June 26, 2016

VIA ELECTRONIC SUBMISSION

Mr. Christopher J. Kirkpatrick
Secretary of the Commission
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street, NW
Washington, DC 20581

Re: Proposed Rulemaking on Regulation Automated Trading (Regulation AT)

Dear Mr. Kirkpatrick:

I am submitting this letter on behalf of Trading Technologies International, Inc. ("TT"), to respond to certain issues raised during the June 10, 2016 public roundtable discussion regarding Regulation AT. Specifically, TT would like to address proposed testing requirements for Algorithmic Trading (as defined in Regulation AT) systems and software.

Section 1.81 testing requirements should be limited to testing finished products

TT applauds all reasonable regulatory initiatives to ensure that market integrity is enhanced through testing of Algorithmic Trading systems and software. TT believes that Section 1.81(a) of Regulation AT, which would impose certain development and testing requirements for Algorithmic Trading systems, should be clarified so that it can be implemented in the most practical and useful manner. TT believes that such testing should focus on the output of an Algorithmic Trading system or software rather than the source code underlying such systems or software, which would yield no material benefit.

TT performs regular tests on the software it licenses

As a third party software vendor, TT's view of the proposed rules may be different than entities that are directly regulated by the Commodity Futures Trading Commission ("CFTC"). TT practices commonly accepted development and testing practices and only

licenses systems and software that have been subject to a rigorous testing protocol. This protocol includes:

- testing in a development environment separate from a production environment;
- back testing and stress testing;
- documenting the specifications and requirements of source code; and
- retaining of source code in an environment where changes are recorded.

TT's practices are consistent with the requirements the CFTC proposes to be adopted by AT Persons. In fact, other independent software vendors in the futures world, and most likely all companies that license software and systems, such as Microsoft, Adobe, Google, etc., already follow those practices every day in an effort to produce software and systems that perform as intended.

Only testing of the finished product is relevant to Regulation AT

As TT indicated in its previous comment letter and during the roundtable discussion on Regulation AT, in no event does TT or any software vendor in any industry provide access to source code as part of its license grant to its customers.[1] But, any software product provided by TT to any customer is always available for the customer's testing and TT expects that each customer performs appropriate testing prior to utilizing the software in production environments. In fact, TT offers testing environments that simulate market conditions to facilitate such testing. Such functional testing of a product is conducted to determine whether the output is consistent with the intended purpose of the product. The intended purpose is typically described in documentation provided by the developer of the product.

If TT products do not work as expected, TT's customers demand changes to the products and if TT fails to address their concerns, TT risks losing the customer. In that way, companies like TT are "regulated" by the market for software and systems.

An important distinction between the sort of testing that clients perform every day on their third party software products and the proposed language of Regulation AT seems to be that the proposed rules require a registered entity to test software code (see, 1.81 (a) (ii)) as opposed to the finished product that the entity licensed. To the extent the entity licensed the product from a third party, the code is never available for testing and

[1] The exception to this statement would be vendors who license open source software.

TT sees no reason why the code should ever be required for testing. The reason why customers purchase turnkey software is to utilize the product as a whole; testing of components of the source code is not consistent with that motivation and doesn't make achieving the goals of the CFTC any more likely.

We cannot envision any type of testing that would be appropriate with respect to the code itself. If a line by line test of the code to determine whether there are flaws in the way it was written is intended by Regulation AT, it is unclear how any such review would provide any more or better insight than a test of the product itself to see what the outputs are.

Moreover, taking the extraordinary step of mandating testing or review of source code is potentially very damaging to the source code owner as indicated in TT's prior comment letter, several other comment letters and verbal comments to the CFTC.

To the extent third party code is at issue, third party code simply will not be made available to licensees. Neither TT nor any other commercial software vendor that facilitates algorithmic trading, such as Microsoft through its products like Excel®[2], licenses source code to its customers and will not willingly do so[3]. We believe, respectfully, that any attempt to mandate third party vendors to produce such code outside of existing legal procedures, such as issuing subpoenas, would be an unprecedented overreach of governmental power without any merit.

Whether a product is licensed from a third party does not change the appropriate testing procedures

Some have argued that, absent a requirement by the CFTC, an FCM or other regulated entity would have no control over how third party code might be tested, monitored or altered to address issues that may arise in an algorithmic trading environments. When looked at from a practical perspective, such an objection has no merit.

If an FCM was to test an algorithmic trading system it would run the algorithm in a simulated environment to determine what the outputs of the system would be under various market scenarios. If a problem was detected by a tester or compliance specialist, that person would turn off the algorithm[4], contact the developer of the algorithm, point out the problem and ask the developer to fix the problem. The

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[2] Excel is a registered trademark of Microsoft Corporation.

[3] As indicated in TT's original comment letter, TT has not been in contact with Microsoft, but we would suspect that commercial software companies like Microsoft would not be willing to divulge their source code.

[4] Mandating such a kill switch seems prudent.

developer would then review the code that implemented the algorithm and make any appropriate adjustments. Then the algorithm would be retested in the simulation environment and the process might repeat itself until the algorithm was determined to be running as planned. The process would be the same if the problem was discovered in a production environment-- the algorithm would be turned off and it would be fixed by the developer and then tested in a simulation environment before being used again in a production environment. If the algorithm had been developed in-house at an FCM that developer might sit down the hall from the tester or the compliance specialist. If the algorithm was developed by a third party, the developer would be a phone call away. The testing would be the same and the resolution of any issues would be the same.

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TT, respectfully, remains very concerned that, as drafted, Regulation AT will not positively enhance the existing regulatory regime for automated trading. We appreciate the opportunities afforded to us to comment on Regulation AT and are more than willing to provide additional input about these matters or others matters within our expertise.

Please contact me at (312) 476-1081 if you have any questions or seek additional information.

Respectfully submitted,

Michael G. Ryan
Executive Vice President and General Counsel