different market participant.” Order Approving a Proposed Rule Change to Add a New Discretionary Limit Order Type Called D-Limit, SEC Release No. 34-89686 (August 26, 2020), 85 FR 54438 (September 1, 2020).

<sup>16</sup> While some commenters focus on the probability of execution on IntelligentCross, it is unclear why other venues with a protected quote currently do not disclose their “non-match” event rates for all of their trading systems and order types, particularly given claims that a non-match event rate is determinative of approval of a trading mechanism or order type eligible for (or the continued status of) a protected quote, and the comparison by one commenter of the consideration of the IntelligentCross matching system to the approval process for one of its order types. See Letter from John Ramsay, Chief Market Policy Officer, IEX, to Vanessa Countryman, Secretary, Securities and Exchange Commission, dated April 14, 2023 (“IEX Letter”).

<sup>17</sup> See Citadel Letter II.

comments that incorrectly infer that the IntelligentCross matching process favors one side of the trade over another (*i.e.*, that it is asymmetrical in nature). As noted, both sides of the trade – both the taker and the maker – are on equal footing for the next scheduled match while maintaining full control of their orders, and both sides of the trade must wait equally for the next scheduled match event to occur. Along the same lines, the commenter questioned why a taker would want to cancel an order that it sent to IntelligentCross prior to execution. In response to feedback received when creating IntelligentCross, the IntelligentCross ATS was designed as a market that gives both sides of the trade a fair opportunity to manage their orders. IntelligentCross does not get involved in a market participant's specific trading intent; we believe however that order control is central to liquid and efficient markets and when market conditions change, market participants want to have the ability to reprice as needed.<sup>18</sup>

As previously noted, at the end of the day, there is always a trade-off involved in trading, including the trade-off of price stability vs. certainty of execution. If there are trade-offs relating to the manner in which the IntelligentCross matching process operates, those trade-offs certainly do not frustrate the purposes of Regulation NMS by impairing fair and efficient access to IntelligentCross' displayed quotations.<sup>19</sup>

## **2. Market Participants Can Adapt to the IntelligentCross Matching Process**

Certain commenters reiterate questions regarding the ability for market participants to adapt to the randomized nature of the IntelligentCross matching process.<sup>20</sup> We continue to believe this would not be an issue for an IntelligentCross protected quote. As previously noted, among other things, IntelligentCross is already widely used by most major broker-dealers and electronic trading firms, and these firms make routing decisions every day in response to the IntelligentCross matching process as well as the numerous order types already in place by various exchanges.

One commenter, nevertheless, compares the randomized nature of the delay in the IntelligentCross matching process to the "deterministic" delay of the speed bump on its system to attempt to illustrate issues market participants would have adapting to the IntelligentCross protected quote.<sup>21</sup> As discussed in our previous letter, while the randomized nature of the IntelligentCross matching process may not be the same as addressing a so-called "deterministic" delay, it certainly does not prevent market participants from adopting routing strategies such as "staggering" order routing or from using any of a variety of commonly

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<sup>18</sup> In our previous letter, IntelligentCross responded to a commenter's incorrect claim that in a scenario where the liquidity provider can cancel their order before a match event occurs, that incoming orders are likely to be filled only when commercially beneficial for the liquidity provider by providing statistics that illustrated that liquidity removers who executed on IntelligentCross achieved lower markouts after execution vs. protected venues, on balance, using ASPEN Fee/Fee. Regarding the previously provided statistics, the commenter states that it is their understanding that the majority of trading activity on ASPEN Fee/Fee occurs against liquidity that is not displayed, and that one would expect average markouts to be lower on dark, non-displayed venues than on lit, displayed exchanges; therefore, our analysis was incorrect. See Citadel Letter II. To clarify, while our original markout statistic included providers who were both lit and dark, when we isolate only lit providers on ASPEN Fee/Fee, the markout numbers improve; markouts at 20ms were a full 1.10bps better than the exchange average universe weighted and 41 percent of our inbound IOC matched shares match against displayed providers for the first six months of 2023, which has grown from 34 percent in January to 49 percent in June.

<sup>19</sup> With respect to Intermarket Sweep Orders ("ISOs"), one commenter states that "IntelligentCross appears to be advancing a novel approach to complying with the intermarket sweep order exception under Rule 611 in suggesting that these orders could be immediately cancelled by the sender before execution." See Citadel Letter II. That is not the case. As we previously stated, in the case of ISOs, our observation is that concerns are misplaced as the definition does not require an execution, only that the order is "routed to execute." As a result, the fact that an ISO might not always execute against IntelligentCross' protected quotation does not raise any regulatory implications related to the Order Protection Rule.

