

FAGSE BT-FIX Gateway

Rules of Engagement

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FAGSE

BT-FIX Gateway

May 23rd, 2025

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Related Documents

FIX

- [1] FIX protocol limited: FIX Documentation Version 4.4 with Errata 20030618, Volumes 1-7 - as of June 18, 2003
- [2] FIX protocol limited: FIX Documentation Version 4.2 with Errata 20010501 - as of May 1, 2001
- [5] FIX protocol limited: Exchanges / ECN Working Group Recommended Best Practices Phase 1 - as of January 25, 2007

Useful Web Pages

www.xontro.de

www.deutsche-boerse.com

www.fixprotocol.org

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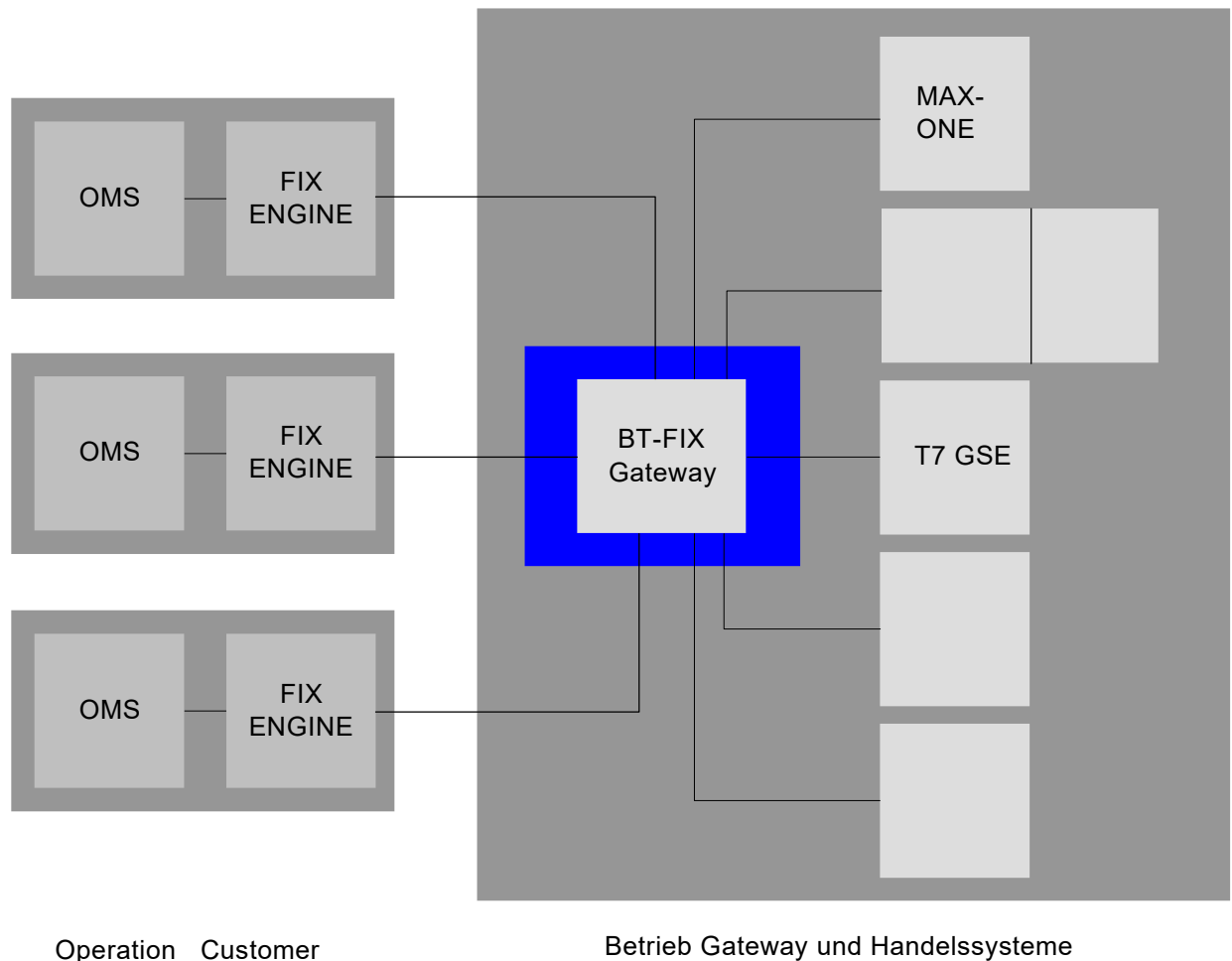
1 Introduction

This document describes all modifications, restrictions and extensions of the FIX protocol versions 4.2 and 4.4 implemented by the **FAGSE BT-FIX Gateway** product which controls the FIX order routing interface to

- the T7 GSE (German Stock Exchanges) and MAX-ONE
- the trade processing in the T7 GSE trade system

Requirements, assumptions, message layouts and most of the common message flows will be discussed. All customers planning to use the new FIX interface for routing orders to the trading systems mentioned should thoroughly read the whole document.

The following figure explains the interaction between the systems involved.



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1.1 Abbreviations and Definitions

| Item | Description |
|---------|---|
| FAGSE | Name of the product providing access to the trading systems, acronym for “ F IX A ccess to G erman S tock E xchanges”. The product consists of two components: the BT-FIX Gateway and the BT-FIX Connector |
| FIX | The F inancial I nformation e Xchange protocol – created and enhanced over time by banks, brokers, stock exchanges and service providers – is an open standard for transmitting information. Usage of the FIX protocol substantially simplifies the exchange of information between different applications |
| MAX-ONE | The trading system of the Munich stock exchange |
| OMS | Acronym for O rders M anagement S ystem |
| RoE | Acronym for R ules o f E ngagement. A contract describing all the rules of a specific variant of the FIX protocol used by the parties signing the contract to exchange information. Usually the following details will be stipulated: network connections, partner identification, encryption of messages, supported message types, message layouts, handling of duplicate messages, etc. |
| TCP/IP | T ransmission C ontrol P rotocol / I nternet P rotocol (TCP/IP). FIX Versions 4.x rely on TCP/IP as communications protocol |
| OMS | Order Management System (customer) |
| T7 GSE | Trading system T7 German Stock Exchanges (replaces the term XONTRO) |

2 Assumptions

2.1 Supported FIX Protocol Versions

Only FIX protocol versions V4.2 and V4.4 are supported. Some of the message layouts described contain substantial extensions of the standard message layouts defined by the fix protocol version under consideration. There is a standard procedure for extending message layouts: Additional tags as well as additional values for a specific tag will be adopted – if possible – from one of the newer FIX protocol versions up to and including V5.0 SP2¹. If this is not possible, user-defined, registered tags will be used.

FIXML will not be supported.

As only FIX versions 4.x are implemented, communications protocols are restricted to TCP/IP.

2.2 Clients and Order Management Systems

The FIX engine of a party/customer operating a connection is called a **Client** or a **FIX client**. FIX clients are identified by using a CompID. CompIDs will be specified and distributed by BrainTrade GmbH.

Due to reliability considerations a customer may decide to set up two FIX Clients. In this case FIX Clients may be organized as two independent instances or into a single cluster.

The customer's environment must support one of the failover variants listed below. All variants need exactly one SenderCompID at the customer's site.

1. The FIX engine is installed on several computers of a given cluster. The FIX engine supports the cluster's failover procedures. Sessions will be resumed automatically.
2. The FIX engine is installed on several independent computers. Failover procedures will have to be launched manually. The information needed for resuming the FIX message traffic (Sequence numbers, sent messages,...) are kept on a shared SAN storage subsystem. As soon as the failover procedure has ended, the active FIX engine may start a new session and resume the message exchange.
3. The FIX engine is installed on several independent computers. No shared storage subsystem is available. Failover procedures will be launched manually. The customer's FIX engine then must provide the following logon procedure for re-initiating the message exchange: The engine must assure that the logon request's sequence number definitely exceeds the sequence numbers of all preceding messages sent. Gaps of any size are allowed. The following resend request issued by the BT-FIX gateway must then be answered by a reset message with GapFillFlag set to "Y". Thus the gap will be closed and standard message traffic may be resumed.
4. A second IP address is available for reconnection and FIX session logon in the event of a failover. Only one connection/IP address can be used at a time.

The BT-FIX Gateway also will be identified by using a CompID defined by BrainTrade GmbH.

A customer will be connected to the BT-FIX Gateway by one or two leased lines. The communications protocol will be TCP/IP².

¹ So Version 4.2 layouts may be enhanced by using 4.4 and/or 5.0 items, and version 4.4 layouts by using version 5.0 items. Please check: Appendix D: 4.2 Extensions and Appendix E: 4.4 Extensions.

² As of now it is not intended to support version 5.0, therefore FIXT will not be supported either.

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Sessions will always be initiated by the Client.

Any Client must support FIX version 4.2 or version 4.4 and must additionally meet all requirements for the target version specified in this document.

An order management system may be operated by a customer or by a provider offering services to several customers. For an OMS run by a single customer, headquarters/branch relationships (also known as “Zentrale/Filiale” relationships as implemented by the “Systemanschluss Kreditinstitute” component) may be defined for a specific FIX connection.

The party running the connection, as well as the parties which intend to use the connection for order routing purposes, must have valid IDs (CBF Account Number also known as “Kassenvereinsnummer” or “KVNr”). Those IDs must be granted special rights to access the FIX interface, see chapter 2.3 Security.

2.3 Security

The BT-FIX Gateway will support TLS-encryption 1.3 at FIX message level.

Secure network connections (router to router) may be provided by using IPSec. An additional agreement between the party operating the FIX connection and the party running the BT-FIX Gateway is needed to set up the features needed.

The FIX Engines on either side will use the tags SenderCompID and TargetCompID for partner identification.

Every FIX Party operating a connection must ensure that only requests along with the agreed SenderCompID are sent.

Request with an invalid SenderCompID will be rejected.

Requests with an invalid SenderCompID sent after a successful login are valued as an attack. In this case, the session will be logged out. The party running the connection (customer, entering firm) must have a valid ID.

If further parties are to be entitled to use the fix connection for order routing purposes (as executing firm/owner of an order), they must have valid IDs as well. Those IDs must be granted special rights to access the FIX interface.

For each FIX main branch account having been admitted resp. defined, a FAGSE session ID and a FAGSE session password may be applied for from the T7 member section (simulation & production). The logon information having been assigned have to be included within the logon message using the tags user name (tag 553) and password (tag 554).

The BT-FIX Gateway will support standard FIX retransmission procedures (duplicate and resend).

2.4 Target Trading Systems

The BT-FIX Gateway will cooperate with the following application systems:

- T7 GSE
- MAX-ONE

2.5 Financial Instruments

There are no limitations with reference to the instruments of a trading -system. Instruments will solely be identified by using the corresponding ISIN. Other ways of identifying financial instruments (e.g. WKN, mnemonic) will not be supported.

It is possible to use the mandatory tag 55 (Symbol), but any value provided will completely be ignored. Messages provided by the BT-FIX Gateway will always have tag 55 set to "[N/A]".

Exceptions are the messages called realtime trade confirmation (UserMessage TradeCaptureReportSno). Tag 55 includes the ticker symbol (if available) or value "[N/A]".

2.6 Trading Systems Offering Multiple interfaces

Basically, access via FIX (*Systemanschluss Kreditinstitute*, system connection for banks) offer the same functionality. These functionalities are divided into the following groups:

- Orderrouting
- OTC-entry
- Realtime trade confirmation

Example of a possible configuration for ID 1766:

- Orderrouting with FIX-access of central office 7066
- OTC- -entry with FIX central office 3766
- Delivery of realtime trade confirmations by FIX with central office 3766

The interfaces (T7 GUI, T7 GSE) are not affected.

It should be kept in mind that using one of those interfaces admitted may cause FIX messages to be generated and disseminated.

2.7 Implementation Of The MiFID II Requirements

Beginning with version 2.3.2 of this document, the requirements of the MiFID II rules and regs have been implemented. In connection with these requirements, we would particularly like you to focus on the areas listed below.

2.7.1 MiFID II Data Fields Provision

Entry fields bearing a direct connection with the MiFID II regulatory acts are specially marked along with their first mention within this document.

What follows is an example for such a flag: "(ESMA RTS24 Field 3)".

In case lack of clarity is detected in connection with the usage of these tags, then the corresponding documentation of the competent regulatory authorities is referred to.

2.7.2 Shortcode Procedure

Shortcode data are used for the purpose of containment of the identification data of participating parties to be submitted towards the trading venues, according to MiFID II.

Within T7 GSE, the shortcode procedure is relevant only for the FIX order routing participants.

All contents (according to the MiFID II requirements) of the data fields <client identification code>, <investment decision maker>, and <execution within firm> are regarded as relevant for the safeguarded submission of the shortcode files. They may essentially be seen as personalized legitimization data.

The shortcode to longcode mapping (upload and report file) for the T7 trading system is to be processed via the existing DBAG portal (Common Upload Engine and Common Report Engine).

In future, the shortcode to longcode mapping (upload and report file) for the MAX-ONE trading system is to be processed via the existing Munich Stock Exchange portal (Secure FTP).

2.8 Order-Functionality

2.8.1 Order Identification

The BT-FIX Gateway will support the common FIX task “chaining” concept based on the usage of ClOrdID and OrigClOrdID respectively and will check for ClOrdID uniqueness. Uniqueness must be ensured across the entire life cycle of the corresponding order. New order single requests using an already existing ClOrdID, as well as Cancel or Cancel/Replace Requests providing an unknown ClOrdID as OrigClOrdID, will be rejected.

The BT-FIX Gateway provides a second method for cancelling/replacing orders: A Cancel/Cancel Replace Request may deliver the trading system's OrderID using tag 37 and may explicitly rule out the common addressing method by setting OrigClOrdID to “[N/A]”.

If both keys of an order are known, either method for accessing and manipulating orders may be used. It does not matter how an order was entered into the system or which access method was used last. Still the chain of tasks/requests will only reflect requests entered via the FIX interface.

Please note that identifying orders by OrderID relies on positive trading system responses (while on the contrary the “chaining” method does not).

No further methods for identifying orders will be supported. It should especially be kept in mind that Tag 526 is no valid key.

It is not intended to standardize methods for identifying orders across interfaces.

2.8.2 Recommendations

Customers who intend to make simultaneous, unrestricted use of all interfaces of the trading systems under consideration should set up their own scheme for identifying orders. Using the trading systems' order numbers is **no sensible approach**. The order management system will be responsible for any (order) key mapping. If an order management system uses the FIX interface, special care should be taken when handling one of the situations listed below:

- Modification of an order – the trading system's order number may change. The related FIX message sent by the BT-FIX Gateway to the order management system will only provide the new **(modified) order number**.
- Modification or cancellation (via the FIX interface) of an order entered via an interface other than FIX. The FIX Request must provide the trading system's order number (Tag 37), if it is immediately subsequent to the operation creating the order.
- Modification or cancellation of an order (via any interface other than FIX). The resulting FIX message(s) sent to an order management system will contain no OrigClOrdID information and will have ClOrdID set to the corresponding value of the last successfully processed FIX request related to this order. So an order management system must always be able to identify any order by its **OrderID or the ClOrdID of the last successfully processed request entered via the FIX interface**.

If an order management system changes interfaces at random when processing an order the common FIX “chaining” mechanism will be perturbed. Additionally the order management system must be prepared to switch procedures for order identification permanently.

Therefore one of the interfaces should be selected to support the order management system's standard procedures. The alternate usage of further interfaces should be restricted to emergency situations.

2.8.3 Particular Request Behavior

The Order Cancel Requests will need a second order type (Tag 5253).

2.9 Trade Functionality

2.9.1 Supported Messages

The following Trade Messages are supported:

- TradeCaptureReport Request: OTC- Functionality
- TradeCaptureReportAck Response to a TradeCaptureReport
- TradeCaptureReportSno Information to a Trade Confirmation (contract note)

The following FIX-Tags are used as identification criteria for supported messages:

- Functionality (OTC, SNO)
 - 6556 BusinessTransactionType
 - 487 TradeReportTransType
 - 856 TradeReportType
- Identification of a trade resp. report
 - 880 TrdMatchID
 - 6555 OrigTrdMatchID
- More identification criteria
 - 571 TradeReportID
 - 572 TradeReportRefID
 - 150 ExecType

Details can be found in chapter 7.5 Trade Functionality

2.9.2 Trade identification

Each message includes the field TradeReportID (tag 571) as unique identifier. In addition, messages with reference to a previous action include the field TradeReportRefID (tag 572).

There is no chaining mechanism for these fields on the BT-FIX Gateway. Furthermore, there is no examination implemented for checking the uniqueness of the concerning field TradeReportID. Also, there is no examination if a TradeReportRefID includes an existing TradeReportID having already been delivered.

The uniqueness resp. correctness of these fields in the request messages must be secured by the client.

Within a response message, the fields TradeReportID and TradeReportRefID (if available) are provided using the content of the request message.

For the TradeCaptureReportSno FAGSE will generate an unique TradeReportID.

Keys for trade messages identification in the BT-FIX Gateway are only T7 GSE defined report- resp. trade-numbers. Their content will be delivered in TrdMatchID (tag 880) and OrigTrdMatchID (tag 6555).

2.10 General Comments on Rejecting Requests

If the BT-FIX Gateway is incapable to transform an OMS Request into a message accepted by the target trading -system (because of faulty or inconsistent message content), it will always respond with a reject message at session level (MsgType 3).

Common examples are

- missing mandatory or conditionally mandatory tags
- invalid tags
- invalid tag values
- invalid combinations of tag values

If RoE requirements differ from standard FIX conventions, then the former will hold.

Errors detected by a trading -system will lead to reject messages of type Execution Report, Cancel Reject or Business Message Reject.

If a trading -system is unavailable, then the BT-FIX Gateway will generate a Business Message Reject message with ReasonCode set to 4 ("Application not available").

Business Message Reject and **Reject** messages are described in chapter no: 6 Reject and Business Message Reject. They may be used for a negative response concerning **all kinds of** requests. Clients and OMS's should be able to handle these responses.

2.11 Behaviour along with ResendRequest

In case a sequence number (MsgSeqNum) gap has arisen within the requests sent by the OMS, then the BT-FIX Gateway asks for the missing sequence number(s) using a ResendRequest. The gap must then be filled immediately by the OMS.

In case more than 500 further requests are sent instead, without filling the gap, then an immediate automated Logout by the BT-FIX Gateway will occur. By this means, all requests having been after the gap will be discarded.

2.12 Production Launch

Potential customers must participate in a monitored simulation prior to being admitted to the production environment. The terms and conditions of the monitored simulation will be published by BrainTrade.

3 Characteristics

3.1 Incoming and Outgoing Messages

“Incoming message” (request) will indicate a message sent by the customer's order management. Those definitions will also be used for messages which do not pass every possible segment of the application chain.

Transmission of incoming messages:

OMS → FIX engine (customer) → BT-FIX Gateway → trading -system

“Outgoing message” (response, broadcast) will be used to identify messages transmitted from the trading system to the customer's order management -system.

Transmission of outgoing messages:

trading -system → BT-FIX Gateway → FIX engine (customer) → OMS

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3.2 Scenarios and Messages of Session Levels**3.2.1 Processing of FIX Requests**

| Scenario | Incoming Message | Outgoing Message |
|--|--|--|
| Technical Requests | | |
| logon | Logon | Logon (positive) Logon + Logout (negative) |
| logon with simultaneous password change | Logon | Logon (positive) Logon + Logout (negative) |
| logout | Logout | Logout |
| password change | User Request (4.4) User Defined Request (4.2) | User Response (4.4) User Defined Response (4.2) |
| General Rejections (possible for every request) | | |
| session level reject | All Request Messages | Reject |
| General rejection through a trading system or BT-FIX Gateway | All Request Messages | Business Message Reject |

3.2.2 System Generated Messages

| Scenario | Incoming Message | Outgoing Message |
|------------------------------------|------------------|---|
| System Shutdown | | |
| logout | - | Logout |
| status message | - | News "End-of-Day Processing" "End-of-Day Cut-off" |
| Technical Messages | | |
| checkup of the physical connection | - | Heartbeat |
| request of a heartbeats | - | Test Request |
| request of messages | - | Resend Request |

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3.3 Scenarios and Messages at Application Level**3.3.1 Processing of FIX Requests**

| Scenario | Incoming Message | Outgoing Message |
|----------------------------|----------------------|--|
| Order Functionality | | |
| New order | New Order Single | Execution Report |
| Order cancellation | Order Cancel | Execution Report (positive, preliminary) Order Cancel Reject (negative) |
| Order modification | Order Cancel/Replace | Execution Report (positive, preliminary) Order Cancel Reject (negative) |
| Trade Functionality | | |
| New OTC trade | TradeCaptureReport | TradeCaptureReportAck |
| OTC trade cancellation | TradeCaptureReport | TradeCaptureReportAck |

3.3.2 External Inputs / Messages Generated at System Level

| Scenario | Incoming message | Outgoing message |
|---|------------------|--|
| Order Functionality | | |
| New Order | - | Execution Report |
| Order cancellation | - | Execution Report (positive, preliminary) Order Cancel Reject (negative) |
| Order modification | - | Execution Report (positive, preliminary) Order Cancel Reject (negative) |
| Order execution | - | Execution Report |
| Trade-Functionality | | |
| OTC Trade Information (Realtime contract note) | - | TradeCaptureReportSno |
| News | | |
| Event messages | - | News |

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3.4 Differences Between FIX Versions 4.2 and 4.4

The RoE described in this document are established using the FIX Version 4.4 specification. The differences when using FIX version 4.2 – which will also be supported by the BT-FIX Gateway – will particularly affect order status concepts, parties' component block concepts, and some other message types not implemented by version 4.2, like User Request and User Response messages.

3.4.1 Order Routing

Execution reports produced for a FIX client running version 4.2 will provide ExecTransType (Tag 20). Their value will always be set to 0 ("New").

The party component block implemented for sessions running version 4.4 cannot be set up for version 4.2 sessions. A party component block will not be present; the repeating groups will be mapped to single tags, which will solely carry the PartyID information³:

| <parties> | Tag 4.2 | field name | comments |
|------------------------------|---------|---|--|
| <entering firm> | 6031 | EnteringFirm | String(4), KVNr of the party operating the connection |
| <executing firm> | 76 | ExecBroker | String(4), KVNr of the owner of the order |
| <market maker> | 9318 | MktMkerID | String(4), KVNr of intermediary This tag will be ignored. |
| <session> | 5177 | Source | String, KVNr resp. MemberID of the originator from any other interface |
| <executing system> | 7931 | VenuelD | String, possible values: "T7 GSE" "MAX-ONE" |
| <client identification code> | 20003 | PartyIDClientID | Char(20), Shortcode. (ESMA RTS24 Field 3) Special values: 1 = AGGR 2 = PNAL |
| | 21103 | PartyIDClientIDQualifier | Integer This tag will be ignored. The qualifier for the ClientID specifies if the Shortcode given in Tag 20003 represents a LEI or a natural person. 23 = LEI (Legal Entity Identifier) 24 = Nat. Person |
| | 21303 | PartyIDClientIDSource | Char Classification of Tag 20003. P = Shortcode The indication of Tag 21303 is not necessary. |
| <investment decision maker> | 20122 | PartyIDInvestmentDecisionMaker | Char(20), Shortcode or Algorithm. (ESMA RTS24 Field 4) |
| | 21222 | PartyIDInvestmentDecisionMakerQualifier | Integer The qualifier for the InvestmentDecisionMaker specifies if the PartyID in Tag 20122 represents an algorithm or the Shortcode for a natural person. 22 = Algorithm 24 = Shortcode for a nat. person In case Tag 21222 is missing, then a Shortcode representation is assumed. |

³ Names included in angle brackets will refer to the <parties> component block's occurrence names used in this document, not to FIX field names.

