FINANCIAL INFORMATION EXCHANGE PROTOCOL (FIX)

Version 4.4 with Errata 20030618

VOLUME 3 – FIX APPLICATION MESSAGES: PRE-TRADE

Includes Errata adjustments as of June 18, 2003

Errata Purpose:

This document includes a list of minor adjustments to the FIX 4.4 Specification document due to typographical errors or ambiguities. The nature and scope of Errata adjustments do not introduce new functionality, additional fields, new values for existing fields, or new messages. Regretably some functionality was introduced in FIX 4.4 which contained errors that required a new value or field on a specific message in order to make the intended functionality implementable. Any such exceptions to the "do not introduce", "additional fields", or "new messages" Errata rules were kept to a minimum using the "required to make the intended functionality implementable" rationale. The list of items has been reviewed and approved by the FIX Technical Committee and Steering Committees. Implementers of FIX version 4.4 should refer to this document to ensure the most consistent implementation and clearest understanding of the FIX protocol.

The specific adjustments made to the original FIX version 4.4 specification as a result of the Errata can be seen and printed via Microsoft Word's revision feature of this document. A separate document with an itemized list of changes is available via the FIX website.

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FIX APPLICATION MESSAGES: PRE-TRADE

Pre-trade messaging is characterized as messages which are typically communicated prior to the placement of an order.

The specific FIX pre-trade messaging categories are:

- 1. INDICATION
- 2. EVENT COMMUNICATIONS
- 3. QUOTATION / NEGOTIATION
- 4. MARKET DATA
- 5. SECURITY AND TRADING SESSION DEFINITION/STATUS

Descriptions and formats of the specific FIX pre-trade application messages follow.

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CATEGORY: INDICATION

Advertisements -

Advertisement messages are used to announce completed transactions. The advertisement message can be transmitted in various transaction types; NEW, CANCEL and REPLACE. All message types other than NEW modify the state of a previously transmitted advertisement identified in AdvRefID.

The advertisement message format is as follows:

Advertisement

Tag	Field Name	Req'd	Comments
	Standard Header Y		MsgType = 7
2	AdvId	Y	
5	AdvTransType	Y	
3	AdvRefID	N	Required for Cancel and Replace AdvTransType messages
compo	onent block <instrument></instrument>	Y	Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
555	NoLegs	N	Number of legs
			Identifies a Multi-leg Execution if present and non-zero.
→	component block <instrumentleg></instrumentleg>	N	Must be provided if Number of legs > 0
711	NoUnderlyings	N	Number of underlyings
→	component block <underlyinginstrumen t></underlyinginstrumen 	N	Must be provided if Number of underlyings > 0
4	AdvSide	Y	
53	Quantity	Y	
854	QtyType	N	
44	Price	N	
15	Currency	N	
75	TradeDate	N	
60	TransactTime	N	
58	Text	N	
354	EncodedTextLen	N	Must be set if EncodedText field is specified and must immediately precede it.
355	EncodedText	N	Encoded (non-ASCII characters) representation of the Text field in the encoded format specified via the MessageEncoding field.
149	URLLink	N	A URL (Uniform Resource Locator) link to additional information (i.e. <u>http://www.XYZ.com/research.html</u>)

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30	LastMkt	N	
336	TradingSessionID	N	
625	TradingSessionSubID	N	
	Standard Trailer	Y	

FIXML Definition for this message – see http://www.fixprotocol.org for details

Refer to FIXML element Adv

Deleted: <!ENTITY %
AdvertisementCustom "">¶
<!ENTITY %AdvertisementContent
"AdvID,AdvTransType,Instrument,AdvSi
de,Quantity,Price?,Currency?,TradeDate?
,TransactTime?,Text?,EncodedTextGrou
p?,
URLLink?,LastMkt?,TradingSessionID?,
TradingSessionSubID?
%AdvertisementCustom;">¶
<!ELEMENT Advertisement
(%AdvertisementContent;)>¶
<!ATTLIST Advertisement FIXTag
CDATA #FIXED '35"¶
DataType CDATA #FIXED 'String'¶
Value CDATA #FIXED '7'>

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Indications of Interest -

Indication of interest messages are used to market merchandise which the broker is buying or selling in either a proprietary or agency capacity. The indications can be time bound with a specific expiration value. Indications are distributed with the understanding that other firms may react to the message first and that the merchandise may no longer be available due to prior trade.

Indication messages can be transmitted in various transaction types; NEW, CANCEL, and REPLACE. All message types other than NEW modify the state of the message identified in IOIRefID.

The indication of interest message format is as follows:

Indication of Interest

	indication of interest						
Tag .	Field Name	Req'd	Comments				
,	Standard Header		MsgType = 6				
23	IOIid	Y					
28	IOITransType	Y					
26	IOIRefID	N	Required for Cancel and Replace IOITransType messages				
Compon <instrun< td=""><td></td><td>Y</td><td>Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"</td></instrun<>		Y	Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"				
compone <financ< td=""><td>ent block eingDetails></td><td>N</td><td>Insert here the set of "FinancingDetails" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"</td></financ<>	ent block eingDetails>	N	Insert here the set of "FinancingDetails" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"				
711	NoUnderlyings	N	Number of underlyings				
	component block <underlyinginstrumen t></underlyinginstrumen 	N	Must be provided if Number of underlyings > 0				
54	Side	Y	Side of Indication Valid values: 1 = Buy 2 = Sell 7 = Undisclosed (for IOIs) B = As Defined (for multilegs) C = Opposite (for multilegs)				
854	QtyType	N					
compone <order(< td=""><td>eent block QtyData></td><td><u>N</u></td><td>Insert here the set of _"Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES" The value zero is used if NoLegs repeating group is used Applicable if needed to express CashOrder Qty (tag 152)</td></order(<>	eent block QtyData>	<u>N</u>	Insert here the set of _"Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES" The value zero is used if NoLegs repeating group is used Applicable if needed to express CashOrder Qty (tag 152)				
27	IOIQty	Y	The value zero is used if NoLegs repeating group is used				
15	Currency	N					
		N	Insert here the set of "Stipulations" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"				
555	NoLegs	N	Required for multileg IOIs				

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→	compo <instr< th=""><th>onent block cumentLeg></th><th>N</th><th>Required for multileg IOIs For Swaps one leg is Buy and other leg is Sell</th></instr<>	onent block cumentLeg>	N	Required for multileg IOIs For Swaps one leg is Buy and other leg is Sell
→	682 LegIOIQty		N	Required for multileg IOIs and for each leg.
→	compe		N	
423	PriceT	ype	N	
44	Price		N	
62	Valid	JntilTime	N	
25	IOIQl	tyInd	N	
130	IOINa	turalFlag	N	
199	NoIO	Qualifiers	N	Required if any IOIQualifiers are specified. Indicates the number of repeating IOIQualifiers.
→	104	<i>IOIQualifier</i>	N	Required if NoIOIQualifiers > 0
58	Text		N	
354	EncodedTextLen		N	Must be set if EncodedText field is specified and must immediately precede it.
355	Encod	edText	N	Encoded (non-ASCII characters) representation of the Text field in the encoded format specified via the MessageEncoding field.
60	Transa	actTime	N	
149	URLL	ink	N	A URL (Uniform Resource Locator) link to additional information (i.e. http://www.XYZ.com/research.html)
215	NoRo	utingIDs	N	Required if any RoutingType and RoutingIDs are specified. Indicates the number within repeating group.
→	216	RoutingType	N	Indicates type of RoutingID. Required if NoRoutingIDs is > 0.
→	217	RoutingID	N	Identifies routing destination. Required if NoRoutingIDs is > 0.
1	component block <spreadorbenchmarkcurvedat a></spreadorbenchmarkcurvedat 		N	Insert here the set of "SpreadOrBenchmarkCurveData" (Fixed Income spread or benchmark curve) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
compo	onent blo	ock <yielddata></yielddata>	N	
	Standard Trailer		Y	

FIXML Definition for this message – see http://www.fixprotocol.org for details

Refer to FIXML element IOI

IndicationCustom "">¶
<!ENTITY % IndicationContent
"IOL_ID,IOL_TransType,Instrument,IOL_Side,QuantityType?,
IOL_Qty,PriceType?,Price?,Currency?,ValidUntilTime?,IOL_QltyInd?,IOL_Natural
Flag?,IOL_QualifierList?,Text?,EncodedTextGroup?,TransactTime?,URLLink?,RoutingList?,SpreadOrBenchmarkCurveData?, %IndicationCustom;">¶
<!ELEMENT Indication
(%IndicationContent;)>¶
<!ATTLIST Indication FIXTag CDATA
#FIXED '35¶
DataType CDATA #FIXED 'String'¶
Value CDATA #FIXED '6'>

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CATEGORY: EVENT COMMUNICATION

News -

The news message is a general free format message between the broker and institution. The message contains flags to identify the news item's urgency and to allow sorting by subject company (symbol). The News message can be originated at either the broker or institution side.

The news message format is as follows:

News

	1			
Tag	Field	Name	Req'd	Comments
	Standard Header		Y	MsgType = B
42	OrigT	ime	N	
61	Urgen	cy	N	
148	Headl	ine	Y	Specifies the headline text
358	Encod	edHeadlineLen	N	Must be set if EncodedHeadline field is specified and must immediately precede it.
359	Encod	edHeadline	N	Encoded (non-ASCII characters) representation of the Headline field in the encoded format specified via the MessageEncoding field.
215	NoRo	utingIDs	N	Required if any RoutingType and RoutingIDs are specified. Indicates the number within repeating group.
→	216	RoutingType	N	Indicates type of RoutingID. Required if NoRoutingIDs is > 0.
→	217	RoutingID	N	Identifies routing destination. Required if NoRoutingIDs is > 0.
146	NoRelatedSym		N	Specifies the number of repeating symbols (instruments) specified
→	compo <instr< td=""><td>onent block ument></td><td>N</td><td>Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"</td></instr<>	onent block ument>	N	Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
555	NoLeg	gs	N	Number of legs
				Identifies a Multi-leg Execution if present and non-zero.
→	compo <instr< td=""><td>onent block numentLeg></td><td>N</td><td>Must be provided if Number of legs > 0</td></instr<>	onent block numentLeg>	N	Must be provided if Number of legs > 0
711	NoUn	derlyings	N	Number of underlyings
→	component block <underlyinginstrument></underlyinginstrument>		N	Must be provided if Number of underlyings > 0
33	LinesOfText		Y	Specifies the number of repeating lines of text specified
→	58	Text	Y	Repeating field, number of instances defined in LinesOfText
- →-	354	EncodedTextLen	N	Must be set if EncodedText field is specified and must immediately precede it.

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→	355	EncodedText	N	Encoded (non-ASCII characters) representation of the Text field in the encoded format specified via the MessageEncoding field.
149	URLLink		N	A URL (Uniform Resource Locator) link to additional information (i.e. http://www.XYZ.com/research.html)
95	RawDataLength		N	
96	RawData		N	
	Standard Trailer		Y	

FIXML Definition for this message – see http://www.fixprotocol.org for details

Refer to FIXML element News

Deleted: <!ENTITY % NewsCustom
"">¶
<!ENTITY % NewsContent
"OrigTime?,Urgency?,Headline,Encoded
HeadlineGroup?,RoutingList?,
InstrumentList?,LinesOfTextList,URLLin
k?,RawData? %NewsCustom;">¶
<!ELEMENT News (%NewsContent;)>¶
<!ATTLIST News FIXTag CDATA
#FIXED '35¶
DataType CDATA #FIXED 'String'¶
Value CDATA #FIXED 'B'>

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Email -

The email message is similar to the format and purpose of the News message, however, it is intended for private use between two parties.

The email message format is as follows:

Email

				Eman	
Tag	Field Name		Req'd	Comments	
	Standard Header		Y	MsgType = C	
164	Email	ΓhreadID	Y	Unique identifier for the email message thread	
94	Email	Гуре	Y		
42	OrigTi	ime	N		
147	Subjec	t	Y	Specifies the Subject text	
356	Encod	edSubjectLen	N	Must be set if EncodedSubject field is specified and must immediately precede it.	
357	Encod	edSubject	N	Encoded (non-ASCII characters) representation of the Subject field in the encoded format specified via the MessageEncoding field.	
215	NoRoi	utingIDs	N	Required if any RoutingType and RoutingIDs are specified. Indicates the number within repeating group.	
→	216	RoutingType	N	Indicates type of RoutingID. Required if NoRoutingIDs is > 0.	
→	217	RoutingID	N	Identifies routing destination. Required if NoRoutingIDs is > 0.	
146	NoRel	atedSym	N	Specifies the number of repeating symbols (instruments) specified	
>	component block <instrument></instrument>		N	Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"	
711	NoUnd	derlyings	N	Number of underlyings	
>		nent block erlyingInstrument>	N	Must be provided if Number of underlyings > 0	
555	NoLeg	ţs.	N	Number of legs	
				Identifies a Multi-leg Execution if present and non-zero.	
→	_	nent block umentLeg>	N	Must be provided if Number of legs > 0	
37	7 OrderID		N		
11	11 ClOrdID		N		
33	Lines	OfText	Y	Specifies the number of repeating lines of text specified	
, >	58	Text	Y	Repeating field, number of instances defined in LinesOfText	
→	354 EncodedTextLen		N	Must be set if EncodedText field is specified and must immediately precede it.	

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→	355	EncodedText	N	Encoded (non-ASCII characters) representation of the Text field in the encoded format specified via the MessageEncoding field.
95	95 RawDataLength		N	
96	RawData		N	
	Standard Trailer		Y	

FIXML Definition for this message – see http://www.fixprotocol.org for details

Refer to FIXML element Email

Deleted: <!ENTITY % EmailCustom

<!ENTITY % EmailContent

"EmailThreadID,EmailType,OrigTime?,S ubject,EncodedSubjectGroup?,EncodedS ubject?,RoutingList?,InstrumentList?,Ord tary (ClordID?, LinesOfTextList, RawData? %EmailCustom; >¶
<!ELEMENT Email (%EmailContent;)>¶
<!ATTLIST Email FIXTag CDATA

#FIXED '35'¶

DataType CDATA #FIXED 'String'¶
Value CDATA #FIXED 'C' >

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CATEGORY: QUOTATION / NEGOTIATION

The quotation messages fall into two main sub-categories – those used for quoting in single instruments 'Single product quoting' and those used to quote on multiple instruments such as option series - 'Mass quoting'

Within the 'single product quoting' suite of messages three business models have been identified

- Indicative quoting. the predominant business model for retail quoting, where the expected response to a
 quote is a 'previously quoted' order which may be accepted or rejected. In the retail model the quote may
 be preceded by a Quote Request
- Tradeable quoting a model where the response to a quote may be an execution (rather than an order). A common model where participants are posting quotes to an exchange. Quote may be issued in response to a Quote Request in a 'quote on demand' market
- Restricted Tradeable quoting as per Tradeable quoting but the response to a quote may be either an
 execution or an order depending on various parameters.

The Negotiation (a.k.a. counter quoting) dialog is also supported. The Negotiation dialog may begin with either an indicative quote or a tradeable quote. For specific usage guidance for Fixed Income negotiation and counter quotes using the quotation messages, see *Volume 7 – PRODUCT: FIXED INCOME*

The common thread linking the models is the use of the quote message

Quote Request -

In some markets it is the practice to request quotes from brokers prior to placement of an order. The quote request message is used for this purpose. This message is commonly referred to as an Request For Quote (RFQ)

Quotes can be requested on specific securities, on specified stipulations when specific security is not known or forex rates. The quote request message can be used to request quotes on single products or multiple products.

Securities quotes can be requested as either market quotes or for a specific quantity and side. If OrderQty and Side are absent, a market-style quote (bid x offer, size x size) will be returned.

In the tradeable and restricted tradeable quote models the Quote Request may be preceded by the RFQ Request message described further below.

For tradeable quote requests it is possible to specify the time period in which the request is valid for and the time period which the resulting quote must be valid for.

If the message is used for foreign exchange, conventions for identifying the forex transaction are as follows:

- The forex Symbol is defined in Electronic Broking Services, Ltd. (see http://www.ebs.com) format: Great.
 - Rates are expressed as "currency1 in currency2" (or "currency2 per currency1") and are calculated as CCY2 divided by CCY1 (NOT CCY1 divided by CCY2)
 - e.g. "GBP/USD" represents a rate expressed as USD per GBP, "USD/JPY" represents a rate expressed as JPY per USD, etc.).
 - CCY1 and CCY2 are ISO currency codes
- The value of the Currency field represents the denomination of the quantity fields (e.g. JPY represents quantity of JPY).
- See VOLUME 7 PRODUCT: FOREIGN EXCHANGE
- Forex quotes can be requested as indicative or at a specific quantity level. If an indicative quote is requested (OrderQty and Side are absent), the broker has discretion to quote at either a specific trade level and side or to provide an indicative quote at the mid-point of the spread. The broker can also choose to respond to an indicative quote by sending multiple quote messages specifying various levels and sides.

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Quote Request

		1	×	dote Request
Tag	Field	Name	Req'd	Comments
	Standard Header		Y	MsgType = R
131	Quote	eReqID	Y	
644	RFQI	ReqID	N	For tradeable quote model – used to indicate to which RFQ Request this Quote Request is in response.
11	ClOre	dID	N	Required when QuoteType is Tradeable and the OrdType is Limit.
528	Orde	rCapacity	N	
146	NoRe	elatedSym	Y	Number of related symbols (instruments) in Request
→	comp	onent block <instrument></instrument>	Y	Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
→		oonent block ancingDetails	N	Insert here the set of "FinancingDetails" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
→	711	NoUnderlyings	N	Number of underlyings
<u></u>	<u></u>	<u>component</u> <u>block</u> <u><underlyinginstrument></underlyinginstrument></u>	<u>N</u>	Must be provided if Number of underlyings > 0
→	140	PrevClosePx	N	Useful for verifying security identification
→	303	QuoteRequestType	N	Indicates the type of Quote Request (e.g. Manual vs. Automatic) being generated.
→	537	QuoteType	N	Type of quote being requested from counterparty or market (e.g. Indicative, Firm, or Restricted Tradeable)
\rightarrow	336	TradingSessionID	N	
\rightarrow	625	TradingSessionSubID	N	
→	229	TradeOriginationDate	N	
>	54	Side	N	If OrdType = "Forex - Swap", should be the side of the future portion of a F/X swap. The absence of a side implies that a two-sided quote is being requested.
				For single instrument use.
→	854	QtyType	N	
→	component block <orderqtydata></orderqtydata>		N	Required for single instrument quoting. Required for Fixed Income if QuoteType is Tradeable.
→	63	SettlType	N	
' →	64	SettlDate *	<u>N</u>	Can be used (e.g. with forex quotes) to specify the desired "value date"

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			_		
→	193	SettlD	ate2	N	Can be used with OrdType = "Forex - Swap" to specify the "value date" for the future portion of a F/X swap.
→	192	OrderQty2		N	Can be used with OrdType = "Forex - Swap" to specify the order quantity for the future portion of a F/X swap.
→	15	Curre	ncy	N	Can be used to specify the desired currency of the quoted price. May differ from the 'normal' trading currency of the instrument being quote requested.
→		onent ulations	block s>	N	Insert here the set of "Stipulations" (repeating group of Fixed Income stipulations) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
→	1	Accou	nt	N	
→	660	AcctIL	OSource	N	
→	581	Accou	ntType	N	
→	555	NoLeg		N	Required for multileg quotes.
→	→	compo		N	Required for multileg quotes
		-	umentLeg>		For Swaps one leg is Buy and other leg is Sell
→	→	687	LegQty	N	
→	→	690	LegSwapType	N	
→	→	587	LegSettlType	N	
→	→	588	LegSett <mark>l</mark> Date	N	
→	→	compo		N	
→	→	compo <neste< th=""><th>onent block edParties></th><th>N</th><th></th></neste<>	onent block edParties>	N	
→	→	compo <legb ta></legb 	nent block BenchmarkCurveDa	N	
→	735	NoQue	oteQualifiers	N	
→	→	695	QuoteQualifier	N	Required if NoQuoteQualifiers > 1
→	692		PriceType	N	Initiator can specify the price type the quote needs to be quoted at. If not specified, the Respondent has option to specify how quote is quoted.
→	40	OrdTy	ре	N	Can be used to specify the type of order the quote request is for
→	62	ValidU	IntilTime	N	Used by the quote initiator to indicate the period of time the resulting Quote must be valid until
→	126	Expire	eTime	N	The time when Quote Request will expire.
→	60	Transa	actTime	N	Time transaction was entered

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→	compone <spread ta></spread 	ent block IOrBenchmarkCurveDa	N	Insert here the set of "SpreadOrBenchmarkCurveData" (Fixed Income spread or benchmark curve) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
→	423 Pi	гісеТуре	N	
→	44 P	rice	N	Quoted or target price
→	640 Pi	rice2	N	Can be used with OrdType = "Forex - Swap" to specify the Quoted or target price for the future portion of a F/X swap.
→	component block <yielddata></yielddata>		N	Insert here the set of "YieldData" (yield-related) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
→	compone	ent block <parties></parties>	N	
58	Text		N	
354	EncodedTextLen		N	Must be set if EncodedText field is specified and must immediately precede it.
355	Encoded	dText	N	Encoded (non-ASCII characters) representation of the Text field in the encoded format specified via the MessageEncoding field.
	Standard	d Trailer	Y	

FIXML Definition for this message – see http://www.fixprotocol.org for details

Refer to FIXML element QuotReq

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QuoteReqCustom "">¶
<IENTITY % QuoteReqContent
"QuoteReqID,RFQReqID?,
InstrumentList, PrevClosePx?
QuoteRequestType?, QuoteType?,
TradingSessionIDP;
TradeOriginationDate?,StipulationsList?,
Side?,QuantityType?, OrderQty?,
CashOrderQty?,SettlType?,
SettlDate?,OrdType?, SettlDate2?,
OrderQty2?, ExpireTime?,
TransactTime?, Currency?,
SpreadOrBenchmarkCurveData?,
PriceType?, Price?,Price2?, YieldData?,
Text?, EncodedTextGroup?
%QuoteReqCustom;">¶
<IBLEMENT QuoteReq
(%QuoteReqContent;)>¶
<IATTLIST QuoteReq FIXTag CDATA
#FIXED '35*¶
DataType CDATA #FIXED 'String'¶
Value CDATA #FIXED 'R'>

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Quote Response

The Quote Response message is used to respond to a IOI message or Quote message. It is also used to counter a Quote or end a negotiation dialog.

