BUSINESS JUSTIFICATION

FOR THE DEVELOPMENT OF NEW UNIFI (ISO 20022) FINANCIAL REPOSITORY ITEMS

A. Name of the request:

Securities pre-trade and trade

B. Submitting organizations:

FIX Protocol Ltd. (FPL)

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Standards Department

C. Scope of the new development:

The scope of this business justification is the development and submission of candidate ISO 20022 models for a set of Message Definitions covering the securities pre-trade and trade areas for the following financial instruments, business areas and business processes:

Financial instruments	Equity Fixed income Single and multileg listed derivatives
Business areas	Securities trade initiation (seti) Securities trade (setr)
Business processes	Indication of interest Quotation Order and pre-allocation Execution

In view of the scope, we suggest that the Securities SEG be assigned the evaluation of these Message Definitions.

D. Purpose of the new development:

In line with the "Investment Roadmap" proposed by SWIFT, FPL, FpML and ISITC last May, the purpose of this submission is to ensure interoperability between the messages defined in the FIX Protocol message syntax for the securities pre-trade/trade areas and the ISO 20022 messages that are being designed by other submitting organizations to support the following steps of the securities trade lifecycle.

Reason for opting out of the ISO 20022 XML syntax

The use of XML for messaging is not universally applicable across all segments of the Financial Services industry. The volume of messages and the demands for very low latency processing within the securities pre-trade and trade segments of financial services (equities, fixed-income, and listed derivatives) are leading to a requirement for smaller message sizes. The overhead of XML is not acceptable from a technical perspective within the pre-trade and trade business areas and therefore it is not technically feasible for the FIX community to adopt ISO 20022 XML syntax. A determination was made at that time that the verbosity of even the highly optimized FIXML syntax was not feasible for high volume trading applications.

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The FIX Protocol message syntax is a practical open standard that meets the majority of technical requirements for the securities pre-trade and trade functions. The FIX Protocol message syntax does provide metadata and is a very flexible and extensible format; there is no benefit to conversion away from this syntax, from both a business and a technical perspective for the vast majority of the FIX adopters. A forced conversion from FIX to ISO 20022 XML for the sake of compliance is detrimental from two aspects.

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1. The cost of conversion would likely never be recouped and there are no visible benefits in terms of reduced costs or enhanced functionality in a migration from FIX syntax to ISO 20022 XML.
2. There would be an adverse impact on the network economic benefits that have been built via FIX adoption over the last ten plus years. It is plausible that the disruption in terms of access could have an impact on liquidity and access to counterparties.

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At the same time the FIX Community welcomes the opportunity to participate in the creation of an industry standard business level model that can be used to unify business processes across the various messaging syntaxes being successfully used by the industry at this time.

This request paves the road towards end-to-end automation of the securities processing lifecycle. The alignment of all physical messages to a series of ISO 20022 compliant message models based on the same repository will ultimately enable the seamless flow of data between front and back office applications even if the syntax used is specific to the business domain.

To achieve this goal, while shielding FIX communities of users from investment in unnecessary migration at syntax level, this business justification makes use of the "interoperability approach" that was approved by the RMG on 4 June 2008.

Such approach proposes a three-step process:

- **step 1:** the submission of candidate ISO 20022 Message Definition (business models) including the related ISO 20022 Business Components and Message components, where it is permitted - and requested - that this submission will not result in the publication of

ISO 20022 XML schemas. After approval and publication of the Message Definition models, the submitter will become the recognized "owner" of the ISO 20022 models as per ISO 20022 IPR policy. These models are being developed by SWIFT on behalf and upon a joint initiative of FPL and SWIFT to reverse engineer two of the most adopted standards in the securities pre-trade and trade areas: ISO 15022 and Financial Information eXchange (FIX).

