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CEESEG FIX Specification

Version F11.1 for T7 11.1
May 2023

Revision history

June 2021	■ Compatibility to T7 Release 9.1. No modifications in this document (only Version Number and Date)
September 2021	■ Added FIX tag 119 (SettlCurrAmt) to TradeCaptureReport (AE) ■ FIX tag 381 (GrossTradeAmt) in TradeCaptureReport (AE) changed to non-mandatory ■ Added FIX tag 119 (SettlCurrAmt) to ExecutionReport (8)
November 2021	■ Added FIX tag 824 (TradeLegRefID) to TradeCaptureReport (AE). This tag is part of the combination of tags to uniquely identify match steps in TradeCaptureReports. For more information, please read Appendix C.
April 2022	■ Added new key / value pair to the CEESEG FIX SecurityList (y) message: tag 871 "InstrAttribType" value "120" (Trading On Terms of Issue) tag 872 "InstrAttribValue" value "Y"
June 2022	■ Corrected wording in Appendix C
September 2022	■ No changes to previous version – only version number and date updated.
April 2023	No changes to previous version – only version number and date updated.
May 2023	■ Final version - no changes to previous version.

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Overview

FIX Version

The CEESEG FIX interface is based on FIX specification 4.4. Exchange FIX engine enables FIX clients to connect to the trading system via the FIX 4.4 protocol.

This document describes the implementation details for CEESEG FIX. Basic principles of FIX are explained in FIX specification that can be found at https://www.fixtrading.org/.

CEESEG FIX Version

The CEESEG FIX version numbering indicates which versions of the software and specification are being used. Target is to provide the client an insight in the release management of CEESEG FIX.
The CEESEG FIX version number format has several levels and is used as follows:

Format: aa.bb.cc.dd-xyz

aa	Reserved for Xetra T7 version
bb	Major changes in CEESEG FIX, impact for customers
cc	Software development branch (usually 00)
dd	Minor changes in CEESEG FIX, no impact for customers
xyz	Build number of software development

When changes that mandate a version number change on a specific level are introduced, version numbers on lower levels are set to zero.

After connection and logon, the version number of the CEESEG FIX server can be read by the client in tag 58, contained in the “logon” message sent by the server.

Scope

CEESEG FIX implementation covers a subset of the trading system functionality. The supported features are:

- Market data
- Order routing and trade confirmations
- Quotation
- OTC trading
- Back office functionality

The CEESEG FIX implementation consists of:

- Exchange FIX Gateway – this part is installed at the stock exchange and is required to translate between FIX messages and trading system interface.
- FIX connectivity – the connectivity to the exchange member – described in separate document “CEE Exchange group connectivity”
- CEESEG FIX implementation specification (this document)

Availability and markets

Availability of the CEESEG FIX service is set according to trading times at the respective markets. This means, the interfaces are available between 7:50 and ~20:00. Orders will only be accepted during trading times of the respective destination market.

Trading times are subject to change and are published in the documentation and terms of use of the respective marketplace. Availability of simulation- and testing environment can be different and is published separately. Currently CEESEG FIX supports the following markets:

MARKET	FROM	TO	TAG 100 / TAG 30
Xetra® Vienna	8:00	17:45	XVIE
Xetra® LJSE	8:00	16:00	XLJU
Xetra® PSE	8:00	17:00	XPRA
Xetra® BSE	8:00	17:30	XBUD
Xetra® ZSE	8:00	16:45	XZAG

CEESEG FIX implementation details

Message Sequence Numbers

CEESEG FIX message sequence numbers are always reset for each new trading day. Message sequence numbers can also be reset by sending a logon message with ResetSeqNumFlag (tag 141) set to 'Y'. The FIX client will always be “Session Initiator” and the exchange gateway will always be “Session Acceptor”.

Business level request identification

All CEESEG FIX requests have a field which is used for request identification. When a response is generated, this field is copied to the response to allow the client to connect the response to the original request. These ID fields have different names for different message types: ClOrdID, SecurityReqID, SecurityStatusReqID, QuoteID, MassQuoteID, MDReqID etc. The request IDs must be unique in the scope of each message type.

Sending time window

For a message to be considered valid, it must be received within a predefined time window from the SendingTime (tag 52) specified in its header. The default is set at “within 1 minute” from the message SendingTime. Any message received outside of this window will be rejected.

Unknown messages and tags

Messages that are not known to the CEESEG FIX implementation will be rejected using the Reject message.
Messages that are known to FIX but not implemented in CEESEG FIX are rejected the using Business Message Reject message.
Messages with tags that are not known to FIX and are not custom fields are rejected using the Reject message.
Tags that are known to FIX but not used in CEESEG FIX implementation are ignored.

Protocol revisions

It might be necessary to modify the existing protocol. In most cases these modifications are additional fields and messages that can be ignored by the client. We will never remove mandatory fields and we will do our best not to change the meaning of the existing fields. Mandatory fields that will not be used anymore will get default values.
In a rare situation where meaning of existing fields would change we will introduce additional custom field "Product Version" (ID=9682) into the Logon message and handle both old and new version for a reasonable time.

Order preparation

The CEESEG FIX gateway does not have an option for storing and releasing orders at a specific time (e.g. for auction, market opening), the timing has to be handled by the client system according the market model.

Order value limit

The trading system is checking the order value limit according the trader specific value setup of the member supervisor.

Symbol or ISIN code

Some trading systems identify securities by trading symbols others by ISIN codes. The CEESEG FIX system is supporting ISIN code only as the symbol field is not mandatory within the trading system. When the client’s message is received, the fields SecurityID (48) + SecurityIDSource (22) are used. They must represent a valid ISIN code (in SecurityID) + value "4" (in SecurityIDSource).

Supported message types per session

The following table shows available message types that can be sent in via different session type.

		Session type				
FIX Functionality	Message Type	Market Data	Trading	Quotation	Combined (Trading + Quotation)	Back office
General	Logon (MsgType=A)	X	X	X	X	X
	Logoff (MsgType=5)	X	X	X	X	X
	Security List Request (MsgType=x)	X	X		X	X
	Trade Capture Report Request (MsgType=AD)	X (all trades only)	X	X	X	X
	Trade Capture Report (MsgType=AE)	X (all trades only)	X	X	X	X
	Trade Capture Report Ack (MsgType=AR)	X (all trades only)	X	X	X	X
	Security Status Request (MsgType=e)	X	X		X	X
	News (MsgType=B)	X	X	X	X	X
	TickSizeRequest (MsgType = XTR)	X	X	X	X	X
	TickSizeList (MsgType = XTL)	X	X	X	X	X
Market Data	MarketDataRequest (MsgType=V)	X	X		X	
Order routing	Order Status Request (MsgType=H)		X		X	
	Order Mass Status Request (MsgType=AF)		X		X	
	NewOrderSingle (MsgType=D)		X		X	
	OrderCanclRequest(MsgType=F)		X		X	
	OrderCancelReplaceRequest (MsgType=G)		X		X	

		Session type				
FIX Functionality	Message Type	Market Data	Trading	Quotation	Combined (Trading + Quotation)	Back office
	Quote Request (MsgType=R)		X		X	
	UserRequest (MsgType = BE)		X		X	X
	UserResponse (MsgType = BF)		X		X	X
	IOI (MsgType = 6)		X		X	X
OTC Trading	TradeCaptureReport (MsgType=AE incoming)		X		X	
	TradeCaptureReport Ack (MsgType=AR incoming)		X		X	
Quotation	Quote (MsgType=S)			X	X	
	MassQuote (MsgType=i)			X	X	
	MassQuoteAcknowledgement (MsgType=b)			X	X	
	QuoteCancel (MsgType=Z)			X	X	
	QuoteStatusRequest (MsgType=AI)			X	X	
Intelligent Order Processing	NewOrderSingle (MsgType=D)		On Request		On Request	
	Cancel Order (MsgType=F)		On Request		On Request	

If the connection to the exchange FIX gateway breaks during the day, continue the session by starting with synchronization of the FIX message sequence number and synchronize the order status via OrderMassStatusRequest (MsgType=H) with the trading system.

Order management within the trading system

The exchange may delete orders during the day on customer request. If corporate actions take place, orders will be deleted after trading. Therefore it is recommended to synchronize orders whenever connecting to the system. The exact behavior is set by the specific market rules.

Throttle on FIX Gateway

In order to limit and control the input flow on the CEESEG FIX Gateway a throttling mechanism is implemented and can be configured on FIX client level (SenderCompID). This throttle is defined by the exchange and controls, how many requests per second are accepted by the CEESEG FIX Gateway. Any requests exceeding this limit will be buffered. When the buffer size is exceeded, further messages will be rejected with a business message reject message with tag 58, (Text) containing “Number of messages exceeded”.

Usage of non-standard FIX fields

Please note this specification is based on FIX 4.4 but uses some non-standard extensions.
Following tags are either not FIX standard or used in messages which would not contain them by FIX 4.4 standard:

Tag	Field Name	Usage	Comments
15	Currency	OrderCancelRequest	
28	IOITransType	IOI	Values “A” and “D” are not standard in FIX.
30	LastMkt	OrderCancelReject UserResponse	Execution destination as defined by institution when order is entered Possible values see Availability and markets
58	Text	Logon	Contains the version of the FIX GW software
100	ExDestination	OrderCancelRequest UserRequest	
269	MDEntryType	MarketDataRequest MarketDataSnapshotFullRefresh	Value “H” is not standard in FIX 4.4 Value “p” is not standard in FIX 4.4 Value “r” is not standard in FIX 4.4
371	RefTagID	BusinessMessageReject	The tag number of the FIX field being referenced.
378	ExecRestatementReason	ExecutionReport	Several non-FIX-standard values were added.
381	GrossTradeAmt	ExecutionReport	Total amount traded (i.e. QUANTITY * PRICE) expressed in units of trading currency. For certain instruments (depending on the market model) this calculation takes a pool factor and/or a currency exchange rate and/or precentral notation of the instrument into account (i.e. POOL_FACTOR * PRICE/100 * QUANTITY * CURRENCY_EXCHANGE_RATE)
453	NoPartyIDs	Number of PartyIDs in ExecutionReport	Repeating group used without PartyIDSource
526	SecondaryClOrdID	TradeCaptureReportAck	In context of OTC trading used for provision of Xetra classic MIOrdNo of the trade accepting party.
871	NoInstrAttribType	SecurityList	Some values were added in order to fit CEESEG requirements
925	NewPassword	Logon	Used to change the session Password

Tag	Field Name	Usage	Comments
1151	SecGrp	SecurityList	(FIX 5.0 SP1)
1300	MarketSegmentID	SecurityList	Tier code (FIX 5.0 SP2)
1301	MarketID	SecurityList News	Identifies the market which lists and trades the instrument (FIX 5.0 SP2)
1409	SessionStatus	Logoff	Values: 5=Invalid username or password 6=Account locked 7=Logons are not allowed at this time 8=Password expired (FIX 5.0SP2)
1473	NewsCategory	News	Values : 0 = Company News 1 = Marketplace News 2 = Financial Market News 3= Technical News 99 = Other (FIX 5.0 SP2)
1724	OrderOrigination	NewOrderSingle OrderCancelRequest OrderCancelReplaceRequest ~~ExecutionReport~~ TradeCaptureReport	Values: 5 = Direct Market Access (FIX 5.0 SP2 EP240)
5145	NettingLevel	TradeCaptureReport	Value “I” can be provided by the exchange for members using the settlement internalization feature
10058	SecondaryText	NewOrderSingle OrderCancelReplaceRequest ExecutionReport TradeCaptureReports.	Free text 2
10060	PrecisionTransactTime	TradeCaptureReport	Provides precision time stamp in format “nanoseconds since 01.01.1970”
10320	RejectReason	OrderCancelReject ExecutionReport QuoteRequestReject MassQuoteAcknowledgement QuoteStatusReport	Text containing the reject reason of the trading system – refer to the corresponding trading system manual
20050	BidOrderID	QuoteStatusReport	Unique identifier for order (not defined in FIX)
20051	OfferOrderID	QuoteStatusReport	Unique identifier for order (not defined in FIX)
27500	MMOblig	SecurityList	Market maker Obligation Flag (not defined in FIX)

Tag	Field Name	Usage	Comments
28743	SkipCheck	NewOrderSingle OrderCancelReplaceRequest Quote MassQuote TradeCaptureReport TradeCaptureReportAck	Skip value/volume check (not defined in FIX)
28744	MatchInstCrossID	NewOrderSingle OrderCancelReplaceRequest Quote MassQuote QuoteStatusReport MassQuoteAcknowledgement ExecutionReport	Can be used to specify a numeric self-match prevention ID(not defined in FIX)
28745	Crossed	ExecutionReport	Contains 1 if the order was rejected due to the self-match prevention (not defined in FIX)
28746	MarketCondition	SecurityStatus	Contains the Market Condition (Normal or stressed)
1084	DisplayMethod	NewOrderSingle OrderCancelReplaceRequest ExecutionReport	Values : 3 = Random (iceberg order only) (FIX 5.0 SP2)
1085	DisplayLowQty	NewOrderSingle OrderCancelReplaceRequest ExecutionReport	Defines the lower quantity limit to a randomized refresh of DisplayQty. (iceberg order only) (FIX 5.0 SP2)
1086	DisplayHighQty	NewOrderSingle OrderCancelReplaceRequest ExecutionReport	Defines the upper quantity limit to a randomized refresh of DisplayQty. (iceberg order only) (FIX 5.0 SP2)
1138	DisplayQty	NewOrderSingle OrderCancelReplaceRequest ExecutionReport	The quantity to be displayed / The currently displayed quantity (FIX 5.0 SP2)
1444	SideLiquidityIndicator	TradeCaptureReport	Used to identify whether the order initiator is an aggressor or not in the trade or the trade results from an auction. Values: 1 = Order initiator is passive 2 = Order initiator is aggressor 4 = Auction trade
1903	RegulatoryTradeID	TradeCaptureReport	Used to provide the TVTIC (Trading Venue Transaction Identification Code) (FIX.5.0SP2 EP161)
2593	NoOrderAttributes	NewOrderSingle OrderCancelReplaceRequest Quote	Number of order attribute entries

Tag	Field Name	Usage	Comments
		MassQuote TradeCaptureReport TradeCaptureReportAck	
2594	OrderAttributeType	NewOrderSingle OrderCancelReplaceRequest Quote MassQuote TradeCaptureReport TradeCaptureReportAck	Type of order attribute Valid Value 2 = Liquidity provision activity order
2595	OrderAttributeValue	NewOrderSingle OrderCancelReplaceRequest Quote MassQuote TradeCaptureReport TradeCaptureReportAck	Value associated with the order attribute type in 2594 Valid value: Y = Attribute is set
2667	AlgorithmicTradeIndicator	MarketDataSnapshotFullRefresh TradeCaptureReport	Indicates that the trade originates from a computer program or algorithm requiring little-to-no human intervention. Values : 0 : Non-algorithmic trade 1 : algorithmic trade
2376	PartyRoleQualifier	NewOrderSingle OrderCancelReplaceRequest OrderCancelRequest Quote MassQuote TradeCaptureReport	
552, 54, 528, 15, 526, 58, 448, 447, 452	NoSides Group [NoSides Side OrderCapacity Currency SecondaryClOrdID Text NoPartyIDs PartyID PartyIDSource PartyRole]	TradeCaptureReportAck	FIX.5.0SP2 Added to provide ClientID with “Agent” OTC or Block Trades

Mixing order entries from CEE Trader stations and CEESEG FIX

DropCopy (CEE Trader)

CEESEG FIX supports a feature, referred to as DropCopy, which enables the exchange of order and trade copies between CEESEG FIX sessions and CEE Trader stations of one member.

When entering orders through the CEESEG FIX interface there is a mandatory field ClOrdID. This order identifier is not equal to the order number of the trading system Order ID.
In case that orders which were entered via CEESEG FIX, get **altered/cancelled** via CEE Trader, the CEESEG FIX Gateway reflects the order change via an ExecutionReport message.
If orders are **entered** in a CEE Trader station, these orders are sent by the CEESEG FIX interface with an automatic generated ClOrdID and can be thus managed by the FIX client. If an order which was entered via CEE Trader is **executed**, the CEESEG FIX interface sends out an ExecutionReport for this trade.

DropCopy (other interfaces)

The DropCopy feature supports the interaction of orders and trades with ETI sessions of the member. Please note, that orders entered via an ETI session can only be imported by CEESEG FIX when the order is entered with a “FixClOrdID” via the ETI protocol. The “FixClOrdID” must be a unique ClOrdID in the scope of the clients CEESEG FIX session. Further, orders entered via ETI must be entered as **persistent orders** to get imported by CEESEG FIX.
Non-persistent orders entered via a third party trading station, ISV program or ETI session will not be imported or recognized by the CEESEG FIX gateway. Therefore no ExecutionReports for non-persistent orders will be distributed. All orders entered via the CEESEG FIX gateway are handled as persistent orders in the trading system.
Trades resulting from non-persistent orders are delivered via TradeCaptureReport functionality (compare section ”Trade Capture Reports”).

DropCopy examples

The message flow of an order entry which is replicated via drop copy is shown in Figure 1.

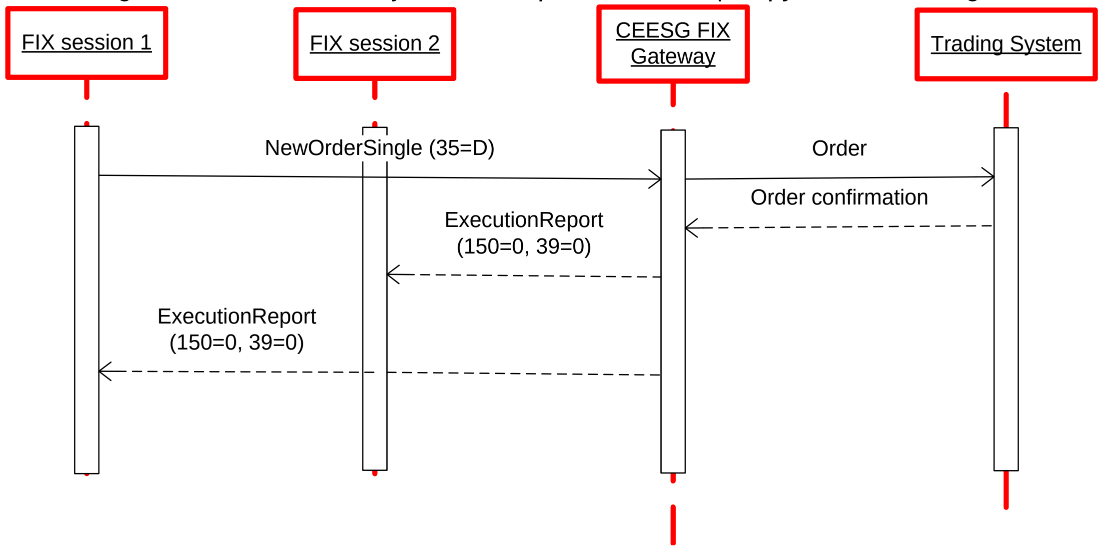

Figure 1 Example DropCopy of order entry

The ClOrdIDs of the message flow above are copied as follows

Session 1	Session 2
Enters NewOrderSingle with ClOrdID „ABC“	
Receives ExecutionReport with ClOrdID „ABC“	Receives ExecutionReport with ClOrdID „ABC“

In Figure 2, the message flow of an order modification is illustrated. Pending state execution reports (i.e. pending replace, pending cancel) are not distributed as DropCopies.

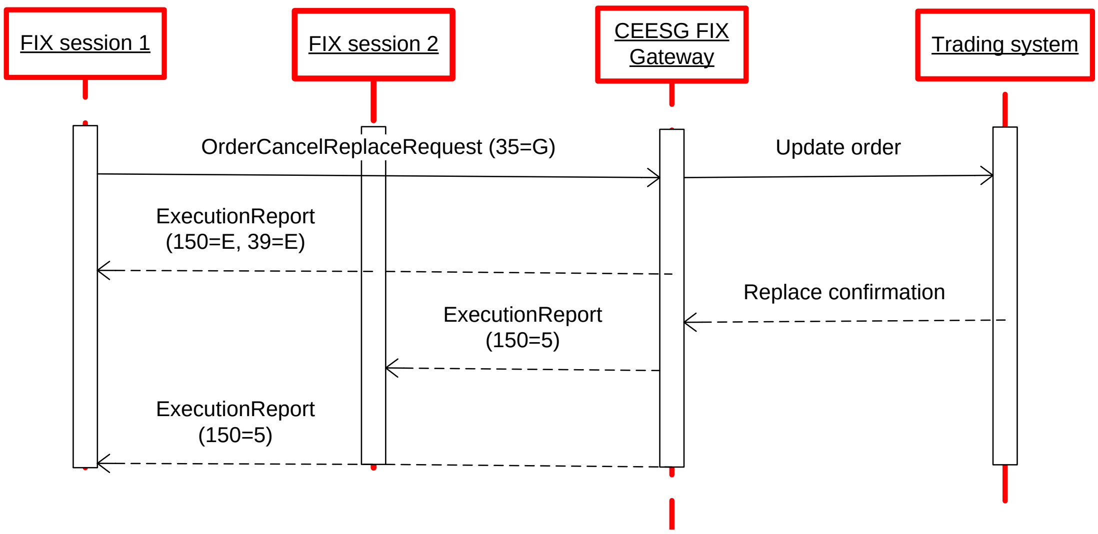

Figure 2 Example DropCopy of order modification

The ClOrdIDs of the message flow above are copied as follows

Session 1	Session 2

Enters OrderCancelReplaceRequest with OrigClOrdID „ABC“ and ClOrdID „DEF“	
Receives ExecutionReport with OrigClOrdID „ABC“ and ClOrdID „DEF“	Receives ExecutionReport with OrigClOrdID „ABC“ and ClOrdID „DEF“

Xetra T7 identifier mapping

The table below specifies the mapping of identifier fields between CEESEG FIX and Xetra T7. The mapping is relevant for clients mixing order entries from Xetra T7 trading interfaces and CEESEG FIX.

