Global Fixed Income Committee

LegSecurityXML Component Proposal

December 13, 2011

Revision 0.3

Proposal Status: ~~GTCGov vote~~Approved

For Global Technical Committee Governance Internal Use Only

Submission Date:	December 15, 2011	Control Number:	EP145
Submission Status	~~GTCGov vote~~Approved	Ratified Date	January 18, 2012
Primary Contact Person:	Sassan Danesh, Etrading Software Ltd.	Release Identifier:	5.0 SP3

DISCLAIMER

THE INFORMATION CONTAINED HEREIN AND THE FINANCIAL INFORMATION EXCHANGE PROTOCOL (COLLECTIVELY, THE "FIX PROTOCOL") ARE PROVIDED "AS IS" AND NO PERSON OR ENTITY ASSOCIATED WITH THE FIX PROTOCOL MAKES ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, AS TO THE FIX PROTOCOL (OR THE RESULTS TO BE OBTAINED BY THE USE THEREOF) OR ANY OTHER MATTER AND EACH SUCH PERSON AND ENTITY SPECIFICALLY DISCLAIMS ANY WARRANTY OF ORIGINALITY, ACCURACY, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SUCH PERSONS AND ENTITIES DO NOT WARRANT THAT THE FIX PROTOCOL WILL CONFORM TO ANY DESCRIPTION THEREOF OR BE FREE OF ERRORS. THE ENTIRE RISK OF ANY USE OF THE FIX PROTOCOL IS ASSUMED BY THE USER.

NO PERSON OR ENTITY ASSOCIATED WITH THE FIX PROTOCOL SHALL HAVE ANY LIABILITY FOR DAMAGES OF ANY KIND ARISING IN ANY MANNER OUT OF OR IN CONNECTION WITH ANY USER'S USE OF (OR ANY INABILITY TO USE) THE FIX PROTOCOL, WHETHER DIRECT, INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL (INCLUDING, WITHOUT LIMITATION, LOSS OF DATA, LOSS OF USE, CLAIMS OF THIRD PARTIES OR LOST PROFITS OR REVENUES OR OTHER ECONOMIC LOSS), WHETHER IN TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY), CONTRACT OR OTHERWISE, WHETHER OR NOT ANY SUCH PERSON OR ENTITY HAS BEEN ADVISED OF, OR OTHERWISE MIGHT HAVE ANTICIPATED THE POSSIBILITY OF, SUCH DAMAGES.

DRAFT OR NOT RATIFIED PROPOSALS (REFER TO PROPOSAL STATUS AND/OR SUBMISSION STATUS ON COVER PAGE) ARE PROVIDED "AS-IS" TO INTERESTED PARTIES FOR DISCUSSION ONLY. PARTIES THAT CHOOSE TO IMPLEMENT THIS DRAFT PROPOSAL DO SO AT THEIR OWN RISK. IT IS A DRAFT DOCUMENT AND MAY BE UPDATED, REPLACED, OR MADE OBSOLETE BY OTHER DOCUMENTS AT ANY TIME. THE FPL GLOBAL TECHNICAL COMMITTEE WILL NOT ALLOW EARLY IMPLEMENTATION TO CONSTRAIN ITS ABILITY TO MAKE CHANGES TO THIS SPECIFICATION PRIOR TO FINAL RELEASE. IT IS INAPPROPRIATE TO USE FPL WORKING DRAFTS AS REFERENCE MATERIAL OR TO CITE THEM AS OTHER THAN “WORKS IN PROGRESS”. THE FPL GLOBAL TECHNICAL COMMITTEE WILL ISSUE, UPON COMPLETION OF REVIEW AND RATIFICATION, AN OFFICIAL STATUS ("APPROVED") TO THE PROPOSAL AND A RELEASE NUMBER.

No proprietary or ownership interest of any kind is granted with respect to the FIX Protocol (or any rights therein).