- **step 2:** the submission of a description of the transformation rules that enable a precise, repeatable and accurate transformation from the ISO 20022 Business Components, Message Components and Message Definitions to the physical messages in the FIX Protocol message syntax. Upon approval of this transformation rules, ISO compliance of the physical messages will be granted, but suffixed with the term 'using a domain specific syntax'. These transformation rules will be documented by FPL. Further guidance is expected from the RMG about the way these transformation rules must be described and submitted.

  step 3: SWIFT and FPL plan to submit additional message definitions based upon the FIX Execution Report and DK Trade messages and business processes that complete the 'execution' business process of the securities trade process in a separate submission (see appendix).

E. Community of users:

The categories of users that will benefit from this submission are:

IM (Investment Manager)

B/D (Broker – Dealer)

Exchange

VMU (Virtual Matching Utility)

Custodian

Clearer

CSD (Central Securities Depositories)

ICSD (International / Central Securities Depositories)

CCP (Central Counterparty)

The full benefits of this initiative will be delivered to the financial industry with the development and registration of message standards for the remaining processes in the securities lifecycle. Implementation benefits will include among others: facilitated end-to-end communications at lower costs, increase of straight-through-processing rates of securities transactions, increase of process automation across asset classes and reduced settlement cycles through an increased automation of cross-market processes (securities, payments, treasury and trade finance).

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F. Timing and development:

Step 1: SWIFT submitted already an initial version of 44 pre-trade and trade candidate Message Definitions which were evaluated by the Securities SEG back in 2006. Upon a

request of the submitters, the SEG evaluation was put on hold to allow FPL and SWIFT to ensure full alignment with the latest version of the FIX protocol. A new version of 32 candidate Message Definitions are being finalised, harmonised with the recently approved Financial Instrument Business Information Model (FIBIM) and checked for compliance by the Registration Authority (RA). It is expected that the RA will deliver the SEG documentation in Q4 2008.

There are no other known standards initiatives involved in an effort to address the same requirements.

Step 2: once the above models are approved by the SEG, FPL will prepare a description of the transformation rules between the approved Message Definitions and the physical messages in the FIX syntax. Timing of step 2 will depend on the outcome of step 1 and the agreement with the RMG about the way these transformation rules must be described and submitted.

Step 3: Due to confusion surrounding the NOE (Notice of Execution), which was later clarified to be a different post-trade message, the Execution Report and DK Trade messages were not fully modelled. The Execution Report and DK Trade messages are key components to the trade process as they represent order acceptance and convey individual fills/trades and order statuses. The effort to complete the reverse engineering of the FIX Execution Report and DK Trade messages into the trade model will leverage SWIFT resources assigned to the post-trade project in close collaboration with FIX experts. The submission of these messages into the trade model is anticipated to occur sometime in the second or third quarter of 2009.

G. Commitments of the submitting organizations

SWIFT confirms that it will undertake the development of the initial candidate UNIFI business and message models on behalf of FPL and SWIFT, and submit them to the RA for compliance review and evaluation. The submission will include Business Process Diagram (activity diagram), Message Flow Diagram (sequence diagram) and Message Definition Diagram (class diagram), and other descriptive material that is required by the RA to generate the Message Definition Report.

FPL confirms that it will address any queries related to the description of the models as published by the RA on the UNIFI website, and that it will initiate and participate in the future maintenance of the models.

As the ISO 20022 XML message schemas will not be published, no testing or implementation of the ISO 20022 Message Definitions will be organized by the submitting organizations.

FPL and SWIFT confirm their knowledge and acceptance of the UNIFI Intellectual Property Rights policy for contributing organizations, as follows.

"Organizations that contribute information to be incorporated into the ISO 20022 Repository shall keep any Intellectual Property Rights (IPR) they have on this information. A contributing organization warrants that it has sufficient rights on the contributed information to have it published in the ISO 20022 Repository through the ISO 20022 Registration Authority in accordance with the rules set in ISO 20022. To ascertain a widespread, public and uniform use of the ISO 20022 Repository information, the contributing organization grants third parties a non-exclusive, royalty-free licence to use the published information".

FPL commits to submit additional business justifications that will complete the inclusion of the FIX standard in the pre-trade and trade space within the ISO 20022 model at a future, as yet unspecified time.