For usage of this message in a negotiation or counter quote dialog in the fixed income space see Volume 7, Fixed Income.

The Quote Response message format is as follows:

Quote Response

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = AJ
693	QuoteRespID	Y	Unique ID as assigned by the Initiator
117	QuoteID	N	Required only when responding to a Quote.
694	QuoteRespType	Y	Type of response this Quote Response is.
11	ClOrdID	N	Required only when QuoteRespType is 1 (Hit/Lift) or 2 (Counter quote).
528	OrderCapacity	N	
23	IOIid	N	Required only when responding to an IOI.
537	QuoteType	N	Default is Indicative.
735	NoQuoteQualifiers	N	
→	695 QuoteQualifier	N	Required if NoQuoteQualifiers > 1
compo	component block <parties></parties>		Insert here the set of "Parties" (firm identification) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
336	TradingSessionID	N	
625	TradingSessionSubID	N	
compo	component block <instrument></instrument>		Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
			For multilegs supply minimally a value for Symbol (55).
component block <financingdetails></financingdetails>		N	Insert here the set of "FinancingDetails" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
			For multilegs supply minimally a value for Symbol (55).
711	NoUnderlyings	N	Number of underlyings
→	component block <underlyinginstrument></underlyinginstrument>	N	Must be provided if Number of underlyings > 0
54	Side	N	Required when countering a single instrument quote or "hit/lift" an IOI or Quote.

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component block <orderqtydata></orderqtydata>			N	Insert here the set of "OrderQtyData" fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES" Required when countering a single instrument quote or "hit/lift"
	_			an IOI or Quote.
63	SettlT	ype	N	
64	SettlD	ate	N	Can be used with forex quotes to specify a specific "value date"
193	SettlD	ate2	N	Can be used with OrdType = "Forex - Swap" to specify the "value date" for the future portion of a F/X swap.
192	Order	Qty2	N	Can be used with OrdType = "Forex - Swap" to specify the order quantity for the future portion of a F/X swap.
15	Currer	ncy	N	Can be used to specify the currency of the quoted prices. May differ from the 'normal' trading currency of the instrument being quoted
compo	onent blo	ock <stipulations></stipulations>	N	Optional
1	Account		N	
660	AcctIDSource		N	Used to identify the source of the Account code.
581	AccountType		N	Type of account associated with the order (Origin)
555	NoLegs		N	Required for multileg quote response
→	component block		N	Required for multileg quote response
	<instr< td=""><td>rumentLeg></td><td></td><td>For Swaps one leg is Buy and other leg is Sell</td></instr<>	rumentLeg>		For Swaps one leg is Buy and other leg is Sell
→	687	LegQty	N	
→	690	LegSwapType	N	
→	587	LegSettlType	N	
→	588	LegSettlDate	N	
→	component block <legstipulations></legstipulations>		N	Insert here the set of "LegStipulations" fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
→	component block <nestedparties></nestedparties>		N	Insert here the set of "Nested Parties" (firm identification "nested" within additional repeating group) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
→	686	LegPriceType	N	Represents type of price presented in LegBidPx and LegOfferPx. Required if LegBidPx or LegOfferPx is present.
→	681	LegBidPx	N	
→	684 LegOfferPx		N	
→	1 = 8 = 3,5 = = 1		N	Insert here the set of "LegBenchmarkCurveData" (Fixed Income benchmark curve) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
				To specify the Leg benchmark when the legs are priced differently, e.g. Euro Corporates.

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132	BidPx	N	If F/X quote, should be the "all-in" rate (spot rate adjusted for forward points). Note that either BidPx, OfferPx or both must be specified.
133	OfferPx	N	If F/X quote, should be the "all-in" rate (spot rate adjusted for forward points). Note that either BidPx, OfferPx or both must be specified.
645	MktBidPx	N	Can be used by markets that require showing the current best bid and offer
646	MktOfferPx	N	Can be used by markets that require showing the current best bid and offer
647	MinBidSize	N	Specifies the minimum bid size. Used for markets that use a minimum and maximum bid size.
134	BidSize	N	Specifies the bid size. If MinBidSize is specified, BidSize is interpreted to contain the maximum bid size.
648	MinOfferSize	N	Specifies the minimum offer size. If MinOfferSize is specified, OfferSize is interpreted to contain the maximum offer size.
135	OfferSize	N	Specified the offer size. If MinOfferSize is specified, OfferSize is interpreted to contain the maximum offer size.
62	ValidUntilTime	N	The time when the quote will expire.
			Required for FI when the QuoteRespType is 2 (Counter quote) to indicate to the Respondent when the counter offer is valid until.
188	BidSpotRate	N	May be applicable for F/X quotes
190	OfferSpotRate	N	May be applicable for F/X quotes
189	BidForwardPoints	N	May be applicable for F/X quotes
191	OfferForwardPoints	N	May be applicable for F/X quotes
631	MidPx	N	
632	BidYield	N	
633	MidYield	N	
634	OfferYield	N	
60	TransactTime	N	
40	OrdType	N	Can be used to specify the type of order the quote is for.
642	BidForwardPoints2	N	Bid F/X forward points of the future portion of a F/X swap quote added to spot rate. May be a negative value
643	OfferForwardPoints2	N	Offer F/X forward points of the future portion of a F/X swap quote added to spot rate. May be a negative value
656	SettlCurrBidFxRate	N	Can be used when the quote is provided in a currency other than the instrument's 'normal' trading currency. Applies to all bid prices contained in this quote message

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	<u> </u>		
657	SettlCurrOfferFxRate	N	Can be used when the quote is provided in a currency other than the instrument's 'normal' trading currency. Applies to all offer prices contained in this quote message
156	SettlCurrFxRateCalc	N	Can be used when the quote is provided in a currency other than the instruments trading currency.
12	Commission	<u>N</u>	Can be used to show the counterparty the commission associated with the transaction.
13	<u>CommType</u>	<u>N</u>	Can be used to show the counterparty the commission associated with the transaction.
582	CustOrderCapacity	N	For Futures Exchanges
100	ExDestination	N	Used when routing quotes to multiple markets
58	Text	N	
354	EncodedTextLen	N	Must be set if EncodedText field is specified and must immediately precede it.
355	55 EncodedText N		Encoded (non-ASCII characters) representation of the Text field in the encoded format specified via the MessageEncoding field.
44	Price	N	
423	PriceType	N	
component block <spreadorbenchmarkcurvedata></spreadorbenchmarkcurvedata>		N	Insert here the set of "SpreadOrBenchmarkCurveData" fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
compo	onent block <yielddata></yielddata>	N	Insert here the set of "YieldData" fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
	Standard Trailer	Y	

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FIXML Definition for this message – see http://www.fixprotocol.org for details

Refer to FIXML element QuotRsp

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Quote Request Reject -

The Quote Request Reject message is used to reject Quote Request messages for all quoting models.

The quote request reject message format is as follows:

Quote Request Reject

	Quote Request Reject					
Tag	Field	Name	Req'd	Comments		
	Standard Header		Y	MsgType = AG		
131	Quote	eReqID	Y			
644	RFQI	ReqID	N	For tradeable quote model – used to indicate to which RFQ Request this Quote Request is in response.		
658	Quote	eRequestRejectReason	Y	Reason Quote was rejected		
146	NoRe	elatedSym	Y	Number of related symbols (instruments) in Request		
→	comp	onent block <instrument></instrument>	Y	Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"		
→	component block <financingdetails></financingdetails>		N	Insert here the set of "FinancingDetails" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"		
→	711	NoUnderlyings	N	Number of underlyings		
<u></u>	<u></u>	<u>component</u> <u>block</u> <u><underlyinginstrument></underlyinginstrument></u>	<u>N</u>	Must be provided if Number of underlyings >		
→	140	PrevClosePx	N	Useful for verifying security identification		
→	303 QuoteRequestType		N	Indicates the type of Quote Request (e.g. Manual vs. Automatic) being generated.		
→	537 QuoteType		N	Type of quote being requested from counterparty or market (e.g. Indicative, Firm, or Restricted Tradeable)		
→	336 TradingSessionID		N			
→	625	TradingSessionSubID	N			
→	229	TradeOriginationDate	N			
→	54	Side	N	If OrdType = "Forex - Swap", should be the side of the future portion of a F/X swap. The absence of a side implies that a two-sided quote is being requested.		
				Required if specified in Quote Request message.		
→	854 QtyType		N			
→	component block <orderqtydata></orderqtydata>		N	Insert here the set of "OrderQytData" fields defined in "COMMON COMPONENETS OF APPLICATION MESSAGES"		
V		▼		Required_if_component_is_specified_in_Quote_Request_ message.		
→	63	SettlType	N			

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→	64	SettlD	SettlDate		Can be used (e.g. with forex quotes) to specify the desired "value date"
→	193	SettlD	ate2	N	Can be used with OrdType = "Forex - Swap" to specify the "value date" for the future portion of a F/X swap.
→	192	Order	Qty2	N	Can be used with OrdType = "Forex - Swap" to specify the order quantity for the future portion of a F/X swap.
→	15	Curre	ncy	N	Can be used to specify the desired currency of the quoted price. May differ from the 'normal' trading currency of the instrument being quote requested.
→		ponent ulation	block s>	N	Insert here the set of "Stipulations" (repeating group of Fixed Income stipulations) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
→	1	Accou	int	N	
→	660	AcctIl	DSource	N	
→	581	Accou	<i>intType</i>	N	
→	555	NoLeg	gs	N	Required for multileg quote request rejects
→	→	compo	onent block	N	Required for multileg quote request rejects
		<instrumentleg></instrumentleg>			For Swaps one leg is Buy and other leg is Sell
→	→	687	LegQty	N	
→	→	690	LegSwapType	N	
→	→	587	LegSettlType	N	
→	→	588	LegSettlDate	N	
→	→	component block <legstipulations></legstipulations>		N	
→	→	compo <nesto< th=""><th>onent block edParties></th><th>N</th><th></th></nesto<>	onent block edParties>	N	
→	>	component block <legbenchmarkcurveda ta></legbenchmarkcurveda 		N	
→	735	NoQu	oteQualifiers	N	
→	→	695	QuoteQualifier	N	Required if NoQuoteQualifiers > 1
→	692	QuotePriceType		N	Initiator can specify the price type the quote needs to be quoted at. If not specified, the Respondent has option to specify how quote is quoted.
→	40	OrdTy	pe	N	Can be used to specify the type of order the quote request is for
→	126	Expire	eTime	N	The time when Quote Request will expire.
→	60	Trans	actTime	N	Time transaction was entered

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→		oonent block eadOrBenchmarkCurveDa	N	Insert here the set of "SpreadOrBenchmarkCurveData" (Fixed Income spread or benchmark curve) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
→	423	PriceType	N	
→	44	Price	N	Quoted or target price
→	640 Price2		N	Can be used with OrdType = "Forex - Swap" to specify the Quoted or target price for the future portion of a F/X swap.
→	comp	oonent block <yielddata></yielddata>	N	Insert here the set of "YieldData" (yield-related) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
→	comp	oonent block <parties></parties>	N	Insert here the set of "Parties" (firm identification) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
58	Text		N	
354	EncodedTextLen		N	Must be set if EncodedText field is specified and must immediately precede it.
355	Enco	dedText	N	Encoded (non-ASCII characters) representation of the Text field in the encoded format specified via the MessageEncoding field.
	Stand	lard Trailer	Y	

FIXML Definition for this message – see http://www.fixprotocol.org for details

Refer to FIXML element QuotReqRej

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QuoteReqRejectCustom "">¶
<!ENTITY % QuoteReqRejectContent
"QuoteReqID,RFQReqID?,QuoteRequest
RejectReason,QuoteReqRejList?
,Text?,EncodedTextGroup?
%QuoteReqRejectCustom;">¶
<!ELEMENT QuoteReqReject
(%QuoteReqRejectContent;)>¶
<!ATTLIST QuoteReqReject FIXTag
CDATA #FIXED '35*¶
DataType CDATA #FIXED 'String'¶
Value CDATA #FIXED 'AG'>

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RFQ Request -

In tradeable and restricted tradeable quoting markets – Quote Requests are issued by counterparties interested in ascertaining the market for an instrument. Quote Requests are then distributed by the market to liquidity providers who make markets in the instrument. The RFQ Request is used by liquidity providers to indicate to the market for which instruments they are interested in receiving Quote Requests. It can be used to register interest in receiving quote requests for a single instrument or for multiple instruments

The RFQ Request message format is as follows:

RFQ Request

	Ti Ç Tuquesi						
Tag	Field Name		Req'd	Comments			
	Stana	lard Header	Y	MsgType = AH			
644	RFQI	ReqID	Y				
146	NoRe	elatedSym	Y	Number of related symbols (instruments) in Request			
→		onent block rument>	Y	Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"			
→	711	NoUnderlyings	N	Number of underlyings			
<u>→</u>	<u></u>	component block < <u>UnderlyingInstrum</u> ent>	<u>N</u>	Must be provided if Number of underlyings > 0			
→	555	NoLegs	N	Number of legs Identifies a Multi-leg Execution if present and non-zero.			
<u></u>	<u></u>	component block <instrumentleg></instrumentleg>	<u>N</u>	Must be provided if Number of legs > 0			
→	140	PrevClosePx	N	Useful for verifying security identification			
→	303	QuoteRequestType	N	Indicates the type of Quote Request (e.g. Manual vs. Automatic) being generated.			
→	537	QuoteType	N	Type of quote being requested from counterparty or market (e.g. Indicative, Firm, or Restricted Tradeable)			
→	336	TradingSessionID	N				
→	625 TradingSessionSubI		N				
263	SubscriptionRequestType		N	Used to subscribe for Quote Requests that are sent into a market			
	Stana	lard Trailer	Y				

FIXML Definition for this message – see http://www.fixprotocol.org for details

Refer to FIXML element RFQReq

Tradeable Quote Model - Using the RFQ Request

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RFQRequestCustom "">¶
<!ENTITY % RFQRequestContent
"RFQReqID,RFQReqList,SubscriptionRe
questType? %RFQRequestCustom;">¶
<!ELEMENT RFQRequest
(%RFQRequestContent;)>¶
<!ATTLIST RFQRequest FIXTag
CDATA #FIXED '35"
DataType CDATA #FIXED 'String'¶
Value CDATA #FIXED 'AH'>

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In the quote on demand model – markets are not necessarily available until someone interested in the market generates a request.

First Party		Market		Second Party (usually market maker or specialist)
			←	RFQ Request
				Subscribes for Quote Requests for instruments in which party is interested in making markets
Quote Request	\rightarrow			
Submits Quote Requests for instruments				
		Quote Requests are distributed to subscribers	→	Receives Quote Request
			←	Quote
				Sends Quote in response to Quote Request
	←	Market Data		
		Quote results in change to market – causing Market Data to be distributed		

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Quote -

The Quote message is used as the response to a Quote Request or a Quote Response message in both indicative, tradeable, and restricted tradeable quoting markets.

In tradeable and restricted tradeable quoting models, the market maker sends quotes into a market as opposed to sending quotes directly to a counterparty.

For Fixed Income in the indicative and tradeable quoting models, the quotes are typically sent directly to an interested counterparty as opposed to a market place. See Volume 7 – PRODUCT: FIXED INCOME for specific descriptions and usage details.

The quote message can be used to send unsolicited quotes in both indicative, tradeable, and restricted tradeable quoting markets.

The quote message contains a quote for a single product.

If the issuer of the quote requires a response (e.g. notification that the quote message has been accepted) then the QuoteResponseLevel field should be populated on the quote message – the response would be made using the Quote Status Report message

The quote should not be used in tradeable and restricted tradeable quoting markets, such as electronic trading systems, to broadcast quotes to market participants. The recommended approach to reporting market state changes that result from quotes received by a market is to use the market data messages.

Quotes supplied as the result of a Quote Request message will specify the appropriate QuoteReqID, unsolicited quotes can be identified by the absence of a QuoteReqID.

If the message is used for foreign exchange, conventions for identifying the forex transaction are as follows:

The forex Symbol is defined in <u>Electronic Broking Services, Ltd. (see http://www.ebs.com)</u> format: "CCY1/CCY2".

• Rates are expressed as "currency1 in currency2" (or "currency2 per currency1") and are calculated as

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- e.g. "GBP/USD" represents a rate expressed as USD per GBP, "USD/JPY" represents a rate expressed as JPY per USD, etc.).
- CCY1 and CCY2 are ISO currency codes
- The value of the Currency field represents the denomination of the quantity fields (e.g. JPY represents quantity of JPY).
- See VOLUME 7 PRODUCT: FOREIGN EXCHANGE

CCY2 divided by CCY1 (**NOT** CCY1 divided by CCY2)

Orders can be generated based on Quotes. Quoted orders include the QuoteID and are OrdType=Previously Quoted

The time in force for a quote is determined by agreement between counterparties.

