





# **Document History**

Version	Date	Author	Description	Status
0.0	8 Aug. 2008	Technology	Initial version. For NYX internal review.	Working document
1.0	10 Aug. 2008	Technology	Reviewed version	Draft
1.1	27 Aug. 2008	Technology	Removed length restriction on ClOrdID and OrigClOrdID fields.  Modified the only authorized value for the TradingSessionID field.  Specified that the fields holding clearing information in New Order (D) message are to be repeated twice for buy & sell sides of a cross order.  Removed Y (cross basket) from the ExecInst field's possible values.  Precised the usage of ExpireTime field (date & time parts for defining GTD or GTT orders).  Added bulk cancellation support in Order Cancel Request (F) message description. Added the missing CancelByLocationID field, removed the useless Account field.  Updated the description of ClearingHandlingType and OpenClose fields.	Draft
1.2	5 Sep. 2008	Technology	Removed 3 (Done for day), 7 (Stopped), 9 (Suspended), A (Pending new), B (Calculated) and D (Accepted for bidding) from the possible values of OrdStatus field.  Added DiscretionInst field were DiscretionOffset specified.  Added ContraBroker, CollarRejType and CollarRejPx fields in Execution Report (8).	Draft

Version	Date	Author	Description	Status
1.3	17 Sep. 2008	Technology	Added Price Input (I) and Request Ack (y) messages. Specified the way an order quantity is updated using the Order Cancel/Replace Request (G) message. Precised that a Side value of 8 is applicable for New Order (D) messages only. Precised that the ClOrdID and OrigClOrdID field contents are ignored in case of Bulk cancellation using Order Cancel Request (F) message. Precised the authorized characters for ClOrdID. Removed useless values from LiquidityIndicator. Extended the length of ExecRefID field to 24 characters.	Draft
1.4	25 Sep. 2008	Technology	Added Logon (A) message. Introduced NextExpectedSeqNum tag within this message in order to meet CCG High availability requirements Fixed possible values for InputPxType in Price Input (I) message.	Draft
1.5	1 Oct. 2008	Technology	Added ClOrdID in Price Input (I). Added ClOrdID and Price in Request Ack (y). These modifications should allow the mapping to MMTP SLE-0203 and SLE-0303 messages during migration phase.	Draft
1.6	2 Oct. 2008	Technology	Fixed tag number of SenderSubId in Header. Enriched description of ExpireTime field. Rolled back changes introduced in 1.5 as FIX 4.2 will never be used to communicate with NSC.	Deliverable



Version	Date	Author	Description	Status
1.7	8 Oct. 2008	Technology	Fix: moved the Price field from Request Ack (y) message to Price Input (I) message.  Moved the Price Input (I) message description after other request messages.	Deliverable
1.8	16 Oct. 2008	Technology	Fixed type & length of ClientID field. Removed MinQty from Order Cancel/Replace Request (G) (cannot be modified) Fix: CancelByLocationID field's FIX tag is 9960 instead of 9950 (which is already used by InputPxType field).	Deliverable
1.9	27 Oct. 2008	Technology	Added DeliverToCompID in Message Header. Fix: fields OnBehalfOfCompID and DeliverToCompID not mandatory in Message Header. Added NumClearingAggregates and repeating group for clearing aggregates in New Order (D) message.	Deliverable
1.10	6 Nov. 2008	Technology	OnBehalfOfCompID / DeliverToCompID fields conditionaly required (Service Bureau).  SenderCompID / TargetCompID field descriptions revised.  Added SenderLocationID field in Message Header.	Deliverable
1.11	7 Nov. 2008	Technology	Fix: inbound/outbound mixes in the aforementioned field definitions.	Deliverable
1.12	06 Feb. 2009	Technology	Enriched Order Cancel Request (F), Order Cancel/Replace Request (G) and messages usage description. Added usage of Order Cancel/Replace Request (G) message to confirm an order rejected for collar crossing. Added 3 (Done for Day) in OrdStatus field. Added "Condition" line in Fields description sections, in order to specify field conditions as the "required" /	Deliverable

Version	Date	Author	Description	Status
			"provided" characteristic of some fields depends on conditions (and so can't be fully described in the "required" / "provided" column) => specified "Condition" for all fields.  Updated the possible values of ClOrdID, ClientID, ContraBroker, ErrorCode, TimeInForce (only "ISIN format" indication added), Text, TradingSessionID, fields. Renamed OrderType field to OrdType in messages definition sections. Renamed NumClearingAggregates field to NoClearingEntries for FIX naming norm reasons. Added ExpireDate, HandlInst fields in New Order (D) and Order Cancel/Replace Request (G). Also added ExpireDate in Execution Report (8). Added ErrorCode field in Execution Report (8) and Order Cancel Reject (9), for future use. Added Text field in Order Cancel Reject (9). Removed ConfirmFlag from . Removed OrdType from Order Cancel Request (F). Added BeginString, BodyLength, MsgType, SendingTime, Signature, SignatureLength, CheckSum fields descriptions. For FIX 4.2 standard compliancy: Added NoTradingSessions in New Order (D) and Order Cancel/Replace Request (G). Added NoContraBrokers in Execution Report (8). Added TransactTime in New Order (D) and Order Request (F) and Order Request (F) and Order Rass Cancel Request (F) and Order Rass Cancel Request (G). Added HandlInst in New Order (D)	
			and Order Cancel/Replace Request (G).	



