

# Inside Market Data

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# DATAFEEDS

SPECIAL REPORT



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## LETTER FROM THE EDITOR

### Different Feeds for Different Folks

Over the past 15 years, the datafeeds landscape has changed beyond recognition. Once the preserve of only the largest firms with the most demanding requirements in terms of volume and performance, with most capital markets participants relying on terminals to meet their data requirements, the efficiency and speed advantages of both consolidated and direct feeds won over users at large and small firms alike.

On the direct feed side, this was largely driven by two factors: trading firms wanting faster and direct sources of data to support evolving algorithmic trading operations, and exchanges looking for new revenues, bypassing traditional consolidators with their own direct feed infrastructures. And despite these efforts, consolidated feed use has also grown as trading operations become more globalized and firms began demanding access to markets where direct feeds are either impractical or simply don't exist.

But if speed was the driving factor for feeds, the current focus is on flexibility and performance, where "performance" covers a multitude of factors beyond just speed, including reliability, capacity management and cost. So firms must not only invest in high-performance infrastructures to handle these datafeeds, but also in sophisticated monitoring systems to measure speed, uptime and other factors—though unlike in the past, when these were used by small business units running alongside enterprise systems, high performance is now the standard. "Speed has become an expectation, not a driver," says Adam Honore, chief executive of financial technology business strategy consultancy MarketsTech LLC.

However, over the same period, attrition and mergers have meant that the once-booming market for data distribution platforms and ticker plants has shrunk significantly, with much of this infrastructure business consolidating around a de facto incumbent, and only a few smaller technology companies providing competing platforms—though usually with limited capabilities.

Increased data availability has inevitably led to commoditization, and so in addition to datafeeds, firms are now looking at analytics that can deliver additional value and insight into the raw data. And with more analytics being presented via apps to serve the needs of an increasingly mobile workforce, new delivery mechanisms, APIs and cloud data marts are a logical next step for many data consumers—though participants in this report's Q&A say these will coexist with, rather than replace, the current generation of datafeed solutions. ■



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## Activ Adds EU Alt. Venues to Feed

Data and ticker plant provider Activ Financial has added new content from four European alternative trading venues to its ActivFeed low-latency consolidated feed, in response to client demand for full coverage of European markets.

The new content provides Level 1 and Level 2 data from recently launched pan-European trading venue Aquis Exchange; over-the-counter Level 1 and Level 2 data from BATS Chi-X Europe's trade reporting arm; Level 1 and Level 2 data from the London Stock Exchange Group's LSE International Order Book (IOB), which trades depository receipts for international companies listed in more than 44 countries, including countries across Central and Eastern Europe,

Asia, and the Middle East; and Level 2 data from the LSE's Turquoise equities and derivatives multilateral trading facility.

Activ already carried Level 1 data from Turquoise, as well as real-time Level 1 and Level 2 market data from BATS Chi-X Europe and the LSE's primary market, so the process of adding the new datasets for these markets was a matter of permissioning—rather than writing to—new datafeeds, says Ben Collins, global head of sales at Activ in London.

The data went live on ActivFeed on Aug. 22, and will likely appeal to firms looking to execute arbitrage strategies for stocks that trade both on their primary markets and on alternative venues, Collins says. ■

## Millistream Adds GXG Markets Data

Swedish data provider Millistream has signed an agreement to distribute real-time, delayed and end-of-day price data from Danish pan-European exchange GXG Markets, to improve its offering and to give clients access to a broader range of market information.

The new data, which will be added to a newly created feed within the coming weeks, covers the trading venue's complete market data offering, including trade data and order book updates primarily for equities trading, but also covering some debt instruments, says Per Rastin, chief executive of Millistream.

Göteborg-based Millistream is looking to grow its offering with the goal of improving its customers' trading strategies, and to provide banks and brokerages with improved end-of-day and intra-day updates on their positions and holdings. ■

## ITRS Adds Bloomberg B-Pipe Monitoring to Geneos

ITRS Group, a provider of performance monitoring technology for real-time systems, has launched an interface that provides monitoring support for customers of Bloomberg's B-Pipe real-time market data feed in ITRS' Geneos monitoring platform via a new plug-in.

