FASTMATCH

FIX Protocol Specification

Streaming

Contents

Revision History

Version	Last Updated
1.0	October 7, 2011
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Introduction

This document is aimed to provide the reader definition of FASTMATCH's Financial Information Exchange (FIX) implementation for price making spot FX. We assume that readers of this document are familiar with FIX protocol standards. FASTMATCH uses FIX 4.2.

Overview

Connections

FASTMATCH requires two FIX connections, one for market data and a second for trading. FASTMATCH will be the initiator, and Market Maker (MM) will be the acceptor to these connections. MM should have servers available during agreed upon market hours for FASTMATCH connection. FASTMATCH will connect and disconnect at agreed upon times. FASTMATCH will make two connections to MM:

- **Quote connection** – FASTMATCH logs on and connects to MM. FASTMATCH will send market data subscription requests (MsgType = V). MM will either begin streaming market data snapshots (MsgType = W) or reject the subscription (MsgType = Y) for symbols or pairs they are not providing quotes for. FASTMATCH will send individual market data subscription messages for each symbol. This connection will be referred to as "STREAM" throughout this document.
- **Trading connection** – FASTMATCH logs on and connects to MM. When an FASTMATCH client attempts to deal on a MM's quote, FASTMATCH will submit Fill or Kill (FOK) limit orders to the MM at the specified price. MM will respond with execution reports detailing a fill or a rejection of the requested order. This connection will be referred to as "TRADE" throughout this document.

Connectivity

The FASTMATCH FIX Interface supports secure connections over
- Extranets
- Cross Connectivity (from Equinix NY4 or LD4 data centers)
- Internet secure connection

Certification

Certification with FASTMATCH is aimed to be as straight forward as possible. UAT testing must be completed in advance of production trading. The FASTMATCH IT team will assist you in connecting and testing.

Time

All times are in GMT per FIX protocol standard. We expect that all customers sync their clocks with an external time source.

Timestamps

Timestamps on all FIX messages will be in milliseconds.

Nightly Sequence Number Reset

The FIX Gateway service is offline each weekday from 17:00:00 EST/EDT until 17:30:00 EST/EDT. During this time, the FIX sequence number for both FIX TRADE and STREAM connections are reset.

After 17:30:00 EST/EDT, the FIX Gateway service expects the initial message from each MM reconnection to have a sequence number equal to one (1). The platform will reply to this with an outbound message with a sequence number also equal to one (1).

Session information is not retained during the reset period. Upon a maker's reconnecting, FASTMATCH will send market data subscription requests (MsgType = V). To prevent two (2) or more streams being delivered for the same instrument, a MM must reset its internal state during the sequence number reset period.

Disconnections

Connections can be lost due to network issues. If your session disconnects, all outstanding quotes will be cancelled from the market. Session information is not retained after a reset. FASTMATCH will send new market data subscription requests (MsgType = V) to restart price streams after a disconnection. Do not reset sequence numbers if you want to replay missed messages.

FIX Messages Supported

In the message descriptions that follow, the following convention is used to indicate direction:
- In – a message sent by a MM to FASTMATCH
- Out – a message sent by FASTMATCH to a MM.
- In/Out – a message that can be sent to or from a MM or FASTMATCH

Available fields, requirements, values and their associated meanings are documented in the Message Details section.