<sup>20</sup> See IEX Letter, Letter from Tyler Gellasch, President and CEO, Healthy Markets Association, to Vanessa Countryman, Secretary, Securities and Exchange Commission, dated March 14, 2023 ("Healthy Markets Letter II").

<sup>21</sup> See IEX Letter.

employed tools that already exist to assist in the “predictable staging” of order sending activity across multiple venues.

As the commenter notes, the Commission has previously recognized that these routing strategies are available through the use of “affordable and readily-available technology” and is “commonplace.” Given the technological capabilities of order routers today and the products available for use,<sup>22</sup> a market participant should not have difficulty in configuring their routers to adapt to the IntelligentCross matching process (if they have not already done so), certainly without employing any change that would frustrate the purposes of Regulation NMS.<sup>23</sup> In addition, there is nothing requiring that market participants be able to alter their routing strategies to account for IntelligentCross’ randomized delay in the same way they can account for other delays. Market participants have always had to adapt to a changing market structure; the same would hold true with an IntelligentCross protected quote.<sup>24</sup>

It is important to note that the claimed “deterministic” nature of other trading systems is somewhat of a misconception. While the specific delay in other markets itself, such as the speedbump the same commenter refers to, may be static and therefore deterministic in isolation, there are numerous other factors that impact how (or if) a market participant may receive an execution on a particular venue. Variability in the success of an execution is a function of, among other things, the speed of a trader’s software, telecommunication resources, geography, and the number of ports purchased from an exchange (which exchanges sell to market participants to reduce the number of customer order messages ahead of them in the queue). These factors – hardware, software, and port in nature - can affect outcomes as much as (if not more than) any actual delay mechanism.

### **3. There is No “Undue Advantage” for “Faster” Market Participants on IntelligentCross**

One commenter raises the issue of “speed” in the markets related to the ability to cancel on IntelligentCross and states that “the more salient question is not whether this ability to cancel orders after their arrival on the [IntelligentCross order book] creates an undue advantage for liquidity makers over takers, but whether it creates unfair discrimination in favor of faster market participants, whether they are seeking to provide or take liquidity.”<sup>25</sup> We do not believe the ability to cancel on IntelligentCross creates an “undue” advantage for faster market participants, and certainly does not result in any “unfair discrimination.”

“Advantages” exist for faster market participants related to executions on all markets, including those already with protected quotations, related to the ultimate ability to get an order executed vis-à-vis another market participant. To that end, it is unrealistic to claim that there is no speed advantage across all trading markets, including on continuous exchange markets. Put simply, if you get to a market faster than another market participant, your order will be executed first (including on the commenter’s own market). Similarly, while the same commenter raises the notion of speed advantages in being able to determine whether to

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<sup>22</sup> See, e.g., RBC’s Thor product which synchronizes routing of order segments to multiple exchanges and determines when orders should be sent to multiple exchanges so that they arrive simultaneously.

<sup>23</sup> The same commenter states that “it is well-established that most market participants are not able to react to market price signals within the IntelligentCross delay period.” See IEX Letter. As discussed above, market participants already employ tools to manage order routing and repricing on the scale of hundreds of microseconds as shown by, among other things, the existence of mechanisms that adapt to the changing technology on trading venues, including adaptations that address functions employed by the commenter’s own venue.

<sup>24</sup> Several market participants have relayed to us that they must already examine and modify their algorithms and/or routing strategies, for example, each time there is a change to the matching processes and/or order types at exchanges, including in the “deterministic” system utilized by the commenter.

<sup>25</sup> See IEX Letter.



cancel an order using “fast” market data and connectivity to anticipate changes to the NBBO, it is exchanges that facilitate these practices by providing the faster proprietary market data feeds the commenter refers to - at a cost - to market participants looking to have a speed advantage, as well as the technology and connectivity to provide any such advantages to market participants to trade on their venue.