Geneos can display up to 30 Bloomberg B-Pipe service instances on the same screen, allowing users to monitor the status and performance of datafeeds and consuming servers and applications, to see tick messages—and missing data—sent and received, and to set alerts. ■

## BATS Delays New Feed Launch After SEC Extends Review Period

BATS Global Markets has delayed the launch of its BATS One consolidated feed of data from the four equities markets operated by its BATS and Direct Edge exchanges, after the Securities and Exchange Commission extended its 45-day period by a further 45 days to give the commission "sufficient time to consider the proposed rule change and the [two] comments received."

BATS officials say the exchange will confirm a new launch date for the feed—originally expected to be Oct. 1—once it receives final SEC approval for BATS One and its associated fees. Until then, the feed will only be available in BATS' certification environment. ■

## Thomson Reuters Maps 12-Month Retirement-Upgrade Schedule

Thomson Reuters has notified customers that it will retire a number of legacy products and feeds over the next 12 months, as part of an ongoing program to migrate all customers to its next generation Elektron Real Time datafeed.

On March 31, 2015, remaining versions of the Thomson Reuters Datafeed and Reuters Datafeed in Europe, Africa and the Americas will be retired, followed on June 30 by all remaining versions in Middle East countries. Customers are advised

to migrate to the vendor's Elektron Real Time feed, which improves the "accuracy, breadth and depth" of the data, according to a notice sent to clients in June.

As well as the legacy Thomson Reuters Datafeed and Reuters Datafeed, remaining versions of the Reuters Workstation Server Open Out Via Deployed Delivery and the Dealing Money Rates and Money Rates News delivered by Reuters Workstation Server deployed in Europe, Africa and the Americas will be shelved on March 31,

2015, and in the Middle East on June 30.

At the end of this year, the vendor will retire legacy versions of its Advanced Transformation System, Data Access Control System, and the Open DACS Permission Server in favor of newer versions.

The vendor will continue to support the withdrawn products and versions only during the notice period.

Officials say the moves are part of the vendor's ongoing development and upgrade process. ■



## Datafeeds: Right-Sizing Distribution for Demand

Modern trading firms require a market data environment capable of handling a combination of data delivery mechanisms, with low-latency, high-volume datafeeds chief among them. But with content and performance demands increasing, and the cost of building and maintaining a sophisticated market data infrastructure an expensive proposition, how are firms deciding what—from snapshot “feeds” and consolidated offerings to ultra-low-latency, high-performance feeds—is best for them?

**IMD: Please describe your company/workflow and what role datafeeds play in your business as a consumer/provider of market data? How important are feeds as a data delivery option for this business, compared to other delivery mechanisms?**

**Erik Gordon, chief technology officer, Trillium Trading:** Trillium’s reliance on market data is multi-faceted and therefore important in many ways. In order to run Trillium Trading’s electronic trading operations, market data is vital—it is the lifeblood of the business. Without data that is fast and reliable, it would be impossible to conduct our trading operations. The real-time dependency of this data necessitates the data be delivered in feed format, as any other delivery mechanism would simply be too slow. Furthermore, for developing the financial technology tools that Trillium Labs does, accurate and complete market data is again necessary. Without it, our applications—like Surveyor, a groundbreaking market-manipulation detection tool—could not accurately function.

**Trevor Scouse, founder and chief executive, TJS Data:** TJS Data is an independent, vendor-neutral consultancy firm advising clients on all aspects of market data, from either helping to reduce costs or improve quality to helping them source specific datasets. We listen to the client requirements and determine the options available to them, taking into account their location, delivery methods, their proposed use for the data, and the amount of data they require. Integral to this process, we are extremely conscious of their budget restraints.