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| <parties> | Tag 4.2 | field name | comments |
|-------------------------|---------|--|---|
| | 21422 | PartyIDInvestmentDecision MakerSource | Char Classification of Tag 20122. P = Shortcode or in conjunction with Tag 21222 also Algorithm The indication of Tag 21422 is not necessary. |
| <Execution within firm> | 20012 | PartyIDExecutingTrader | Char(20), Shortcode or Algorithm. (ESMA RTS24 Field 5) Special values: 3 = NORE |
| | 21112 | PartyIDExecutingTrader Qualifier | The qualifier for the ExecutingTrader indicates if the PartyID in Tag 20012 represents an algorithm or the Shortcode for a natural person. 22 = Algorithm 24 = Shortcode for natural person In case 21112 is missing, then a Shortcode representation is assumed. |
| | 21312 | PartyIDExecutingTrader Source | Char Classification of Tag 20012. P = Shortcode or in conjunction with Tag 21112 also Algorithm The indication of Tag 21312 is not necessary. |

3.4.2 Password Change

Message types “BE” – User Request – and “BF” – User Response – will not be provided by version 4.2. They will be replaced by message types “UBE” and “UBF” respectively. Message layouts will remain unchanged.

It should be kept in mind that FIX 4.2 message layouts and tags have been extended by FIX 4.4.

Password changes regarding a specific FAGSE session ID may be required, upon demand, within the T7 member section of the participant. As a result, a newly generated password will be provided for the FAGSE session ID having been selected. The last 4 digits of the FAGSE session ID correspond to the FIX main branch account number.

Therefore, a password modification via the FAGSE gateway will technically neither be necessary nor possible any longer.

3.4.3 Trade Messages

MsgTypes “AE” - TradeCaptureReport and “AR” - TradeCaptureReportAck are not defined in FIX Version 4.2. Using the same message structures, “AE” will be replaced by “UAE” and “AR” by “UAR”. Within the user-defined TradeCaptureReport message and TradeCaptureReportSno message, all Party-Repeating Groups will not be replaced – description above.

4 Message Layouts

4.1 FIX Header / Trailer

| Legend | FIX Header / Trailer |
|------------------------|---|
| <u>Sort sequence:</u> | Information items (Tag=Value<SOH>) within a FIX message usually can be defined in any order. Some FIX Header and Trailer structures, however, bear exceptions, as some tags cannot be defined in any sequence: The corresponding rows of the table below will be grey-shaded. The tags will be shown at their proper position within the table/message structure. The remaining (standard) tags are sorted ascending by tag number. |
| <u>Column headers:</u> | RF will indicate if a tag is required with respect to the FIX protocol version, R will indicate if a tag is required with respect to the RoE. All other column headers are self-explanatory. |
| <u>Content:</u> | Columns “R” and “RF” will indicate if a tag is <u>M</u> andatory or <u>O</u> ptional; “Comment” will contain the tag's FIX data type, admitted values (optional) and further explanatory remarks. All other content is self-explanatory. If cell values for “R” and “RF” are contradictory, the value presented by column “R” will be valid . |

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4.2 FIX Header <standard message header>**Incoming Messages**

| Tag | Field Name | RF | R | Comment |
|-----|------------------------|----|---|--|
| 8 | BeginString | M | M | String FIX version Valid values: FIX.4.4 FIX.4.2 Must always be the first field in the header structure |
| 9 | BodyLength | M | M | Length Message length Must always be the second field in the header structure |
| 35 | MsgType | M | M | String Message type Must conform to the RoE. Must always be the third field in the header structure |
| 34 | MsgSeqNum | M | M | SeqNum Message sequence number. Must be provided and maintained by the sending system. The number must be unique per session. Must start at "1", gaps are not allowed. Intraday termination and restart of a session will not automatically reset MsgSeqNum |
| 43 | PossDupFlag | O | O | Boolean If a FIX engine repeats transmission of identical content (including MsgSeqNum) it will set PossDupFlag to "Y" |
| 49 | SenderCompID | M | M | String ID of the sending system Used for partner identification. Values will be defined by BrainTrade GmbH. If the party operating the connection owns multiple SenderCompIDs, only one of them may be active. SenderCompID values are identical for all computers |
| 52 | SendingTime | M | M | UTC Time stamp |
| 56 | TargetCompID | M | M | String ID of the receiving system Used for partner identification. Values will be defined by BrainTrade GmbH |
| 97 | PossResend | O | O | Boolean If a FIX engine repeats transmission of identical content (not including MsgSeqNum), it will set PossResendFlag to "Y". The receiving application must examine the situation. This functionality is not fully supported: PossResends are only allowed for NewOrderSingle. If a Request has already been received using the same ClOrdID, then the same ExecutionReport resp. Reject will be transferred to the Client again. Otherwise the Request will not be processed, but replied to with a Reject. |
| 122 | OrigSendingTime | O | O | UTCTimestamp May be used when answering a resend request of the BT-FIX gateway Timestamp of the original message Included due to compatibility reasons This tag will be ignored. |
| 369 | LastMsgSeqNumProcessed | O | O | SeqNum Last MsgSeqNum processed by the sending system |

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Outgoing Messages

| Tag | Field Name | RF | R | Comment |
|-----|-----------------|----|---|--|
| 8 | BeginString | M | M | String FIX version Valid values: FIX.4.4 FIX.4.2 Must always be the first field in the header structure |
| 9 | BodyLength | M | M | Length Message length Must always be the second field in the header structure |
| 35 | MsgType | M | M | String Message type Must conform to the RoE. Must always be the third field in the header structure |
| 34 | MsgSeqNum | M | M | SeqNum Message sequence number Must be provided and maintained by the sending system. The number must be unique per session. Must start at "1", gaps are not allowed. Intraday termination and restart of a session will not automatically reset MsgSeqNum |
| 43 | PossDupFlag | O | O | Boolean If a FIX engine repeats transmission of identical content (including MsgSeqNum) it will set PossDupFlag to "Y". Will always be set to "Y" when responding to a Resend Request |
| 49 | SenderCompID | M | M | String ID of the BT-FIX Gateway system Used for partner identification. Values will be defined by BrainTrade GmbH |
| 52 | SendingTime | M | M | UTC Time stamp |
| 56 | TargetCompID | M | M | String ID of the receiving system Used for partner identification. Values will be defined by BrainTrade GmbH |
| 97 | PossResend | O | O | Boolean If a FIX engine repeats transmission of identical content (not including MsgSeqNum), it will set PossResendFlag to "Y". The receiving application must examine the situation |
| 122 | OrigSendingTime | O | O | UTCTimestamp May be used when answering a resend request of the BT-FIX gateway Timestamp of the original message |

4.3 FIX Trailer <standard message trailer>

| Tag | Field Name | RF | R | Comment |
|-----|------------|----|---|---|
| 10 | Checksum | M | M | 3 Bytes Checksum Must always be the last field in the trailer structure |

5 FIX Messages of Session Levels

5.1 Explanation of the FIX Message Body

Column headers: RF will indicate if a tag is required resp. how a tag is handled with respect to the FIX protocol version, R will indicate if a tag is required resp. how a tag is handled with respect to the RoE. All other column headers are self-explanatory. 7M will detail tag handling for all target trading systems. All other column headers are self-explanatory.

7M (T7 GSE/MAX-ONE/) will detail tag handling at trading resp. settlement-system level. This column will additionally allow “N” (Tag Not allowed). When discussing a Cancel/Replace Request, the values chAngeable or Unchanged (no modification possible) will also be used.

All other headers are self-explanatory.

Content: Columns “R” and “RF” will indicate if a tag is Mandatory or Conditionally mandatory. Cell content will only be set to “M” or “C”, if tag handling is identical across all trading systems. In this case column 7M will be left blank.

“Comment” will contain the tag’s FIX data type, admitted values (optional) and further explanatory remarks.

Integer(5) means that the tag’s value may have 5 significant digits (after leading zeroes have been removed), Float(10,3) means that tag’s value may have 10 significant digits including at most 3 decimal places. Those are **not FIX data type definitions** but mere conventions of writing and valid only for this document.

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5.2 Logon / ~~Logon With Simultaneous Password Change~~

Please note that a Logon request message will **always** be answered by a Logon response message issued by the FIX engine (possibly with simultaneous password change). If the Logon request is finally rejected, then an additional Logout response will be sent. [Further information on future password management will be announced in due course.]

Logon Request

| Tag | Field Name | RF | R | 7M | Comment |
|-----|----------------------------|----|---|----|--|
| | <standard message header> | M | M | | Tag 35 = "A" (MsgType) |
| 98 | EncryptMethod | M | M | | Integer Method of encryption Must be set to 0 = "none / other" |
| 108 | HeartBtInt | M | M | | Integer Heartbeat interval Will be checked against a BT-FIX Gateway configuration file value |
| 141 | ResetSeqNumFlag | O | O | OO | Boolean "Y" indicates that the both sides of the FIX session should reset sequence numbers |
| 383 | MaxMessageSize | O | O | OO | Length Maximum number of bytes supported for a single message |
| 553 | Username | O | M | | FAGSE Session ID Password changes regarding the ID may be required, within the T7 member section. The last 4 digits of the FAGSE session ID correspond to the FIX main branch account number = <enteringFirm> String(10) UserID or username Must be identical to the <entering-firm> PartyID-value Only integer values will be accepted |
| 554 | Password | O | M | | String Password FAGSE Session Password from the T7 Member SectionValue must contain numeric digits and letters. Special characters are not allowed. |
| 789 | NextExpectedMsgSeqNum | O | O | OO | SeqNum Next expected MsgSeqNum value to be received Reserved for future use This tag will be ignored. |
| 925 | NewPassword | O | O | OO | String New password If the new password is available, then a password change will be done during Logon-processing. Value must contain numeric digits and letters. Special characters are not allowed. |
| | <standard message trailer> | M | M | | |

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Logon Response

| Tag | Field Name | RF | R | 7M | Comment |
|----------------------------|-----------------------|----|---|----|---|
| <standard message header> | | M | M | | Tag 35 = "A" (MsgType) |
| 98 | EncryptMethod | M | M | | Integer Method of encryption Will be set to 0 = "none / other" |
| 108 | HeartBtInt | M | M | | Integer Heartbeat interval |
| 141 | ResetSeqNumFlag | O | O | OO | Boolean "Y" indicates that the both sides of the FIX session should reset sequence numbers |
| 383 | MaxMessageSize | O | O | OO | Length Maximum number of bytes supported for a single message |
| 553 | Username | O | O | OO | String(10) UserID or username The tag will not be supplied at present |
| 789 | NextExpectedMsgSeqNum | O | O | OO | SeqNum Next expected MsgSeqNum value to be received Reserved for future use Will not be supplied |
| <standard message trailer> | | M | M | | |

The following additional message will be sent. Please note that you cannot expect SessionStatus always to be supplied.

Logout Response

| Tag | Field Name | RF | R | 7M | Comment |
|----------------------------|---------------|----|---|----|---|
| <standard message header> | | M | M | | Tag 35 = "5" (MsgType) |
| 58 | Text | | O | OO | String Error text |
| 1409 | SessionStatus | | O | OO | Integer Error code Valid values: 5 = Invalid username or password 7 = Logons are not allowed at this time 8 = Password expired |
| <standard message trailer> | | M | M | | |

If a Logon Request is rejected with tag 1409 set to "8", the customer may immediately try to send an extended Logon Request including a new password. This second message format of the Logon Request may be used anytime.

If tag 925 is present one of the following situations may occur:

- The old password provided is invalid. The request will be rejected
- The old password provided is valid. The request will be accepted and the old password will be replaced by the new one. It does not matter if the old password has expired or not.

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5.3 Password Change

The request may only be used if a valid FIX session has been established. Therefore **it cannot be used when a password has expired**. [Further information on future password management will be announced in due course.]

User Request

| Tag | Field Name | RF | R | 7M | Comment |
|----------------------------|-----------------|----|---|----|--|
| <standard message header> | | M | M | | Tag 35 = "BE" (MsgType) ⁴ |
| 553 | Username | M | M | | String(10) UserID or username Must be identical to the <entering firm> PartyID value |
| 554 | Password | O | M | | String Password Value must contain numeric digits and letters. Special characters are not allowed. |
| 923 | UserRequestID | M | M | | String(16) Unique identifier for a User Request |
| 924 | UserRequestType | M | M | | Integer Indicates the action required by a User Request message Must be set to "3" (ChangePasswordForUser) |
| 925 | NewPassword | O | M | | String New password Value must contain numeric digits and letters. Special characters are not allowed. |
| <standard message trailer> | | M | M | | |

User Response

| Tag | Field Name | RF | R | 7M | Comment |
|---------------------------|---------------|----|---|----|--|
| <standard message header> | | M | M | | Tag 35 = "BF" (MsgType) ⁵ |
| 553 | Username | M | M | | String UserID |
| 923 | UserRequestID | M | M | | String(16) Unique identifier for a User Request |

⁴ FIX 4.2 sessions will use "UBE"

⁵ FIX 4.2 sessions will use "UBF"

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| Tag | Field-Name | RF | R | 7M | Comment |
|----------------------------|----------------|----|---|----|---|
| 926 | UserStatus | O | M | | Integer Indicates the status of a user Password-change successful: 5 = "Password-Changed successful" Password-change not successful: 2 = "Not-Logged-In" 3 = "User-Not-Recognized" 4 = "Password-Incorrect" 6 = "Other" Further information along with password change without success may be found on tag-927 |
| 927 | UserStatusText | O | O | OO | String If password-change successful then tag will be not-filled A text description associated with a user-status (tag-926) |
| <standard-message-trailer> | | M | M | | |

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5.45.3 Logout**Logout Request**

| Tag | Field Name | RF | R | 7M | Comment |
|-----|----------------------------|----|---|----|------------------------|
| | <standard message header> | M | M | | Tag 35 = "5" (MsgType) |
| | <standard message trailer> | M | M | | |

Logout Response

| Tag | Field Name | RF | R | 7M | Comment |
|-----|----------------------------|----|---|----|---|
| | <standard message header> | M | M | | Tag 35 = "5" (MsgType) |
| 58 | Text | | O | OO | String A text description for logout |
| | <standard message trailer> | M | M | | |

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5.55.4 System Shutdown

From the customer's point of view an incoming News message where status is set to 002 = "End of Business Day" indicates that a system shutdown has been initiated by the BT-FIX Gateway. No more incoming requests will be accepted, but outgoing messages waiting for delivery will still be transmitted. Trading -systems may also generate further messages, which will also be distributed. As soon as all trading systems have finished to do so, the BT-FIX Gateway will disseminate a News message where status is set to 003 = "End of Business Day Cutoff" and – after a short delay – a logout message for every active connection. Then all sessions/connections will be terminated unconditionally.

| No. | System Shutdown | Message Flow | | |
|-----|---|--------------|----------------|----------------|
| | | FE Customer | BT FIX Gateway | Trading System |
| 1 | News ("2", "End of Business Day") <i>Further client requests</i> | | ←● | |
| 2 | NewOrderSingle <i>Declined to requests after "End of Business Day"</i> | ●→ | | |
| 3 | Business Message Reject (4) <i>Message from system</i> | | ←● | |
| 4 | Execution Report ("Trade", "Partially filled") | | ←● | ←● |
| 5 | News ("3", "End of Business Day Cut-Off") | | ←● | |
| 6 | Logout | | ←● | |
| 8 | Session termination | | ←● | |

News Messages

| Tag | Field Name | RF | R | 7M | Comment |
|-----|----------------------------|----|---|----|--|
| | <standard message header> | M | M | | Tag 35 = "B" (MsgType) |
| 33 | LinesOfText | | M | | NumInGroup Identifies number of lines of text body Will be set to "1" |
| 58 | Text | | M | | String Message text End of Business Day "End of Day Processing – No more Input Messages" End of Business Day Cut-Off "End of Business Day Cutoff, System unavailable" |
| 148 | Headline | | M | | String System status "002" = End of Business Day "003" = End of Business Day Cut-Off |
| | <standard message trailer> | M | M | | |

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6 Reject and Business Message Reject

Only tags of the message body will be discussed. No party or instrument information will be present in either message.

Reject (MsgType = 3)

| Tag | Field Name | RF | R | 7M | Comment |
|------|---------------------|----|---|----|---|
| 45 | RefSeqNum | M | M | | SeqNum Sequence number of the request being rejected |
| 58 | Text | O | O | OO | String Error text |
| 371 | RefTagID | O | M | | Integer Tag number of the FIX field being referenced |
| 372 | RefMsgType | O | M | | String MsgType of the FIX message being referenced |
| 373 | SessionRejectReason | O | O | OO | Integer Reject reason |
| 5555 | ReturnCode | | O | OO | Integer Return code |
| 9803 | TradingSystemID | | O | OO | Integer Identifies the system generating the return code |

If an appropriate FIX error code is provided in tag 373 (SessionRejectReason), tag 58 (Text) may be present or not. If no such code can be determined, Tags 5555 (ReturnCode), 9803 (TradingSystemID) and 58 (Text) will be present, but **tag 373 (SessionRejectReason) will be missing**. If field relationship has been evaluated, tag 371 (RefTagID) will contain the tag number of the tag which is missing or not allowed.

Business Message Reject (MsgType = j)

| Tag | Field Name | RF | R | 7M | Comment |
|------|----------------------|----|---|----|---|
| 45 | RefSeqNum | O | M | | String MsgType of the FIX message being referenced |
| 58 | Text | O | O | OO | String Error text |
| 372 | RefMsgType | M | M | | Integer MsgType of the FIX message being referenced |
| 380 | BusinessRejectReason | M | M | | Integer Reject reason |
| 5555 | ReturnCode | | O | OO | String Return code |
| 9803 | TradingSystemID | | O | OO | Integer Identifies the system generating the return code |

If an appropriate FIX error code is provided in tag 380 (BusinessRejectReason), tag 58 (Text) may be present or not. If no such code can be determined, tags 5555 (ReturnCode), 9803 (TradingSystemID) and 58 (Text) will be present; **tag 380 (BusinessRejectReason) will, however, be set to "0"**.

7 FIX Messages at Application Levels







7.1 Explanation of the FIX Message Body







| | |
|------------------------|--|
| <u>Sorting:</u> | <p>The elements of <instrument> Component Blocks may be transferred in any order. Elements do not need any ascending or descending order rule. The same rule is valid for messages sent by the BT-FIX Gateway.</p> <p>Repeating Groups contain fields with a fixed start position, and other ones at any position within the Repeating Group.</p> <p>A Repeating Group always starts with the tag containing the number of groups, then the first tag of this group follows. Fields with a fixed position are highlighted in grey and are at the same position as in the Repeating Group. All other fields are sorted ascending by tags, but may be transferred without any sequence order. The same rule is valid for Repeating Groups generated by the BT-FIX-Gateway.</p> |
| <u>Column headers:</u> | <p>7M: These details (Mandatory/Optional/Conditional/Not allowed) are listed for the trading systems T7 GSE/MAX-ONE. RF will indicate if a tag is required resp. how a tag is handled with respect to the FIX protocol version, R will indicate if a tag is required resp. how a tag is handled with respect to the RoE. 7M will detail tag handling for all target trading resp. settlement-systems. When discussing a Cancel/Replace Request, the values chAngeable and Unchanged (no modification possible) will also be used. EnterOTC, DeleteOTC contain Mandatory/Optional/Conditional/Not allowed/Ignore for the Requests: Enter order, deletion, OTC-routing and OTC-trades.</p> <p>All other column headers are self-explanatory.</p> |
| <u>Content:</u> | <p>Columns “R” and “RF” will indicate if a tag is <u>M</u>andatory or <u>C</u>onditionally mandatory. Cell content will only be set to “M” or “C” if the tag handling is identical across all trading systems. In this case column 7M will be left blank. If the field is part of a repeating group or component block, then “M” means that the field within the superior structure is mandatory. The corresponding attribute concerning the message is then a part of the structure. When a tag within one target-system is mandatory in one system and optional in another one, then code “O” will be default .</p> <p>All fields are marked with a “C” when depending from another field. Example: StopPx depends on OrdType. In this case StopPx is filled with Code “C”.</p> <p>“Comment” will contain the tag's FIX data type, admitted values (optional) and further explanatory remarks.</p> <p>Integer(5) means that the tag's value may have up to 5 significant digits (after leading zeroes have been removed), Float(10,3) means that tag's value may have up to 10 significant digits including up to 3 decimal places. Those are not FIX data type definitions but mere conventions of writing and valid only for this document.</p> |

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7.2 Order Functionality**7.2.1 Order Entry****7.2.1.1 Operations – Orders**

| No. | Successful Submission of an Order | Message Flow | | |
|-----|---|---|---|---|
| | | FE Customer | BT FIX Gateway | Trading System |
| 1 | New Order Single |  |  | |
| | | | | |
| | <i>Optionally: Preliminary confirmation with PendingReason (tag 5946)</i> | | |  |
| 2 | Execution Report ("Pending New", "Pending New") | |  | |
| | <i>Final confirmation positive</i> | | |  |
| 3 | Execution Report ("New", "New") | |  | |

| No. | Unsuccessful Submission of an Order | Message Flow | | |
|-----|---|---|---|---|
| | | FE Customer | BT FIX Gateway | Trading System |
| 1 | New Order Single |  |  | |
| | | | | |
| | <i>Optionally: Preliminary confirmation with PendingReason (tag 5946)</i> | | |  |
| 2 | Execution Report ("Pending New", "Pending New") | |  | |
| | <i>Final confirmation negative with error information (tags 5555, 9320, 9803)</i> | | |  |
| 3 | Execution Report ("Rejected", "Rejected") | |  | |

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| No. | Submission of an Order Without Final Confirmation | Message Flow | | |
|-----|--|---|---|---|
| | | FE Customer | BT FIX Gateway | Trading System |
| 1 | New Order Single |  |  | |
| | <i>Optionally: Preliminary confirmation with PendingReason (tag 5946)</i> | | |  |
| 2 | Execution Report ("Pending New", "Pending New") | |  | |
| | <i>End of day: Preliminary confirmation with PendingReason 4 = "order status unknown (end of day)"</i> | | |  |
| 3 | Execution Report ("Pending New", "Pending New") | |  | |

7.2.1.2 NewOrderSingle Request

| Tag | Field Name | RF | R | 7M | Comment |
|------------------------------|------------|----|---|----|--|
| <standard message header> | | M | M | | Tag 35 = "D" (MsgType) |
| <parties> | | O | M | | |
| 453 | NoPartyIDs | O | M | | NumInGroup Number of parties involved Valid values are 1 – 6 The value must correspond to the number of parties (repeating groups) provided |
| <entering firm> | | O | M | | The participant operating the connection |
| <executing firm> | | O | O | OO | The participant being in charge of the order If the repeating group is missing, "entering firm" will become the owner of the order |
| <market maker> | | O | O | OO | The market maker <u>Only Not relevant</u> valid for T7 GSE and MAX-ONE. <u>The content of this field is ignored-Will be ignored.</u> |
| <intermediary> | | O | O | NN | Not permitted |
| <systematic internalizer> | | O | O | NN | Xetra Best Executor Only valid for Xetra. Not permitted |
| <client identification code> | | O | O | OO | Identification of the customer |
| <investment decision maker> | | O | O | OO | Trading member employee or algorithm being responsible for the investment decision. |
| <Execution within firm> | | O | O | OO | Trading member employee or algorithm being responsible for the order execution. |
| end <parties> | | | | | |
| <instrument> | | M | M | | Financial instrument, given as ISIN |