#### **4. Impact of the IntelligentCross Protected Quote on the NBBO/Consolidated Market Data**

IntelligentCross believes that the addition of the IntelligentCross quote to the SIP (and associated additional liquidity to the markets) would be a benefit for market participants and would not negatively impact the NBBO. One commenter states that it has concerns about IntelligentCross creating a new protected NBB or NBO for orders that are pending a match and for which new, incoming orders will be “very likely inaccessible.”<sup>26</sup> The commenter provides a hypothetical example to support its assertion where, after a number of events occur in the markets, the NBBO is made up solely of two 100 share orders on IntelligentCross such that, if another market participant responded to the quote, the new participant would be sequentially added to the queue and would not trade.<sup>27</sup> The example the commenter illustrates, while possible to occur, is nonetheless extremely unlikely, according to our most recent calculations based on observations on the IntelligentCross platform. Specifically, in June 2023, the daily average incidence of such a hypothetical was 158 times in the course of 45 million orders, *i.e.*, 0.00035 percent of the time.

Another commenter raises questions regarding how IntelligentCross protected quotes updates would be reflected in consolidated market data feeds.<sup>28</sup> The commenter notes that exchanges are effectively prohibited from sending updates to the SIPs any later than they send out the information on their proprietary data feeds, to avoid unduly preferencing proprietary over consolidated data. As we stated in our previous letter, the ASPEN Fee/Fee book will provide any quotes or quote updates to the ADF no later than when it is disseminated via the IQX market data feed. In addition, FINRA has stated that it believes that any processing latency for the ADF generally will be in line with exchange processing latencies once IntelligentCross begins quoting on the ADF platform, and it therefore believes that prior concerns expressed by commenters regarding ADF latencies are unwarranted.<sup>29</sup>

### **III. IntelligentCross Provides Fair and Non-Discriminatory Access to ASPEN Quotations**

As discussed above, for quotations to be protected, they must be immediately and automatically accessible. Tied into this requirement, and to further the goal of fair and efficient access to quotations, the Commission adopted Rule 610 under Regulation NMS (the “Access Rule”) which addresses three areas related to access to quotations: (1) the means of access to quotations; (2) the fees for access to protected quotations (and any other quotations that are the best bid or best offer of an exchange or national securities association); and (3) locking and crossing quotations. Among other things, the goal of Rule 610 is to promote non-discriminatory access to public prices and ensure that there is a level playing field that

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<sup>26</sup> See Letter from Joanna Mallers, Secretary, FIA Principal Traders Group, to Vanessa Countryman, Secretary, Securities and Exchange Commission, dated March 8, 2023 (“FIA PTG Letter II”); See also Citadel Letter II.

<sup>27</sup> Specifically, the example the commenter provides is where: (1) prior to the following orders, the NBBO is \$9.95 by \$10.05; (2) IntelligentCross receives a Displayed Day limit sell order 100 @ \$10.00 that is displayed on the SIP creating a revised NBBO of \$9.95 by \$10.00; (3) IntelligentCross then receives a Displayed Day limit buy order 100 @ \$10.00. This order would trigger a match event. During the up to 900 microseconds of the match event, IntelligentCross would display the buy order at \$9.99 on the SIP (the order is “price slid” and displayed one minimum price variation below the best offer in order to not create a locked market), creating an NBBO of \$9.99 by \$10.00.

<sup>28</sup> See IEX Letter.

<sup>29</sup> See Letter from Faisal Sheikh, Assistant General Counsel, FINRA Office of General Counsel, Capital Markets, Financial Industry Regulatory Authority, to Vanessa Countryman, Secretary, Securities and Exchange Commission, dated March 13, 2023.

benefits market participants. In addition to Rule 610, FINRA provides a series of rules that mirror the requirements of Rule 610 for ADF trading centers.<sup>30</sup>

IntelligentCross believes that access to its displayed liquidity through the ADF is consistent with that of the quotations displayed through exchanges, and there is a level playing field between IntelligentCross as an ATS and exchanges regarding the display of liquidity. The proposed rule change is therefore consistent with the Exchange Act goals of fair competition among markets as IntelligentCross is not treated differently (or more favorably) than exchanges that are providing a protected quote in this regard.

#### **A. Means of Access to Quotations**

The Access Rule requires that each trading center that displays quotations in an NMS stock through an SRO display-only facility (such as the ADF): (1) provide a level and cost of access to quotations that is substantially equivalent to the level and cost of access to quotations displayed by SRO trading facilities in that stock and (2) ensure that it does not impose unfairly discriminatory terms that prevent or inhibit any person from obtaining efficient access to such quotations through a member, subscriber or customer of the trading center.

##### **1. Level and Cost of Access to IntelligentCross**

As discussed in our previous letters, IntelligentCross subscribers access the ATS via a Financial Information Exchange ("FIX") connection. Such access is available to subscribers through an internet protocol address via communications that are compliant with the FIX API provided by IntelligentCross; the ATS currently supports FIX 4.2. IntelligentCross does not accept orders via any other forms of communication (*e.g.*, telephone, email, instant message).