Version	Date	Author	Description	Status
			Added new Order Mass Cancel Request (q) message for Bulk Cancel. Order Cancel Request (F) is now only for Single Cancel. Updated TransactTime possible values to indicate "in UTC". Updated Tag Combinations for Supported Orders section.	
2.0	16 Mar. 2009	Technology	Enriched ExecRefID, ExecID and ArcaEXID descriptions. Updated ExecTransType possible values. Updated Execution Report (8) Message Usage. Updated LiquidityIndicator possible values. Updated ExecType possible values. Updated ExecType possible values. Updated Order Mass Cancel Request (q) to add OnBehalfOfCompID as optional criteria (updated consequently OnBehalfOfCompID Condition and all parts of this document talking about Bulk Cancel criteria). Updated ExpireTime, SendingTime, and TransactTime possible values. Added an "Execution Report message Signature Tags" section in Execution Report (8) "Message usage" section. Removed Order Status Request (H) and Trading Session Status (h) messages, and consequently updated the "Condition" and "Used in" sections of all fields used in these messages. Updated Order Cancel/Replace Request (G) Message Usage in order to describe the collar crossing confirmation situation.	Deliverable

Version	Date	Author	Description	Status
2.1	8 April 2009	Technologies	Added new Session Management, CCG High Availability and Order management chapters. Updated ClOrdID length. Added a new Administrative messages chapter including the Logon (A) message, removed from Application Messages chapter, and all the new Administrative messages HeartBeat (0), Test Request (1), Resend Request (2), Reject (3), Sequence Reset (4) and Logout (5). Added consequently, in Fields Description chapter, the new fields associated with these new administrative messages: BeginSeqNo, EndSeqNo, GapFillFlag, NewSeqNo, PossDupFlag, PossResend, RefMsgType, RefSeqNum, RefTagID, ResetSeqNumFlag, SessionRejectReason and TestReqID. Added a new Messages Header and Trailer chapter, including Message Header and Message Trailer removed from Application Messages chapter. Updated these Message Header and Message Trailer messages description. Updated TradingSessionID possible values. Removed, in Order Mass Cancel Request (q), the wrong update done in version 2.0 (OnBehalfOfCompID is not an optional criteria of this request). Updated consequently "Condition" section of OnBehalfOfCompID, Side, Rule80A, TechnicalOrdType and CancelByLocationID fields. Modified ArcaExID field name to UTPExID. Enriched ExpireTime and TransactTime fields description. Updated MsgType possible values. Removed the never used SenderSubID and TargetSubID fields from Message Header. Removed the never used Signature and	Deliverable



SignatureLength fields from Message Trailer. Removed, in "Execution Report message Signature tags" section of Execution Report (8), the line SendingCaseID=8, which was wrong.	Version	Date	Author	Description	Status
				Trailer. Removed, in "Execution Report message Signature tags" section of Execution Report (8), the line	

Version	Date	Author	Description	Status
2.2	14 May 2009	Technologies	In Order management chapter: updated Firm Access Connections, Firm Trading Application Instances, ClOrdID uniqueness - format overview and Recommended Instance prefix (adding Application Instance ClOrdID available range overview sub-section) sections, and added Firm Access/Trading Applications/Connections architecture overview section.  Added UTP-FIX.4.2 VS UTP-DIRECT COMPATIBILITY section in Order management chapter. In Order management chapter: In Order mosagement chapter: added Order book retransmission in case of Exchange Disaster Recovery. Updated: Logon handshake: updated logon with NextExpectedMsgSeqNum. Added Order Book Retransmission in Order management New: Exchange Business continuity chapter provides guidelines in case of Exchange Primary Data Center Disaster. Added order book retransmission in Execution Report (8) message description.	Deliverable



Version	Date	Author	Description	Status
2.3	22 May 2009	Technologies	Added Order Mass Cancel Report (r) message. Updated Cancelling Several Orders section.	Deliverable

Version	Date	Author	Description	Status
2.4	18 June 2009	Technologies	Added Business Message Reject (j) message.  Modified section "Execution Report message Signature Tags":  • Added Execution Report sending case 11.5 (Trade Break) and associated signature (2/1/5)  • Modified signature (G/0/2) for Execution Report sending case 10 (Trade Creation). Also updated ExecType possible values (G).  Modified chapter 2.11.5 Cancelling Several Orders: added comments concerning the UTP messages received by the members.  Modified message Execution Report (8):  • Removed field 113 ReportToExch. This field previously specified as 'Never provided' has no possible future use in UTP.  • Modified fields 388 DiscretionInst and 389 DiscretionOffset statuses from 'Never provided' to 'Conditionally provided' since these fields may be populated in messages D and G  Modified messages New Order (D) and Order Cancel/Replace Request (G): Fields 126 ExpireTime and 432 ExpireDate are now 'Ignored' when TimeInForce ≠ 6 (previously specified as 'Forbidden').  Modified message Order Mass Cancel Request (q): Field 530 MassCancelRequestType is now 'Ignored' (previously specified as 'Required').  Modified chapter 2.6, 3.12, 5.8: added details concerning routing rules of kill messages in case of bulk cancel initiated by connection different from	Deliverable



Version	Date	Author	Description	Status
version	Date	Author	connection owner of order  Modified 2.11.6 Order book retranmssion : adding comments on how to request for Order book retransmission  Modified 2.11.5 , 5.3 : added emphasis about bulk cancel command result if CancelByLocationID filter is not provided.	Status



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# 1 Session Management

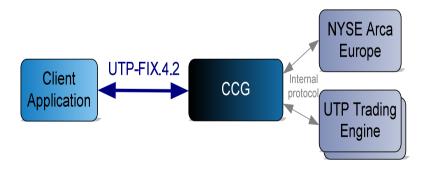
UTP-FIX.4.2 is a protocol allowing a client, or Firm, to communicate with the Trading Platform.