Tag	Fix field	Description	CEE Trader fields	Xetra T7 description
11	ClOrdID	Unique ID for request (generated by client) (ASCII 32-126)		Tag 11 ClOrdID
37	OrderID	Received in execution report	Exchange Order ID	Tag 37 OrderID
10058	SecondaryText	Free text field to enter internal reference Is limited to 12 printable ASCII characters (ASCII 32-126)	N/A	Tag 25008 FreeText2
58	Text	Free text field to enter internal reference Is limited to 12 printable ASCII characters (ASCII 32-126)	Text	Tag 25007 FreeText1
526	SecondaryClOrdID	Internal Trader reference (ASCII 32-126)	MIOrdNo	Tag 25107 FreeText4
528	OrderCapacity	Customer account type Values: (P,A,D,I, R)	Account	Tag 1815 TradingCapacity
571	TradeReportID	Is only mapped for OTC trading related messages (ASCII 32-126)		-

17	ExecID	1 Char [“B” or “S” indicating the side of the order] + 12 digits [Leading “0” digits + T7 Trade ID + T7 Trade Suffix] + 6 Digits [date in format YYMMDD]	Exchange Trade ID Same format as in CEESEG FIX but without date in format YYMMDD	TradeID TradeID Suffix Trade date
824	TradeLeg RefID	Addition to the T7 Trade identifier, distinguishing match steps.	-	TrdMatchID
880	TrdMatch ID	T7 Trade identifier. Unique per day, Side, ISIN and Market	Match ID	Tag 1506 SideTradeID
1903	Regulator yTradeID	T7 system generated TVTIC	-	1 Char [Envir_Flag static value “1”] + 20 Char [SecurityID] + 20 Char TranTime + [DealType static value “1”] + 10 Char [MatchStepID]

The field lengths of the respective fields are described in section “Field length limitations”

ClOrdID chain for replacements and cancelations

Each order in FIX requires a unique ClOrdID in tag 11. In case of an order modification or deletion, the last known ClOrdIDs of the order is referenced by the OrigClOrdID (tag 41) and a new ClOrdID is assigned.
Until Xetra 17, it was possible to reference the OrigClOrdID (tag 41) of deletions to the first ClOrdID of an order (even after multiple modifications). After Xetra 17, only the last known ClOrdID will be accepted as valid reference.

Eg:

Deprecated ClOrdID chain	Suggested ClOrdID chain
Order Entry ClOrdID=”ABC” Order Modification ClOrdID=”DEF” OrigClOrdID=”ABC”) Order Cancellation ClOrdID=“GHI” OrigClOrdID=”ABC”)	Order Entry ClOrdID=”ABC” Order Modification ClOrdID=”DEF” OrigClOrdID=”ABC”) Order Cancellation ClOrdID=“GHI” OrigClOrdID=”DEF”)

Important Notes

- For stop orders / stop limit orders, there is an additional execution report. This ExecutionReport is sent when the stop price is reached and the order hits the market. This ExecutionReport contains tag 150 (ExecType) with the value “D”

- Xetra T7 has an infinite lifetime for “Good till Cancelled” orders, which is represented by a specific date in the ExecutionReport (20991231).

- In case that the client enters an IOC order, which is partially filled, the client will get an ExecutionReport for the partially filled order, and immediately thereafter another ExecutionReport for the cancellation of the remaining quantity which could not be filled.

Field length limitations

Due to limitations of the trading system, all order identifiers and text fields have certain length limitations:

- ClOrdID (Tag 11) is limited to 20 Characters and allows only ASCII characters 32 - 126
- SecondaryClOrdID (Tag 526) is limited to 16 printable ASCII characters (ASCII 32-126)
- Text (Tag 58) is limited to 12 printable ASCII characters (ASCII 32-126)
- SecondaryText (Tag 10058) is limited to 12 printable ASCII characters (ASCII 32-126)
- TradeReportID (Tag 571) is limited to 32 printable ASCII characters (ASCII 32-126)
- PartyID (Tag 448) to provide MiFID Short Codes is limited to 19 characters

Messages

Common structures

Standard Header

Tag	Field Name	Req.	Comments
8	BeginString	Y	FIX.4.4, unencrypted
9	BodyLength	Y	
34	MsgSeqNum	Y	Integer message sequence number
35	MsgType	Y	One of supported message types
49	SenderCompID	Y	Unique identifier of client supplied by the exchange
52	SendingTime	Y	yyyymmdd-hh:MM:ss.SSS (must be within *n* seconds of current time)
56	TargetCompID	Y	supplied by the exchange
347	MessageEncoding	N	UTF-8

Standard Trailer

Tag	Field Name	Req.	Comments
10	CheckSum	Y	Per FIX specifications.

Session Related

Heartbeat (MsgType=0)

Heartbeat (inbound / outbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=0
112	TestReqID	N	Required when the heartbeat is the result of Test Request Message
	Standard Trailer	Y	

TestRequest (MsgType=1)

TestRequest (inbound / outbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=1
112	TestReqID	Y	
	Standard Trailer	Y	

Logon (MsgType=A)

Logon (inbound / outbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=A
98	EncryptMethod	Y	Always 0 (no encryption on FIX level)
58	Text	N	version string of the FIX Gateway
108	HeartBtInt	Y	Values less than 30 seconds will be rejected.
141	ResetSeqNumFlag	N	Indicates both sides of a FIX session should reset sequence numbers
554	Password	N	Minimal Security without transport level encryption: Depending on configuration
925	NewPassword	N	Specifies a new password for the FIX Logon. The new password is used for subsequent logons.
	Standard Trailer	Y	

Logout (MsgType=5)

Logout (inbound / outbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=5
58	Text	N	If the logoff message is sent by the FIX gateway at the end of the trading day, this field contains the string **“Disconnected due to end of tradingday”**
1409	SessionStatus	N	Values: 5=Invalid username or password 6=Account locked 7=Logons are not allowed at this time 8=Password expired (FIX 5.0SP2)
	Standard Trailer	Y	

Reject (MsgType=3)

Reject (outbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=3
45	RefSeqNum	Y	MsgSeqNum of rejected message
371	RefTagID	N	The tag number of the FIX field being referenced.
372	RefMsgType	N	The MsgType (35) of the FIX message being referenced.
373	SessionRejectReason	Y	Code to identify reason for session-level reject 0 = Invalid tag number 1 = Required tag missing 2 = Tag not defined for this message type 3 = Undefined Tag 4 = Tag specified without a value 5 = Value is incorrect (out of range) for this tag 6 = Incorrect data format for value 8 = Signature problem 9 = CompID problem 10 = SendingTime accuracy problem 11 = Invalid MsgType 16 = Incorrect NumInGroup count for repeating group 99 = Other
58	Text	N	Reason for reject if reject code is 99
	Standard Trailer	Y	

BusinessMessageReject (MsgType=j)

BusinessMessageReject (outbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=j
45	RefSeqNum	Y	MsgSeqNum of rejected message
58	Text	N	Reason for reject if reject code is 0
371	RefTagID	N	The tag number of the FIX field being referenced.
380	BusinessRejectReason	Y	0 = Other 1 =Unknown ID 2 =Unknown Security 3 =Unsupported Message Type 5 =Conditionally required field missing 6 =Not Authorized
372	RefMsgType	Y	The MsgType (35) of the FIX message being referenced.
	Standard Trailer	Y	

ResendRequest (MsgType=2)

ResendRequest (inbound / outbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=2
7	BeginSeqNo	Y	MsgSeqNum of first message in range to be resent
16	EndSeqNo	Y	MsgSeqNum of last message in range to be resent. If request for a single message BeginSeqNo = EndSeqNo. If request for all messages subsequent to a particular message, EndSeqNo = “0”
	Standard Trailer	Y	

SequenceReset (MsgType=4)

SequenceReset (inbound / outbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=4
36	NewSeqNo	Y	New Sequence Number
	Standard Trailer	Y	

General

News (MsgType=B)

News (outbound)[1]

Tag		Field Name	Req.	Comments
		Standard Header	Y	MsgType=B
148		Headline	Y	ASCII
42		OrigTime	N	Date/Time of this messages actual publication in UTC
1473		NewsCategory	N	Values : 0 = Company News 1 = Marketplace News 2 = Financial Market News 3 = Technical News 99 = Other (FIX 5.0 SP2)
1301		MarketID	Y	Possible values see Availability and markets
146		NoRelatedSym	N	The number of related symbols
->	48	SecurityID	N	Security ISIN
->	22	SecurityIDSource	N	Valid value: 4 = ISIN
33		NoLinesOfText	Y	Specifies the number of text lines to follow
->	58	Text	Y	Text
		Standard Trailer	Y	

Possible text contents of news messages

CEESEG FIX Gateway status

The CEESEG FIX gateway uses news messages to indicate the connection status of the gateway to the respective market. These news messages are distributed as technical news (1473 = 3). CEESEG FIX markets are defined in the section “Availability and markets” of this document.
The connection status is communicated as follows:

’Market xxxx connected’ – CEESEG FIX gateway ready on market xxxx
‘Market xxxx disconnected’ – CEESEG FIX gateway NOT ready on market xxxx

Examples: Startup of a CEESEG FIX session:

1. Logon message by the initiator (client)
2. Logon message by the acceptor (exchange)
3. News Message: ‘Market xxxx connected’ – CEESEG FIX Gateway ready for trading

CEESEG FIX gateway loses connection to trading system:

1. News Message: ‘Market xxxx disconnected’ – CEESEG FIX Gateway not ready for requests
2. News Message: ‘Market xxxx connected’ – CEESEG FIX Gateway ready again

Please note that in case of a CEESEG FIX client session disconnection for any reason (logout, network problem, central CEESEG FIX gateway problem, etc.) all active quotes are cancelled automatically on the market. No QuoteStatusReport messages are sent or cached to indicate the cancellations. It is necessary, that the client system is aware that in this case the active quotes are no longer on the market. If CEESEG FIX client is connected to the central CEESEG FIX gateway and quotes are removed from market (e.g. ETI session lost, market reset, market relocation, end of trading day, etc.) then the client will receive QuoteStatusReport messages for the removed quotes.

Please note that after a disconnection all market data requests and trade capture report requests have to be sent to the FIX gateway again, as the old subscriptions are discarded.

Market messages
All market messages forwarded from the trading system are distributed as Marketplace News (1473=1)

News messages resulting from cross requests
News messages are used to disclose cross requests to the public. This type of news message is marked with the category “Marketplace News” (1473=1). Tag 48 contains the ISIN of the affected Instrument.
Field OrigTime (Tag 42) provides the time of the cross request.
The content of the Text field (Tag 58) is assembled as follows:

“Cross Request (” +
<<Symbol>> +
”–“ +
<<ISIN>> +
”–“ +
<<Instrument Name>> +
“) quantity (“ +
<<IOI Quantity>> +
“)”

Example:
Cross Request (ACRZ–HRACRZRA0009-AUTOCESTA RIJEKA-ZAGREB, D.D.) quantity (1.000)

Instruments

CEESEG FIX interface supports simple querying of active securities. Securities that are not yet listed or the ones that are delisted for more than 1 week are not returned. SecurityListRequest triggers multiple SecurityList messages grouped by MarketSegmentID. All securities belonging to one MarketSegmentID will be returned in one SecurityList message.

SecurityList request will return as many security lists as MarketSegmentIDs are set up in the trading system.

Indices are sent in an additional SecurityList message. All available indices over all CEESEG markets are sent in one SecurityList message together. The client can retrieve the market association of each index by processing the content of tag 106 (issuer). This tag contains the exchange code (XBUD, XLJU, XPRA, XZAG and XVIE) of the issuing exchange.

SecurityListRequest (MsgType=x)

SecurityListRequest (inbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=x
320	SecurityReqID	Y	Unique Identifier
559	SecurityListRequestType	Y	4 = All securities
263	SubscriptionRequestType	Y	0 = Snapshot 1 = Snapshot + Updates 2 = Disable previous Snapshot + Updates request (Unsubscribe) (not FIX standard)
100	ExDestination	Y	Execution destination as defined by institution when order is entered Possible values see Availability and markets
	Standard Trailer	Y	

SecurityList (MsgType=y)

SecurityList (outbound confirmation or rejection)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=y
30	LastMkt	Y	Execution destination as defined by institution when order is entered Possible values see Availability and markets
320	SecurityReqID	Y	Same identifier as specified in SecurityListRequest message
322	SecurityResponseID	Y	Required field, GUID.
393	TotNoRelatedSym	N	Used to indicate the total number of securities being returned for this request. Specified in the first fragment only.
560	SecurityRequestResult	Y	Valid values: 0 = ValidReq 1 = InvalidReq 2 = NoInstrumentsFound

Tag		Field Name	Req.	Comments
				3 = NotAuthorized
893		LastFragment	N	Indicates whether this is the last fragment in a sequence of message fragments. Specified in the last fragment only.
1301		MarketID	N	MIC Code as defined in ISO 10383 (FIX 5.0 SP2)
1300		MarketSegmentID	N	Tier code (FIX 5.0 SP2)
146		NoRelatedSym	N	Number of securities to follow
->	55	Symbol	N	
->	48	SecurityID	Y	Security ISIN
->	1151	SecGrp	N	An exchange specific name assigned to a group of related securities which may be concurrently affected by market events and actions. (FIX 5.0 SP1)
->	106	Issuer	Y	ASCII
->	107	SecurityDesc	Y	ASCII
->	691	Pool	N	SetID of the Instrument
->	15	Currency	Y	
->	561	RoundLot	N	The trading lot size of a security
->	562	MinTradeVol	N	The minimum trading volume for a security
->	22	SecurityIDSource	Y	Valid value: 4 = ISIN
->	423	PriceType	N	1 = Percentage (i.e. per cent of par) (often called "dollar price" for fixed income) 2 = Per unit (i.e. per share or contract) 9 = Yield Note: This tag is not present when the security is an index.
->	460	Product	N	Instrument type Values; 2 = Warrant / Certificate 3 = Bond 5 = Equity 12 = Other
->	167	SecurityType	N	Values; MLEG = Complex instrument CS = Common stock BOND = Bond TARP = Trade at reference price ETF = Exchange Traded Fund ETC = Exchange Traded Commodity ETN = Exchange Traded Note WAR = Warrant OTHER = Other SR = Subscription Right FUN = Investment Funds
->	574	MatchType	N	Trading algorithm used for this security: 1 = Multiple Auctions 2 = Continuous trading 3 = One Auction

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Tag			Field Name	Req.	Comments
					8 = Continuous Auction Note: This tag is not present when the security is an index.
->	541		MaturityDate	N	Date of maturity
->	228		Factor	N	Pool factor for specific DEBT instruments
->	207		SecurityExchange	N	Used to provide MIC of legal market segment
->	461		CFICode	N	6 letter classification of financial instruments (ISO 10962). (Currently unused)
->	225		IssueDate	N	Date instrument was issued. (Currently unused)
->	27500		MMOblig	N	Valid Values : Y = Market maker provides liquidity for this instrument N (default) = No market maker obligation
->	870		NoInstrAttrib	N	Number of Attributes to follow
->	->	871	NoInstrAttribType	N	Attribute Type Valid Values: 20 = Original issue discount price 29 = Tradable Indicator Indicates trade ability of an instrument 120 = Trading On Terms of Issue Y = Instrument under an IPO (Initial Public Offering) 1001 = MinimumIcebergQty Indicates the minimum quantity of an iceberg order (if applicable) 1002 = MinimumPeakSize Indicates the minimum visible quantity of an iceberg order 1003 = MinimumIcebergValue Indicates the minimum value of an iceberg order (if applicable) 1011 = MinimumQuoteQtty Minimum acceptable quantity for quote entries 1012 = MaxQuoteSpread Maximum allowed spread of bid/ask for quote entries 1013 = SpreadTypeCode Indicates whether the MaxQuoteSpread is given in percent “P” or absolute “A” 1021 = Midpoint indicator Indicates if midpoint orders are allowed for this instrument 1022 = Midpoint order Minimum order value (specified as a cash amount)
->	->	872	InstrAttribValue	N	Value as described in Tag 871
			Standard Trailer	Y	

SecurityStatusRequest (MsgType=e)

SecurityStatusRequest (incoming)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=e
324	SecurityStatusReqID	Y	Unique identifier or previous value if disabling subscription
48	SecurityID	Y	Security ISIN
22	SecurityIDSource	Y	Valid value: 4 = ISIN
263	SubscriptionRequestType	Y	0 = Snapshot 1 = Snapshot + updates 2 = Disable previous snapshot + updates
100	ExDestination	Y	Execution destination as defined by institution when order is entered Possible values see Availability and markets
	Standard Trailer	Y	

SecurityStatus (MsgType=f)

SecurityStatus (outbound confirmation and rejection)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=f
324	SecurityStatusReqID	Y	Unique identifier
55	Symbol	N	1-15 character security identifier
48	SecurityID	Y	Security ISIN
22	SecurityIDSource	Y	Valid value: 4 = ISIN
1484	ComplexEventType	N	Valid Value: 5= Knock-out up Specifies that an instrument was knocked out
326	SecurityTradingStatus	Y	Valid values: 2 = Trading halt 17 = Ready to trade 18 = Not available for trading 20 = Unknown or Invalid 21 = Pre-trade Please refer to tag 336 and 625 for additional information
336	TradingSessionID	N	Valid Values : Tag 326 = 2 HALT HOL Tag 326 = 17 POSTR (Post trade) TRADE VOLA (Volatility interruption) ICALL (auction) IPOBB (Order book balancing) IOBB (Order book balancing) OCALL (auction) OPOBB (Order book balancing) OOBB (Order book balancing) CCALL (auction) TAC (Trade at close) CPOBB (Order book balancing) COBB (Order book balancing) XPREC (auction) XCALL (auction) ENDTR (End Of Trade) MIDFZ (Freeze of Midpoint order book) MIDUF (Unfreeze of Midpoint order book) BETW (Between multiple auctions (market model 1 only)) SUBS (Status of indices) ACTIV (Status of indices) UNDEF (Retry, status N/A)

Tag	Field Name	Req.	Comments
			Tag 326 = 18 START ADD DEL SUSP Tag 326 = 21 PRETR
625	TradingSessionSubID	N	Indicates the present and/or potential type of trading interruption Valid Values: M (Market Order Interruption) V (Volatility Interruption) X (Extended Volatility Interruption) XX (Extended Volatility Interruption again) F (Frozen Volatility Interruption) PM (Potential Market Order Interruption) PV (Potential Volatility Interruption) L (Liquidity interruption) A (Mini auction) In Case that there is more than one indicator at a time, they will be consolidated in this tag, separated by a “-“ character. e.g.: “V-PM”
28746	MarketCondition	N	Indicator for stressed market conditions) 0 = Normal 1 = Stressed
30	LastMkt	Y	Execution destination as defined by institution Possible values see Availability and markets
	Standard Trailer	Y	

TickSizeRequest (MsgType=XTR)

TickSizeRequest (inbound)

Tag		Field Name	Req.	Comments
		Standard Header	Y	MsgType=XTR
100		ExDestination	Y	Possible values see availability and markets
24127		TickSizeRequestID	Y	Unique identifier of the request
146		NoRelatedSym	Y	The number of related symbols
->	48	SecurityID	Y	Security ISIN
->	22	SecurityIDSource	Y	Valid value: 4 = ISIN
		Standard Trailer	Y	

TickSizeList (MsgType=XTL)

TickSizeList (outbound)

Tag				Field Name	Req	Comments
				Standard Header	Y	MsgType=XTR
30				LastMkt	Y	Possible values see availability and markets
24127				TickSizeRequestID	Y	Unique identifier of the request
146				NoRelatedSym	Y	The number of related symbols
->	48			SecurityID	Y	Security ISIN
->	22			SecurityIDSource	Y	Valid value: 4 = ISIN
->	27120			NoTickSizeEntries	Y	The number of tick size entries
->	->	27121		TickSizeLow	Y	Lower boundary of the tick size range
->	->	27122		TickSizeHigh	Y	Upper boundary of the tick size range
->	->	27123		TickSize Precision	Y	Allowed precision of the tick size range
				Standard Trailer	Y	

Market Data

- If Bid or Ask are requested, both sides are returned in the resulting MarketDataSnapshotFullRefresh messages. If no orders are on the market, one MDEntry of bid and ask are delivered with price and quantity of zero. Further MDEntries (market depth >= 2) will not be returned if there are no orders on these levels.
- Please note that for MarketDataRequest only MDUpdateType Tag 265 = 0 (= Full) is supported. MarketDataRequest with MDUpdateType Tag 265 = 1 (= Incremental) will be rejected (MarketDataRequest Reject).
- If MDUpdateType Tag is not specified MarketDataSnapshotFullRefresh (MsgType=W) is returned.
- In case that no trade has happened the current trading day for an instrument requested with MDEntryType Tag 269 = 2 (=Trade) the returned value for MDEntryDate Tag 272 will be the current date and MDEntryTime Tag 273 will be 01:00:00
- If you subscribe for MDEntryType 2 (=Trade), please note that updates which are delivered contain only the last traded price. e.g.: If three buy orders, each with a quantity of five and prices of “10”, “10,1”, “10,2” are on the order book and get matched with one sell order with a price of 10 and a quantity of 15, only the update for the last trade will be delivered. In this case that would be quantity 5, price 10.
- For “index” type instruments, only the MDEntryTypes 4 = Open price, 5 = Close price, 7 = High price and 8 = “Low price” can be subscribed.
- **Important note on mapping of MDEntryTypes to MarketDataSnapshotFullRefresh messages:**
    - In CEESEG FIX versions up to 16.1., MarketDataSnapshotFullRefresh messages are strictly seperated between bid/ask and statistical values when several MarketDataEntryTypes are subscribed. I.e. when a trade happens, the respective entry is removed from bid/ask -> One MarketDataSnapshotFullRefresh message was sent for MDEntyTypes 0 and 1. And a further MarketDataSnapshotFullRefresh message is sent for MDEntryType 2 for the updated last trade price together with the other statistics (open, high, low, closing price, last auction price etc.)
    - In CEESEG FIX versions up from 16.1., MarketData full refresh messages are merged in this scenario. The new orderbook situation in terms of bid/ask and statistical values including the updated last trade price are sent in one single MarketDataSnapshotFullRefresh message, when several MarketDataEntryTypes are subscribed.
    - In case that only a bid or ask MDEntry has changed, a MarketDataSnapshotFullRefresh message is sent only with MDEntryTypes 0 and 1, as in the present version.