**Mirko Silvestri, head of product management, market data, SIX Financial Information:** SIX Financial Information services rely directly or indirectly on a wide set of data used either to create consolidated feeds, to source terminal-based applications, or to derive data items used to complement specific data packages. Depending on its utilization, multiple delivery options are required, differentiated for instance by the required delivery modes and formats, data objects and data





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services, covered region and source type, data structures, etc. For a single service, only a few and specific delivery options are used, usually also having the highest requirements for the selected options. On the other hand, the more variations that are available—either the number of delivery options or variation of a single option—the more flexibility there will be around managing data, creating new or adapting existing services, executing changes, for customization purposes or when integrating data at clients premises. However, flexibility usually comes with more complexity, less transparency, and finally, at higher cost. More importantly, what we look at is which procedures, business principles and architectures must be imposed for a specific delivery option to be leveraged throughout the whole value chain, and secondly, which variations are feasible, both from a content and cost perspective. This principal assessment is essential to all data producers and consumers.

**Adam Honore, chief executive, MarketsTech LLC:** MarketsTech has conducted multiple projects this year in the space for consuming firms, exchanges, and data providers. If I had to consolidate a theme across engagements, budget, quality, and coverage would be the top three focus areas, in that order. Additionally, analytics are becoming a critical component of any data discussion, so while feeds are important, any firm looking beyond direct feeds is considering the analytical capabilities of vendor-based solutions.

**IMD: How critical is the performance of datafeeds—even for non-latency sensitive traders—and how do you measure “performance”: Speed, breadth of content, bandwidth requirements, cost, ease of integration? Or a combination of these and/or other factors?**

**Scouse:** All datafeeds must be reliable, and performance is critical—even more so if the client is trading with millisecond data. Outages from exchanges do occur, and affect everyone. However, if the outages are directly due to the provider, then it is the responsibility of that provider to repair faults to the satisfaction of the client to retain their trust. All of the major vendors employ sophisticated monitoring techniques, and know immediately whether a feed is down or data packets are

being lost. They know how much data is being sent to a client and can check how much of that data is actually being received.

They have teams who actively advise clients if there are any problems, and what is being done. This is crucial as all contracts with vendors have specific service-level agreements that describe timeframes within which faults should be rectified. All major vendors maintain strict logs and can report their monthly percentage uptime across their datasets.

At point of sale, the technical teams and developers from the vendor and the client establish exactly what data is required, which also encompasses which fields are required. With this information, vendors can advise on the bandwidth that will be used, etc. This is, of course, extremely important for the client to understand what the communication costs will be and the hardware (servers) required. Many potential startup companies have drastically revised their business model after adding up all the costs—the data, exchange licenses, communications, hardware and software, developers and resilience.

Ease of integration is a factor and is basically down to the quality and experience of the developers, coupled with a well-documented API and support from the vendor. Where companies are used to working with data, there should be no real problems. However, for companies new to the industry, it can prove a headache if, for example, their developer only knows one specific computer language.

**Gordon:** Performance is always critical for data. Data is used to make fundamental business decisions—and if the integrity of this data is lacking, then so is the foundation on which these decisions are made. That said, performance can take many forms: it can be speed or latency, completeness, ease of use, standardization of protocol, or any/all of the above. Each user and application will have its own definition of “good performance,” but it is something that will always be a necessity.



**Erik Gordon**  
Trillium Trading

For Trillium’s trading operation, we measure performance based on latencies and cost. A “good” datafeed is one that performs well while minimizing cost. With market data costs rising at an alarming rate, all consumers of market data have become very cost-conscious.

**Honore:** Each client is unique, but rarely is speed the first requirement. Firms that need speed tend to build their own direct feed handlers, and the scope is small. Instead, coverage and total cost of ownership tend to be the drivers. Firms are waking up to the challenge of maintaining a large set of handlers where doing so provides no competitive differentiation and makes it more difficult to move into new markets. Speed has become an expectation, not a driver.