FPL is proactively identifying opportunities where the FIX Protocol model can be aligned with the ISO 20022 model, especially in the areas covered by the FIBIM model.

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Appendix A

The following are the list of FIX messages that are included within the scope of this business justification.

Indication of interest

1. IOI (MsgType=6)

Quotation

2. Quote (MsgType=S)
3. QuoteCancel (MsgType=Z)
4. QuoteRequest (MsgType=R)
5. QuoteRequestReject (MsgType=AG)
6. QuoteResponse (MsgType=AJ)
7. QuoteStatusReport (MsgType=AI)
8. QuoteStatusRequest (MsgType=a)
9. RFQRequest (MsgType=AH)
10. MassQuote (MsgType=i)
11. MassQuoteAcknowledgement (MsgType=b)

Order and pre-allocation and Execution

12. NewOrderSingle (MsgType=D)
13. OrderCancelReplaceRequest (MsgType=G)
14. NewOrderMultileg (MsgType=AB)
15. MultilegOrderCancelReplaceRequest (MsgType=AC)
16. NewOrderCross (MsgType=s)
17. CrossOrderCancelRequest (MsgType=u)
18. CrossOrderCancelReplaceRequest (MsgType=t)
19. MultilegOrderCancelRequest (MsgType=F)
20. OrderCancelRequest (MsgType=F)
21. OrderStatusRequest (MsgType=H)
22. BidRequest (MsgType=k)
23. BidResponse (MsgType=l)
24. ListExecute (MsgType=L)
25. NewOrderList (MsgType=E)
26. ListCancelRequest (MsgType=K)
27. ListStatus (MsgType=N)
28. ListStatusRequest (MsgType=M)
29. ListStrikePrice (MsgType=m)
30. OrderMassCancelRequest (FIX MsgType=q)
31. OrderMassStatusRequest (FIX MsgType=AF)
32. ExecutionReport (FIX MsgType=8)
33. OrderCancelReject(FIX MsgType=9)
34. Don'tKnowTrade (FIX MsgType=Q)

Feedback and Comments

France

A) It would appear necessary that clear and concise definitions of the terms « pre-trade", "trade" and "post-trade" are provided to ease the reading of the business justification and so as to make clearer the relation between this standards initiative and others in the pre-trade, trade and post-trade spaces.

Response - The submitters feel that the provided scope of the business justification is clear as the business area and processes are specifically defined. Further, appendix A offers a specific set of FIX protocol messages which the model covers.

B) The remarks concerning the low latency requirements made in the document possibly apply to some processing activities within the pre-trade and trade business spaces. However, relative to the post-trade space and notably for CCPs, the low latency requirement is not as acute. XML is thus acceptable from a technical perspective in the post-trade space.

⇨ Furthermore reference is made to a recent study "Considerable empirical evidence was amassed when the FIX organization effort optimized its FIXML representation to support listed derivatives post trade". As this BJ address the pre-trade and trade perimeter, this comment relative to evidence in the post trade space appears irrelevant and indeed, misleading. Response - The inclusion of the evidence used to optimize FIXML for post trade is not intended to be misleading. The submitters feel the information to be relevant to the overall ISO 20022 initiative and specifically to the argument regarding the submitters request to opt-out of using the ISO 20022 XML syntax. However, the specific comment regarding empirical evidence has been stricken from the business justification as have comments related to the post-trade space.

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C) With regards to the return on investment from migrating from FIX protocol to another protocol, this question does not strictly apply to the post-trade space and thus to the CCP role in that there is not currently a market standard to migrate from. Implementing a Barrier 1 compliant standard is for CCPs a development challenge but does not imply migrating from a previous industry-wide standard.

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⇨ It is also important to understand what players are covered within the notion of "FIX adopters". It is our understanding that a number of FIX users are also users of ISO standards for other parts of their businesses or other areas in the processing chain thus moving to one unique standard would be of benefit. Moving to ISO 20022 XML for current ISO 15022 users is also an important investment but one which the community has accepted albeit while asking SWIFT to ease the process through conversion tools and other such assistance.