- **To request all trades of the market, please refer to the section** Trade Capture Report (public trades, own trades and back office)

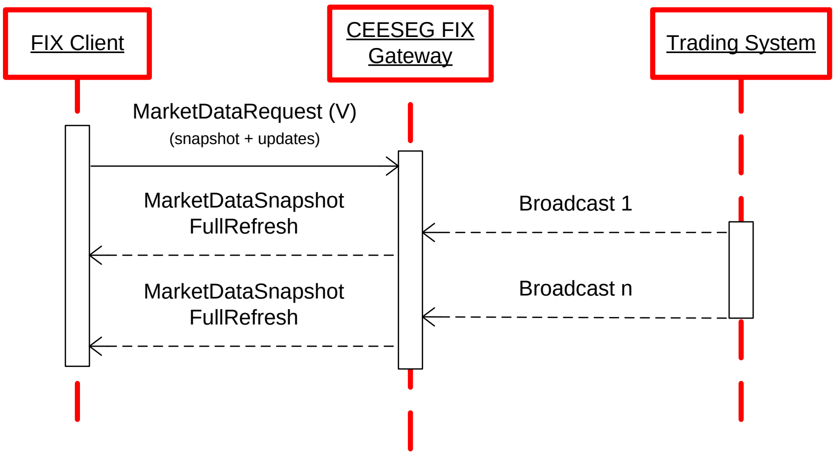

Figure 3 Market data message flow

MarketDataRequest (MsgType =V)

MarketDataRequest (inbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=V
262	MDReqID	Y	Unique identifier or previous value if disabling subscription
263	SubscriptionRequestType	Y	Valid values: 0 = Snapshot 1 = Snapshot + updates 2 = Unsubscribe
264	MarketDepth	Y	Depth of market for Book Snapshot. 1- best price 2- n, 1<n<21 for depth (if market depth >10 is permitted)
265	MDUpdateType	N	Required if SubscriptionRequestType = Snapshot + updates (1). Valid values: 0 = Full 1 = Incremental (not supported)
266	Aggregated Book	N	Y = one book entry per side per price
100	ExDestination	Y	Execution destination as defined by institution when order is entered Possible values see Availability and markets
267	NoMDEntryTypes	Y	Number of data types to follow.
-> 269	MDEntryType	Y	Valid values: 0 = Bid 1 = Offer (Ask) 2 = Trade 3 = Index Value (only applicable for indices) 4 = Open price 5 = Closing price 6 = Settlement Price (currently not supported)

Tag		Field Name	Req.	Comments
				7 = High price 8 = Low price C = Open Interest (currently not supported) i = Indicative (potential auction price) x = Last auction s = Surplus H = Mid Price (last price and quantity of midpoint order trade) p = Previous closing price (of previous trading day) r = Reference Price (previous closing price, including adjustments due to capital measures) B = Traded volume
146		NoRelatedSym	Y	Number of instruments to follow
->	48	SecurityID	Y	Security ISIN
->	22	SecurityIDSource	Y	Valid value: 4 = ISIN
		Standard Trailer	Y	

MarketDataSnapshotFullRefresh (MsgType=W)

MarketDataSnapshotFullRefresh (outgoing)

Tag		Field Name	Req.	Comments
		Standard Header	Y	MsgType=W
262		MDReqID	Y	Identifier of the request or subscription
48		SecurityID	Y	Security ISIN
22		SecurityIDSource	Y	Valid value: 4 = ISIN
55		Symbol	N	Security symbol
451		NetChgPrevDay	N	Net change from previous day’s closing price vs. last traded price.
30		LastMkt	Y	Execution destination as defined by institution Possible values see Availability and markets
268		NoMDEntries	Y	Number of market data entries to follow
->	269	MDEntryType	Y	Valid values: 0 = Bid 1 = Offer (Ask) 2 = Trade 3 = Index Value (only applicable for indices) 4 = Open price 5 = Closing price 6 = Settlement Price (currently not supported) 7 = High price 8 = Low price C = Open Interest (currently not supported) i = Indicative (potential auction price) x = Last auction s = Surplus (sell)

Tag		Field Name	Req.	Comments
				b = Surplus (buy) H = Mid Price (last price and quantity of midpoint order trade) p = Previous closing price (of previous trading day) r = Reference Price (previous closing price, including adjustments due to capital measures) B = Traded volume
->	290	MDEntryPositionNo	N	Display position for bid or offer Note: not present if requested market depth is 1
->	270	MDEntryPx	N	Price (missing value means market price)
->	271	MDEntrySize	N	Visible volume
->	272	MDEntryDate	N	Trade date
->	273	MDEntryTime	N	Trade time (for trades)
->	346	NumberOfOrders	N	In an Aggregated Book, used to show how many individual orders make up an MDEntry
->	2667	AlgorithmicTradeIndicator	N	Required for MDEntryType 2 Indicates if the order or trade originates from a computer program or algorithm requiring little-to-no human intervention. Values : 0 : Non-algorithmic trade 1 : algorithmic trade
		Standard Trailer	Y	

MarketDataRequestReject (MsgType=Y)

MarketDataRequestReject (outbound rejection)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=Y
262	MDReqID	Y	= MDReqID from request
281	MDReqRejReason	N	Text explaining reject reason of trading system Valid values: 0 = UnknownSymbol 1 = Duplicate ID 3 = Insufficient permission 4 = Unsupported SubscriptionRequestType 5 = Unsupported MarketDepth 6 = Unsupported MDUpdateType 7 = Unsupported Aggregated Book
58	Text	N	Further description of the rejection
30	LastMkt	Y	Execution destination as defined by institution Possible values see Availability and markets
	Standard Trailer	Y	

Order Management

Order Entry (MsgType=D)

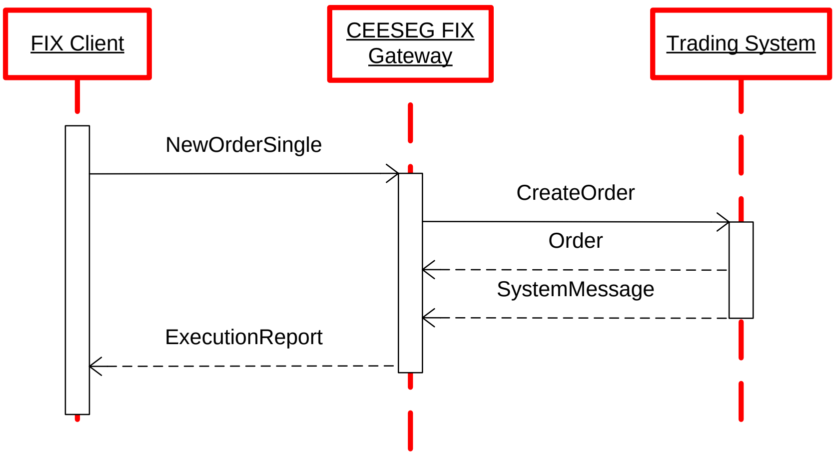

Figure 4 Order entry message flow

NewOrderSingle (inbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType= D (NewOrderSingle)
11	ClOrdID	Y	This is your new and unique ID for this request (limited to 20 printable ASCII characters (ASCII 32-126)) Please check the Field length limitations on Page 22.
55	Symbol	N	1-15 character security identifier. Provide as listed.
48	SecurityID	Y	Security ISIN
22	SecurityIDSource	Y	Valid value: 4 = ISIN
54	Side	Y	Valid values: 1 = Buy 2 = Sell
40	OrdType	Y	Valid values: depending on the market model of the exchange 1 = Market 2 = Limit 3 = Stop 4 = Stop Limit K = Market to limit P = Midpoint (currently not supported)
38	OrderQty	Y	Must be positive number
18	ExecInst	N	c = Ignore Price Validity Check absence activates the price reasonability check
111	MaxFloor	N	Maximum visible quantity of a static peak size iceberg order. Specify the visible quantity of a static peak iceberg order in this tag.

Tag	Field Name	Req.	Comments
			The visible quantity must be smaller than the overall quantity.
1084	DisplayMethod	N	3 = Random peak iceberg order (requires tag 1085 and 1086)
1085	DisplayLowQty	N	Defines the lower quantity limit to a randomized refresh of DisplayQty. (iceberg order only)
1086	DisplayHighQty	N	Defines the upper quantity limit to a randomized refresh of DisplayQty. (iceberg order only)
1138	DisplayQty	N	The initial peak quantity for random peak iceberg orders
99	StopPx	N	Stop Limit
44	Price	N	Price per unit of quantity(e.g. share)
15	Currency	Y	Identifies the currency used for price Valid values are those used in XETRA T7 as defined in ISO 4217
59	TimeInForce	N	Specifies how long the order will remain in effect. Depending on market model 0 = Day 1 = GoodTillCancel 3 = ImmediateOrCancel 4 = FillOrKill 6 = GoodTillDate B = Book or cancel T = Top of book (currently not supported)
432	ExpireDate	N	Has to be set if tag 59(TimeInForce) = 6 Format: YYYYMMDD Order expires at the end of trading on the specified date.
100	ExDestination	Y	Execution destination as defined by institution when order is entered Possible values see Availability and markets
526	SecondaryClOrdID	N	Will be returned to you in execution reports. Please check the Field length limitations on Page 22.
528	OrderCapacity	Y	General Values : A = Agency P = Principal R = Riskless principal Market maker Values: D = Designated Sponsor
386	NoTradingSessionID	N	Number of TradingSessionIDs If set to “1”, trading restriction is given, additionally TradingSessionID (Tag 336) has to be specified accordingly. Please see Appendix A for further details
336	TradingSessionID	N	Identifier for Trading Session Valid Values: A = Auction Only C = Closing M = Main Auction (Intraday Auction Only) O = Opening S = Accept Surplus

Tag		Field Name	Req.	Comments
				T = Main Trading (specifies the whole trading day) Please see Appendix A for further details
30625		TradeAtCloseOptIn	N	Eligibility of an order to participate in trade-at-close phase. Valid values: 0 = No (default, if field is not sent) 1 = Yes
58		Text	N	Free text. Please check the Field length limitations on Page 22.
1724		OrderOrigination	N	Direct Market Access (DMA) Flag Valid Values: 5 = Direct Market Access
10058		SecondaryText	N	Free text 2. Please check the Field length limitations on Page 22.
28744		MatchInstCrossID	N	Can be used to specify a numeric self-match prevention ID. If 0 is entered or field is not sent, self-match prevention is turned off.
2593		*NoOrderAttributes*	N	The number of order attributes
->	2594	OrderAttributeType	N	Type of order attributes Valid Values : 2 = Liquidity provision activity order
->	2595	OrderAttributeValue	N	Value associated with the order attribute type in 2594 Valid value: Y = Attribute is set
453		*NoPartyIDs*	N	The number of related Parties (required by trading system)
->	448	PartyID	N	Required if NoPartyIDs >=1 Identification of the party (Short Code). Please check the Field length limitations on Page 22. Reserved Values for 452 =3 1 = AGGR (An aggregation of multiple client orders) 2 = PNAL (Clients are Pending allocation) Reserved Values for 452 =12 (where client has specified execution) 3 = CLIENT
->	447	PartyIDSource	N	Required if NoPartyIDs >=1 Valid Values: P (Short code identifier)
->	452	PartyRole	N	Required if NoPartyIDs >=1 Identifies the type of PartyID Valid values: 3 = ClientID 12 = Executing trader (Replaces Tag 376 ComplianceID)

Tag		Field Name	Req.	Comments
				122 = Investment Decision Maker
->	2376	PartyRoleQualifier	N	Valid Values : 22 = Algorithm (applicable to PartyRole values 12 or 122) 24 = Natural person (applicable to PartyRole 12 and 122)
28743		SkipCheck	N	Valid Values : 1 = skip value check 2 = skip volume check 3 = skip value and volume check
60		TransactTime	Y	The time that you sent this request. Must be within *n* seconds of current time.
		Standard Trailer	Y	

Important Notes

- In the 'Continuous trading with opening and closing auction' trading model of BSE, market- and market-to-limit orders have to be entered with either IOC or FOK execution restriction.

- DropCopies (as explained in "
Mixing order entries from CEE Trader stations and CEESEG FIX") have to be seen in two categories:
    - Internal DropCopies
    resulting from other CEESEG FIX sessions and from interactions with CEE Trader instances within the same member subgroup. Internal DropCopies can be modified, and deleted.
    Internal DropCopies are marked with CopyMsgIndicator (Tag 797) = "N"
    - External DropCopies
    resulting from other interfaces i.e. foreign ETI sessions. In contrast to internal DropCopies, external DropCopy orders can't be modified. Via CEESEG FIX, foreign DropCopy orders can only be deleted.
    External DropCopies are marked with CopyMsgIndicator (Tag 797) = "Y"
    - ExecutionReport messages which result from interactions in the own FIX session do not contain the CopyMsgIndicator (Tag 797).

Association of orders, execution reports and trades

CEESEG FIX uses several identifiers for different message types.
ClOrdID is the unique identifier of an order. The ClOrdID can also be found in ExecutionReports, independent of the purpose of the ExecutionReport. ExecutionReports of an accepted order contain a trading system order ID in Tag 37 (OrderID). This OrderID can be used to associate private TradeCaptureReports directly to an order.
Since the introduction of Xetra T7, ExecutionReports for order executions contain the tag TrdMatchID (Tag 880). This field is also present in private TradeCaptureReport messages and thus can be used to find the relation between ExecutionReports and TradeCaptureReports.

ExecutionReport (outbound confirmation)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=8 (ExecutionReport)
150	ExecType	Y	Purpose of the ExecutionReport: Valid values:

Tag		Field Name	Req.	Comments
				0 = New D = Stop price triggered
39		OrdStatus	Y	Valid values: 0 = New
17		ExecID	Y	Execution ID
60		TransactTime	N	Time of last order action
11		ClOrdID	N	Copied from request
37		OrderID	N	Order number assigned by the trading system
55		Symbol	N	Copied from request
58		Text	N	Copied from request
10058		SecondaryText	N	Copied from request
99		StopPx	N	Copied from request
48		SecurityID	N	Copied from request
22		SecurityIDSource	N	Copied from request
54		Side	Y	Copied from request
40		OrdType	N	Copied from request
38		OrderQty	N	Copied from request
18		ExecInst	N	Copied from request
111		MaxFloor	N	Copied from request
1084		DisplayMethod	N	Copied from request
1085		DisplayLowQty	N	Copied from request
1086		DisplayHighQty	N	Copied from request
1138		DisplayQty	N	The initial peak quantity for random peak iceberg orders / refilled peak quantity of random peak iceberg orders
44		Price	N	Copied from request
15		Currency	N	Copied from request
59		TimeInForce	N	Copied from request Note: Orders entered as GTC (59=1) are mirrored back as GTD order (59=6) with their respective validity date.
432		ExpireDate	N	Expiration date of the Order
526		SecondaryClOrdID	N	Copied from request
528		OrderCapacity	N	Copied from request
30625		TradeAtCloseOptIn	N	Copied from request
336		TradingSessionID	N	Copied from request
453		*NoPartyIDs*	N	Number of related Parties
->	448	PartyID	N	If 452=12 Xetra T7 / Trader ID is provided
->	452	PartyRole	N	Identifies the type of PartyID Valid values if 447 = D: 12 = Executing trader
->	447	PartyIDSource	N	Value: D = Proprietary/Custom code (Xetra T7 Trader ID)
14		CumQty	Y	Currently executed quantity for chain of orders. In this case equals 0.

Tag	Field Name	Req.	Comments
30	LastMkt	N	Execution destination as defined by institution when order is entered Possible values see Availability and markets
797	CopyMsgIndicator	N	Indicates whether or not this message is a DropCopy of another message. Valid Values: Y = Order is a DropCopy from foreign ETS ETI session and thus not modifiable N = Order is a modifiable DropCopy from the same ETS ETI session
6	AvgPx	Y	Discontinued. Tag will always contain 0.
28744	MatchInstCrossID	N	Copied from request
	Standard Trailer	Y	

ExecutionReport (outbound rejection)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=8
150	ExecType	Y	Purpose of the ExecutionReport: Valid values: 8 = Reject
39	OrdStatus	Y	Valid values: 8 = Rejected
17	ExecID	Y	execution ID
60	TransactTime	N	Time of last order action
11	ClOrdID	N	Copied from request
37	OrderID	N	NONE
55	Symbol	N	Copied from request
48	SecurityID	N	Copied from request
22	SecurityIDSource	N	Copied from request
54	Side	Y	Copied from request
40	OrdType	N	Copied from request
38	OrderQty	N	Copied from request
18	ExecInst	N	Copied from request
111	MaxFloor	N	Copied from request
1084	DisplayMethod	N	Copied from request
1085	DisplayLowQty	N	Copied from request
1086	DisplayHighQty	N	Copied from request
1138	DisplayQty	N	Copied from request
44	Price	N	Copied from request
15	Currency	N	Copied from request
526	SecondaryClOrdID	N	Copied from request
528	OrderCapacity	N	Copied from request
336	TradingSessionID	N	Copied from request
14	CumQty	Y	Currently executed quantity for chain of orders. In this case equals 0.
6	AvgPx	Y	Discontinued. Tag will always contain 0.
103	OrdRejReason	N	Code to identify reason for order rejection. Valid values: 99 = Other If Code is 99 then tag 10320 contains the text for reject reason
58	Text	N	Copied from request
10058	SecondaryText	N	Copied from request
30	LastMkt	N	Execution destination as defined by institution when order is entered Possible values see Availability and markets
10320	RejectReason	N	Text containing the reject reason of the trading system – refer to the corresponding trading system manual
28744	MatchInstCrossID	N	Copied from request
28745	Crossed	N	Contains „1“ if the order was rejected due to the self-match prevention

Tag	Field Name	Req.	Comments
	Standard Trailer	Y	

OrderCancelRequest (MsgType=F)

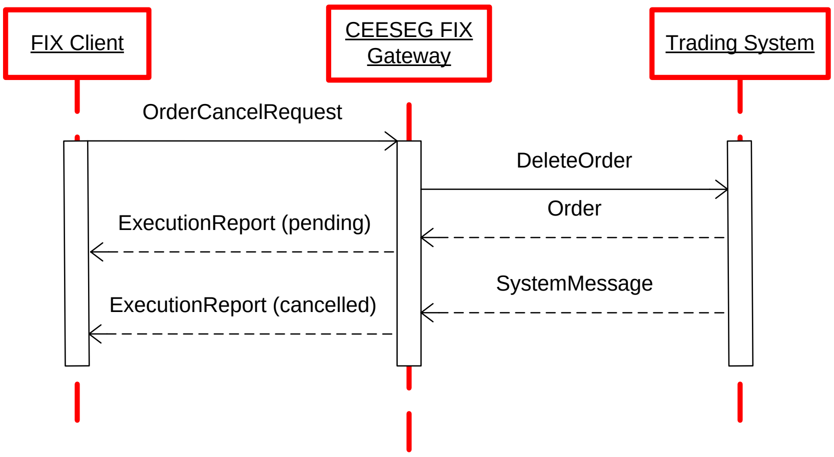

Figure 5 Order cancel message flow

OrderCancelRequest (inbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType = F (OrderCancelRequest)
41	OrigClOrdID	Y	Original identification of the order to be canceled. Mandatory field.
11	ClOrdID	Y	Unique identification of cancel request. Please check the Field length limitations on Page 22
15	Currency	N	
55	Symbol	N	Must be the same as the symbol of the original order.
48	SecurityID	Y	Security ISIN
22	SecurityIDSource	Y	Valid value: 4 = ISIN
54	Side	Y	Must be the same as the side of the original order
60	TransactTime	Y	The time that you released this request.
38	OrderQty	N	Total order quantity as entered (even if some was already traded)
100	ExDestination	Y	Execution destination as defined by institution when order is entered Possible values see Availability and markets
1724	OrderOrigination	N	Direct Market Access (DMA) Flag Valid Values: 5 = Direct Market Access
58	Text	N	
453	*NoPartyIDs*	N	The number of related Parties (required by trading system)
-> 448	PartyID	N	Required if NoPartyIDs >=1 Identification of the party (Short Code) Please check the Field length limitations on Page 22. Reserved Values for 452 =3 1 = AGGR (An aggregation of multiple client orders)

Tag		Field Name	Req.	Comments
				2 = PNAL (Clients are Pending allocation) Reserved Values for 452 =12 (where client has specified execution) 3 = CLIENT
->	447	PartyIDSource	N	Required if NoPartyIDs >=1 Valid Values: P (Short code identifier)
->	452	PartyRole	N	Required if NoPartyIDs >=1 Identifies the type of PartyID Valid values: 3 = ClientID 12 = Executing trader (Replaces Tag 376 ComplianceID) 122 = Investment Decision Maker
->	2376	PartyRoleQualifier	N	Valid Values : 22 = Algorithm (applicable to PartyRole values 12 or 122) 24 = Natural person (applicable to PartyRole 12 and 122)
		Standard Trailer	Y	

For OrderCancelRequest two ExecutionReports are returned. The first one with value 6 (Pending Cancel) in tag 150 (ExecType) and tag 39 (OrdStatus). The second one with value 4 (Cancelled) in both tags.

ExecutionReport (outbound confirmation)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=8
150	ExecType	Y	Purpose of the ExecutionReport: Valid values: 6 = Pending Cancel 4 = Canceled C = Expired D = Restated
39	OrdStatus	Y	Valid values: 6 = Pending Cancel 4 = Canceled C = Expired
378	ExecRestatementReason	N	Valid Values: 0 = Corporate Action 8 = Exchange option 103 = Order delete accepted 122 = Instrument State Change 146 = End of Day processing 148 = Order expiration 197 = Pending order deletion 199 = Pending order cancellation executed (end of FREEZE state) 261 = Panic Cancel 292 = Dividend Payment 294 = Last Trading Day 295 = Trading Parameter Change 296 = Currency Change 297 = Product Assignment Change 298 = Reference Price Change 300 = Tick Rule Change 316 = QRS Order Expiry
17	ExecID	Y	Execution ID
60	TransactTime	N	Time of last order action
11	ClOrdID	N	Copied from order
41	OrigClOrdID	N	ClOrdID () of the previous order (NOT the initial order of the day) as assigned by the institution, used to identify the previous order.
37	OrderID	N	Trading system order number
55	Symbol	N	Copied from order
48	SecurityID	N	Copied from order
22	SecurityIDSource	N	Copied from order
54	Side	Y	Copied from order
40	OrdType	N	Copied from order
38	OrderQty	N	Copied from order
18	ExecInst	N	Copied from order
111	MaxFloor	N	The currently displayed quantity of an iceberg order
1084	DisplayMethod	N	Copied from order

Tag	Field Name	Req.	Comments
1085	DisplayLowQty	N	Copied from order
1086	DisplayHighQty	N	Copied from order
1138	DisplayQty	N	Copied from order
44	Price	N	Copied from order
15	Currency	N	Copied from order
59	TimeInForce	N	Copied from order
432	ExpireDate	N	Expiration date of the Order
526	SecondaryClOrdID	N	Copied from order
528	OrderCapacity	N	Copied from order
336	TradingSessionID	N	Copied from order
151	LeavesQty	Y	Quantity left on the order, as per State Matrixes. In this case equals 0
14	CumQty	Y	Currently executed quantity for chain of orders.
6	AvgPx	Y	Discontinued, tag will always contain 0.
58	Text	N	Copied from order
10058	SecondaryText	N	Copied from order
30	LastMkt	N	Execution destination as defined by institution when order is entered, Possible values see Availability and markets
	Standard Trailer	Y	

In case that orders are cancelled by the exchange (i.e. on behalf of the trader) order cancel ExecutionReports will be delivered with 150=4 and 39=4.

In case of deletion of an order during batch processing, i.e. due to expiry, capital measure, market segment change etc., the respective values are 150=C and 39=C.
In case of batch deletions, the specific reason for the order deletion will be indicated with tag 378, ExecRestatementReason.