As UTP-FIX.4.2 protocol is derived from FIX 4.2 - and FIX 4.4 regarding the Logon management, this document assumes the reader thoroughly understands the FIX 4.2 and FIX 4.4 protocol available at http://www.fixprotocol.org/. This document is not intended as a guide to constructing a FIX client.

## 1.1 Architecture

The CCG – stands for Common Customer Gateway – is the equipment hosting the UTP-FIX.4.2 interface.

UTP-FIX.4.2 interface uses TCP/IP sockets. Each client connection sends messages to its assigned IP and port. The CCG then routes the messages to the appropriate trading platform.



An inbound message is a message sent by the client application and received by the CCG.

An outbound message is a message sent by the CCG and received by the client application.

# **1.2** Logon handshake

Clients initiate a TCP/IP session to the UTP FIX.4.2 server, and then initiate a logon (once physical connection is established, if no logon is received within 10 seconds, the CCG closes the connection).

Session Logon is always initiated by the client using the Logon (A) message. Application messages may be exchanged between the client and the server after logon is successful.

## 1.2.1 Logon using "NextExpectedMsgSeqNum"

**Exchange strongly recommends** customers to use the FIX 4.4 NextExpectedMsgSeqNum (789) field in the Logon. Using this field offers Customer application two benefits:

- to facilite FIX session resynchronization.
- to garanty FIX session safe recovery during CCG failover conditions.

NextExpectedMsgSeqNum (789) is used as per FIX 4.4 specifications:

In its Logon request the session initiator supplies in NextExpectedMsgSeqNum (789) the value next expected from the session acceptor in MsgSeqNum (34). The outgoing header MsgSeqNum (34) of the Logon request is assigned the next-to-be-assigned sequence number as usual.

The session acceptor validates the Logon request including that NextExpectedMsgSeqNum (789) does not represent a gap. It then constructs its Logon response with NextExpectedMsgSeqNum (789) containing the value next expected from the session initiator in MsgSeqNum (34) having incremented the number above the Logon request if that was the sequence expected. The outgoing header MsgSeqNum (34) is constructed as usual.

The session initiator waits to begin sending application messages until it receives the Logon response. When it is received the initiator validates the response including that NextExpectedMsgSeqNum (789) does not represent a gap.

Both sides react to NextExpectedMsgSeqNum (789) from its counterparty thus:

- If equal to the next-to-be-assigned sequence, proceed sending new messages beginning with that number.
- If lower than the next-to-be-assigned sequence, "recover" (see Automatic recovery) all messages from the last message delivered prior to this Logon through the specified NextExpectedMsgSeqNum (789) sending them in order; then Gap Fill over the sequence number used in Logon and proceed sending newly queued messages with a sequence number one higher than the original Logon.
- If higher than the next-to-be-assigned sequence, send Logout to abort the session.

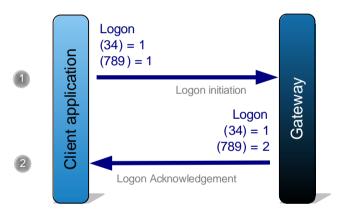
Neither side should generate a ResendRequest based on MsgSeqNum (34) of the incoming Logon message but should expect any gaps to be filled automatically. If a gap is produced by the Logon message MsgSeqNum (34), thereceive logic should expect the gap to be filled automatically prior to receiving any messages with sequences above the gap.

## **1.2.2** First Logon of the day

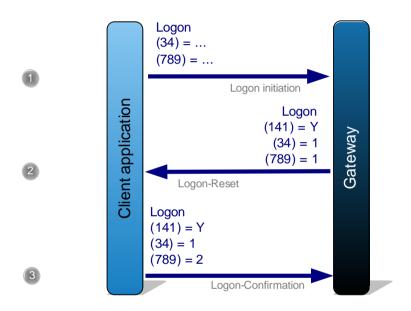
CCG resets inbound and outbound sequence numbers to 1 every day at trading session startup time.

As a result, the first Logon of the day is processed depending on the way the client application decides to manage the sequence reset:

- If the client application automatically reset sequence numbers to 1, the first Logon of the day is processed as follows:



- Otherwise, CCG asks the client application to reset sequence numbers using ResetSeqNumFlag (141) set to 'Y' in the Logon acknowledgment. In this case, the first Logon of the day is processed as follows:

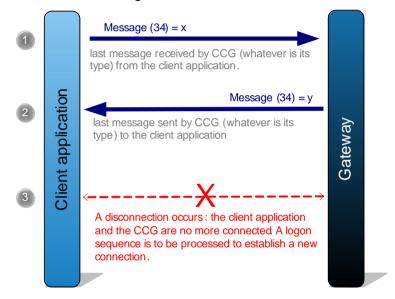


If the Logon confirmation has not been received by the CCG within 10 seconds, the CCG issues a Logout (5) message.

Sequence number reset is always initiated by the CCG. If the client application initiates the sequence reset – using ResetSeqNumFlag (141) – the CCG responds with a Logout (5) message.