Response - As agreed in the RMG meeting held in November 2008 in New York - the business justification will not use as one of its argument for an alternative syntax the return on investment or lack thereof for migration to another protocol. As the RMG has previously agreed that alternative syntax do exist and should be embraced as part of the overall ISO 20022 initiative, the submitters have removed these references from the business justification.

D) The proposed process explicitly excludes developing XML schemas. While there may be some valid reasons for developing schemas other than XML ones, it would seem appropriate to also ensure the availability of XML schemas for players that would take an all-XML approach (which could be appropriate for players also developing other message sets that are now more and more ISO 20022 XML driven).

⇨ It can be underlined that custodians are amongst the actors that use current solutions in the pre-trade and trade space. This community is progressively migrating other business processes to ISO 20022 XML. As cost is an important consideration, it is unacceptable that custodians should have to embrace two sets of important standards changes that do not converge to one standard / syntax, i.e. have to pay twice.

If the authors of the BJ consider that for the messages for which transformation is envisaged here, they are in reality exchanged in a very limited community - and therefore do not impact other sub-categories, please specify ?

Response - FPL feels that as the FIX protocol is the long term standard for pre-trade and trade in the listed derivatives, equities, fixed income, and financially traded FX space, the creation of an alternative syntax, including ISO 20022 XML is not acceptable from a FIX community perspective. The argument that FIX users are also ISO messaging users as well is correct but the areas using the FIX Protocol are separate from those using ISO messages and there is no demand for convergence at syntax level.

E) The document needs to further clarify how the group that will develop the proposed solution will reverse engineer in a coherent manner between FIX protocol and ISO 20022 and/or "SWIFT" standards.

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⇨ Beyond the production of a new family of messages, at a higher level this BJ leads to questions concerning the maintenance process for the FIX messages, and for FPL as an 'authority' for managing these maintenances. Taking into consideration the 'heavy' and 'very professional' way of SWIFT organisation when driving the maintenance process:
(i) Is FPL envisaging the same type of maintenance process, with regular meetings of a community, official leaders, vote processing, etc ... ?
(ii) Shall all actors participate to both processes i.e. the FPL maintenance process, and the SWIFT maintenance process? At what cost?

Response - The submitters feel this to be an extremely relevant series of questions. FPL has a rigorous maintenance process with global participation and governance. Regarding the process in updating the ISO 20022 model with changes from the FIX community, the reverse engineering process and the maintenance process set in place by the RMG will be used to keep the ISO 20022 model synchronised with the FIX model.

F) Last but not least, it is important that the solution retained is clearly a 'best in breed' solution as it will be a base for the industry for many years to come. The solution should thus avoid falling into the trap of a 'comprise' solution that could appear a way forward in the short term but that could be detrimental to the success of the standard and to the industry in the long term.

Response - The adoption of additional syntax in the pre-trade through post-trade spaces (as agreed as part of the investment roadmap) is viewed as a strategic direction for the industry and is not seen as a compromise. The alternative to this approach is complete

separate standards and efforts with no coordination between large segments of the securities industry.

Closing Response to comments from France

The submitters would like to thank the French community for taking the time to review the business justification and provide such a thorough set of comments and observations as well as for their support of the pre-trade/trade business justification.

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ISITC

In the May 2007 meeting of the RMG in New York ISITC was a strong and vocal supporter of the proposals to provide a structure whereby alternate syntaxes can be compliant with ISO 20022. In the latter half of 2007 and early 2008 ISITC was an active participant in the effort to create the Investment Roadmap. The Roadmap illustrates the benefit of allowing multiple message syntaxes to co-exist within the framework of a common business model.

This business justification proposes the creation of an ISO 20022 model based on a set of existing FIX messages in the pre-trade and trade space. We expect that these new models will provide the baseline for future development of post-trade and settlement models. As such, ISITC fully supports this Business Justification.

Response to comments from ISITC

The submitters would like to thank ISITC for support of the pre-trade/trade business justification.

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