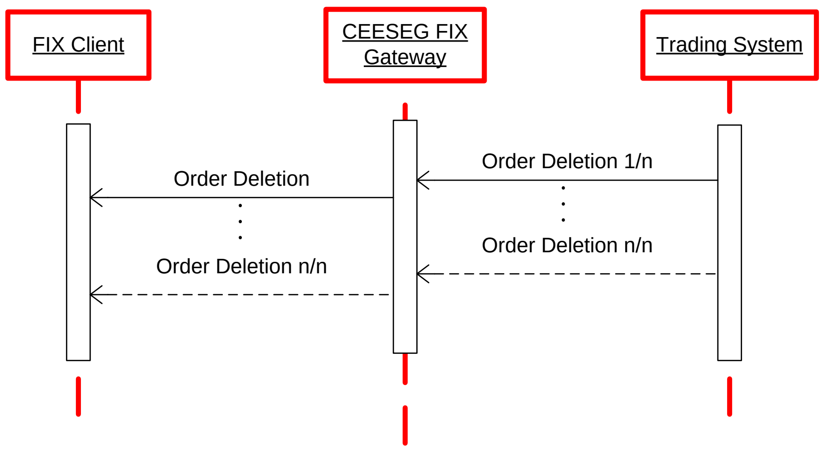

Figure 6 Deleted by exchange message flow

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OrderCancelReject (MsgType=9)

OrderCancelReject (outbound rejection)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=9
37	OrderID	Y	Order ID
11	ClOrdID	Y	Copied from request
41	OrigClOrdID	Y	ClOrdID of the previous order (NOT the initial order of the day) as assigned by the institution, used to identify the previous order.
39	OrdStatus	Y	If the order was not found (and the cancelation was rejected for this reason) 8 = Rejected If the order was found (and the cancelation was rejected for any other reason) Tag 39 contains the status of the original order: 0 = New 1 = Partial filled 2 = Filled 4 = Canceled 8 = Rejected C = Expired
434	CxlRejResponseTo	Y	Valid values: 1 = Order cancel request
102	CxlRejReason	N	Code to identify reason for cancel rejection Valid values: 0 = Too late to cancel 1 = Unknown order 6 = Duplicate ClOrdID (11) received 99 = Other If code is 99 then tag 10320 contains the text for reject reason
58	Text	N	Copied from request
526	SecondaryClOrdID	N	If the order was not found (and the cancelation was rejected for this reason) 526 is copied from request If the order was found (and the cancelation was rejected for any other reason) 526 contains the value from the original order.
30	LastMkt	Y	Execution destination as defined by institution when order is entered Possible values see Availability and markets
10320	RejectReason	N	Text containing the reject reason of the trading system – refer to the corresponding trading system manual
	Standard Trailer	Y	

OrderCancelReplaceRequest (MsgType=G)

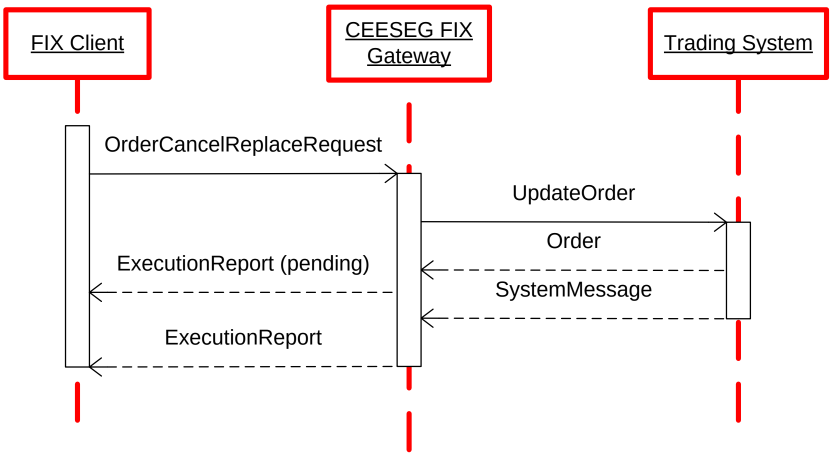

Figure 7 OrderCancelReplace message flow

OrderCancelReplaceRequest (inbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=G
41	OrigClOrdID	Y	ClOrdID () of the previous order (NOT the initial order of the day) as assigned by the institution, used to identify the previous order.
11	ClOrdID	Y	Unique identification of update request. This will also become new client order identification for updated order if successful. Please check the Field length limitations on Page 22.
55	Symbol	N	Security identifier.
48	SecurityID	Y	Security ISIN
22	SecurityIDSource	Y	Valid value: 4 = ISIN
54	Side	Y	Valid values: 1 = Buy 2 = Sell
40	OrdType	Y	Valid values: depending on the market model of the exchange 1 = Market 2 = Limit 3 = Stop 4 = Stop Limit K = Market to limit P = Midpoint (currently not supported)
38	OrderQty	Y	Must be positive number
18	ExecInst	N	c = Ignore Price Validity Check absence activates the price reasonability check
111	MaxFloor	N	Maximum visible quantity of static peak size ice berg order. Specify the visible quantity of a static peak ice berg order in this tag.

Tag	Field Name	Req.	Comments
			The visible quantity must be smaller than the overall quantity.
1084	DisplayMethod	N	3 = Random peak iceberg order (requires tag 1085 and 1086)
1085	DisplayLowQty	N	Defines the lower quantity limit to a randomized refresh of DisplayQty. (iceberg order only)
1086	DisplayHighQty	N	Defines the upper quantity limit to a randomized refresh of DisplayQty. (iceberg order only)
1138	DisplayQty	N	The initial peak quantity for random peak iceberg orders
44	Price	N	Price per share
15	Currency	Y	
59	TimeInForce	N	Specifies how long the order will remain in effect. Specifies how long the order will remain in effect. Depending on market model 0 = Day 1 = GoodTillCancel 3 = ImmediateOrCancel 4 = FillOrKill 6 = GoodTillDate B = Book or Cancel T = Top of book (currently not supported)
432	ExpireDate	N	Has to be set if TimeInForce = 6; Order expires at the end of trading on the specified date.
526	SecondaryClOrdID	N	Will be returned to you in execution reports. Please check the Field length limitations on Page 22.
528	OrderCapacity	Y	General Values : A = Agency P = Principal R = Riskless principal Market maker Values: D = Designated Sponsor
386	NoTradingSessionID	N	Number of TradingSessionIDs (336) Always “1” if trading restriction should be given; additionally TradingSessionID (Tag 336) is used.
336	TradingSessionID	N	Valid Values: A = Auction Only C = Closing M = Main Auction (Intraday Auction Only) O = Opening S = Accept Surplus T = Main Trading (default)
60	TransactTime	Y	The time that you sent this request. Must be within *n* seconds of current time.
100	ExDestination	Y	Execution destination as defined by institution when order is entered Possible values see Availability and markets
58	Text	N	Free text.

Tag	Field Name		Req.	Comments
				Please check the Field length limitations on Page 22.
1724	OrderOrigination		N	Direct Market Access (DMA) Flag Valid Values: 5 = Direct Market Access
10058	SecondaryText		N	Free text 2. Please check the Field length limitations on Page 22.
99	StopPx		N	Stop limit
28744	MatchInstCrossID		N	Can be used to specify a numeric self-match prevention ID. Send “0” to turn off self-match prevention of an existing order.
2593	*NoOrderAttributes*		N	The number of order attributes
->	2594	OrderAttributeType	N	Type of order attributes Valid Values : 2 = Liquidity provision activity order
->	2595	OrderAttributeValue	N	Value associated with the order attribute type in 2594 Valid value: Y = Attribute is set
453	*NoPartyIDs*		N	The number of related Parties (required by trading system)
->	448	PartyID	N	Required if NoPartyIDs >=1 Identification of the party (Short Code). Please check the Field length limitations on Page 22. Reserved Values for 452 =3 1 = AGGR (An aggregation of multiple client orders) 2 = PNAL (Clients are Pending allocation) Reserved Values for 452 =12 (where client has specified execution) 3 = CLIENT
->	447	PartyIDSource	N	Required if NoPartyIDs >=1 Valid Values: P (Short code identifier)
->	452	PartyRole	N	Required if NoPartyIDs >=1 Identifies the type of PartyID Valid value: 3 = ClientID 12 = Executing trader (Replaces Tag 376 ComplianceID) 122 = Investment Decision Maker
->	2376	PartyRoleQualifier	N	Valid Values : 22 = Algorithm (applicable to PartyRole values 12 or 122) 24 = Natural person (applicable to PartyRole 12 and 122)
28743	SkipCheck		N	Valid Values : 1 = skip value check 2 = skip volume check 3 = skip value and volume check

Tag	Field Name	Req.	Comments
	Standard Trailer	Y	

Please note

In case that the client is trying to reduce the quantity of a partially executed order, so that the new total order quantity would be less or equal than the executed quantity, the remaining quantity will be deleted and the order status is changed to "Filled". In this scenario the client receives two ExecutionReports. The first one with "pending" status (value "E" in tag 150 and 39), the second one with "filled" status (150=5 and 39=2). Please compare Scenarios 2 and 3 as examples for this case.

For valid OrderCancelReplaceRequest, two ExecutionReports are returned. The first one with "pending" status (value "E" in tag 150 and 39), the second one with value 5 (replaced) in tag 150 (ExecType) and value 0 (New) or 1 (Partial Filled) – depending on order status before the request - in tag 39 (OrdStatus).

ExecutionReport (outbound confirmation)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=8 (ExecutionReport)
41	OrigClOrdID	N	Conditionally required for response to an electronic Cancel or Cancel/Replace request ClOrdID of the previous order (NOT the initial order of the day) as assigned by the institution, used to identify the previous order.
150	ExecType	Y	Purpose of the ExecutionReport: Valid values: 4 = Cancelled 5 = Replaced E = Pending Replace
39	OrdStatus	Y	Valid values: 0 = New 1 = Partial filled 2 = Filled 4 = Cancelled E = Pending Replace
17	ExecID	Y	Execution ID
60	TransactTime	N	Time of last order action
11	ClOrdID	N	Copied from request
37	OrderID	N	Order number assigned by the trading system at the time of entry
55	Symbol	N	Copied from request
48	SecurityID	N	Copied from request
22	SecurityIDSource	N	Copied from request
54	Side	Y	Copied from request
40	OrdType	N	Copied from request
38	OrderQty	N	Copied from request
18	ExecInst	N	Copied from request
111	MaxFloor	N	Currently visible quantity of an iceberg order
1084	DisplayMethod	N	Copied from request
1085	DisplayLowQty	N	Copied from request
1086	DisplayHighQty	N	Copied from request

Tag	Field Name	Req.	Comments
1138	DisplayQty	N	Copied from request
44	Price	N	Copied from request
15	Currency	N	Copied from request
59	TimeInForce	N	Copied from request Note: Orders entered as GTC (59=1) are mirrored back as GTD order (59=6) with their respective validity date.
59	TimeInForce	N	Expiration date of the Order
526	SecondaryClOrdID	N	Copied from request
528	OrderCapacity	N	Copied from request
336	TradingSessionID	N	Copied from request
151	LeavesQty	Y	Quantity left on the order, as per State Matrixes.
14	CumQty	Y	Currently executed quantity for chain of orders.
6	AvgPx	Y	Discontinued. Tag will always contain 0.
31	LastPx	N	Price of securities traded in this fill (only if this is execution/trade report)
32	LastQty	N	Number of securities traded in this fill (only if this is execution/trade report)
58	Text	N	Copied from request
10058	SecondaryText	N	Copied from request
30	LastMkt	N	Execution destination as defined by institution when order is entered Possible values see Availability and markets
99	StopPx	N	Copied from request
10320	RejectReason	N	Text containing a possible reject reason of the trading system
28744	MatchInstCrossID	N	Copied from request
453	*NoPartyIDs*	N	Number of related Parties
->	448 PartyID	N	If 452=12 and 447=D Xetra T7 Trader ID is provided
->	452 PartyRole	N	Identifies the type of PartyID Valid values if 447 = D: 12 = Executing trader
->	447 PartyIDSource	N	Value: D = Proprietary/Custom code (Xetra T7 Trader ID)
	Standard Trailer	Y	

OrderCancelReject (outbound rejection)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=9
37	OrderID	Y	Order ID
11	ClOrdID	Y	Copied from request
39	OrdStatus	Y	If the order was not found (and the cancelation was rejected for this reason) Tag 39 = Rejected If the order was found (and the cancelation was rejected for any other reason) Tag 39 contains the status of the original order:

Tag	Field Name	Req.	Comments
			0 = New 1 = Partial filled 2 = Filled 4 = Canceled 8 = Rejected C = Expired
434	CxlRejResponseTo	Y	Valid values: 2 = Order cancel/replace request
102	CxlRejReason	N	Code to identify reason for cancel rejection Valid values: 99 = Other If Code is 99 then tag 10320 contains the text for reject reason
58	Text	N	Copied from request
526	SecondaryClOrdID	N	If the order was not found (and the cancelation was rejected for this reason) 526 is copied from request If the order was found (and the cancelation was rejected for any other reason) 526 contains the value from the original order.
30	LastMkt	Y	Execution destination as defined by institution when order is entered Possible values see Availability and markets
10320	RejectReason	N	Text containing the reject reason of the trading system – refer to the corresponding trading system manual
28744	MatchInstCrossID	N	Copied from request
28745	Crossed	N	Contains „1“ if the order was rejected due to the self-match prevention
	Standard Trailer	Y	

Order modification examples

Scenario 1: Order Quantity > Cum Quantity				
Initial Status				
OrderQty	CumQty	LeavesQty	Order Status	
1000	400	600	Partially Filled	
Amend quantity down to 700				
OrderQty	CumQty	LeavesQty	Order Status	Comment
700	400	300	Partially Filled	OrderCancelReplaceRequest is accepted. Order Quantity is reduced to 700 leaving behind open volume as 300

Scenario 2: Order Quantity < Cum Quantity				
Initial Status				
OrderQty	CumQty	LeavesQty	Order Status	
1000	400	600	Partially Filled	
Amend quantity down to 300				
OrderQty	CumQty	LeavesQty	Order Status	Comment
300	400	would be -100 -> impossible	Filled	As the order quantity (300 in this example) was set smaller than the already executed quantity (400), the OrderCancelReplace-Request will result in a correction of the order quantity to the already executed quantity (in this example 400),, This is indicated by an ExecutionReport message with 150=5, 39=2.

Scenario 3: Order Quantity == Cum Quantity				
Initial Status				
OrderQty	CumQty	LeavesQty	Order Status	
1000	400	600	Partially Filled	
Amend quantity down to 400				
OrderQty	CumQty	LeavesQty	Order Status	Comment
400	400	would be 0 -> impossible	Filled	As the remaining quantity was set equal to the leaves quantity, the OrderCancel-ReplaceRequest will result in a modification of the order quantity down to the already executed quantity, As there is no open quantity left, an ExecutionReport message with 150=5, 39=2 is sent.

Scenario 4: Order Quantity > Cum Quantity				
Initial Status				
OrderQty	CumQty	LeavesQty	Order Status	
1000	400	600	Partially Filled	
Amend quantity up to 2000				
OrderQty	CumQty	LeavesQty	Order Status	Comment
2000	400	1600	Partially Filled	OrderCancelReplaceRequest is accepted. Order Quantity is increased to 2000 leaving open volume as 1600.

Order Status

Order status can be requested individually or globally. OrderMassStatusRequest triggers many execution reports – one for each order. The OrderMassStatusRequest returns only orders that are currently active in the order book of the exchange. Orders that are already filled, removed or rejected are not returned. The (single) OrderStatusRequest provides also the status of cancelled and filled orders.
If the client has no order on the order book of the exchange and sends an OrderMassStatusRequest, a rejection ExecutionReport message is returned, as described below (*outbound* rejection)

OrderStatusRequest (MsgType=H)

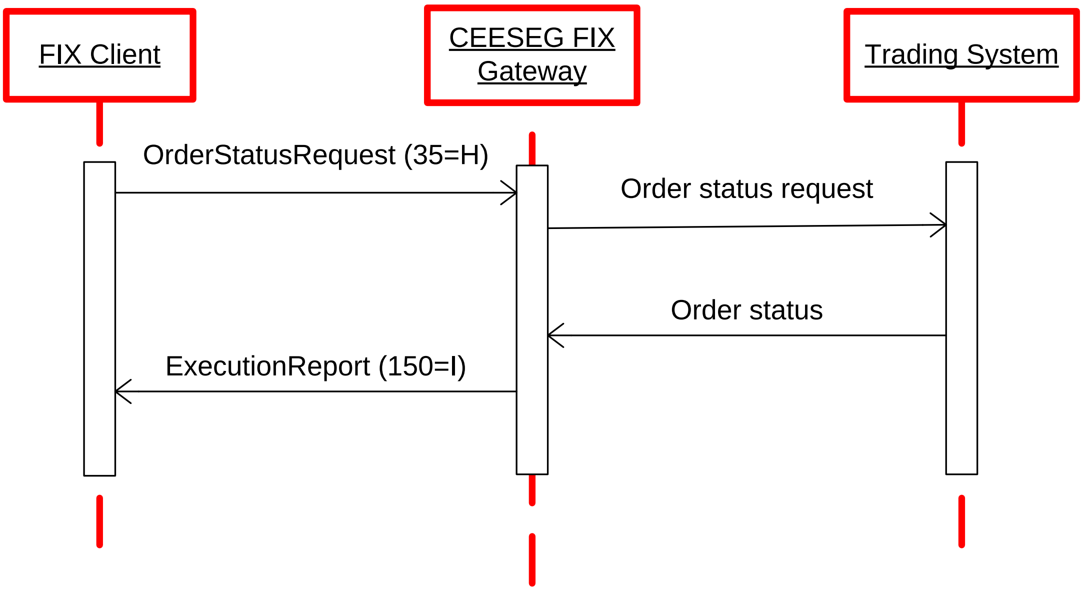

Figure 8 Order status message flow example

OrderStatusRequest (inbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=H
790	OrdStatusReqID	Y	Unique identifier
11	ClOrdID	Y	The ClOrdID of the order whose status is being requested. Please check the Field length limitations on Page 22.
37	OrderID	N	Trading system order number
55	Symbol	N	Must be the same as the symbol of the original order
48	SecurityID	Y	Security ISIN
22	SecurityIDSource	Y	Valid value: 4 = ISIN
54	Side	Y	Must be the same as the side of the original order.
100	ExDestination	Y	Execution destination as defined by institution when order is entered

Tag	Field Name	Req.	Comments
			Possible values see Availability and markets
	Standard Trailer	Y	

OrderMassStatusRequest (MsgType=AF)

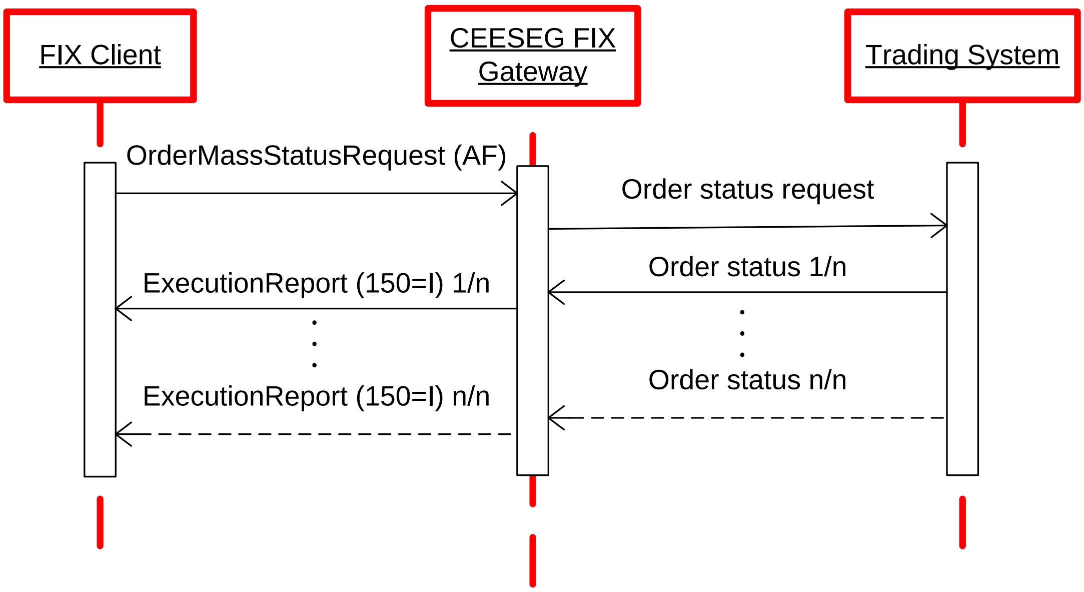

Figure 9 Order mass status message flow example

OrderMassStatusRequest (inbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=AF
584	MassStatusReqID	Y	This is your new and unique ID for this request
585	MassStatusReqType	Y	Values: 1 = status for all orders for a security (SecurityID / SecurityIDSource are mandatory in this case) 7 = status for all orders
55	Symbol	N	
48	SecurityID	N	Security ISIN
22	SecurityIDSource	N	Valid value: 4 = ISIN
336	TradingSessionID	N	Valid Values: A = Auction Only C = Closing M = Main Auction (Intraday Auction Only) O = Opening T = Main Trading
100	ExDestination	Y	Execution destination as defined by institution when order is entered

Tag	Field Name	Req.	Comments
			Possible values see Availability and markets
	Standard Trailer	Y	

ExecutionReport (outbound confirmation)

Tag	Field Name	Required	Comments
	Standard Header	Y	MsgType=8
150	ExecType	Y	Purpose of the ExecutionReport - Valid values: I = Status
39	OrdStatus	Y	Valid values: 0 = New 1 = Partial filled 2 = Filled 4 = Canceled 9 = Suspended (Halted) C = Expired
17	ExecID	Y	Execution ID
60	TransactTime	Y	Time of last order action
584	MassStatusReqID	N	Required in response to OrderMassStatusRequest, not present in response to OrderStatusRequest
911	TotNumReports	N	Only used in response to OrderMassStatusRequest – the first ExecutionReport returned has this field set
912	LastRptRequested	N	Only used in response to OrderMassStatusRequest Values : Y, N This tag contains Y in the last ExecutionReport which is sent in reply to an OrderMassStatusRequest
790	OrdStatusReqID	N	Required in response to OrderStatusRequest, not present in response to OrderMassStatusRequest
11	ClOrdID	Y	Copied from order
37	OrderID	Y	Copied from order
55	Symbol	N	Copied from order
48	SecurityID	Y	Copied from order
22	SecurityIDSource	Y	Copied from order
54	Side	Y	Copied from order
40	OrdType	Y	Copied from order
38	OrderQty	Y	Copied from order
18	ExecInst	N	Copied from order - only available on the trading day, on which the order was entered
327	ComplianceID	N	Copied from order
111	MaxFloor	N	The currently displayed quantity of an iceberg order
1084	DisplayMethod	N	Copied from order
1085	DisplayLowQty	N	Copied from order
1086	DisplayHighQty	N	Copied from order

