

# FPL Global Technical Committee Update

By Kevin Houstoun, Consultant and FPL Global Technical Committee co-Chair



**Members of the FPL Global Technical Committee leadership were chatting the other day with Chris Pickles and we realised there is an opportunity for greater communication about the technical advances of FIX. This column attempts to address that opportunity by reciting all the new FIX tag numbers and their meaning introduced since FIX.4.0. Have I lost you yet?**

OK, seriously what we intend to do in this column is produce a periodic look at some of the technical advances that are being supported or planned to be supported in FIX. The aim of this column is to enable the average non technical FIX practitioner to understand the underlying drivers and benefits of this technology and be aware of the new business functionality that support is being added for in FIX.

Some of the important developments that are happening have already been covered in in-depth pieces, others will be

new to the dedicated reader of this august journal and some are just glimmers in the Global Technical Committees collective eye. Over the coming issues we'll aim to cover:

- The FIX Repository, what it is, and how we intend to extend it to capture FIX's true long term value.
- FAST(sm) – FIX Adapted for SStreaming data and how this delivers the benefits of open standards to the market data space.

- FIX and Web Services, as a way of delivering FIX messages and most of the benefits of FIX to another section of the financial services industry.

Anything else that takes the authors fancy; the great joy of being given a column such as this is the opportunity to rant.

This quarter, however, we plan to simply report on the activities of the Global Technical Committee over the last few months and our plans for the next few.

As many of you may know FIX.4.4 was released in April 2003. Three years later and the world, and our industry with it, has moved on. We now live in a world of robot traders, driving and being driven by ever rising volumes of market data, orders and executions. With this increased automation of trading, market data volumes have risen, exposing market data dissemination as a weak link in the electronic trading chain. FPL has been addressing this with FAST(sm) and an improved model for order book management.

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Our industry is being policed in ever more ingenious ways - MiFID, OATS, Reg-NMS and many other new regulations. Most of these new regulations require the capture of new information, or the labelling of existing information in regulator friendly fashion. Some of these regulations introduce new business practice or make certain best practices mandatory. Messaging changes are sometimes required to support this. The GTC are constantly considering the regulators' moves to ensure best execution through regulation on both sides of the Atlantic.

Since FIX.4.4 was released, the FIXML Schema syntax of FIX has become the most widely used XML variant in the financial services industry, with the US derivatives industry sending over 100 million messages per day. Due to this

increased adoption of FIX in the derivatives industry, there is greater need to provide a standard that solves more of its business problems.

In the wider IT industry, in which electronic trading is a niche, Microsoft and Sun have settled a lot of their differences and the pair are now working more closely than ever before on interoperability of their systems via a service orientated architecture approach. The practical upshot of this is that OASIS is working on a specification called WS-RX for reliable exchange of messages between computers. This is broadly the same function provided by the FIX session layer. FPL plans to pilot an implementation of this specification to allow informed comment and evaluation of its benefits to our community.

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These four drivers account for most of the changes we introduce in the remainder of this column. Namely, enhancements to support improved market data dissemination, enhancements to support the evolving regulatory environment and the changes to allow FIX's business process to be used independently of any particular FIX version and other alternative delivery mechanisms.

FPL itself has moved on with a new structure, legal entity, web site, etc., but that's another story.

The point of the above is that the Global Technical Committee has received, worked on and approved requests to extend the functionality of FIX 4.4. The Global Technical Committee is now finalising the process of updating the FIX 4.4 specification, to bring all of the extensions into a formal release of the specification. The release will be known as Service Pack 1.

When FIX.4.4 was released FPL introduced the FIX Repository. With the release of Service Pack 1 for FIX.4.4, FPL is introducing some enhancements to the Repository itself.

The first enhancement is that the service pack consists of 17 separate extension packs. Each extension pack is an

enhancement to the existing Repository that defines any new tags, enumeration, messages and components or enhancements to existing messages and components that are needed to support a specific piece of functionality or product area. Interestingly the same approach could be used to define bilaterally agreed custom functionality between counterparties, in a way that makes it much easier to manage what are essentially private extensions to FIX. In the same way that some FIX engines now update their data dictionaries using the Repository, they could also update themselves to support a piece of bilaterally agreed functionality.

An important aspect of this release model is that it allows early adopters of a piece of functionality to implement in advance of it being formally incorporated into the FIX specification documentation. Once an Extension is approved, by the Global Technical Committee, implementers' can use it safe in the knowledge that FPL will be supporting it, in that form, in the next release of the protocol, be it a service pack or a full release. This puts FPL in the position of being able to deliver finalised enhancements to the protocol in a matter of days when required.