### ROUNDTABLE

**“If one has to consolidate different feed types, challenges may exist, particularly around data inconsistencies—though consolidating feeds provides the option of creating a “best-of-breed” selection of data from different sources.”**

Mirko Silvestri, head of product management, market data, SIX Financial Information

**Silvestri:** Excessive data volume growth, as experienced in the last decade, is slowing down. This challenging period has contributed to the creation of a number of new tools, performance-optimizing features, and even more importantly, new features on which data—and how much—is subscribed to by clients. It also has improved the awareness and action plans on how to manage “performance” in general, ranging from: implementing new technologies with slim and smart application design; the insertion of new capacity management concepts; tactical and radical changes within the IT architecture; the definition and execution of new business principles and data standards; and the consolidation and standardization of the used infrastructure, to list a few. Some of these improvements have now become part of the standard action plan, and are commonly used across our organization. “Performance” is thereby perceived to be less critical than in the past, simply because the last improvements have led to higher standards overall. For example, to change data dissemination according to clients’ bandwidth consumption requirements is easily performed through simple yet flexible configuration options and monitoring tools, providing data volumes or latency figures for different levels of the value chain, allowing users to take proper action quickly.

**IMD: What are the benefits and challenges of using and integrating different types of datafeeds, such as ultra-low latency microwave feeds for limited numbers of instruments, with broader but slower consolidated feeds and reference data sources?**

**Silvestri:** Different types of businesses may require different types of datafeeds. While SIX Financial Information requires a rather broad coverage of different sources with little need for low-latency feeds to deliver its services, others might require ultra-low latency feeds for a selected set of instruments to create services that, for example, exploit market inefficiencies. Therefore, the coexistence of different feed types is a legitimate result of different business needs. However, if one has to consolidate different feed types, challenges may exist, particularly around data inconsistencies—though consolidating feeds provides the option of creating a “best-of-breed” selection of data from different sources.

**Honore:** Cost also plays a significant role in these decisions. There are efforts across the board to ensure firms don’t pay twice for the same data. Firms acquiring direct data are scaling back their consolidated usage. Reference data teams are looking to caching solu-

tions to lower on-demand request fees. For historical data, there are significant efforts around cloud providers to create shared repositories. I think you will continue to see data be examined in a much more granular fashion even as firms add to the number of sources they consume as they move into new areas of opportunity.

**Scouse:** Bandwidth is the bane of the industry, for vendors and end users alike. No one could really predict accurately the exponential increase of data coming from the exchanges. Some have expanded three-fold in as many years, and as new instruments and fields are added by the exchanges, this will continue.

The effect of this increase in bandwidth use has critical impact in performance insofar as larger leased lines will be required, and more servers will be needed. If this does not happen, too much data will be forced down too small a pipe, and inevitably data packets will be lost, which of course will have a detrimental consequence to the client’s business. Some vendors throttle some of the feeds by limiting the fields they supply or reducing the amount of market depth available. Clients who previously took the whole of exchanges’ feeds have cut back to a symbol-based feed whereby they only receive the data they require to run their business. It is quite common, therefore, for clients to receive data from more than one source, depending on its urgency. While the Holy Grail of zero latency—a predilection which has abated to a degree in the last five years—has yet to be achieved, the fact is that proximity is key, so where ultra-real-time data is critical to the client, then they will house their servers either at or close to the relevant exchange.

**Gordon:** I have no personal experience with the ultra-high performance feeds from FPGA and microwave sources. Bleeding-edge technologies have never been necessary to power Trillium’s business. However, they are tangentially necessary and beneficial in that they continue to march the progress of technology forward, thus making previous generation technology cheaper and more attainable. The types of products are niche products consumed by the niche players.

**IMD: Over the last decade, an active market has emerged around provision of low-latency feed handlers and ticker plants. Yet the marketplace for enterprise feed platforms has largely concentrated around one supplier. What other options exist for firms with broad data requirements who want more competition among a greater range of providers, and how are vendors responding to this need?**

**Honore:** Incumbent vendors have pursued the leader. For instance, Bloomberg is making investments in its enterprise feed



**Trevor Scouse**  
TJS Data



capabilities, and Interactive Data is heading down that path. Beyond the big three, I think the problem rests with consumer adoption more than producer activity. Firms like Xignite, Activ Financial, Devexperts, etc., have a presence, but it takes capital to compete and if the industry wants more options, the industry needs to back more horses in the race. One dark horse could be SR Labs, where it remains to be seen what the vendor will do with its Wombat/SuperFeed acquisition.