Session Messages

Session messages establish, maintain and terminate a MM to FASTMATCH connection. The following messages apply to both STREAM and TRADE sessions.
- **Logon** – (In/Out) message sent by a FASTMATCH to initiate a FIX session. The Logon message establishes the communication session, authenticates the connection, and initializes the message sequence number.
- **Heartbeat** – (In/Out) message sent by FASTMATCH during periods of application inactivity to ensure connection validity. MM should respond to heartbeat messages upon receipt.
- **Resend Request** – (In/Out) can be sent by FASTMATCH or MM to request certain messages be resent. Often used when gaps are detected in the sequence numbering, when a message is lost, and during the initialization process.
- **Logout** – (In/Out) message signaling the normal termination of the trading session. Sessions terminated without a Logout message will be considered an abnormal condition, The FIX gateway treats a MM as logged out whenever the communication session is dropped
- **Session Level Reject** (35=3) – (In/Out) can be sent by FASTMATCH or MM when a message is received but cannot be passed through to the application level. For example, if a message with invalid basic data is received (e.g. MsgType=&) which successfully passes de-encryption, CheckSum (10) and BodyLength (9) checks. Rejected messages should be logged and the incoming sequence number incremented. Possible reasons for session level Reject include: (Invalid tag number, Required tag missing, Tag not defined for this message type, Undefined Tag, Tag specified without a value, Value is incorrect (out of range) for this

tag, Incorrect data format for value, Decryption problem, CompID problem, SendingTime accuracy problem, InvalidMsgType (35).

Application Messages

Once a proper session is established, application messages are used by a MM to stream quotes and to receive trades on these quotes.

There are two distinct ways to stream quotes

- **Business Message Reject** – (Out) application message sent in response to any application level message that cannot be replied to with a normal matching response message. For example, FASTMATCH sends this message if any messages are received with unsupported tag values or improper syntax. STREAM and TRADE message type.
- **Market Data Request** – (Out) application message sent by FASTMATCH after a session has been established telling the MM the currency pairs for which FASTMATCH wants to receive quotes. STREAM message type.
- **Market Data Request Reject** – (In) application message to be sent by a MM to FASTMATCH if a Market Data Request application message is rejected. If a Market Data Request message is properly processed, MM should immediately begin sending market data. STREAM message type.
- **Market Data Snapshot** – Full Refresh – (In) application message sent by a MM in response to a Market Data Request. The MM controls the interval at which market data messages are sent. A new snapshot should be sent out whenever any prices on a symbol change or are cancelled. STREAM message type.
- **New Order – Single** – (Out) application message FASTMATCH sends to submit an order for execution by the MM. The MM should immediately respond with an Execution Report with Execution Type "Filled" (2) or "Rejected" (8). Execution Report with Execution Type "New" (0) are not required. TRADE message type.
- **Execution Report** – (In) application message containing an order's current status. Sent to FASTMATCH by a MM in reply to a New Order (single) message. A MM must reply to a New Order (single) message with an Execution Report message. TRADE message type.
- **Order Timeout** (35=OT) – (Out) a FASTMATCH defined application message. If a reply is not received from a MM to a New Order (single) application message within a defined period of time, FASTMATCH will send the MM an Order Timeout message. The client who submitted the order will be informed of a "nothing done". The MM should assume that FASTMATCH will DK any fills for that order.
- **Don't Know Trade** (DK) (35=Q) – (Out) application rejection message sent to a MM in reply to any Execution Report sent after a FASTMATCH Order Timeout message has been issued. Once an Order Timeout has occurred, Execution Reports for that order in question will be rejected whether for a fill or a reject of the original order. No response to DK is required from MM. TRADE message type.
- **Trading Session Status** (35=h) – (In) This message is sent by a client to Fastmatch to indicate the current state of the trading session. Fastmatch may connect to Clients while the trading session is closed and will be notified as soon as the trading session opens. A "Closed" or "Halted" message will be sent during a session to indicate temporary unavailability of the underlying trading service. An "Open" message will be sent when the service is restored. Any prices sent before the "Closed" message are no longer valid. When Fastmatch receive 'Halted'(1) or 'Closed' (3) we cancel all outstanding quotes and stop accepting quotes until we receive TradingSessionStatus 'Open'.