**Further enhancements are currently being worked on by the Repository Working Group to support conditional validation of message content**

The second enhancement to the Repository is a set of changes to support better presentation of the Repository data and support more formality in some of FIX's data model. Further enhancements are currently being worked on by the Repository Working Group to support conditional validation of message content. For example the ability to state, in a computer readable form, that when an order message is used for a particular purpose, certain fields are mandatory.

The final sets of enhancements planned are to capture the business process, in a computer readable form, so that at a business level we can simply state/agree what product we're trading, (Equities, Credit Derivatives Swaps etc) and the trading model (Central Order book, Tradable quote etc) and the messaging takes care of itself.

Anyway enough of the techno speak, what's coming up in FIX.4.4 SP1

1. **Unapplied Errata Items (EP1)**  
Correction of errors and omission in the existing version of FIX.4.4.
2. **Algorithmic Trading Extensions (EP2)**  
Better support for the exchange of information used to initiate and execute algorithmic trading strategy trades.
3. **Cross Order Extensions (EP3)**  
Enhanced support for cross-orders in an Exchange/ECN model.
4. **FIA1.0 Extensions (EP4)**  
Significant new post-trade functionality for exchange traded derivatives including futures, options on futures, and equity options. Position Reporting, Settlement Price Reporting and Instrument extensions are the main focus of this work.
5. **FIA1.1 Extensions (EP5)**  
Significant new post-trade functionality for exchange traded derivatives with a focus on the development of a 3-party Allocation Model and multi-sided Trade Capture Reporting.
6. **Regulation NMS Extensions + User Defined Spreads (EP6)**  
Support for Regulation NMS and creation of User Defined Spreads via the Security Definition message suite.
7. **Market Data Optimization Extensions (EP7)**  
Enhanced Market Data message set to support book management and some preliminary FX requirements for Market Data. This provides enhanced business model support and incorporates changes to support best practices for book management.
8. **FIA Errata Extensions (EP8)**  
Correction of errors and omissions in FIA Extension Packs. (EP 4 and EP 5)
9. **Oats Phase3 Extensions (EP9)**  
Support for the OATS Phase 3 regulations that allow more accurate time stamping of orders flowing from buy side to sell side.
10. **Execution Acknowledgement Extensions (EP10)**  
An extension which introduces a brand new message

type that would allow the Buy-side to explicitly acknowledge an Execution Report received from the Sell-side. This provides functionality in FIX, that was lacking for the user communities that relied heavily on placing orders over the phone to explicitly accept the "notice of execution."

#### 11. FIA Trade ID + Addendum2 Extensions (EP11)

Provides the capability of referencing a trade based on a set of entity ID's assigned either by the central counter party or requesting party.

#### 12. FIA Collateral Extensions (EP12)

Enhances the collateral model to support risk-based margining for listed derivatives.

#### 13. FIA Large Trader + Allocation for Options (EP13)

Provides support for listed derivatives regulatory requirements and additional instructions for processing of Allocations on options.

#### 14. Transport Independence (EP TBA)

Additional tags needed to support multiple service packs in a single version of FIX.4.4 and completion of the formal separation of the session layer of FIX from the application layer. One of the benefits of this is the ability to use a message from a version of FIX other than your session layer version. For example, you could use FIX.4.4 Allocation messages on the same FIX.4.0 session that is carrying your FIX.4.0 Order and Execution messages. These extensions are also needed to allow FIX messages to be carried over other transports such as web services and MQ.

#### 15. Repository house keeping. (EP TBA)

A number of minor enhancements to improve the Repository based on the feedback received since its launch.

#### 16. External Order Routing Instruction – (EP TBA)

This EP adds additional values to the Execution Instruction (Execlnst) field to allow the Buy-side to specify whether external routing of the order is allowed.

#### 17. New SecurityIDSource value to support FpML (EP TBA)

In 2005 the GTC approved the addition of a new SecurityIDSource to support the ability to reference a URL which points to an FpML document. The proposal also clarified the existing SecurityIDSource for referencing FpML as the value used when the FpML document is embedded in the FIX message itself.

One interesting aspect of preparing all the above extension packs is that FPL has been able to use the resources of its small firm volunteer members. These are small firms that elect to volunteer about a week of time in exchange for FPL waiving their small firm membership fee. These guys have done the legwork in preparing the Repository extension pack.

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At the time of writing, the Global Technical Committee is just establishing the time table for releasing this service pack. Over the next few months we'll finalise the feature list, compile the documentation, (each extension has its' own supporting documentation), issue a draft of the service pack for comment and feedback and then formally issue it. Obviously the thing we'd value most is input from anyone with an interest in any of the areas covered. If you can help, please contact us via email; Kevin Houston, kevin@altkb.com, or Matt Simpson, MSimpson@cme.com.**FIX**

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#### **Any thoughts on this or other articles?**

Please send any comments, referring to this article as Vol 1 Issue 10 GL4, direct to Edward at [edward@fixglobal.com](mailto:edward@fixglobal.com)