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| Tag | Field Name | RF | R | 7M | Comment |
|-----|--------------------|-------|-------|----|--|
| | <trading sessions> | O | O | OO | Trading Session Information Only TradingSessionSubID will carry useful information Alternatively single tags 336 and 625 may be used This also holds for FIX 4.2 messages. Please note that FIX 4.4 definitions hold, which are not compliant with FIX 4.2 |
| | <OrderAttributes> | O | O | OO | Repeating Group for attributes of orders |
| | <ValueChecksGrp> | O | O | OO | Check flag for the market value permitted as a maximum for one order on the trading venue. |
| 1 | Account | O | O | OO | String(2) Consists of Account Type and Account Type Number Possible values: P1 – bank's own-account trading A1 – bank's customer (agent) business |
| 11 | CIOrdID | M | M | | String(16) Unique key of an order related task (request) Will be provided by the sending system. As long as the corresponding order is active, no task (request) referring to it will be allowed to use the identical CIOrdID value. So uniqueness must be guaranteed across the entire life cycle of an order. Uniqueness will be verified by the BT-FIX Gateway |
| 21 | HandlInst | M / O | M / O | | Char for "FIX 4.2" mandatory for "FIX 4.4" optional Instructions for order handling on Broker trading floor Valid values: 1 = Automated execution order, private, no Broker intervention 2 = Automated execution order, public, Broker intervention OK 3 = Manual order, best execution This tag will be ignored. |
| 38 | OrderQty | O | M | | Qty, Float(12,3) Total quantity ordered |
| 40 | OrdType | M | M | | Char Valid values MAX-ONE 1 = "Market" 2 = "Limit" 3 = "Stop" 4 = "Stop Limit" T7 GSE 1 = "Market" 2 = "Limit" 3 = "Stop" |
| 44 | Price | C | C | | Price, Float(13,5) Order limit, must be present if Tag 40 (OrdType) is set to "2", "4" or "P", must not be present otherwise |
| 54 | Side | M | M | | Char Side of order Valid values: 1 = "Buy" 2 = "Sell" |

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| Tag | Field Name | RF | R | 7M | Comment |
|------|-------------------------|----|---|-------|---|
| 58 | Text | O | O | OO | String(24) Text |
| 59 | TimeInForce | O | O | OO | Char Valid values: 0 = "Day" 6 = "Good till Date" Default: "0" |
| 60 | TransactTime | M | M | | UTC Timestamp Provided by the sending system or the owner of the order. This tag will be ignored. |
| 99 | StopPx | C | C | | Price, Float(13,5) Stop Limit, must be present if tag 40 (OrdType) is set to "3" or "4", must not be present otherwise |
| 100 | ExDestination | O | M | | Target exchange MIC Code |
| 110 | MinQty | O | O | NN | Qty, Float(12,3) Minimum quantity to be executed. Not permitted |
| 432 | ExpireDate | C | C | | LocalMktDate Order expiration date Must be present if Tag 59 is set to "6", must not be present otherwise |
| 526 | SecondaryClOrdID | O | O | OO | String(16) Bank internal order number User defined key of the order (Order number) May be defined by the sending system or the owner of the order. Will not be validated by the BT-FIX Gateway. However, the rules of the respective trading system will be valid. The uniqueness is not checked by the system. |
| 1094 | PegPriceType | | O | NN | Integer Not permitted |
| 1138 | DisplayQty | | O | NN | Qty, Float(12,3) Not permitted |
| 1724 | OrderOrigination | O | O | OO | Integer Flag for DEA (Direct Electronic Access). (ESMA RTS 24, Field 2) 5 = DEA (Direct Electronic Access) Missing Tag means „no DEA“. |
| 1815 | TradingCapacity | O | O | NNOON | Integer Trading function. (ESMA RTS 24, Field 7) 1 = AOTC (trading for customer) 5 = DEAL (trading for his own account) 6 = DEAL (trading as Market Maker) 9 = MTCH (matching of corresponding customer orders) Missing tag means „1=AOTC“ wenn Tag1 Account = „A1“ oder „5=DEAL“ wenn Tag1 Account = „P1“ |
| 5076 | FundReinvestIncome | | O | NN | Char Not permitted |
| 5078 | FundSpecialDealDiscount | | O | NN | Char Not permitted |

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| Tag | Field Name | RF | R | 7M | Comment |
|----------------------------|----------------|----|---|----|---|
| 5156 | UnreleasedDate | | O | OO | LocalMktDate MAX-ONE Attribute for orders valid from this date. Must be filled with date >= current business date Every date > current business date is valid, even if the date is not a trading day The actual value valid-from will be set by the trading system internally. The used value will be delivered in the response message (also in tag 5156 - field unreleased date). |
| 5253 | OrdTypeExt | | C | OO | Char MAX-ONE E = "EG-Order" |
| <standard message trailer> | | M | M | | |

7.2.1.3 Response "Execution Report" – Identification Criteria

FIX tags within the Execution Report for the identification of responses for order submissions:

| FIX tags | | Response for Order submission | | | |
|----------|---------------|---|-----------|----------------|-------------------------|
| Tag | Field | Preliminary | Positive | Negative | Negative (Vestima only) |
| 39 | OrdStatus | A = "Pending New" | 0 = "New" | 8 = "Rejected" | 4 = "Cancelled" |
| 150 | ExecType | A = "Pending New" | 0 = "New" | 8 = "Rejected" | 4 = "Cancelled" |
| 5946 | PendingReason | 2 = "locked stock" 4 = "order status unknown (end of day)" | - | - | - |

7.2.1.4 Response "Execution Report" – Message Data

A New Order Single Request may provide only one entry in the <parties> component block, if entering firm and executing firm are identical. Yet, the BT-FIX gateway will nevertheless set up two entries in the Execution Report. If a market maker is involved, an additional entry will be generated.

| Tag | Field Name | RF | R | 7M | Comment |
|---------------------------|------------|----|---|----|--|
| <standard message header> | | M | M | | Tag 35 = "8" (MsgType) |
| <parties> | | O | M | | |
| 453 | NoPartyIDs | O | M | | NumInGroup Number of parties involved Valid values are 2 ... 4 The value must correspond to the number of parties (repeating groups) provided |
| <entering firm> | | O | M | | The participant operating the connection |
| <executing firm> | | O | O | MM | The participant having issued the order If the repeating group is missing, "entering firm" will become the owner of the order |
| <market maker> | | O | O | OO | The market maker |

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| Tag | Field Name | RF | R | 7M | Comment |
|---------------------------|-------------|----|---|----|--|
| <intermediary> | | O | O | NN | Data for intermediary (sales institution) Will not be delivered |
| <systematic internalizer> | | O | O | NN | Xetra Best Executor Will not be delivered |
| end <parties> | | | | | |
| <instrument> | | M | M | | Financial instrument given as ISIN |
| 1 | Account | O | O | OM | String(2) Consists of Account Type and Account Type Number Trading systems may provide default values |
| 6 | AvgPx | M | M | | Price Average price Will be set to "0" |
| 11 | ClOrdID | O | M | | String(16) Unique key of an order related task (request) |
| 14 | CumQty | M | M | | Qty, Float(12,3) Total quantity executed Will be set to "0" |
| 17 | ExecID | M | M | | String Unique key of the Execution Report Uniqueness must be guaranteed within a single trading day |
| 37 | OrderID | M | M | | String(20)Integer Unique order number of the trading system (without leading zeros) If no order number is available, "[N/A]" will be set. This happens in case of rejections and preliminary confirmations. |
| 38 | OrderQty | O | M | | Qty, Float(12,3) Total quantity ordered |
| 39 | OrdStatus | M | M | | Char Order status 0 = "New" Submission positive A = "Pending New" Submission preliminarily accepted (further information can be found in tag 5946 – PendingReason) 8 = "Rejected" Submission rejected |
| 40 | OrdType | O | M | | Char Order type |
| 44 | Price | C | C | | Price, Float(13,5) Order limit Filled for OrdType = "2", "4" or "P" |
| 54 | Side | M | M | | Char Side of order 1 = "buy" 2 = "sell" |
| 58 | Text | O | O | OO | String(24) Text |
| 59 | TimeInForce | O | M | | Char |

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| Tag | Field Name | RF | R | 7M | Comment |
|------|-------------------------|----|---|----|---|
| 60 | TransactTime | O | M | | UTC Timestamp [microseconds YYYYMMDD-HH:MM:SS.ssssss] Time of execution/order creation |
| 99 | StopPx | C | O | CC | Price, Float(13,5) Stop limit, filled for OrdType = "3" or "4" |
| 100 | ExDestination | O | M | | Exchange MIC Code Will always be supplied by the BT-FIX Gateway |
| 110 | MinQty | O | O | NN | Qty, Float(12,3) Minimum quantity to be executed Will not be delivered |
| 150 | ExecType | M | M | | Char Type of Report 0 = "New" Submission positive A = "Pending New" Submission preliminarily accepted (further information to be seen via tag 5946 – PendingReason) 8 = "Rejected" Submission rejected |
| 151 | LeavesQty | M | M | | Qty, Float(12,3) Quantity open for further execution Will be set to OrderQty |
| 336 | TradingSessionID | O | O | OO | String(1) Valid value 1 = "Day" Will always be used from a New Order Single Request together with tag 625 |
| 432 | ExpireDate | O | M | | LocalMktDate Order expiration date Will always be supplied with TimeInForce = "6" (tag 59) |
| 526 | SecondaryClOrdID | O | O | OO | String(16) Bank internal order number User defined key of the order (Order number) |
| 625 | TradingSessionSubID | O | O | CC | String Will always be used together with tag 336 |
| 1094 | PegPriceType | | O | NN | Integer Will not be delivered |
| 1138 | DisplayQty | | O | NN | Qty, Float(12,3) Maximum visible volume of the order Will not be delivered |
| 5048 | OrdSubStatus | | O | NN | String Will not be delivered |
| 5076 | FundReinvestIncome | | O | NN | Char Will not be delivered |
| 5078 | FundSpecialDealDiscount | | O | NN | Char Will not be delivered |

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| Tag | Field Name | RF | R | 7M | Comment |
|--|----------------------|----|----------|-----------|--|
| 5156 | UnreleasedDate | | O | OO | LocalMktDate Will be used to set up a "valid from" condition MAX-ONE Date valid from for orders which become valid in the future. Tag contains exchange day from which the order will be valid. |
| 5253 | OrdTypeExt | | C | OO | Char Second order type Will be set to "E" if present. Used only for EG-Orders MAX-ONE E = EG Order |
| 5476 | PrivateReference | | O | NN | String Will not be delivered |
| 5689 | VersionID | | O | NN | Integer(18) Will not be delivered |
| <u>5862</u> | <u>UpdateReason</u> | | <u>O</u> | <u>ON</u> | <u>Reason of order modification or deletion by the system</u> <u>Value range see appendix C</u> |
| 5946 | Pending Reason | | O | CC | String Delivery by BT-FIX Gateway; only integer(1) This field is only filled in case of preliminary confirmation ("Pending New" - OrdStatus = A, ExecType = A) 2 = "locked stock" Order submission held on because of a locked order book (T7 GSM, MAX-ONE) 4 = "order status unknown (end of day)" No confirmation of order submission until end of day (either positive nor negative). Status of the order is unknown. |
| 9933 | CombinedOrderType | | O | ON | Char Will not be delivered |
| The following fields are only filled in the case of a rejection ("Rejected" - OrdStatus = 8, ExecType = 8) | | | | | |
| 5555 | ReturnCode | | O | CC | Integer Return code |
| 9320 | OrderRejectReasonTxt | | O | CC | String Error text delivered by the trading system |
| 9803 | TradingSystemID | | O | CC | Integer Identification ID of the system generating the return code |
| <standard message trailer> | | M | M | | |

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7.2.2 Order-Cancellation**7.2.2.1 Operations**

| No. | Successful Cancellation of an Order | Message Flow | | |
|-----|---|---|---|---|
| | | FE Customer | BT FIX Gateway | Trading System |
| 1 | Order Cancel ("CLOrdID", "OrigCLOrdID") |  |  | |
| | <i>Optionally: Preliminary confirmation with PendingReason (tag 5946)</i> | | |  |
| 2 | Execution Report ("Pending Cancel", "Pending Cancel") | |  | |
| | <i>Confirmation</i> | | |  |
| 3 | Execution Report ("Cancelled", "Cancelled") | |  | |

| No. | Rejected Cancellation of an Order | Message Flow | | |
|-----|---|---|---|---|
| | | FE Customer | BT FIX Gateway | Trading System |
| 1 | Order Cancel ("CLOrdID", "OrigCLOrdID") |  |  | |
| | <i>Optionally: Preliminary confirmation with PendingReason (Tag 5946)</i> | | |  |
| 2 | Execution Report ("Pending Cancel", "Pending Cancel") | |  | |
| | <i>Final negative confirmation with error information (tags 5555, 9320, 9803)</i> | | |  |
| 3 | Order Cancel Reject ("Rejected") | |  | |

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| Nr. | Preliminarily Accepted Cancellation of an Order | Message Flow | | |
|-----|--|---------------------|----------------|----------------|
| | | FE Customer | BT FIX Gateway | Trading System |
| 1 | Order Cancel ("CtOrdID", "OrigCtOrdID") | | | |
| | <i>Optionally: Preliminary confirmation with PendingReason (tag 5946)</i> | | | |
| 2 | Execution Report ("Pending Cancel", "Pending Cancel") | | | |
| | <i>End of day: Preliminary confirmation with PendingReason 4 = "order status unknown (end of day)"</i> | | | |
| 3 | Execution Report ("Pending Cancel", "Pending Cancel") | | | |

Explanatory Notes:

The Execution Report "Pending Replace" or "Pending Cancel", in connection with the Completion Code 127650 (MODIFICATION/CANCELLATION ACCEPTED BUT TEMPORARILY POSTPONED), means that an order modification resp. order deletion has already become logically final, but has been temporarily postponed due to technical reasons. The final Execution Report of the Acknowledgement "Replace" or "Cancel" will follow.

7.2.2.2 Order Cancel Request

~~If OrigCtOrdID is used for order identification, then ExDestination may be omitted, but must be set to the original value if present. If OrderID is used for identification, then ExDestination must have a value. Inclusion of ExDestination will improve performance. Modified tag assignment: The hitherto optional FIX tag 100 ExDestination (MIC code of the exchange location) will become „mandatory“ in the future and is thus to be included in all cases along with the call of the requests.~~

| Tag | Field Name | RF | R | 7M | Comment |
|------------------------------|------------|----|---|----|--|
| <standard message header> | | M | M | | Tag 35 = "F" (MsgType) |
| <parties> | | O | M | | |
| 453 | NoPartyIDs | O | M | | NumInGroup Number of parties involved Valid values are 1 – 5 The value must correspond to the number of parties (repeating groups) provided |
| <entering firm> | | O | M | | The participant operating the connection |
| <executing firm> | | O | O | OO | The participant being in charge of the order If the repeating group is missing, "entering firm" will become the owner of the order |
| <client identification code> | | O | O | OO | Identification of the customer |

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| Tag | Field Name | RF | R | 7M | Comment |
|------|-----------------------------|--------------|---------------|----|---|
| | <investment decision maker> | O | O | OO | Trading member employee or algorithm being responsible for the investment decision. |
| | <Execution within firm> | O | O | OO | Trading member employee or algorithm being responsible for the order execution. |
| | end <parties> | | | | |
| | <instrument> | M | M | | Financial instrument given as ISIN |
| | <OrderAttributes> | O | O | OO | Repeating Group for attribute of orders |
| 11 | ClOrdID | M | M | | String(16) Unique key of an order related task (request) Will be provided by the sending system. For as long as the corresponding order is active, no other task (request) referring to it will be allowed to use the identical ClOrdID value. So the uniqueness must be guaranteed across all trading days. Uniqueness will be verified by the BT-FIX Gateway. |
| 37 | OrderID | O | C | | String(20) Integer Unique order number of the trading system May be used for order identification. If so, then OrigClOrdID must be set to "[N/A]". |
| 38 | OrderQty | M | M | | Qty, Float(12,3) Total quantity ordered This tag will be ignored. |
| 41 | OrigClOrdID | M | M | | String(16) ClOrdID of the previous successful FIX request corresponding to the order, used to identify the order. If OrigClOrdID is set to "[N/A]", OrderID (Tag 37) must be present and will be used for order identification. |
| 54 | Side | M | M | | Char Side of order 1 = "buy" 2 = "sell" MAX-ONE also accepts cancel requests including errors but using the correct format. |
| 60 | TransactTime | M | M | | UTC Timestamp Provided by the sending system or the owner of the order. This tag will be ignored. |
| 100 | ExDestination | O | OM | | Exchange location MIC Code |
| 5253 | OrdTypeExt | | OC | OO | Char Second Order Type Will be ignored by MAX-ONEThe Request will be processed anyway. |
| 6042 | CxlReason | O | O | OO | Integer Identification of deleting an order by kill-functionality (MIFID II). 1 = Cancel by kill-functionality |
| | <standard message trailer> | M | M | | |

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7.2.2.3 Response Execution Report (Preliminary, Positive)

| Tag | Field Name | RF | R | 7M | Comment |
|---------------------------|---------------|----|---|----|--|
| <standard message header> | | M | M | | Tag 35 = "8" (MsgType) |
| <parties> | | O | M | | |
| 453 | NoPartyIDs | O | M | | NumInGroup Number of parties involved Valid value: only "2" The value must correspond to the number of parties (repeating groups) provided |
| <entering firm> | | O | M | | The participant operating the connection |
| <executing firm> | | O | O | MM | The participant having sent the order If the repeating group is missing, "entering firm" will become the owner of the order |
| end <parties> | | | | | |
| <instrument> | | M | M | | Financial instrument |
| 6 | AvgPx | M | M | | Price Average price Will be set to "0" |
| 11 | ClOrdID | O | M | | String(16) The value provided by the request will be returned |
| 14 | CumQty | M | M | | Qty, Float(12,3) Total quantity executed |
| 17 | ExecID | M | M | | String Unique key of the Execution Report Uniqueness must be maintained across the entire trading day. |
| 37 | OrderID | M | M | | IntegerString(20) Unique order number of the trading system (without leading zeros) |
| 38 | OrderQty | M | M | | Qty, Float(12,3) Total quantity ordered |
| 39 | OrdStatus | M | M | | Char Order status 4 = successfully cancelled 6 = cancellation pending Cancellation preliminarily accepted (more information see Tag 5946 – PendingReason). |
| 41 | OrigClOrdID | O | M | | String(16) The values provided by the request will be returned |
| 44 | Price | O | O | CC | Price, Float(13,5) Order limit, will be provided if OrdType is set to "2", "4" or "P" |
| 54 | Side | M | M | | Char Side of order |
| 60 | TransactTime | O | M | | UTC Timestamp [microseconds YYYYMMDD-HH:MM:SS.ssssss] Time of execution/order cancellation |
| 100 | ExDestination | | M | | Exchange location MIC Code |

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| Tag | Field Name | RF | R | 7M | Comment |
|----------------------------|---------------------|----|----------|----|---|
| 150 | ExecType | M | M | | Char Type of Report 4 = "Cancelled" Cancellation positive 6 = "Cancellation Pending" Cancellation preliminarily accepted (further information on tag 5946 – PendingReason). |
| 151 | LeavesQty | M | M | | Qty, Float(12,3) Quantity open for further execution Will be set to "0" |
| 526 | SecondaryClOrdID | O | O | OO | String(16) Bank internal order number |
| 5048 | OrdSubStatus | | O | NN | String Will not be delivered |
| 5476 | PrivateReference | | O | NN | String Supplement to OrdSubStatus Will not be delivered |
| <u>5862</u> | <u>UpdateReason</u> | | <u>O</u> | | <u>Reason of order modification or deletion by the system</u> <u>Value range see appendix C</u> |
| 5946 | Pending Reason | | O | CC | String Delivery by BT-FIX Gateway; only integer(1) This field will only be filled when preliminarily confirmed ("Pending Cancel" – OrdStatus = 6, ExecType = 6) 2 = "locked stock" Order submission held due to a locked order book (T7 GSM, MAX-ONE) 4 = "order status unknown (end of day)" No confirmation of order submission until end of day (neither positive nor negative). Status of the order is unknown. |
| <standard message trailer> | | M | M | | |

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7.2.2.4 Response “Order Cancel Reject” (Negative from Vestima)







Instead of an Execution Report, an Order Cancel Reject message will be sent.







| Tag | Field Name | RF | R | 7M | Comment |
|----------------------------|---------------------|----|---|----|--|
| <standard message header> | | M | M | | Tag 35 = “9” (MsgType) |
| <parties> | | | M | | |
| 453 | NoPartyIDs | | M | | NumInGroup Number of parties involved Valid value “2” The value must correspond to the number of parties (repeating groups) provided. |
| <entering firm> | | | M | | The participant operating the connection |
| <executing firm> | | | O | OO | The participant having sent the order. If the repeating group is missing, “entering firm” will become the owner of the order. |
| end <parties> | | | | | |
| 11 | ClOrdID | M | M | | String(16) Unique key of an order related task (request). The value provided by the request will be returned. |
| 37 | OrderID | M | M | | <u>String(20)Integer</u> Unique order number of the trading system <u>(without leading zeros)</u> May be missing or set to “[N/A]” |
| 39 | OrdStatus | M | M | | Char Order status Will be set to “8” (Rejected). |
| 41 | OrigClOrdID | M | M | | String(16) ClOrdID of the previous successful FIX request corresponding to the order, or set to “[N/A]”. The value provided by the request will be returned. |
| 60 | TransactTime | O | M | | UTC Timestamp Time of execution/rejection |
| 100 | ExDestination | | M | | Exchange location MIC Code |
| 102 | CxlRejReason | O | M | | Integer Will be set to 99 = “Other” if no appropriate FIX reason code is available. Tag 5555 will then contain an error code, and tag 9320 contains the related error text. |
| 434 | CxlRejResponseTo | M | M | | Char Will be set to “1” (Order Cancel Request) |
| 5555 | ReturnCode | | M | | Integer Return code |
| 9320 | OrdRejectReasonText | | M | | String Error text issued by the trading system |
| 9803 | TradingSystemID | | M | | Integer Will identify the system generating the return code. |
| <standard message trailer> | | M | M | | |

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7.2.3 Order -Modification**7.2.3.1 Operations – Orders**

| No. | Immediate Successful Order Modification | Message Flow | | |
|-----|---|---|---|---|
| | | FE Customer | BT FIX Gateway | Trading System |
| 1 | Order Cancel/Replace ("ClOrdID", "OrigClOrdID") |  |  | |
| | <i>Optionally: Preliminary confirmation with PendingReason (tag 5946)</i> | | |  |
| 2 | Execution Report ("Pending Replace", "Pending Replace") | |  | |
| | <i>Confirmation positive</i> | | |  |
| 3 | Execution Report ("replace", actual order status) | |  | |

| No. | Rejected Modification of an Order | Message Flow | | |
|-----|---|---|---|---|
| | | FE Customer | BT FIX Gateway | Trading System |
| 1 | Order Cancel/Replace ("ClOrdID", "OrigClOrdID") |  |  | |
| | <i>Optionally: Preliminary confirmation with PendingReason (tag 5946)</i> | | |  |
| 2 | Execution Report ("Pending Replace", "Pending Replace") | |  | |
| | <i>Final negative confirmation with error information (tags 5555, 9320, 9803)</i> | | |  |
| 3 | Order Cancel Reject ("Rejected") | |  | |

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| No. | Temporarily Accepted Modification of an Order | Message Flow | | |
|-----|--|---|---|---|
| | | FE Customer | BT FIX Gateway | Trading System |
| 1 | Order Cancel/Replace ("ClOrdID", "OrigClOrdID") |  |  | |
| | <i>Optionally: Preliminary confirmation with PendingReason (tag 5946)</i> | |  |  |
| 2 | Execution Report ("Pending Replace", "Pending Replace") | |  | |
| | <i>End of day: Preliminary confirmation with PendingReason 4 = "order status unknown (end of day)"</i> | | |  |
| 3 | Execution Report ("Pending Replace", "Pending Replace") | |  | |

Explanatory Notes:

The Execution Report "Pending Replace" or "Pending Cancel", in connection with the Completion Code 127650 (MODIFICATION/CANCELLATION ACCEPTED BUT TEMPORARILY POSTPONED), means that an order modification resp. order deletion has already become logically final, but has been temporarily postponed due to technical reasons. The final Execution Report of the Acknowledgement "Replace" or "Cancel" will follow.