## **1.2.3** Intraday Logon scenarios

The initial conditions before the logon messages sequence numbers check, are the following:

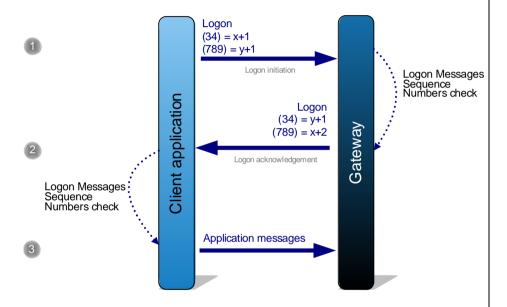


As a result, from the CCG point of view:

- the next expected sequence is x+1
- the next-to-be-assigned sequence is y+1

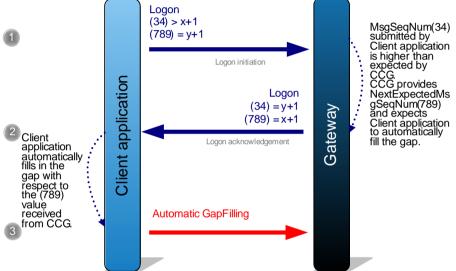
#### 1.2.3.1 **Nominal Logon**

A general overview of a nominal UTP-FIX.4.2 Session Logon establishment sequence is presented below:

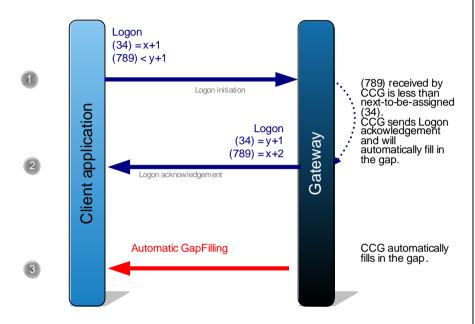


#### **Automatic recovery** 1.2.3.2

A general overview of a UTP-FIX.4.2 Session Logon establishment sequence with automatic Customer to CCG resynchronization is presented below:



A general overview of a UTP-FIX.4.2 Session Logon establishment sequence with automatic CCG to Customer resynchronization is presented below:



GapFilling examples are described below:

Automatic Customer to CCG resynchronization

	Client Application				Gat	eway				
Seq	Message	Detail			Detail	Message	Seq			
20	Order		>							
				<		Ack	30			
21	Order		>		Not received					
22	Order		>		Not received					
23	Order		>		Not received					
		Connexion Lost								

	Client Application				Gateway				
Seq	Message	Detail			Detail	Message	Seq		
24	Logon	(789)=31	>						
				<	(789)=21	Logon	31		
21	Order	(43)=Y	>						
22	Order	(43)=Y	>						
23	Order	(43)=Y	>						
24	SeqReset	(123)=Y;(43)=Y;(36)=25	>						

## • Automatic CCG to Customer resynchronization

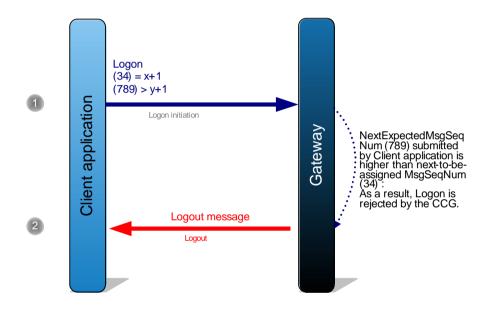
Client Application					Gateway	/	
Seq	Message	Detail			Detail	Message	Seq
20	Order		>				
				<		Ack	30
		Not received		<		Ack	31
		Not received		<		Ack	32
		Not received		<		Ack	33
		C	Conr	nexi	on Lost		

Client Application					Gateway				
Seq	Message	Detail			Detail	Message	Seq		
21	Logon	(789)=31	>						
				<	(789)=21	Logon	34		
				<		Ack	31		
				<		Ack	32		
				<		Ack	33		
				<	(123)=Y;(43)=Y;(36)=35	SeqReset	34		

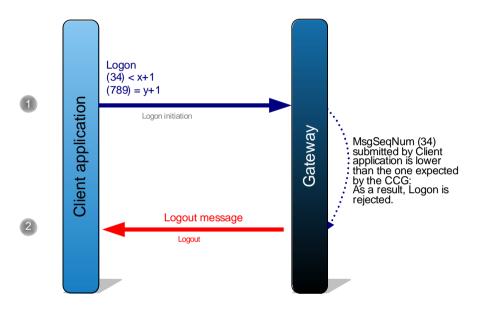
Nota: Automatic GapFilling is ended with a SequenceReset-GapFill replacing the Logon.

## **1.2.3.3** Sequence validation failure

A general overview of a UTP-FIX.4.2 Session Logon-Reject due to NextExpectedMsgSeqNum (789) validation failure :



A general overview of a UTP-FIX.4.2 Session Logon-Reject due to MsgSeqNum (34) validation failure:



# 2 Order management

Several entities and notions are involved in the sending of orders from clients to trading platforms, in the identification of these orders, and in the constraints associated with the identification of these orders. They are introduced hereunder.

## 2.1 Client Order Identifier

To each order sent by a client is associated the reference identifier of this order. This information is held by the ClOrdID field in the messages sent or received by the client or the trading platform.

# 2.2 Firm identifier

To each client is associated a Firm Identifier, which is the reference identifier of the client, "Firm" being the term used for "Client of Exchange". This information is held by the OnBehalfOfCompID (in Client requests messages) and DeliverToCompID (in Trading Platform responses messages) fields in the messages sent or received by the client or the trading platform.