Tag	Field Name		Required	Comments
1138	DisplayQty		N	The initial peak quantity for random peak iceberg orders / refilled peak quantity of random peak iceberg orders
44	Price		N	Copied from order
15	Currency		Y	Copied from order
59	TimeInForce		N	Copied from order
432	ExpireDate		N	Copied from order
526	SecondaryClOrdID		N	Copied from order
528	OrderCapacity		N	Copied from order
30625	TradeAtCloseOptIn		N	Copied from order
336	TradingSessionID		N	Copied from order
151	LeavesQty		Y	Quantity left on the order, as per State Matrixes.
14	CumQty		Y	Currently executed quantity for chain of orders.
797	CopyMsgIndicator		N	Indicates whether or not this message is a DropCopy of another message. Valid Values: Y = Order is a DropCopy from foreign ETI session and thus not modifiable N = Order is a modifiable DropCopy from the same ETI session
6	AvgPx		Y	Discontinued. Tag will always contain 0.
31	LastPx		N	Price of securities traded in this fill (only if this is execution/trade report)
32	LastQty		N	Number of securities traded in this fill (only if this is execution/trade report)
58	Text		N	Copied from order
10058	SecondaryText		N	Copied from order
30	LastMkt		Y	Execution destination as defined by institution when order is entered Possible values see Availability and markets
99	StopPx		N	Copied from order
28744	MatchInstCrossID		N	Copied from order
453	*NoPartyIDs*		N	Number of related Parties
->	448	PartyID	N	If 452=12 and 447=D Xetra T7 Trader ID is provided
->	452	PartyRole	N	Identifies the type of PartyID Valid values if 447 = D: 12 = Executing trader
->	447	PartyIDSource	N	Value: D = Proprietary/Custom code (Xetra T7 Trader ID)
	Standard Trailer			

ExecutionReport (outbound rejection)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=8
150	ExecType	Y	Purpose of the ExecutionReport: Valid values: I = Status
39	OrdStatus	Y	Valid values: 8 = Rejected
17	ExecID	Y	Always 0
584	MassStatusReqID	N	Only used in response to OrderMassStatusRequest
790	OrdStatusReqID	N	Only used in response to OrderStatusRequest
11	ClOrdID	N	If the client has no order on the market, or the OrderMassStatusRequest is rejected for any other reason, ClOrdID is 0
37	OrderID	N	In case of rejection, value is “NONE”.
55	Symbol	N	Field must be present per spec. Value is not defined.
48	SecurityID	N	Security ISIN If the client has no order on the market, or the OrderMassStatusRequest is rejected for any other reason, SecurityID is 000000000000
22	SecurityIDSource	N	Valid value: 4 = ISIN
54	Side	Y	Field must be present per spec. Value is 7 (Undisclosed).
151	LeavesQty	Y	Field must be present per spec. Value is 0
14	CumQty	Y	Field must be present per spec. Value is 0.
6	AvgPx	Y	Discontinued. Tag will always contain 0.
103	OrdRejReason	N	Text explaining reject reason of trading system Valid values: 5 = Unknown Order 99 = Other
58	Text	N	
30	LastMkt	N	Execution destination as defined by institution when order is entered Possible values see Availability and markets
	Standard Trailer	Y	

QuoteRequestReject (MsgType=AG)

QuoteRequestReject (outbound rejection)

Tag		Field Name	Req.	Comments
		Standard Header	*Y*	*MsgType= AG*
131		QuoteReqID	Y	Copied from request
644		RFQReqID	N	Copied from request
658		QuoteRequestRejectReason	Y	Valid Values 1 = Unknown Symbol 2 = Exchange Closed 3 = QuoteRequestExLimit 4 = TooLate 6 = NotAuthToReqQuote 7 = NoMatchForInquiry 8 = NoMarketForInstrument 9 = NoInventory 10 = Pass 99 = Other
10320		RejectReason	N	Text containing the reject reason of the trading system – refer to the corresponding trading system manual
537		QuoteType	N	Copied from request
30		LastMkt	Y	Execution destination. Possible values see Availability and markets.
146		NoRelatedSym	Y	The number of related symbols
->	48	SecurityID	Y	Copied from request
->	55	Symbol	N	Copied from request
->	22	SecurityIDSource	Y	Copied from request
->	38	OrderQty	Y	Copied from request
->	54	Side	Y	Copied from request
		Standard Trailer	Y	

Cross Request functionality

A trader sends the cross request which is then published by the means of a “news” message to all other participants, to alert them of the intention to trade with an own order or to conduct a pre-arranged trade.
“A cross trade is a trade where a participant trades against an own order in the order book. In a pre-arranged trade, orders from at least two members are executed against each other as previously negotiated. Participants wanting to consciously enter cross and pre-arranged trades into T7, must precede them with the entry of a cross request.” *[Source: Deutsche Börse T7 7.0 ETI Manual 1.0]*

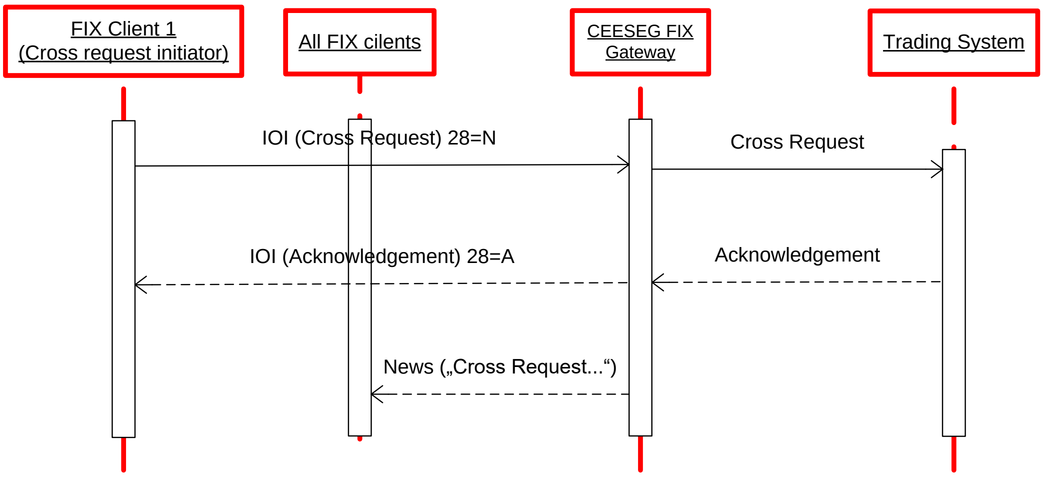

Figure 10 Cross request message flow

In CEESEG FIX, cross requests are entered via MsgType=6 (IOI) and distributed to the public via MsgType=B (News). The initiator receives a confirmation or rejection for the entered cross request via MsgType=6 (IOI).

IOI (inbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType= 6
23	IOIid	Y	Unique ID for the IOI message
28	IOITransType	Y	Identifies IOI message transaction type. Valid values : N= New
22	SecuritySource	Y	4=ISIN
48	SecurityID	Y	Security ISIN
55	Symbol	N	
54	Side	Y	Side of Indication 7=Undisclosed
27	IOIQty	Y	Quantity of the cross request
60	TransactTime	Y	Time of the transaction
100	ExDestination	Y	Specifies the destination exchange
	Standard Trailer	Y	

IOI (outbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType= 6

Tag	Field Name	Req.	Comments
23	IOIid	Y	Unique ID for the IOI message
28	IOITransType	Y	Identifies IOI message transaction type. Valid values : A = Acknowledged D = Declined
26	IOIRefID	N	References to original IOI message if IOITransType = Acknowledged or Declined
22	SecuritySource	Y	4=ISIN
48	SecurityID	Y	Security ISIN
55	Symbol	N	
54	Side	Y	Side of Indication 7=Undisclosed
58	Text	N	Text field, may contain reject reason if IOITransType= Declined
27	IOIQty	Y	Quantity of the cross request
60	TransactTime	Y	Time of the transaction
30	LastMkt	Y	Specifies the destination exchange
	Standard Trailer	Y	

Intelligent Order Processing

Introduction to Intelligent Order Processing

CEESEG FIX supports the intelligent order types trailing stop order (TSO) and One Cancels Other (OCO) of Xetra T7. The functional details are explained in the document "Intelligent Order Processing based on CEESEG FIX". Since Xetra T7 the functionality is located directly in the trading system.

IO message header

Tag	Field Name	Req.	Comments
8	BeginString	Y	FIX.4.4, unencrypted
9	BodyLength	Y	
34	MsgSeqNum	Y	Integer message sequence number
35	MsgType	Y	One of supported message types
49	SenderCompID	Y	Unique identifier of client supplied by the exchange
50	**SenderSubID**	**N**	**Contains the value "IO" if a message is received from the intelligent order processing engine.**
52	SendingTime	Y	yyyymmdd-hh:MM:ss.SSS (must be within *n* seconds of current time)
56	TargetCompID	Y	supplied by the exchange
57	**TargetSubID**	**N**	**Is required to specify that a message shall be sent to the intelligent order processing engine (Trailing Stop Order).** **In this case the tag must contain the value "IO"**
347	MessageEncoding	N	UTF-8

Note on TargetSubID / SenderSubID:

The tag TargetSubID is required in the message header of the intelligent order, which specifies the alternative destination ("IO") of the message. IO related messages sent by the intelligent order processor have a SenderSubID tag containing the value "IO".

Trailing stop order entry (MsgType=D)

Introduction to trailing stop orders

A trailing stop order is sent to the CEESEG FIX gateway with the TargetSubID “IO”. The Xetra T7 system confirms the order entry with an ExecutionReport message which contains the SenderSubID “IO”.
From there on the trading system adjusts the stop price according to the offset values provided in the tags 44 and 99. For all the subsequent order adjustments ExecutionReport messages with SenderSubID “IO” and ExecType “5” are sent by the CEESEG FIX gateway.
Once the market price reaches the stop price of the order, the order is “triggered”. This means that the order reaches the actual order book of the trading system. This is indicated with an ExecutionReport message with the ExecType “D” from the FIX gateway. This message and all subsequent ExecutionReports messages related to this order do not have the SenderSubID “IO”, as the intelligent order processing is finished. The order has to be treated like any other normal order from this moment on.

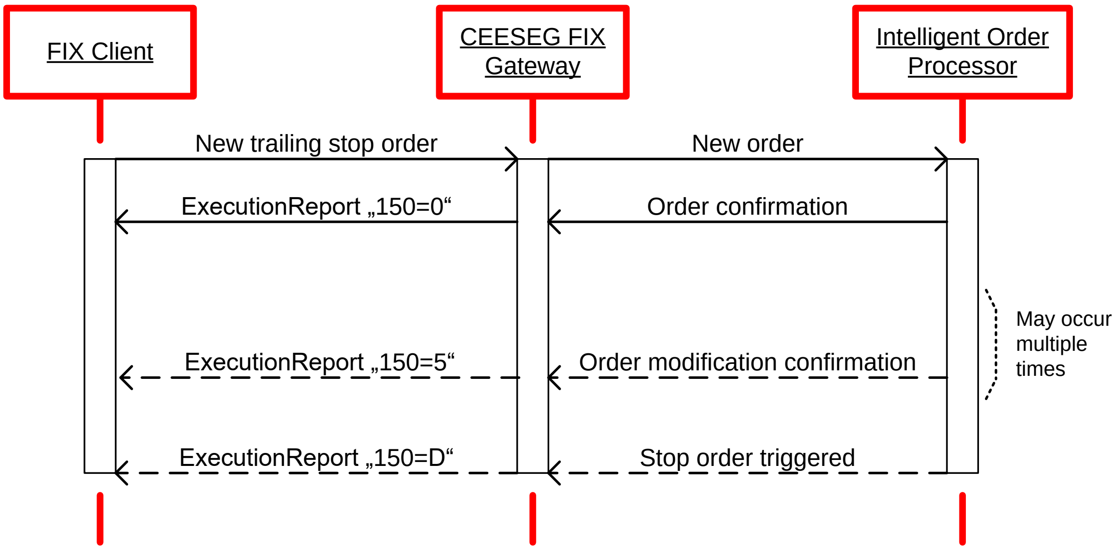

Figure 11 Trailing-stop-order message flow

NewOrderSingle (inbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType= D (NewOrderSingle) TargetSubID = IO
11	ClOrdID	Y	This is your new and unique ID for this request. Please check the Field length limitations on Page 22.
55	Symbol	N	1-15 character security identifier.
48	SecurityID	Y	Security ISIN
22	SecurityIDSource	Y	Valid value: 4 = ISIN
54	Side	Y	Valid values: 1 = Buy 2 = Sell
40	OrdType	Y	3 = Stop Market ~~4 = Stop Limit~~
423	PriceType	Y	This tag is used to: **a.)** Set the method how the “Trailing stop” offset between the stop price and the limit price is specified in tag 44. **b)** Set the method how the offset between the stop price and the last trade price is specified in tag 99. 1 = Percentage 3 = Fixed amount (absolute value specified in tag 44 and absolute offset specified in tag 99)
38	OrderQty	Y	Must be positive number
28743	SkipCheck	N	Valid Values : 1 = skip value check 2 = skip volume check 3 = skip value and volume check
18	ExecInst	N	c = Ignore Price Validity Check absence activates the price reasonability check
2593	*NoOrderAttributes*	N	The number of order attributes
->	2594 OrderAttributeType	N	Type of order attributes Valid Values : 2 = Liquidity provision activity order
->	2595 OrderAttributeValue	N	Value associated with the order attribute type in 2594 Valid value: Y = Attribute is set
453	*NoPartyIDs*	N	The number of related Parties (required by trading system)
->	448 PartyID	N	Required if NoPartyIDs >=1 Identification of the party (Short Code). Please check the Field length limitations on Page 22. Reserved Values for 452 =3 1 = AGGR (An aggregation of multiple client orders) 2 = PNAL (Clients are Pending allocation)

Tag	Field Name		Req.	Comments
				Reserved Values for 452 =12 (where client has specified execution) 3 = CLIENT
->	447	PartyIDSource	N	Required if NoPartyIDs >=1 Must always be P (Short code identifier)
->	452	PartyRole	N	Required if NoPartyIDs >=1 Identifies the type of PartyID Valid value: 3 = ClientID 12 = Executing trader (Replaces Tag 376 ComplianceID) 122 = Investment Decision Maker
->	2376	PartyRoleQualifier	N	Valid Values : 22 = Algorithm (applicable to PartyRole values 12 or 122) 24 = Natural person (applicable to PartyRole 12 and 122)
99	StopPx		N	This tag is used to set the stop price offset of the “Trailing stop” order. This offset can be entered in absolute numbers or as percentage of the last trade price at the time when the order is entered.
44	Price		N	This tag is used to set the limit of the “Trailing stop” order by specifying an offset of the stop limit. This offset can be entered in absolute numbers or as percentage of the last trade price at the point in time when the order is activated.
15	Currency		Y	Identifies the currency used for price Valid values are those used in XETRA T7 as defined in ISO 4217
59	TimeInForce		N	Specifies how long the order will remain in effect. Depending on market model 0 = Day 1 = GoodTillCancel 3 = ImmediateOrCancel 6 = GoodTillDate
432	ExpireDate		N	Has to be set if tag 59 (TimeInForce) = 6 Order expires at the end of trading on the specified date.
100	ExDestination		Y	Execution destination as defined by institution when order is entered Possible values see Availability and markets
526	SecondaryClOrdID		N	Will be returned to you in execution reports. Please check the Field length limitations on Page 22.
528	OrderCapacity		Y	General Values : A = Agency P = Principal R = Riskless principal Market maker Values: D = Designated Sponsor

Tag	Field Name	Req.	Comments
386	NoTradingSessionID	N	No restriction possible
336	TradingSessionID	N	No restriction possible
58	Text	N	Free text. Please check the Field length limitations on Page 22.
1724	OrderOrigination	N	Direct Market Access (DMA) Flag Valid Values: 5 = Direct Market Access
1005 8	SecondaryText	N	Free text 2. Please check the Field length limitations on Page 22.
60	TransactTime	Y	The time that you sent this request. Must be within *n* seconds of current time.
2874 4	MatchInstCrossID	N	Can be used to specify a numeric self-match prevention ID. If 0 is entered or field is not sent, self-match prevention is turned off.
	Standard Trailer	Y	

ExecutionReport (outbound confirmation)

Tag	Field Name		Req.	Comments
	Standard Header		Y	MsgType=8 (ExecutionReport) SenderSubID=IO
150	ExecType		Y	Purpose of the ExecutionReport: Valid values: 0 = New 5 = Replaced D = Stop price triggered
39	OrdStatus		Y	Valid values: 0 = New
17	ExecID		Y	Execution ID
60	TransactTime		N	Time of last order action
11	ClOrdID		N	Copied from request
37	OrderID		N	Order number assigned by the trading system
55	Symbol		N	Copied from request
58	Text		N	Copied from request
10058	SecondaryText		N	Copied from request
99	StopPx		N	Calculated stop price
48	SecurityID		N	Copied from request
22	SecurityIDSource		N	Copied from request
54	Side		Y	Copied from request
40	OrdType		N	Copied from request
423	PriceType		N	Copied from request
38	OrderQty		N	Copied from request
18	ExecInst		N	Copied from request
453	*NoPartyIDs*		N	Number of related Parties
->	448	PartyID	N	If 452=12 and 447=D Xetra T7 Trader ID is provided
->	452	PartyRole	N	Identifies the type of PartyID

Tag	Field Name		Req.	Comments
				Valid values if 447 = D: 12 = Executing trader
->	447	PartyIDSource	N	Value: D = Proprietary/Custom code (Xetra T7 Trader ID)
44	Price		N	Calculated limit price
15	Currency		N	Copied from request
59	TimeInForce		N	Copied from request
432	ExpireDate		N	Expiration date of the order
526	SecondaryClOrdID		N	Copied from request
528	OrderCapacity		N	Copied from request
336	TradingSessionID		N	Copied from request
151	LeavesQty		Y	Quantity left on the order, as per State Matrixes. In this case equals OrderQty
14	CumQty		Y	Currently executed quantity for chain of orders. In this case equals 0.
30	LastMkt		N	Execution destination as defined by institution when order is entered Possible values see Availability and markets
797	CopyMsgIndicator		N	Indicates whether or not this message is a DropCopy of another message. Valid Values: Y = Order is a DropCopy from foreign ETI session and thus not modifiable N = Order is a modifiable DropCopy from the same ETI session
6	AvgPx		Y	Discontinued. Tag will always contain 0.
28744	MatchInstCrossID		N	Copied from request
28745	Crossed		N	Contains „1“ if the order was rejected due to the self-match prevention
	Standard Trailer		Y	

Replacing trailing stop orders

A “replace” of trailing stop orders is not possible until the order is triggered. As long as the order is not triggered only deletions and insertions of new orders are possible. Trailing stop orders can be cancelled using the IO cancel order message (message type F) described in the IO section.

Cancellation of trailing stop orders

OrderCancelRequest (inbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType = F (OrderCancel) TargetSubID = IO
41	OrigClOrdID	Y	Original identification of the order to be canceled. Mandatory field.
11	ClOrdID	Y	Unique identification of cancel request. Please check the Field length limitations on Page 22.
15	Currency	N	
55	Symbol	N	Must be the same as the symbol of the original order.
48	SecurityID	Y	Security ISIN
22	SecurityIDSource	Y	Valid value: 4 = ISIN
54	Side	Y	Must be the same as the side of the original order
60	TransactTime	Y	The time that you released this request.
38	OrderQty	N	Total order quantity as entered (even if some was already traded)
100	ExDestination	Y	Execution destination as defined by institution when order is entered Possible values see Availability and markets
58	Text	N	
1724	OrderOrigination	N	Direct Market Access (DMA) Flag Valid Values: 5 = Direct Market Access
	Standard Trailer	Y	

Triggered Trailing Stop Orders

Once the market price reaches the stop price of the order, the order is “triggered”. This means that the order reaches the actual order book of the trading system. This is indicated with an ExecutionReport message with the ExecType “D” from the CEESEG FIX gateway.

This message and all subsequent ExecutionReports messages related to this order do not have the SenderSubID “IO”, as the intelligent order processing is finished. The order is treated like any other regular order from this moment on.

Timing of Trailing Stop Order adjustments

Adjustments take place according to the movement of the instrument price and the specified price offsets of the TS order. Although the frequency of order adjustments is controlled, so that in cases of high load on the system, the order adjustments can be throttled by the exchange.

Price movement thresholds

To trigger an order adjustment the monitored (Last price, quote…) price must move at least one tick compared to the last adjustment done by the CEESEG FIX gateway. The minimum price movement threshold can be increased by the exchange in case that certain market situations result in high system load caused by frequent adjustments.

One Cancels Other Order (MsgType=D)

Introduction to one cancels other orders

With the update to trading system Version T7 8.0, the FIX message type for OCO is “D” (NewOrderSingle). A one cancels other order is sent to the FIX gateway ***without*** the TargetSubID “IO”. It is identified by the presence of a LIMIT price and the presence of a STOP price.