7.2.3.2 Order Cancel / Replace Request

As a rule, a Cancel/Replace Request should deliver all information items of an order. The BT-FIX Gateway supports this standard behavior, but will in addition accept messages which only include those tags whose values need to be changed – as far as optional tags are concerned. Of course all mandatory tags must always be present. The request description will discuss in detail how conditionally mandatory tags will be handled. "Unchangeable", "May not be changed", etc. merely constitute remarks. The BT-FIX Gateway will always pass the tags' values to the trading system without further examination.

Modified tag assignment: The hitherto optional FIX tag 100 ExDestination (MIC code of the exchange location) will become „mandatory“ in the future and is thus to be included in all cases along with the call of the requests. If OrigClOrdID is used for order identification, ExDestination may be missing. If ExDestination is present, then it must contain the correct value. If OrderID is used, then ExDestination must be provided.

| Tag | Field Name | RF | R | OM | Comment |
|---------------------------|------------|----|---|----|------------------------|
| <standard message header> | | M | M | | Tag 35 = "G" (MsgType) |
| <parties> | | O | M | | |

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| Tag | Field Name | RF | R | OM | Comment |
|---------------|------------------------------|-------|-------|----|--|
| 453 | NoPartyIDs | O | M | | NumInGroup Number of parties involved Valid values are 2 – 6 The value must correspond to the number of parties (repeating groups) provided. |
| | <entering firm> | O | M | | The participant operating the connection |
| | <executing firm> | O | O | MM | The participant being in charge of the order. If the repeating group is missing, then "entering firm" will become the owner of the order. |
| | <market maker> | O | O | OO | The market maker. <i>Not relevant valid for T7 GSE and MAX-ONE. The content of this field is ignored Will not be delivered</i> |
| | <systematic internalizer> | O | O | NN | Xetra Best Executor Only valid for Xetra. Not permitted |
| | <client identification code> | O | O | OO | Identification of the customer |
| | <investment decision maker> | O | O | OO | Trading member employee or algorithm being responsible for the investment decision. |
| | <Execution within firm> | O | O | OO | Trading member employee or algorithm being responsible for the order execution. |
| end <parties> | | | | | |
| | <instrument> | M | M | | Financial instrument given as ISIN |
| | <trading sessions> | O | O | OO | Trading Session Information Only TradingSessionSubID will contain useful information Alternatively, single tags 336 and 625 may be used. This also holds for FIX 4.2 messages. Please note that in this case FIX 4.4 definitions hold, which are not compliant to FIX 4.2. |
| | <OrderAttributes> | O | O | OO | Repeating Group for attribute of orders |
| | <ValueChecksGrp> | O | O | OO | Check flag for the maximum market value permitted for one order an the trading venue. |
| 1 | Account | O | O | NN | String(2) Consists of Account Type and Account Type Number. Possible values: P1 – bank's own-account trading A1 – bank's customer (agent) business |
| 11 | ClOrdID | M | M | | String(16) Unique key of an order related task (request). Will be provided by the sending system. For as long as the corresponding order is active, no task (request) referring to it will be allowed to use the identical ClOrdID value. So uniqueness must be guaranteed across the entire life span of an order. Uniqueness will be verified by the BT-FIX Gateway. |
| 21 | HandlInst | M / O | M / O | | Char "FIX.4.2" mandatory "FIX.4.4" optional Instructions for order handling on Broker trading floor. Valid values: 1 = Automated execution order, private, no Broker intervention 2 = Automated execution order, public, Broker intervention OK 3 = Manual order, best execution This tag will be ignored |

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| Tag | Field Name | RF | R | OM | Comment |
|-----|---------------|----|-----------|-----------|---|
| 37 | OrderID | O | C | | String(20)Integer Unique order number of the trading system (without leading zeros) May be used for order identification. If filled, OrigClOrdID must be set to "[N/A]". |
| 38 | OrderQty | O | M | | Qty, Float(12,3) Total quantity ordered (incl. total quantity filled). For orders addressing T7 GSE or MAX-ONE, this value is identical to the original order quantity. A modification of the QTY is not possible. T7 GSE: The request is declined if OrderQty and quantity of the original order are unequal. MAX-ONE: This tag will be ignored. |
| 40 | OrdType | M | M | | Char Valid values: T7 GSE: 1 = "Market" 2 = "Limit" 3 = "Stop" |
| 41 | OrigClOrdID | M | M | | String(16) ClOrdID of the previous successful FIX request corresponding to the order, used to identify the order. If OrigClOrdID is set to "[N/A]", OrderID (Tag 37) must be present and will be used for order identification. |
| 44 | Price | O | C | | Price, Float(13,5) Order limit Must be present if Tag 40 (OrdType) is set to "2", "4" or "P", is not allowed otherwise. |
| 54 | Side | M | M | | Char Side of order Valid values: 1 = "Buy" 2 = "Sell" May not be changed |
| 58 | Text | O | O | OO | String(24) Text |
| 59 | TimeInForce | O | O | OO | Char Valid value: 6 = Good till Date There is no default value for this tag. If the expiration date of an order must be changed, Tag 59 must be set to "6", and tag 432 must contain the (new) expiration date. |
| 60 | TransactTime | M | M | | UTC Timestamp Provided by the sending system or the owner of the order. This tag will be ignored. |
| 99 | StopPx | O | O | CC | Price, Float(13,5) Stop Limit Must be present if tag 40 (OrdType) is set to "3" or "4", is not allowed otherwise. |
| 100 | ExDestination | O | MO | OO | Exchange location MIC Code May not be changed. |

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| Tag | Field Name | RF | R | OM | Comment |
|----------------------------|------------------|----|---|----|---|
| 432 | ExpireDate | O | C | | LocalMktDate Order expiration date Must be present if Tag 59 is set to "6". |
| 526 | SecondaryClOrdID | O | O | OO | String(16) Bank internal order number User defined key of the order (Order number). May be defined by the sending system or the owner of the order. Will not be examined by the BT-FIX Gateway. The uniqueness is not checked by the system. |
| 1094 | PegPriceType | | O | NN | Integer Not permitted |
| 1138 | DisplayQty | | O | NN | Qty, Float(12,3)Not permitted |
| 1724 | OrderOrigination | O | O | OO | Integer Flag for DEA (Direct Electronic Access). (ESMA RTS 24, Field 2) 5 = DEA (Direct Electronic Access) Missing Tag means „no DEA“. |
| 5689 | VersionID | | O | NN | Integer(18) Not permitted |
| 6126 | OrigLeavesQty | | O | OO | Qty, Float(12,3) Quantity open for further execution Update control information item If it is desired to have the quantity remaining for execution checked, the expected value must be entered into Tag 6126 (T7 GSE only). Otherwise the tag may be omitted. |
| <standard message trailer> | | M | M | | |

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7.2.3.3 Response Execution Report (Preliminary, Positive)

A Cancel/Replace Request may provide only one entry in the <parties> component block, if entering firm and executing firm are identical. The BT-FIX gateway will, however, still set up two entries in the Execution Report. If a market maker is involved, then an additional entry will be generated.

| Tag | Field Name | RF | R | 7M | Comment |
|---------------------------|------------|----|---|----|---|
| <standard message header> | | M | M | | Tag 35 = "8" (MsgType) |
| <parties> | | O | M | | |
| 453 | NoPartyIDs | O | M | | NumInGroup Number of parties involved Valid values are 2 ... 3 The value must correspond to the number of parties (repeating groups) provided |
| <entering firm> | | O | M | | The participant operating the connection |
| <executing firm> | | O | O | OO | The participant being in charge of the order. If the repeating group is missing, "entering firm" will become the owner of the order. |
| <market maker> | | O | O | OO | The market maker |
| end <parties> | | | | | |
| <instrument> | | M | M | | Financial instrument given as ISIN |
| 1 | Account | M | M | | String(2) Consists of Account Type and Account Type Number |
| 6 | AvgPx | M | M | | Price Average price Will be set to "0" |
| 11 | ClOrdID | O | M | | String(16) Unique key of an order related task (request) copied from the related request |
| 14 | CumQty | M | M | | Qty, Float(12,3) Total quantity executed |
| 17 | ExecID | M | M | | String Unique key of the Execution Report Uniqueness must be guaranteed for the entire trading day |
| 37 | OrderID | M | M | | <u>IntegerString(20)</u> Unique order number of the trading system <u>(without leading zeros)</u> |
| 38 | OrderQty | O | M | | Qty, Float(12,3) Total quantity ordered |
| 39 | OrdStatus | M | M | | Char Order status 0 = "New" Will reflect the current status of the order. Modification done (finally) Filled in reference to the status of the order Modification done (preliminary) E = "Pending Replace" (for further information cf. tag 5946 – PendingReason) |
| 40 | OrdType | O | M | | Char Order type |

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| Tag | Field Name | RF | R | 7M | Comment |
|-------------|---------------------|----|----------|-----------|---|
| 41 | OrigClOrdID | O | M | | String(16) Copied from the related request ClOrdID of the previous successful FIX request related to the order, if Tag 41 was used to identify the order. Will contain "[N/A]", if Tag 37 was used for order identification. |
| 44 | Price | C | C | | Price, Float(13,5) Order limit |
| 54 | Side | M | M | | Char Side of order |
| 58 | Text | O | O | OO | String(25) Text |
| 59 | TimeInForce | O | O | OO | Char |
| 60 | TransactTime | O | M | | UTC Timestamp [microseconds YYYYMMDD-HH:MM:SS.ssssss] Time of execution/order modification |
| 99 | StopPx | C | O | CC | Price, Float(13,5) Stop limit |
| 100 | ExDestination | | M | | Exchange location MIC Code Will always be supplied by the BT-FIX Gateway |
| 150 | ExecType | M | M | | Char Type of Report will be set to "5" (Replace) Modification done (finally) 5 = "Replace" Modification done (preliminary) E = "Pending Replace" (for further information cf. tag 5946 – PendingReason) |
| 151 | LeavesQty | M | M | | Qty, Float(12,3) Quantity open for further execution |
| 336 | TradingSessionID | O | O | OO | String(1) Valid value 1 = "Day" Will always be used together with tag 625 |
| 432 | ExpireDate | O | C | | LocalMktDate Order expiration date |
| 526 | SecondaryClOrdID | O | O | OO | String(16) Bank internal order number User defined key of the order (Order number). |
| 625 | TradingSessionSubID | O | O | CC | String Will always be used together with tag 336 |
| 1094 | PegPriceType | | O | NN | Integer Not permitted |
| 1138 | DisplayQty | | O | NN | Qty, Float(12,3) Not permitted |
| 5689 | VersionID | | O | NN | integer(18) Update control key Will be provided by the trading system. |
| <u>5862</u> | <u>UpdateReason</u> | | <u>O</u> | <u>ON</u> | <u>Reason of order modification or deletion by the system</u> <u>Value range see appendix C</u> |

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| Tag | Field Name | RF | R | 7M | Comment |
|----------------------------|----------------|----|---|----|--|
| 5946 | Pending Reason | | O | CC | String Delivery by BT-FIX Gateway only as an integer(1) This field is only filled in case of preliminary confirmation ("Pending Replace" - OrdStatus = E, ExecType = E) 2 = "locked stock" Order submission in hold due to locked order book (T7 GSM, MAX-ONE). 4 = "order status unknown (end of day)" No confirmation of order submission received until end of day (neither positive nor negative). Status of the order is unknown. |
| <standard message trailer> | | M | M | | |

7.2.3.4 Response "Order Cancel Reject" (Negative)

Instead of an Execution Report, an Order Cancel Reject message is sent. It is almost identical to an Execution Report responding to a rejected Order Cancel Request. The tags listed below have differing values.

| Tag | Field Name | RF | R | 7M | Comment |
|---------------------------|--------------|----|---|----|--|
| <standard message header> | | M | M | | Tag 35 = "9" (MsgType) |
| <parties> | | | M | | |
| 453 | NoPartyIDs | | M | | NumInGroup Number of parties involved Valid value "2" The value must correspond to the number of parties (repeating groups) provided. |
| <entering firm> | | | M | | The participant operating the connection |
| <executing firm> | | | O | MM | The participant owning the order If the repeating group is missing, "entering firm" will become the owner of the order. |
| end <parties> | | | | | |
| 11 | ClOrdID | M | M | | String(16) Unique key of an order related task (request). The value provided by the Order Cancel/Replace Request will be returned. |
| 37 | OrderID | M | M | | IntegerString(20) Unique order number of the trading system <u>(without leading zeros)</u> May be missing or set to "[N/A]". |
| 39 | OrdStatus | M | M | | Char Order status Will be set to "8" (Rejected). |
| 41 | OrigClOrdID | M | M | | String(16) ClOrdID of the previous successful FIX request corresponding to the order or set to "[N/A]". The value provided by the Order Cancel/Replace Request will be returned. |
| 60 | TransactTime | O | M | | UTC Timestamp Time of execution/rejection |

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| Tag | Field Name | RF | R | 7M | Comment |
|----------------------------|---------------------|----|---|----|--|
| 100 | ExDestination | | M | | Exchange MIC Code Will always be supplied by the BT-FIX Gateway |
| 102 | CxlRejReason | O | M | | Integer Will be set to 99 = "Other" if no appropriate FIX reason code is available. Tag 5555 will then contain an error code and tag 9320 the related error text. |
| 434 | CxlRejResponseTo | M | M | | Char Will be set to "2" (Order Cancel/Replace Request) |
| 5555 | ReturnCode | | M | | Integer Return code |
| 9320 | OrdRejectReasonText | | M | | String Error text issued by the trading system |
| 9803 | TradingSystemID | | M | | Integer Will identify the system generating the return code |
| <standard message trailer> | | M | M | | |

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7.2.4 OrderExecution**7.2.4.1 Operations – Orders**

| No. | Partial Fill | Message Flow | | |
|-----|---|--------------|----------------|----------------|
| | | FE Customer | BT FIX Gateway | Trading System |
| | <i>Partial Fill</i> | | | ←● |
| 1 | Execution Report ("Trade", "Partially Filled") | | ←● | |

| No. | Complete Fill | Message Flow | | |
|-----|---|--------------|----------------|----------------|
| | | FE Customer | BT FIX Gateway | Trading System |
| | <i>Complete fill</i> | | | ←● |
| 1 | Execution Report ("Trade", "Filled") | | ←● | |

7.2.4.2 Response "Execution Report" Order Execution

The corresponding New Order Single Request may provide only one entry in the <parties> component block, if entering firm and executing firm are identical. The BT-FIX gateway will, however, still set up two entries in the Execution Report. If a market maker is involved, an additional entry will be generated.

| Tag | Field Name | RF | R | 7M | Comment |
|---------------------------|------------|----|---|----|---|
| <standard message header> | | M | M | | Tag 35 = "8" (MsgType) |
| <parties> | | O | M | | |
| 453 | NoPartyIDs | O | M | | NumInGroup Number of parties involved Valid values are 1 – 3 The value must correspond to the number of parties (repeating groups) provided. |
| <entering firm> | | O | M | | The participant operating the connection |
| <executing firm> | | O | O | OO | The participant being in charge of the order. If the repeating group is missing, "entering firm" will become the owner of the order. |
| <market maker> | | O | O | OO | The market maker |
| <systematic internalizer> | | O | O | NN | Xetra Best Executor Will not be delivered |
| end <parties> | | | | | |
| <instrument> | | M | M | | Financial instrument given as ISIN |
| <RegulatoryTradeIDGrp> | | O | O | MM | TVTIC (Trading venue transaction identification code) |
| 6 | AvgPx | M | M | | Price Average price Will be set to "0" |

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| Tag | Field Name | RF | R | 7M | Comment |
|-----|---------------|----|---|-------|--|
| 11 | ClOrdID | O | M | | String(16) Unique key of an order related task (request). The key value of the last successfully processed FIX request. |
| 14 | CumQty | M | M | | Qty, Float(12,3) Total quantity executed |
| 15 | Currency | O | O | OOOOO | Currency Trading currency used at trading exchange location |
| 17 | ExecID | M | M | | String Unique key of the Execution Report Uniqueness must be guaranteed for the entire trading day. |
| 31 | LastPx | M | M | | Price, Float(13,5) Market value |
| 32 | LastQty | M | M | | Qty, Float(12,3) Quantity bought/sold on this execution. |
| 37 | OrderID | M | M | | <u>IntegerString(20)</u> Unique order number of the trading system <u>(without leading zeros)</u> |
| 38 | OrderQty | O | M | | Qty, Float(12,3) Total quantity ordered |
| 39 | OrdStatus | M | M | | Char Order status 1 = "Partially Filled" 2 = "Filled" |
| 44 | Price | C | O | CN | Price, Float(13,5) Order limit, will be provided if OrdType is set to "2", "4" or "P". Will not be delivered by MAX-ONE. |
| 54 | Side | M | M | | Char Side of order 1 = "buy" 2 = "sell" |
| 59 | TimeInForce | O | M | | Char |
| 60 | TransactTime | O | M | | UTC Timestamp [microseconds YYYYMMDD-HH:MM:SS.ssssss] Time of execution/order creation |
| 64 | SettlDate | O | O | OO | LocalMktDate Settlement date <u>The value date from T7 or MAX-ONE is delivered with every order execution. Value date for orders, if executed before issue date.</u> |
| 99 | StopPx | C | C | | Price, Float(13,5) Stop limit, will be provided if OrdType is set to "3" or "4" |
| 100 | ExDestination | | M | | Exchange location MIC Code Will always be supplied by the BT-FIX Gateway |
| 110 | MinQty | O | O | NN | Qty, Float(12,3) Will not be deliveredWill not be delivered |
| 150 | ExecType | M | M | MM | Char Type of report All trading systems: F = "Trade" (message directed to the owner of the order) |

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| Tag | Field Name | RF | R | 7M | Comment |
|----------------------------|-------------------------------|----|---|----|---|
| 151 | LeavesQty | M | M | | Qty, Float(12,3) Quantity open for further execution 0 when filled completely |
| 155 | SettlCurrFxRate | O | O | OO | Float(10,5) Exchange rate |
| 157 | NumDaysInterest | O | O | OO | Integer Number of accrued interest days Like FIX 4.4 Tag 157; also for FIX.4.2 |
| 432 | ExpireDate | O | M | | LocalMktDate Order expiration date |
| 526 | SecondaryClOrdID | O | O | OO | String(16) Bank internal order number User defined key of the order (Order number). |
| 1094 | PegPriceType | | O | NN | Integer Will not be delivered |
| 1138 | DisplayQty | | O | NN | Qty, Float(12,3) Will not be delivered |
| 5048 | OrdSubStatus | | O | NN | Char Will not be delivered |
| 5689 | VersionID | | O | NN | Integer(18) Will not be delivered |
| 5944 | InitialDisplayQty | | O | NN | Qty, Float(12,3) Will not be delivered |
| 6585 | SpreadPctDiscount | | O | NN | Float(10,7) Will not be delivered |
| 6611 | TotalAccruedInterestAmt | | O | NN | Float(17,8) Will not be delivered |
| 6893 | Profit | | O | NN | Float(15,8) Will not be delivered |
| 7491 | CustomPrice1 | | O | NN | Float(15,8) Will not be delivered |
| 7680 | OTCInd | | M | | Integer Indicator trade is exchange related 0 = On exchange trade 1 = Off exchange trade |
| 9583 | MIFIDInternalizationIndicator | | O | NN | Char Will not be delivered |
| <standard message trailer> | | M | M | | |

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7.2.5 Requests Using Any Other Interface Than FIX**7.2.5.1 Submission, Modification and Cancellation of Orders**

Submissions, modifications and cancellations of Orders via an interface other than the FIX interface may generate FIX Execution Reports, whenever an entering firm/executing firm using the FIX connection is affected.

- T7 GUI T7 GSE, MAX-ONE
- ETI Gateway Specialist T7 GSE
- MAX-ONE GUIs MAX-ONE

Execution Reports will be distributed whenever the first request triggering the workflow has been accepted. They will be generated for all events included in the workflow. E.g., for an order modification entered during a locked stock period, which was subsequently rejected when the locked stock period had ended, a positive (Pending Replace) and a negative (Reject) Execution Report will be transmitted. Only Execution Reports are affected, differing tag values are discussed below.

Execution Reports will additionally include the <session> repeating group in the <parties> component block. OrigClOrdID (Tag 41) will be set to "[N/A]". ClOrdID (Tag 11) will reflect the last successfully processed request entered via the FIX interface (if any).

