



The evolution of FIX: aligning with mainstream technologies

By Paul Foley, Financial Markets, Microsoft

The latest developments around the FIX repository and FIXML widen the scope for FIX to be used alongside proven enterprise technologies. And as FIXML converges with more mainstream web services and XML standards, organisations can look forward to internal and external connectivity becoming easier, cheaper and more reliable.

In the capital markets, electronic connectivity is continuing to be as disruptive and creative of opportunities as the industrial revolution. Some organisations are better placed to cope than others. Some are embracing the opportunities and trying to forge their own vision of how the market structure and interactions might work in future. Others are being reactive and taking simple steps, such as implementing a FIX engine and connecting to a hub when a counterparty wants a certain type of communication sent using this means.

One of the hurdles to achieving the vision of ubiquitous electronic connectivity in the industry is that FIX is often seen as a 'black art' – even within a technology world used to simple acronyms and the complex concepts that sit behind

them. But the latest developments around FIX are set to change this.

'The technical committee within FIX Protocol Ltd (FPL) has been working on a repository that extracts information from the FIX specification and renders it in a more computer usable format,' says Kevin Houston, co-chair of the Global FPL Technical Committee.

'It currently comprises a series of XML documents and schemas, and can be loaded into a database. Because of this it can be used to generate future releases of FIX. Equally importantly, the repository and developments in FIXML will help FIX to become more closely aligned with mainstream Web services and XML technology and standards.'

FIX converging with mainstream

This will enable more use of tools from the large mainstream IT vendors in the FIX connectivity world, which should help extend the reach of FIX into the smaller institutions that are yet to embrace it. 'Leveraging FIX on top of industry standard integration, workflow and office productivity tools should enable any organisation to more easily achieve the business benefits that can be gained from more sophisticated use of FIX,' adds Houston.

The long-term implications of this for organisations are to make connectivity easier, cheaper and more reliable. In the past, much of the breakdown in electronic connectivity infrastructure has come from the complexity involved, and not necessarily due to software or hardware faults. Difficulties have also occurred in the past when organisations have struggled to find the right skill sets internally.

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Stuart Plane, sales and marketing director of Citadel Associates, says that soon implementers will be able to understand FIX and the way it works much more easily. 'They won't have to learn FIX as a separate language, and won't have to know the ins and outs of the FIX session layer. Instead, anyone familiar with XML and web services and how they are used in messaging and connectivity will be able to quickly become proficient. A much wider pool of developers will thus become available, and this is going to have a significant impact on costs for organisations that want to take a more strategic approach to connectivity.'

Vendor involvement

FIX is evolving beyond its niche origins and one result of this is that mainstream enterprise technology vendors are becoming involved. Microsoft joining the FIX technical committee at the end of last year is a good example of this. 'We believe FIX is one of the most important areas of development in the capital markets today,' says James Burns, Architectural Engineer, Microsoft, who now participates on the FPL technical committee.

'And we're not just involved to learn for ourselves about the implications of FIX for enterprise computing,' says Burns. 'We're interested in participating and seeing if the work Microsoft is doing elsewhere around reliable messaging and Web services can be of use to other committee members and their organisations.'

SolutionForge CEO Steve Wilkinson says that by using mainstream technologies to build products that make full use of FIXML standards, specialist vendors can provide FIX solutions to their customers that are cost effective and simple to implement. 'There is room for more commoditisation in the FIX space, and this is going to breathe some fresh air into the market and lower some of the barriers to entry for organisations that haven't yet engaged in a strategic view of connectivity,' he says. 'For example, far more buy-side organisations can afford to spend US\$150,000 than US\$250,000. And looking ahead there is huge potential for FIX with hedge funds.'

Data extraction and automation

In the past, as businesses grew, their back-office costs also grew exponentially. This was particularly the case for sell-side institutions. But now as they grow their business they want to control these costs. They don't want to double their back-office costs to double their trading volume. There is a push for a lot more automation in back-office processing systems. Organisations want to start dealing electronically with more customers such as hedge funds that have traditionally been dealt with using fax and phone. Dealing in this manner comes with high associated back-office costs.

But as well as wanting to bring more customers online using FIX, many organisations are selecting FIX as the mechanism for enabling integration between their back-office systems. And this is another area that is assisted by the convergence of mainstream enterprise technology and the latest versions of FIX.

Plane says that the real value of FIX 4.4 is the way it enables organisations to take the data embedded within the FIX message and put it to work. 'It is possible to take the FIX message and supply that to the OMS, but at the same time take out the appropriate pieces of data from the message and supply them to systems such as the transactional cost analysis system,' he says.

‘Other areas might include extracting some securities information and validating the price that has been received against a series of prices from other sources.’

Front-end integration

As well as embracing mainstream technology to assist with the transformation of FIX and FIXML messages for internal integration, many organisations are looking at using FIX with mainstream technology at the front end.

‘We’re seeing another change that relates to traders on the floor who basically live in their spreadsheets a lot of the time,’ says Burns. ‘There is a push in the marketplace for traders to communicate via their spreadsheets as a front-end. One way you can do this is by linking the spreadsheet to orchestration tools that then communicate FIX to the outside world or even internally to other systems.’

Workflow and changing job roles

The coming together of mainstream enterprise technology and FIX will also enable more efficient people-based processes and workflows. This is important, as job roles and the value of products and services in the capital markets are changing just as rapidly as the technology.

According to Houstoun, exception management is becoming a much more important role in the sales/trading area. ‘Organisations need more than just experts in particular products and markets; they also need experts in the types of systemic problems that occur when trying to execute trades in these areas on behalf of clients.’

‘This relates to the buy-side increasingly going for direct market access (DMA) where they don’t need or want lots of involvement from the broker. In cases like this specifically, the value that the broker/dealers need to bring to the relationship is with their problem solving and exception management skills.’

With FIX managing interactions between counterparties while communicating with internal systems, the use of workflow in FIX implementations is beginning to mirror how workflow technology was first used for mortgages 10-15 years ago.

‘With mortgages, the focus was on getting all the relevant documentation together in one place and having a structured

flow for that documentation,’ says Houstoun. ‘The workflow fed all the information required and stepped through all the job roles involved in going from initial application to authorisation. With workflow technology supporting FIX, a similar level of efficiency is now achievable within the capital markets.’

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Reactive versus strategic

As FIX develops and more mainstream technologies are used to facilitate both internal and external FIX connectivity, organisations will increasingly embrace FIX as a strategic business enabler. Although one might consider those organisations already using FIX today as having a more strategic view, being an early adopter doesn’t necessarily mean thinking about long-term implications.

‘I’ve seen a few different examples,’ says Plane. ‘One buy-side firm had a FIX-enabled OMS, but weren’t using it until the phone lines went down one day. They only started using FIX from that day, but continue to do so. Now 60-70% of their trades are done using FIX.’

‘But another organisation is actually delaying its FIX implementation because of the strategic impact of it. They are taking the time to look at the wider impact – how they can best use FIX throughout their entire organisation.’

In the history of FIX’s evolution, the introduction of the repository will be remembered as a key milestone. People do make mistakes within the specifications, but with the repository where it’s all stored electronically, organisations can start automating a lot of the processes much more easily. They can also move to more off-the-shelf solutions that can be used as part of a strategic approach. Together with the direction FPL is taking to move into other instruments such as fixed income, the introduction of the repository and the alignment with mainstream XML and web services development will see the use of FIX in the finance world grow exponentially. **FIX**