“A one-cancels-other order is an order that combines a limit order and a stop market order. If the limit order is fully executed or the stop market order is triggered, the respectively other order will be deleted. If the limit order is partially executed, the stop market order will be modified to match the remaining volume of the limit order.” .*[Source: Deutsche Börse - xetra.com*

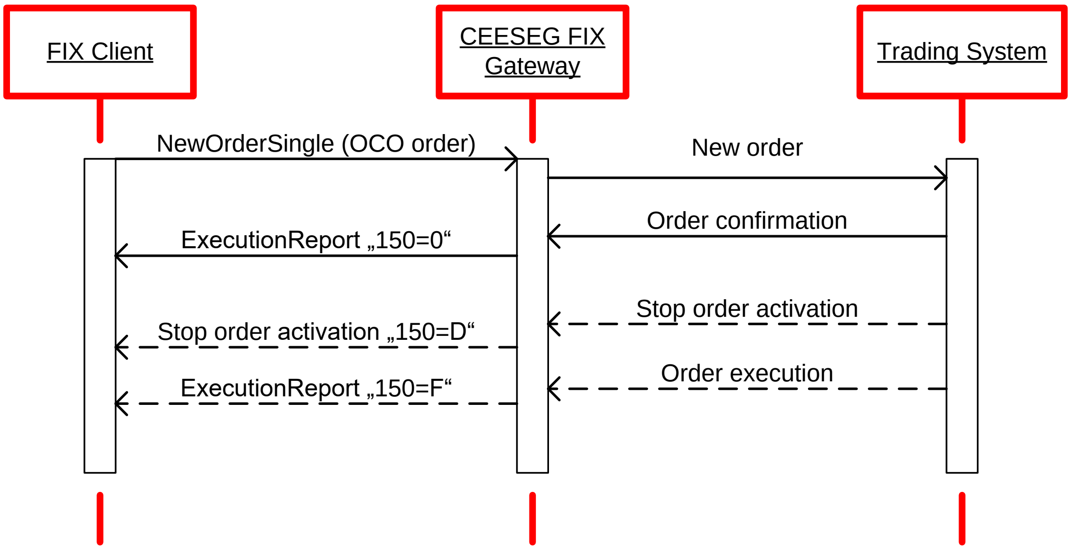

Figure 12 One-cancels-other-order message flow

NewOrderSingle (inbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType= D (NewOrderSingle)
11	ClOrdID	Y	This is your new and unique ID for this request (limited to 20 printable ASCII characters (ASCII 32-126)) Please check the Field length limitations on Page 22.
55	Symbol	N	1-15 character security identifier. Provide as listed.
48	SecurityID	Y	Security ISIN
22	SecurityIDSource	Y	Valid value: 4 = ISIN
54	Side	Y	Valid values: 1 = Buy 2 = Sell
40	OrdType	Y	Valid values (for OCO Order): 2 = Limit
38	OrderQty	Y	Must be positive number
18	ExecInst	N	c = Ignore Price Validity Check absence activates the price reasonability check
1138	DisplayQty	N	The initial peak quantity for random peak iceberg orders
99	StopPx	Y	Stop Limit must be present for OCO Order
44	Price	N	Price per unit of quantity(e.g. share)
15	Currency	Y	Identifies the currency used for price Valid values are those used in XETRA T7 as defined in ISO 4217
59	TimeInForce	N	Specifies how long the order will remain in effect. Depending on market model 0 = Day 1 = GoodTillCancel 3 = ImmediateOrCancel 4 = FillOrKill 6 = GoodTillDate B = Book or cancel T = Top of book (currently not supported)
432	ExpireDate	N	Has to be set if tag 59(TimeInForce) = 6 Format: YYYYMMDD Order expires at the end of trading on the specified date.
100	ExDestination	Y	Execution destination as defined by institution when order is entered Possible values see Availability and markets
526	SecondaryClOrdID	N	Will be returned to you in execution reports. Please check the Field length limitations on Page 22.
528	OrderCapacity	Y	General Values : A = Agency P = Principal R = Riskless principal Market maker Values:

Tag	Field Name	Req.	Comments
			D = Designated Sponsor
386	NoTradingSessionID	N	Number of TradingSessionIDs If set to “1”, trading restriction is given, additionally TradingSessionID (Tag 336) has to be specified accordingly. Please see Appendix A for further details
336	TradingSessionID	N	Identifier for Trading Session Valid Values: A = Auction Only C = Closing M = Main Auction (Intraday Auction) O = Opening S = Accept Surplus T = Main Trading (specifies the whole trading day) Please see Appendix A for further details
58	Text	N	Free text. Please check the Field length limitations on Page 22.
1724	OrderOrigination	N	Direct Market Access (DMA) Flag Valid Values: 5 = Direct Market Access
10058	SecondaryText	N	Free text 2. Please check the Field length limitations on Page 22.
28744	MatchInstCrossID	N	Can be used to specify a numeric self-match prevention ID. If 0 is entered or field is not sent, self-match prevention is turned off.
2593	*NoOrderAttributes*	N	The number of order attributes
-> 2594	OrderAttributeType	N	Type of order attributes Valid Values : 2 = Liquidity provision activity order
-> 2595	OrderAttributeValue	N	Value associated with the order attribute type in 2594 Valid value: Y = Attribute is set
453	*NoPartyIDs*	N	The number of related Parties (required by trading system)
-> 448	PartyID	N	Required if NoPartyIDs >=1 Identification of the party (Short Code). Please check the Field length limitations on Page 22. Reserved Values for 452 =3 1 = AGGR (An aggregation of multiple client orders) 2 = PNAL (Clients are Pending allocation) Reserved Values for 452 =12 (where client has specified execution) 3 = CLIENT
-> 447	PartyIDSource	N	Required if NoPartyIDs >=1 Valid Values: P (Short code identifier)

Tag		Field Name	Req.	Comments
->	452	PartyRole	N	Required if NoPartyIDs >=1 Identifies the type of PartyID Valid values: 3 = ClientID 12 = Executing trader (Replaces Tag 376 ComplianceID) 122 = Investment Decision Maker
->	2376	PartyRoleQualifier	N	Valid Values : 22 = Algorithm (applicable to PartyRole values 12 or 122) 24 = Natural person (applicable to PartyRole 12 and 122)
28743		SkipCheck	N	Valid Values : 1 = skip value check 2 = skip volume check 3 = skip value and volume check
60		TransactTime	Y	The time that you sent this request. Must be within *n* seconds of current time.
		Standard Trailer	Y	

Confirmation of One-Cancels-Other order

The one cancels other order is confirmed with a regular ExecutionReport message, like normal orders. The order type is “Limit”, a limit price and a “Stop” price are present.

Execution of OCO orders

The OCO order is treated like a normal limit order. It is also displayed in the public order book like a limit order. If the order gets fully executed at the limit, the second stop order “part” of the order is deleted.

Triggering of OCO orders

If the order is not executed or only partially executed and the market price reaches the stop limit, the remaining quantity of the order is converted to a market order. The ClOrdID and all other identifiers remain unchanged.

Tick sizes

All prices which do not match the tick size of the instrument defined in the trading system are rounded to fit the tick size.

DropCopy behavior of IO orders

Within the same CEEConnector instance IO orders support DropCopy. DropCopies of IO orders are delivered as in the primary session with the “IO” Target- and SenderSubID.

In foreign CEEConnector instances (connected via different ETI sessions) DropCopies are delivered without “IO” notification in Target- and Sender-SubID.

Order Execution Report

Report trade to involved party

When a trade occurs, the system sends two separate trade confirmations to each, the buyer and the seller.

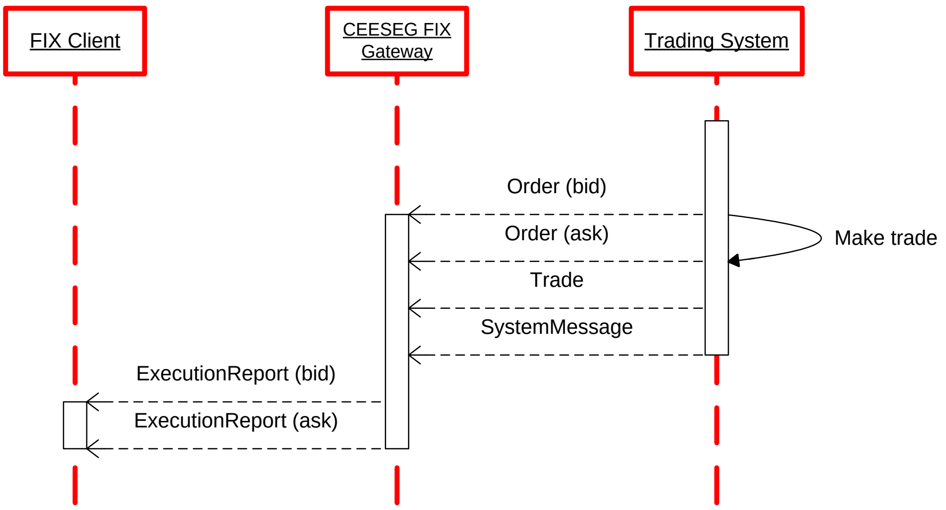

Figure 13 Execution report for trade message flow

ExecutionReport (outbound report)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=8
150	ExecType	Y	Purpose of the ExecutionReport: Valid values: F = Trade
39	OrdStatus	Y	Valid values: 1 = Partial filled (remaining) 2 = Filled
880	TrdMatchID	N	Identifier assigned to a trade by the matching system.
17	ExecID	N	Execution Id The contents of this field are described in section “Xetra T7 identifier mapping”
60	TransactTime	N	Time of last order action
11	ClOrdID	N	Copied from order
37	OrderID	N	Copied from order
55	Symbol	N	Copied from order
48	SecurityID	N	Copied from order
22	SecurityIDSource	N	Copied from order
54	Side	Y	Copied from order
40	OrdType	N	Copied from order
38	OrderQty	N	Copied from order
44	Price	N	Copied from order

Tag	Field Name		Req.	Comments
15	Currency		N	Copied from order
59	TimeInForce		N	Copied from order
432	ExpireDate		N	Copied from order
526	SecondaryClOrdID		N	Copied from order
528	OrderCapacity		N	Copied from order
453	*NoPartyIDs*		N	Number of related Parties
->	448	PartyID	N	If 452=12 and 447=D Xetra T7 Trader ID is provided
->	452	PartyRole	N	Identifies the type of PartyID Valid values if 447 = D: 12 = Executing trader
->	447	PartyIDSource	N	Value: D = Proprietary/Custom code (Xetra T7 Trader ID)
151	LeavesQty		Y	Quantity left on the order
14	CumQty		Y	Currently executed quantity for chain of orders.
1444	SideLiquidityIndicator		N	Used to identify whether the order initiator is an aggressor or not in the trade. Values: 1 = Order initiator is passive 2 = Order initiator is aggressor 4 = Auction trade (FIX 5.0 SP1EP81)
797	CopyMsgIndicator		N	Indicates whether or not this message is a DropCopy of another message. Valid Values: Y = Order is a DropCopy from foreign ETI session and thus not modifiable N = Order is a modifiable DropCopy from the same ETI session
6	AvgPx		Y	Discontinued. Tag will always contain 0.
31	LastPx		N	Price of securities traded in this fill
32	LastQty		N	Number of securities traded in this fill
58	Text		N	Copied from order
10058	SecondaryText		N	Copied from order
63	SettlType		N	0= Regular 1= Cash (TOD / T+0) 3= T+2 4= T+3 5= T+4 9= T+5
64	SettlDate		N	Takes precedence over SettlType value and conditionally required/omitted for specific SettlType values. Required for NDFs to specify the "value date".
157	NumDaysInterest		N	Number of days of interest (where applicable)
159	AccruedInterestAmt		N	Amount of Accrued Interest (where applicable)

Tag	Field Name	Req.	Comments
381	GrossTradeAmt	N	Total amount traded (i.e. QUANTITY * PRICE) expressed in units of trading currency. For certain instruments (depending on the market model) this calculation takes a pool factor and/or a currency exchange rate and/or precentral notation of the instrument into account (i.e. POOL_FACTOR * PRICE/100 * QUANTITY * CURRENCY_EXCHANGE_RATE)
119	SettlCurrAmt	N	The sum of money to be settled. This tag is contained only in FILLED and PARTIALLY_FILLED Execution Reports of Orders.
	Standard Trailer	Y	

Trade Capture Report (public trades, own trades and back office)

Trade capture report is intended for building a list of all trades of the current trading day. This message type is not available for previous days. Please note the following functionalities provided by the different TradeRequestTypes (Tag 569)

Public trades

TradeCaptureReportRequests with 569=0 provide "Street side" TradeCaptureReports for all trades of the market.
TradeCaptureReports with 569=0 can be requested in all CEESEG FIX session types including the MarketData session, which does not support further TradeRequestTypes.

Own Trades

If the client requests 569=1, all trades on persistent orders of his trader subgroup will be delivered, together with any OTC trades, trade modification notifications, trade cancellation notifications and all trades on quotes of the same CEESEG FIX session.

Back office (all trades of the member)

In case of 569=3 (foreign trades) all own trades on member level resulting of foreign entered orders and quotes are received. By "foreign", any other trader subgroup is meant. Further all trades on non-persistent orders are delivered via 569=3. Any trade of the client's member which is not covered by 569=1 is delivered via 569=3. Please note that 569=3 is not enabled per default. If you would like to use this functionality, please contact Wiener Börse by e-mail to mailto:it_helpdesk@wienerboerse.at which is provided with 569=3 is that GCM members can request to get their NCM member's trades. This feature is also disabled by default and can be enabled on customer request by e-mail to it_helpdesk@wienerboerse.at.

Timespan limitation

By providing the tags 580 and 60, the client can specify that not all trades are requested. Instead a selection can be made based on the trade time. E.g. a client may request all trades that happened after 12:00:00.000. This feature may be helpful in case of an intraday reconnect of the client system.
TradeCaptureReportRequestAck is sent only in the following cases:

- confirmation of the subscription or un-subscription
- rejection of the TradeCaptureReportRequest
- as result of the snapshot request if there are no results to return

Trade duplication protection

To prevent duplicate delivery of TradeCaptureReports, every request can only be processed once. This means if a client subscribes i.e. TradeCaptureReports "StreetSide" (All trades of the market) for all ISINS of the market and then subscribes for one particular ISIN again, this request will be rejected in order to prevent duplicate

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TCR delivery. The same applies when a client subscribe twice for the same ISIN by specifying them in two requests.
This functionality protects against duplicates in the scope of all TradeRequestTypes (569=0, 1 and 3).

TradeCaptureReportRequest (MsgType=AD)

TradeCaptureReportRequest (inbound) [1]

Tag	Field Name		Req.	Comments
	Standard Header		Y	MsgType=AD
568	TradeRequestID		Y	Unique identifier or previous value if disabling subscription
569	TradeRequestType		Y	Valid values: 0 = All trades of the market 1 = Own trades (resulting from own orders and OTC trade reporting) 3 = Foreign trades (own Trades resulting from ETI orders and trades of NCMs) Note: Only trades of current trading day
263	SubscriptionRequestType		N	0 = Snapshot (default) 1 = Snapshot + updates 2 = Disable previous snapshot + updates
55	Symbol		N	Symbol of security
48	SecurityID		N	Security ISIN If not provided, all ISINS are subscribed.
22	SecurityIDSource		N	Valid value: 4 = ISIN
828	TrdType		N	Valid values: 0 = Regular trade 1 = Block trade 3 = Transfer (Reported)
100	ExDestination		Y	Execution destination as defined by institution when order is entered Possible values see Availability and markets
580	NoDates		N	Valid values: 0 = all trades for the day 1 = from 2 = from – to
->	75	TradeDate	Y	Date Must be the current business date.
->	60	TransactTime	Y	Time in UTC Required if 580 = 1 or 580 = 2 Valid values: If 580 = 1, this tag contains the “from” timestamp. If 580 = 2, the first occurrence of this tag contains the “from” time, the second occurrence of this tag contains the “to” time. In this case “from” time must be smaller or equal to “to” time.

Tag	Field Name	Req.	Comments
			If specified this date/time field must belong to the same day as specified in TradeDate.
	Standard Trailer	Y	

TradeCaptureReportRequestAck (MsgType=AQ)

TradeCaptureReportRequestAck (outbound confirmation)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=AQ
568	TradeRequestID	Y	Unique identifier or previous value if disabling subscription
569	TradeRequestType	Y	Valid values: 0 = All trades 1 = Own trades 3 = Unmatched trades
263	SubscriptionRequestType	N	0 = Snapshot 1 = Snapshot + updates 2 = Disable previous snapshot + updates
749	TradeRequestResult	Y	Valid values: 0 = Successful 1 = Invalid or unknown instrument 9 = Unauthorized 99 = Other
750	TradeRequestStatus	Y	Valid values: 0 = Accepted 1 = Completed 2 = Rejected
58	Text	N	Further information
30	LastMkt	Y	Execution destination as defined by institution Possible values see Availability and markets
	Standard Trailer	Y	

TradeCaptureReport (MsgType=AE)

TradeCaptureReport (outbound confirmation)

Tag	Field Name	Req	Comments
	Standard Header	Y	MsgType=AE
571	TradeReportID	Y	Unique Identifier per Instrument
572	TradeReportRefID	N	The TradeReportID that is being referenced in case of trade type = 54
568	TradeRequestID	N	Request ID if the Trade Capture Report is in response to a Trade Capture Report Request
828	TrdType	Y	Valid values: 0 = RegularTrade 1 = BlockTrade 3 = Transfer (Reported) 54 = OTC
856	TradeReportType	N	Used if TrdType = 54 Valid Values: 0 = Submit 2 = Accept 6 = Cancel
150	ExecType	N	Valid values: F = Trade G = Trade Correct H = Trade Cancel *P = Pending trade (custom status, currently not used)*
880	TrdMatchID	N	Identifier assigned to a trade by the matching system.
824	TradeLegRefID	N	Match step ID, assigned by the matching system.
1903	RegulatoryTradeID	N	T7 system generated TVTIC
17	ExecID	N	Ticket, the trade id of the trading system Deprecated – will not be provided anymore in TradeCaptureReport when all Instruments are fully migrated from Xetra Classic to Xetra T7.
748	TotNumTradeReports	N	Returned in the first result of snapshot
818	SecondaryTradeReportID	N	Reference
912	LastRptRequested	N	Returned in the last result of snapshot
570	PreviouslyReported	Y	Always N.
55	Symbol	N	
48	SecurityID	Y	Security ISIN
22	SecurityIDSource	Y	Valid value: 4 = ISIN
31	LastPx	Y	Price of securities traded in this fill
32	LastQty	Y	Number of securities traded in this fill
75	TradeDate	Y	Date of the trade Format YYYYMMDD
60	TransactTime	Y	

Tag		Field Name	Req	Comments
10060		PrecisionTransactTime	N	Provides precision time stamp in format “nanoseconds since 01.01.1970”
63		SettlType	N	0 = Regular 1 = Cash (DVP)
64		SettlDate	N	
5145		NettingLevel	N	Values: I = Internalize (Can be provided by the exchange for members using the settlement internalization feature)
30		LastMkt	Y	Execution destination as defined by institution Possible values see Availability and markets
2667		AlgorithmicTradeIndicator	N	Only provided in “public” TradeCaptureReports (569=0) Indicates if the order or trade originates from a computer program or algorithm requiring little-to-no human intervention. Values : 0 : non-algorithmic trade 1 : algorithmic trade
552		NoSides	N	Valid values: 2
->	54	Side	Y	1 = Buy 2 = Sell
->	37	OrderID	Y	Order number. If you don’t have permission to see trade details this field will be 0.
->	528	OrderCapacity	N	Copied from order
->	15	Currency	N	Identifies the currency used for the price. Valid values are those used in XETRA T7 as defined in ISO 4217
->	526	SecondaryClOrdID	N	Reference
->	58	Text	N	Free text
->	1724	OrderOrigination	N	Direct Market Access (DMA) Flag Valid Values: 5 = Direct Market Access
->	10058	SecondaryText	N	Free text 2
->	381	GrossTradeAmt	N	Total amount traded (i.e. QUANTITY * PRICE) expressed in units of trading currency. For certain instruments (depending on the market model) this calculation takes a pool factor and/or a currency exchange rate and/or precentral notation of the instrument into account (i.e. POOL_FACTOR * PRICE/100 * QUANTITY * CURRENCY_EXCHANGE_RATE) . In own trades, this tag is filled from respective field delivered by the trading system and is not mandatory.
->	119	SettlCurrAmt	N	The sum of money to be settled. This tag is contained only in own trades (where it is mandatory).

Tag				Field Name	Req	Comments
->	1444			SideLiquidityIndicator	N	Used to identify whether the order initiator is an aggressor or not in the trade. Values: 1 = Order initiator is passive 2 = Order initiator is aggressor 4 = Auction trade (FIX 5.0 SP1EP81)
->	453			NoPartyIDs	N	
->	->	448		PartyID	N	If tag 447=D Xetra T7 Trader ID is provided Else if tag 447=P this field delivers Short code according to PartyRole in tag 452.
->	->	447		PartyIDSource	N	Valid Values: P = Short code identifier D = Proprietary/Custom code (Xetra T7 Trader ID)
->	->	452		PartyRole	N	Identifies the type of PartyID Valid value: 122 = Investment Decision Maker
->	->	2376		PartyRoleQualifier	N	Valid Values : 22 = Algorithm (applicable to PartyRole values 12 or 122) 24 = Natural person (applicable to PartyRole 12 and 122)
->	->	802		NoPartySubIDs	N	
->	->	->	523	PartySubID	N	Content depending on Tag 803
->	->	->	803	PartySubIDType	N	Valid Values: 10 = Settlement account 17 = KV Number (KVNo) 25 = Settlement location 32 = Execution Venue (Reporting MIC)
->	336			TradingSessionID	N	This tag provides the trading phase of the reported trade. Valid values: ICALL ECALL OCALL CCALL TRADE TAC VOLA AUCTION
->	157			NumDaysInterest	N	Number of Days of Interest for convertible bonds and fixed income
->	159			AccruedInterestAmt	N	Amount of Accrued Interest for convertible bonds and fixed income
->	155			SettlCurrFxRate	N	Foreign exchange rate (if applicable)

Tag		Field Name	Req	Comments
->	156	SettlCurrFxRateCalc	N	Specifies whether SettlCurrFxRate (155) should be multiplied or divided M = Multiply D = Divide
->	13	CommissionType	N	Valid values: 3 = Absolute
		Standard Trailer	Y	

Please reffer to appendix C of this document for more information about identifiers in TradeCaptureReport messages, and the mapping to ExecutionReport messages.

OTC- and block trade reporting

Trade Capture Report

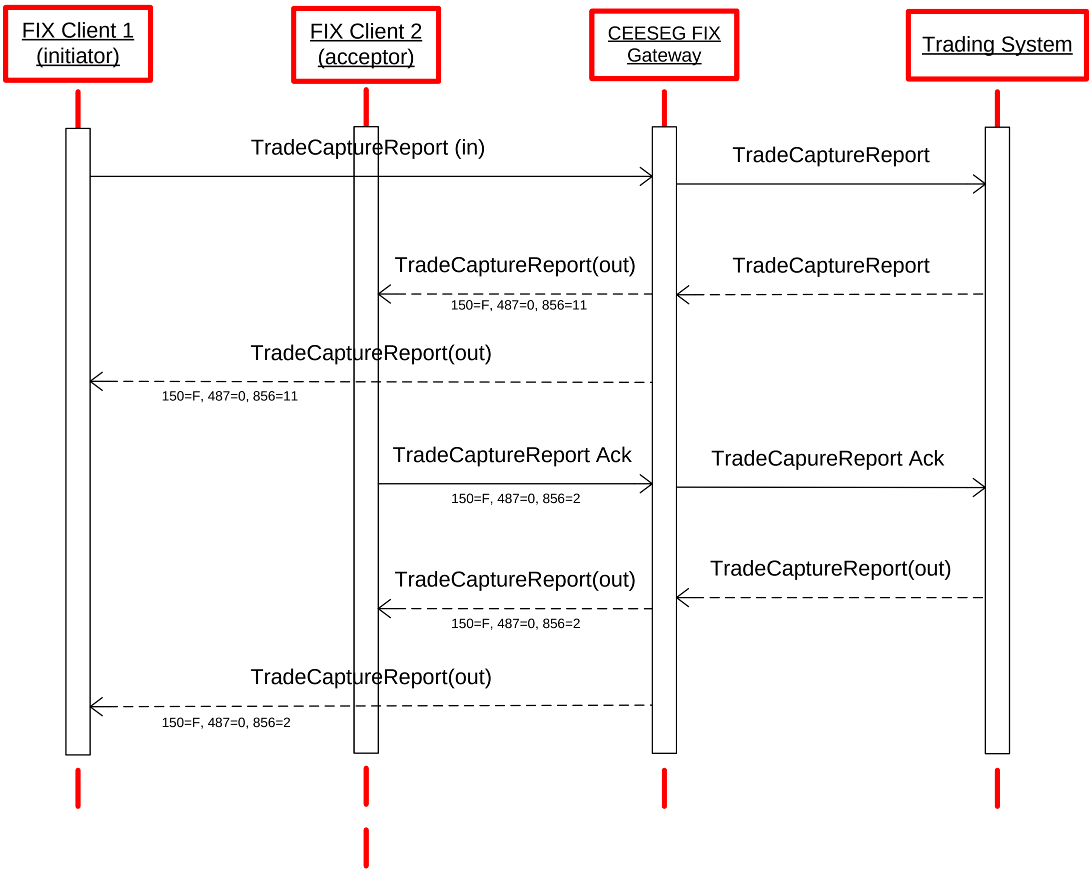

Figure 14 OTC Trade reporting message flow

Possible use cases:

- To report OTC trades between counterparties (when available on the exchange)
- To report block trades between counterparties (when available on the exchange)

Block trades differ from OTC trades by their turnover. When a trade is reported as block trade, the trade's turnover is being checked against a minimum turnover. The minimum turnover is maintained by the respective exchange. Normal OTC trades do not need to fulfil a minimum turnover requirement.