# 2.3 Firm Access types

A Firm Access allows the Firm to access the Trading Platform. The 2 different Firm Access types, which can both be used by a given Firm, are the Regular Access and the Service Bureau Access ones, as described below:

• Regular Access: when a firm contracts directly its own and exclusive order entry access mean with NYSE Euronext, the Firm Trading Solution type is called Regular Access (or sometimes Direct Access).

• Service Bureau Access: when a 3<sup>rd</sup> party customer, also named Service Bureau, contracts order entry access mean with NYSE Euronext to act as an order carrier on behalf of several firms, the Firm Trading Solution type is called Service Bureau Access.

Note: The term "Firm Trading Solution type" can also be used instead of Firm Access type. The term "Direct access" can also be used instead of "Regular Access".

Important note: there are 2 types of Service Bureau, depending on if they generate or not ClOrdID, or in other words if they just transmit the ClOrdID values directly generated by the Firm on behalf of which the Service Bureau sends messages, or not. If a Service Bureau doesn't generate ClOrdIDs and just transmits them, it is called a "Pass Through" Service Bureau, can be assimilated to a Regular Access Trading Solution type, and so must feature the Regular Access ClOrdID format presented in next sections. And the firms, on behalf of which a "Pass Through" Service Bureau sends messages, are required to generate ClOrdID in the same manner, described in next sections, as for Regular Access.

# 2.4 Firm Access Connections

A Firm Access can establish connections to the Trading Platform by logging to CCG using the logon process (see also Session Management). These Firm Access connections are established by applications, also called Firm Trading Applications as described in next section, which can each one establish several connections.

# **2.5 Firm Trading Application Instances**

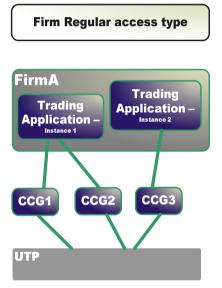
A given Firm can have several Firm Trading Application Instances. A Firm Trading Application is an application allowing a Firm to trade (i.e to send orders, to receive trade notices, etc...). Firm Trading Application instances may be independent from each other, and each one:

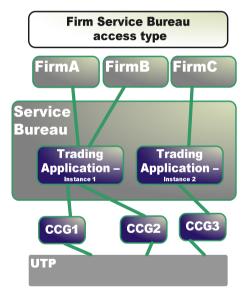
- can use different software solutions ("In-House" or a "Software vendors").
- manages its own pool of CCG connections.

can run in different branches of the same firm.

# 2.6 Firm Access/Trading Applications/Connections architecture overview

Here under is presented an overview of the architecture of the set of the entities presented in previous sections, according to the Firm Access type.





# 2.7 ClOrdID uniqueness - format overview

The ClOrdID value assigned to any given order must be unique for the Firm across all available connections for the current trading day. This constraint also applies to any orders placed on a previous trading day that still remain on the order book. As an example, the ClOrdID assigned to a GTC or GTD order not fully executed on the day of its entry and not yet cancelled can not be used for a new order placed on a subsequent day.

Remark: This applies to the following requests: New Order (D) and Order Cancel/Replace Request (G) where ClOrdID is used as an order reference identifier. But uniqueness doesn't apply to Order Cancel Request (F), where ClOrdID is used as a reference of the request and is optional.

To ensure for a given Firm that there is no conflict between Regular Access and Service Bureau Access, the exchange has put in place a "mandatory prefix policy" for Service Bureau Access (see Section Mandatory prefix: Service Bureau vs Regular Access for details).

The exchange also highly recommends an optional "instance prefix policy" for all Firms (regardless of the access type used) to ensure that there is no conflict between multiple Trading Solution or Connection instances within the Firm (see Recommended Instance prefix for details).

The ClOrdID length is 30 characters.

# 2.8 Mandatory prefix: Service Bureau vs Regular Access

Clients are required to implement available ranges according to the following general rules:

- Regular Access must not start any ClOrdID value with the '-' character.
- Service Bureau Access:
  - Must start all ClOrdID values with the '-' character.

AND

The next three characters must be populated with the unique 3-digit number assigned to the Service Bureau by the exchange.

# 2.9 Recommended Instance prefix

"In-House" and "Software vendors" developpers are recommended to implement a configurable prefix in order to allow Firms easy integration of several application instances to ensure ClOrdlD uniqueness across the Firm's orders.

The exchange recommends to use a 2-character prefix (must be numerical if Firm requires UTP-Direct vs UTP-FIX.4.2 compatibility – see also section 2.10). This prefix should be placed in the following locations within the ClOrdID value, depending on access type:

- Regular Access: The 2 leading characters, keeping in mind the "mandatory prefix policy" constraint detailed in Mandatory prefix: Service Bureau vs Regular Access section.
- Service Bureau Access: The next 2 characters after the mandatory '-' character and the 3-character Service Bureau prefix (see also Mandatory prefix: Service Bureau vs Regular Access section).

"Software Vendors" and "In house" developpers must be able to extend the instance prefix size for firm which has more instances than the 2character prefix available combinations can cover.

# 2.9.1 Application Instance ClOrdID available range overview

Below is presented an overview of the ClOrdID value available range, in ASCII format, for a Firm Application Instance, according to the Firm Access type.