If a request entered via an interface other than the FIX interface is rejected, no information will be passed onto the BT-FIX Gateway.

| Tag | Field Name | RF | R | 7M | Comment |
|---|-------------------|----|---|----|---|
| <parties> component block, NoPartyIDs will be increased | | | | | |
| 448 | <session> PartyID | | M | | String KVNr or MemberID of the originator |
| 447 | PartyIDSource | | M | | Char Will always be set to "D" |
| 452 | PartyRole | | M | | Integer Will be set to 55 = "Session ID" |
| 802 | NoPartySubIDs | | M | | NumInGroup Will be set to "1" |
| 523 | PartySubID | | M | | String(6) The last six Characters of the originator's user identifier |
| 803 | PartySubIDType | | M | | Integer Will be set to "4040" (User identifier) |
| 11 | ClOrdID | M | M | | String(16) ClOrdID of the previous successfully processed FIX request corresponding to the order or set to "[N/A]". The value provided by the request will be returned. |
| 41 | OrigClOrdID | M | M | | String(16) Set to "[N/A]" |

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7.2.5.2 Triggering a Stop Order

The trading system will generate an Execution Report almost identical to the Execution Report responding to an unconditionally accepted Order Cancel/Replace Request. OrdStatus will always be set to "0" (New). In addition, the TriggerIndicator (tag 6489) will be set to "Y", and a party instance of type <executing system> – see chapter 7.2.3.3 Response Execution Report (Preliminary, Positive) – will be added to the <parties> repeating group. OrigClOrdID (Tag 41) will be set to "[N/A]". ClOrdID (Tag 11) will reflect the last successfully processed request entered via the FIX interface (if any). Tag 6489 (TriggerIndicator) will be delivered.

| Tag | Field Name | RF | R | 7M | Comment |
|--|-------------------------------|----|---|----|---|
| <parties> component block, tag 453 will be increased | | | | | |
| 448 | <executing system> PartyID | | M | | String Valid values: T7 GSE MAX-ONE |
| 447 | PartyIDSource | | M | | Char Will always be set to "D" |
| 452 | PartyRole | | M | | Integer Will be set to 16 = "Executing System" |
| 802 | NoPartySubIDs | | M | | NumInGroup Will be set to "1" |
| 523 | PartySubID | | M | | String Will be set to "[N/A]" |
| 803 | PartySubIDType | | M | | Integer Will be set to "3" (System) |
| | | | | | |
| 11 | ClOrdID | | M | | String(16) ClOrdID of the previously successful FIX request corresponding to the order or set to "[N/A]". The value provided by the request will be returned |
| 39 | OrdStatus | | M | | Char Order status Valid values: 0 = "new" |
| 41 | OrigClOrdID | | M | | String(16) Will be set to "[N/A]" |
| 6489 | TriggerIndicator | | C | CC | Always set to "Y". "Y" = Trigger Stop Order Will never be present when responding to a Cancel/Replace request |

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7.2.5.3 Activation of an EG Order

If the rule for the activation of an EG-order is fulfilled, then it will be activated by the intermediary.

In this case an Execution Report is transmitted, which is similar to the Execution Report for a modification from any other interface (cf. chapter "Order Submission, Modification and Cancellation").

In this case Tag 6489 (TriggerIndicator) will be delivered in addition:

| Tag | Field Name | RF | R | 7M | Comments |
|------|------------------|----|---|----|--|
| 6489 | TriggerIndicator | | C | CC | Char MAX-ONE "A" = activation of an EG-Order |

7.2.6 System Generated Order Modifications and Cancellations

In certain specific situations orders will be modified and cancelled by the relevant trading system:

- Master data modification modification, cancellation
- Suspended trading cancellation
- Ancillary rights modification, cancellation
- Order decline (MAX-ONE, T7 GSE) cancellation
- Input of system administrator (Market Supervision) modification, cancellation

In these cases Execution Reports are also generated. These Reports are similar to Cancel/Replace resp. Cancel Requests, with the following differences:

- An additional entry for PartyRole **executing system** at the <parties> Component Block is generated
- An additional Tag 5862 UpdateReason is created, which includes the reason for the modification or cancellation of the order
- Cancellations due to validity FIX messages include an additional differing OrdStatus "C" ("expired") and ExecType "C" ("expired")

According to the end of day processing, some orders are modified and cancelled by T7 GSE. These orders will be transferred to the relevant OMS at the next morning.

| Tag | Field Name | RF | R | 7M | Comment |
|---|-------------------------------|----|---|----|---|
| <parties> Component Block (tag 453 will be increased) | | | | | |
| 448 | <executing system> PartyID | | M | | String Valid values are T7 GSE MAX-ONE |
| 447 | PartyIDSource | | M | | Char Will be set to = "D" |
| 452 | PartyRole | | M | | Integer Will be set to 16 = "Executing System" |
| 802 | NoPartySubIDs | | M | | NumInGroup Will be set to "1" |

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| Tag | Field Name | RF | R | 7M | Comment |
|-------------|---------------------|----|----------|-----------|--|
| 523 | PartySubID | | M | | String Will be set to "[N/A]" |
| 803 | PartySubIDType | | M | | Integer Will be set to "3" (by system) |
| 39 | OrdStatus | | M | | Char OrderStatus Will be set to "C" (expired) in case of cancellation due to order validity expiration. |
| 150 | ExecType | | M | | Char Type of record Will be set to "C" (expired) in case of cancellation due to order validity expiration. |
| <u>5862</u> | <u>UpdateReason</u> | | <u>O</u> | <u>OO</u> | <u>Reason of order modification or deletion by the system</u> <u>Value range see appendix C</u> |

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| Tag | Field Name | RF | R | 7M | Comment |
|------|--|----|---|----|---|
| 5862 | UpdateReason (future valid values will be announced at a later date) | | O | OO | <p>String(15) Reason of order modification or deletion by the system</p> <p><u>Master data modifications:</u> "SBSL" = Loss of SB/SL ability of securities "MSEG" = Change of market segment "EREO" = Date of redenomination "ENOT" = Suspension of price fixing "MBKS" = Modification of single price quotation flag, smallest tradeable unit, minimum amount or increment "MBVA" = Modification variable trading flag, smallest tradeable unit, minimum amount or increment "KSVA" = Change of single price fixing to continuous price "KSKH" = Change of single price fixing into no trading "VAKS" = Change from continuous price fixing without single price fixing to single price fixing "VAKH" = Change from continuous price fixing without single price fixing to no trading "VKKS" = Change from continuous price fixing with single price fixing to single price fixing "VKVA" = Change from continuous price fixing with single price fixing to continuous price fixing without single price fixing "VKKH" = Change from continuous price fixing with single price fixing to no trading "LHBR" = End of subscription rights trading</p> <p><u>Ancillary rights:</u> "EXBR" = Ex subscription rights "EXBA" = Ex bonus shares "EXDI" = Ex dividend "EXAG" = Ex dividend distribution "EXDA" = Ex dividend (with foreign shares) "EXSP" = Division (split) with foreign shares "EXRS" = "Reverse split" (merge) for shares "EXZS" = Ex interest (with redemption) "EXAZ" = Ex compensation payments (with shares) "EXBO" = Ex bonus rights (with shares) "EABC" = Ex various rights "HL" = Comment (order deletion) "HA" = Comment (limit markup) "WKNA" = ISIN change</p> <p><u>Miscellaneous events:</u> "AUSG" = Suspended trading "ORDEREXPIRED" = Order decline</p> |

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7.2.7 Component Blocks

Only the following component blocks defined by FIX version 4.4 message specifications will be used:

- Instrument
- Parties
- Trading Sessions
- Order Attributes
- Value Checks
- Regulatory TradeID

7.2.7.1 Instrument Component Block <instrument>**Incoming Messages**

| Tag | Field Name | RF | R | 7M | Comment |
|-----|------------------|----|---|----|-------------------------------------|
| 55 | Symbol | O | M | | String This tag will be ignored. |
| 48 | SecurityID | O | M | | String ISIN |
| 22 | SecurityIDSource | O | M | | String Must be set to "4" |

Outgoing Messages

| Tag | Field Name | RF | R | 7M | Comment |
|-----|------------------|----|---|----|---|
| 55 | Symbol | O | M | | String Will always be set to "[N/A]" |
| 48 | SecurityID | O | M | | String ISIN |
| 22 | SecurityIDSource | O | M | | String Will always be set to "4" |

The instrument component block will be referred to by <instrument>.

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7.2.7.2 Party Concept <parties>

The party component block is used to describe all parties participating in a transaction. For each party a separate repeating group is set up.

The parties component block is referred to by <parties>, the repeating groups by <entering firm>, <executing firm>, <market maker>, <executing system>, <Client Identification Code>, <Execution within Firm>, <Investment Decision Maker> and <session>, respectively.

Incoming Messages

| Tag | Field Name | RF | R | 7M | Comment |
|-----|---------------|----|---|----|--|
| 453 | NoPartyIDs | O | M | | NumInGroup Number of parties concerned Valid values are 1 – 6 The value must correspond to the number of parties (repeating groups) provided. |
| 448 | PartyID | O | M | | String PartyRole = 1 (Executing Firm) String(4), KVNr of the owner of the order PartyRole=3 (Client Identification Code) String(20), Shortcode. (ESMA RTS24 Field 3) Special values: 1 = AGGR 2 = PNAL PartyRole = 7 (Entering Firm) String(4), KVNr of party/customer PartyRole=12 (Execution within Firm) String(20), Shortcode or algorithm. (ESMA RTS24 Field 5) Special values: 3 = NORE PartyRole = 66 (Market Maker) String(4), KVNr of intermediary PartyRole=122 (Investment Decision Maker) String(20), Shortcode or algorithm. (ESMA RTS24 Field 4) |
| 447 | PartyIDSource | O | M | | Char PartyIDSource=D (KVNr), if PartyRole equal to 1 = "Executing Firm" 7 = "Entering Firm" 66 = "Market Maker" PartyIDSource=P (Shortcode), if PartyRole equal to 3 = "Client Identification Code" 12 = "Execution within Firm" 122 = "Investment Decision Maker" |
| 452 | PartyRole | O | M | | Integer Valid values: 1 = "Executing Firm" 3 = "Client Identification Code" 7 = "Entering Firm" 12 = "Execution within Firm" 66 = "Market Maker" This tag will be ignored 122 = "Investment Decision Maker" |

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| Tag | Field Name | RF | R | 7M | Comment |
|------|--------------------|----|---|----|---|
| 2376 | PartyRoleQualifier | O | O | OO | <p>Integer</p> <p>The indication of this qualifiers is only necessary if „PartyID“ represents an algorithm (22) and not a shortcode (default).</p> <p>The differentiation of a shortcode as LEI (23) or natural person (24) ist not necessary and will be ignored.</p> <p>22 = „Algorithmus“ PartyID as algorithm. Only valid for PartyRoles 12 = "Execution within Firm" 122 = "Investment Decision Maker"</p> <p>23 = „LEI (Legal Entity Identifier)" PartyID as Shortcode for LEI Only valid for PartyRole 3 = "Client Identification Code"</p> <p>24 = „Nat. Person" PartyID as Shortcode for a natural person Only valid for PartyRole 3 = "Client Identification Code" 12 = "Execution within Firm" 122 = "Investment Decision Maker"</p> |

Outgoing Messages

| Tag | Field Name | RF | R | 7M | Comment |
|-----|---------------|----|---|----|--|
| 453 | NoPartyIDs | O | M | | <p>NumInGroup</p> <p>Number of parties concerned</p> <p>Valid values are 1 – 5</p> <p>The value must correspond to the number of parties (repeating groups) provided.</p> |
| 448 | PartyID | O | M | | <p>String</p> <p>PartyRole = 1 (Executing Firm) String(4), KVNr of the owner of the order</p> <p>PartyRole = 7 (Entering Firm) String(4), KVNr of party/customer</p> <p>PartyRole = 16 (Executing System) Valid values: T7 GSE "MAX-ONE"</p> <p>PartyRole = 55 (Session ID) String(4), KVNr of originator</p> <p>PartyRole = 66 (Market Maker) String(4), KVNr of the intermediary</p> |
| 447 | PartyIDSource | O | M | | <p>Char</p> <p>Will always be set to "D"</p> |
| 452 | PartyRole | O | M | | <p>Integer</p> <p>Valid values:</p> <p>1 = "Executing Firm" 7 = "Entering Firm" 16 = "Executing system" 55 = "Session ID" 66 = "Market Maker" This tag will be ignored</p> <p>"55" will only be used for an order entry/modification via any interface other than FIX. "16" will indicate a message generated by a trading system.</p> |

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| Tag | Field Name | RF | R | 7M | Comment |
|-----|----------------|----|---|----|---|
| 802 | NoPartySubIDs | O | C | | NumInGroup Will be set to "1" if PartyRole = "55" or "16 ", or will be missing. |
| 523 | PartySubID | O | C | | String(11) Will contain the user identifier of the person/role who caused the original action. Only valid if PartyRole is set to "55". |
| 803 | PartySubIDType | O | C | | Integer Will be set tot "4040" (user identifier), if PartyRole is set to "55". Will be set tot "3" (system), if PartyRole is set to "16 |

7.2.7.3 Trading Sessions Repeating Group <trading sessions>

Incoming Messages

| Tag | Field Name | RF | R | 7M | Comment |
|-----|---------------------|----|---|----|--|
| 386 | NoTradingSessions | O | O | OO | NumInGroup will be ignored Must always be set to "1" If this tag is available, the tags 336 and 625 will follow. |
| 336 | TradingSessionID | O | O | OO | String(1) will be ignored Must always be set to "1" mandatory if tag 386 is available mandatory if tag 625 is available |
| 625 | TradingSessionSubID | O | O | OO | String mandatory if tag 336 is available Valid values: T7 GSE: 6 = "Main auction" (KS - Kassa-Order) MAX-ONE 6 = "Main auction" (KS - Kassa-Order) The assignment corresponds to FIX 5.0 definitions. |

Instead of Repeating Group <trading sessions> – which always exist with one instance only – the Single Tags TradingSessionID (336) and TradingSessionSubID (625) can be used. Tag NoTradingSessions (386) is not allowed.

The Trading Sessions Repeating Group will be referred to with <trading sessions>.

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7.2.7.4 Order Attribute Repeating Group <OrderAttributes>

Only valid for inbound messages

| Tag | Field Name | RF | R | 7M | Comment |
|------|---------------------|----|---|----|--|
| 2593 | NoOrderAttributes | O | O | OO | NumInGroup Number of order attributes. Only the values 1 .. 3 are permitted. The value indicated must match the number of the repeating groups that follow. |
| 2594 | OrderAttributeType | O | O | OO | Integer Type of attribute. 0 = AGGR (Aggregated Order) The inclusion of this attribute excludes the concurrent inclusion of the party <client identification code> (ESMA RTS 24 Field 3) 1 = PNAL (Pending Allocation) The inclusion of this attribute excludes the concurrent inclusion of the party <client identification code> (ESMA RTS 24 Field 3) 2 = Liquidity provision activity order (ESMA RTS 24 Field 8) Only permitted in NewOrderSingle message. 6 = NORE The inclusion of this attribute excludes the concurrent inclusion of the party <Execution within firm> (ESMA RTS 24 Field 5) |
| 2595 | OrderAttributeValue | O | O | OO | String(1) Value for OrderAttributeType Y = Yes |

7.2.7.5 Value Checks Repeating Group <ValueChecksGrp>

Only valid for inbound messages

| Tag | Field Name | RF | R | 7M | Comment |
|------|------------------|----|---|----|---|
| 1868 | NoValueChecks | O | O | OO | NumInGroup Number of ValueCheck entries contained. Only the value „1“ is permitted. |
| 1869 | ValueCheckType | O | O | OO | Integer Type of attribute. 1 = Value check for market value permitted as a maximum on the trading venue (ESMA RTS 7 Opt-Out-Flag) |
| 1870 | ValueCheckAction | O | O | OO | Integer Value for ValueCheckType 0 = no value check 1 = perform value check (Default) |

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7.2.7.6 Regulatory TradeID Repeating Group <RegulatoryTradeIDGrp>

| Tag | Field Name | RF | R | 7M | Comments |
|------|-----------------------|----|---|----|--|
| 1907 | NoRegulatoryTradeID | O | O | | NumInGroup Only „1“ is valid. |
| 1903 | RegulatoryTradeID | O | O | | String(52) TVTIC (Trading venue transaction identification code) The T7 GSE TVTIC is a concatenation of: Envir_Flag (1) + SecurityID (20) + TranTime (20) + DealType (1) + MatchStepID (10) MAX-ONE TVTIC: Segment MIC (4 digits) + ISIN (12 digits) + Trading day (8 digits) + time of price fixing termination (12 digits) |
| 1906 | RegulatoryTradeIDType | O | O | | Integer Type of Regulatory TradeID 5 = TVTIC (Trading venue transaction identification code) |

7.2.8 Particular Tag Behavior

Faulty tags of New Order Single Requests are always returned in the Execution Report.

Default values of a New Order Single are taken onto the Execution Report. Optional tags of the Execution Report are only filled if they are used in the request, too.

If an order is sent by an interface other than FIX, in defined cases optional tags can be transferred if they include no significant values. In this case the client must be capable to handle content like 12 = 0 or 526 = " ".

This can occur in case of Cancel/Replace Requests – in the case of less information of an Cancel Reject message.

Multiple blanks are deleted by the BT-FIX Gateway. If a tag consists of blanks only, then only one blank will be left.

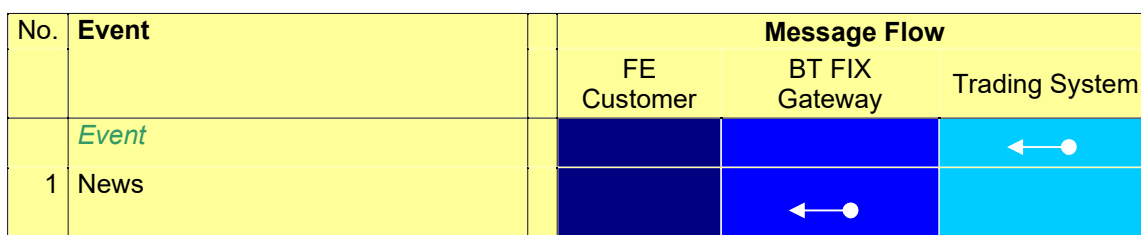
Example:

An order will be changed: the text of the order will be adjusted from “dissimilar blank” to “blank”.

This modification is communicated as an ExecutionReport with Tag 58 = " ". For this reason it is obvious that the new order text is blank.

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7.3 Notification of Events**7.3.1 Operations****7.3.2 Component Blocks****News Messages**

| Tag | Field Name | RF | R | 7M | Comment |
|---------------------------|----------------|----|---|----|--|
| <standard message header> | | M | M | | tag 35 = "B" (MsgType) |
| <LinesOfTextGrp> | | O | M | | |
| <InstrmtGrp> | | O | O | | |
| 148 | Headline | | M | | String event key - FIXOF Suspension of price fixing <u>(MAX-ONE)</u> - FIXON Withdrawal of price fixing suspension <u>(MAX-ONE)</u> - TRINT Interruption of the price determination - TRSTA Restart of the price determination - BOINT Interruption of the trading sessions - NBSTA restart of the trading sessions - BOEND End of trading T7 GSE - EHEND End of trading MAX-ONE End of trading session <u>Event key T7 MassActionReason</u> <u>- T7MARnnn</u> <u>Values for für nnn:</u> <u>105 = Product State Halt</u> <u>106 = Product State Holiday</u> <u>107 = Instrument Suspended</u> <u>110 = Volatility Interruption</u> <u>111 = Product temporarily not tradeable</u> <u>113 = Instrument Stopped</u> <u>116 = Instrument Sold Out</u> <u>115 = Instrument Knock Out</u> <u>118 = Instrument Knock Out has been reverted</u> <u>Event key T7 News</u> <u>- T7NEWS Market Supervision info in the "Text" field</u> |
| <routingGrp> | | O | M | | |
| 6255 | EndTime | | O | OO | String end of trading hours (event T7EXP) Format "HHMM0000" |
| 6516 | NewsValidUntil | | O | OO | LocalMktDate date until the news is valid |
| 6517 | NewsEventDate | | O | OO | LocalMktDate date for resp. date from which the news is valid |

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| Tag | Field Name | RF | R | 7M | Comment |
|-----|----------------------------|----|---|----|---------|
| | <standard message trailer> | M | M | | |

7.3.3 NoLinesOfText Repeating Group <LinesOfTextGrp>

| Tag | Field Name | RF | R | 7M | Comment |
|-----|-------------|----|---|----|--|
| 33 | LinesOfText | | M | | NumInGroup Number of lines filled with "1" |
| 58 | Text | | M | | String text for event |

7.3.4 NoRelatedSym Repeating Group <InstrmtGrp>

| Tag | Field Name | RF | R | 7M | Comment |
|-----|------------------|----|---|----|--|
| 146 | NoRelatedSym | O | O | | NumInGroup Number of lines filled with "1" If this tag is available, the tags 55, 22 and 48 will follow |
| 55 | Symbol | O | C | | String available if tag 146 is present Will be set to "[N/A]" by the BT-FIX Gateway |
| 22 | SecurityIDSource | O | C | | String must be present if tag 146 contains a value Will be set to "4" by the BT-FIX Gateway |
| 48 | SecurityID | O | C | | String must be present if tag 146 contains a value ISIN |

7.3.5 NoRoutingIDs Repeating Group <RoutingGrp>

| Tag | Field Name | RF | R | 7M | Comment |
|-----|--------------|----|---|----|---|
| 215 | NoRoutingIDs | O | O | | NumInGroup Valid values are "1", "2" or "3". If this tag is available, then tags 216 and 217 will follow. |
| 216 | RoutingType | O | C | | Integer Available if tag 215 is present Will be set to "1" by the BT-FIX Gateway. |

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| Tag | Field Name | RF | R | 7M | Comment |
|-----|------------|----|---|----|---|
| 217 | RoutingID | O | C | | <p>String</p> <p>Available if tag 215 is present contains</p> <ul style="list-style-type: none"> - 1st Group-Element always trading system ("<u>T7</u>", "<u>MAX</u>") - 2nd Group-Element always trading exchange location <u>MAX-ONE: MIC (e.g. "XMUN")</u> <u>T7 GSE: MIC + "/" + product group (T7 ProductID)</u> <u>(e.g. "XDUS/123")</u> - 3rd Group-Element always receiver <p>Note: If a receiver is available, then the trading system and trading exchange location will be given, too. Their content value may, however, be "[N/A]". If a trading exchange location is available, then the trading system will be given, too. This content may, however, assume the value of "[N/A]".</p> |

7.4 Trade Functionality

7.4.1 Supported Events

| Scenario | Incoming Message | Outgoing Message | Recipient of Outgoing Message |
|---|--------------------|-----------------------|--|
| OTC trade entry | TradeCaptureReport | TradeCaptureReportAck | Originator |
| OTC trade cancellation | TradeCaptureReport | TradeCaptureReportAck | Originator |
| Trade information (realtime contract notes) | - | TradeCaptureReportSno | Both counterparties (depending on the connections configuration) |

In case of an OTC trade entry or cancellation, the originator receives a confirmation.

In addition, contract notes for the trade are send to both counterparties.

For 3270 dialog or SAKI entries the FIX member gets a FIX message about the generated contract note.






For trades generated out of a price fixing or trade entries, all FIX members affected will get a FIX message about the generated contract note. The messages for the contract notes include information about the affected orders.




The transmission of contract note information (TradeCaptureReportSno) depends on the configuration of the member. These will only delivered to FIX members who have been set up for the reception of realtime contract notes.

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7.4.2 Operations

| Nr. | OTC Requests | Message Flow | | |
|-----|------------------------------------|---|---|---|
| | | FE Customer | BT FIX Gateway | T7 GSE |
| 1 | Trade Capture Report |  |  | |
| | | |  | |
| | <i>Confirmation (always final)</i> | | |  |
| 3 | Trade Capture Report Ack | |  | |

| Nr. | SNO Realtime | Message Flow | | |
|-----|--|--------------|---|---|
| | | FE Customer | BT FIX Gateway | T7 GSE |
| | Contract note | | |  |
| 1 | Trade Capture Report SNO (for counterpart 1) | |  | |
| 2 | Trade Capture Report SNO (for counterpart 2) | |  | |

7.4.3 OTC Trades– Requests**7.4.3.1 Request “TradeCaptureReport” – Identification Criteria**

The following FIX tags within the TradeCaptureReport for identification of trade requests will be given:

| | 6556 BusinessTransactionType | 487 TradeReportTransType | 856 TradeReportType |
|------------------------------------|---|-------------------------------------|--------------------------------|
| OTC trade entry (EnterOTC) | Tag not available | 0 (new) | 0 (submit) |
| OTC trade cancellation (DeleteOTC) | Tag not available | 1 (cancel) | 6 (TradeReportCancel) |

In all cases tag 571 (TradeReportID) is filled with a unique value (Unique identifier of trade capture report). The uniqueness must be ensured by the FIX member. There is no check within the FIX Gateway.