A quote can be canceled either using the Quote Cancel message or by sending a quote message with bid and offer prices and sizes all set to zero (BidPx, OfferPx, BidSize, OfferSize)

The quote message format is as follows:

Quote

Standard Header Y MsgType = S Deleted: Deleted: 2	√ Tag	Field Name	Rea'd	Comments		Deleted: January 24, 2000
Standard Header Y MsgType = S Peleted; 2	VI ug	Lieu vane	Regu	Commens	4	Deleted:
		Standard Header	Y	MsgType = S	``	Deleted: 2

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131	QuoteReqID		N	Required when quote is in response to a Quote Request message
117	QuoteID		Y	
693	QuoteR	espID	N	Required when responding to the Quote Response message. The counterparty specified ID of the Quote Response message.
537	QuoteT	ype	N	Quote Type
	Quote 1 ype			If not specified, the default is an indicative quote
735	NoQuot	teQualifiers	N	
→	695	QuoteQualifier	N	Required if NoQuoteQualifiers > 1
301	QuoteR	esponseLevel	N	Level of Response requested from receiver of quote messages.
comp	onent blo	ock <parties></parties>	N	Insert here the set of "Parties" (firm identification) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
336	Trading	gSessionID	N	
625	Trading	gSessionSubID	N	
component block <instrument></instrument>		Y	Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"	
comp	component block <financingdetails></financingdetails>		N	Insert here the set of "FinancingDetails" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
711	NoUnderlyings		N	Number of underlyings
→		nent block rlyingInstrument>	N	Must be provided if Number of underlyings > 0
54	Side		N	Required for Tradeable or Counter quotes of single instruments
comp	onent blo	ock <orderqtydata></orderqtydata>	N	Required for Tradeable quotes or Counter quotes of single instruments
63	SettlTy	pe	N	
64	SettlDa	ite	N	Can be used with forex quotes to specify a specific "value date"
193	SettlDa	ite2	N	Can be used with OrdType = "Forex - Swap" to specify the "value date" for the future portion of a F/X swap.
192	2 OrderQty2		N	Can be used with OrdType = "Forex - Swap" to specify the order quantity for the future portion of a F/X swap.
15	Curren	cy	N	Can be used to specify the currency of the quoted prices. May differ from the 'normal' trading currency of the instrument being quoted
Сотр	onent bl	ock <stipulations></stipulations>	N	Insert here the set of "Stipulations" (repeating group of Fixed Income stipulations) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
1	Accour	nt	N	

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660	AcctIDSource		N	
581	AccountType		N	Type of account associated with the order (Origin)
555	NoLegs		N	Required for multileg quotes
→	component block <instrumentleg></instrumentleg>		ck N	Required for multileg quotes
				For Swaps one leg is Buy and other leg is Sell
→	687	LegQty	N	
→	690	LegSwapType	N	
→	587	LegSettlType	N	
→	588	LegSettlDate	N	
→	compon <legsti< th=""><th>ent blo pulations></th><th>ck N</th><th></th></legsti<>	ent blo pulations>	ck N	
→	compon <nested< th=""><th>ent blo Parties></th><th>ck N</th><th></th></nested<>	ent blo Parties>	ck N	
→	686	LegPriceType	N	Code to represent type of price presented in LegBidPx and LegOfferPx. Required if LegBidPx or PegOfferPx is present.
→	681	LegBidPx	N	
→	684	LegOfferPx	N	
→	component block <legbenchmarkcurvedata></legbenchmarkcurvedata>		ck N	
132	32 BidPx		N	If F/X quote, should be the "all-in" rate (spot rate adjusted for forward points). Note that either BidPx, OfferPx or both must be specified.
133	OfferPx		N	If F/X quote, should be the "all-in" rate (spot rate adjusted for forward points). Note that either BidPx, OfferPx or both must be specified.
645	MktBidPx		N	Can be used by markets that require showing the current best bid and offer
646	MktOfferPx		N	Can be used by markets that require showing the current best bid and offer
647	MinBidSize		N	Specifies the minimum bid size. Used for markets that use a minimum and maximum bid size.
134	BidSize		N	Specifies the bid size. If MinBidSize is specified, BidSize is interpreted to contain the maximum bid size.
648	MinOfferSize		N	Specifies the minimum offer size. If MinOfferSize is specified, OfferSize is interpreted to contain the maximum offer size.
135	OfferSize		N	Specified the offer size. If MinOfferSize is specified, OfferSize is interpreted to contain the maximum offer size.
62	ValidUntilTime		N	The time when the quote will expire
188	BidSpot	Rate	N	May be applicable for F/X quotes
190	OfferSpotRate		N	May be applicable for F/X quotes

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189	BidForwardPoints	N	May be applicable for F/X quotes
191	OfferForwardPoints	N	May be applicable for F/X quotes
631	631 MidPx		
632	BidYield	N	
633	MidYield	N	
634	OfferYield	N	
60	TransactTime	N	
40	OrdType	N	Can be used to specify the type of order the quote is for
642	BidForwardPoints2	N	Bid F/X forward points of the future portion of a F/X swap quote added to spot rate. May be a negative value
643	OfferForwardPoints2	N	Offer F/X forward points of the future portion of a F/X swap quote added to spot rate. May be a negative value
656	656 SettlCurrBidFxRate		Can be used when the quote is provided in a currency other than the instrument's 'normal' trading currency. Applies to all bid prices contained in this quote message
657	657 SettlCurrOfferFxRate		Can be used when the quote is provided in a currency other than the instrument's 'normal' trading currency. Applies to all offer prices contained in this quote message
156	156 SettlCurrFxRateCalc		Can be used when the quote is provided in a currency other than the instruments trading currency.
13	13 CommType		Can be used to show the counterparty the commission associated with the transaction.
12	12 Commission		Can be used to show the counterparty the commission associated with the transaction.
582	CustOrderCapacity	N	For Futures Exchanges
100	ExDestination	N	Used when routing quotes to multiple markets
528	OrderCapacity	N	
423	PriceType	N	
component block <spreadorbenchmarkcurvedata></spreadorbenchmarkcurvedata>		N	
component block <yielddata></yielddata>		N	
y			•
58	Text	N	
354	EncodedTextLen	N	Must be set if EncodedText field is specified and must immediately precede it.
355	EncodedText	N	Encoded (non-ASCII characters) representation of the Text field in the encoded format specified via the MessageEncoding field.
	Standard Trailer		

Deleted: component block <Parties>

Deleted: N

Deleted: Insert here the set of "Parties" (firm identification) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"

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FIXML Definition for this message - see http://www.fixprotocol.org for details

Refer to FIXML element Quot

Example: Quote for Single Security

QuoteID=XXX QuoteReqID=YYY Symbol=AA MaturyMonthYear=199901 StrikePrice=25.00 CFICode="OCXXXS" BixPx=5.00OfferPx=5.25 BidSize=10 OfferSize=10

Deleted: <!ENTITY % QuoteCustom

<!ENTITY % QuoteContent

"QuoteReqID?,QuoteID,QuoteType?,Qu oteResponseLevel?,PartiesList?,Account? ,AccountType?,TradingSessionID?,Tradi ngSessionSubID?,Instrument,BidPx?,Off erPx?,MktBidPx?,MktOfferPx?,MinBidS ize?,BidSize?,MinOfferSize?,OfferSize?, ValidUntilTime?,BidSpotRate?,OfferSpo tRate?,BidForwardPoints?,OfferForward Points?, MidPx?, BidYield?, MidYield?, Of ferYield?, TransactTime?, Settlement?, Ord Type?,FutSettDate2?,OrderQty2?,BidFor wardPoints2?,OfferForwardPoints2?,Curr ency?,SettlCurrBidFxRate?,SettlCurrOffe rFxRate?,SettlCurrFxRateCalc?,CommTy pe?,Commission?,CustOrderCapacity?,E xDestination?, Text?, EncodedTextGroup? %QuoteCustom;">¶

<!ELEMENT Quote (%QuoteContent;)>¶ <!ATTLIST Quote FIXTag CDATA #FIXED '35'¶

DataType CDATA #FIXED 'String'¶ Value CDATA #FIXED 'S' >

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Quote Cancel -

The Quote Cancel message is used by an originator of quotes to cancel quotes.

The Quote Cancel message supports cancelation of:

- All quotes
- Quotes for a specific symbol or security ID
- All quotes for a security type
- All quotes for an underlying

Canceling a Quote is accomplished by indicating the type of cancelation in the QuoteCancelType field.

It is recommended that all Cancel messages be acknowledged using the Quote Status Report message.

The Quote Cancelation only applies to quotes made by the current FIX user.

The Quote Cancel message format is as follows:

Quote Cancel

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = Z
131	131 QuoteReqID		Required when quote is in response to a Quote Request message
117	QuoteID	Y	
298	QuoteCancelType	Y	Identifies the type of Quote Cancel request.
301	QuoteResponseLevel	N	Level of Response requested from receiver of quote messages.
comp	onent block <parties></parties>	N	Insert here the set of "Parties" (firm identification) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
1	Account	N	
660	AcctIDSource	N	
581	AccountType	N	Type of account associated with the order (Origin)
336	TradingSessionID	N	
625	TradingSessionSubID	N	
295	NoQuoteEntries	N	The number of securities (instruments) whose quotes are to be canceled
			Not required when cancelling all quotes.
→	component block <instrument></instrument>	N	Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
→	component block <financingdetails></financingdetails>	N	Insert here the set of "FinancingDetails" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
2	711 NoUnderlyings	N	Number of underlyings

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<u></u>	<u></u>	component block	<u>N</u>	Must be provided if Number of underlyings > 0
		<underlyinginstrum< li="">ent></underlyinginstrum<>		
→	555	NoLegs	N	Required for multileg quotes
→	→	component block	N	Required for multileg quotes
	< <u>InstrumentLeg></u>			For Swaps one leg is Buy and other leg is Sell
	Standard Trailer		Y	

FIXML Definition for this message – see http://www.fixprotocol.org for details

Refer to FIXML element QuotCxl

Options usage notes:

Normal usage would be to cancel the quotes for a symbol. This is the reason that the use of further nesting similar to the quote is not used in this message. You are able to cancel quotes for specific series by specifying each option series in the repeating group.

Examples of the types of Quote Cancel operations:

Cancel for Symbol(s)

Cancel all option quotes for symbol: IBM

QuoteID=user defined identifier for this cancel request

QuoteCancelType=1

NoQuoteEntries=1

Symbol=IBM

CFICode=O

Cancel for Security Type(s)

Cancel all futures quotes for symbol: T (notice that CFICode is specified not SecurityType).

QuoteID=user defined identifier for this cancel request

QuoteCancelType=2

NoQuoteEntries=1

Symbol=N/A

CFICode=F

Cancel Quotes for underlying symbols

Cancel all quotes for options with an underlying symbol of IBM

QuoteID= user defined identifier for this cancel request

QuoteCancelType=3

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QuoteCancelCustom "">¶
<!ENTITY % QuoteCancelContent
"QuoteReqID?,QuoteID,QuoteCancelType,QuoteResponseLevel?,PartiesList?,
Account?, AccountType?,
TradingSessionID?,
TradingSessionSubID?,
QuoteCancelGroupList?
%QuoteCancelGroupList?
%QuoteCancelCustom;">¶
<!ELEMENT QuoteCancel
(%QuoteCancelContent;)>¶
<!ATTLIST QuoteCancel FIXTag
CDATA #FIXED '35'¶
DataType CDATA #FIXED 'String'¶
Value CDATA #FIXED 'String'¶

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NoQuoteEntries=1 Symbol=IBM CFICode=O

Cancel All Quotes

Cancel all quotes associated with this FIX Session

QuoteID= user defined identifier for this cancel request QuoteCancelType=4

Cancel all quotes for a specific trading session

QuoteID= user defined identifier for this cancel request
QuoteCancelType=4
TradingSessionID=a trading session identifier in a market

Cancel All Quotes for specific parties

QuoteID= user defined identifier for this cancel request
QuoteCancelType=4
PartyID=party identifier
NoPartyIDs=1
PartyID=party identifier
PartyIDSource=source
PartyRole=role

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Quote Status Request -

The quote status request message is used for the following purposes in markets that employ tradeable or restricted tradeable quotes:

- For the issuer of a quote in a market to query the status of that quote (using the QuoteID to specify the target quote).
- To subscribe and unsubscribe for Quote Status Report messages for one or more securities.

The format of the quote status request message is:

Quote Status Request

| | Quote Status Request | | | | |
|---|---------------------------------|-------|--|--|--|
| Tag | Field Name | Req'd | Comments | | |
| | Standard Header | Y | MsgType = a (lowercase) | | |
| 649 | 9 QuoteStatusReqID | | | | |
| 117 | QuoteID | N | | | |
| compo
<instru< td=""><td>onent block
ument></td><td>Y</td><td colspan="2">Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"</td></instru<> | onent block
ument> | Y | Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES" | | |
| compo
<finar< td=""><td>onent block
neingDetails></td><td>N</td><td colspan="2">Insert here the set of "FinancingDetails" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"</td></finar<> | onent block
neingDetails> | N | Insert here the set of "FinancingDetails" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES" | | |
| 711 | NoUnderlyings | N | Number of underlyings | | |
| → component block <underlyinginstrume nt=""></underlyinginstrume> | | N | Must be provided if Number of underlyings > 0 | | |
| 555 | 555 NoLegs | | Required for multileg quotes | | |
| → component block | | N | Required for multileg quotes | | |
| | <instrumentleg></instrumentleg> | | For Swaps one leg is Buy and other leg is Sell | | |
| component block <parties></parties> | | N | Insert here the set of "Parties" (firm identification) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES" | | |
| 1 | Account | N | | | |
| 660 | AcctIDSource | N | | | |
| 581 | 581 AccountType | | Type of account associated with the order (Origin) | | |
| 336 | 336 TradingSessionID | | | | |
| 625 | 625 TradingSessionSubID | | | | |
| 263 | 263 SubscriptionRequestT ype | | Used to subscribe for Quote Status Report messages | | |
| | Standard Trailer | Y | | | |

FIXML Definition for this message – see http://www.fixprotocol.org for details

Refer to FIXML element QuotStatReq

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Deleted: <!ENTITY % $QuoteStatusReqCustom "">\P$ <!ENTITY % QuoteStatusReqContent "Quote Status Req ID?,QuoteID?,Instrument,PartiesList?, Account?, AccountType?, TradingSessionID?,TradingSessionSubID ?,SubscriptionRequestType?
%QuoteStatusReqCustom;">¶ <!ELEMENT QuoteStatusReq (%QuoteStatusReqContent;)>¶
<!ATTLIST QuoteStatusReq FIXTag

CDATA #FIXED '35¶
DataType CDATA #FIXED 'String'¶
Value CDATA #FIXED 'a' >

To retrieve status of all quo SecurityID[167] along with a	tes for a given underlying symbol for options enter the Symbol[55] and optionally the a CFICode[537]="OXXXXX".	
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Application of Quote Status Request to Options Markets using tradeable or restricted tradeable quoting models:

Quote Status Report -

The quote status report message is used:

- as the response to a Quote Status Request message
- as a response to a Quote Cancel message
- as a response to a Quote Response message in a negotiation dialog (see Volume 7 PRODUCT: FIXED INCOME)

Quote Status Report

Quote Status Report					
Tag	Field Name	Req'd	Comments		
	Standard Header	Y	MsgType = AI		
649	649 QuoteStatusReqID				
131	QuoteReqID	N	Required when quote is in response to a Quote Request message		
117	QuoteID	Y			
693	QuoteRespID	N	Required when responding to a Quote Response message.		
537	QuoteType	N	Quote Type		
			If not specified, the default is an indicative quote		
component block <parties></parties>		N	Insert here the set of "Parties" (firm identification) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"		
336	TradingSessionID	N			
625	625 TradingSessionSubID				
component block <instrument></instrument>		Y	Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"		
component block <financingdetails></financingdetails>		N	Insert here the set of "FinancingDetails" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"		
711	NoUnderlyings	N	Number of underlyings		
→	component block <underlyinginstrument></underlyinginstrument>	N	Must be provided if Number of underlyings > 0		
54	Side	N			
component block <orderqtydata></orderqtydata>		N	Required for Tradeable quotes of single instruments		
63	SettlType	N			
64	SettlDate	N	Can be used with forex quotes to specify a specific "value date"		
193	SettlDate2	N	Can be used with OrdType = "Forex - Swap" to specify the "value date" for the future portion of a F/X swap.		

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192	OrderQt	ty2	N	Can be used with OrdType = "Forex - Swap" to specify the order quantity for the future portion of a F/X swap.
15	Currenc	у	N	Can be used to specify the currency of the quoted prices. May differ from the 'normal' trading currency of the instrument being quoted
compo	onent blo	ck <stipulations></stipulations>	N	
1	Account	-	N	
660	AcctIDS	Source	N	
581	Accoun	tType	N	Type of account associated with the order (Origin)
555	NoLegs		N	Required for multileg quote status reports
→	compon <instru< td=""><td>ent block mentLeg></td><td>N</td><td>Required for multileg quote status reports For Swaps one leg is Buy and other leg is Sell</td></instru<>	ent block mentLeg>	N	Required for multileg quote status reports For Swaps one leg is Buy and other leg is Sell
→	687	LegQty	N	To Swape one leg is Buy and outer leg is sen
→	690	LegSwapType	N	
→	587	LegSettlType	N	
→	588	LegSettlDate	N	
→	compon		N	
→	compon		N	
735	NoQuo	teQualifiers	N	
→	695	QuoteQualifier	N	Required if NoQuoteQualifiers > 1
126	Expire	Time	N	
44	Price		N	
423	PriceTy	тре	N	
compo		block chmarkCurveData>	N	
compo	onent blo	ck <yielddata></yielddata>	N	
132	BidPx		N	If F/X quote, should be the "all-in" rate (spot rate adjusted for forward points). Note that either BidPx, OfferPx or both must be specified.
133	OfferPx		N	If F/X quote, should be the "all-in" rate (spot rate adjusted for forward points). Note that either BidPx, OfferPx or both must be specified.
645	MktBid	Px	N	Can be used by markets that require showing the current best bid and offer
646 •	MktOffe	erPx	N 	Can be used by markets that require showing the current best bid and offer

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647	MinBidSize	N	Specifies the minimum bid size. Used for markets that use a minimum and maximum bid size.
134	BidSize	N	Specifies the bid size. If MinBidSize is specified, BidSize is interpreted to contain the maximum bid size.
648	MinOfferSize	N	Specifies the minimum offer size. If MinOfferSize is specified, OfferSize is interpreted to contain the maximum offer size.
135	OfferSize	N	Specified the offer size. If MinOfferSize is specified, OfferSize is interpreted to contain the maximum offer size.
62	ValidUntilTime	N	
188	BidSpotRate	N	May be applicable for F/X quotes
190	OfferSpotRate	N	May be applicable for F/X quotes
189	BidForwardPoints	N	May be applicable for F/X quotes
191	OfferForwardPoints	N	May be applicable for F/X quotes
631	MidPx	N	
632	BidYield	N	
633	MidYield	N	
634	OfferYield	N	
60	TransactTime	N	
40	OrdType	N	Can be used to specify the type of order the quote is for
642	BidForwardPoints2	N	Bid F/X forward points of the future portion of a F/X swap quote added to spot rate. May be a negative value
643	OfferForwardPoints2	N	Offer F/X forward points of the future portion of a F/X swap quote added to spot rate. May be a negative value
656	SettlCurrBidFxRate	N	Can be used when the quote is provided in a currency other than the instrument's 'normal' trading currency. Applies to all bid prices contained in this message
657	SettlCurrOfferFxRate	N	Can be used when the quote is provided in a currency other than the instrument's 'normal' trading currency. Applies to all offer prices contained in this message
156	SettlCurrFxRateCalc	<u>N</u>	Can be used when the quote is provided in a currency other than the instruments trading currency.
13	Соттуре	N	Can be used to show the counterparty the commission associated with the transaction.
12	Commission	N	Can be used to show the counterparty the commission associated with the transaction.
582	CustOrderCapacity	N	For Futures Exchanges
100	ExDestination	N	Used when routing quotes to multiple markets
- 297	QuoteStatus	N	Quote Status.
58	Text	N	

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354	EncodedTextLen	N	
355	EncodedText	N	
	Standard Trailer	Y	

FIXML Definition for this message - see http://www.fixprotocol.org for details

Refer to FIXML element QuotStatRpt

Deleted: < !ENTITY % $QuoteStatusReportCustom "">\P$ <!ENTITY % QuoteStatusReportContent "Quote Status Req ID?, Quote Req ID?, QuoteID,QuoteType?,PartiesList?, Account?, AccountType?, TradingSessionI D?, Trading Session SubID?, Instrument?, BidPx?,OfferPx?,MktBidPx?,MktOfferPx? $,\!MinBidSize?,\!BidSize?,\!MinOfferSize?,\!O$ fferSize?, ValidUntilTime?, BidSpotRate?, OfferSpotRate?,BidForwardPoints?,Offer ForwardPoints?,MidPx?,BidYield?,MidYield?,OfferYield?,TransactTime?,FutSett Date?,OrdType?,FutSettDate2?,OrderQty 2?,BidForwardPoints2?,OfferForwardPoi nts 2?, Currency?, Settl Curr Bid FxRate?,SettlCurrOfferFxRate? Settl Curr Fx Rate Calc?, Comm Type?, Commission?, CustOrder Capacity?, ExDestination?, Quote Status? $\label{eq:continuous} \parbox{$^{\circ}$QuoteStatusReportCustom;">\P}$ <!ELEMENT QuoteStatusReport $(\%QuoteStatusReportContent;) \!\!> \!\! \P$ <!ATTLIST QuoteStatusReport FIXTag CDATA #FIXED '35'¶ DataType CDATA #FIXED 'String'¶
Value CDATA #FIXED 'AI' >

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Indicative Quoting Model

FIX supports an Indicative Quoting Model that is frequently used between two counterparties. In the Indicative Quoting Model a party interested in a particular security issues a Quote Request to a counterparty. The counterparty responds with an indicative quote. The first party – assuming the quote meets their requirements – can send back a New Order – Single (order type = Previously Quoted). The New Order – Single message should contain the QuoteID of the Quote. The issuer of the quote does not necessarily have to execute the order – based upon market conditions or characteristics contained on the New Order Message.