Table of Contents

Document History

Revision	Date	Author	Revision Comments
0.1	November 21, 2011	Yuval Cohen (Etrading Software)	Initial revision
0.2	November 29, 2011	Yuval Cohen (Etrading Software)	Modification after review (all chapters)
0.3	December 13, 2011	Rajeev Kuppadakath (Etrading Software)	Added section 6.3 & 6.4. Proposal for applying similar changes to the Component UnderlyingInstrument, for consistency
ASBUILT	February 4, 2012 February 6, 2012	Jim N. Rich S.	ASBUILT with tag assignments
	February 15, 2012	Lisa T.	Minor clean up of "tba" with assigned tag numbers
	2012-02-22	Jim N	Additional cleanup

1 Introduction

On June 2011, FPL announced support for the industry initiative to accelerate the adoption of FIX for Fixed Income. In this announcement, it was stated that "*FPL will work closely with the consortium to identify any additional functionality needed and ensure FIX effectively meets the evolving business needs of the fixed-income markets. The parties will also collaborate to produce best-practice guidelines that encourage FIX use in a standardised manner and achieve maximum industry-wide benefit.*"

Since this announcement the Global Fixed Income Technical subcommittee has produced a set of best practices documents (4 volumes), *Best Practices: FIX Message Flows and Usage for Interest Rate Swaps (IRS) and Credit Default Swaps (CDS).* This set of best practices document focuses on the use of FIX 5.0 SP2 for the pre-trade and trading activities for CDS and IRS securities between the banks (Dealers) and the Swap Execution Facilities (SEFs). As a result of this exercise some gaps have been identified in the FIX 5.0 SP2 specifications. The first gap analysis namely GFIC QuoteAck Proposal, was presented to the Global Technical Committee on 29/Nov/2011. This is the second gap analysis which is presented for consideration by the Global Technical Committee.

1.1 Summary of changes

1.1.1 *LegSecurityXML* – new component

During the requirements analysis for the FIX message flows and the Instrument identifier attributes for the quotation/negotiation model between SEFs and banks, it was uncovered that under certain scenarios a new Instrument definition needs to be sent embedded within the QuoteRequest or QuoteResponse messages. The GFIC Technical Subcommittee would like to propose a new component LegSecurityXML, which will enable sending a new Multi-leg Instrument XML definition embedded within the QuoteRequest or QuoteResponse message. This would facilitate the cases where bespoke CDS and IRS securities are used in the negotiation.

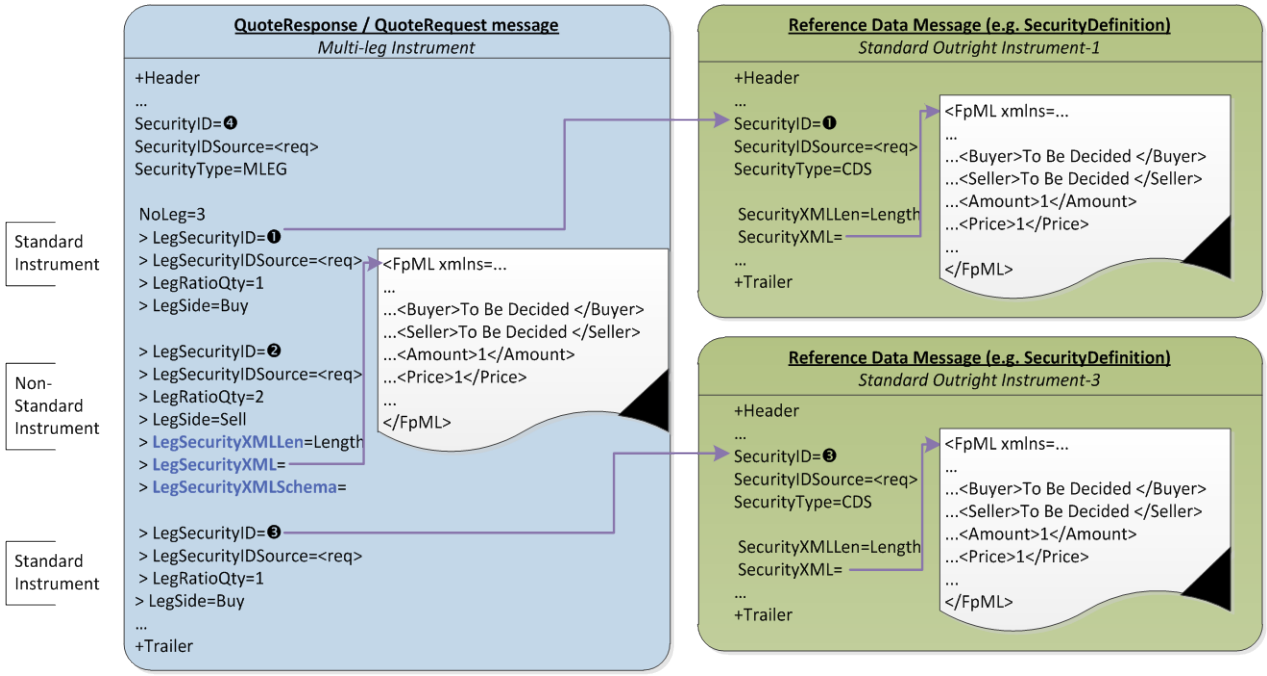
Proposal

This proposal recommends adding a new LegSecurityXML component within the InstrumentLeg component. The LegSecurityXML component is modeled in the same manner as existing SecurityXML component found in the Instrument component.