The field TradeReportID in the request message is returned back with the response message.

For cancellations of OTC trades, the trade number will be filled in tag 880 (TrdMatchID).

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In the following chapter the message format of the cases supported will be described.

Columns “R” and “RF” will indicate if a tag is Mandatory or Conditionally mandatory. The columns EnterOTC contain information about Mandatory/Optional/Conditional/Not allowed/Ignored.

7.4.3.2 Request “TradeCaptureReport” – Message Data

| Tag | Field Name | RF | R | EnterOTC | DeleteOTC | Comments |
|---------------------------|----------------------|----|---|----------|-----------|---|
| <standard message header> | | M | M | | | Tag 35 = “AE” (MsgType) |
| 30 | LastMkt | O | M | | | Stock Exchange Location MIC Code |
| 31 | LastPx | M | M | | | Price, Float(10,4) |
| 32 | LastQty | M | M | | | Quantity, Float(13,3) |
| 60 | TransactTime | M | M | | | UTCTimestamp |
| 64 | SettlDate | O | | C | I | LocalMktDate Date of fixed value Always used in combination with tag 5053 |
| 75 | TradeDate | M | M | | | LocalMktDate Trade date (AS) Date of trade having been transacted |
| 283 | LocationID | O | O | I | N | String(4) Is not yet used by the BT-FIX gateway. |
| 487 | TradeReportTransType | O | M | | | Integer 0 = new EnterOTC 1 = cancel DeleteOTC |
| 570 | PreviouslyReported | M | M | C | C | Boolean If Tag 487 = new (0), then Tag 570 = N, otherwise = Y N = EnterOTC Y = DeleteOTC |
| 571 | TradeReportID | M | M | | | String(16) Unique Identifier of trade, assigned by the FIX Client. Not checked by the BT FIX Gateway |
| 572 | TradeReportRefID | O | O | N | M | String(16) Key of a trade related task, assigned by the FIX Client |
| 578 | TradeInputSource | O | O | O | I | String(4) Segment MIC of a „Non T7 GSE Exchange Trading Venue” in order for the trade to be flagged according to the CSDR rules and regs. |

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| Tag | Field Name | RF | R | EnterOTC | DeleteOTC | Comments |
|----------------------------|-------------------------|----|---|----------|-----------|--|
| 818 | SecondaryTradeReportID | O | O | O | I | String(13) bank internal OTC number, assigned by the FIX Client. Not checked by the BT FIX Gateway |
| 880 | TrdMatchID | O | O | N | M | <u>IntegerString(16)</u> Original T7 trade number <u>(without leading zeros)</u> Not permitted |
| 856 | TradeReportType | O | M | | | Integer 0 (submit) EnterOTC 6 = TradeReportCancel DeleteOTC |
| <instrument> | | M | M | | | |
| <TrdRegTimestamps> | | O | | O | I | Deviating trade contraction date (code "AA") |
| 5053 | TradeType2 | O | | C | I | Integer Identification code of fixed value date 1 (DVP) = FZ Always used in combination with tag 64 |
| 5179 | TradeTime | O | | O | I | String Trade time (hhmmss) <u>EnterOTC</u> The current trade entry time is used as default. |
| 6556 | BusinessTransactionType | O | O | N | N | String 1 = TradeAdvice |
| 5458 | MDDelayed | O | O | I | I | Boolean Delay-Indicator This tag will be ignored. |
| 7017 | VolumeIndicator | O | O | I | I | Integer Quotation unit 1 = "unit", 2 = "percentage", 3 = "per thousand", 4 = "scores", 9 = "other" |
| 7566 | TimezoneOffset | O | O | I | I | signed Integer Difference between UTC Time Stamp and actual (local) trade time. |
| 7567 | ReportedPxDiff | O | O | I | I | Boolean Deviant price indicator <u>This tag will be ignored.</u> |
| 7568 | ReportedPxReason | O | O | I | I | Char Negotiated price indicator "N" = negotiated Trade This tag will be ignored. |
| 7680 | OTCInd | O | O | O | I | Integer OTC (Off Exchange order) indicator 0 = On-exchange 1 = Off-exchange (default) |
| <TrdCaptRptSideGrp> | | M | M | | | |
| <standard message trailer> | | M | M | | | |

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7.4.3.3 Instrument Component Block <instrument>

| Tag | Field Name | RF | R | EnterOTC | DeleteOTC | Comments |
|-----|------------------|----|---|----------|-----------|--|
| 55 | Symbol | O | M | | | String Ticker symbol This tag will be ignored by the BT FIX Gateway. |
| 48 | SecurityID | M | M | | | String ISIN |
| 22 | SecurityIDSource | M | M | | | String Always set to "4" |

The instrument component block is referenced with <instrument>.

7.4.3.4 NoTrdRegTimestamps Repetition Group <TrdRegTimestamps>

The "TrdRegTimestamps" component block contains the Repeating Group NoTrdRegTimestamps.

| Tag | Field Name | RF | R | EnterOTC | DeleteOTC | Comments |
|-----|---------------------|----|---|----------|-----------|---|
| 768 | NoTrdRegTimestamps | O | O | O | I | NumInGroup Valid value "1" If available then tags 769 and 770 will follow. |
| 769 | TrdRegTimestamp | O | C | C | I | UTCTimestamp Following tag 768, if Tag 768 is available. This field contains the deviant trade date. Enter-OTC Permitted are off-exchange days in past (max. 90 days). If the field is not filled, the current exchange day is used. |
| 770 | TrdRegTimestampType | O | C | C | I | Integer Available if tag 768 is present Valid values 1 = "Execution Time" |

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7.4.3.5 NoTransactionCosts Repeating Group <courtage>

| Tag | Field Name | RF | R | EnterOTC | DeleteOTC | Comments |
|------|---------------------|----|---|----------|-----------|---|
| 9471 | NoTransactionCosts | O | O | O | I | NumInGroup Valid value = "1" If available, then tag 9473 will follow; possibly tag 9476 will follow. |
| 9473 | TransactionCostCode | O | O | C | I | Char Available if tag 9471 is present. Valid values: 1 = AC (different brokerages fee) 2 = FC (free of brokerage fee) 3 = FR (free of any fees) In combination with tag 12, only "3" = FR is valid. |
| 9476 | TransactionCostAmt | O | O | C | I | Float(9,2) Amount of brokerage fees Available if tag 9473 contains "1" = AC. |

7.4.3.6 NoSides Repeating Group <TrdCaptRptSideGrp>

The "TrdCaptRptSideGrp" component block contains Repeating Group NoSides, which contains Repeating Groups NoTransactionCosts and NoPartyIDs.

| Tag | Field Name | RF | R | EnterOTC | DeleteOTC | Comments |
|----------|------------|----|---|----------|-----------|--|
| 552 | NoSides | M | M | 2 | 1 | NumInGroup For EnterOTC: Valid value = "2" Tag 54 will follow (Side). |
| <Side 1> | | M | M | | | <Side 1> trade details of the originator |
| <Side 2> | | O | O | M | N | <Side 2> trade details of the counterparty |

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<Side1>

| Tag | Field Name | RF | R | EnterOTC | DeleteOTC | Comments |
|---------------------|---------------------|----|---|----------|-----------|---|
| 54 | Side | M | M | | | Char Side of trade 1 = Buy 2 = Sell |
| 37 | OrderID | M | M | | | String Will be set to "[N/A]" |
| <parties> | | O | M | | | |
| 453 | NoPartyIDs | O | M | | | NumInGroup Valid values are 1 – 4. |
| <entering firm> | | O | M | | | |
| <executing firm> | | O | O | O | O | |
| <report originator> | | O | O | N | N | |
| <execution venue> | | O | O | N | N | |
| end <parties> | | O | M | | | |
| 12 | Commission | O | O | O | I | Float(9,2) Commission |
| 15 | Currency | O | O | M | I | Currency Currency of price fixing This tag will be ignored for EnterOTC. |
| 58 | Text | O | O | O | I | String(24) Arbitrary text |
| 155 | SettlCurrFxRate | O | O | C | I | Float(10,5) Currency exchange rate of trade Only valid with tag 156 |
| 156 | SettlCurrFxRateCalc | O | O | C | I | Char D = divide Only valid with tag 155 |
| 6586 | CashOffset | O | O | O | I | Float(9,2) Reinvestment discount in percent For investment trust certificates only. This tag will be ignored. |
| <courtage> | | O | O | O | I | |
| 9596 | ClientFreeField1 | O | O | C | I | String Provision Float(10,3) > 0 Only valid with tag 9597 If tag 9597 = "PD" then value <= 9999999,990 (3rd decimal digit = 0) |
| 9597 | ClientFreeField2 | O | O | C | I | String(2) Key for provision Only valid with tag 9596 Valid values: PD = "Amount in Euro" |

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<Side2>

| Tag | Field Name | RF | R | EnterOTC | DeleteOTC | Comments |
|---------------|------------|----|---|----------|-----------|--|
| 54 | Side | M | M | M | N | Char Side of trade for counterpart 1 = Buy 2 = Sell |
| 37 | OrderID | M | M | M | N | String Will be set to "[N/A]" |
| <parties> | | O | O | | | |
| 453 | NoPartyIDs | O | O | | | NumInGroup Valid value = "1" |
| <contra firm> | | O | O | M | N | |
| end <parties> | | O | M | | | |

7.4.3.7 Party Concept <parties>

The "parties" component block is used for the specification of all members of an operation.

The TradeCaptureReport for FIX 4.2 is an user defined message. The message structure is identical to the TradeCaptureReport of FIX 4.4. If a FIX 4.2 member obtains trade messages, too, then they must consider the NoPartyIDs Repeating Group.

| Tag | Field Name | RF | R | Comments |
|-----|---------------|----|---|---|
| 453 | NoPartyIDs | O | M | NumInGroup Number of involved entities Valid values are 1 – 4. The value used must conform to the numbers of the following Repeating Groups. Tags following are 448, 447, 452. |
| 448 | PartyID | O | M | String PartyRole = 1 (Executing Firm) String(4), KVNr of the owner originator PartyRole = 7 (Entering Firm) String(4), KVNr of the party/customer PartyRole = 17 (Contra Firm) String(4), KVNr of the counterparty PartyRole = 62 (Report Originator) String(11), Code for the identification of the reporting institution PartyRole = 73 (Execution Venue) String(12) Information about the features of a reported trade: <ul style="list-style-type: none"> • OTC-trade • internalised trade or • used platform for the trade (if used) • character String "OTC" for OTC trades • character String "SI" for systematic internaliser Identification of the trading platform used: <ul style="list-style-type: none"> • 12-digit starting with "B" (ISO 9662): BIC • 5 - digit starting with "M" (ISO 10383): MIC • 11-digit starting with "I" (ISO 16327): IBEI |
| 447 | PartyIDSource | O | M | Char Valid value = "D" only |

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| Tag | Field Name | RF | R | Comments |
|-----|------------|----|---|---|
| 452 | PartyRole | O | M | Integer Valid values: 1 = "Executing Firm" 7 = "Entering Firm" 17 = "Counterparty Firm" 62 = "Report Originator" 73 = "Execution Venue" |

The parties component block will be referred to as <parties>, the repeating groups as <entering firm>, <executing firm>, <contra firm>, <report originator>, <execution venue>.

7.4.4 OTC Trades – Responses**7.4.4.1 Response "TradeCaptureReportAck" – Identification Criteria**

The following FIX tags within the TradeCaptureReportAck serve as an identification of trade responses.

TradeCaptureReportAck (confirmation)

| | 6556 Business TransactionType | 487 TradeReport TransType | 856 TradeReportType | 150 ExecType |
|------------------------|--|--|-------------------------------|------------------------|
| OTC trade entry | Tag not available | 0 (new) | 0 (submit) | 0 (new) |
| OTC trade cancellation | Tag not available | 1 (cancel) | 6 (TradeReportCancel) | 4 (cancelled) |

In all cases tag 571 (TradeReportID) and tag 572 (TradeReportRefID) are filled with the content of the request message.

Tag 880 (TrdMatchID) contains the trade entry (OTC) generated trade number

TradeCaptureReportAck (Negative Confirmation)

The field assignment will have the same content as with a positive confirmation, but tag 150 (ExecType) = 8 (rejected).

In all cases tag 571 (TradeReportID) and tag 572 (TradeReportRefID) are filled with the content of the request message.

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7.4.4.2 Response “TradeCaptureReportAck” – Message Data

| Tag | Field Name | RF | R | EnterOTC | DeleteOTC | Comments |
|---------------------------|-------------------------|----|---|----------|-----------|--|
| <standard message header> | | M | M | | | Tag 35 = “AR” (MsgType) |
| <instrument> | | M | M | | | |
| 30 | LastMkt | O | M | | | Exchange location MIC Code Used by the FIX Client. Similar to the FIX 5.0 definition of TradeCaptureReportAck. |
| 58 | Text | O | C | C | C | String Error text of trading system Relates to tags 751, 5555, 9803. |
| 60 | TransactTime | M | | | | UTCTimestamp |
| 150 | ExecType | M | M | | | Char Type of report: 0 = “New”, when successful EnterOTC 4 = “Cancelled”, when successful DeleteOTC 8 = “Rejected”, when not successful |
| 487 | TradeReportTransType | O | M | | | Integer 0 = “new”, in answer to EnterOTC 1 = “cancel”, in answer to DeleteOTC |
| 571 | TradeReportID | M | M | | | String(16) Unique identifier of trade which is assigned by the FIX client. String(16) Unique identifier of trade, assigned by FIX Client. Not checked by the BT FIX Gateway. |
| 572 | TradeReportRefID | O | O | N | M | String(16) Unique identifier for trade which is assigned by the FIX client. Not checked by the BT FIX Gateway. |
| 751 | TradeReportRejectReason | O | O | O | O | Integer Reason for Rejection Only if tag 150 = “8”, then set to 99 = “Other” Combined with tags 58, 5555, 9803 |
| 818 | SecondaryTradeReportID | O | O | O | - | String(13) Bank internal OTC number which is assigned by the FIX client. Not checked by the BT FIX Gateway. |
| 856 | TradeReportType | O | M | | | Integer 0 = “submit”, in answer to EnterOTC 6 = “TradeReportCancel”, in answer to DeleteOTC |

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| Tag | Field Name | RF | R | EnterOTC | DeleteOTC | Comments |
|----------------------------|-------------------------|----|---|----------|-----------|--|
| 880 | TrdMatchID | O | M | | | IntegerString(16) T7 Trade number (without leading zeros) In case of a positive answer: Unique identifier for trade which is assigned by the trade system. In case of a negative answer: "[N/A]". |
| 5555 | ReturnCode | O | C | C | C | Integer Error code (e.g. 3730) Related to tags 58, 751, 9803 |
| 6555 | OrigTrdMatchID | O | O | - | - | IntegerString(16) Old trade number used by the FIX client's request as TrdMatchID. Will not be delivered |
| 6556 | BusinessTransactionType | O | O | N | N | String 1 = TradeAdvice |
| 9591 | PriceCheckingFlag | O | O | - | - | Integer Indicator for price alert. 2 = severe (PriceAlert) |
| 9803 | TradingSystemID | O | C | C | C | Integer Identification of the system which generated the error code. Releates to tags 58, 751, 5555 |
| <standard message trailer> | | M | M | | | |

7.4.4.3 Instrument Component Block <instrument>

| Tag | Field Name | RF | R | Comments |
|-----|------------------|----|---|---|
| 22 | SecurityIDSource | O | M | String Will always be set to "4" |
| 48 | SecurityID | O | M | String ISIN Format |
| 55 | Symbol | O | M | String Will always be set to "[N/A]" |

7.4.5 Realtime Contract Notes

The contract notes are transferred with a user defined message "TradeCaptureReportSno" (MsgType "USN").

Likewise, the FIX 4.4 defined TradeCaptureReport (MsgType AE), but without any restriction for tag 552 (NoSides). In FIX 4.4 and FIX 5.0 the only values valid are "1" and "2". For the new message "TradeCaptureReportSno" for tag 552 (NoSides), values \geq "2" are possible.

~~For one given contract note more than one message can be sent.~~

Every "TradeCaptureReportSno" can include 1 order reference.

The order reference is transferred as additional "Sides" within the repeating group "NoSides" (tag 552).

Order references are generated when the trade originated from an order, and when the member is configured for receiving order numbers. This is adjustable by the member configuration. Depending from the configuration, either the Exchange-number or the bank internal order number will be delivered.

This rule is valid for the manual input of subscription rights, too.

~~The last~~Every message for a contract note is marked with "N" in tag 9954 (NextMsgFlag).

In each message, for tag 571 (TradeReportID) a unique value will be inserted by FAGSE.

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7.4.5.1 Trade Information “TradeCaptureReportSno”

| Tag | Field Name | RF | R | Comments |
|---------------------------|----------------------|----|---|--|
| <standard message header> | | M | | Tag 35 = "USN" (MsgType) |
| <instrument> | | M | | |
| 30 | LastMkt | O | M | Exchange location MIC Code GSE-Exchanges "XDUS" = Duesseldorf "XFRA" = Frankfurt "XHAM" = Hamburg "XHAN" = Hannover "XMUN" = Muenchen |
| 31 | LastPx | M | | Price, Float(10,4) rate |
| 32 | LastQty | M | | Quantity, Float(13,3) Nominal value |
| 75 | TradeDate | M | | LocalMktDate Trade date (possibly deviant trade date) |
| 60 | TransactTime | M | | UTCTimestamp |
| 64 | SettlDate | O | C | LocalMktDate Fixed value date Always used in combination with tag 5053. |
| 283 | LocationID | O | M | String Exchange trading place of registration. Is provided as FIX Data Type Exchange. T7 GSE-Exchange "XBER" = Berlin "XMUN" = Muenchen "XDUS" = Duesseldorf "XFRA" = Frankfurt "XHAM" = Hamburg "XHAN" = Hanover "XSTU" = Stuttgart |
| 487 | TradeReportTransType | O | M | Integer 0 = new |
| 570 | PreviouslyReported | M | M | Boolean N = no |
| 571 | TradeReportID | M | M | String(16) Unique identifier, delivered by FAGSE |
| 578 | TradeInputSource | O | O | String(4) Segment MIC of a „Non T7 GSE Exchange Trading Venue“ in order for the trade to be flagged according to the CSDR rules and regs. |
| <TrdRegTimestamps> | | O | | - date of transaction + differing time of transaction (AU) If a differing date of transaction (AA) was used then this date will be used as date of transaction. Otherwise the date of transaction is always like tag 75 (trade date) - input time |
| 820 | TradeLinkID | O | O | String(16) "Wegen" trade number |
| 828 | TrdType | O | O | Integer OTC Post-trade indicator Indicator for type of transaction according to ESMA RTS 22 Field 63. 9001 = ACTX (Agency cross transaction) 9002 = CANC (Cancellation) 9101 = ACTX CANC (Agency cross transaction and Cancellation) |

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| Tag | Field Name | RF | R | Comments |
|------------------------|-----------------|----|---|---|
| 829 | TrdSubType | O | M | Integer record type See chapter 14 Appendix G: Possible Values Tag 829 TrdSubType (Record Type) e.g. 9012 = "Buy – direct trade" |
| 856 | TradeReportType | O | M | Integer 0 = submit |
| 880 | TrdMatchID | O | O | <u>IntegerString(16)</u> <u>T7 Trade number (without leading zeros)</u> |
| 1125 | OrigTradeDate | O | O | LocalMktDate Date of the original trade |
| 1126 | OrigTradeID | O | O | String(16) Original trade number Will not be delivered |
| <RegulatoryTradeIDGrp> | | O | O | TVTIC (Trading venue transaction identification code) |
| 5053 | TradeType2 | O | C | Integer indicator for fixed value date 1 (DVP) = FZ 7 (When Issued) = FE Always used in combination with tag 64 |
| 5494 | LastTrader | O | O | Integer Original intermediary |
| 5665 | MKTXPriceDiff | O | O | Float(15,2) Price difference Will not be delivered |
| 6034 | ConcessionAmt | O | O | Float(9,2) Bonus differential amount Will not be delivered |
| 6475 | ClientIndicator | O | O | Char Y = "IW-trade" Will not be delivered |

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| Tag | Field Name | RF | R | Comments |
|----------------------------|-----------------|----|---|--|
| 6732 | DealerNote | O | O | <p>String(350) different content of SAKI-Fields separated by "\"s. All relevant tags of a trade are defined in the TradeCaptureReportSno. The new tag 6732 includes the additional data content of the SAKI SNO Message respectively by the reason of additional requirements.</p> <p>Label delivery release (valid from 03.06.2013 always space)\ Different counterparty price \ <u>always „000000.0000“</u> Indicator for deviant trade date \ Type of security \ Type of custody \ Coupon date \ Constant 'APMT' \ Currency code of contract price \ Currency code of market value \ Currency code of price difference \ Currency code of interest accrued \ Flag brokerage \ Flag fees \ Indicator for reinvestment discount \ Indicator for bonus \ Indicator for bonus difference \ Indicator for commission \ Currency code of brokerage \ Currency code of fees \ Currency code of reinvestment discount \ Currency code of bonus \ Currency code of bonus difference \ Currency code of commission \ Indicator for reinvestment discount \ Indicator for bonus \ Bonus key \ Indicator for bonus difference \ Indicator for order reference \ Entering Party-ID \ Formats and values see Appendix C: User Defined Tags</p> |
| 7017 | VOLUMEIndicator | O | O | <p>Integer Unit of security quotation 1 = unit quotation, 2 = percentage quotation, 3 = per thousand quotation</p> |
| 7680 | OTCInd | O | M | <p>Integer OTC (Off Exchange) indicator 0 = on-exchange trade 1 = off-exchange trade</p> |
| 9954 | NextMsgFlag | O | M | <p>Boolean N = no (more) following records</p> |
| 9807 | RegFeeFlag | O | O | <p>Char Amount of brokerage fees from the respective brokerage fee scales. Please note that contract notes having been created by a nominal distribution routine are not allocated a key for brokerage fees, since in these cases the original nominal may have been changed. Will not be delivered</p> |
| 9893 | DiscountRate | O | O | <p>Float(9,7) Will not be delivered</p> |
| <SnoRealtimeSideGrp> | | M | | |
| <standard message trailer> | | M | M | |

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7.4.5.2 Instrument Component Block <instrument>

The “instrument” component block contains the repeating group NoSecAltID.