**Adam Honore**  
MarketsTech LLC

**Silvestri:** We experienced that many firms are looking for major changes to their current setup as a result of the tough economic context and the increasing number of changes they must cope with, such as new regulatory requirements. We also experienced that firms are prepared to outsource all or some of these functions through EDS (Enhanced Data Services) or through EDM (Enterprise Data Management) solutions. A number of new vendor and vendor-independent solutions have launched to cope with this new requirement, all striving for the same goal—to provide “best quality” at “lowest price.”

**Gordon:** Market data in its raw form (i.e. directly from the vendors) has become unwieldy and difficult to manage. There are multiple sources (exchanges), all of which then have multiple datafeeds, making the number of feeds and protocols to code against very large. As a result, we’ve seen the emergence of consolidated market data providers—that is, vendors who consume all these raw feeds of varying protocols and produce a single aggregate feed with just one protocol. This has not only generated a secondary market of data providers, but has made it easier for the average firm to focus on its core business and minimize the amount of engineering effort needed to consume and use this data.

**Scouse:** One of the major considerations a data purchaser takes into account is whether a particular vendor can supply all the exchange data that they require. If having Nasdaq, the London Stock Exchange and the Tokyo Stock Exchange are critical, then immediately their options are limited to the top five or six vendors. The more the list of exchanges expands, then ultimately there is but one provider—although this is being redressed and the other vendors are constantly adding exchanges, usually based upon existing client demand rather than as a result of expanding into new sales areas that would demand local exchanges to be on the feed offering. There have been some discussions over the past few years of vendors and data contributors pooling their resources in a virtual warehouse to save them duplicative costs, but such a proposition would not be welcomed by the exchanges, so for the moment

if the data purchaser does not want to work with the leading provider (maybe because of cost or speed issues) then the only other option is work with perhaps two others.

**IMD:** As an increasingly mobile workforce and consumer base creates more demand for app-based and wireless data delivery options, are datafeeds still the best mechanism to meet this demand? Will they be replaced by APIs and web services? Or will feeds still dominate back-end infrastructure and high-performance trading requirements, and co-exist with new client-facing interfaces and integration layers?

**Scouse:** Datafeeds will continue to be the best mechanism for reliable data procurement for the foreseeable future, while cloud devices and apps will continue to blossom so that perhaps in the near future, front-end terminals will be replaced.

**Silvestri:** We don’t see traditional datafeeds becoming obsolete, mainly for two reasons: First, the absence of commonly used data environments in areas such as data modeling and logic—areas that use varied technologies for different use cases—which still call for easy and cheap data access mainly through data consolidators. Secondly, the creation of complete new types of data access comes with higher investments, while data service providers and consumers need to cut or maintain costs. We’ve experienced instances of data consumers requiring a wider range of prefabricated data services and more delivery options with an increased need for fully managed and multi-vendor capable services. Both will impact current business models, specifically from a vendor perspective, much more significantly than the current developments around digital banking, for example. We therefore see the new technologies of user interaction as coexisting with traditional datafeeds, which will have to be complemented with new data services and additional data delivery options required to bridge all types of data.

**Gordon:** I don’t believe datafeeds are the right delivery mechanism for mobile applications. Datafeeds are a “fire hose” approach to data delivery. In the mobile world, where both bandwidth and computing resources are limited, this is less than ideal. Instead, mobile applications should use intelligent APIs and push-delivery mechanisms to minimize the data sent to and from a mobile device. Datafeeds will be used on the back-end systems to power these mobile applications, but then a filtering layer/protocol needs to exist between that system and the mobile device to ensure only necessary data is sent over the air.

**Honore:** What we’re talking about here is just a delivery method, but certainly you’ll see more REST APIs available as more firms migrate infrastructure to the cloud. The real issue here is whether firms will have the billing mechanisms and policies in place to effectively net usage by one person across multiple devices. There is still a significant amount of work to be done in this area. ■

A man with dark hair and glasses is looking over a very large, tall stack of papers. The papers are stacked high, reaching up to his eyes, and are slightly blurred to suggest a large volume. The man's expression is one of focus and determination. The background is a soft, out-of-focus office setting with light coming from a window.

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