2 Business Workflow

2.1 Message Diagram

The following diagram illustrates the structure of a QuoteRequest and a QuoteResponse message using LegSecurityXML within the InstrumentLeg component. The diagram shows a 3-legged strategy where one of the legs is a Non-Standard Instrument.



2.2 LegSecurityXML *component Requirement*

The following scenario describes the context and the requirements for the LegSecurityXML component. In this scenario, the Customer defines a Multi-leg Instrument where one or more legs are Non-Standard Instrument. The Customer places a QuoteRequest or sends a QuoteResponse to the Execution Venue for the new Instrument and the Execution Venue in turn forwards the QuoteRequest or QuoteResponse to one or more Dealers.

Notes:

- The Execution Venue sends the new (Multi-leg) Instrument definition embedded within the QuoteRequest or a QuoteResponse message
- The Non-Standard Multi-leg Instrument consists of multiple legs, where each leg is an Outright Instrument
- Typically the lifecycle of such a Non-Standard Instrument is restricted to the lifecycle of that negotiation dialog

The following scenarios are provided as examples of the Execution Venue sends a QuoteRequest or QuoteResponse to the Dealer:

Quote Request Scenario Execution Venue sends a QuoteRequest to Dealers:

Business Message description	QuoteRequest (R)	Notes
Execution Venue places a QuoteRequest with a Non-Standard Multi-leg Instrument definition embedded in it	QuoteReqID(131) NoRelatedSym(146)	Required for QuoteRequest
	> Symbol(55) <human readable name or "[N/A]"> > SecurityID(48) > SecurityIDSource(22) > SecurityType(167)	Required to identify the Instrument in further messages
	> SecurityXMLLen(1184) > SecurityXMLLen(1185) > SecurityXMLSchema(1186)	Required for Non-Standard Outright Instruments
	> NoLegs(555) > > LegSymbol(600) > > LegSecurityID(602) > > LegSecurityIDSource(603) > > LegSecurityType(609) > > LegSide(624)	Required for Non-Standard Multi-leg Instruments Optional for Standard Multi-leg Instruments
	> > LegSecurityXMLLen <see SecurityXMLLen(1184)> **> > LegSecurityXML <see SecurityXML(1185)>** **> > LegSecurityXMLSchema** <see SecurityXMLSchema (1186)>	Required for Non-Standard Multi-leg Instruments where one or more leg is a Non-Standard Outright Instrument

See Subsequent messages below for details about subsequent messages.

Quote Response Scenario Execution Venue sends a QuoteReposnse to the Dealer:

Business Message description	QuoteResponse(AJ)	Notes
Execution Venue sends a QuoteResponse with a Non-Standard Multi-leg Instrument definition in it	QuoteRespID(693) QuoteRespType(694)=Hit/Lift(1)	Required for QuoteResponse
	Symbol(55) <human readable name or "[N/A]"> SecurityID(48) SecurityIDSource(22) SecurityType(167)	Required to identify the Instrument in further messages
	SecurityXMLLen(1184) SecurityXMLLen(1185) SecurityXMLSchema(1186)	Required for Non-Standard Outright Instruments
	NoLegs(555) > LegSymbol(600) > LegSecurityID(602) > LegSecurityIDSource(603) > LegSecurityType(609) > LegSide(624)	Required for Non-Standard Multi-leg Instruments Optional for Standard Multi-leg Instruments
	> LegSecurityXMLLen <see SecurityXMLLen(1184)> **> LegSecurityXML <see SecurityXML(1185)>** **> LegSecurityXMLSchema** <see SecurityXMLSchema (1186)>	Required for Non-Standard Multi-leg Instruments where one or more leg is a Non-

		Standard Outright Instrument

Subsequent messages:

In both of the above scenarios (**Quote Request Scenario** and **Quote Response Scenario**) subsequent messages may refer to Instrument and each of the Instrument Legs by:

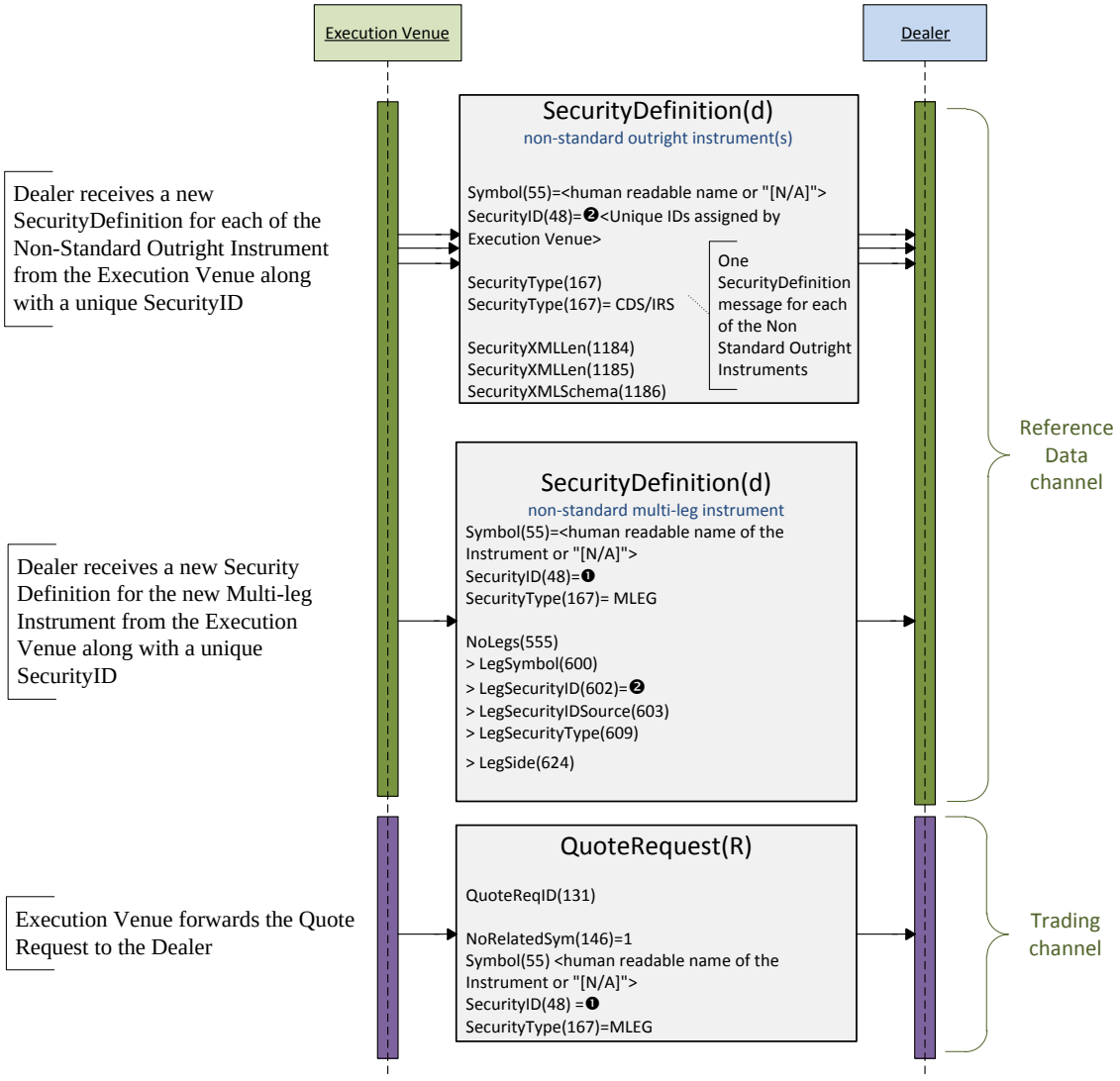
Subsequent FIX message	Notes
Symbol(55) <human readable name or "[N/A]"> SecurityID(48) SecurityIDSource(22)	Refers to the Instrument
NoLegs(555) > LegSymbol(600) > LegSecurityID(602) > LegSecurityIDSource(603)	Refers to a Leg

3 Issues and Discussion Points

3.1 Potential Alternative Consideration

During this gap analysis process, an alternative was considered. In particular for the following workflows:

1. Dealer receives a new SecurityDefinition for each of the Non-Standard Outright Instrument from the Execution Venue along with a unique SecurityID assigned by the Execution Venue
2. Dealer receives a new SecurityDefinition for the new Multi-leg Instrument from the Execution Venue along with a unique SecurityID assigned by the Execution Venue
3. Execution Venue sends the Quote Request to the Dealer



Issues with the proposed alternative

This alternative was ruled out because of the following reasons:

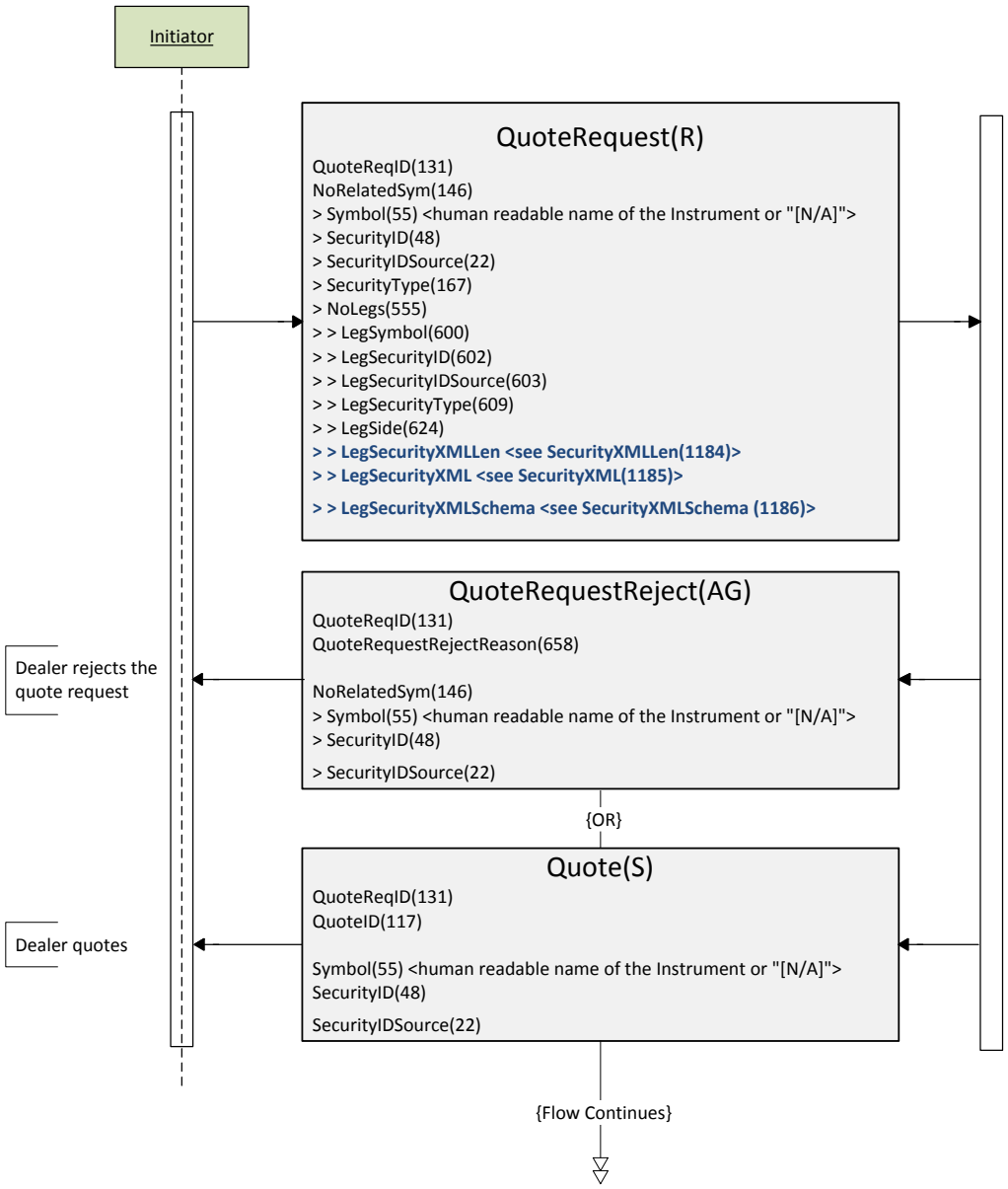
- Potential race condition: Race condition may occur when the SecurityDefinition and the QuoteRequest are transmitted via different channels. In such a scenario, the Dealer may receive the QuoteRequest (or QuoteResponse) before receiving the SecurityDefinition message which defines the security reference in that QuoteRequest
- From a business perspective the entire operation of defining the Multi-leg Instrument and placing the quote request should be an atomic operation