IntelligentCross' primary matching engines are located in the Equinix NY4 data center in Secaucus, New Jersey. Subscribers wanting to connect directly to IntelligentCross' User Acceptance Testing ("UAT") and Production servers will need to have NY4 cross-connects with the servers of IntelligentCross' co-location and network provider, Pico Quantitative Trading ("Pico") or connect through other network service providers that have a presence in NY4. IntelligentCross allows subscribers the ability to determine their level of connectivity. IntelligentCross also has a clearing agreement with Instinet, LLC to provide for clearance and settlement of transactions executed on the ATS.

IntelligentCross does not charge connectivity fees, and IntelligentCross offers to pay for certain of subscribers' cross-connect fees at NY4. IntelligentCross also covers payment for one primary connection and one back-up connection to access its venue, and any direct subscriber is eligible for this payment. IntelligentCross' network provider and other similar network providers may charge fees relating to connectivity. IntelligentCross itself also does not charge for market data through its IQX market data feed (although network providers may charge a fee to receive the IQX data feed).

FINRA also provides an ADF pre-approved connectivity provider list to facilitate the requirement of offering a sufficient level and cost of access to quotations posted through the ADF,<sup>31</sup> and ADF trading centers must be accessible through at least two of the connectivity providers. FINRA notes that the list is not exclusive of connectivity options for accessing an ADF trading center, and that market participants seeking to access an ADF trading center's quotes may choose to access an ADF trading center via a dedicated telecommunications line or an unlisted connectivity provider. All the connectivity providers on the FINRA

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<sup>30</sup> See FINRA Rule 6200 series of rules covering the ADF at <https://www.finra.org/rules-guidance/rulebooks/finra-rules/6200>.

<sup>31</sup> The connectivity provider list can be found at [https://www.finra.org/sites/default/files/ADF\\_Pre-Approv\\_List.pdf](https://www.finra.org/sites/default/files/ADF_Pre-Approv_List.pdf).



provider list are available to IntelligentCross subscribers for the purposes of the ADF and we believe the range of access providers available to IntelligentCross subscribers is sufficient to provide access substantially equivalent to SRO trading facilities.<sup>32</sup> ADF trading centers also must execute and continue to comply with a FINRA “Certification Record” to display quotations through the ADF that specifies the method and terms by which the ADF trading center will comply with the requirements of FINRA rules (and applicable provisions of Regulation NMS).<sup>33</sup>

Based on these arrangements, IntelligentCross believes the level and cost of access to its quotations complies with Rule 610 as it is substantially equivalent to the level and cost of access to quotations displayed by SRO trading facilities and will not impose burdens on market participants, certainly not at a level that would impede the purpose and requirements of Rule 610. In addition, when Regulation NMS was adopted, the Commission emphasized that a “substantially equivalent” cost of access will not be evaluated in terms of absolute dollar costs of access and, instead, the requirement applies on a per-transaction basis to reflect the costs relative to the ADF participant’s trading volume. As discussed above, IntelligentCross’ daily market value versus total consolidated volume has averaged over 124bps daily for the first six months of 2023, more than that of seven existing exchanges, and most major broker-dealers and electronic trading firms are already connected to IntelligentCross. We therefore believe that the cost of access would not be out of proportion to our level of trading, and any concerns expressed regarding having to connect to relatively inactive ATSS with little trading volume whose quotations are displayed only in the ADF are not germane to a discussion of IntelligentCross.

## **2. IntelligentCross Does Not Impose Unfairly Discriminatory Terms**

Rule 610 prohibits trading centers from unfairly discriminating against non-members or non-subscribers that attempt to access their quotations through a member or subscriber of the trading center. FINRA Rules 6250 and 6260 also address requirements around access (or the denial thereof). Similarly, FINRA Rule 6260 provides a process and requirements regarding the review of direct and indirect access complaints against an ADF trading center. IntelligentCross does not impose unfairly discriminatory terms that would prevent or inhibit any person from obtaining access to its quotations through a subscriber of the trading center.

IntelligentCross operates as an open, fair access market, *i.e.*, it does not tier or discriminate among subscribers. Market participants can either become subscribers of IntelligentCross to obtain direct access to its quotations, or they can obtain indirect access by going through the direct access of a subscriber. Any registered US broker-dealer can be a member of IntelligentCross, and IntelligentCross only permits registered broker-dealers to be subscribers.