Indicative Quoting Model Message Scenario

Indicative Quoting Woder Wessage Seenario		
First Party		Second Party
QuoteRequest	→	Accepts Quote Request
This is an optional first step. Counterparties may agree to provide indicative quotes in a continuous manner.		Creates a Quote for the product specified in the Quote Request
Accepts Quote – after examining market indicated in quote decides whether to place a New Order	←	Send Quote message (can be a one or two sided market). The QuoteReqID should be set to the QuoteReqID from the Quote Request to which this Quote is a response.
New Order –Single – should reference the QuoteID for which the New Order message in which the New Order is a response. The OrdType should be set to previously quoted.	→	Accepts the New Order message. Should be acknowledged as New.
	←	Sends Execution Report for NEW (Optional)
	←	Sends Execution Report OrdStatus=FILL if the order is acceptable or
		<u>Or</u>
		Send Execution Report OrdStatus=PARTIALLY FILLED
		<u>Or</u>
		Send Execution Report OrdStatus=REJECTED

Indicative quotes can also be sent out on an unsolicited basis. The correct response is the New Order (previously quoted) as above

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Tradeable Quote Model

Beginning with FIX 4.2 support was provided for markets requiring tradeable quotes. A tradeable quote market has market makers or specialist issue quotes that are kept as part of a market. A tradeable quote can be directly traded against orders or other quotes (depending on market rules). The market created by these quotes should be distributed using the Market Data messages. When orders are entered in response to the markets created by the tradeable quotes – trades may result. Trades are reported with an Execution Report.

Tradeable Quote model markets can be continuously quoted or quoted on demand or a combination of the two. In continuously quoted markets – market makers or specialists are required to maintain two sided markets which comply with market requirements for bid-ask spread and minimum quantity. In the quote on demand market – market makers and specialists are usually required to respond to Quote Requests (RFQs) within a market prescribed time limit with a quote which complies with exchange prescribed bid-ask spread and minimum quantity.

Tradeable Quote Model - Reporting Quote Status back to Issuer

The market should provide unsolicited quote status back to the quote issuer if the state of a quote changes with the exception of trades (fills) that occur against a quote. Trades (fills) are reported using the Execution Report.

NOTE: The Quote Message should not be used to report trades. Only the Execution Report should be used to report fills against a tradeable or restricted tradeable quote.

Market maker or specialist		Market
Quote	→	Accepts Quote and applies to the market
<u>Valid</u> tradeable or restricted tradeable <u>quote</u> <u>sent into market – either unsolicited or in reply</u> <u>to a Quote Request from the market.</u>		
Accepts Quote and updates trading system based upon status reported by market	+	Based upon market rules or the QuoteResponseLevel requested by Quote Issuer the market will send Quote Status Report messages back to the quote issuer to report quote status (using the QuoteStatus field).
	←	If a trade (fill) occurs against a tradeable quote an Execution Report (ExecType=Fill or Partial Fill) is sent to the quote issuer.

Using the Execution Report to report a trade on a Tradeable Quote

The Execution Report should be used to report trades involving a tradeable quote. Because quotes are usually replaced or replenished – often times with the same QuoteID – it is not always possible, nor does it necessarily make sense for markets to keep track and transmit the detailed quantity information required on the quote. Execution Reports for trades against a tradeable quote can use the quantity fields in the following manner.

Tag#	Field Name	Re qd	Usage in reporting trades on tradeable or restricted tradeable quotes
38	OrderQty	N	Quote quantity when the fill occurred.
32	LastQty	N	Same as for a fill against an order
31	LastPx	N	Same as for a fill against an order
151	LeavesQty	Y	Quantity remaining open in the market
_ 14	CumQty	Y	Use 0.0 if market is unable to provide a cumulative total.
6	AvgPx	Y	Use 0.0 if market is unable to provide an average price

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Tradeable Quote Model - Quote on Demand Message Scenario

In the quote on demand model – markets are not necessarily available until someone interested in the market

generates a request.

First Party		Market		Second Party (usually market maker or specialist)
			+	Optional
				Quote Status Request to subscribe for Quote Status for one or more instruments (some markets may chose to configure this out of band).
		Tracks Subscription Requests for each party connected to market	+	RFQ Request
		NOTE: Some markets may choose to configure subscription and dissemination of Quote Request out-of-band – instead of in-band.		Subscribe for Quote Requests
Quote Request (Optional request for quote if no quote exists in the market)	→	Market checks validity of Quote Request and then sends it to subscribed participants	→	Accepts Quote Request Generates a quote based upon request
		Interprets quotes and applies them to a market	+	Quote Quote is sent that complies
		Interprets QuoteResponse Level to determine if quote status should be sent back to the quote issuer using a Quote Status Report message with the QuoteStatus field set appropriately		with market requirements.
		Valid quote that changes market should be disseminated using Market Data messages	→	
		Optional Quote Status Report	7	
Receives Market Data	(If the Quote is valid and has an	→	Receives Market Data
Will use Market Data to make market participation		impact on the market Market Data is published		Useful in creating subsequent quotes
and pricing decision		(NOTE: The process of subscribing for market data is omitted from this example)		

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First Party		Market		Second Party (usually market maker or specialist)
Sends New Order – Single Receives Execution Report – Pending New (optional) Received Execution Report – NEW	→	Order is matched against other orders and quotes according to market rules. (NOTE: This can be either openoutcry based markets with or without limit book or a fully electronic market)		
Receipt of Execution Report – Reporting Fill or Partial Fill	+	If the order is matched against the tradeable or restricted tradeable quote resulting in a trade – Execution Reports are sent to the counterparties of the trade	→	Receipt of Market Maker side Execution Report reporting Fill against the previously submitted tradeable or restricted tradeable Quote (Optionally can choose to replenish market or wait for next Quote Request)

Tradeable Quote Model Message Scenario – Continuous markets

The Tradeable Quote Model in a continuously quoted marketed – requires market makers or specialist to maintain market compliant two sided markets.

First Party		Market		Second Party (usually market maker or specialist)
Uses market data to determine market participation and pricing on orders	←	Market Data is disseminated (NOTE: This may include the need to transmit expected opening prices based upon current state of the book at the opening)	→	Uses market data to create subsequent quotes
		Interprets quotes and applies them to a market Interprets QuoteResponse Level to determine if quote status should be sent back to the quote issuer using a Quote Status Report message with the QuoteStatus field set appropriately Market Data will be generated to	←	Quote Market Makers / Specialist are expected to maintain two sided quotes that comply with market required bid-ask spread and minimum quantities
y	Y _	report state of the book is changed by the quote _Optional Quote Status Report	→	

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First Party		Market		Second Party (usually market maker or specialist)
Receives Market Data Will use Market Data to make market participation and pricing decision	←	If the Quote is valid and has an impact on the market Market Data is published (NOTE: The process of subscribing for market data is omitted from this example)	→	Receives Market Data Used to create subsequent quotes
Sends New Order – Single Receives Execution Report – Pending New (optional) Received Execution Report – NEW	→	Order is matched against other orders and quotes according to market rules. (NOTE: This can be either openoutcry based markets with or without limit book or a fully electronic market)		
Receipt of Execution Report - Reporting Fill or Partial Fill	+	If the order is matched against the tradeable or restricted tradeable quote resulting in a trade – Execution Reports are sent to the counterparties of the trade	→	Receipt of Market Maker side Execution Report reporting Fill against the previously submitted tradeable or restricted tradeable Quote (Optionally can choose to replenish market or wait for next Quote Request)
		Quote is processed as above – market data is generated – an optional Quote Status Report message is generated	+	Replenishes Quote – possibly changing prices and quantities

Tradeable Quote Model - Querying for Quote Status

Market participants may need to query the status of their current quotes. Normally a market will provide status in an unsolicited manner back to the quote issuer. However, to support system or session recovery – the Quote Status Request can be used to query the current state of quotes within a market.

Market maker or specialist		Market
Quote Status Request	→	Accepts Quote Status Request
Contains information on the securities for which the quote status request is being issued or the QuoteID of a previously submitted quote.		

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Accepts Quote and updates trading system. Sends Quote Status Report messages with the QuoteStatus field set, bid and ask prices, and quantities for each quote belonging to the request issuer that meet the criteria in the request. If there is a current quote in the market – the Quote Status Report in response to a Quote Status Request should be sent with a QuoteStatus of "Query".

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Restricted Tradeable Quote Model

The Restricted Tradeable Quote Model extends the behavior of the Tradeable Quote Model to place limits on quantity or price. Orders received against the Restricted Tradeable Quote that are within limits set by the market – will execute against the quote automatically – just as in the case of the Tradeable Quote Model.

If the order is outside the limits specified by the market – the order is forwarded to the quote issuer(s) to be filled, partially filled with remaining quantity cancelled, or canceled.

Restricted Tradeable Quote Model Message Scenario

The Restricted Tradeable Quote Model will automatically trade against orders within restrictions specified by the market in terms of quantity or price.

First Party		Market		Second Party (usually market maker or specialist)
Uses market data to determine market participation and pricing on orders	+	Market Data is disseminated (NOTE: This may include the need to transmit expected opening prices based upon current state of the book at the opening)	↑	Uses market data to create subsequent quotes
		Interprets quotes and applies them to a market Interprets QuoteResponse Level to determine if quote status should be sent back to the quote issuer using a Quote Status Report message with the QuoteStatus field set appropriately Market Data will be generated to report state of the book is changed by the quote	Ψ	Quote Market Makers / Specialist are expected to maintain two sided quotes that comply with market required bid-ask spread and minimum quantities
Receives Market Data Will use Market Data to make market participation and pricing decision	←	If the Quote is valid and has an impact on the market Market Data is published (NOTE: The process of subscribing for market data is omitted from this example)	>	Receives Market Data Used to create subsequent quotes
Sends New Order – Single Receives Execution Report – Pending New (optional) Received Execution Report – NEW	→	Order is matched against other orders and quotes according to market rules. (NOTE: This can be either openoutcry based markets with or without limit book or a fully electronic market)		

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First Party		Market		Second Party (usually market maker or specialist)
Receipt of Execution Report - Reporting Fill or Partial Fill	←	If the order is matched against the tradeable or restricted tradeable quote resulting in a trade – Execution Reports are sent to the counterparties of the trade	→	Receipt of Market Maker side Execution Report reporting Fill against the previously submitted tradeable or restricted tradeable Quote
				(Optionally can choose to replenish market or wait for next Quote Request)
		Quote is processed as above – market data is generated – an optional quote status message is generated	←	Replenishes Quote – possibly changing prices and quantities
Sends New Order – Single that is outside the restrictions specified by the market	→	Order is identified as being outside automatic execution parameters. The order is sent to the quote issuer(s)	→	Receives order and decides if the order is acceptable
				Sends back an execution for partial quantity, full quantity, or cancels the order

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Mass Quote -

The Mass Quote message can contain quotes for multiple securities to support applications that allow for the mass quoting of an option series. Two levels of repeating groups have been provided to minimize the amount of data required to submit a set of quotes for a class of options (e.g. all option series for IBM).

A QuoteSet specifies the first level of repeating fields for the Mass Quote message. It represents a group of related quotes and can, for example, represent an option class.

Each QuoteSet contains an optional repeating group of QuoteEntries which can represent an option series.

It is possible the number of Quote Entries for a Quote Set (option class) could exceed one's physical or practical message size. It may be necessary to fragment a message across multiple quote messages. Message size limits must be mutually agreed to with one's counterparties.

The grouping of quotes is as follows:

NoQuoteSets - specifies the number of sets of quotes contained in the message

QuoteSetID - Is a unique ID given to the quote set

Information regarding the security to which all of the quotes belong

TotQuoteEntries - defines the number of quotes for the quote set across all messages

NoQuoteEntries - defines the number of quotes contained within this message for this quote set

QuoteEntryID - Is a unique ID given to a specific quote entry

Information regarding the specific quote (bid/ask size and price)

If there are too many Quote Entries for a Quote Set to fit into one physical message, then the quotes can be continued in another Mass Quote message by repeating all of the QuoteSet information and then specifying the number of Quote Entries (related symbols) in the continued message. The TotQuoteEntries is provided to optionally indicate to the counterparty the total number of Quote Entries for a Quote Set in multiple quote messages. This permits, but does not require, a receiving application to react in a stateful manner where it can determine if it has received all quotes for a Quote Set before carrying out some action. However, the overall approach to fragmentation is to permit each mass quote message to be processed in a stateless manner as it is received. Each mass quote message should contain enough information to have the Quote Entries applied to a market without requiring the next message if fragmentation has occurred. Also, a continued message should not require any information from the previous message.

Maximum message size for fragmentation purposes can be determined by using the optional MaxMessageSize field in the Logon message or by mutual agreement between counterparties.

Requesting Acknowledgement for Mass Quotes

Applications can optionally support acknowledgement of quotes using the *QuoteResponseLevel* field. The *QuoteResponseLevel* is used to specify the level of acknowledgement requested from the counterparty. A *QuoteResponseLevel* of 0 indicates that no acknowledgement is requested. A ResponseLevel of 1 requests

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acknowledgement of invalid or erroneous quotes. A QuoteResponseLevel of 2 requests acknowledgement of each Mass Quote message.

See "Mass Quote Message Scenarios"

The Mass Quote message format is as follows:

Mass Quote

			111435	s Quote
Tag	Field l	Name	Req' d	Comments
	Standa	ard Header	Y	MsgType = i (lowercase)
131	Quote	ReqID	N	Required when quote is in response to a Quote Request message
117	Quote	ID	Y	
537	Quote	Гуре	N	Type of Quote Default is Indicative if not specified
301	Quote	ResponseLevel	N	Level of Response requested from receiver of quote messages.
component block <parties></parties>			N	Insert here the set of "Parties" (firm identification) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
1	1 Account			
660	60 AcctIDSource			
581	AccountType			Type of account associated with the order (Origin)
293	293 DefBidSize			Default Bid Size for quote contained within this quote message – if not explicitly provided.
294	4 DefOfferSize			Default Offer Size for quotes contained within this quote message – if not explicitly provided.
296	NoQue	oteSets	Y	The number of sets of quotes in the message
→	302	QuoteSetID	Y	Sequential number for the Quote Set. For a given QuoteID – assumed to start at 1.
				Must be the first field in the repeating group.
→ component block <underlyinginstrument></underlyinginstrument>			N	Insert here the set of "UnderlyingInstrument" (underlying symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
→	367	QuoteSetValidUntilTime	N	

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	ĺ	ĺ		ſ	
→	304	TotNoQuoteEntries		Y	Total number of quotes for the quote set across all messages. Should be the sum of all NoQuoteEntries in each message that has repeating quotes that are part of the same quote set.
→	893	LastF	ragment	N	Indicates if this message is the last fragment of a fragmented mass quote message
→	295	NoQu	oteEntries	Y	The number of quotes for this Symbol (instrument) (QuoteSet) that follow in this message.
					** Nested Repeating Group follows **
→	→	299	QuoteEntryID	Y	Uniquely identifies the quote as part of a QuoteSet.
					Must be used if NoQuoteEntries is used
→	→	сотро	nent block <instrument></instrument>	N	Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
→	→	555	NoLegs	N	Used for multileg instruments
→	→	→	component block <instrumentleg></instrumentleg>	N	Used for multileg instruments
→	→	132	BidPx	N	If F/X quote, should be the "all-in" rate (spot rate adjusted for forward points). Note that either BidPx, OfferPx or both must be specified.
→	→	133	OfferPx	N	If F/X quote, should be the "all-in" rate (spot rate adjusted for forward points). Note that either BidPx, OfferPx or both must be specified.
→	→	134	BidSize	N	
→	→	135	OfferSize	N	
→	→	62	ValidUntilTime	N	
→	→	188	BidSpotRate	N	May be applicable for F/X quotes
→	→	190	OfferSpotRate	N	May be applicable for F/X quotes
→	→	189	BidForwardPoints	N	May be applicable for F/X quotes
→	→	191	OfferForwardPoints	N	May be applicable for F/X quotes
→	→	631	MidPx	N	
→	→	632	BidYield	N	
→	→	633	MidYield	N	
<u></u> →_	→	_ 634_	OfferYield	_ N _	-
→	→	60	TransactTime	N	

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→	→	226	Tunding Consider ID	N	
7	7	336	TradingSessionID	IN	
→	\rightarrow	625	TradingSessionSubID	N	
→	→	64	SettlDate	N	Can be used with forex quotes to specify a specific "value date"
→	→	40	OrdType	N	Can be used to specify the type of order the quote is for
→	→	193	SettlDate2	N	Can be used with OrdType = "Forex - Swap" to specify the "value date" for the future portion of a F/X swap.
→	→	192	OrderQty2	N	Can be used with OrdType = "Forex - Swap" to specify the order quantity for the future portion of a F/X swap.
→	→	642	BidForwardPoints2	N	Bid F/X forward points of the future portion of a F/X swap quote added to spot rate. May be a negative value
→	→	643	OfferForwardPoints2	N	Offer F/X forward points of the future portion of a F/X swap quote added to spot rate. May be a negative value
→	→	15	Currency	N	Can be used to specify the currency of the quoted price.
	Stando	ard Trai	ler	Y	

FIXML Definition for this message – see http://www.fixprotocol.org for details

Refer to FIXML element MassOuot

Notes on usage:

For many markets, the Mass Quote message will be used to generate quotes in high volumes in an unsolicited manner. This means that multiple quotes will be sent to the counterparty (an exchange) without acknowledgement. The Mass Quote message can be used to send quotes for multiple classes, each with multiple series.