4 Proposed Message Flow

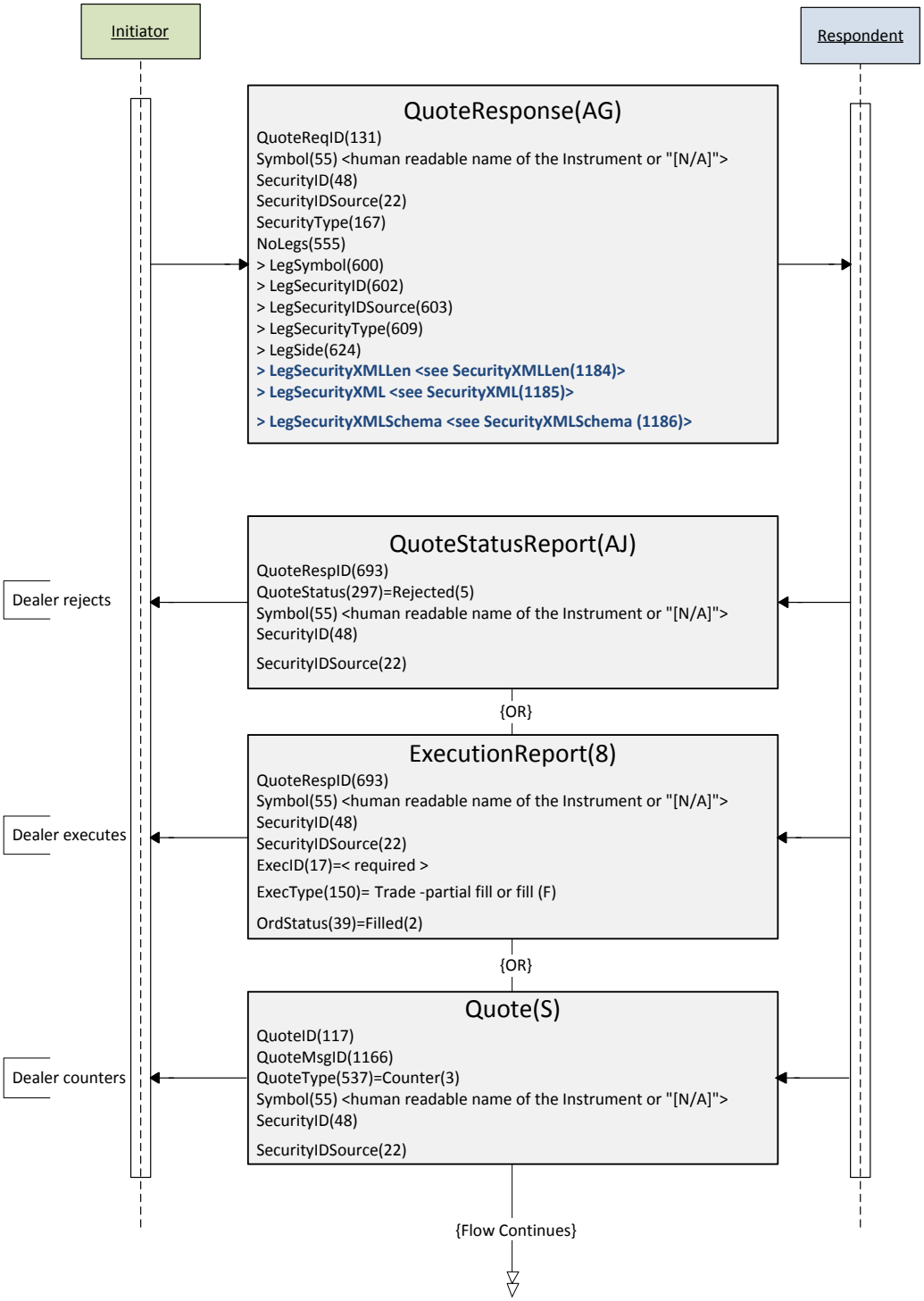
An additional LegSecurityXML component is proposed to be added to the InstrumentLeg component to support these scenarios. There are no changes to the actual quote/negotiation message flows.