All firms must be in good standing of an SRO to be eligible to become a subscriber. Subscribers also must satisfy certain other eligibility requirements.<sup>34</sup> IntelligentCross processes all applications and completes its

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<sup>32</sup> FINRA Rule 6250 in general addresses issues around quote and order access requirements such as requirements around providing direct or indirect electronic access, the level and cost of access to quotations, and demonstrating sufficient technology to automatically update quotations and immediately respond to orders for execution.

<sup>33</sup> FINRA also will review the activities of ADF trading centers through its examination process, which will be complemented through the review of IntelligentCross’ written supervisory procedures.

<sup>34</sup> For example, a subscriber must pass Office of Foreign Asset Control (“OFAC”) checks and pass disciplinary/regulatory reviews. A subscriber also must satisfy such technical or systems requirements as may be prescribed by IntelligentCross, including but not limited to: connectivity certification, the ability to send orders and cancellations, and to receive trades, cancellations, rejects and trade breaks from the ATS; must have clearing and settlement systems and/or arrangements in place to support participation on the ATS; attest to having in place arrangements to ensure all staff and systems involved in the conduct of business with IntelligentCross are suitable, adequately registered, as applicable, properly trained and supervised; execute the Subscriber Agreement; and execute all other applicable agreements required to facilitate clearance, settlement, trade reporting, error correction and cancellation of trades effected on or through the ATS.

review and approval/denial process within thirty calendar days of receipt of each completed subscriber application. Each approval or denial must be authorized by the Chief Compliance Officer and communicated to the Head of Trading Operations, and Trading Operations will then promptly notify the applicant of the decision.

IntelligentCross creates and maintains records of all decisions granting access, denying access, and the reasons for so doing. IntelligentCross considers a subscriber's regulatory history in examining a subscriber's application. When the ASPEN Fee/Fee book displays orders through the ADF, non-subscribers would access IntelligentCross through a subscriber, and IntelligentCross would therefore respond to orders by non-subscribers as promptly as it responds to orders by subscribers.

## **B. Fees for Access to Quotations**

The Access Rule limits the fees that can be charged for access to protected quotations. The Commission has stated that by generally imposing a uniform fee limitation of \$0.003 per share, the Access Rule, among other things, promotes equal regulation of different types of trading centers, thereby leveling the playing field among diverse market centers.

The IntelligentCross fee schedule is transparent, formulaic and applies to all subscribers evenly (and non-subscribers gaining indirect access through subscribers). The fee structure applicable to the ADF through the ASPEN Fee/Fee book charges both sides the same fee for transactions. The base rate charged in ASPEN Fee/Fee is \$0.0008 per share for each side of a transaction. Subscribers can pay lower fees through (1) a "Total Composite Volume Incentive" based on the total market volume in all NMS Stocks reported to the consolidated tape and (2) an "Active Order Incentive" which is based on a per symbol basis and the percent that is marketable.<sup>35</sup>

The IntelligentCross fee schedule for subscribers is published in our Form ATS-N. Pricing is subject to change with advanced notice to subscribers. In addition, as discussed further below, upon approval of the proposed rule change, IntelligentCross anticipates any fee changes also being subject to a review process, on par with other venues currently providing a protected quote.

## **C. Locking and Crossing Quotations**

In general, the Access Rule requires SROs to establish, maintain and enforce specific written rules that are generally aimed at limiting the display of quotations that lock or cross any protected quotations in an NMS stock. FINRA Rule 6240 also addresses the prohibition from locking or crossing quotations in NMS stocks for ADF trading centers.

In ASPEN, if a displayed Limit Order or Primary Peg Order would lock or cross displayed contra-side interest inside the ATS or the NBBO, such order will be displayed one minimum price variation less aggressive than the price of the displayed contra-side interest inside the ATS or as part of the NBBO and ranked at the price of displayed contra-side interest inside the ATS or as part of the NBBO. In the event the displayed contra-side interest inside the ATS or the NBBO updates, such order's displayed price will be updated to the most aggressive price permissible without locking displayed contra-side interest inside the ATS or as part of the NBBO, up to the order's limit price, and such order's ranked price will be updated to the most aggressive price permissible without crossing displayed contra-side interest inside the ATS or as part of the NBBO, up to the order's limit price.