Example: Multiple Option Series for a single Option Class (No Fragmentation)

QuoteID=XXX QuoteReqID=YYY NoQuoteSets=1 QuoteSetID=1 Symbol=AA TotQuoteEntries=2 NoQuoteEntries=2 Other quote set fields QuoteEntryID=1

- MaturyMonthYear=199901-

StrikePrice=25.00 CFICode="OCXXXS"

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MassQuoteCustom "">¶

<!ENTITY % MassQuoteContent
"QuoteReqID?,QuoteID,QuoteType?,Qu

oteResponseLevel?,PartiesList?,
Account?, AccountType?,
DefBidSize?,DefOfferSize?,QuoteSetGro

upList %MassQuoteCustom;">¶

<!ELEMENT MassQuote
(%MassQuoteContent;)>¶

<!ATTLIST MassQuote FIXTag
CDATA #FIXED '35'¶
DataType CDATA #FIXED 'String'¶
Value CDATA #FIXED 'I'>

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```
BixPx=5.00
       OfferPx=5.25
       BidSize=10
       OfferSize=10
      QuoteEntryID=2
       MaturyMonthYear=199901
       StrikePrice=30.00
       CFICode="OCXXXS"
       BixPx=3.00
       OfferPx=3.25
       BidSize=10
       OfferSize=10
Example: Multiple Option Series for a single Option Class (Fragmentation)
First Message:
   QuoteID=XXX
   QuoteReqID=YYY
   NoQuoteSets=1
     QuoteSetID=1
     Symbol=AA
     TotQuoteEntries=3
     NoQuoteEntries=2
     Other quote set fields
     QuoteEntryID=1
       MaturyMonthYear=199901
       StrikePrice=25.00
       CFICode="OCXXXX"
       BixPx=5.00
       OfferPx=5.25
       BidSize=10
       OfferSize=10
      QuoteEntryID=2
       MaturyMonthYear=199901
       StrikePrice=30.00
       CFICode="OCXXXX"
       BixPx=3.00
       OfferPx=3.25
       BidSize=10
       OfferSize=10
Second Message:
   QuoteID=XXX
   QuoteReqID=YYY
   NoQuoteSets=1
     QuoteSetID=1
     Symbol=AA
     Other quote set fields
     TotQuoteEntries=3
     NoQuoteEntries=1
```

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QuoteEntryID=3

MaturyMonthYear=199901

StrikePrice=35.00

CFICode="OCXXXS"

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BixPx=2.00 OfferPx=2.25 BidSize=10 OfferSize=10

Example: Multiple Quotes for Fixed Income publishing

QuoteID=XXX

NoQuoteSets=1

QuoteSetID=1

TotQuoteEntries=3

NoQuoteEntries=3

Other quote set fields

QuoteEntryID=1

Symbol=DE10003453

SecurityID=DE10003453

SecurityIDSource=4

BixPx=105

BidYield=.043

OfferPx=102.3

OfferYield=.0525

BidSize=10

OfferSize=10

QuoteEntryID=2

Symbol=NL0000102606

SecurityID=NL0000102606

SecurityIDSource=4

MidPx=105

MidYield=4.3

QuoteEntryID=3

Symbol=FR0100059601

SecurityID=FR0100059601

SecurityIDSource=4

BidYield=.048

OfferYield=.057

BidSize=5

OfferSize=5

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Mass Quote Acknowledgement -

Mass Quote Acknowledgement is used as the application level response to a Mass Quote message. The Mass Quote Acknowledgement contains a field for reporting the reason in the event that the entire quote is rejected (QuoteRejectReason[300]). The Mass Quote Acknowledgement also contains a field for each quote that is used in the event that the quote entry is rejected (QuoteEntryRejectReason[368]). The ability to reject an individual quote entry is important so that the majority of quotes can be successfully applied to the market instead of having to reject the entire Mass Quote for a minority of rejected quotes.

Derivative markets are characterized by high bandwidth consumption – due to a change in an underlying security price causing multiple (often in the hundreds) of quotes to be recalculated and retransmitted to the market. For that reason the ability for market participants (and the market) to be able to set the level of response requested to a Mass Quote message is specified using the QuoteResponseLevel[301] field.

The Mass Quote Acknowledgement message format is as follows:

Mass Quote Acknowledgement

			8	1	
Tag	Field Name	Req 'd	Comments		
	Standard Header	Y	MsgType = b (lowercase)		
131	QuoteReqID	N	Required when acknowledgment is in response to a Quote Request message		
117	QuoteID	N	Required when acknowledgment is in response to a Quote message		
297	QuoteStatus	Y	Status of the mass quote acknowledgement.		
300	QuoteRejectReason	N	Reason Quote was rejected.		
301	QuoteResponseLevel	N	Level of Response requested from receiver of quote messages. Is echoed back to the counterparty.		
537	QuoteType	N	Type of Quote		
comp	onent block <parties></parties>	N	Insert here the set of "Parties" (firm identification) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"		
1	Account	N			
660	AcctIDSource	N			
581	AccountType	N	Type of account associated with the order (Origin)	/	Deleted: 336 Deleted: TradingSessionID
V	.	_		1/	Deleted: N
					Deleted: 625
58	Text	N			Deleted: TradingSessionSubID
354	<u>EncodedTextLen</u>	N			Deleted: N
355	EncodedText	N	<u> </u>		Deleted: January 24, 2000
		_			Deleted:
296	NoQuoteSets	N	The number of sets of quotes in the message	I	Deleted: 2

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→	302	Quote	SetID	N	First field in repeating group. Required if NoQuoteSets > 0
→	component block <underlyinginstrument></underlyinginstrument>			N	Insert here the set of "UnderlyingInstrument" (underlying symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
		1			Required if NoQuoteSets > 0
→	304	04 TotNoQuoteEntries			Total number of quotes for the quote set across all messages. Should be the sum of all NoQuoteEntries in each message that has repeating quotes that are part of the same quote set.
					Required if NoQuoteEntries > 0
→	893	LastF	ragment	N	Indicates if this message is the last fragment of a fragmented mass quote message
→	295	NoQu	oteEntries .	N	The number of quotes for this Symbol (QuoteSet) that follow in this message.
→	→	299	QuoteEntryID	N	Uniquely identifies the quote as part of a QuoteSet.
					First field in repeating group. Required if NoQuoteEntries > 0.
→	→	compo <instr< th=""><th>onent block ument></th><th>N</th><th>Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"</th></instr<>	onent block ument>	N	Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
→	→	555	NoLegs	N	Used for multileg instruments
→	→	→	component block <instrumentleg></instrumentleg>	N	Used for multileg instruments
→	→	132	BidPx	N	If F/X quote, should be the "all-in" rate (spot rate adjusted for forward points). Note that either BidPx, OfferPx or both must be specified.
→	→	133	OfferPx	N	If F/X quote, should be the "all-in" rate (spot rate adjusted for forward points). Note that either BidPx, OfferPx or both must be specified.
→	→	134	BidSize	N	
→	→	135	OfferSize	N	
→	→	62	ValidUntilTime	N	
→	→	188	BidSpotRate	N	May be applicable for F/X quotes
→	→	190	OfferSpotRate	N	May be applicable for F/X quotes
→	→	189	BidForwardPoints	N	May be applicable for F/X quotes
→	→	191	OfferForwardPoints	N	May be applicable for F/X quotes
	- → -	631	MidPx▼	- N	-
→	→	632	BidYield	N	

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		,	,		Υ
→	→	633	MidYield	N	
→	→	634	Offer Yield	N	
→	→	60	TransactTime	N	
→	→	336	TradingSessionID	N	
→	→	625	TradingSessionSubID	N	
→	→	64	SettlDate	N	Can be used with forex quotes to specify a specific "value date"
→	→	40	OrdType	N	Can be used to specify the type of order the quote is for
→	→	193	SettlDate2	N	Can be used with OrdType = "Forex - Swap" to specify the "value date" for the future portion of a F/X swap.
→	→	192	OrderQty2	N	Can be used with OrdType = "Forex - Swap" to specify the order quantity for the future portion of a F/X swap.
→	→	642	BidForwardPoints2	N	Bid F/X forward points of the future portion of a F/X swap quote added to spot rate. May be a negative value
→	→	643	OfferForwardPoints2	N	Offer F/X forward points of the future portion of a F/X swap quote added to spot rate. May be a negative value
→	→	15	Currency	N	Can be used to specify the currency of the quoted price.
→	→	368	QuoteEntryRejectRea son	N	Reason Quote Entry was rejected.
	Stana	lard Tra	iiler	Y	

FIXML Definition for this message – see http://www.fixprotocol.org for details

Refer to FIXML element MassQuotAck

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MassQuoteAckCustom "">¶

<!ENTITY % MassQuoteAckContent
"QuoteReqID?,QuoteID?,QuoteStatus,Qu
oteRejReason?,QuoteResponseLevel?,Qu
oteType?,PartiesList?,Account?,
AccountType?,TradingSessionID?,Tradin
gSessionSubID?,
Text?,QuoteSetGroupList
%MassQuoteAckCustom;">¶

<!ELEMENT MassQuoteAck
(%MassQuoteAckContent;)>¶

<!ATTLIST MassQuoteAck FIXTag
CDATA #FIXED '35¶

DataType CDATA #FIXED 'String'¶
Value CDATA #FIXED 'b'>

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Mass Quote Message Scenarios

Unsolicited quote(s) no response requested

Mass Quote is sent from first party to second party. The quote has the QuoteResponseLevel set to 0 or omitted. The second party does not acknowledge the quote. If the quote is later hit, resulting in a trade, an Execution Report is sent to the first party.

First Party		Second Party
Mass Quote message	→	Interprets quotes applies them to a market
Options: One or more sets of quotes Set QuoteResponseLevel is set to 0 or omitted		Interprets Response Level – provides response accordingly No response is sent
	+	Execution Report Quote Results in Trade

Unsolicited quote(s) negative response only requested

Mass Quote is sent from first party to second party. The quote has the QuoteResponseLevel set to 1. The second party only acknowledges the quote if there is an error. If the second party encounters an error while processing the quote a <u>Mass Quote Acknowledgement message</u> is sent with the QuoteRejectReason set to the error encountered.

First Party		Second Party
Mass Quote message	\rightarrow	Interprets quotes applies them to a market
Options:		
One or more sets of quotes		
Set Response Level to 1		
Interprets Mass Quote Acknowledgement	←	Mass Quote Acknowledgement
If error – then send revised quote		If an error is encountered
Mass Quote message	\rightarrow	Interprets quotes applies them to a market

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Unsolicited quote(s) full response requested

Mass Quote is sent from first party to second party. The quote has the QuoteResponseLevel set to 2. The second party acknowledges each quote.

First Party		Second Party
Mass Quote message	→	Interprets quotes applies them to a market
Options:		
One or more sets of quotes		
Set Response Level to 2		
Interpret Mass Quote Acknowledgement	←	Mass Quote Acknowledgement

Cancel All Quotes

The First Party asks the second party to cancel all quotes. Quotes with a quote status are sent in response to the Cancel All Quotes message.

First Party		Second Party
Quote Cancel message	→	Interprets Quote Cancel message and cancels quotes.
QuoteCancelType = 4 (Cancel all quotes)		
Interpret Mass Quote Acknowledgement	←	Mass Quote Acknowledgement

Use of other Quote Messages in Mass Quoting

Once the Mass Quote message is submitted to a market and after the initial Mass Quote Acknowledgement - the Quote Entries are treated as separate quotes. Report of Quote Status should be done using the Quote Status Request and Quote messages. Fills are reported for each QuoteEntry using the Execution Report.

Reporting Quote Status back to Mass Quote Issuer

Markets should report the status of quotes back to the quote issuer when the state of one of the quotes in a Mass Quote changes. Quote Status Report messages should be issued for each change in state of a quote entry. The QuoteID of the original Mass Quote message should be used as the QuoteID on the Quote Status Report. It is acceptable to append the QuoteSetID and QuoteEntryID to indicate the specific quote in the Mass Quote message referred to in the Quote Status Report if this information is maintained by the market. NOTE: The Quote Message should not be used to report trades. Only the Execution Report should be used to report fills against a tradeable or restricted tradeable quote.

against a tradeable or restricted tradeable quo	2		Deleted: January 24, 2000
Market maker or specialist	Market		Deleted:
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Mass Quote Valid_tradeable or restricted tradeable_quote sent into market – either unsolicited or in reply to a Quote Request from the market.	→	Accepts Mass Quote and applies to the market
Accepts Quote and updates trading system based upon status reported by market	+	Based upon market rules or based upon the QuoteResponseLevel requested by Quote Issuer the market will send Mass Quote Acknowledgement message back to the quote issuer to report quote status in the QuoteStatus field.
Updates trading system with quote status	←	Quote messages are sent back unsolicited as the quote state changes. The QuoteEntryID should be used as the QuoteID.
Updates trading system with execution report	←	If a trade (fill) occurs against a tradeable or restricted tradeable quote an Execution Report (ExecType=Trade) is sent to the quote issuer.

Querying for Mass Quote Status

If the issuer of a Mass Quote queries the current status of the quote the market should reply with a sequence of individual quote messages with status. This is recommended to eliminate the need for markets to store QuoteSetIds and QuoteEntryIds that were provided as part of the Mass Quote message. Also, as quote status is very dynamic data – sending quote status on securities as soon as it is available – instead of combining it into a single message – will provide more timely information to the quote issuer. The use of a Quote Status Request for a Mass Quote is provided as a method of recovery for market maker trading systems – due to the volume of information that can be generated and the short lived nature of quote status – this usage is not recommended for normal processing.

Market maker or specialist		Market
Quote Status Request	\rightarrow	Accepts Quote Status Request
Contains the QuoteId of a previously submitted Mass Quote.		
Accepts Quote and updates trading system.	÷	Sends Quote messages with the QuoteStatus field, bid and ask prices and quantities for each quote belonging to the request issuer that meet the criteria in the request. If there is a current quote in the market – the Quote in response to a Quote Status Request should be sent with a QuoteStatus of "Query". The Quote message can also contain a QuoteStatus of "Quote Not Found" if no quote currently exists.

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CATEGORY: MARKET DATA

Market Data Request -

Some systems allow the transmission of real-time quote, order, trade, trade volume, open interest, and/or other price information on a subscription basis. A Market Data Request is a general request for market data on specific securities or forex quotes.

A successful Market Data Request returns one or more Market Data messages containing one or more Market Data Entries. Each Market Data Entry is a Bid, an Offer, a Trade associated with a security, the opening, closing, or settlement price of a security, the buyer or seller imbalance for a security, the value of an index, the trading session high price, low price, or VWAP, or the trade volume or open interest in a security. Market Data Entries usually have a price and a quantity associated with them. For example, in an order book environment, requesting just the top of book will result in only two active Market Data Entries at a time – one for the best Bid and one for the best Offer. For a full book, the Bid and Offer side may each have several Market Data Entries. Each Market Data Entry might represent an aggregate for each price tier, and only one Market Data Entry per side per price would be active at a time. This is referred to as an Aggregated book. Or several Market Data Entries at one price tier could each represent a broker, Market Maker, ECN or Exchange's quote in a security, or individual orders in a book. This is a Non-Aggregated book. Alternately, a Market Data Entry could represent a completed trade in a security, the value of an index, the opening, closing, or settlement price of an instrument, the trading session high price, low price, or VWAP, or the volume traded or open interest in a security.

If the message is used for foreign exchange, conventions for identifying the forex transaction are as follows:

The forex Symbol is defined in <u>Electronic Broking Services, Ltd. (see http://www.ebs.com)</u> format: "CCY1/CCY2".

 Rates are expressed as "currency1 in currency2" (or "currency2 per currency1") and are calculated as CCY2 divided by CCY1 (NOT CCY1 divided by CCY2)

- e.g. "GBP/USD" represents a rate expressed as USD per GBP, "USD/JPY" represents a rate expressed as JPY per USD, etc.).
- · CCY1 and CCY2 are ISO currency codes
- The value of the Currency field represents the denomination of the quantity fields (e.g. JPY represents quantity of JPY).
- See VOLUME 7 PRODUCT: FOREIGN EXCHANGE

If the message is used for disseminating imbalance information, conventions are as follows:

- MDEntrySize represents the size of the imbalance and is always a positive integer.
- A TradeCondition of either P or Q is required to indicate the side of the imbalance.
- Markets may wish to indicate the presence of an imbalance but not the actual size. In this case, MDEntrySize need not be specified.

A Snapshot causes the current state of the market to be sent. A Snapshot + Updates causes the current state of the market to be sent, and any updates as they occur, until the client requests that the Snapshot + Updates be disabled.

When just a Snapshot is requested, the complete data for only one security or forex quote will be returned per FIX Market Data message.

When Snapshot + Updates is requested, updates may be full or incremental:

Full Refresh. This mode is optimized to trade off increased bandwidth for simplicity in processing and is
intended for requests on only a few instruments. Each FIX Market Data message in response to the request will

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contain the complete data requested for one instrument. If more than just the top of book is requested, this means that both sides, and all price tiers, must be reported in that Market Data message.

 Incremental Refresh. This mode is optimized for handling requests for many instruments while conserving bandwidth. Each Market Data Entry is assigned an MDEntryID unique among all other active entries, and several incremental updates of entries for different instruments can be included in one FIX Market Data message.

One specifies whether a list of trades, a 1-sided or 2-sided book, index, opening, closing, settlement, high, low and VWAP prices and imbalance volumes should be returned by using the NoMDEntryTypes field and MDEntryType repeating group to list all MDEntryType values that should be returned.

While this document specifies many parameters and modes in a request, the recipient of the request is not required to support all of them. A Market Data Request Reject may be sent in response to a request indicating that it cannot be honored.

The Market Data Request message format is as follows:

Market Data Request

			1	
Tag	Field	Name Name	Req'd	Comments
	Stand	lard Header	Y	MsgType = V
262	MDR	ReqID	Y	Must be unique, or the ID of previous Market Data Request to disable if SubscriptionRequestType = Disable previous Snapshot + Updates Request (2).
263	SubscriptionRequestType		Y	SubcriptionRequestType indicates to the other party what type of response is expected. A snapshot request only asks for current information. A subscribe request asks for updates as the status changes. Unsubscribe will cancel any future update messages from the counter party.
264	Mark	etDepth	Y	
265	MDU	JpdateType	N	Required if SubscriptionRequestType = Snapshot + Updates (1).
266	Aggr	egatedBook	N	
286	Open	CloseSettlFlag	N	Can be used to clarify a request if MDEntryType = Opening Price(4), Closing Price(5), or Settlement Price(6).
546	Scop	e	N	Defines the scope(s) of the request
547	MDI	mplicitDelete	N	Can be used when MarketDepth >= 2 and MDUpdateType = Incremental Refresh(1).
267	NoM	DEntryTypes	Y	Number of MDEntryType fields requested.
→	269	MDEntryType	Y	Must be the first field in this repeating group. This is a list of all the types of Market Data Entries that the firm requesting the Market Data is interested in receiving.
146	NoRe	elatedSym	Y	Number of symbols (instruments) requested.

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→	_	onent block trument>	Y	Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
→	711	NoUnderlyings	N	Number of underlyings
→	>	component block <underlyinginstrument></underlyinginstrument>	N	Must be provided if Number of underlyings > 0
→	555	NoLegs	N	Required for multileg quotes
→	→	component block <instrumentleg></instrumentleg>	N	Required for multileg quotes For Swaps one leg is Buy and other leg is Sell
386	NoTr	radingSessions	N	Number of trading sessions for which the request is valid.
→	336	TradingSessionID	N	
→	625	TradingSessionSubID	N	
815	Appl	QueueAction	N	Action to take if application level queuing exists
812	Appl	QueueMax	N	Maximum application queue depth that must be exceeded before queuing action is taken.
	Stand	lard Trailer	Y	

FIXML Definition for this message – see http://www.fixprotocol.org for details

MktDataReq

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MarketDataReqCustom "">¶

<!ENTITY % MarketDataReqContent
"MDReqID,SubscriptionRequestType,Ma
rketDepth,MDUpdateType?,AggregatedB
ook²,OpenCloseSettleFlag?,Scope?,MDI
mplicitDelete?,MDEntryTypeList
,MDReqGroupList,TrdSessionList?
%MarketDataReqCustom;">¶

<!ELEMENT MarketDataReq
(%MarketDataReqContent;)>¶

<!ATTLIST MarketDataReq FIXTag
CDATA #FIXED '35°¶
DataType CDATA #FIXED 'String'¶
Value CDATA #FIXED 'V'>

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Market Data - Snapshot / Full Refresh -

The Market Data messages are used as the response to a Market Data Request message. In all cases, one Market Data message refers only to one Market Data Request. It can be used to transmit a 2-sided book of orders or list of quotes, a list of trades, index values, opening, closing, settlement, high, low, or VWAP prices, the trade volume or open interest for a security, or any combination of these.

Market Data messages sent as the result of a Market Data Request message will specify the appropriate MDReqID. Unsolicited Market Data messages can be sent; in such cases, MDReqID will not be present.