- **Market Data Incremental Refresh** (35=X) – (In) this message format is used for incremental updates. A New Market Data Entry will replace the previous best quote for that side and symbol. Deletion would remove the most recent Market Data Entry for the specified symbol and side,
- **Quote Request** (35=R) – (Out) Fastmatch sends a QuoteRequest message to request a price on a given currency pair.
- **Mass Quote** (35=i) – (In) The MassQuote message may contain prices for a given currency pair on multiple price layers. This message is sent whenever there is a price updates from for the given currency pair. Periodically, prices may be indicative or unavailable. An indicative price is reported by sending a zero for fields BidSize and/or OfferSize. An unavailable price is reported by sending a zero for fields BidPx, OfferPx, BidSize and OfferSize.
- **Quote** (35=S) – (In) If the QuoteRequest is valid and a rate is available for the specified currency pair, tenor and amount, a client should return a Quote with a Bid and/or Offer rate. A Client will then continue to send Quotes as the market moves. Each Quote sent will provide the Size that the Quote is good for which may increase/decrease throughout the day. However use of Mass Quote is preferred.
- **Quote Request Reject** (35=AG) – (In) Client will send this message to indicate that a QuoteRequest has been rejected and will subsequently not stream MassQuote or Quote messages for the requested currency pair. This might be due to the currency pair not being permissioned for the Client or an invalid QuoteRequest message.
- **Quote Response** (35=AJ) - (Out) Fastmatch sends this message to terminate a stream of MassQuote messages or unsubscribed to Quotes updates.
- **Quote Cancel** (35=Z) – (In) Client may send a QuoteCancel to temporarily suspend pricing. On receipt of a QuoteCancel all previous Quotes issued for the Request are no longer valid and will be pulled of the marked. As soon as Fastmatch receives a quote it will resume the processing.

Streaming Rate Request

Upon a FIX quote session being established, FASTMATCH sends market data subscription messages to the MM. Each Market Data Request message contains one symbol. MM should not start streaming any quotes until FASTMATCH sends market data subscriptions.

Upon accepting a market data subscription, a MM should immediately begin sending its streaming market data snapshots. If a market data subscription cannot be fulfilled, the MM should return a Market Data Request Reject message.

As quotes change or are cancelled, the MM must send an updated Market Data Snapshot – Full Refresh message. It is the MM's responsibility to reject any orders they received on a pulled quote.

Base Currency Quoting Convention

In all application messages, the Symbol field defines the currency pair, for example EUR/USD.

FASTMATCH follows the International Organization for Standardization (ISO) currency pair symbol convention of BASE/TERM or CCY1/CCY2. Rates are expressed as one unit of a BASE currency in units of the TERM currency. For example, a EUR/USD rate = 1.3675 means 1.3675 units of USD per one unit of EUR.

MM's must send quotes expressed in this convention. If a quote cannot be provided in the specified convention, the MM should reject the Market Data Request.

Decimal Places

The number of decimal places given in published prices and honored upon prices on submitted orders will be configured by FASTMATCH. Market data precision will follow standard OTC spot market conventions. FASTMATCH supports one-tenth of a pip for market data and one-hundredth of a pip for trading. (i.e. 5 decimals for market data and 6 decimal for trading for EUR/USD and 3 and 4 decimals correspondingly for USD/JPY).

Order Input and Execution

When a client attempts to deal on a MM quote, a New Order – Single message is sent by FASTMATCH to the MM. Only OrdType "H" for a previously quoted foreign exchange order, are supported.

All MMs must be able to support Limit FOK orders. This is the FASTMATCH default.

For MMs that can support Limit IOC orders, this order type can be enabled.

A MM should send an Execution Report message immediately in response to a New Order – Single message.

A MM sends an Execution Report message to:

- Report the fill of a New Order – Single message.
- Report the partial of a New Order – Single message.
- Report a reject of a New Order – Single message.

In an Execution Report message, the fields ExecType and OrdStatus always contain the same values, either 1 (Partially Filled), 2 (Filled), or 8 (Rejected).

Delayed Execution Report

A MM must respond immediately with an Execution Report to New Order – Single messages. If an Execution Report is not received within a fixed number of milliseconds (set per Market Maker), the order will be considered "OUT", and the MM will be sent an Order Timeout message. FASTMATCH will respond to any Execution Report received after the Order Timeout has been sent with a "Don't Know Trade" message, indicating the Execution Report cannot be processed.