Reminder: UTP-FIX4.2 admissible ascii values are:

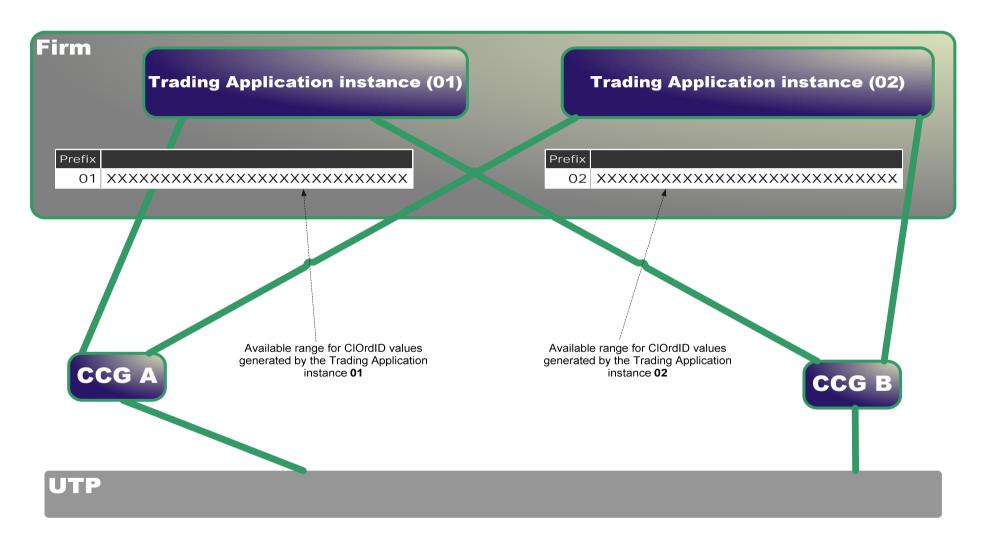
0..9 a.z A.Z "#
$$$&()-./:;<=>@[]^_*#{} blank.$$

In this section:

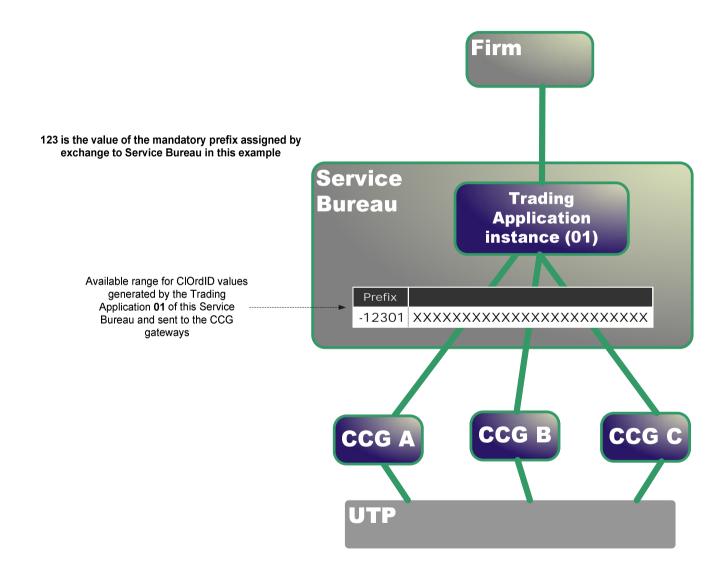
Let 2 be the Firm Application Instances prefix sizes and **01** and **02** the 2 values associated with the 2 instances.

Let **123** be the Service bureau mandatory prefix.

## 2.9.1.1 Regular access



## 2.9.1.2 Service Bureau access



# 2.10 UTP-FIX.4.2 vs UTP-DIRECT COMPATIBILITY

As UTP-Direct can only handle numerical ClientOrderID values. Clients needing to ensure UTP-FIX.4.2 / UTP-DIRECT compatibility must restrict the range of ClientOrderID values used in the UTP-FIX.4.2 protocol to numerical values only, in a range that is compatible with the UTP-DIRECT protocol.

An order entered through a UTP-FIX.4.2 connection with non-numerical characters in its ClientOrderID value cannot be modified or canceled through a UTP-DIRECT connection and the associated order trade notices cannot be received through a UTP-DIRECT drop-copy connection.

# 2.11 Kinematics

In the present section, Execution Report (8) with signature = xyz means that Execution Report (8) carries Tag 150=x, Tag 20=y, Tag 39=z. For more details about signature, please refer to the section Execution Report message Signature Tags within Execution Report (8) paragraph.

Responses are either Execution Report (8) message with specific signature or Order Cancel Reject (9).

In case of acknowledgement messages, the ClOrdID field returns back the value provided within the firm request.

In case of acknowledgement of a firm's cancel/replace or cancel request, the OrigClOrdID field identifies the order concerned by the request.

In case of replacement notices sent by the trading engine (Execution Report (8) message with signature = 501 or 505), the ClOrdID and OrderID fields identify the new order.

In case of cancellation notices (as a response to an Order Cancel Request (F)) sent by the trading engine (Execution Report (8) message with signature = 404), the OrigClOrdlD and OrderlD fields identify the cancelled order.

In case of elimination notices sent by the trading engine (Execution Report (8) message with signature = 404), for example a GTT order eliminated at its expiration time, the ClOrdID and OrderID fields identify the eliminated order.

If case of reject message, an Execution Report (8) message (with signature = 808) or an Order Cancel Reject (9) message is sent back, providing the client order ID of the request in the ClOrdID field, and the original client order ID in the OrigClOrdID field.