The following diagrams illustrate the proposed message flow:

Non-Standard Multi-leg QuoteRequest: *The message flow below depicts a scenario where the Initiator requests a Quote for Non-Standard Multi-leg Instrument where one or more legs are Non-Standard outright.*



Non-Standard Multi-leg QuoteResponse: *The message flow below depicts a scenario where the Initiator sends QuoteResponse for a Non-Standard Multi-leg Instrument where one or more legs are Non-Standard outright Instrument.*



5 FIX Message Tables

No changes to messages

6 FIX component blocks

6.1 InstrumentLeg Component

InstrumentLeg Component	
Component Name	InstrumentLeg
Component Abbreviated Name (for FIXML)	Leg
Component Type	Common
Category	Block
Component Synopsis	<…*No Change*…>
Component Elaboration	<…*No Change*…>
To be finalized by FPL Technical Office	
Repository Component ID	

Component FIXML Abbreviation: <*Leg*>						
Tag	*Field Name*	*Req'd*	*ICR*	*Action*	*Mappings and Usage Comments*	*FIX Spec Comments*
600	LegSymbol	N				
601	LegSymbolSfx	N				
<...*truncated*...>						
620	LegSecurityDesc	N				
621	EncodedLegSecurity DescLen	N				
622	EncodedLegSecurity Sec	N				
Component <LegSecurityXML>		N		NEW		Embedded XML document describing the leg instrument.
623	LegRatioQty	N				
<...*truncated*...>						
</*Leg*>						

6.2 LegSecurityXML Component

LegSecurityXML Component	
Component Name	***LegSecurityXML***
Component Abbreviated Name (for FIXML)	***SecXML***
Component Type	XMLDataBlock
Category	Common
Component Synopsis	The LegSecurityXML component is used ~~for carrying security description or~~to provide a definition in an XML format ~~at the instrument leg level~~for the leg instrument. ~~See "Specifying an FpML product specification from within the FIX Instrument Block" for more information on using this component block with FpML as a guideline.~~
Component Elaboration	See "Specifying an FpML product specification from within the FIX Instrument Block" in Volume1 of the FIX Specification for more information on using this component block with FpML as a guideline.
To be finalized by FPL Technical Office	
Repository Component ID	2212

Component FIXML Abbreviation: *<SecXML>*						
Tag	*Field Name*	*Req'd*	*ICR*	*Action*	*Mappings and Usage Comments*	*FIX Spec Comments*
1871	LegSecurityXMLLen	N		NEW		Must be ~~set~~ provided if LegSecurityXML(1872) field is specified and must immediately precede it.
1872	LegSecurityXML	N		NEW	Removed the description as it is redundant with the DD.	~~XML payload or content describing the Security information.~~
1873	LegSecurityXMLSchema	N		NEW	Removed the description as it is redundant with the DD.	~~XML Schema used to validate the XML used to describe the Security.~~
</SecXML>						

6.3 UnderlyingInstrument Component

UnderlyingInstrument Component	
Component Name	UnderlyingInstrument
Component Abbreviated Name (for FIXML)	Undly
Component Type	Common
Category	Block
Component Synopsis	<…*No Change*…>
Component Elaboration	<…*No Change*…>
To be finalized by FPL Technical Office	
Repository Component ID	

Component FIXML Abbreviation: <*Undly*>						
Tag	*Field Name*	*Req'd*	*ICR*	*Action*	*Mappings and Usage Comments*	*FIX Spec Comments*
311	UnderlyingSymbol	N				
312	UnderlyingSymbolSfx	N				
<*...truncated...*>						
462	UnderlyingProduct	N				
Component <UnderlyingSecurityXML>		N		NEW		Embedded XML document describing the underlying instrument.
1039	UnderlyingSettlMethod	N				
315	UnderlyingPutOrCall	N				
</*Undly*>						

~~6.36.4~~ UnderlyingSecurityXML Component

UnderlyingSecurityXML Component	
Component Name	***UnderlyingSecurityXML***
Component Abbreviated Name (for FIXML)	***SecXML***
Component Type	XMLDataBlock
Category	Common
Component Synopsis	The UnderlyingSecurityXML component is used ~~for carrying security description or~~ to provide a definition in an XML format ~~at the~~for the underlying instrument ~~level~~. ~~See "Specifying an FpML product specification from within the FIX Instrument Block" for more information on using this component block with FpML as a guideline.~~
Component Elaboration	See "Specifying an FpML product specification from within the FIX Instrument Block" in Volume 1 of the FIX Specification for more information on using this component block with FpML as a guideline.
To be finalized by FPL Technical Office	
Repository Component ID	2213