FASTMATCH business rules state that Order Timeouts are always reported as "rejected" or "not done" to the client. MM should establish procedures to close their own exposure should an Order Timeout occur for a trade they would have reported as filled. Neither FASTMATCH nor its clients will be responsible for executions received after the Order Timeout message is sent.

Supported Messages

Standard Message Header

Tag	Field Name	Req'd	Comments
8	BeginString	Y	FIX 4.2 must be the first field in the message
9	BodyLength	Y	Message length, in bytes. Must be the second field in the message
35	MsgType	Y	Defines message type. Must be the third field in the message
34	MsgSeqNum	Y	Integer message sequence number.
49	SenderCompID	Y	Assigned by MM
56	TargetCompID	Y	Assigned by MM

52	SendingTime	Y	Time should be in GMT

Standard Message Trailer

Tag	Field Name	Req'd	Comments
10	CheckSum	Y	Checksum of all characters in message up to and including the delimiter preceding the checksum field.

Logon

The logon message will be the first message sent by FASTMATCH after the connection has been established. MM will respond with their own logon message for accepted logons. If logon is rejected MM will respond with a Logout message with Tag 58 Text field describing reason for failed logon. Passwords are supported at MM request, for both MM and FASTMATCH.

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = A
35	MsgType	Y	A
98	EncryptMethod	Y	0 – "not encrypted" is the only accepted value.
108	HeartBtInt	Y	Note same value used by both sides
141	ResetSeqNumFlag	N	Y – resets both the incoming and outgoing sequence numbers to 1.
554	Password	N	Optional – MM to inform FASTMATCH whether they want to use a password for logon.
	Standard Trailer	Y	

Logout

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = 5
35	MsgType	Y	5
58	Text	N	Free format text string
	Standard Trailer	Y	

Resend Request

Tag	Field Name	Req'd	Comments

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = 2
35	MsgType	Y	2
7	BeginSeqNo	Y	Message sequence number of first message in range to be resent
16	EndSeqNo	Y	Message sequence number of last message in range to be resent. If request is for a single message BeginSeqNo = EndSeqNo. If request is for all messages subsequent to a particular message, EndSeqNo = "0"
	Standard Trailer	Y	

Heartbeat

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = 0
35	MsgType	Y	0
112	TestReqID	C	Required when the heartbeat is the result of a Test Request message.
	Standard Trailer	Y	

Test Request

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = 1
35	MsgType	Y	1
112	TestReqID	Y	Identifier included in Test Request message to be returned in resulting Heartbeat
	Standard Trailer	Y	

Session Level Reject

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = 3
35	MsgType	Y	3
45	RefSeqNum	Y	Identifier included in Test Request message to be returned in resulting Heartbeat
371	RefTagID	N	The tag number of the FIX field being referenced.

Tag	Fieldname	Req'd	Comments
372	RefMsgType	N	The MsgType of the FIX message being referenced.
373	SessionRejectReason	N	Code to identify reason for a session-level Reject message.
58	Text	N	Where possible, message to explain reason for rejection
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	

Trading Session Status

Tag	Fieldname	Req'd	Comments
	Standard Header	Y	MsgType = h
35	MsgType	Y	Defines message Type
336	TradingSessionID	N	Trading session name.
340	TradingSessionStatus	Y	Session status: Halted=1 Open=2 Closed=3
	Standard Trailer		

Market Data Request

	Tag	Fieldname	Req'd	Comments
		Standard Header	Y	MsgType = V
	35	MsgType	Y	Defines message Type
	146	NoRelatedSym	Y	Specifies the number of repeating symbols specified. FASTMATCH will send a single Symbol per Market Data Request.
Repeating Field 1	55	Symbol	Y	Currency pair in form CURR1/CURR2 *Example:* EUR/USD
	262	MDReqID	Y	Unique ID which will be used to refer back to your request
	263	SubscriptionRequestType	Y	1 = Subscribe 2 = Unsubscribe
	264	MarketDepth	N	Used to specify the number of levels to be requested.