## 2.11.1 Creating an Order

The firm creates an order using the New Order (D) request.

If the new order request is accepted, the trading engine answers with an Execution Report (8) message. This message contains the OrderID field that should be used for subsequent requests regarding the created order (cancel/replace, cancel).



 If the new order request is rejected, the trading engine answers with an Execution Report (8) with a specific signature and rejection reason.



**Note**: a new order request may be acknowledged (Execution Report (8) message), then rejected (Execution Report (8) message with signature = 808) for collar crossing.

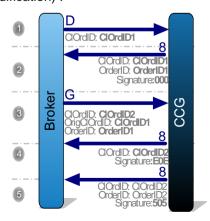
## 2.11.2 Replacing an Order

The firm replaces an existing order using the Cancel/Replace Order (G) message. This request enables changing any valid attribute of an alive order (i.e. reduce or increase quantity, change limit price, change instructions, etc.).

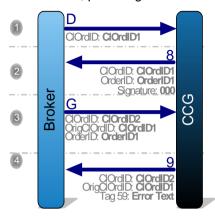
Any attribute of the original order must be repeated as is in the cancel/replace request, unless this attribute is to be modified.

The identification of the order to replace is provided with the OrderID field or the OrigClOrdID field. Using OrderID is recommended (for better performance), and in this case OrigClOrdID is not taken into account even if, for FIX standard compliancy, it must be provided. But OrderID is optional to replace an order, and if not provided, the order is then identified by the OrigClOrdID field (see "2.11.3-Confirming an Order" for the only functional case where, in the Cancel/Replace Order (G) message, both OrderID and OrigClOrdID must be provided and are taken into account).

If the Cancel/Replace request is accepted, the trading engine answers with two Execution Report (8) messages. The first one acknowledges the request, and holds the information associated with the modified order, and the second one indicates the successfull process, and holds the information associated with the modifying order (new order created after modification):



If the Cancel/Replace request is rejected, an Order Cancel Reject (9) message is sent back instead, providing the reason of the rejection.



**Note**: a cancel/replace request may be acknowledged (Execution Report (8) message with signature = E0E), then rejected (Order Cancel Reject (9) message) for collar crossing.

### **Order Quantity**

To increase or decrease an order quantity, the firm must specify the new total quantity (whatever the already executed quantity of the order to replace).

Example: new order 1 with a total quantity  $Q_{tot1}$ =1000 is executed for 700, hence its remaining quantity  $Q_{rem1}$  is 300.

If the new total quantity is strictly greater than the difference between the original total quantity and the remaining quantity, the Cancel/Replace request is accepted.

In the example above, order 1 is then replaced by a new order 2 with a total quantity  $Q_{tot2}$  of 800, hence the quantity of order 2 is:

$$Q_{rem2} = Q_{rem1} - (Q_{tot1} - Q_{tot2}) = 300 - (1000-200) = 100.$$

If the new total quantity is less than or equal to the difference between the original total quantity and the remaining quantity, the Cancel/Replace request is rejected.

In the example above, if firm attempts to replace order 1 with a new order 2 with a total quantity  $Q_{tot2}$  of 500, the request is rejected as:

$$Q_{rem1}$$
 -  $(Q_{tot1}$ - $Q_{tot2}) = 300 - (1000-500) <= 0$ .

## 2.11.3 Confirming an Order

New Order (D) and Cancel/Replace Order (G) messages contain both the ConfirmFlag field. This indicator is used in two situations:

#### **Order Size Confirmation**

If the order exceeds the amount (equities) or total quantity (bonds) predefined at the class level, it is rejected and needs to be entered once again with the confirmation indicator set (however, firm may choose to avoid rejects for confirmation by systematically setting the confirmation indicator in the first place new order requests).

## **Collar Crossing Confirmation**

If a new order can be executed upon entry, but the matching price hits a collar, the remaining quantity of that order is rejected.

However the firm can force the collar crossing by reactivating the rejected order within a short time period using a Cancel/Replace Order (G) with the same price and quantity and the confirmation indicator set. Collars are therefore adjusted around the hit collar before the confirmed order is processed.

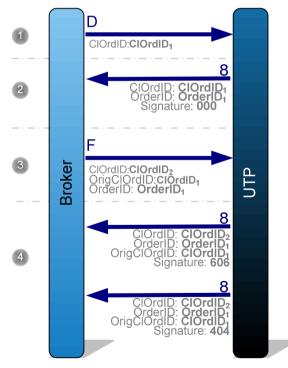
In that situation, the firm must provide both the OrigClOrdID and OrderID fields in the Cancel/Replace Order (G) message.

## 2.11.4 Cancelling an Order

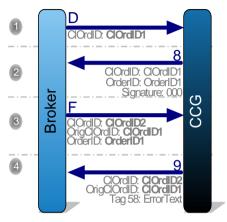
A firm may cancel the remaining quantity of an alive order using the Order Cancel Request (F) message.

The identification of the order to cancel is provided with the OrderID field or the OrigClOrdID field. Using OrderID is recommended (for better performance), and in this case OrigClOrdID is not taken into account even if, for FIX standard compliancy, it must be provided. But OrderID is optional to cancel an order, and if not provided, the order is then identified by the OrigClOrdID field.

If the Cancel request is accepted, the trading engine always answers to this firm request with a Execution Report (8) message (with signature = 606). Then, if the order cancellation is committed, an Execution Report (8) message (with signature = 404) message is sent back.