If the message is used for foreign exchange, conventions for identifying the forex transaction are as follows:

- The forex Symbol is defined in Electronic Broking Services, Ltd. (see http://www.ebs.com) format: "CCY1/CCY2".
 - Rates are expressed as "currency1 in currency2" (or "currency2 per currency1") and are calculated as CCY2 divided by CCY1 (NOT CCY1 divided by CCY2)
 - e.g. "GBP/USD" represents a rate expressed as USD per GBP, "USD/JPY" represents a rate expressed as JPY per USD, etc.).
 - CCY1 and CCY2 are ISO currency codes
- The value of the Currency field represents the denomination of the quantity fields (e.g. JPY represents quantity of JPY).
- See VOLUME 7 PRODUCT: FOREIGN EXCHANGE

Market Data messages include many fields, and not all are required to be used. A firm may, at its option, choose to send the minimum fields required, or may choose to send more information, such as tick direction, tagging of best quotes, etc.

Market Data messages can take two forms. The first Market Data message format used for a Snapshot, or a Snapshot + Updates where MDUpdateType = Full Refresh (0) is as follows:

- For Market Data Requests where a Bid or Offer is added, changed, or deleted, every update to a Market
 Data Entry results in a new Market Data message that contains the entirety of the data requested for that
 instrument, not just the changed Market Data Entry. In other words, both sides of the market, or just one
 side in the case of a request of only bids or offers, for the depth requested, must be sent in one FIX Market
 Data message.
- A Market Data message may contain several trades, imbalances, an index value, opening, closing, settlement, high, low, and/or VWAP price for one instrument, as well as the traded volume and open interest, but only one instrument per message.
- Messages containing bids and/or offers cannot contain trades, imbalances, index value, opening, closing, settlement, high, low, and/or VWAP prices, trade volume, or open interest.

Market Data - Snapshot / Full Refresh

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = W
262	MDReqID	N	Conditionally required if this message is in response to a Market Data Request.

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compor	nent bloo	ck <instrument></instrument>	Y	Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
711	NoUnderlyings		N	Number of underlyings
→		onent block erlyingInstrument>	N	Must be provided if Number of underlyings > 0
555	NoLeg	gs	N	Required for multileg quotes
→	compo	nent block	N	Required for multileg quotes
	<instr< th=""><th>umentLeg></th><th></th><th>For Swaps one leg is Buy and other leg is Sell</th></instr<>	umentLeg>		For Swaps one leg is Buy and other leg is Sell
291	Financ	eialStatus	N	
292	Corpo	rateAction	N	
451	NetCh	gPrevDay	N	
268		DEntries	Y	Number of entries following.
→	269	MDEntryType	Y	Must be the first field in this repeating group.
→	270	MDEntryPx	N	Conditionally required if MDEntryType is not Imbalance(A)), Trade Volume (B), or Open Interest(C)
→	15	Currency	N	Can be used to specify the currency of the quoted price.
→	271	MDEntrySize	N	Conditionally required if MDEntryType = Bid(0), Offer(1), Trade(2)), Trade Volume (B), or Open Interest(C)
→	272	MDEntryDate	N	
→	273	MDEntryTime	N	
→	274	TickDirection	N	
→	275	MDMkt	N	Market posting quote / trade. Valid values:
				See Volume 6: Appendix 6-C.
→	336	TradingSessionID	N	
→	625	TradingSessionSubID	N	
→	276	QuoteCondition	N	Space-delimited list of conditions describing a quote.
→	277	TradeCondition	N	Space-delimited list of conditions describing a trade
→	282	MDEntryOriginator	N	
→	283	LocationID	N	
→	284	DeskID	N	
<u></u>	_ 286	OpenCloseSettlFlag	N	Used_if_MDEntryType_ =_ Opening_ Price(4), Closing Price(5), or Settlement Price(6).

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→	59	TimeInForce	N	For optional use when this Bid or Offer represents an order
>	432	ExpireDate	N	For optional use when this Bid or Offer represents an order. ExpireDate and ExpireTime cannot both be specified in one Market Data Entry.
→	126	ExpireTime	N	For optional use when this Bid or Offer represents an order. ExpireDate and ExpireTime cannot both be specified in one Market Data Entry.
→	110	MinQty	N	For optional use when this Bid or Offer represents an order
→	18	ExecInst	N	Can contain multiple instructions, space delimited.
→	287	SellerDays	N	
→	37	OrderID	N	For optional use when this Bid, Offer, or Trade represents an order
→	299	QuoteEntryID	N	For optional use when this Bid, Offer, or Trade represents a quote
→	288	MDEntryBuyer	N	For optional use in reporting Trades
→	289	MDEntrySeller	N	For optional use in reporting Trades
→	346	NumberOfOrders	N	In an Aggregated Book, used to show how many individual orders make up an MDEntry
→	290	MDEntryPositionNo	N	Display position of a bid or offer, numbered from most competitive to least competitive, per market side, beginning with 1
→	546	Scope	N	
_	_	_	_	_
→	811	PriceDelta	N	
→	58	Text	N	Text to describe the Market Data Entry. Part of repeating group.
→	354	EncodedTextLen	N	Must be set if EncodedText field is specified and must immediately precede it.
→	355	EncodedText	N	Encoded (non-ASCII characters) representation of the Text field in the encoded format specified via the MessageEncoding field.
813	ApplÇ	QueueDepth	N	Depth of application messages queued for transmission as of delivery of this message
814	ApplQ	QueueResolution	N	Action taken to resolve application queuing
	Stando	ard Trailer	Y	

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FIXML Definition for this message – see http://www.fixprotocol.org for details

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D. C. J. d. DITTE CT.	1 345 0 545 0 1
Refer to the FIX MI	. element MktDataSnnFullRefresh

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MarketDataCustom "">¶

<!ENTITY % MarketDataContent
"MDReqID?,Instrument,FinancialStatus?,
CorporateAction?,TotalVolumeTraded?,¶
TotalVolumeTradedDate?,TotalVolumeT
radedTime?,NetChgPrevDay?,¶
MDEntryList %MarketDataCustom;">¶
<!ELEMENT MarketData
(%MarketDataContent;)>¶
<!ATTLIST MarketData FIXTag
CDATA #FIXED '35'¶
DataType CDATA #FIXED 'String'¶
Value CDATA #FIXED 'W' >

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Market Data - Incremental Refresh -

The second Market Data message format is used for incremental updates. Market Data Entries may have an MDEntryID unique among all currently active Market Data Entries so they can be referenced for the purposes of deleting and changing them later. When changing a Market Data Entry, it may keep the same MDEntryID, in which case only MDEntryID would be populated, or the MDEntryID may change, in which case MDEntryID will contain the new ID, and MDEntryRefID will contain the ID of the Market Data Entry being changed. An MDEntryID can be reused within a day only if it has first been deleted.

Alternately, in the case of displaying the best quotes of Market Makers or Exchanges, and not orders in an order book, MDEntryID can be omitted for simplification. In this case, a New Market Data Entry will replace the previous best quote for that side and symbol for the specified Market Maker or Exchange. Deletion of a Market Data Entry would not specify an MDEntryID or MDRefID, and would remove the most recent Market Data Entry for the specified symbol, side, and Market Maker or Exchange. A Change of a Market Data Entry would not specify an MDEntryID or MDRefID, and would replace the most recent Market Data Entry for the specified symbol, side, and Market Maker or Exchange.

The Market Data message for incremental updates may contain any combination of new, changed, or deleted Market Data Entries, for any combination of instruments, with any combination of trades, imbalances, quotes, index values, open, close, settlement, high, low, and VWAP prices, trade volume and open interest so long as the maximum FIX message size is not exceeded. All of these types of Market Data Entries can be changed and deleted.

Adding, Changing, or Deleting Market Data Entries requires special consideration of the MDEntryPositionNo field, if the sender wishes to specify it and the receiver wishes to process it. For example, assume ten bids for a security. Adding a bid with MDEntryPositionNo = 4 requires the receiver to shift down other Market Data Entries, i.e. the Market Data Entry in the 4th display position will shift to the 5th, the 5th shifts to the 6th, etc. until the 10th shifts to the 11th. The sender must **NOT** send a modification of all MDEntries in the 4th through 10th positions just to update the MDEntryPositionNo field; the recipient must infer the change. Similarly, deleting a Market Data Entry in the 7th position causes the 8th Market Data Entry to move into the 7th position, the 9th to shift into the 8th position, etc. A Change of the MDEntryPositionNo field of a Market Data Entry causes the Market Data Entries lying between the old and new positions to shift. For instance, a Market Data Entry that occupied the 5th position is changed to the 8th position. This means that the Market Data Entry in the 6th position shifts up to the 5th position, the 7th position shifts to the 6th, and what was in the 8th position shifts into the 7th to make room for the changed Market Data Entry that is being moved into the 8th position.

Several techniques are employed to conserve bandwidth:

- An instrument only needs to be identified when a Market Data Entry is first created.
- In cases where the identification of an instrument is long, the sender has the option of referring to a previous active Market Data Entry of the same instrument instead of duplicating the information.
- A new Market Data Entry will default to the same instrument of the previous Market Data Entry in the same Market Data message if neither Symbol nor MDEntryRefID are specified.
- In the case of a change in a Market Data Entry, only the fields changing need to be sent as part of the change to the Market Data Entry; for example, a change of the MDEntrySize but not the MDEntryPx or other attributes of the Market Data Entry only requires listing the MDEntrySize field, in addition to MDUpdateAction and MDEntryID if used in the original Market Data Entry
- When creating a new Market Data Entry with a future or option instrument similar to the instrument in the
 previous Market Data Entry in the same FIX message, one may send just symbol identification fields that
 have changed, such as MaturityMonthYear, MaturityDay, StrikePrice, OptAttribute, and
 SecurityExchange.
- MDEntryID can be reused within the same day after it is deleted. This is helpful for distributing order books because an order that is suspended and then reinstated can have its MDEntryID deleted upon suspension and later reused, with MDUpdateAction = New(0) upon reinstatement, thus avoiding having to re-map the MDEntryID.

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Market Data - Incremental Refresh

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Field I	Vame	Req'd	Comments
Stando	ard Header	Y	MsgType = X
MDRe	eqID	N	Conditionally required if this message is in response to a Market Data Request.
NoMI	Entries	Y	Number of entries following.
279	MDUpdateAction	Y	Must be first field in this repeating group.
285	DeleteReason	N	If MDUpdateAction = Delete(2), can be used to specify a reason for the deletion.
269	MDEntryType	N	Conditionally required if MDUpdateAction = New(0). Cannot be changed.
278	MDEntryID	N	If specified, must be unique among currently active entries if MDUpdateAction = New (0), must be the same as a previous MDEntryID if MDUpdateAction = Delete (2), and must be the same as a previous MDEntryID if MDUpdateAction = Change (1) and MDEntryRefID is not specified, or must be unique among currently active entries if MDUpdateAction = Change(1) and MDEntryRefID is specified.
280	MDEntryRefID	N	If MDUpdateAction = New(0), for the first Market Data Entry in a message, either this field or a Symbol must be specified. If MDUpdateAction = Change(1), this must refer to a previous MDEntryID.
сотро	ment block <instrument></instrument>	N	Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES" Either Symbol (the instrument component block) or MDEntryRefID must be specified if MDUpdateAction = New(0) for the first Market Data Entry in a message. For subsequent Market Data Entries where MDUpdateAction = New(0), the default is the instrument used in the previous Market Data Entry if neither Symbol nor MDEntryRefID are specified, or in the case of options and futures, the previous instrument with changes specified in MaturityMonthYear, MaturityDay, StrikePrice, OptAttribute, and SecurityExchange. May not be changed.
711	NoUnderlyings	N	Number of underlyings
→	component block <underlyinginstrument></underlyinginstrument>	N	Must be provided if Number of underlyings > 0
555	NoLegs	N	Required for multileg quotes
→	component block <instrumentleg></instrumentleg>	N	Required for multileg quotes For Swaps one leg is Buy and other leg is Sell
	Standa MDR6 NoMI 279 285 269 278 280 compo 711 → 555	269 MDEntryType 278 MDEntryID 280 MDEntryRefID component block <instrument> 711 NoUnderlyings → component block <underlyinginstrument> 555 NoLegs → component block</underlyinginstrument></instrument>	Standard Header Y MDReqID N NoMDEntries Y 279 MDUpdateAction Y 285 DeleteReason N 269 MDEntryType N 278 MDEntryID N component block <instrument> N 711 NoUnderlyings N → component block <underlyinginstrument> N 555 NoLegs N → component block N</underlyinginstrument></instrument>

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п	1	ì	1	Ť I
→	291	FinancialStatus	N	
\rightarrow	292	CorporateAction	N	
→	270	MDEntryPx	N	Conditionally required when MDUpdateAction = New(0) and MDEntryType is not Imbalance(A)), Trade Volume (B), or Open Interest (C).
→	15	Currency	N	Can be used to specify the currency of the quoted price.
→	271	MDEntrySize	N	Conditionally required when MDUpdateAction = New(0) andMDEntryType = Bid(0), Offer(1), Trade(2)), Trade Volume(B), or Open Interest(C).
→	272	MDEntryDate	N	
→	273	MDEntryTime	N	
→	274	TickDirection	N	
→	275	MDMkt	N	Market posting quote / trade. Valid values: See Volume 6: Appendix 6-C
→	336	TradingSessionID	N	
→	625	TradingSessionSubID	N	
→	276	QuoteCondition	N	Space-delimited list of conditions describing a quote.
→	277	TradeCondition	N	Space-delimited list of conditions describing a trade
→	282	MDEntryOriginator	N	
→	283	LocationID	N	
→	284	DeskID	N	
→	286	OpenCloseSettlFlag	N	Used if MDEntryType = Opening Price(4), Closing Price(5), or Settlement Price(6).
→	59	TimeInForce	N	For optional use when this Bid or Offer represents an order
→	432	ExpireDate	N	For optional use when this Bid or Offer represents an order. ExpireDate and ExpireTime cannot both be specified in one Market Data Entry.
→	126	ExpireTime	N	For optional use when this Bid or Offer represents an order. ExpireDate and ExpireTime cannot both be specified in one Market Data Entry.
→	110	MinQty	N	For optional use when this Bid or Offer represents an order
→	18	ExecInst	N	Can contain multiple instructions, space delimited.
→	287	SellerDays	N	
→	37	OrderID	N	For optional use when this Bid, Offer, or Trade represents an order
→	299	QuoteEntryID	N	For optional use when this Bid, Offer, or Trade represents a quote

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1				
→	288	MDEntryBuyer	N	For optional use in reporting Trades
→	289	MDEntrySeller	N	For optional use in reporting Trades
→	346	NumberOfOrders	N	In an Aggregated Book, used to show how many individual orders make up an MDEntry
→	290	MDEntryPositionNo	N	Display position of a bid or offer, numbered from most competitive to least competitive, per market side, beginning with 1
→	546	Scope	N	
_	_	_	_	_
→	811	PriceDelta	N	
→	451	NetChgPrevDay	N	
→	58	Text	N	Text to describe the Market Data Entry. Part of repeating group.
→	354	EncodedTextLen	N	Must be set if EncodedText field is specified and must immediately precede it.
→	355	EncodedText	N	Encoded (non-ASCII characters) representation of the Text field in the encoded format specified via the MessageEncoding field.
813	ApplQ	QueueDepth	N	Depth of application messages queued for transmission as of delivery of this message
814	ApplQ	QueueResolution	N	Action taken to resolve application queuing
	Stando	urd Trailer	Y	

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FIXML Definition for this message – see http://www.fixprotocol.org for details

Refer to the FIXML element MktDataIncRefresh

Deleted: <!ENTITY %

MarketDataIncCustom "">¶
<!ENTITY % MarketDataIncContent
"MDReqID?,MDIncList
%MarketDataIncCustom;">¶
¶
<!ELEMENT MarketDataInc
(%MarketDataIncContent;)>¶
<!ATTLIST MarketDataInc FIXTag

CDATA #FIXED '35'¶

DataType CDATA #FIXED 'String'¶

Value CDATA #FIXED 'X' >

Deleted: January 24, 2000

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Market Data Request Reject -

The Market Data Request Reject is used when the broker cannot honor the Market Data Request, due to business or technical reasons. Brokers may choose to limit various parameters, such as the size of requests, whether just the top of book or the entire book may be displayed, and whether Full or Incremental updates must be used

The market data request reject message format is as follows:

Market Data Request Reject

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = Y
262	MDReqID	Y	Must refer to the MDReqID of the request.
281	MDReqRejReason	N	
816	NoAltMDSource	N	
→	817 AltMDSourceID	N	Alternative Market Data Source
58	Text	N	
354	EncodedTextLen N Must be set if EncodedText field is specified immediately precede it.		Must be set if EncodedText field is specified and must immediately precede it.
355	EncodedText	N	Encoded (non-ASCII characters) representation of the Text field in the encoded format specified via the MessageEncoding field.
	Standard Trailer	Y	

FIXML Definition for this message – see http://www.fixprotocol.org for details

Refer to FIXML element MktDataReqRej

Deleted: <!ENTITY %

MarketDataReqRejCustom "">¶
<!ENTITY % MarketDataReqRejContent
"MDReqID,MDReqRejReason?,Text?,En
codedTextGroup?
%MarketDataReqRejCustom;">¶
<!ELEMENT MarketDataReqRej
(%MarketDataReqRej
(%MarketDataReqRej FIXTag
CDATA #FIXED '35"¶
DataType CDATA #FIXED 'String'¶
Value CDATA #FIXED 'Y'>

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CATEGORY: SECURITY AND TRADING SESSION DEFINITION/STATUS

Security Definition Request -

The Security Definition Request message is used for the following:

1. Request a specific Security to be traded with the second party. The request security can be defined as a multileg security made up of one or more instrument legs.

Subscription for security status can be optionally specified by including the SubscriptionRequestType[263] field on the message.

See "Security Definition, Security Status, and Trading Session Message Scenarios"

Security Definition Request

Tag	Field Name	Req'd	Comments
Tug			
	Standard Header	Y	MsgType = c (lowercase)
320	SecurityReqID	Y	
321	SecurityRequestType	Y	
component block <instrument></instrument>		N	Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
			of the requested Security
component block <instrumentextension></instrumentextension>		N	Insert here the set of "InstrumentExtension" fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
711	NoUnderlyings	N	Number of underlyings
→	component block <underlyinginstrument></underlyinginstrument>	N	Must be provided if Number of underlyings > 0
15	Currency	N	
58	Text	N	Comment, instructions, or other identifying information.
354	EncodedTextLen	N	Must be set if EncodedText field is specified and must immediately precede it.
355	EncodedText	N	Encoded (non-ASCII characters) representation of the Text field in the encoded format specified via the MessageEncoding field.
336	TradingSessionID	N	Optional Trading Session Identifier to specify a particular trading session for which you want to obtain a list of securities that are tradeable.
625	TradingSessionSubID	N	
* 555	-NoLegs	N	Number of legs that make up the Security

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→	component block <instrumentleg></instrumentleg>	N	Insert here the set of "InstrumentLeg" (leg-specific symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES" Required if NoLegs > 0.
827	ExpirationCycle	N	
263	SubscriptionRequestType	N	Subscribe or unsubscribe for security status to security specified in request.
	Standard Trailer	Y	

FIXML Definition for this message – see http://www.fixprotocol.org for details

Refer to the FIXML element SecDefReq

Deleted: <!ENTITY % SecurityDefReqCustom "">¶
<!ENTITY % SecurityDefReqContent "SecurityReqID,SecurityRequestType,Instrument?,Currency?,Text?,EncodedTextGroup?,TradingSessionID?, TradingSessionSubID?,InstrumentLegLis t?, SubscriptionRequestType?
%SecurityDefReqCustom;">¶ <!ELEMENT SecurityDefReq (%SecurityDefReqContent;)>¶ <!ATTLIST SecurityDefReq FIXTag CDATA #FIXED '35'¶

DataType CDATA #FIXED 'String'¶

Value CDATA #FIXED 'c' >

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Security Definition -

The Security Definition message is used for the following:

- 1. Accept the security defined in a Security Definition message.
- 2. Accept the security defined in a *Security Definition* message with changes to the definition and/or identity of the security.
- 3. Reject the security requested in a Security Definition message

Security Definition

	<u> </u>	Security	Definition
Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = d (lowercase)
320	SecurityReqID	Y	
322	SecurityResponseID	Y	Identifier for the Security Definition message
323	SecurityResponseType	Y	Response to the Security Definition Request
compoi	nent block <instrument></instrument>	N	Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES" of the requested Security
compoi	nent block <instrumentextension></instrumentextension>	N	Insert here the set of "InstrumentExtension" fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
711	NoUnderlyings	N	Number of underlyings
→	component block <underlyinginstrument></underlyinginstrument>	N	Must be provided if Number of underlyings > 0
15	Currency	N	
336	TradingSessionID	N	
625	TradingSessionSubID	N	
58	Text	N	Comment, instructions, or other identifying information.