Tag	Fieldname	Req'd	Comments
265	MDUpdateType	Y	0 = Full Refresh Snapshot 1 = Incremental Refresh
267	NoMDEntryTypes	Y	Number of MDEntryType fields requested. *Example*: 2 (Bid & Offer)
269	MDEntryType	Y	Type of Market Data entry 0 = Bid 1 = Offer
	Standard Trailer	Y	

Note: rows 269 and onward are grouped under "Repeating Field 2".

Market Data Request Reject

Tag	Fieldname	Req'd	Comments
	Standard Header	Y	MsgType = Y
35	MsgType	Y	Y
262	MDReqID	Y	MDReqID of your Market Data Request
281	MDReqRejReason	N	Reason for the rejection of a Market Data request. 0 = Unknown Symbol 1 = Duplicate MDReqID 4 = Unsupported SubscriptionRequestType 5 = Unsupported MarketDepth 8 = Unsupported MDEntryType
58	Text	N	Text description of the reason why the request was rejected.
	Standard Trailer	Y	

Market Data Snapshot Full Refresh

Tag	Fieldname	Req'd	Comments
	Standard Header	Y	MsgType = W
35	MsgType	Y	W
15	Currency	N	Identifies currency used for quantity. Absence of this field is interpreted as

	262	MDReqID	Y	MDReqID of your Market Data Request
	55	Symbol	Y	Currency pair in form CCY1/CCY2
Repeating Fields	268	NoMDEntries	Y	Number of entries in Market Data message. *Example:* 2 for top of book, or 2x tag 264 value in Market Data Request message
	269	MDEntryType	Y	0 = Bid 1 = Offer
	270	MDEntryPx	Y	Price
	271	MDEntrySize	Y	Size for which that price is quoted. If set to 0, the quote will be cancelled.
	276	QuoteCondition	N	A = Open - Active B = Closed - Inactive C = Exchange Best D = Consolidated Best E = Locked F = Crossed G = Depth H = Fast Trading I = Non-Firm A (This tag is optional. If tag 276 is received by FASTMATCH, then the only value published will be "A"; FASTMATCH will cancel a quote if any other value than "A" is received").
	299	QuoteEntryID	N	Provides a reference ID for this quote. The ID should be unique per symbol (currency pair)
		Standard Trailer	Y	

Note: the top cell content continues from previous page: "the default for the security (base currency)."

Market Data Incremental Refresh

Tag	Fieldname	Req'd	Comments
	Standard Header	Y	MsgType=X
35	MsgType	Y	X
262	MDReqID	Y	A unique ID of your Market Data

	Tag	Field Name	Req'd	Comments
				Request
	268	NoMDEntries	Y	Number of entries
Repeating Fields	299	QuoteEntryID	N	Provides a unique reference ID for this quote
	279	MDUpdateAction	Y	Action type of this entry. Possible values: '0' – New * '1' – Change '2' – Delete * 'New' for an existing quote will work as 'Change'
	55	Symbol	Y	Currency pair in form CCY1/CCY2
	269	MDEntryType	Y	The type of this entry. Possible values: "0" – Bid "1" – Ask
	278	MDEntryID	Y	Identifier of the entry.
	270	MDEntryPX	N	Price of the entry
	271	MDEntrySize	N	Size for which that price is quoted.
	15	Currency	N	Currency that sizes are expressed in.
		Standard Trailer		