Component FIXML Abbreviation: < *UndlySecXML* >						
Tag	*Field Name*	*Req'd*	*ICR*	*Action*	*Mappings and Usage Comments*	*FIX Spec Comments*
1874	UnderlyingSecurityXMLLen	N		NEW		Must be ~~set~~ provided if UnderlyingSecurityXML(1875) field is specified and must immediately precede it.
1875	UnderlyingSecurityXML	N		NEW	Removed description as it overlaps with DD	~~XML payload or content describing the Security information.~~
1876	UnderlyingSecurityXMLSchema	N		NEW	Removed description as it overlaps with DD	~~XML Schema used to validate the XML used to describe the Security.~~
</ *UndlySecXML* >						

6.5 Instrument Component

Change the usage description for SecurityXML component reference from "Embedded XML document describing security" to "Embedded XML document describing the instrument.

6.6 SecurtyXML Component

Revise the usage descriptions within the SecurityXML component to comply with guidelines and to be consistent with the usage descriptions in UnderlyingSecurityXML and LegSecurityXML

SecurityXML Component	
Component Name	***SecurityXML***
Component Abbreviated Name (for FIXML)	***SecXML***
Component Type	XMLDataBlock
Category	Common
Component Synopsis	The SecurityXML component is used to provide a definition in an XML format for the instrument. ~~The SecurityXML component is used for carrying security description or definition in an XML format. See "Specifying an FpML product specification from within the FIX Instrument Block" for more information on using this component block with FpML as a guideline.~~
Component Elaboration	See "Specifying an FpML product specification from within the FIX Instrument Block" in Volume 1 of the FIX Specification for more information on using this component block with FpML as a guideline.
To be finalized by FPL Technical Office	
Repository Component ID	1060

Component FIXML Abbreviation: <*SecXML* >						
Tag	*Field Name*	*Req'd*	*ICR*	*Action*	*Mappings and Usage Comments*	*FIX Spec Comments*
1184	SecurityXMLLen	N		CHANGE		Must be ~~set~~ provided if SecurityXML(1185) field is specified and must immediately precede it.
1185	UnderlyingSecurityXML	N		CHANGE	Removed description as it overlaps with DD	~~XML payload or content describing the Security information.~~
1186	UnderlyingSecurityXMLSchema	N		CHANGE	Removed description as it overlaps with DD	~~XML Schema used to validate the XML used to describe the Security.~~
</*SecXML* >						

Appendix A - Data Dictionary

Tag	Field Name	Action	Data type	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
1184	SecurityXMLLen	CHANGE	Length	The length of the SecurityXML(1185) data block.		
1185	SecurityXML	CHANGE	XMLData	~~Actual~~ XML ~~data stream describing~~definition for ~~a~~ the security~~, normally FpML~~.		
1186	SecurityXMLSchema	CHANGE	String	The schema used to validate the contents of SecurityXML(1185).		
1871	LegSecurityXMLLen	ADD	Length	The length of the LegSecurityXML(1872) data block.		LegSecurityXML component block
1872	LegSecurityXML	ADD	XMLData	~~Actual XML data stream describing~~XML definition for the leg security~~, normally FpML~~.		LegSecurityXML component block
1873	LegSecurityXMLSchema	ADD	String	The schema used to validate the contents of LegSecurityXML(1872).	@Schema	LegSecurityXML component block
1874	UnderlyingSecurityXMLLen	ADD	Length	The length of the UnderlyingSecurityXML(1875) data block.		UnderlyingSecurityXML component block
1875	UnderlyingSecurityXML	ADD	XMLData	~~Actual~~ XML ~~data stream describing~~definition for the underlying security~~, normally FpML~~.		UnderlyingSecurityXML component block
1876	UnderlyingSecurityXMLSchema	ADD	String	The schema used to validate the contents of UnderlyingSecurityXML(1875).	@Schema	UnderlyingSecurityXML component block

Appendix B - Glossary Entries

Term	Definition	Field where used
Initiator	The side that initiates the QuoteRequest or receives a Quote.	
Respondent	The side that provides a Quote or Stream of Quotes.	
Standard Instrument	An instrument already pre-defined by the Execution Venue	
Non-Standard Instrument	An instrument not pre-defined by the Execution Venue	
Outright Instrument	A single security instrument	

Appendix C – Abbreviations

Term	Proposed Abbreviation	Proposed Messages, Components, Fields where used