354	EncodedTextLen	N	Must be set if EncodedText field is specified and must immediately precede it.
355	EncodedText	N	Encoded (non-ASCII characters) representation of the Text field in the encoded format specified via the MessageEncoding field.
555	NoLegs	N	Number of legs that make up the Security

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→	component block <instrumentleg></instrumentleg>	N	Insert here the set of "InstrumentLeg" (leg- specific symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
827	ExpirationCycle	N	
561	RoundLot	N	
562	MinTradeVol	N	
	Standard Trailer	Y	

FIXML Definition for this message - see http://www.fixprotocol.org for details

Refer to FIXML element SecDef

Deleted: <!ENTITY %
SecurityDefCustom "">¶
<!ENTITY % SecurityDefContent
"SecurityReqID,SecurityResponseID,SecurityResponseType,
Instrument?,Currency?,TradingSessionID
?,TradingSessionSubID?,Text?,Encoded
TextGroup?, ¶
InstrumentLegList?,RoundLot?,
MinTradeVol? %SecurityDefCustom;">¶
¶
<!ELEMENT SecurityDef
(%SecurityDefContent;)>¶
<!ATTLIST SecurityDef FIXTag
CDATA #FIXED '35"¶
DataType CDATA #FIXED 'String'¶
Value CDATA #FIXED 'd'>

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Security Type Request -

The Security Type Request message is used to return a list of security types available from a counterparty or market,

The request can include a specific TradingSessionID for which Security Types should be returned.

Security Type Request

-	Security Type Request				
Tag	Field Name	Req'd	Comments		
	Standard Header	Y	$MsgType = v ext{ (lowercase V)}$		
320	SecurityReqID	Y			
58	Text	N	Comment, instructions, or other identifying information.		
354	EncodedTextLen	N	Must be set if EncodedText field is specified and must immediately precede it.		
355	EncodedText	N	Encoded (non-ASCII characters) representation of the Text field in the encoded format specified via the MessageEncoding field.		
336	TradingSessionID	N	Optional Trading Session Identifier to specify a particular trading session for which you want to obtain a list of securities that are tradeable.		
625	TradingSessionSubID	N			
460	Product	N	Used to qualify which security types are returned		
167	SecurityType	N	Used to qualify which security type is returned		
762	SecuritySubType	N	Used to qualify which security types are returned		
	Standard Trailer	Y			

FIXML Definition for this message – see http://www.fixprotocol.org for details

Refer to FIXML element SecTypReq

Deleted: <!ENTITY %
SecurityTypeReqCustom "">¶
<!ENTITY % SecurityTypeReqContent
"SecurityReqID.Text?,EncodedTextGrou
p?,TradingSessionID?
%SecurityTypeReqCustom;">¶
¶
<!ELEMENT SecurityTypeReq
(%SecurityTypeReqContent;)>¶
<!ATTLIST SecurityTypeReq FIXTag
CDATA #FIXED 'S'
DataType CDATA #FIXED 'String'¶
Value CDATA #FIXED 'V'>

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Security Types

The Security Type message is used to return a list of security types available from a counterparty or market,

Security Types

Tag	Field I	Name	Req'd	Comments
	Standard Header		Y	MsgType = w (lowercase W)
320	Securi	tyReqID	Y	
322	Securi	tyResponseID	Y	Identifier for the security response message
323	Securi	tyResponseType	Y	The result of the security request identified by SecurityReqID
557	TotNo	SecurityTypes	N	Indicates total number of security types in the event that multiple Security Type messages are used to return results
893	LastFr	agment	N	Indicates if this message in a fragmented response
558	NoSec	urityTypes	N	
→	167 SecurityType		N	Required if NoSecurityTypes > 0
→	762 SecuritySubType		N	
→	460	Product	N	
\rightarrow	461	CFICode	N	
58	Text		N	Comment, instructions, or other identifying information.
354	Encod	edTextLen	N	Must be set if EncodedText field is specified and must immediately precede it.
355	EncodedText		N	Encoded (non-ASCII characters) representation of the Text field in the encoded format specified via the MessageEncoding field.
336	TradingSessionID		N	Optional Trading Session Identifier to specify a particular trading session for which you want to obtain a list of securities that are tradeable.
625	Tradin	gSessionSubID	N	
263	Subsci	riptionRequestType	N	Subscribe or unsubscribe for security status to security specified in request.
	Stando	ard Trailer	Y	

FIXML Definition for this message – see http://www.fixprotocol.org for details

Refer to FIXML element SecTyps

Deleted: <!ENTITY %
SecurityTypesCustom "">¶
<!ENTITY % SecurityTypesContent
"SecurityReqID,SecurityResponseID,SecurityResponseID,SecurityResponseID,SecurityResponseIT,Peps.",Text?,EncodedTextGroup?,TradingSessionID?,TradingSessionID?,TradingSessionSubID?,SubscriptionRequestType?
%SecurityTypesCustom;">¶
<!ELEMENT SecurityTypes
(%SecurityTypesContent;)>¶
<!ATTLIST SecurityTypes FIXTag
CDATA #FIXED '35"¶
DataType CDATA #FIXED 'String'¶
Value CDATA #FIXED 'W'>

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Security List Request -

The Security List Request message is used to return a list of securities from the counterparty that match criteria provided on the request

Subscription for security status can be optionally specified by including the SubscriptionRequestType[263] field on the message.

 $Security List Request Type [559] \ specifies \ the \ criteria \ of \ the \ request:$

- 0 Symbol
- 1 SecurityType and/or CFICode
- 2 Product
- 3 TradingSessionID
- 4 All Securities

Security List Request

	2	ccurry	List Request
Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = x (lowercase X)
320	SecurityReqID	Y	
559	SecurityListRequestType	Y	Type of Security List Request being made
compo	onent block <instrument></instrument>	N	Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
			of the requested Security
compo	onent block <instrumentextension></instrumentextension>	N	Insert here the set of "InstrumentExtension" fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
component block <financingdetails></financingdetails>		N	Insert here the set of "FinancingDetails" fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
711	NoUnderlyings	N	Number of underlyings
→	component block <underlyinginstrument></underlyinginstrument>	N	Must be provided if Number of underlyings > 0
555	NoLegs	N	Number of legs that make up the Security
→	component block <instrumentleg></instrumentleg>	N	Insert here the set of "Instrument Legs" (leg symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
			Required if NoLegs > 0
15	Currency	N	
58	Text	N	Comment, instructions, or other identifying information.
354	EncodedTextLen	N	Must be set if EncodedText field is specified and must immediately precede it.

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355	EncodedText	N	Encoded (non-ASCII characters) representation of the Text field in the encoded format specified via the MessageEncoding field.
336	TradingSessionID	N	Optional Trading Session Identifier to specify a particular trading session for which you want to obtain a list of securities that are tradeable.
625	TradingSessionSubID	N	
263	SubscriptionRequestType	N	Subscribe or unsubscribe for security status to security specified in request.
	Standard Trailer	Y	

FIXML Definition for this message – see http://www.fixprotocol.org for details

Refer to FIXML element SecListReq

Deleted: <!ENTITY % SecurityListReqCustom "">¶
<!ENTITY % SecurityListReqContent
"SecurityReqID,SecurityListRequestType
,Instrument?,Currency?,Text?,EncodedTe xtGroup?,TradingSessionID?,TradingSessionSubID?,SubscriptionRequestType?
%SecurityListReqCustom;">¶ <!ELEMENT SecurityListReq (%SecurityListReqContent;)>¶ <!ATTLIST SecurityListReq FIXTag CDATA #FIXED '35¶ DataType CDATA #FIXED 'String'¶
Value CDATA #FIXED 'x' >

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Security List -

The Security List message is used to return a list of securities that matches the criteria specified in a Security List Request.

Security List

	Security List				
Tag	Field 1	Name	Req'd	Comments	
	Standa	ırd Header	Y	MsgType = y (lowercase Y)	
320	Securi	tyReqID	Y		
322	Securi	tyResponseID	Y	Identifier for the Security List message	
560	Securi	tyRequestResult	Y	Result of the Security Request identified by the SecurityReqID	
393	TotNo	RelatedSym	N	Used to indicate if the total number of securities being returned for this request. Used in the event that message fragmentation is required.	
893	LastFr	agment	N	Indicates if this message in a fragmented response	
146	NoRel	atedSym	N	Specifies the number of repeating symbols (instruments) specified	
→	сотро	nent block <instrument></instrument>	N	Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES" of the requested Security	
>		nent block umentExtension>	N	Insert here the set of "InstrumentExtension" fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"	
→		nent block ncingDetails>	N	Insert here the set of "FinancingDetails" fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"	
→	711	NoUnderlyings	N	Number of underlyings	
→	component block <underlyinginstrument></underlyinginstrument>		N	Must be provided if Number of underlyings > 0	
→	15	Currency	N		
→	component block <stipulations></stipulations>		N	Insert here the set of "Stipulations" fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"	
' →	555	NoLegs	N	Number of legs that make up the Security	

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→	→	component block <instrumentleg></instrumentleg>		N	Insert here the set of "Instrument Legs" (leg symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
			T		Required if NoLegs > 0
→	→	690	LegSwapType	N	
→	→	587	LegSettlType	N	
→	→ component block <legstipulations></legstipulations>			N	Insert here the set of "LegStipulations" (leg symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES" Required if NoLegs > 0
→	→	→ component block <legbenchmarkcurvedata></legbenchmarkcurvedata>		N	Insert here the set of "LegBenchmarkCurveData" (leg symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES" Required if NoLegs > 0
→	component block <spreadorbenchmarkcurvedata></spreadorbenchmarkcurvedata>			N	Insert here the set of "SpreadOrBenchmarkCurveData" fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
→	compo	onent blo	ock <yielddata></yielddata>	N	Insert here the set of "YieldData" fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
→	561	Round	dLot	N	
→	562	MinTi	radeVol	N	
→	336	Tradir	ngSessionID	N	
→	625	Tradir	ngSessionSubID	N	
→	827	Expire	ationCycle	N	
→	58 Text		N	Comment, instructions, or other identifying information.	
→	354 EncodedTextLen		N	Must be set if EncodedText field is specified and must immediately precede it.	
→	355 EncodedText		ledText	N	Encoded (non-ASCII characters) representation of the Text field in the encoded format specified via the MessageEncoding field.
	Stando	ard Trai	ler	Y	

FIXML Definition for this message – see http://www.fixprotocol.org for details

Refer to FIXML element SecList

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¶
<!ELEMENT SecInstrList
(NoRelatedSym?, SecInstrGroup+)>¶

¶
<!ELEMENT SecInstrGroup
(Instrument?, Currency?,
InstrumentLegList?, RoundLot?,
MinTradeVol?, TradingSessionID?,
TradingSessionSubID?, Text?,
EncodedTextGroup?)>

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Derivative Security List Request -

The Derivative Security List Request message is used to return a list of securities from the counterparty that match criteria provided on the request

Subscription for security status can be optionally specified by including the SubscriptionRequestType[263] field on the message.

SecurityListRequestType[559] specifies the criteria of the request:

- 0 Symbol
- 1 SecurityType and/or CFICode
- 2 Product
- 3 TradingSessionID
- 4 All Securities

Derivative Security List Request

	Delivative Security List Request				
Tag	Field Name	Req'd	Comments		
	Standard Header	Y	MsgType = z (lowercase Z)		
320	SecurityReqID	Y			
559	SecurityListRequestType	Y			
compo	onent block <underlyinginstrument></underlyinginstrument>	N	Specifies the underlying instrument		
762	SecuritySubType	N			
15	Currency	N			
58	Text	N	Comment, instructions, or other identifying information.		
354	EncodedTextLen	N	Must be set if EncodedText field is specified and must immediately precede it.		
355	EncodedText	N	Encoded (non-ASCII characters) representation of the Text field in the encoded format specified via the MessageEncoding field.		
336	TradingSessionID	N	Optional Trading Session Identifier to specify a particular trading session for which you want to obtain a list of securities that are tradeable.		
625	TradingSessionSubID	N			
263	SubscriptionRequestType	N	Subscribe or unsubscribe for security status to security specified in request.		
	Standard Trailer	Y			

FIXML Definition for this message - see http://www.fixprotocol.org for details

Refer to FIXML element DerivSecListReq

"SecurityReqID,SecurityListRequestType ,UnderlyingInstrument ?,Currency?,Text?,EncodedTextGroup?,T

Deleted: <!ENTITY %
DerivSecurityListReqCustom "">¶

DerivSecurityListReqContent

<!ENTITY %

radingSessionID?,TradingSessionSubID?,SubscriptionRequestType?
%DerivSecurityListReqCustom;">¶

<!ELEMENT DerivSecurityListReq
(%DerivSecurityListReqContent;)>¶
<!ATTLIST DerivSecurityListReq</pre>

FIXTag CDATA #FIXED '35'¶

DataType CDATA #FIXED 'String'¶

Value CDATA #FIXED 'z' >

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Derivative Security List -

The Derivative Security List message is used to return a list of securities that matches the criteria specified in a Derivative Security List Request.

Derivative Security List

			1144116	Security List
Tag	Field I	Name	Req'd	Comments
	Standa	ırd Header	Y	MsgType = AA (2 A's)
320	Securi	tyReqID	Y	
322	Securi	tyResponseID	Y	Identifier for the Derivative Security List message
560	Securi	tyRequestResult	Y	Result of the Security Request identified by SecurityReqID
compo	nent blo	ock <underlyinginstrument></underlyinginstrument>	N	Underlying security for which derivatives are being returned
393	TotNo	RelatedSym	N	Used to indicate if the total number of securities being returned for this request. Used in the event that message fragmentation is required.
893	LastFr	agment	N	Indicates if this message in a fragmented response
146	NoRel	atedSym	N	Specifies the number of repeating symbols (instruments) specified
→	compo	nent block <instrument></instrument>	N	Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
	 			of the requested Security
→	15	Currency	N	
→	827	ExpirationCycle	N	
→	component block <instrumentextension></instrumentextension>		N	Insert here the set of "InstrumentExtension" fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
→	555 NoLegs		N	Number of legs that make up the Security
→	→	component block <instrumentleg></instrumentleg>	N	Insert here the set of "Instrument Legs" (leg symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES" Required if NoLegs > 0
→	336	TradingSessionID	N	
U		σ		

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→	625	TradingSessionSubID	N	
→	58	Text	N	Comment, instructions, or other identifying information.
→	354	EncodedTextLen	N	Must be set if EncodedText field is specified and must immediately precede it.
→	355	EncodedText	N	Encoded (non-ASCII characters) representation of the Text field in the encoded format specified via the MessageEncoding field.
	Standard Trailer		Y	

FIXML Definition for this message - see http://www.fixprotocol.org for details

Refer to FIXML element DerivSecList

Deleted: <!ENTITY % DerivSecurityListCustom "">¶ elenvecurityListCustom

!ENTITY % DerivSecurityListContent

"SecurityReqID,SecurityResponseID,SecurityRequestResult,UnderlyingInstrument
?,TotalNumSecurities?,DerivSecInstrList ? %DerivSecurityListCustom,">¶ <!ELEMENT DerivSecurityList (%DerivSecurityListContent;)>¶ <!ATTLIST DerivSecurityList FIXTag CDATA #FIXED '35'¶ DataType CDATA #FIXED 'String'¶
Value CDATA #FIXED 'AA' >¶
<!ELEMENT DerivSecInstrList (NoRelatedSym?, DerivSecInstrGroup+)>¶ ¶
<!ELEMENT DerivSecInstrGroup (Instrument?, Currency?, InstrumentLegList?, TradingSessionID?, TradingSessionSubID?, Text?, EncodedTextGroup?)>

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Security Status Request -

The Security Status Request message provides for the ability to request the status of a security. One or more Security Status messages are returned as a result of a Security Status Request message.

The Security Status Request message contains a *SubscriptionRequestType* field. This tells the counter party what type of request is being made:

- 0 indicates that the requestor only wants a snapshot or the current status.
- 1 indicates that the requestor wants a snapshot (the current status) plus updates as the status changes. This is similar to subscribing for information and can be implemented in applications as a subscription mechanism.
- 2 indicates that the requestor wishes to cancel any pending snapshots or updates in essence making this an unsubscribe operation.

Security Status Request

			ity Status Request
Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = e (lowercase)
324	SecurityStatusReqID	Y	Must be unique, or the ID of previous Security Status Request to disable if SubscriptionRequestType = Disable previous Snapshot + Updates Request (2).
compo	onent block <instrument></instrument>	Y	Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
<instru< td=""><td>onent block umentExtension></td><td>N</td><td>Insert here the set of "InstrumentExtension" fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"</td></instru<>	onent block umentExtension>	N	Insert here the set of "InstrumentExtension" fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
711	NoUnderlyings	N	Number of underlyings
→	component block <underlyinginstrument></underlyinginstrument>	N	Must be provided if Number of underlyings > 0
555	NoLegs	N	Number of legs that make up the Security
→	component block <instrumentleg></instrumentleg>	N	Insert here the set of "Instrument Legs" (leg symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"
			Required if NoLegs > 0
15	Currency	N	
263	SubscriptionRequestType	Y	SubcriptionRequestType indicates to the other party what type of response is expected. A snapshot request only asks for current information. A subscribe request asks for updates as the status changes. Unsubscribe will cancel any future update messages from the counter party.)
336	TradingSessionID	N	
625	TradingSessionSubID	N	
V	Standard Trailer	Y	

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FIXML Definition for this message – see http://www.fixprotocol.org for details Refer to FIXML element SecStatReq

Deleted: <!ENTITY % $SecurityStatusReqCustom "">\P$ <!ENTITY % SecurityStatusReqContent
"SecurityStatusReqID,Instrument,Currenc</pre> y?,SubscriptionRequestType,TradingSess ionID?, TradingSessionSubID? $\% Security Status Req Custom;">\P$ <!ELEMENT SecurityStatusReq (%SecurityStatusReqContent;)>¶
<!ATTLIST SecurityStatusReq FIXTag CDATA #FIXED '35"

DataType CDATA #FIXED 'String'

Value CDATA #FIXED 'e' >

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Security Status -

The Security Status message provides for the ability to report changes in status to a security. The Security Status message contains fields to indicate trading status, corporate actions, financial status of the company. The Security Status message is used by one trading entity (for instance an exchange) to report changes in the state of a security.

It is expected that the Security Status message that is sent as a response should indicate what type of request is being provided. If the message is being generated as a result of a RequestType =1, then the response should have a RequestType=1 to permit the requestor to determine why the message was sent.

Security Status

i	Security Status					
Tag	Field Name	Req'd	Comments			
	Standard Header	Y	MsgType = f (lowercase)			
324	SecurityStatusReqID	N				
component block <instrument></instrument>		Y	Insert here the set of "Instrument" (symbology) fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"			
component block <instrumentextension></instrumentextension>		N	Insert here the set of "InstrumentExtension" fields defined in "COMMON COMPONENTS OF APPLICATION MESSAGES"			
711	NoUnderlyings	N	Number of underlyings			
→	component block <underlyinginstrument></underlyinginstrument>	N	Must be provided if Number of underlyings > 0			
555	NoLegs	N	Required for multileg quotes			
→	component block	N	Required for multileg quotes			
	<instrumentleg></instrumentleg>		For Swaps one leg is Buy and other leg is Sell			
15	Currency	N				
336	TradingSessionID	N				
625	TradingSessionSubID	N				
325	UnsolicitedIndicator	N	Set to 'Y' if message is sent as a result of a subscription request not a snapshot request			
326	SecurityTradingStatus	N	Identifies the trading status applicable to the transaction.			
291	FinancialStatus	N				
292	CorporateAction	N				
327	HaltReason	N	Denotes the reason for the Opening Delay or Trading Halt.			
328	InViewOfCommon	N				
329	DueToRelated	N				
v 330	_BuyVolume •	N				
331	SellVolume	N				

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332	HighPx	N		
333	LowPx	N		
31	LastPx	N	Represents the last price for that security either on Consolidated or an individual participant basis at the time it is disseminated.	
60	TransactTime	N	Trade Dissemination Time	
334	Adjustment	N		
58	Text	N	Comment, instructions, or other identifying information.	
354	EncodedTextLen	N	Must be set if EncodedText field is specified and must immediately precede it.	
355	EncodedText	N	Encoded (non-ASCII characters) representation of the Text field in the encoded format specified via the MessageEncoding field.	
	Standard Trailer	Y		

FIXML Definition for this message – see http://www.fixprotocol.org for details

Refer to FIXML element SecStat

Deleted: <!ENTITY %
SecurityStatusCustom "">¶
<!ENTITY % SecurityStatusContent
"SecurityStatusReqID?,Instrument,Curren
cy?,TradingSessionID?,TradingSessionS
ubID?,UnsolicitedIndicator?,SecurityTra
dingStatus?,FinancialStatus?,CorporateA
ction?,HaltReason?,InViewOfCommon?,
DueToRelated?,BuyVolume?,SellVolume
?,HighPx?,LowPx?,LastPx?,TransactTim
e?,Adjustment?,Text?,EncodedTextGrou
p? %SecurityStatusCustom;">¶
<!ELEMENT SecurityStatus
(%SecurityStatusContent;)>¶
<!ATTLIST SecurityStatus FIXTag
CDATA #FIXED '35"¶