Quote Request

	Tag	Field Name	Req'd	Comments
		Standard Header	Y	MsgType = R
	35	MsgType	Y	Defines message Type
	131	QuoteRequestID	Y	Unique id of the quote request.
	146	NoRelatedSym	Y	Number of repeating groups present in this request. Each group is composed of the elements prefixed by the symbol. Always set to 1.
Repeating Fields	55	Symbol	Y	Ticker symbol of the currency pair using market conventions.
	64	SettlDate	N	Value date in YYYYMMDD or YYYY-DD-MM format
		Standard Trailer	Y	

Quote Request Reject

	Tag	Field Name	Req'd	Comments
		Standard Header	Y	MsgType = AG
		MsgType	Y	AG
	131	QuoteRequestID	Y	ID of the quote request this message is responding to.
	658	QuoteRequestRejectReason	N	Reason for rejection.
	146	NoRelatedSym	Y	Number of repeating groups present in this request. Each group is composed of the elements prefixed by the symbol. Always set to 1.
Repeating Fields	55	Symbol	Y	Ticker symbol of the currency pair using market conventions.
	58	Text	N	Reason for rejection. *Example:* 58=Not allowed to trade in USD/JPY
		Standard Header	Y	

Quote Response

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = AJ
35	MsgType	Y	AJ
693	QuoteRespID	Y	ID of the quote request this message is responding to.
694	QuoteRespType	Y	Reason for rejection: Expired=3
55	Symbol	Y	Ticker symbol of the currency pair using market conventions.

Mass Quote

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = i
35	MsgType	Y	i
131	QuoteReqId	Y	ID of the quote request this message is responding to (64 chars

	Tag	Field Name	Req'd	Comments
				max).
	117	QuoteId	Y	Unique ID of the quote being sent (64 chars max).
	296	NoQuoteSets	Y	Number of quotes in this set. Always set to 1.
Repeating Fields 1	302	QuoteSetId	Y	Quote set id (64 chars max). Equals to field117.
	304	TotNoQuoteEntries	Y	Number of active quotes in the set. Always the same as NoQuoteEntries.
	295	NoQuoteEntries	Y	Number of quotes in this set. The following fields repeat for each quote.
Repeating Fields 2	299	QuoteEntryId	Y	Unique quote entry ID (64 chars max).
	55	Symbol	Y	Instrument symbol.
	132	BidPx	Y	Spot Bid price.
	133	OfferPx	Y	Spot Offer price.
	134	BidSize	Y	Bid size.
	135	OfferSize	Y	Offer size.
	64	SettlDate	Y	Settlement date.
		Standard Trailer		

Quote

Tag	Field Name	Req'd	Comments
	Standard Header		MsgType = S
35	MsgType	Y	S
131	QuoteRequestID	Y	ID taken from the QuoteRequest.
117	QuoteID	Y	A unique generated quote id. The value can be of arbitrary length and format (up to 64 chars).
537	QuoteType	N	0 = Indicative 1 = Tradable 2 = Restricted Tradable If there is no value provided it is defaulted to 1
55	Symbol	Y	Currency Pair taken from the QuoteRequest.
15	Currency	Y	Dealt currency taken from the client's QuoteRequest. BidSize[134] and OfferSize[135] will be specified in terms of Currency[15].

62	ValidUntilTime	N	Indicates Quote validity. Can be specified in two formats depending on client preference. 1. Relative, e.g. 3 seconds from SendingTime[52], '00000000-00:00:03.000' (default) 2. Absolute, e.g. until 11:21:22.345, '20121115-11:21:22.345'
64	SettDate	Y	Calculated value date specified in the QuoteRequest, e.g. '200121017'.
134	BidSize	C	(Optionally returned depending on Side[54]) Quoted amount expressed in terms of Currency[15]. Deals can be submitted up to and including this size. BidSize[134] may be less than requested amount.
132	BidPx	C	(Optionally returned depending on Side[54]) Bid All-in Rate, BidSpotRate[188] + BidForwardPoints[189].
135	OfferSize	C	(Optionally returned depending on Side[54]) Quoted amount expressed in terms of Currency[15]. Deals can be submitted up to and including this size. OfferSize[135] may be less than requested amount.
133	OfferPx	C	(Optionally returned depending on Side[54])
	Standard Trailer		