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<sup>35</sup> The IntelligentCross ASPEN Fee/Fee and Midpoint order books follow the same fee schedule, and shares traded will aggregate for volume pricing tiers.

#### **IV. Transparency Regarding the IntelligentCross Matching Process**

One commenter raises questions regarding the transparency surrounding the IntelligentCross matching process and recommends that IntelligentCross provide further information on how the matching process' time bands are established for each security including "detail on the specific inputs and the formula(s) applied that is sufficient to allow participants to verify how specific time bands are determined and allocated on a daily basis to specific securities."<sup>36</sup>

IntelligentCross supports transparency around our matching process and appreciates the need for market participants to understand how the matching process itself operates. To that end, our two previous letters on the proposed rule change provided information on numerous aspects of the process, and further information is available, among other places, in our publicly posted ATS-N<sup>37</sup> and on our website.

To the commenter's specific question, as previously noted, our matching schedules are calculated using an overnight optimization process that uses, among other things, a number of historical performance measurements from prior days' matches, and each security has an individualized matching schedule. There are no specific algorithmic formulas to disclose because our optimization process is using an AI learning process. Like many such learning processes, our system is presented with historical data and outcomes and iteratively computes the optimal time bands that maximize price stability after trades.

Because the market data changes from day to day, the "presented examples" to the learning process likewise change day to day, which results in the learning of new time bands, *i.e.*, there are no programmed "weights" to disclose. The learning process is data driven and implicitly takes into account stock by stock volatility, spreads, daily trading volume, price stability after trades and other market factors characteristic of how the specific stock recently traded in the market and on the IntelligentCross platform. The match event intervals per security are adjusted overnight after enough data points have been accumulated to warrant an adjustment, and each match event interval is designed to achieve two objectives: (1) provide for as many matches as possible to maximize liquidity; and (2) keep the NBBO as stable as possible for a period of time after executions occur on the ATS.

#### **V. Process for Changes to Fees or Operations Related to IntelligentCross' Protected Quote**

Several commenters reiterate questions surrounding the process in connection with potential changes to IntelligentCross' operations and fees associated with displaying protected quotations on the ADF.<sup>38</sup> As we previously stated, IntelligentCross does not object to a review process, on par with other venues currently providing a protected quote (*i.e.*, exchanges), through which the Commission may provide an opportunity for notice and comment to assist in its evaluation of material changes to the methods affecting quote display and access, the operation of the ASPEN Fee/Fee book impacting the provision of the protected quote, or if changes are made to the level and cost of access to the ASPEN Fee/Fee book impacting the display of IntelligentCross' protected quotations.

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<sup>36</sup> See IEX Letter.

<sup>37</sup> See <https://www.sec.gov/cgi-bin/browse-edgar?action=getcompany&filenum=013-00016&owner=include&count=40>. Rule 304 of Regulation ATS requires ATSs that trade NMS stocks to publicly file with the Commission an initial Form ATS-N, amendments to initial Form ATS-N, and notices of cessations of operations that requires disclosures about the manner of operations of the ATS and the ATS-related activities of the broker-dealer operator and its affiliates, among other things.

<sup>38</sup> See FIA PTG Letter II, IEX Letter, Healthy Markets Letter II.

Ms. Vanessa Countryman

July 14, 2023

Page 12 of 12

One commenter suggested that this process can be accomplished, for example, by a requirement to include material changes in FINRA rule filings, subject to Commission approval after notice and comment.<sup>39</sup> IntelligentCross agrees that this is one of the methods by which such a process can be accomplished. In the event that IntelligentCross makes a material change to the policies and procedures governing access to IntelligentCross, including a change to its fees, it also will submit the changes to the Commission, as required, under Form ATS-N.

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As discussed above, IntelligentCross believes that adding its displayed liquidity to the markets as a protected quotation would not only be beneficial to the markets but is consistent with, and would satisfy, the applicable requirements under Regulation NMS. Please do not hesitate to contact the undersigned at [ari.burstein@imperativex.com](mailto:ari.burstein@imperativex.com) should you have any additional questions regarding this matter.

Sincerely,



Ari Burstein  
General Counsel  
Imperative Execution

cc: The Honorable Gary Gensler, Chair  
The Honorable Hester M. Peirce, Commissioner  
The Honorable Caroline A. Crenshaw, Commissioner  
The Honorable Mark T. Uyeda, Commissioner  
The Honorable Jaime Lizárraga, Commissioner  
Haixiang Zhu, Director, Division of Trading and Markets

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<sup>39</sup> See FIA Letter II.