DataType CDATA #FIXED 'String'¶
Value CDATA #FIXED 'f'>

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Trading Session Status Request -

The Trading Session Status Request is used to request information on the status of a market. With the move to multiple sessions occurring for a given trading party (morning and evening sessions for instance) there is a need to be able to provide information on what product is trading on what market.

The Trading Session Status Request message can be used to inquire the trading status of a trading party. The Trading Session Status message can be used to subscribe to updates to the status of a trading session by setting the RequestType field to 1.

To list the securities available during a particular trading session, **see the SecurityDefinitionRequest message**.

Trading Session Status Request

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = g (lowercase)
335	TradSesReqID	Y	Must be unique, or the ID of previous Trading Session Status Request to disable if SubscriptionRequestType = Disable previous Snapshot + Updates Request (2).
336	TradingSessionID	N	Trading Session for which status is being requested
625	TradingSessionSubID	N	
338	TradSesMethod	N	Method of trading
339	TradSesMode	N	Trading Session Mode
263	SubscriptionRequestTy pe	Y	
	Standard Trailer	Y	

FIXML Definition for this message – see http://www.fixprotocol.org for details

Refer to FIXML element TrdgSesStatRec

Deleted: <!ENTITY %
TradSesStatusReqCustom "">¶
<!ENTITY % TradSesStatusReqContent
"TradSesReqID
,TradingSessionID?,TradingSessionSubI
D?,TradSesMethod?,TradSesMode?,Subs
criptionRequestType
%TradSesStatusReqCustom;">¶
<!ELEMENT TradSessionStatusReq
(%TradSesStatusReqContent;)>¶
<!ATTLIST TradSessionStatusReq
FIXTag CDATA #FIXED '35"¶
DataType CDATA #FIXED '51ring'¶
Value CDATA #FIXED '51ring'¶
Value CDATA #FIXED '52'>

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Trading Session Status -

The Trading Session Status provides information on the status of a market. With the move to multiple sessions occurring for a given trading party (morning and evening sessions for instance) there is a need to be able to provide information on what product is trading on what market.

The Trading Session Status can provide an optional repeating group of securities that are available for trading during that session.

Trading Session Status

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = h (lowercase)
335	TradSesReqID	N	Provided for a response to a specific Trading Session Status Request message (snapshot).
336	TradingSessionID	Y	Identifier for Trading Session
625	TradingSessionSubID	N	
338	TradSesMethod	N	Method of trading:
339	TradSesMode	N	Trading Session Mode
325	UnsolicitedIndicator	N	'Y' if message is sent unsolicited as a result of a previous subscription request.
340	TradSesStatus	Y	State of the trading session
567	TradSesStatusRejReason	N	Use with TradSesStatus = "Request Rejected"
341	TradSesStartTime	N	Starting time of the trading session
342	TradSesOpenTime	N	Time of the opening of the trading session
343	TradSesPreCloseTime	N	Time of the pre-close of the trading session
344	TradSesCloseTime	N	Closing time of the trading session
345	TradSesEndTime	N	End time of the trading session
387	TotalVolumeTraded	N	
58	Text	N	
354	EncodedTextLen	N	Must be set if EncodedText field is specified and must immediately precede it.
355	EncodedText	N	Encoded (non-ASCII characters) representation of the Text field in the encoded format specified via the MessageEncoding field.
	Standard Trailer	Y	

FIXML Definition for this message – see http://www.fixprotocol.org for details

Refer to FIXML element TrdgSesStat

<!ENTITY % TradSesStatusContent "TradSesReqID?, TradingSessionID, TradingSessionSubID,TradSesMethod?,TradS esMode?,UnsolicitedIndicator?,¶ TradSesStatus,TradSesStatusRejReason?, TradSesStartTime?,TradSesOpenTime?,T radSesPreCloseTime?,¶ TradSesCloseTime?,TradSesEndTime?,T otalVolumeTraded?,Text?,EncodedTextG roup? ¶ %TradSesStatusCustom;">¶ <!ELEMENT TradSessionStatus (%TradSesStatusContent;)>¶ <!ATTLIST TradSessionStatus FIXTag CDATA #FIXED '35'¶ DataType CDATA #FIXED 'String'¶
Value CDATA #FIXED 'h' >

Deleted: <!ENTITY % TradSesStatusCustom "">¶

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Security Definition, Security Status, and Trading Session Message Scenarios

Overview

A set of messages has been defined for the definition and dissemination of securities information traded between two parties. These messages allow for the ability to define complex, multi-leg financial securities, such as options strategies, futures spreads, underlying-derivative combinations, indexes, and baskets. *Security Definition Request* message is used to define a security to the counterparty for trading and to retrieve definitions for securities available for trading with the counterparty.

The Security Definition message can also be used to query a list of securities offered by a trading party. This message is useful for obtaining lists of products that are traded on a market. Although intended to support exchange style trading – this capability should also be of use in trading between any two trading partners.

Two additional messages have been added for status purposes: The Security Status message and the Trading Session Status message. The Security Status message is based upon the Trade Related message proposal from SIAC.

The Security Status message provides solicited or unsolicited status information on securities. An exchange can use this message to transmit change in trading state of a product. The Security Status Request message can be used to query the state of a product or to subscribe for security state changes.

The *Trading Session Status* message has been added to provide status on a market. An exchange can use this to indicate status on the overall market and to provide a list of securities traded during that trading session. Two trading parties can also use this message to communicate information on two-party trading. The *Trading Session Status Request* message is used to query the state of a product.

Both the Security Status message and Trading Session Status message include a SubscriptionRequestType field, which is used to tell the counterparty application if the requesting application wants to receive a snapshot of status or wants to subscribe for unsolicited messages as the status of the security (or trading session) changes.

Background

The motivation behind these messages was to identify a method to be able to trade derivative strategies (butterfly spread, vertical spread, calendar spread, covered write, etc.) and to provide a mechanism to define FLEX Options using the FIX protocol. Most exchange trading systems have some type of product definition service. Although the motivation for the new messages was to support the communication between trading party and exchange, it was important to make any message flexible enough to support a variety of applications, including the ability to retrieve information about securities available for trading with a counterparty. The ability to query for a list of securities is very important in an exchange environment – where the retrieval of "standing data" from the exchange is needed by many trading systems.

Definitions

• Strategy - A group of related securities that are traded atomically at a net price.

Examples:

- Vertical Spread
- Butterfly Spread
- Calendar Spread
- Covered Write
- Strategy Leg One Security within a strategy

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- Spread combination of derivative securities whose maturity date or strike price is spread, creating a synthetic Security.
- Synthetic A financial security that is the result of holding positions in multiple securities.
- · Combination alias for spread or strategy.

Approach

A Security Definition Request message can be used to define and/or request a specific Security to be traded with a counterparty.

The Security Definition message is used to:

- Indicate acceptance of a Security defined in a previous Security Definition Request message.
- Indicate acceptance of a Security defined in a previous Security Definition Request message with changes to the definition and/or symbol or security ID.
- Reject the request for security.

Extensions to other messages

One additional field, *MultiLegReportingType*, is to be used on the Execution Report to indicate if the Execution Report is for the multileg security itself or an individual leg of the multileg security. Absence of this field in the Execution Report implies that the report pertains to the entire security – not an individual leg.

The agreement on how parties report multileg security execution is left to individual trading parties and is to be configured out of band. The FIX protocol will not provide a mechanism to specify how multileg execution reporting should be done.

For an example:

A straddle is an option strategy that consists of simultaneously buying a call option and a put option at the same strike price and maturity date. The straddle is defined for trading using the Security Definition Request Message. Once the straddle is defined, via receipt of the Security Definition Message from the counterparty (in this case an options exchange), a New Order – Single is used to submit the order to trade this newly defined multileg security. If the parties agree to report multileg execution by individual legs— then an execution report will be generated for each leg of the option strategy. If the parties agree to report multileg execution by multileg security only, then only one Execution Report will be issued for the fill.

Reporting by leg is required for equity options as clearing houses will only understand the individual option series legs. Reporting by legs permits the trading parties to accurately maintain positions.

Rules

- The Security identification negotiated during the session is, by default, assumed valid only during the session.
 This eliminates the requirement for, but does not prevent the use, of a service to define and keep Securities persistent.
- Once a Security is defined, it will be traded as a regular Security
- Once a Security is defined, it will be traded at a single net price
- Once a Security is defined; it can be traded by FIX-4.1 compatible systems (This provides for backward compatibility and the ability to maintain Security information outside of FIX so that FIX 4.1 engines can participate).

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Specifying Derivative Trading Strategies using the Security Definition message

The Security Definition message can be used to specify multiple legs of a derivative trading strategy. The first set of security related fields are used to name and identify the proposed strategy. This is followed by the NoRelatedSym field (146), which indicates the number of legs in the proposed security. After the NoRelatedSym field, security related fields are repeated for each leg in the proposed security.

Two additional pieces are needed specify the strategy.

- RatioQty is a quantity field that indicates the ratio of the leg to other legs in the strategy.
- Side indicates if that particular leg will be bought or sold as part of the strategy.

Example using RatioQty and Side:

A Butterfly strategy consists of simultaneously:

Buying 1 Call at Strike Price #1

Selling 2 Calls at the next higher strike price (Strike Price #2)

Buying 1 call at the next higher strike price (Strike Price #3)

The Legs that would describe this strategy are as follows:

PutOrCall	RatioQty	Side
1=Call	1	1=Buy
1=Call	2	2=Sell
1=Call	1	1=Buy

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Scenarios

Scenario 1 - Typical use of Security Definition message in placing an Order

This scenario has the first party defining a strategy order using a Security Definition message.

First Party		Second Party
Security Definition Request message	\rightarrow	Interprets Security request
SecurityRequest = 1		
Propose an identity for the Security or Request an identity for the Security from second party		
If second party accepted Security then the first	+	Security Definition message
party is free to use the Security in a trade		SecurityResponse=0
New Order – Single message	→	Order is handled by exchange
Product = Security information from the Security Definition message		
	←	Execution Report
		Order received
		(Most likely will need to add Security information to the Execution report)
	←	Execution Report
		Fill Information on Order

Scenario 2 - Inquire Securities Types Available

This scenario has the first party requesting a list of Security types supported by the second party

First Party		Second Party
Security Definition Request message	\rightarrow	Processes Security Definition message
SecurityRequest = 2		
First party can use this to select a list of	←	Security Definition message
messages		In this scenario, the trading party only trades three types of securities
		SecurityResponseType= 2
		NoRelatedSym=3
		UnderlyingSecuritySymbol=SecurityType#1
		UnderlyingSecuritySymbol=SecurityType#2
		UnderlyingSecuritySymbol=SecurityType#3

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Scenario 3 – Inquire Common Stocks Available for Trading with Counterparty.

This example shows how the Security Definition Request Message and Security Definition Messages can be used to return a list of common stocks available for trading with a counterparty. The first party specifies the SecurityRequest equal to 3 and specifies the SecurityType of common stock. The second party returns a list of common stocks available on its market. Note: This is intended to return standing data (static data) or a list of products available for trading – it is **not** intended to return an order book (see Market Data messages for this purpose). This is most applicable but not limited, to the case when the second party is an exchange.

First Party		Second Party
Security Definition Request message	→	Processes Security request
In this scenario the initiator wants to obtain a list of common stock available for trading with the counterparty.		Create a list of common stocks that are available for trading.
SecurityRequest=3		
SecurityType="CS"		
First party can use this to select a list of	←	Security Definition message
messages		Contains list of common stocks available for trading with the second party
		SecurityResponse=3
		NoRelatedSym=25
		UnderlyingSecuritySymbol="AOL"
		Other fields for this security
		UnderlyingSecuritySymbol="GM"
		Other fields for this security
		UnderlyingSecuritySymbol="IBM"
		Other fields for this security

Scenario 4 - Inquire all securities traded by a trading party

This scenario has the first party requesting a list of Security types supported by the second party.

First Party		Second Party
Security Definition Request message SecurityRequest=3	→	Processes Security request Create a list of the Securities available for the specified SecurityType
First party can use this to select a list of messages	←	Security Definition message Contains list of Securities available for the specified the Security Types supported by second party SecurityResponse=3 NoRelatedSym=XX
		Security information for each security is provided for each of the XX securities.

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Scenario 5 - Inquire Option Classes Available for Trading with Counterparty.

This example shows how the *Security Definition Request* Message and *Security Definition* Messages can be used to return a list of option classes available for trading with a counterparty. The first party specifies a Security Request Type equal to 3 (Request List of Securities) and the SecurityType of options. The second party returns a list of option classes available on its markets. Note: This is intended to return standing data (static data) or a list of products available for trading – it is not intended to return an order book (see Market Data messages).

First Party		Second Party
Security Definition Request message	→	Processes Security request
In this scenario the initiator wants to see a list of option series for IBM that are traded by the counterparty (that may be an exchange)		Create a list of common stocks that are available for trading.
SecurityRequest=3		
SecurityType="OPT"		
First party can use this to select a list of	←	Security Definition message
messages		Contains list of common stocks available for trading with the second party
		SecurityResponse=3
		NoRelatedSym=25
		UnderlyingSecuritySymbol="AOL"
		UnderlyingSecuritySymbol="GM"
		UnderlyingSecuritySymbol="IBM"

Scenario 6 - Inquire list of option series for a class

This scenario has the first party requesting a list of option classes by setting the SecurityRequest equal to 3, the SecurityType to "OPT", and a security symbol = "IBM". Because a symbol is given, the second party sends back a list of option series for the class specified with a symbol or securityID.

First Party		Second Party
Security Definition Request message	\rightarrow	Processes Security request
SecurityRequest=3		Because a symbol is provided the second party
SecurityType="OPT"		sends back a list of option series.
Symbol="IBM"		
Any of the security identification fields can be populated for this query		

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First party can use this to select a list of messages	+	Security Definition message
		Contains list of option series available for the specified the class specified in the request.
		SecurityResponse=3
		NoRelatedSym=XX
		Security information for each security is provided for each of the XX securities.

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Appendix 3-A

Pre-Trade Message Targeting/Routing

Three fields, NoRoutingID, RoutingType, and RoutingID have been added to support list processing on third party networks. Vendor "indication of interest" systems generally have list management capabilities. These capabilities include blocking and targeting. To mirror the functionality of the vendor indication systems both blocking and targeting were supported.

Targeting

Targeting relates to the message that contains a list of targeted firms or targeted vendor maintained list identifiers to receive the indication. Generally, most vendor "indication of interest" systems maintain list identifiers that contain firm identifiers for their broker connections. For example, a broker has a list called "JapanList" that contains three institutions JapaneseFirm1, JapaneseFirm2, and JapaneseFirm3. The three firm identifiers are created by the vendor.

Targeting allows for the definition of the universe of firms to receive the indication of interest. A indication of interest message without the targeting identifiers (either firm or list) is assumed to be sent to the whole list of indication receiving firms managed by the vendor (i.e. every institution connected to the broker).

Specific targeting can be accomplished through the combination of firm identifiers and list identifiers. For example, a broker needs to send an indication of interest to a vendor maintained list of U.K. based clients called "UKList" and two U.S. based firms. The targeting section of the indication of interest would look as follows:

215=3^216=1^217=USFirm1^216=1^217=USFirm2^216=2^217=UKList^

Note: The ^ character represents the SOH delimiter.

Tag Explanation

215=3	Three pairs of routing types and IDs to be processed	
216=1	Target ID to follow	
217=USFirm1	Target ID named USFirm1	
216=1	Target ID to follow	
217=USFirm2	Target ID named USFirm2	
216=2	Target list to follow	
217=UKList	Target list named UKList	

The vendor would assemble the destination list based on the two firm identifiers and the one list identifier.

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Blocking

An indication with blocking contains a list of firm identifiers or vendor maintained list identifiers that will be excluded from the targeted list of indication receiving firms managed by the vendor. Using the blocking fields without targeting fields implies that indication of interest is being blocked from the whole universe of institutions available to the broker (i.e. everyone on the vendor's system but these firms).

Many "indication of interest" systems have sophisticated list handling mechanisms that need to be replicated. Blocking is not always performed from the whole universe of firms on the system (i.e. ALL).

Using a combination of targeting and blocking fields can allow for sophisticated list management capabilities. For example, let's assume that the broker intends to send an indication of interest to the universe defined by the broker's UKList and two U.S. based firms. However, the broker needs to exclude one UK based firm from the UKList. The targeting and blocking section would appear as follows:

215=4^216=2^217=UKList^216=1^217=USFirm1^216=1^217=USFirm2^216=3^217=UKFirm1^

Note: The ^ character represents the SOH delimiter.

Tag Explanation

215=4	Four pairs of routing types and IDs to be processed
216=2	Target list to follow
217=UKList	Target list named UKList
216=1	Target firm to follow
217=USFirm1	Target firm named USFirm1
216=1	Target firm to follow
217=USFirm2	Target firm named USFirm2
216=3	Blocked firm to follow
217=UKFirm1	UKFirm1 is blocked from receiving IOI

The vendor would assemble the targets based on the supplied UKList and two firm identifiers (USFirm1 and USFirm2) and then remove UKFirm1 from the combined list.

Other Issues

It is expected that every indication of interest message will have a unique IOIid for the FIX session for the trading day.

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For canceling and replacing, the vendor system would cancel or replace every destination that has been identified on the previous indication of interest by the IOIid. Blocking and targeting information would not be required on the canceled or replaced indication of interest.

The use of vendor based firm identifiers requires periodic updates to the brokers to ensure proper blocking and targeting. It is expected that vendors will provide file base transfers of firm identifiers and company names until a more automated solution becomes available.

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