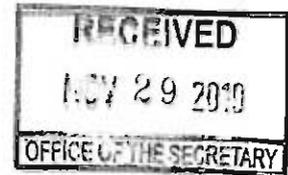




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IT Doesn't Have to be Hard™

November 12, 2010



Ms. Elizabeth M. Murphy
Secretary
U.S. Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549-1090

RE: Consolidated Audit Trail Proposal Securities Exchange Act Release No. 34-62174 (File No. S7-II-10)

Dear Ms. Murphy:

Although we learned about the submission of comments to the SEC after its deadline, a project team comprised of Integration Systems LLC (iSys), Millennium IT (MIT), and International Business Machines (IBM) gladly offers its thoughts on the proposed new Rule 613 which would require national securities exchanges and national securities associations to act jointly in creating a national market system plan to develop, implement and maintain a consolidated order tracking system, or consolidated audit trail (CAT), with respect to the trading of NMS securities. We support the SEC's efforts to gather input on ways to improve our financial markets.

Towards this end, our team would like to share our laboratory research and product development data with your team. We believe this is critical in your achieving a viable, realistic long-term answer to the proposal's stated goals and those it did not state for today and tomorrow. This letter provides our findings and advice in abridged form. We request a meeting with the SEC, at its convenience, so we can present an unabridged version and answer any questions.

The Knowledge Behind Our Recommendations

Since the year 2000, financial markets have illustrated dynamics that have become progressively faster, more volatile, and larger in scale. During this period our involvement centered on the enablers of these dynamics – software platforms and low latency technology. Extensive lab research and experimentation on our part has resulted in groundbreaking achievements.

For example, we have taken low latency to sub-microsecond levels that outstrip even recently announced benchmarks. A new technology paradigm shift is the end result of our design team's producing and using a truly unique underlying architecture and approach.

Our experimentation, in fact, points to the importance of making the surveillance function a wholly integrated component of the sub-microsecond environment and ending its traditional add-on cost-center only role.



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We see the regulation and audit of current markets, especially the escalating processing speed and order volumes of high performance trading, requiring two vital inseparable elements - instant adaptability coupled with unconditional performance.

At the SEC's insistence, these elements must be present in the new system's core functionalities. The SEC's users must have the ability to respond to market changes within minutes, by way of configuration and rule changes to the system. To get these changes tested on the production system (by applying them in the test mode on identified servers) without hindering the production setup fast tracks the deployment of such changes within days. No longer do you have to wait for weeks, or even months, for programmers to write, test, and deploy new code.

Yet, we are also aware that obtaining this optimum output is most challenging. Why?

Unless a system was designed from the drawing board with ongoing balanced adaptability and performance optimization abilities, upgrading in these areas will take significant customization at highly unacceptable time, labor, and cost levels. Our evaluation process has proven this to be a fact.

The industry is at a crossroad. Transaction speeds challenge current operating systems and storage methodologies. At these speeds, how do you save or duplicate real-time transactions generated faster and in greater volumes than current backup systems' capabilities?

Today's innovations probably will be outmoded a year or so from now, since technology advancement timelines are amazingly short. The surveillance function in this environment becomes highly problematic. The magnitude of the NYSE "flash crash" this year offers the SEC a glimpse of what is on the horizon.

Therefore, how should the SEC proceed in order to achieve the goals set forth in this proposal? Does the SEC reinvent the wheel with a new experimental, costly system that potentially could fail?

Hence, we recommend that the SEC's final system of choice incorporate these core Functions and Capabilities:

- A system capable of reconstructing any moment of history, of the consolidated market, to identify the exact events, along with the constituents responsible for such events
- Continuous uptime operation and consistency due to a fail-safe system built into the software
- Expanded oversight capability with complete consolidated audit trail (CAT) capabilities
- Full configuration of CATs for single and/or multi-dimensional and multi-functional operations
- Multi-dimensional reporting and charting of both historical and real-time data
- Across-the-system behavior pattern detection, trends analysis, and a sophisticated relationship inference ability pointing to possible insider trading violations
- A market replay tool with a snapshot feature to visualize full tick by tick market reconstructions leading up to, during and after suspicious behavior has been detected
- A data warehouse to store historical data for reporting and analysis
- Identifiers for indexing, searches, alerts, investigations, case building, and sorting
- Intelligent tools that generate forewarnings of potential anomalies detrimental to market activity and stability
- Tools that result in a decrease, and possibly prevent, aberrant behavior occurrences
- The ability to isolate and investigate trading actions that violate regulations



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- System safeguards against wrongful intervention in financial markets operation
- Security systems guaranteeing permitted access with immediate violation alerts and full documentation of keystroke trails

These features will enable the SEC and the financial industry to achieve its regulatory requirements with enhanced responsiveness, performance, reliability, and low cost of ownership. With the right equilibrium in place, the pillars of our country's historic financial market system – open trading, market transparency, and safeguards against egregious behavior – will be preserved.