Quote Cancel

Tag	Field Name	Req'd	Comments
	Standard Header		MsgType=Z
35	MsgType	Y	Z
131	QuoteRequestID	Y	ID taken from the QuoteRequest.
117	QuoteID	N	ID from the last Quote
298	QuoteCancelType	Y	Can be '1' (Cancel Symbol) or '4' (Cancel All Quotes)
295	NoQuoteEntries	Y	Number of quote entries. Always '1'

	Tag	Field Name	Req'd	Comments
Repeating Fields	55	Symbol	Y	Currency Pair taken from the QuoteRequest. Tag must follow immediately after NoQuoteEntries[295]
		Standard Trailer		

New Order – Single

	Tag	Field Name	Req'd	Comments
		Standard Header	Y	MsgType=D
	35	MsgType	Y	D
	11	ClOrdID	Y	Unique order identifier assigned by FASTMATCH.
	453	NoPartyIDs	N	Number of parties provided NoPartyIDs=1
Repeating Fields	448	PartyID	N	Required if parties specified. This identifier is used to derive the client/user/trader that is behind the counterparty. e.g PartyID=15
	447	PartyIDSource	N	Must be 'D' (Proprietary/Custom Code) if party specified. PartyIDSource=D
	452	PartyRole	N	Must be '3' (Client ID) if party specified PartyRole=3
	21	HandlInst	Y	2 = Automated execution order
	55	Symbol	Y	EUR/USD
	54	Side	Y	Valid values: 1=Buy 2=Sell Note: From price taker's perspective, not market maker's
	38	OrderQty	Y	1000000
	40	OrderType	Y	Valid value: H=Previously Quoted FX Order
	44	Price	Y	Limit Price
	117	QuoteID	N	May contain the QuoteEntryID from

					specific quote to be traded against.
	SettlDate				
15	Currency		N		Either CCY1 or CCY2. The units for OrderQty.
59	TimeInForce		Y		3=Immediate or Cancel (IOC) *** 4=Fill or Kill
1	Account		N		Provided by FASTMATCH. Frequently used to identify Prime Broker.
60	TransactTime		N		Time this order request was initiated/released by the trader or trading system.
109	ClientID		N		Provided by FASTMATCH. Used for firm identification as a code.
110	MinQty ***		N		Minimum quantity of an order to be executed. For IOC orders any partials must meet the MinQty.
	Standard Trailer		Y		

   *** FASTMATCH currently supports full fills only and expects to send "4" (FOK) in tag 59 (to ensure full fills). For MMs who can support the Limit IOC, FASTMATCH can also accommodate sending 59=3 (IOC).

Execution Report

- The execution reports are used to:
- Confirm the receipt of an order
- Relay order status information
- Reject orders
- Report Fills

Execution Report message

	Tag	Field Name	Req'd	Comments
		Standard Header	Y	MsgType=8
	35	MsgType	Y	8
	11	ClOrdID	Y	Unique order identifier assigned by FASTMATCH.
Repeating Fields	453	NoPartyIDs	N	Number of parties provided NoPartyIDs=1
	448	PartyID	N	Required if parties specified. This identifier is used to derive the client/user/trader that is behind the counterparty. e.g PartyID=15
	447	PartyIDSource	N	Must be 'D' (Proprietary/Custom Code) if party specified.