| Tag | Field Name | RF | R | Comments |
|---------------|-------------------------|----|---|--|
| 55 | Symbol | O | M | String Ticker symbol Will be set to “[N/A]” by the BT-FIX Gateway |
| 48 | SecurityID | O | M | String ISIN format |
| 22 | SecurityIDSource | O | M | String Will be set to “4” by the BT-FIX Gateway |
| 223 | CouponRate | O | O | Float(13,9) Interest rate |
| 228 | Factor | O | C | Float(10,9) Pool factor/conversion factor Will always be used together with tag 691 |
| 240 | RedemptionDate | O | O | LocalMktDate Last redemption date (last maturity) |
| <SecAltIDGrp> | | O | O | |
| 691 | Pool | O | C | String Indicator for tag 228. 1 = PF (pool factor) 2 = FS (Public-Bonds, municipal) 3 = IK (index coefficient) |
| 6611 | TotalAccruedInterestAmt | O | O | Float(17,8) Accumulated dividend equivalent earnings The accumulated dividend equivalent earnings must be deposited. |
| 6893 | Profit | O | O | Float(15,8) Mid-way profit Will not be delivered |
| 7491 | CustomPrice1 | O | O | Float(15,8) Initial offering price Will not be delivered |

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7.4.5.3 NoSecAltID Repeating Group <SecAltIDGrp>

The SecAltIDGrp component block contains the repeating group NoSecAltID.

| Tag | Field Name | RF | R | Comments |
|-----|---------------------|----|---|---|
| 454 | NoSecAltID | O | O | NumInGroup Will always be set to "1", "2" or "3". If present, tags 455 and 456 must follow immediately. |
| 455 | SecurityAltID | O | C | String Ticker symbol WKN ISIN Available, if tag 454 is present |
| 456 | SecurityAltIDSource | O | C | String Will be set to "8" = "Ticker symbol" "B" = "Security" (WKN) "4" = "ISIN" by the BT-FIX Gateway Available if tag 454 is present |

7.4.5.4 NoTrdRegTimestamps Repeating Group <TrdRegTimestamps>

The "TrdRegTimestamps" component block contains the repeating group NoTrdRegTimestamps.

| Tag | Field Name | RF | R | Comments |
|-----|---------------------|----|---|---|
| 768 | NoTrdRegTimestamps | O | O | NumInGroup Valid values are "1" or "2". If present, tags 769 and 770 must follow immediately. |
| 769 | TrdRegTimestamp | O | C | UTCTimestamp [microseconds YYYYMMDD-HH:MM:SS.sssss] Available if tag 768 is present. |
| 770 | TrdRegTimestampType | O | C | Integer Must be present if tag 768 has a value. Valid values 1 = "Execution Time" 2 = "Time In" |

7.4.5.5 NoMiscFees Repeating Group <gebuehren>

The "MiscFeesGrp" component block contains repeating group NoMiscFees.
Will not be delivered

7.4.5.6 NoTransactionCosts Repeating Group <courtage>

| Tag | Field Name | RF | R | Comments |
|------|---------------------|----|---|--|
| 9471 | NoTransactionCosts | O | O | NumInGroup Valid value = "1" If present, tag 9473 and when indicated 9476 follow immediately. |
| 9473 | TransactionCostCode | O | C | Char Available if tag 9471 is present. Valid values: 0 = brokerage fee 1 = AC (different brokerage fee in Euro) 2 = FC (free of brokerage fee) 3 = FR (free of any fees) |

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| Tag | Field Name | RF | R | Comments |
|------|--------------------|----|---|---|
| 9476 | TransactionCostAmt | O | C | Float(9,2) Brokerage fee Available if tag 9471 is present |

7.4.5.7 NoSides Repeating Group <SnoRealtimeSideGrp>

The Repeating Group NoSides contains Repeating Groups NoTransactionCosts, NoMiscFees and NoPartyIDs.

| Tag | Field Name | RF | R | Comments |
|----------|------------|----|---|---|
| 552 | NoSides | M | M | NumInGroup Only values ≥ "2" are possible Tag 54 (Side) will follow |
| <Side 1> | | M | M | <Side 1> trade details of the originator |
| <Side 2> | | O | O | <Side 2> trade details of the counterpart |
| <Side #> | | O | O | <Side 3> to <Side n> for order references |

<Side1>

| Tag | Field Name | RF | R | Comments |
|----------------------------|------------|----|---|---|
| 54 | Side | M | M | Char Side of trade for <entering firm> 1 = Buy 2 = Sell |
| 37 | OrderID | M | M | String Will always be set to "[N/A]" |
| <parties> | | O | M | |
| 453 | NoPartyIDs | O | M | NumInGroup Valid values "1" to "6" |
| <customer account> | | O | M | Data which specify the recipient of the contract notes |
| <executing firm> | | O | O | Data which specify the originator |
| <buyerseller> | | O | O | Data which specify buyer / seller |
| <order origination trader> | | O | O | Trader ID |
| <clearing firm> | | O | O | KVNr of clearer |
| <clearing organization> | | O | O | KVNr of the recipient of the trade confirmations in the case of internal settlement to be applied. KVNr of the recipient of the trade confirmations in the case of aggregated settlement to be applied |
| end <parties> | | O | M | |

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| Tag | Field Name | RF | R | Comments |
|------|------------------------|----|---|--|
| 1 | Account | O | O | String(2), Based on account type code and account type number. The 'indicator proprietary trading' of the recipient of the trade confirmation is shown. Exceptions are contract notes for the intermediary's proprietary trading. In such cases, the originator's 'indicator own-account trading' will be shown instead of the 'indicator own-account trading' of the recipient of the trade confirmation. In case of interbank trades, the indicator field will remain blank. Possible values: EE – intermediary's own-account trading P1 – bank's own-account trading A1 – bank's customer (agent) business |
| 12 | Commission | O | O | Float(9,2) Charges This field contains the description of charges. |
| 58 | Text | O | O | String(35) Arbitrary text, if necessary with prefix included: "BOSS/", In case of trades coming from T7 GSE order "MAX/" In case of MAX-ONE <u>order</u> -trades "FIX/" In case of OTC-trades inserted by FIX "FIXF/" In case of OTC-trades inserted by another FIX counter part |
| 119 | SettlCurrAmt | O | O | Amt, Float(12,2) Actual amount |
| 120 | SettlCurrency | O | O | Currency Currency of actual amount |
| 155 | SettlCurrFxRate | O | C | Float(10,5) Foreign exchange rate of trade. Always used in combination with tag 156 |
| 156 | SettlCurrFxRateCalc | O | C | Char D = divide Always used in combination with tag 155 |
| 157 | NumDaysIntegererest | O | C | Integer Days of interest, if tag 5427 = I Days of discount, if tag 5427 = D |
| 159 | AccruedIntegererestAmt | O | C | Amt, Float(12,2) Amount of interest, if tag 5427 = I Amount of discount, if Tag 5427 = D |
| 381 | GrossTradeAmount | O | O | Amt, Float(15,2) Market value |
| 5427 | IntegerrAttribType | O | C | Char Attribute if tag 157 and 159 will be delivered I = Interest D = Discount |
| 9596 | ClientFreeField1 | O | O | String Fee Only Float(10,3) > 0 will be accepted Always used in combination with tag 9597. Tag 9597 must not be set to "PS" If tag 9597 is set to "PD", the value must not exceed 9999999,990 (last decimal place = 0) |
| 9597 | ClientFreeField2 | O | O | String(2) Fee code Always used in combination with tag 9596 Valid values: PD = "Amount in Euro" |

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| Tag | Field Name | RF | R | Comments |
|------------|----------------------|----|---|---|
| 9938 | ClearingHandlingType | O | O | Char Character indicating internal or aggregated settlement. Flagged trades are not delivered to Clearstream. "I" = internal settlement "A" = aggregated settlement Contract note out of trading. Flagged trades are not delivered to Clearstream. "B" = aggregated settlement |
| <gebühren> | | O | O | |
| <courtage> | | O | O | |

<Side2>

| Tag | Field Name | RF | R | Comments |
|-----------------------|------------|----|---|--|
| 54 | Side | M | M | Char Side of trade for "contra firm" 1 = Buy 2 = Sell |
| 37 | OrderID | M | M | String Will be set to "[N/A]" |
| <parties> | | O | M | |
| 453 | NoPartyIDs | O | M | NumInGroup Valid values are "2" .. "7" |
| <contra firm> | | O | M | Data describing the counterparty |
| <contra firm> | | O | O | LEI (Legal Entity Identifier) of counterpart. |
| <buyerseller> | | O | M | Data describing the buyer / seller If tag 54 (Side) from <Side2> = sell, then seller If tag 54 (Side) from <Side2> = buy, then buyer |
| <settlement location> | | O | O | PSET |
| end <parties> | | O | M | |

<Side 3 >

| Tag | Field Name | RF | R | Comments |
|------|--------------|----|---|---|
| 54 | Side | M | M | Char Side of trade for <entering firm> 1 = Buy 2 = Sell |
| 37 | OrderID | M | C | String(20) System order number or bank internal order number (SecondaryClOrdID) or bank internal OTC number (SecondaryTradeReportID) together with tag 6141. |
| 119 | SettlCurrAmt | O | C | Float(10,4) proportional settlement amount |
| 6141 | TradeQty | O | C | Qty, Float(12,3) Total quantity filled together with tag 37 (OrderID) |

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7.4.5.8 Party Concept <parties>

The party component block will be used to describe all parties participating in a transaction.

The TradeCaptureReportSno for FIX 4.2 and FIX 4.4 is an user defined message. If a FIX 4.2 – member wants to receive trade messages, then they must be able to process the NoPartyIDs repeating group.

The parties component block will be referred to by <parties>. The repeating groups will be referred to by <executing firm>, <clearing firm>, <order origination trader>, <contra firm>, <clearing organization>, <customer account>, <buyer seller>, <custodian>, <agent>, <report originator>, <execution venue>.

Outgoing Messages

| Tag | Field Name | RF | R | 7M | Comments |
|------------|---------------|----|---|----|--|
| 453 | NoPartyIDs | O | M | | NumInGroup Number of parties involved Valid values are 2 .. 7 The value must correspond to the number of parties (repeating groups) provided. |
| 448 | PartyID | O | M | | String PartyRole = 1 (Executing Firm) String(4), KVNr of the originator or owner of the order PartyRole = 4 (Clearing Firm) String(4), KVNr of the clearer PartyRole = 11 (Order Origination Trader) String(6), Trader ID PartyRole = 17 (Contra Firm) String(4), KVNr of the counterpart, if PartyIDSource = D String(20), LEI (Legal Entity Identifier) of counterpart, PartyIDSource = N PartyRole = 21 (Clearing Organization) KVNr of recipient of trade confirmations in the case of internal settlement to be applied KVNr of recipient of trade confirmations in the case of aggregated settlement to be applied PartyRole = 24 (Customer Account) String(4), KVNr of the contract note- recipient PartyRole = 27 (Buyer Seller) String(4), KVNr of buyer/seller, when PartyIDSource = D |
| 447 | PartyIDSource | O | M | | Char always = "D", if PartyRole = 1, 4, 11, 21, or 24 or = "B", if PartyRole = 10, 28, or 30 or = "D" or "B", if PartyRole = 27 or = „D“ or „N“ if PartyRole 17 |
| 452 | PartyRole | O | M | | Integer Valid values 1 = "Executing Firm" 4 = "Clearing Firm" 11 = "Order Origination Trader" 17 = "Contra Firm" 21 = "Clearing Organization" 24 = "Customer Account" 27 = "Buyer Seller" 28 = "Custodian" 30 = "Agent" |
| PtysSubGrp | | O | C | | Only valid for PartyRole = 27, 28 or 30 |

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7.4.5.9 NoPartySubIDs Repeating Group <PtySubGrp>

| Tag | Field Name | RF | R | 7M | Comments |
|-----|----------------|----|---|----|--|
| 802 | NoPartySubIDs | O | C | | NumInGroup Will be set to "1" or "2" Only valid for PartyRole = 27, 28, or 30 |
| 523 | PartySubID | O | C | | String(35) For PartyRole = 27, 28, or 30 with further identification attribute of safe-accounts |
| 803 | PartySubIDType | O | C | | Integer If PartyRole = 27 then set to "4050" (buy/sell safe account) If PartyRole = 30 and tag 54 (Side) from <Side2> = sell then set to "4060" (DEAG-safe-account), If PartyRole = 30 and tag 54 (Side) from <Side2> = buy then set to "4070" (REAG-safe-account), If PartyRole = 28 and tag 54 (Side) from <Side2> = buy then set to "4080" (DECU-safe-account), If PartyRole = 28 and tag 54 (Side) aus <Side2> = sell then set to "4090" (RECU-safe-account). |

7.4.5.10 Regulatory TradeID Repeating Group <RegulatoryTradeIDGrp>

| Tag | Field Name | RF | R | 7M | Comments |
|------|-----------------------|----|---|----|--|
| 1907 | NoRegulatoryTradeID | O | O | | NumInGroup Only „1“ is valid. |
| 1903 | RegulatoryTradeID | O | O | | String(52) TVTIC (Trading venue transaction identification code) The T7 GSE TVTIC is a concatenation of: Envir_Flag (1) + SecurityID (20) + TranTime (20) + DealType (1) + MatchStepID (10) MAX-ONE TVTIC: Segment MIC (4 digits) + ISIN (12 digits) + Trading day (8 digits) + time of price fixing termination (12 digits) |
| 1906 | RegulatoryTradeIDType | O | O | | Integer Type of Regulatory TradeID 5 = TVTIC (Trading venue transaction identification code) |

8 Appendix A: Current Examples examples will be published at a later date

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9 Appendix B: Restrictions Concerning Data Types and Component Blocks**Legend**Sort sequence: Sorted ascending by column "Data type/Structure"Column headers: I/O indicates incoming/outgoing messages (from the BT-FIX Gateway's point of view). All other column headers are self-explanatory.Content: An entry in column I/O will only be present if the information provided is not valid for either direction. Entries in restrictions/values will detail usage of an item. If a trading -system is not listed in column "trading system", it will not allow the usage of the tag.

| Tag | Data type/Structure | I/O | Restrictions/Values | Trading System |
|-----|---------------------|-----|--|------------------------|
| | KVNr | | Valid "Kassenvereinsnummer" | uniform across systems |
| | Party | | The structure will be restricted to three tags PartyID PartyIDSource PartyRole If the repeating group is not of type "session", "Executing System", „Execution within firm" and „Investment Decision Maker", "Settlement Location" or "Buyer Seller" | uniform across systems |
| | | O | Exception: If PartyRole is set to "session ID", the full structure will be used; in this case, additionally, the following tags will be present: NoPartySubIDs (Tag 802, set to "1" more) PartySubID (Tag 523) (identifier) PartySubIDType (Tag 803, always set to "4040"). For type "Executing System", the following tags will be used in addition: NoPartySubIDs (tag 802, set to "1" more) PartySubID (tag 523) = "[N/A]" PartySubIDType (tag 803) always = "3". For type "Settlement Location", the following tags will be used in addition: NoPartySubIDs (tag 802), set to "2" more PartySubID (tag 523) = "identifier" PartySubIDType (tag 803) = "4060" PartySubID (tag 523) = "identifier" PartySubIDType (tag 803) = "4080" or NoPartySubIDs (tag 802), set to "2" more PartySubID (tag 523) = "identifier" PartySubIDType (tag 803) = "4070" PartySubID (tag 523) = "identifier" PartySubIDType (tag 803) = "4090" is used. For type "Buyer Seller", the following tags will be used in addition: NoPartySubIDs (Tag 802) set to "1" more PartySubID (Tag 523) = " identifier " PartySubIDType (Tag 803) = "4050" is used. For type „Execution within firm" the following qualifier will be used in addition: PartyIDRoleQualifier (Tag 2376) = „22" (algorithm) or | uniform across systems |

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| Tag | Data type/Structure | I/O | Restrictions/Values | Trading System |
|-----|---------------------|-----|---|------------------------|
| | | | "24" (natural person) For type „Investment Decision Maker“ the following qualifier will be used in addition: PartyRoleQualifier (Tag 2376) = „22“ (algorithm) or „24“ (natural person) For type "Client Identification Code" the following qualifier will be used in addition: PartyRoleQualifier (Tag 2376) = „23“ (LEI) or „24“ (Nat. Person) | |
| | Price | | The FIX Price data type (15 digits with optional decimal point and sign) is restricted. Float (13,5) order message Float (10,4) trade message | uniform across systems |
| | Qty | | The FIX Qty data type (15 digits with optional decimal point and sign) is limited. It is always Float (12,3). | uniform across systems |

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10 Appendix C: User Defined Tags**Legend**Sort sequence: Sorted ascending by tag numberColumn headers: I/O indicates incoming/outgoing messages (from the BT-FIX Gateway's point of view). All other column headers are self-explanatory.Content: An entry in column I/O will only be present if the information provided is not valid for either direction. Entries in restrictions/values will detail usage of an item. Optionally a reference to a common "base" data type will be present. If a trading - system is not listed in column "trading system", it will not allow usage of the tag.

| Tag | Field Name | I/O | Restrictions/Values | Trading System |
|------|---|-----|---|---|
| 5053 | TradeType2 | I | 1 (DVP) = FZ | T7 GSE, for TradeCaptureReport |
| | | O | 1 (DVP) = FZ 7 (when issued) = FE | T7 GSE, for TradeCaptureReportSno |
| 5156 | UnreleasedDate | | LocalMktDate "Valid from" date | MAX-ONE |
| 5177 | Source | O | <session> | Uniform across systems, 4.2 only |
| 5179 | TradeTime | I | Trade time (hhmmss) | T7 GSE, for TradeCaptureReport |
| 5253 | OrdTypeExt This field is only used for EG orders | | Valid value: E = "EG-Order" | MAX-ONE |
| 5427 | IntegerrAttribType | O | I = Interest D = Discount | T7 GSE, for TradeCaptureReportSno |
| 5458 | MDDelayed | I | Delay-Indicator | T7 GSE, for TradeCaptureReport |
| 5494 | LastTrader | O | Format KVNr. Permitted CBF account number (intermediary only) for T7 GSE. | T7 GSE, for TradeCaptureReportSno |
| 5555 | ReturnCode | O | <u>Error code</u> <u>If TradingSystemID = 0:</u> - Error code of FAGSE gateway <u>In the format nnnnnn</u> <u>If TradingSystemID = 212:</u> - Error code of FAGSE Connectors <u>In the format nnnn</u> <u>If TradingSystemID = 313:</u> - Error codeF MAX-ONE <u>In the Format nnnn</u> <u>If TradingSystemID = 7:</u> - Error code T7 in the format nnnnn <u>(ETI SessionRejectReason)Error code</u> | <u>FAGSE, T7 GSE, MAX-ONE</u> Uniform across systems |

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| | | | | |
|------|--------------|---|--|-----------------|
| 5862 | UpdateReason | A | <p><u>String(15)</u> <u>Reason of order modification or deletion by the system</u></p> <p>MAX-ONE: <u>"AUSG" = Suspended trading</u> <u>"HL" = Comment (order deletion)</u> <u>"EXBR" = Ex subscription rights</u> <u>"EXBA" = Ex bonus shares</u> <u>"EXDI" = Ex dividend</u> <u>"EXZS" = Ex interest (with redemption)</u> <u>"EXSP" = Division (split) with foreign shares</u> <u>"ENOT" = Suspension of price fixing</u> <u>"ORDEREXPIRED" = Order decline</u></p> <p>T7 GSE: <u>"T7MARnnn" = MassActionReason</u> <u>Value for nnn:</u> <u>000 = No special reason</u> <u>001 = Trading was stopped</u> <u>002 = Emergency</u> <u>006 = Session loss or logout</u> <u>007 = Duplicate Session Login</u> <u>008 = Clearing Risk Control</u> <u>100 = Internal connection loss</u> <u>107 = Instrument Suspended</u> <u>115 = Instrument Knock Out</u> <u>117 = Member has been disabled</u> <u>118 = Instrument Knock Out reverted</u></p> <p><u>"T7ERRnnn"=ExecRestatementReason</u> <u>Value for nnn:</u> <u>000 = Corporate Action</u> <u>001 = Order book restatement</u> <u>008 = Exchange option</u> <u>101 = Order add accepted</u> <u>102 = Order modify accepted</u> <u>103 = Order delete accepted</u> <u>108 = Book Order executed</u> <u>122 = Instrument State Change</u> <u>138 = Pending New</u> <u>139 = Pending modify</u> <u>141 = Pending new order processed</u> <u>142 = Pending modified order proc.</u> <u>146 = End of Day processing</u> <u>148 = Order expiration</u> <u>149 = Closing Auction Order has been activated</u> <u>150 = Closing Auction Order has been inactivated</u> <u>151 = Opening Auction Order has been activated</u> <u>152 = Opening Auction Order has been inactivated</u> <u>153 = Any Auction Order has been activated</u> <u>154 = Any Auction Order has been inactivated</u> <u>155 = Order refreshed</u> <u>159 = Intraday Auction Order has been activated</u> <u>160 = Intraday Auction Order has been inactivate</u> <u>172 = Stop Order has been triggered</u> <u>181 = Ownership Changed</u> <u>197 = Pending order deletion</u> <u>199 = Pending order cancellation processed</u></p> | T7 GSE, MAX-ONE |
|------|--------------|---|--|-----------------|

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| Tag | Field Name | I/O | Restrictions/Values | Trading System |
|------|-------------------------|-----|---|---|
| | | | <u>237 = Order quantity exceeds maximum quantity</u> <u>238 = Invalid limit price</u> <u>241 = User does not exist anymore</u> <u>242 = Session does not exist anymore</u> <u>243 = Invalid stop price</u> <u>245 = Instrument does not exist anymore</u> <u>246 = Business Unit Risk Event</u> <u>261 = Panic Cancel</u> <u>292 = Dividend Payment</u> <u>294 = Last Trading Day</u> <u>295 = Trading Parameter Change</u> <u>296 = Currency Change</u> <u>297 = Product Assignment Change</u> <u>298 = Reference Price Change</u> <u>300 = Tick Rule Change</u> <u>316 = QRS Order Expiry</u> <u>"T7OETnnn" = T7 OrderEventType</u> <u>Value for nnn:</u> <u>100 = Status after locked stock – Pending requests discarded</u> <u>Reason for modification or deletion of an order by system</u> | |
| 5946 | PendingReason | O | Valid values: 2 = locked stock 4 = order status unknown (end of day) | MAX-ONE |
| | | O | Valid values: 2 = locked stock 4 = order status unknown (end of day) 5 = verification pending | T7 GSE |
| 6031 | EnteringFirm | | <entering firm> | Uniform across systems, version 4.2 only |
| 6042 | CxlReason | I | 1 = Cancel by kill function | T7 GSE, MAX-ONE |
| 6126 | OrigLeavesQty | I | see Qty | T7 GSE |
| 6141 | TradeQty | O | see Qty | T7 GSE for TradeCaptureReportSno |
| 6255 | EndTime | | end of trading hours | T7 GSE |
| 6489 | TriggerIndicator | O | A = Activation of an EG Order Y = Trigger Stop Order | MAX-ONE T7 GSE |
| 6516 | NewsValidUntil | | date until | T7 GSE |
| 6517 | NewsEventDate | | date respectively date from | T7 GSE |
| 6556 | BusinessTransactionType | | "1" = TradeAdvice | T7 GSE for TradeCaptureReport and TradeCaptureReportAck |
| 6611 | TotalAccruedInterestAmt | O | Accumulated dividend equivalent earnings Float(17,8) | T7 GSE for TradeCaptureReportSno |
| 6732 | DealerNote | O | Different sub fields separated by "\". The description follows at the end of this table. | T7 GSE for TradeCaptureReportSno |