Our Vision for this project...

Here we call upon the priceless insights gained from accumulating a deep reservoir of experiential knowledge, intelligence, and first-hand experience using previous proofs-of-concept and installations. They contribute to the vision we share here and look forward to elaborating in greater detail in person with the SEC.

Activities such as trading generate profits for financial markets firms. The financial industry perceives surveillance as a cost center, since this function burdens resources and the bottom line. Good surveillance mitigates risk from lawsuits, reputational damage, and other adverse outcomes. However, no revenue emanates from implementation, administration, and support. Regulatory agencies face the same cost impact.

Another factor adversely impacting surveillance is a lack of uniform international standards. Similar but not identical oversight methods can impede inter-communication efforts of all parties, thus impairs efficiency in the detection/investigation of anomalous trading behavior.

In our view, the surveillance market will move in a much different direction over the next few years.

The advanced system will enable trading venues to significantly reduce surveillance costs using greater intelligence and outsourcing the function to regulatory agencies. These agencies, using a fee-based services model, can then implement surveillance standards within each exchange and become self-funding.

Subsequently, this continuity can foster information sharing across trading venues, which could precipitate a move to certain global standards. The presence of transparent, higher surveillance standards eventually will create efficient markets and possibly attract even more investors. An earlier example of a US standard having global impact was the RIXML initiative. What began as a US effort, to establish a uniform research sharing standard, led to a cooperative effort with non-US-based firms to improve the industry's research functions.

Therefore, at our meeting, we will bring forth to the SEC the full scope of our experience in achieving the most optimal results in technology performance with an actual demonstration.

The team of iSys-MIT-IBM can point to solidly-built technology and a real world system that exists and works now. It was designed from its inception to easily expand without sacrificing its built-in balance.



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An SEC System with Perfect Balance

Our earlier comments about designing a system from the drawing board emanated from our own efforts. When we commented previously on specific feature capabilities, this was in reference to a surveillance system actually built from the ground floor up. It delivers on the features we recommended to the SEC team.

The system goes by the name of Millennium Surveillance. It was designed around a CORE platform system with a Perfect Balance approach. The approach consistently ensures a balance of flexibility (adaptability), performance, reliability, and low cost of ownership, even with the addition of refinements and new features over the long-term.

This built-in balance provided by the CORE platform places the system so far ahead of its time, it warrants the pioneering label. We have the utmost confidence you will agree.

When the SEC has the opportunity to view how the CORE Platform system operates, it will become evident how quickly it configures and adapts in response to any condition without writing or changing a single line of new programming code or sacrificing performance and growth.

1. **Unlimited Flexibility** gives SEC users total operational agility to manage any situation or prevent an unwanted event. *Any SEC user has direct command of SEC business logic functions through simple scripting language.*
 - This is due to a patented technology, called BID (Business Innovation – Dynamically) developed by MIT
 - Example – adding a new surveillance alert can be implemented within a matter of minutes depending on the amount of instructions the user wishes to add. This unheard of Ease-of-Use entirely eliminates the necessity of an expensive, time-consuming system re-programming process handled by highly paid technical programmers and/or consultants.
 - Result – SEC immediately responds to any market's compliance/regulation changes or a need to evaluate a crisis before arriving at a fix and accomplishes the goal. The actions are seamless, timely, and compatible with any trading or operating system. In addition, the SEC line staff remains free from IT responsibilities.
2. **Performance** benefits from two key driving forces - real-time high performance throughput paired with exceptional low-latency – that goes well beyond today's needs.
 - Surveillance's capabilities - the current version - can equip the SEC with the ability to handle tomorrow's performance benchmarks for multiple streams of data collection, analysis, interpretation, reports, alerts, and investigation.
 - Current system handles hundreds of thousand messages/second and millions of messages/day
3. **Reliability** along with consistency is unconditional. A Fail-safe Platform with auto-triggered, matched failover systems, built into the software, ensures faultless uptime and performance for business continuity.



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4. **Low Cost of Ownership** designed to deliver consistent cost savings quantified on a dollar-by-dollar basis thanks to:

- Surveillance's automated, analytical functional abilities require less investigative effort by SEC analysts
- Does more with less resources, including streamlining hardware requirements and more efficient use of any hardware in place
- BID simplifies configuration changes, eliminates the cost of programmers and/or consultants, and improves overall product development time, as well as time to market
- Lower administration costs, due to consistent uptime performance with a built-in autonomous self-monitoring system with failover capabilities

Overall Market Oversight

Surveillance delivers comprehensive capabilities to meet the demands of any asset class, instrument, market structure, trading venue, and geographical region. The multi-dimensional platform handles the demands of any combination of multiple level activities.

For example, the SEC could monitor multiple asset classes traded at multiple venues in multiple geographic locations in any strategic theater, while providing real-time analysis and alerts based on stored historical and real-time data.