TradeCaptureReport (MsgType=AE)

TradeCaptureReport (inbound / outbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=AE
571	TradeReportID	Y	Unique Identifier per instrument

Tag	Field Name	Req.	Comments
572	TradeReportRefID	N	Used to refer to the TradeReportID of the original TradeCaptureReport. Please check the Field length limitations on Page 22.
487	TradeReportTransType	Y	0 = New 1 = Cancel
856	TradeReportType	N	Valid Values: 2 = Accept 6 = Reversal 11 = Alleged New (FIX 5.0 SP2)
828	TrdType	N	Valid values: 1 = Block trade 54 = OTC
880	TrdMatchID	N	Used to identify incoming OTC trades. Must be specified in Acknowledgement
570	PreviouslyReported	Y	
150	ExecType	N	Valid values: F = Trade H = Trade Cancel
100	ExDestination	Y	Execution destination as defined by institution when order is entered Possible values see Availability and markets
55	Symbol	N	
48	SecurityID	Y	Security ISIN
22	SecurityIDSource	Y	Valid value: 4 = ISIN
31	LastPx	Y	Price of securities traded in this fill
32	LastQty	Y	Number of securities traded in this fill
75	TradeDate	Y	Date of the trade Format YYYYMMDD
60	TransactTime	Y	
64	SettlDate	N	Specify date of trade settlement in YYYYYMMDD format. Has to be a Business day.
552	NoSides	N	Valid value: 2
-> 54	Side	Y	1 = Buy 2 = Sell
-> 528	OrderCapacity	N	Must be provided for own side of the trade Valid Values: A = Agency P = Principal R = Riskless principal Market maker Values: D = Designated Sponsor I = Issuer
-> 15	Currency	N	Identifies the currency used for the price.

Tag			Field Name	Req.	Comments
					Valid values are those used in XETRA T7 as defined in ISO 4217
->	526		SecondaryClOrdID	N	Reference. Please check the Field length limitations on Page 22.
->	58		Text	N	Please check the Field length limitations on Page 22.
->	453		NoPartyIDs	N	Valid values: 1 if 528 = P 2 if 528 = A (in this case Client ID must be specified)
->	->	448	PartyID	N	If 447=D Member- and Trader ID in trading system If 447=P ClientID (Short Code). Please check the Field length limitations on Page 22. Reserved Values for 452 =3 1 = AGGR (An aggregation of multiple client orders) 2 = PNAL (Clients are Pending allocation) Reserved Values for 452 =12 (where client has specified execution) 3 = CLIENT
->	->	447	PartyIDSource	N	Valid values: D = Proprietary/Custom code (T7 Trader ID of Acceptor or Initiator) P = Short code identifier (For the provision of a Client ID)
->	->	452	PartyRole	N	If 447=D 11 = Initiating Trader (Trader ID of OTC Trade Initiator) 12 = Executing Trader (Trader ID of OTC Trade Acceptor) If 447=P 3 = ClientID
->	155		SettlCurrFxRate	N	Foreign exchange rate (if applicable)
->	156		SettlCurrFxRateCalc	N	Specifies whether SettlCurrFxRate (155) should be multiplied or divided M = Multiply D = Divide
2593			NoOrderAttributes	N	The number of order attributes
->	2594		OrderAttributeType	N	Type of order attributes Valid Values : 2 = Liquidity provision activity order
->	2595		OrderAttributeValue	N	Value associated with the order attribute type in 2594 Valid value: Y = Attribute is set
28743			SkipCheck	N	Valid Values : 1 = skip value check 2 = skip volume check 3 = skip value and volume check

Tag	Field Name	Req.	Comments
	Standard Trailer	Y	

TradeCaptureReportAck (MsgType=AR)

TradeCaptureReportAck (inbound)

Tag		Field Name	Req.	Comments
		Standard Header	Y	MsgType=AR
571		TradeReportID	Y	Unique Identifier per instrument
572		TradeReportRefID	N	Used to echo back the TradeReportID of the TradeCaptureReport being acknowledged. Please check the Field length limitations on Page 22.
487		TradeReportTransType	Y	0 = New
856		TradeReportType	N	Valid Values: 2 = Accept
828		TrdType	N	Valid values: 1 = Block trade 54 = OTC
880		TrdMatchID	N	Identifies the acknowledged OTC Trade
150		ExecType	Y	Valid values: F = Trade
100		ExDestination	Y	Execution destination as defined by institution when order is entered Possible values see Availability and markets
55		Symbol	N	
48		SecurityID	Y	Security ISIN
22		SecurityIDSource	Y	Valid value: 4 = ISIN
60		TransactTime	Y	
552		NoSides	N	Valid value: 1 (own side of the trade)
->	54	Side	Y	1 = Buy 2 = Sell
->	528	OrderCapacity	N	General Values: A = Agency P = Principal R = Riskless principal Market maker Values: D = Designated Sponsor I = Issuer
->	15	Currency	N	Identifies the currency used for the price. Valid values are those used in XETRA T7 as defined in ISO 4217
->	526	SecondaryClOrdID	N	Reference. Please check the Field length limitations on Page 22.
->	58	Text	N	Please check the Field length limitations on Page 22.
->	453	NoPartyIDs	N	Valid values: 1 if 528 = P 2 if 528 = A (in this case Client ID must be specified)

Tag			Field Name	Req.	Comments
->	->	448	PartyID	N	If 447=D Member- and Trader ID in trading system If 447=P ClientID (Short Code). Please check the Field length limitations on Page 22. Reserved Values for 452 =3 1 = AGGR (An aggregation of multiple client orders) 2 = PNAL (Clients are Pending allocation) Reserved Values for 452 =12 (where client has specified execution) 3 = CLIENT
->	->	447	PartyIDSource	N	Valid values: D = Proprietary/Custom code (T7 Trader ID of Acceptor or Initiator) P = Short code identifier (For the provision of a Client ID)
->	->	452	PartyRole	N	If 447=D 11 = Initiating Trader (Trader ID of OTC Trade Initiator) 12 = Executing Trader (Trader ID of OTC Trade Acceptor) If 447=P 3 = ClientID
2593			NoOrderAttributes	N	The number of order attributes
->	2594		OrderAttributeType	N	Type of order attributes Valid Values: 2 = Liquidity provision activity order
->	2595		OrderAttributeValue	N	Value associated with the order attribute type in 2594 Valid value: Y = Attribute is set
28743			SkipCheck	N	Valid Values: 1 = skip value check 2 = skip volume check 3 = skip value and volume check
			Standard Trailer	Y	

Tag 571 is the unique identifier per instrument of each request (TradeCaptureReport and TradeCaptureReportAck). If you need to refer to a request which was entered earlier, use Tag 572 to provide the referenced TradeReportID.

Quote Management

Definition
A (double sided) quote establishes both a limit to buy and a limit to sell within a single transaction. Quantities to buy and to sell are independent of one another but must satisfy minimum quantity requirements. The limit to sell must be larger than the limit to buy (not for trading model continuous auction) and may need to satisfy maximum quote spread requirements. Buy and sell sides of a quote are treated as two separate entries in the Xetra system’s order book and are thus matched independently by the matching engine. Only one quote is allowed in the Xetra system’s order book per instrument, member, account and subgroup. As an exception, BEST quotes are only allowed one per instrument and member. Single sided quotes are not allowed.
CEESEG FIX supports two message types for quotes: The MassQuote and (single) Quote. QuoteCancel message is used for quote cancelation. As only one active quote per member subgroup and instrument is allowed, there is no need for a message to change quotes. Quotes are updated by simply sending a new quote, which overwrites the old one.

MassQuote messages are replied to with a MassQuoteAcknowledge message, Quotes (single) with a QuoteStatusReport.
Executions on the quotes result in an ExecutionReport.

Please note, that in case of a failover or an interruption of the connection between the CEESEG FIX gateway and the trading system, any quote will be cancelled automatically. In case of a disconnection between the CEESEG FIX Client and the CEESEG FIX gateway, quotes will be cancelled automatically too. Thus the client application must be aware that in case of a “Market xxxx disconnected” news message all quotes are deleted without further notice. The same applies in case the client session is disconnected.

Quote Entry

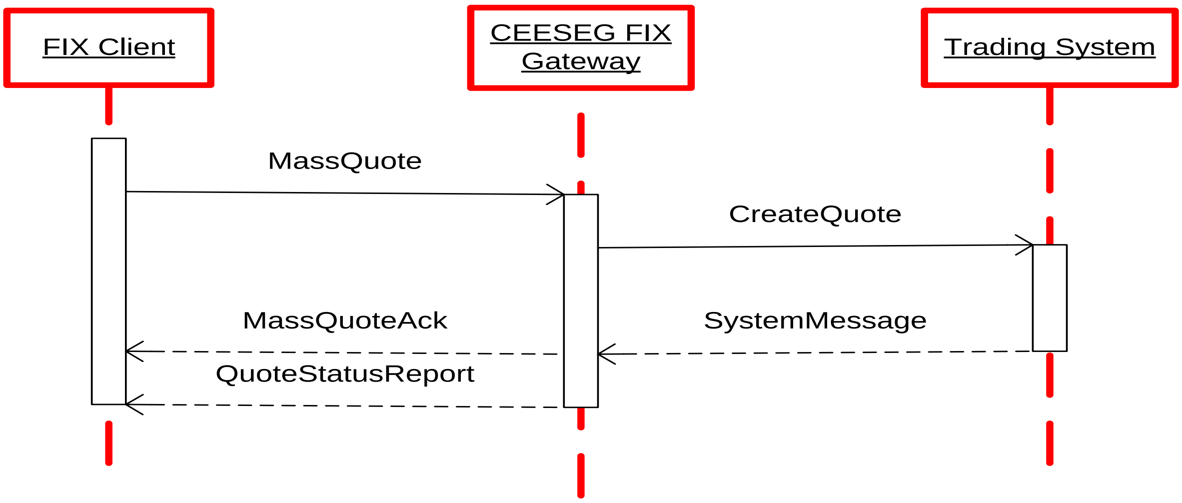

Figure 15 MassQuote message flow

MassQuote (MsgType=i)

MassQuote (inbound)

Tag	Field Name	Req	Comments
	Standard Header	Y	MsgType= i
117	QuoteID	Y	Unique ID for the Quote – Used like ClOrdID
537	QuoteType	N	Valid Values 1 = Tradable 4 = Price Without Turnover (PWT) 5 = Matching Quote
301	QuoteResponseLevel	N	0 = No Ack (not implemented) 1 = Ack only negative or erroneous quotes (not implemented) 2 = Ack each quote message (Default)
100	ExDestination	Y	Execution destination as defined by institution when order is entered. Values: cmp. Availability and markets
528	OrderCapacity	Y	Values : D = Designated Sponsor I = Issuer
18	ExecInst	N	c = Ignore Price Validity Check absence activates the price reasonability check
28743	SkipCheck	N	Valid Values : 1 = skip value check 2 = skip volume check 3 = skip value and volume check
453	*NoPartyIDs*	N	The number of related Parties (required by trading system)
-> 448	PartyID	N	Required if NoPartyIDs >=1

Tag	Field Name	Req	Comments
			Identification of the party (Short Code). Please check the Field length limitations on Page 22.
-> 447	PartyIDSource	N	Required if NoPartyIDs >=1 Valid Values: P (Short code identifier)
-> 452	PartyRole	N	Required if NoPartyIDs >=1 Identifies the type of PartyID Valid value: 12 = Executing trader (Replaces Tag 376 ComplianceID) 122 = Investment Decision Maker
-> 2376	PartyRoleQualifier	N	Valid Values : 22 = Algorithm (applicable to PartyRole values 12 or 122) 24 = Natural person (applicable to PartyRole 12 and 122)
28744	MatchInstCrossID	N	Can be used to specify a numeric self-match prevention ID. If 0 is entered or field is not sent, self-match prevention is turned off.
296	NoQuoteSets	Y	The number of sets of quotes in the message
-> 302	QuoteSetID	Y	Unique ID for the quote set
-> 304	TotNoQuoteEntries	Y	Total number of quotes for the quote set across all messages
-> 295	NoQuoteEntries	Y	Number of entries in the repeating group Always 1
-> -> 299	QuoteEntryID	Y	Uniquely identifies the quote as part of a quote set
-> -> 48	SecurityID	Y	Security ISIN
-> -> 22	SecurityIDSource	Y	Valid value: 4 = ISIN
-> -> 132	BidPx	Y	Bid Price
-> -> 134	BidSize	Y	Bid Quantity
-> -> 133	OfferPx	Y	Offer Price
-> -> 135	OfferSize	Y	Offer Quantity
-> -> 60	TransactTime	N	The time that you sent this request. Must be within *n* seconds of current time.
-> -> 15	Currency	Y	Identifies the currency used for price Valid values are those used in XETRA T7 as defined in ISO 4217
2593	NoOrderAttributes	N	The number of order attributes
-> 2594	OrderAttributeType	N	Type of order attributes Valid Values : 2 = Liquidity provision activity order
-> 2595	OrderAttributeValue	N	Value associated with the order attribute type in 2594 Valid value: Y = Attribute is set
	Standard Trailer	Y	

MassQuoteAcknowledgement (MsgType=b)

MassQuoteAcknowledgement (outbound confirmation)

Tag			Field Name	Req	Comments
			Standard Header	Y	MsgType= b
117			QuoteID	N	Copied from MassQuote entry message
297			QuoteStatus	Y	Valid Values: 0 = Accepted 5 = Rejected 10 = Pending
30			LastMkt	Y	Execution destination as defined by institution when order is entered. Values: cmp. Availability and markets
537			QuoteType	N	Copied from MassQuote entry message
528			OrderCapacity	N	Copied from MassQuote entry message
18			ExecInst	N	Copied from MassQuote entry message
453			*NoPartyIDs*	N	Number of related Parties
->	448		PartyID	N	If 452=12 Xetra T7 / Xetra Trader ID is provided
->	452		PartyRole	N	Identifies the type of PartyID Valid values if 447 = D: 12 = Executing trader
->	447		PartyIDSource	N	Value: D = Proprietary/Custom code (Xetra T7 Trader ID)
300			QuoteRejectReason	N	Valid Values: 2 = Exchange (Security) closed 4 = Too late to enter 6 = Duplicate Quote 9 = Not authorized to quote security 99 = Other
10320			RejectReason	N	Text containing the reject reason of the trading system – refer to the corresponding trading system manual
28744			MatchInstCrossID	N	Copied from MassQuote entry message
296			NoQuoteSets	Y	
->	302		QuoteSetID	Y	Copied from MassQuote entry message
->	304		TotNoQuoteEntries	Y	Copied from MassQuote entry message
->	295		NoQuoteEntries	Y	Copied from MassQuote entry message
->	->	299	QuoteEntryID	Y	Copied from MassQuote entry message
->	->	48	SecurityID	Y	Copied from MassQuote entry message
->	->	22	SecurityIDSource	Y	Copied from MassQuote entry message
->	->	132	BidPx	Y	Copied from MassQuote entry message
->	->	134	BidSize	Y	Copied from MassQuote entry message
->	->	20050	BidOrderID	N	Trading system OrderID of the Bid leg

Tag		Field Name		Req	Comments
->	->	133	OfferPx	Y	Copied from MassQuote entry message
->	->	135	OfferSize	Y	Copied from MassQuote entry message
->	->	55	Symbol	N	Copied from MassQuote entry message
->	->	20051	OfferOrderID	N	Trading system OrderID of the Offer leg
->	->	368	QuoteEntryRejectReason	N	Valid Values: 1 = Unknown Symbol/ISIN 2 = Exchange (security) closed 3 = Quote Request exceeds limit 4 = Too late to enter 5 = Unknown Quote 6 = Duplicate Quote 7 = Invalid Bid/Ask spread 8 = Invalid price 9 = Not authorized to quote security 99 = Other
->	->	10320	RejectReason	N	Text containing the reject reason of the trading system – refer to the corresponding trading system manual
->	->	60	TransactTime	N	The time that you sent this request. Must be within *n* seconds of current time.
->	->	28745	Crossed	N	Contains „1“ if the order was rejected due to the self-match prevention
->	->	15	Currency	N	Copied from MassQuote entry message
			Standard Trailer	Y	

Quote (MsgType=S)

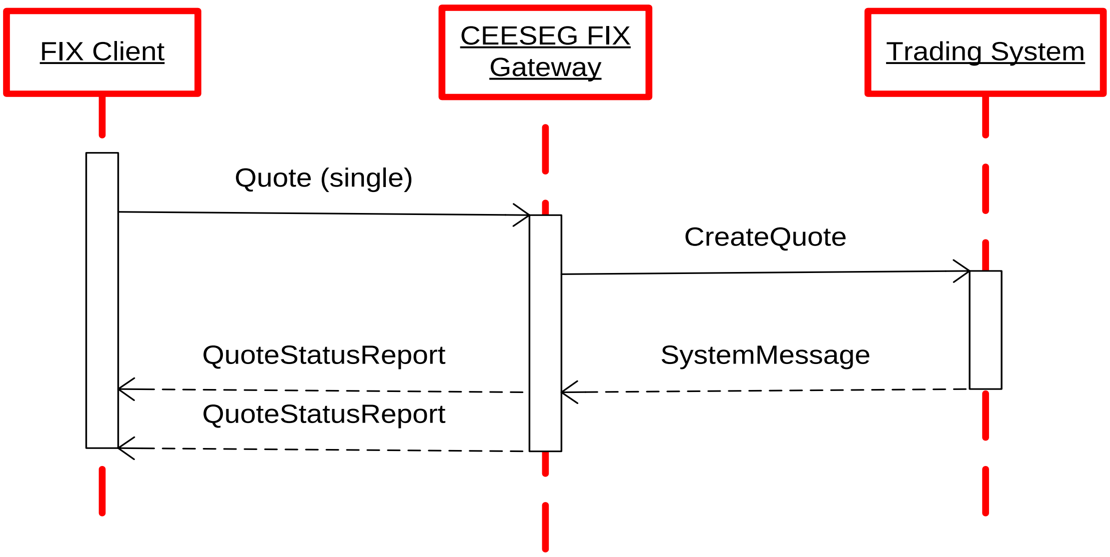

Figure 16 Quote message flow

Quote (inbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType= S
117	QuoteID	Y	Unique ID for the Quote
537	QuoteType	N	Valid Values 1 = Tradable 4 = Price Without Turnover (PWT) 5 = Matching Quote
301	QuoteResponseLevel	N	0 = No Ack (not implemented) 1 = Ack only negative or erroneous quotes (not implemented) 2 = Ack each quote message (Default)
100	ExDestination	Y	Execution destination as defined by institution when order is entered. Values: cmp. Availability and markets
528	OrderCapacity	Y	Values : D = Designated Sponsor/MM I = Issuer
48	SecurityID	Y	Security ISIN
22	SecurityIDSource	Y	Valid value: 4 = ISIN
18	ExecInst	N	c = Ignore Price Validity Check absence activates the price reasonability check
28743	SkipCheck	N	Valid Values : 1 = skip value check

Tag		Field Name	Req.	Comments
				2 = skip volume check 3 = skip value and volume check
453		*NoPartyIDs*	N	The number of related Parties (required by trading system)
->	448	PartyID	N	Required if NoPartyIDs >=1 Identification of the party (Short Code) Please check the Field length limitations on Page 22.
->	447	PartyIDSource	N	Required if NoPartyIDs >=1 Valid Values: P (Short code identifier)
->	452	PartyRole	N	Required if NoPartyIDs >=1 Identifies the type of PartyID Valid value: 12 = Executing trader (Replaces Tag 376 ComplianceID) 122 = Investment Decision Maker
->	2376	PartyRoleQualifier	N	Valid Values : 22 = Algorithm (applicable to PartyRole values 12 or 122) 24 = Natural person (applicable to PartyRole 12 and 122)
132		BidPx	Y	Bid Price
134		BidSize	Y	Bid Quantity
133		OfferPx	Y	Offer Price
135		OfferSize	Y	Offer Quantity
60		TransactTime	N	The time that you sent this request. Must be within *n* seconds of current time.
28744		MatchInstCrossID	N	Can be used to specify a numeric self-match prevention ID. When 0 is entered or field is not sent, self-match prevention is turned off.
15		Currency	Y	Identifies the currency used for price Valid values are those used in XETRA T7 as defined in ISO 4217
2593		*NoOrderAttributes*	N	The number of order attributes
->	2594	OrderAttributeType	N	Type of order attributes Valid Values : 2 = Liquidity provision activity order
->	2595	OrderAttributeValue	N	Value associated with the order attribute type in 2594 Valid value: Y = Attribute is set
		Standard Trailer	Y	

QuoteCancel (MsgType=Z)

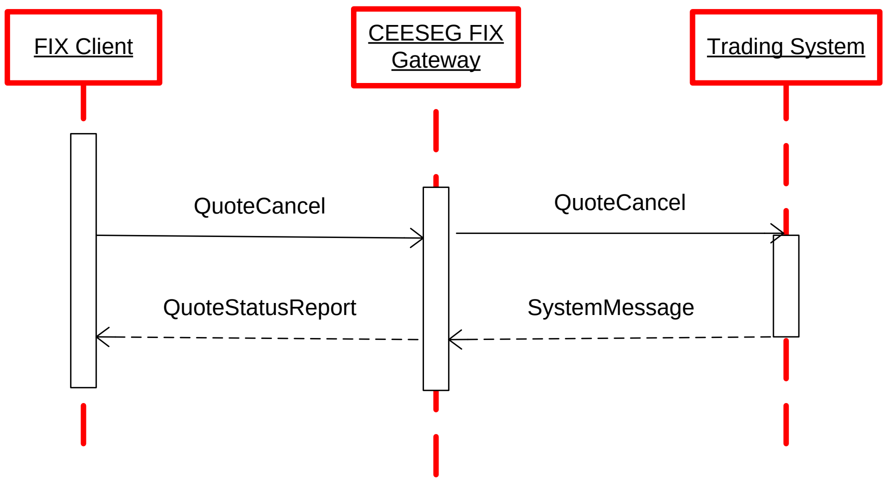

Figure 17 Quote cancel message flow

QuoteCancel (inbound)