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| Tag | Field Name | I/O | Restrictions/Values | Trading System |
|------|----------------------|-----|--|--|
| 7017 | VolumeIndicator | I | 1 = "unit" 2 = "percentage" 3 = "per thousand" 9 = "other" | T7 GSE for TradeCaptureReport |
| | | O | 1 = "unit" 2 = "percentage" 3 = "per thousand" | T7 GSE for TradeCaptureReportSno |
| 7566 | TimezoneOffset | I | Differing UTC Time stamp to trade time | T7 GSE for TradeCaptureReport |
| 7567 | ReportedPxDiff | I | Y = Deviant price indicator | T7 GSE for TradeCaptureReport |
| 7568 | ReportedPxReason | I | N = negotiated Trade | T7 GSE for TradeCaptureReport |
| 7680 | OTCInd | | 0 = on-exchange trading 1 = off-exchange trading (default) | uniform across systems |
| 7931 | VenueID | | <executing system> | uniform across systems, version 4.2 only |
| 9318 | MktMkerID | | <market maker> | uniform across systems, version 4.2 only This tag will be ignored. |
| 9320 | OrderRejectReasonTxt | O | Error text | uniform across systems |
| 9471 | NoTransactionCosts | | <courtage> | T7 GSE for TradeCaptureReport and TradeCaptureReportSno |
| 9473 | TransactionCostCode | | <courtage> | T7 GSE for TradeCaptureReport and TradeCaptureReportSno |
| 9476 | TransactionCostAmt | | <courtage> | T7 GSE for TradeCaptureReport and TradeCaptureReportSno |
| 9591 | PriceCheckingFlag | O | 2 = Severe (PriceAlert) | T7 GSE for TradeCaptureReportAck |
| 9596 | ClientFreeField1 | | String restricted to Float(10,3) > 0 Tag 9597 must not be set to "PS" If tag 9597 is set to "PD", the value must not exceed 9999999,990 (last decimal place = 0) | T7 GSE |
| 9597 | ClientFreeField2 | | Valid values: PD = Amount (in Euro) PM = Per mille (from market value) space = None | T7 GSE |
| 9803 | TradingSystemID | O | 0 = <u>FAGSE</u> Gateway 111 = Connector 112 = Connector 120 = XEO MAX-ONE 212 = <u>T7-GSEFAGSE Connector</u> 312 = MAX-ONE 313 = MAX-ONE <u>7 = T7 GSE</u> | uniform across systems |

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| Tag | Field Name | I/O | Restrictions/Values | Trading System |
|-------|---|-----|---|----------------------------------|
| 9938 | ClearingHandlingType | O | I = internal settlement A = aggregated settlement The trade will be not delivered to Clearstream individually. In case of internal settlement ("I") it is the recipient's responsibility to forward the position to Clearstream. In case of aggregated settlement ("A") the trades are forwarded to Clearstream as an aggregated position. | T7 GSE |
| 9954 | NextMsgFlag | O | N = no (more) following records | T7 GSE for TradeCaptureReportSno |
| 20003 | PartyIDClientID | E | <client identification code> | T7 GSE, MAX-ONE |
| 21103 | PartyIDClientIDQualifier | E | <client identification code> | T7 GSE, MAX-ONE |
| 21303 | PartyIDClientIDSource | E | <client identification code> | T7 GSE, MAX-ONE |
| 20122 | PartyIDInvestmentDecisionMaker | E | <Investment Decision Maker> | T7 GSE, MAX-ONE |
| 21222 | PartyIDInvestmentDecisionMakerQualifier | E | <Investment Decision Maker> | T7 GSE, MAX-ONE |
| 21422 | PartyIDInvestmentDecisionMakerSource | E | <Investment Decision Maker> | T7 GSE, MAX-ONE |
| 20012 | PartyIDExecutingTrader | E | <Execution within firm> | T7 GSE, MAX-ONE |
| 21112 | PartyIDExecutingTraderQualifier | E | <Execution within firm> | T7 GSE, MAX-ONE |
| 21312 | PartyIDExecutingTraderSource | E | <Execution within firm> | T7 GSE, MAX-ONE |

Description of tag 6732 DealerNote

Tag 6732 contains different sub-fields which are separated by "\". The initial values of these sub-fields are generally spaces. The subfield "deviating counterparty price" will be assigned with a fixed "000000,0000", as deviating prices like that will neither be able to be entered nor to be processed within T7 and by MAX-ONE. For sub-field 'different counterparty price' the initial value is „000000,0000“.

| Tag | Fieldname | Sub-Fieldname | Format | Restriction/Value |
|------|------------|----------------------------------|------------|---|
| 6732 | DealerNote | Label delivery release | Char | "J", "N" |
| | | Separator | Char | \ |
| | | Different counterparty price | String(11) | 6 places before the decimal point, 4 decimal places |
| | | Separator | Char | \ |
| | | Indicator for deviant trade date | String(2) | constant "AS" |
| | | Separator | Char | \ |
| | | Type of security | String(3) | constant "SHS" = shares "BON" = bonds "BCE" = bonds, similar to certificates "WTS" = warrants "CER" = certificates "FUN" = funds "SUB" = subsidiary rights "RTE" = profit-sharing rights "UNT" = units "MSC" = others |
| | | Separator | Char | \ |

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| Tag | Fieldname | Sub-Fieldname | Format | Restriction/Value |
|-----|-----------|--|--------------------|--|
| | | Type of custody | String(3) Char | constant "GS" = Girosammelverwahrung "AKV" = Clearstream Banking "NCT" = Non-Collective Safe Custody via T2S (NCSC-T) "STR" = Streifbandverwahrung "WPR" = Wertpapierrechnung |
| | | Separator | String(8) Char | \ |
| | | Coupon date | String(4) | "GD812 + GD813 (see explanation below) |
| | | Separator | Char | \ |
| | | Constant 'APMT' | String(3) | "APMT" = against payment |
| | | Separator | Char | \ |
| | | Currency code of contract price | String(3) | |
| | | Separator | Char | \ |
| | | Currency code of market value | String(3), Char | \ |
| | | Separator | | |
| | | Currency code of price difference | String(3), Char | \ |
| | | Separator | | |
| | | Currency code of interest accrued | String(6), Char | \ |
| | | Separator | | |
| | | Flag brokerage | String(6) | constant /BROK/ |
| | | Separator | Char | \ |
| | | Flag fees | String(6) | constant /FEES/ |
| | | Separator | Char | \ |
| | | Indicator for reinvestment discount | String(6) | constant /MISC/ |
| | | Separator | Char | \ |
| | | Indicator for bonus | String(6) | constant /MISC/ |
| | | Separator | Char | \ |
| | | Indicator for bonus difference | String(6) | constant /MISC/ |
| | | Separator | Char | \ |
| | | Indicator for commission | String(3) | constant /COMM/ |
| | | Separator | Char | \ |
| | | Currency code of brokerage | String(3) | = settlement currency |
| | | Separator | Char | \ |
| | | Currency code of fees | String(3) | = settlement currency |
| | | Separator | Char | \ |
| | | Currency code of reinvestment discount | String(3) | = settlement currency |
| | | Separator | Char | \ |
| | | Currency code of bonus | String(3) | = settlement currency |
| | | Separator | Char | \ |
| | | Currency code of bonus differential | String(3) | = settlement currency |
| | | Separator | Char | \ |
| | | Currency code of commission | String(2) | = settlement currency |
| | | Separator | Char | \ |
| | | Indicator for reinvestment discount | String(2) | constant "WA" |

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| Tag | Fieldname | Sub-Fieldname | Format | Restriction/Value |
|-----|-----------|--------------------------------|-----------|---|
| | | Separator | Char | \ |
| | | Indicator for bonus | String(2) | constant "BO" |
| | | Separator | Char | \ |
| | | Bonus key | String(2) | 01 = % on market value, 02 = EO per unit, 03 = % on face value |
| | | Separator | Char | \ |
| | | Indicator for bonus difference | String(5) | constant "BD" |
| | | Separator | Char | \ |
| | | Indicator for order reference | String(6) | constant „MT599“ (indicator from MT512 that a MT599 is following) |
| | | Separator | Char | \ |
| | | Entering Party-ID | Char | (No longer in use) |
| | | Separator | Char | \ |

Explanation of interest date:

The 8-digit interest date field in the 6th position of the DealerNote is filled from the combination of the two WM fields GD812 (interest date day) + GD813 (interest date month). The following additional rules apply to the field assignment for deviating days at the end of the month:

| GD813 | GD812 | interest date |
|-------|-------|---------------|
| FA | 29 | 28F29A |
| FA | 30 | 28F30A |
| FA | 31 | 28F31A |
| JJ | 31 | 31J31J |
| MS | 31 | 31M30S |
| AO | 31 | 30A31O |
| MN | 31 | 31M30N |
| JD | 31 | 30J31D |
| F29A | 29 | 28F29A |

| GD813 | GD812 | interest date |
|-------|-------|---------------|
| F29A | 30 | 28F29A |
| F29A | 31 | 28F29A |
| F30A | 30 | 28F30A |
| F30A | 31 | 28F30A |
| F31A | 31 | 28F31A |
| A31O | 31 | 30A31O |
| J31D | 31 | 30J31D |
| Else | Else | GD812+GD813 |

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11 Appendix D: 4.2 ExtensionsSorted ascending by tag number

| Tag | Field Name |
|------|-------------------------|
| 447 | PartyIDSource |
| 448 | PartyID |
| 452 | PartyRole |
| 453 | NoPartyIDs |
| 454 | NoSecAltID |
| 455 | SecurityAltID |
| 456 | SecurityAltIDSource |
| 487 | TradeReportTransType |
| 523 | PartySubID |
| 526 | SecondaryClOrdID |
| 552 | NoSides |
| 553 | Username |
| 554 | Password |
| 570 | PreviouslyReported |
| 571 | TradeReportID |
| 572 | TradeReportRefID |
| 578 | TradeInputSource |
| 625 | TradingSessionSubID |
| 691 | Pool |
| 751 | TradeReportRejectReason |
| 768 | NoTrdRegTimestamps |
| 769 | TrdRegTimestamp |
| 770 | TrdRegTimestampType |
| 789 | NextExpectedMsgSeqNum |
| 802 | NoPartySubIDs |
| 803 | PartySubIDType |
| 818 | SecondaryTradeReportID |
| 820 | TradeLinkID |
| 829 | TrdSubType |
| 856 | TradeReportType |
| 880 | TrdMatchID |
| 923 | UserRequestID |
| 924 | UserRequestType |
| 925 | NewPassword |
| 926 | UserStatus |
| 927 | UserStatusText |
| 1094 | PegPriceType |

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| Tag | Field Name |
|-------|---|
| 1125 | OrigTradeDate |
| 1126 | OrigTradeID |
| 1138 | DisplayQty |
| 1409 | SessionStatus |
| 20003 | PartyIDClientID |
| 21103 | PartyIDClientIDQualifier |
| 21303 | PartyIDClientIDSource |
| 20122 | PartyIDInvestmentDecisionMaker |
| 21222 | PartyIDInvestmentDecisionMakerQualifier |
| 21422 | PartyIDInvestmentDecisionMakerSource |
| 20012 | PartyIDExecutingTrader |
| 21112 | PartyIDExecutingTraderQualifier |
| 21312 | PartyIDExecutingTraderSource |

12 Appendix E: 4.4 Extensions

Sorted ascending by tag number

| Tag | Field Name |
|------|---------------|
| 1094 | PegPriceType |
| 1125 | OrigTradeDate |
| 1126 | OrigTradeID |
| 1138 | DisplayQty |
| 1409 | SessionStatus |
| 6042 | CxlReason |

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13 Appendix F: Restricted Use of Standard Tags**Legend**Sort sequence: Sorted ascending by tag numberColumn headers: I/O indicates incoming/outgoing messages (from the BT-FIX Gateway's point of view). All other column headers are self-explanatory.Content: An entries in column I/O will only be present if the information provided is not valid for either direction. Entries in restrictions/values will detail usage of an item. Optionally a reference to a common base data type will be present. If a trading - system is not listed in column "trading system", it will not allow usage of the tag.

| Tag | Field Name | I/O | Restrictions/Values | Trading System |
|-----|------------------|-----|---|------------------------------------|
| 1 | Account | | See AcctTypCod and AcctTypNo | |
| | | | Valid values: A = Agent P = Proprietary optional | T7 GSE (order routing), MAX-ONE |
| | | | "A" = Agent (Client) "P" = Proprietary (bank's own-account trading) "E" = Proprietary (intermediary's own-account trading) optional | T7 GSE for contract notes |
| | AcctTypNo | | Valid value: Only "1" will be accepted optional | T7 GSE Order, MAX-ONE |
| | | | "1" = proprietary trading, only possible with AcctTypCod="A" or "P" optional | T7 GSE for contract notes |
| 8 | BeginString | | Valid values: FIX.4.2 FIX.4.4 | |
| 11 | ClOrdID | | String(16) must be unique for as long as the corresponding order is active 1. message: ClOrdID = ABC1234 2. message: ClOrdID = abc1234 -> double or already used | uniform across systems |
| 12 | Commission | | The FIX "Amt" data type(15 digits with optional decimal point and sign) will internally be mapped to a "XEO+" data type Snum(10,2) of fixed length providing exactly 2 decimal places. If such mapping is not possible, a request providing such data will be rejected. | T7 GSE |
| 21 | HandlInst | I | Char "FIX.4.2" mandatory "FIX.4.4" optional <i>ignored</i> | uniform across systems |
| 22 | SecurityIDSource | | Valid value: 4 = ISIN number | uniform across systems |
| 33 | LinesOfText | O | Valid value: Only "1" will be accepted Along with application level messages the values "1" or "2" are permitted. | uniform across systems |

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| Tag | Field Name | I/O | Restrictions/Values | Trading System |
|-----|---------------|-----|--|--|
| 35 | MsgType | I | Valid values: "0", "1", "2", "4", "5", "A", "D", "F", "G", "BE", "AE" 4.2 sessions will accept "UBE" instead of "BE" and "AE" instead of "UAR" | uniform across systems |
| | | O | Valid values: "0", "1", "2", "3", "4", "5", "8", "9", "A", "B", "J", "BF" 4.2 sessions will accept "UBF" instead of "BF" | uniform across systems |
| 37 | OrderID | | <u>IntegerString(20)</u> Unique order number of the trading system <u>(without leading zeros)</u> | In the field (Tag 37 OrderID) of the ExecutionReport, an exchange-based T7 order number will be provided for each marketplace (XDUS, XHAM, XHAN) in future. The allocation of T7 order numbers corresponds to the existing procedure, which is also used in the FWB's T7 specialist model. |
| 38 | OrderQty | | see Qty | uniform across systems |
| 39 | OrdStatus | O | Valid values: 0 = "New" 1 = "Partially filled" 2 = "Filled" 4 = "Cancelled" 6 = "Pending Cancel" 8 = "Rejected" A = "Pending New" C = "Expired" E = "Pending Replace" | T7 GSE, MAX-ONE |
| 40 | OrdType | | Valid values: 1 = "Market" 2 = "Limit" 3 = "Stop" | T7 GSE |
| | | | 1 = "Market" 2 = "Limit" 3 = "Stop" 4 = "Stop Limit" | MAX-ONE |
| 44 | Price | | see Price | uniform across systems |
| 55 | Symbol | I | <i>ignored</i> | uniform across systems |
| | | O | always set to "[N/A]" | uniform across systems |
| 58 | Text | | Length is restricted to 24 Characters Text entries with a total length of 24 bytes are permitted in the TradeCaptureReport request (2 x 12 bytes for transfer to the T7 fields FreeText1 and FreeText2) | uniform across systems |
| 59 | TimeInForce | | 0 = "Day" 6 = "Good till Date" | T7 GSE |
| 60 | TransactTime | I | <i>ignored</i> | uniform across systems |
| 98 | EncryptMethod | | Valid value: Only "0" will be accepted | uniform across systems |
| 99 | StopPx | | see Price | uniform across systems |
| 100 | ExDestination | | MIC Code XDUS, XHAN, XHAM, XMUN, XFRA | uniform across systems |

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| Tag | Field Name | I/O | Restrictions/Values | Trading System |
|-----|------------------------------------|-----|--|------------------------|
| 150 | ExecType | O | 0 = "New" 4 = "Cancelled" 5 = "Replace" 6 = "Pending Cancel" 8 = "Rejected" A = "Pending New" C = "Expired" E = "Pending Replace" F = "Trade" | T7 GSE, MAX-ONE |
| 156 | SettlCurrFxRateCalc | | Valid value: D = "divide" | T7 GSE |
| 283 | LocationID | E | Is not yet used by the BT-FIX gateway. | |
| 336 | TradingSessionID | | Valid value: 1 = Day | uniform across systems |
| 447 | PartyIDSource | | Valid value: For TradeCaptureReportSno "D", "N" and "B" will be accepted. Otherwise "D" and "P" will be accepted. | uniform across systems |
| 448 | <buyer seller> PartyID | | In combination with PartyIDSource = D KVNr base data type is necessary KVNr (Buyer/Seller) must be permitted by T7 GSE | uniform across systems |
| 448 | <client> PartyID | | Must be of data type KVNr Must be admitted at the T7 GSE security system. Must represent a bank. | T7 GSE, MAX-ONE |
| 448 | <clearing firm> PartyID | | KVNr base data type is necessary. KVNr (clearer) must be permitted by T7 GSE. | uniform across systems |
| 448 | <clearing organization> PartyID | | KVNr base data type is necessary. KVNr must be permitted by T7 GSE | uniform across systems |
| 448 | <contra firm> PartyID | | KVNr base data type is necessary. KVNr (counterparty) must be permitted by T7 GSE. Exception: in TradeCaptureReportSno the <contra firm> will be sent as KVNr and as LEI. | uniform across systems |
| 448 | <customer account> PartyID | | KVNr base data type is necessary. KVNr (recipient of contract notes) must be permitted by T7 GSE. | uniform across systems |
| 448 | <entering firm> PartyID | | In opposition to the FIX standard, this field is mandatory. KVNr base data type is necessary. KVNr must be party/customer of the delivered SenderCompID. If only one "Party" is delivered, all restrictions of the ExecutingFirm format must be fulfilled. | uniform across systems |
| 448 | <executing firm> PartyID | | KVNr base data type is necessary. | |
| | | | KVNr must be permitted by T7 GSE with an adequate userID | T7 GSE, MAX-ONE |
| 448 | <executing system> PartyID | O | String Possible values: "T7 GSE" "MAX-ONE" | T7 GSE, MAX-ONE |
| 448 | [MarketMaker] PartyID | | Must be of data type KVNr | T7 GSE, MAX-ONE |

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| Tag | Field Name | I/O | Restrictions/Values | Trading System |
|-----|---|-----|---|------------------------|
| | | | Must be admitted at the T7 GSE security system. Must represent a market maker. | T7 GSE, MAX-ONE |
| 448 | <order origination trader> PartyID | | String(6), trader ID | T7 GSE, MAX-ONE |
| 448 | <session> PartyID | | String(4), KVNr of originator | T7 GSE, MAX-ONE |
| 448 | <client identification code> PartyID | | String(20), client identification code | T7 GSE, MAX-ONE |
| 448 | <Execution within firm> PartyID | | String(20), Execution within firm | T7 GSE, MAX-ONE |
| 448 | <Investment Decision Maker> PartyID | | String(20), Investment Decision Maker | T7 GSE, MAX-ONE |
| 452 | PartyRole | | 1 = "Executing Firm" 3 = "Client Identification Code" 4 = "Clearing Firm" 7 = "Entering Firm" 10 = "SettlementLocation" 12 = "Execution within Firm" 11 = "Order Origination Trader" 16 = "Executing System" 17 = "Contra Firm" 21 = "Clearing Organization" 24 = "Customer Account" 27 = "Buyer Seller" 28 = "Custodian" 29 = "Intermediary" 30 = "Agent" 55 = "Session ID" 62 = "Report Originator" 66 = "Market Maker" This tag will be ignored 73 = "Execution Venue" 122 = "Investment Decision Maker" | |
| 453 | NoPartyIDs | | Values 1 .. 6 are valid (Incoming messages) | uniform across systems |
| | | | Values 1 .. 7 are valid (Outgoing messages) | uniform across systems |
| 487 | TradeReportTransType | | Valid value: "0" for TradeCaptureReport and TradeCaptureReportAck. "0" for TradeCaptureReportSno | T7 GSE |
| 523 | PartySubID | O | String(6) Last 6 digits of the T7 GSE UserID for <session> | T7 GSE, MAX-ONE |
| | | | [N/A] for <executing system> | uniform across systems |
| 526 | SecondaryClOrdID | | String(16) | uniform across systems |
| 553 | Username | | Only the FAGSE session ID from the T7 Member Section is permitted. The last 4 digits of the session ID correspond to the FIX main branch account number. See EnteringFirm (Tag 448) | uniform across systems |
| 554 | Password | | String Only the generated password for the FAGSE session ID from the T7 Member Section is permitted. Value must contain at least one number and one letter. No distinction between upper and lower case letters. Special characters are not allowed. | uniform across systems |

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| Tag | Field Name | I/O | Restrictions/Values | Trading System |
|-----|-------------------------|-----|---|------------------------|
| 625 | TradingSessionSubID | | Valid values: 6 = "Main auction" (KS - Kassa-Order) | T7 GSE |
| | | | Valid values: 6 = "Main auction" (KS - Kassa-Order) | MAX-ONE |
| 751 | TradeReportRejectReason | | Valid value: 99 = "Other" | T7 GSE |
| 768 | NoTrdRegTimestamps | | Valid value: "1" for TradeCaptureReport "1" or "2" for TradeCaptureReportSno | uniform across systems |
| 770 | TrdRegTimestampType | | Valid value: "1" for TradeCaptureReport "1" or "2" for TradeCaptureReportSno | uniform across systems |
| 802 | NoPartySubIDs | O | Missing or set to "1" (PartyRole 55) | uniform across systems |
| 803 | PartySubIDType | O | Will be set to "4040" (User Identifier) for PartyRole = 55 Will be set to "3" (System) for PartyRole = 16 | uniform across systems |
| 828 | TrdType | O | OTC Post-trade indicator 9001 = ACTX (Agency cross transaction) 9002 = CANC (Cancellation) 9101 = ACTX CANC (Agency cross transaction and Cancellation) | T7 GSE, MAX-ONE |
| 829 | TrdSubType | | See chapter 14 Appendix G: Possible Values Tag 829 TrdSubType (Record Type) | T7 GSE |
| 923 | UserRequestID | | String(16) | uniform across systems |
| 924 | UserRequestType | | Valid value: 3 = "ChangePasswordForUser" | uniform across systems |
| 925 | NewPassword | | String(8) | uniform-across-systems |

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14 Appendix G: Possible Values Tag 829 TrdSubType (Record Type)

| TrdSubType | Description |
|------------|--|
| 9011 | Buy – contract note |
| 9012 | Buy – direct trade |
| 9021 | Sell – contract note |
| 9022 | Sell – direct trade |
| 9611 | Same-day cancellation/Buy – contract note |
| 9612 | Same-day cancellation/Buy – direct trade |
| 9621 | Same-day cancellation/Sell – contract note |
| 9622 | Same-day cancellation/Sell – direct trade |