Offers the SEC the Perfect Balance in Oversight, Investigation, Analysis, and Forewarning Abilities

- Surveys any high volume dynamic electronic and/or manual trading environment
- Provides immediate views of egregious behavior, abnormal patterns, internal relationships, etc.
- Detects the possibility of insider trading by connecting market trading facts and rumors with all parties involved in potential rouge trading behavior
- Set market thresholds, with forewarning alerts formed through historical and real-time data trend analysis with the goal of preventing past market anomalies' reoccurrence
- Analysis and reports support further investigations and builds cases for further examination, including litigation

Cutting-Edge Pattern Recognition Functionalities

- Recognition, detection, and alerts using comprehensive pattern library for any market abuse type
- Real time and offline patterns evaluation with advanced offline pattern mining
- Market replay enables "tick by tick" market reconstruction to visualize patterns – prior, during and after suspicious activity
- Configuration pattern wizards to define custom patterns - complex pattern recognition and follow up
- Immediate alert generation for user defined alert messages, including triggered patterns on external events such as news/notices
- Default generation of reports, cases, and 'Reasoning Out' capabilities to improve efficiency.



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Delivers Fully Configurable Multiple Functionality on Many Levels

- Multi-level data search, sort, and viewing coupled with flexible functions
- Multiple case types include electronic, automatic, and premonition cases, on demand/auto generated, patterns or events

Market Replay as a Service – a Shift from Traditional Cost Center to Potential Profit Paradigm

- Surveillance's Market Replay Tool enables the creation of an optional fee-based service employed by exchanges, buy and sell side firms, and even the last investor
- Surveillance utilizes its "tick-by-tick market activity" capability to reveal an exact linear sequence of any order's execution and processing
- Applicable on multiple asset / multiple structure levels to areas, such as trading strategy analysis, order evaluation, and forensic testing or verification
- Creates a revenue generating service that, in parallel, fosters upgraded execution processing standards, as well as improved transparency and credibility in the United States' market structure

Powerful Surveillance Charting & Reports Features

- Reports - fully configurable on-the-fly report/graph building platform with easy-to-use wizards
- Report repository with search capabilities – delivers raw or formatted output
- Cover all areas using pre-configured/user defined reports with fields, sorting, and filter criteria
- Line graphs, bar charts, scattered plots, pie charts, or candlestick graphs – pre/user-configured
- Computes real-time statistics with ability to draw on all data - real time, historical, or combined
- Graphically illustrate and analyze relationships with a 'Relationship Mesh' for insider trading analysis
- Graphically enriched multi-dimensional views from the brokers, traders, and instruments activity perspectives

Case Management

- Comprehensive case management - gather and group suspicious or abusive behavior data as cases
- Automatically assign user privileges based on "need to know", "need to access" basis
- Totally paperless investigations - record all data electronically, including attachment of any file type
- Useful to support new regulations, such as RegNMS and MiFID

The Project Team of iSys-MIT-IBM

iSys is the spearheading force of a three-member team that also includes IBM and MIT. Each member brings a core area of knowledge and line experience critical to the SEC project. This results in a powerful unit with a deep knowledge-base and first hand strategic/tactical know-how in today's high performance, large volume, high frequency trading markets.

When IBM decided to achieve a major financial markets presence, it turned to its strategic partner, iSys, to be its resident expert in the sector and to spearhead the effort. IBM looked to iSys' ability to innovate solutions combining the right hardware, software, and network communications elements. In support, IBM backed iSys' efforts with its massive resources, especially in advanced technology research labs, hardware, and manufacturing.



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iSys then forged a cohesive working partnership with IBM and a business sourcing arrangement with MIT (fully-owned subsidiary of the London Stock Exchange Group (LSEG)), which developed the CORE software platform with the Perfect Balance approach and owns patented and patent pending technologies. This collaboration has produced advances in low latency, throughput, and network gateways in laboratory testing. The resulting advances achieved by working with the MIT designers and IBM Research labs have taken performance and functionality to formerly unheard-of levels. As a result the team has gained irreplaceable insights on what drives today's markets and what will be tomorrow's driving forces.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'T. Keene', with a horizontal line extending to the right.

Terry Keene
Chief Executive Officer, Integration Systems LLC

cc:
SEC Chairman, Mary L. Schapiro
SEC Commissioner, Kathleen L. Casey
SEC Commissioner, Elisse B. Walter
SEC Commissioner, Luis A. Aguilar
SEC Commissioner, Troy A. Paredes
Robert W. Cook, Director, SEC Division of Trading and Markets
James Brigagliano, Deputy Director, SEC Division of Trading and Markets
David Shillman, Associate Director, SEC Division of Trading and Markets
Rebekah Liu, Special Counsel, SEC Division of Trading and Markets
Jennifer Colihan, Special Counsel, SEC Division of Trading and Markets
Henry Hu, Director, SEC Division of Risk, Strategy, and Financial Innovation