	452	PartyRole	N	PartyIDSource=D Must be '3' (Client ID) if party specified PartyRole=3
	37	OrderID	Y1	Value should be equal to Tag 11
	20	ExecTransType	Y	Used to identify transaction type. Valid values: 0=New (FASTMATCH will always have "0" in tag 20; an inbound message received with any value other than "0" in tag 20 will be rejected by FASTMATCH, stating the reason: "Unsupported tag value")
	17	ExecID	Y1	Assigned by Market Maker. Must be unique for each Execution Report message.
	39	OrdStatus	Y	Current state of the order. Valid values: 0=New 1=Partially filled 2=Filled 8=Rejected Note: Must have same value as Tag 150 ExecType.
	64	SettlDate	Y2	The Settlement date of the trade. e.g. 20121017 Date represented in YYYYMMDD format. Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31.
	55	Symbol	Y	EUR/USD
	54	Side	Y	Valid values: 1=Buy 2=Sell Note: From client's perspective, not market maker's
	38	OrderQty	Y	Original order quantity
	32	LastShares	Y	Quantity of last fill. For FOK orders, values in Tag 38, 32 & 14 will be equal.
	31	LastPx	Y	Price of last fill
	151	LeavesQty	Y	Order quantity open for further execution LeavesQty = OrderQty – CumQty For FOK orders, will always be 0 for fill messages

14	CumQty	Y	Total executed shares for order
6	AvgPx	Y	Required for fill messages. Average price of all the fills of the order.
150	ExecType	Y	Execution Report description. Valid values: 0=New 1=Partial fill 2=Filled 8=Rejected 150=0 "New" messages can be sent, but will not be processed.
1	Account	N	From original New Order – Single message. Frequently used to identify Prime Broker.
109	ClientID	N	Provided by FASTMATCH. Used for firm identification.
44	Price	N	Price specified on the original New Order – Single message. Can be different from Tag 6 and 31 due to price improvement.
15	Currency	N	Currency for the OrderQty amount
59	TimeInForce	N	3=IOC 4=Fill Or Kill (FOK)
40	OrdType	N	Valid value: H=Previously Quoted FX Order
75	TradeDate	N	Used when reporting other than current day trades.
60	TransactTime	Y	Time of execution or order creation. Time expressed in GMT.
58	Text	N	Free format text
	Standard Trailer	Y	

[1] Value will be "UNKNOWN" for ExecType = Rejected (8) orders
[2] Value must set to FX value date when ExecType=1 or ExecType=2

Order Time Out

If no Execution Report with ExecType – Partial Fill (1), Filled (2) or Rejected (8) is received within "x" milliseconds (configured per MM), an Order Time Out message is sent to the price provider. At this time FASTMATCH will consider this trade as "Nothing Done" and will release the order on the client side. Should the price provider have executed the trade, they will need to take action on their end to close the position as neither FASTMATCH nor the client will be responsible.

"x" is presently defaulted to 50 milliseconds, but this is a configurable value per market maker.

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = OT
35	MsgType	Y	OT – an FASTMATCH defined message type
11	ClOrdID	Y	Unique order identifier assigned by FASTMATCH.
	Standard Trailer	Y	

Don't Know Trade (DK)

If a price provider sends an Execution Report for a trade in an Order Time Out state, FASTMATCH will respond with a DK message. This is informational.

Tag	Fieldname	Req'd	Comments
	Standard Header	Y	MsgType = Q
35	MsgType	Y	Q
37	OrderID	Y	Order ID on missing execution
17	ExecID	Y	Execution ID of missing execution
127	DKReason	Y	For Timed Out deals, will be "Z" for "Other"
55	Symbol	Y	EUR/USD
54	Side	Y	Valid values: 1=Buy 2=Sell Note: From client's perspective, not market maker's
58	Text	N	Text description of the reason why the request was rejected.
	Standard Trailer	Y	

Business Message Reject

Tag	Fieldname	Req'd	Comments
	Standard Header	Y	35 (MsgType) = j (lowercase)
35	MsgType	Y	j
45	RefSeqNum	N	MsgSeqNum of rejected message
372	RefMsgType	Y	The MsgType of the FIX message being referenced.
379	BusinessRejectReID	N	The value of the business-level "ID" field on the message being referenced. Required unless the corresponding ID field (see list above) was not specified.

380	BusinessRejectReason	Y	Code to identify reason for a Business Message Reject message.
58	Text	N	Where possible, message to explain reason for rejection
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	