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AutoCAD the CAT amid controversy

*By **Kelvin To**, Founder and President of Data Boiler Technologies*

AutoCAD is so entrenched as the de-facto computer-aided design (CAD) program for engineers that it is like an acronym for anything that is professionally engineered, designed and created using a computer. In the capital markets, the SEC has adopted rule 613 to establish the Consolidated Audit Trail (CAT). Ultimately, it will be the world largest data repository ingesting between 30 billion and 120 billion trade events from more than 2000 sources daily. But will the CAT be able to earn the high level of respect and success that AutoCAD has achieved? I have serious doubt about it amid all the controversies.

The SEC has no money, no guts, and no alternative!

The SEC will approve or reject on November 15, 2016, the CAT National Market System (NMS) plan to build this enormous database. I don't see how anyone at the SEC would have the guts to vote it down after it's been more than six years in the working. SEC chair **Mary Jo White doesn't seem to have a "Plan B"** to address the Flash Crash if CAT is a no-go, and the commission has been over promoting the CAT's promise to "significantly increase the ability of industry oversight to conduct research, reconstruct market events, monitor market behavior, and identify and investigate misconduct". When everyone has drunk the punch, there's a danger of overlooking the realities.

The plan in its current form is developed by the Self-Regulatory Organizations (SROs) working in conjunction with various committees of industry groups. The realities are that:

- No industry participants like any heightening of oversight by the SEC or other regulators.
- The SROs, to a large extent, regulate the securities markets as a proxy acting on behalf of the SEC.

Mercy to folks at the SEC that have piles of long overdue pending cases, the agency has long been under-funded by the Federal budget. **Without money, the SEC has no alternative, but to rely on these SROs to enforce orders**. In fact, SROs need to fight for their own survival too (to allow national exchanges and trading venues to stay afloat). Thus, we have seen a proliferation of order types, rebates and commissions, order routing tactics, speed bumps, etc., employed as competitive tools. But the "fixes" have added significant complications for the SEC (or anyone else) to manage.

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The SROs and the industry have little incentive to do anything more than the CAT's minimum requirements, i.e. to submit data into a centralized vault. They aren't interested in returning powers to the SEC, so the SEC still faces the challenge to figure out **how to reconstruct market events, analyzed the data, and improved oversights**.

Unrelenting focus on Google vs Amazon and a lost sense of purpose!

CAT NMS Plan in its current form calls for a T+5 schedule for regulatory access. So regulators can't see the data until five days after a flash crash?! That's ridiculous. The whole concept of **requiring everyone to submit data into a centralized vault is flawed and invasive**. A single source of truth may never be achieved, as it would take forever to agree on a common standard for data submission. In fact, the CAT NMS Plan may have used the FINRA's OATS as a blueprint when it was developed.

- FINRA is both an SRO and teamed with Amazon as one of the three final bidders for this CAT project. I am not commenting about any potential conflict of interest, but the FINRA-Amazon team does appear to be the industry favorite because it involves the least change to the current OATS data-submission practices.
- Another widely published bidder is the FIS-Google team. FIS acquired SunGard in 2015 – many broker-dealers use their systems. However, this strength has been overshadowed by the flame of Google, or they have put little to no emphasis in their shared CAT documents.

The fight between Google and Amazon has stolen the media's attention. Many are watching whether the NoSQL camp represented by Google would be competitive with the Amazon's Cloud solution to modernize FINRA's OATS structural database. Such unrelenting focus on the two Big Data giants had caused the plan to lose its sense of purpose. Again, the **CAT's purpose is supposed to be about analytics**, reconstruct market events, monitor market behavior, and identify and investigate misconduct.

- Sadly, many do not even aware that there is a third contender – Thesys Technologies, a builder of the SEC's MIDAS system and an affiliate of high-frequency trading (HFT) firm Tradeworx. Thesys appears to have the best sense about market structure and flash crashes, in my humble opinion, and is the most likely to embed an analytical framework in the design of CAT.

Unfortunately, the **third candidate hardly wins many votes as we can see in the U.S. Presidential race**. If Dr. Gregg Berman (a former SEC associate director who currently is working at HFT firm Citadel) were still with the agency, then I would say Thesys might have some chance, because he knows their capabilities based on the MIDAS project.

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The convenience of pointing to cybersecurity and IBG / YBG!

The SEC has solicited public comments about CAT in a 1090 pages document with 456 questions. Many responses are fewer than 3-5 pages, mostly raising questions on cyber-security, or expressing a desire to retire OATS to avoid costs duplication with CAT. Some SROs seems to be more interested in governance questions surrounding the CAT, and most are against the use of legal entities identifiers (LEIs). Anyway, many difficult and controversial questions around the design of CAT aren't addressed – but I did contribute to a 43 pages response.

Instead of requiring the industry to submit its data to a centralized vault and live in fear of hacking, the SEC does have an alternate choice: scrutinize all order/ execution management systems (OMS/ EMS), and allow **real-time analysis to be conducted directly at the point where data is originated**. This type of in-memory/ streaming analytic is engineered to catch the rogues by continuously monitoring their play-by-play actions. Abusive behaviors would be captured and accumulated into stronger warning signals to prompt the necessary close scrutiny without delay.

Obviously, this ground breaking approach is very different compared to the current CAT NMS Plan. There are other benefits and better information security protection than moving data in and out of a repository. I can go on and on to explain the details, but I wonder – **who at the SEC would have the guts to reject the CAT NMS Plan**?

Frankly, our society are filled with I'll be gone/ you'll be gone (**IBG/ YBG**) mentality. According to CAT's implementation timeline:

- SROs have two months to select one of the remaining Plan Processor bidders to build the central CAT repository once the plan is approved.
- It will then take 10 months to build CAT and SROs will begin report their data by November 2017.
- Large broker-dealers will have two years from the plan's approval to begin reporting data (latest November 2018) and small broker-dealers will have three years (latest November 2019).

Who knows who still will be around to consider the "AutoCAD" engineering approach to market surveillance!

***** END *****

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About the Author

Kelvin To
Founder and President
Data Boiler Technologies, LLC

A 2015 FinTech Person of the Year nominee, over 20 years of experience in strategic planning and corporate development with a strong emphasis on business modeling and innovations. Prior to his current role, he was VP for Broadridge, Functional Head for Citigroup, subject matter expert for the Institute of Bankers, and also lecturer for various professional organizations. Kelvin holds an MSc degree in Banking from City University of HK, a Master of Management from Macquarie Graduate School, and a BSc degree in Accountancy from Bentley University. (Click here for an elaborated bio).

Media Contact – Phone: 1(617) 237-6111 / Email: info@databoiler.com

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