Tag		Field Name	Req	Comments
		Standard Header	Y	MsgType= Z
117		QuoteID	Y	Unique ID for the QuoteCancel
298		QuoteCancelType	Y	Valid Values: 5 = Cancel quote specified
301		QuoteResponseLevel	N	0 = No Ack (not implemented) 1 = Ack only negative or erroneous quotes (not implemented) 2 = Ack each quote message (Default)
295		*NoQuoteEntries*	Y	The number of related symbols
->	48	SecurityID	Y	Security ISIN
->	22	SecurityIDSource	Y	Valid value: 4 = ISIN
		End of repeating group		
100		ExDestination	Y	Execution destination as defined by institution when order is entered. Values: cmp. Availability and markets
528		OrderCapacity	Y	Values : D = Designated Sponsor / Market Maker I = Issuer
60		TransactTime	N	The time that you sent this request. Must be within *n* seconds of current time.
453		*NoPartyIDs*	N	The number of related Parties (required by trading system)
->	448	PartyID	N	Required if NoPartyIDs >=1

Tag		Field Name	Req	Comments
				Identification of the party (Short Code) Please check the Field length limitations on Page 22.
->	447	PartyIDSource	N	Required if NoPartyIDs >=1 Valid Values: P (Short code identifier)
->	452	PartyRole	N	Required if NoPartyIDs >=1 Identifies the type of PartyID Valid values: 12 = Executing trader (Replaces Tag 376 ComplianceID) 122 = Investment Decision Maker
->	2376	PartyRoleQualifier	N	Valid Values : 22 = Algorithm (applicable to PartyRole values 12 or 122) 24 = Natural person (applicable to PartyRole 12 and 122)
		Standard Trailer	Y	

Quote Maintenance

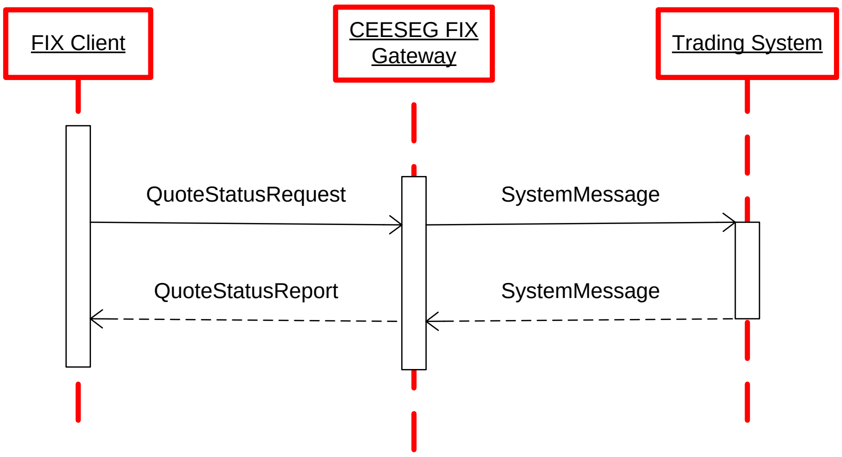

Figure 18 QuoteStatusRequest message flow

QuoteStatusRequest (MsgType=a)

QuoteStatusRequest (Inbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType= a
649	QuoteStatusReqID	N	
117	QuoteID	N	Unique identifier for quote
100	ExDestination	Y	Execution destination as defined by institution when order is entered. Values: cmp. Availability and markets
48	SecurityID	Y	Security ISIN
22	SecurityIDSource	Y	Valid value: 4 = ISIN
	Standard Trailer	Y	

QuoteStatusReport (MsgType=AI)

The QuoteStatusReport message is used to reply to quote operations and for sending updates of the available volume in case that a quote is (partially) filled,

Further the QuoteStatusReport message is used

- as the response to a QuoteStatusRequest message
- as a response to a QuoteCancel message
- as message when quotes are removed from the market due to market reset, market relocation, trading system connection problem and end of day

QuoteStatusReport (outbound)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType= AI
649	QuoteStatusReqID	N	Copied from request
117	QuoteID	Y	Unique identifier for quote or quote status request or NONE in case of nonexistent quote
537	QuoteType	N	Valid Values: 1 = Tradable 4 = Price Without Turnover (PWT) 5 = Matching Quote
30	LastMkt	Y	Execution destination as defined by institution when order is entered. Values: cmp. Availability and markets
48	SecurityID	Y	Security ISIN
22	SecurityIDSource	Y	Valid value: 4 = ISIN
18	ExecInst	N	c = Ignore Price Validity Check absence activates the price reasonability check
28743	SkipCheck	N	Valid Values : 1 = skip value check 2 = skip volume check 3 = skip value and volume check
132	BidPx	N	Bid Price
134	BidSize	N	Bid Quantity
20050	BidOrderID	N	Unique identifier for order
133	OfferPx	N	Offer Price
135	OfferSize	N	Offer Quantity
20051	OfferOrderID	N	Unique identifier for order
297	QuoteStatus	N	0 = Accepted 5 = Rejected 9 = Quote not found 10 = Pending 16 = Active (FIX 5.0 SP2) 17 = Canceled (FIX 5.0 SP2)

Tag	Field Name	Req.	Comments
300	QuoteRejectReason	N	1 = Unknown Symbol/ISIN 2 = Exchange (security) closed 3 = Quote Request exceeds limit 4 = Too late to enter 5 = Unknown Quote 6 = Duplicate Quote 7 = Invalid Bid/Ask spread 8 = Invalid price 9 = Not authorized to quote security 99 = Other
28744	MatchInstCrossID	N	Copied from request
28745	Crossed	N	Contains „1“ if the order was rejected due to the self-match prevention
10320	RejectReason	N	Text containing the reject reason of the trading system – refer to the corresponding trading system manual
	Standard Trailer	Y	

Handling of “Market Reset” events

It might happen that a “Market Reset” is performed during the trading day in the central trading system.
This “Market Reset” causes a cancelation of all non-persistent orders and quotes in a group of instruments or all instruments.
Market Reset events are transparent for CEESEG FIX customers unless they have active quotes for instruments affected by the reset. For all cancelled quotes QuoteStatusReports with QuoteStatus “cancelled” (Tag 297=17) are sent.

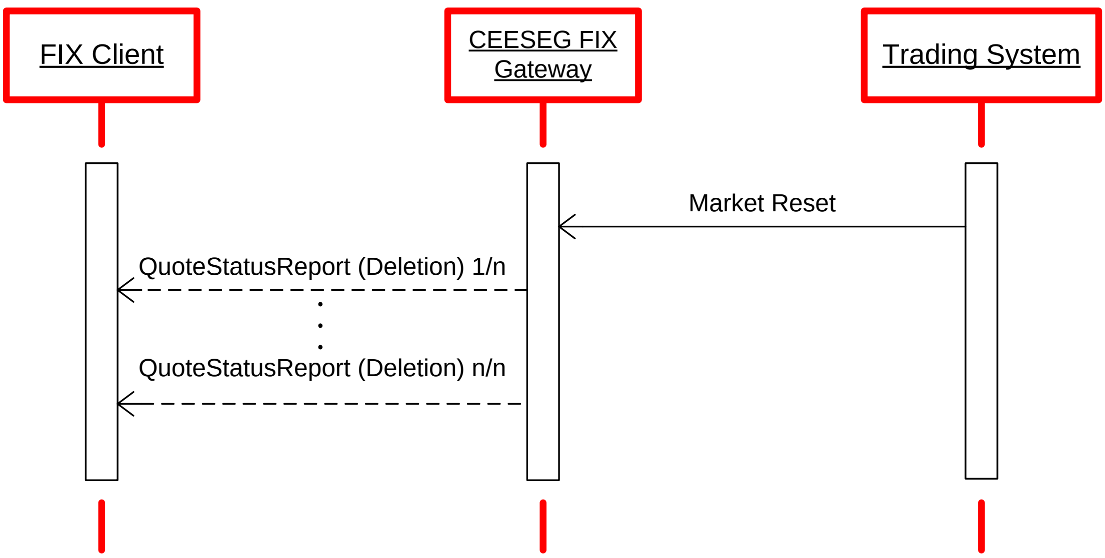

Figure 19 Market reset message flow

Handling of “Market Reallocation” events

A market reallocation event takes place if the central trading system fails to persist a transaction. In this case any open transactions are rolled back and a Market Reset event is initiated.
In case of a Market Reallocation the client application may receive an execution report with negative execution quantities and ExecType “trade cancel” (150=H) which indicates the rollback of a trade.
After the open transactions are cleared with those ExecutionReports, a normal Market Reset event is initiated (as described above).

Execution of quotes

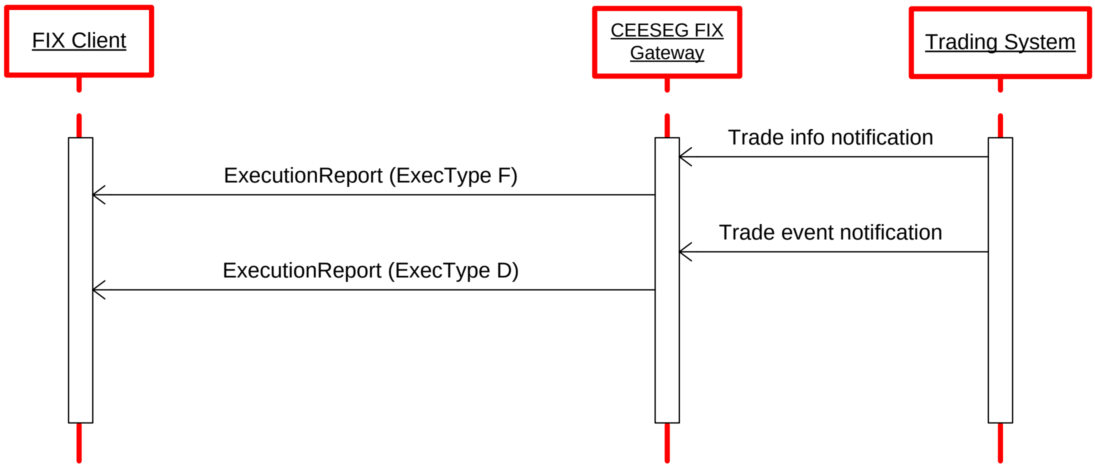

Figure 20 Quote execution message flow

Execution report message is used to relay fill information on quotes.
Fill information is sent first with a temporary ExecID based on preliminary information from the trading system. This preliminary execution report has the ExecType “F”. Please note, if there are multiple partial executions at the same time, for each price level, there is only one preliminary execution report, irrespective of the number of partial executions. This means if you enter a quote for an instrument which instantly matches two or more orders which are already on the order book and have the same price, you will only get one single preliminary execution report.
As soon as the trade has been persisted in the trading system (which means that the trade is written to the database and the processing is finished), a second ExecutionReport is sent with ExecType = D (Restated) and ExecRestatementReason = 8 with the final ExecID. This time, one execution report is sent for each trade (for each partial execution).
In case of a Market Reallocation event between those two ExecutionReports – resulting in an annulment of the trade – the second ExecutionReport has ExecRestatementReason = 7 to indicate that the trade did not happen.

ExecutionReport (outbound report)

Tag	Field Name	Req.	Comments
	Standard Header	Y	MsgType=8
117	QuoteID	N	Copied from Quote
150	ExecType	Y	Purpose of the ExecutionReport: Valid values: F = Trade G = Trade Correct H = Trade Cancel D = Restated
378	ExecRestatement Reason	N	7 = Cancel on System Failure 8 = Market (Exchange) Option
39	OrdStatus	Y	Valid values:

Tag	Field Name	Req.	Comments
			1 = Partial filled (remaining) 2 = Filled
880	TrdMatchID	N	Identifier assigned to a trade by the matching system.
17	ExecID	Y	Execution Id – then trade id of the trading system + buy or sell flag
60	TransactTime	Y	Time of last order action
37	OrderID	Y	Trading system order number
55	Symbol	N	Copied from quote
48	SecurityID	Y	Copied from quote
22	SecurityIDSource	Y	Copied from quote
54	Side	Y	Valid values : 1 = Buy 2 = Sell
38	OrderQty	N	
44	Price	N	
15	Currency	N	Copied from quote
528	OrderCapacity	N	Copied from quote
151	LeavesQty	Y	Quantity left on the quote
14	CumQty	Y	Currently executed quantity for chain of orders
30	LastMkt	Y	Execution destination as defined by institution when order is entered. Values: cmp. Availability and markets
453	*NoPartyIDs*	N	Number of related Parties
-> 448	PartyID	N	If 452=12 Xetra T7 Trader ID is provided
-> 452	PartyRole	N	Identifies the type of PartyID Valid values if 447 = D: 12 = Executing trader
-> 447	PartyIDSource	N	Value: D = Proprietary/Custom code (Xetra T7 Trader ID)
6	AvgPx	Y	Discontinued. Tag will always contain 0.
31	LastPx	N	Price of securities traded in this fill
32	LastQty	N	Number of securities traded in this fill
1444	SideLiquidityIndicator	N	Used to identify whether the order initiator is an aggressor or not in the trade. Values: 1 = Order initiator is passive 2 = Order initiator is aggressor 4 = Auction trade (FIX 5.0 SP1EP81)
28744	MatchInstCrossID	N	Copied from quote
381	GrossTradeAmt	N	Total amount traded (i.e. QUANTITY * PRICE) expressed in units of trading currency. For certain instruments (depending on the market model) this calculation takes a pool factor and/or a currency exchange rate and/or precentral notation of the

Tag	Field Name	Req.	Comments
			instrument into account (i.e. POOL_FACTOR * PRICE/100 * QUANTITY * CURRENCY_EXCHANGE_RATE)
	Standard Trailer	Y	

Quote Request (MsgType=R)

Possible use cases:
Issuer Broadcast
If market makers of continuous auction instruments have an indicative quote on the market and a participant enters an order which would match this quote if it was tradeable, the CEESEG FIX Gateway sends a quote request to market makers of the continuous auction instrument to make him aware that a tradeable order is in the order book.

RequestForQuote (inbound, outbound)

Tag		Field Name	Req.	Comments
		Standard Header	Y	MsgType= R
131		QuoteReqID	Y	Unique identifier for quote request
644		RFQReqID	N	For tradable quote model - used to indicate to which RFQ Request this Quote Request is in response.
537		QuoteType	N	Valid Values: 1 = Tradable 4 = Price Without Turnover (PWT) 5 = Matching Quote
100		ExDestination	Y	Execution destination as defined by institution when order is entered Possible values see Availability and markets
146		NoRelatedSym	Y	The number of related symbols
->	48	SecurityID	Y	Security ISIN
->	55	Symbol	N	1-15 character security identifier. Provide as listed.
->	22	SecurityIDSource	Y	Valid value: 4 = ISIN
->	38	OrderQty	Y	Must be positive number
->	54	Side	Y	Valid values: 1 = Buy 2 = Sell B = Both Sides (Buy and Sell)
		Standard Trailer	Y	

Appendix A

Valid combinations for execution constraints, validity and trading restrictions for orders.

Please note: The combinations of the order types, order restrictions and execution restriction depend on the respective market model and exchange rules. If orders with GTC are entered to Xetra T7, the ER contains a placeholder date (20991231) in Tag 432 (ExpireDate).

Order type	Possible execution restrictions or validity TimeInForce (Tag 59)	Possible trading restrictions NoTradingSessionID (Tag 386) – Set to "1", if trading restriction is given, additionally TradingSessionID (Tag 336) has to be specified accordingly. If TradingSessionID and NoTradingSessionID are not specified, the validity of the order is verified on behalf of the current trading phase
Market Order Tag 40=1	Day – valid for the day ("0")	Auction Only ("A"), Closing Auction ("C"), Main Auction ("M"), Opening Auction ("O"), Main Trading ("T")
	GTC – Good Till Cancelled ("1")	Auction Only ("A"), Closing Auction ("C"), Main Auction ("M"), Opening Auction ("O"), Main Trading ("T")
	IOC - Immediate or Cancel ("3") Always valid for the day!	Accept Surplus (“S”)
	FOK - Fill or Kill ("4") Always valid for the day	Accept Surplus (“S”)
	GTD - Good Till Date ("6") Tag 432 - ExpireDate must be filled!	Auction Only ("A"), Closing Auction ("C"), Main Auction ("M"), Opening Auction ("O"), Main Trading ("T")
Limit Order Tag 40=2	Day – valid for the day ("0")	Auction Only ("A"), Closing Auction ("C"), Main Auction ("M"), Opening Auction ("O"), Main Trading ("T")
	GTC – Good Till Cancelled ("1")	Auction Only ("A"), Closing Auction ("C"), Main Auction ("M"), Opening Auction ("O"), Main Trading ("T")
	IOC - Immediate or Cancel ("3") Always valid for the day!	Accept Surplus (“S”)
	FOK - Fill or Kill ("4") Always valid for the day!	Accept Surplus (“S”)
	GTD - Good Till Date ("6") Tag 432 - ExpireDate must be filled!	Auction Only ("A"), Closing Auction ("C"), Main Auction ("M"), Opening Auction ("O"), Main Trading ("T")
Stop Market Tag 40=3	Day - valid for the day ("0")	none (means no value in Tag 336)
	GTC – Good Till Cancelled ("1")	none (means no value in Tag 336)

Order type	Possible execution restrictions or validity TimeInForce (Tag 59)	Possible trading restrictions NoTradingSessionID (Tag 386) – Set to "1", if trading restriction is given, additionally TradingSessionID (Tag 336) has to be specified accordingly. If TradingSessionID and NoTradingSessionID are not specified, the validity of the order is verified on behalf of the current trading phase
	GTD - Good Till Date ("6") Tag 432 - ExpireDate must be filled!	none (means no value in Tag 336)
Stop Limit Tag 40=4	Day – valid for the day ("0")	none (means no value in Tag 336)
	GTC – Good Till Cancelled ("1")	none (means no value in Tag 336)
	GTD - Good Till Date ("6") Tag 432 - ExpireDate must be filled!	none (means no value in Tag 336)
Market to Limit Tag 40=K	Day - valid for the day ("0")	none (means no value in Tag 336)
	GTC – Good Till Cancelled ("1")	none (means no value in Tag 336)
	IOC - Immediate or Cancel ("3") Always valid for the day!	none (means no value in Tag 336)
	FOK - Fill or Kill ("4") always valid for the day!	none (means no value in Tag 336)
	GTD - Good Till Date ("6") Tag 432 - ExpireDate must be filled!	none (means no value in Tag 336)
Iceberg Order (Tag 40=2 & combination of 1084 and 1085 and 1086 and 1138) for random peak ice berg orders or (40=2 and tag 111) for static iceberg orders.	Day - valid for the day ("0")	none (means no value in Tag 336)
	GTC – Good Till Cancelled ("1")	
	GTD - Good Till Date ("6") Tag 432 - ExpireDate must be filled!	

Iceberg order notes

Xetra T7 is able to process iceberg orders with fixed peak and with random peak quantity.

Iceberg orders with fixed peak quantity

Iceberg orders with fixed peak size are entered with a maximum peak quantity in field MaxFloor (111).
The MaxFloor (111) represents the maximum peak quantity of the iceberg order. The iceberg order will be visible on the market initially with the maximum peak quantity. If the order gets partially executed with a quantity smaller than the peak, the rest of the peak stays visible in the market. The peak will not be refilled until it is entirely executed.
Once the peak is entirely executed, it will be refilled with the maximum peak quantity. If the total remaining quantity of the order is smaller than the maximum peak quantity, only the remaining quantity of the order will be made available to the market.
Iceberg orders can only be entered as limit orders.

Iceberg orders with random peak quantity

Random peak iceberg orders are entered with DisplayMethod=Random (1084=3). Additionally, a DisplayLowQty (1085), a DisplayHighQty (1086) and a DisplayQty (1138) must be specified. Initially, the iceberg order will be visible on the market with the initial peak quantity as provided in the DisplayQty field of the NewOrderSingle message. For refills of the peak, the trading system will pick a random value between the DisplayLowQty and the DisplayHighQty. The selected random peak is returned in an ExecutionReport message in the DisplayQty field. If the order gets partially executed with a quantity smaller than the peak, the rest of the peak stays visible in the market. The peak will not be refilled until it is entirely executed.
Once the peak is entirely executed, it will be refilled with a randomized peak. If the total remaining quantity of the order is smaller than the maximum peak quantity, only the remaining quantity of the order will be made available to the market. Iceberg orders can only be entered as limit orders.

Stop order notes

Stop orders are defined by OrdType (tag 40) containing a value of 3 or 4. They are entered with a price value in the tag StopPx (tag 99), which represents the stop price of the order. The stop order will become visible to the market as soon as the specified stop price is hit by the market price.
Once the order becomes visible to the market, the client receives an execution report with ExecType (tag 150) containing the value “D” as a notification. Stop orders can be entered as limit and market orders.
In the ‘Continuous trading with opening and closing auction’ trading model of BSE, Market- and Market-to-limit orders have to be entered with either IOC or FOK execution restriction.

Appendix B

Delivery of TradeCaptureReports of foreign orders in CEESEG FIX

<table>
<tr><th colspan="3" rowspan="2">Back office TradeCaptureReport in CEESEG Fix</th><th>FIX Configuration</th></tr>
<tr><th>TradeRequestType</th></tr>
<tr><td rowspan="4">Trades from CEESEG_FIX / CEE Trader</td><td rowspan="2">persistent orders</td><td>same Trader-Subgroup</td><td>569=1</td></tr>
<tr><td>different Trader-Subgroup</td><td>569=3</td></tr>
<tr><td rowspan="2">quotes</td><td>same Trader-Subgroup</td><td>569=1</td></tr>
<tr><td>different Trader-Subgroup</td><td>569=3</td></tr>
<tr><td rowspan="6">Trades from other ETI Sessions</td><td rowspan="2">persistent orders</td><td>same Trader-Subgroup</td><td>569=1</td></tr>
<tr><td>different Trader-Subgroup</td><td>569=3</td></tr>
<tr><td rowspan="2">non-persistent orders</td><td>same Trader-Subgroup</td><td>569=1</td></tr>
<tr><td>different Trader-Subgroup</td><td>569=3</td></tr>
<tr><td rowspan="2">quotes</td><td>same Trader-Subgroup</td><td>569=1</td></tr>
<tr><td>different Trader-Subgroup</td><td>569=3</td></tr>
</table>

The table above illustrates the delivery of TradeCaptureReports for orders entered via other interfaces than CEESEG FIX, up from CEESEG FIX 16.1.

Appendix C

Mapping between TCR and ER

We would recommend to map ER and TCR for the same trade with help of following fields:

Secondary ClOrdID (526) and/or Text field (58)

Another solution would be to use a combination of of the following fields:

Trade Match ID (880)
+ Security ID (48)
+ Side (54)

If several partial executions occur within the same match step, the relation between ExecutionReport messages and TradeCaptureReport messages can be 1:n. There will be one ExecutionReport for the same match step, and one TradeCaptureReport for each allocation / trade item within this match step. All these messages will have the same combination of Tags 880+48+54.
The single allocations / trade items within the match step can be distinguished only in TradeCaptureReport messages by field TradeLegRefID (824).

List of figures