If the Cancel request is rejected, an Order Cancel Reject (9) message is sent back instead, providing the reason of the rejection.



# 2.11.5 Cancelling Several Orders

A firm may cancel the remaining quantity of several alive orders using the Order Mass Cancel Request (q) message. The following conditions must be met:

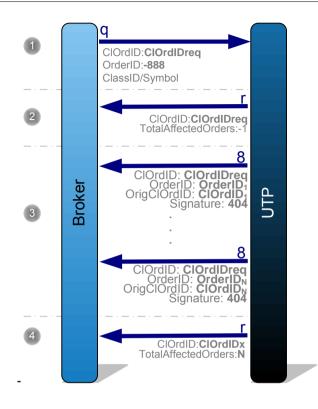
- Either the ClassID field or the Symbol field must be populated;
- Optional additional criteria may be specified with the CancelByLocationID, Side, TechnicalOrdType and Rule80A fields. If no optional criteria is specified, all remaining orders of the issuing firm are cancelled for the populated ClassID or Symbol

#### **Important Note:**

 If CancelByLocationID criteria is not specified, all remaining orders of all connections of the issuing firm, are cancelled for the populated ClassID or Symbol along with the other additional criteria Following a valid Mass Cancel request, the UTP trading engine will send the following messages:

- A first message Order Mass Cancel Report (r), sent back to the connection that issued the Mass Cancel request
- One message 8 "Order Mass Cancel Request (q) responses" for each order cancelled, sent to the connection that owns the order
- A second and final message Order Mass Cancel Report (r), sent back to the connection that issued the Mass Cancel request

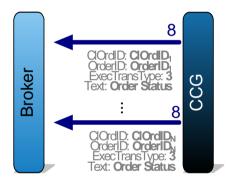
Please refer to the Order Mass Cancel Report (r) message for further details.



## 2.11.6 Order Book Retransmission

For Exchange Disaster Recovery scenario purposes, Order Book Retransmission consists of retransmitting all orders present in the central orderbook for a given firm as follow:

Execution Report (8) messages (with ExecTransType = 3) will be sent to related client connection, one for each order in the book.



#### Notes:

- To request for order book retransmission, firm must contact Market Desk.
- Clients working with several firms will need to contact Market Desk to apply for retransmission requests for all relevant firm identifiers.
- Firms who applied for Order Book Retransmission must empty their local orderbook of any remaining orders in order to receive the incoming data with a clean sheet.

# 3 Messages Header and Trailer

# 3.1 Message Header

#### **Message Fields**

✓ Always required / + Conditionally required / 0 optional / I Ignored

Tag	Field	Description	Require d	Values	Pge
8	BeginString	Beginning of message identifier	✓	FIX.4.2	62
9	BodyLength	Message length	✓	Integer	62
35	MsgType	Message type	<b>✓</b>	A 0 1 2 3 4 5 D F q G H 8 8 9 h (for future use) I r y j	72
34	MsgSeqNum	Message Sequence Number	✓	Integer(15)	72
49	SenderCompID	Identifier of the message sender (Firm ID or Service Bureau ID in Inbound messages)	<b>✓</b>	String(11)	78
56	TargetComplD	Identifier of the message receptor (Firm ID or Service Bureau ID in Outbound messages)	<b>✓</b>	String(11)	80

Tag	Field	Description	Require d	Values	Pge
115	OnBehalfOfComplD	Identifier of the Firm to which the order belongs (Inbound messages)	+	String(11) (agreed upon clearing value)	73
128	DeliverToCompID	Identifier of the Firm to which the order belongs (Application Outbound messages)	+	String(11)	66
142	SenderLocationID	Identifier of the Trading Application Issuer	+	String(11)	78
52	SendingTime	Time of message transmission	✓	LocalMktTime	78
43	PossDupFlag	Message possible retransmission indicator	0	Y Possible duplicate N Original transmission	76
97	PossResend	Indicator of message containing information already sent	0	Y Possible resend N Original transmission	76

### **Header Usage**

The header identifies the type, length, destination, sequence number, origination point and time of each UTP-FIX.4.2 message.

Destination and origination point information of a message are held by the SenderCompID, TargetCompID, OnBehalfOfCompID and DeliverToCompID fields, whose usage differs according to the message direction (Outbound or Inbound).

2 fields help with the resending of messages. PossDupFlag is set to **Y** when resending a message as the result of a session level event (i.e. the retransmission of a message reusing a sequence number). PossResend is set to **Y** when reissuing a message with a new sequence number (e.g. resending an order). The receiving application should process these messages as follows:

PossDupFlag - if a message with this sequence number has been previously received, ignore message, if not, process normally. PossResend - forward message to application and determine if previously received (i.e. verify order id and parameters).

# **3.2** Message Trailer

## **Message Fields**

✓ Always required / + Conditionally required / 0 optional / I Ignored

Tag	Field	Description	Require d	Values	Pge
10	CheckSum	CheckSum	✓	String(3)	63

## **Trailer Usage**

The trailer is used to segregate messages and contains the three digit character representation of the checksum value.

# 4 Administrative messages

Administrative messages, except Reject (3) which is only an outbound message, are both inbound and outbound messages (these messages are Logon (A), HeartBeat (0), Test Request (1), Resend Request (2), Sequence Reset (4) and Logout (5)).

# **4.1** Logon (A)

#### **Message Fields**

✓ Always required / + Conditionally required / 0 optional / I Ignored

Tag	Field	Description	Require d	Values / Comments	Pge
	Message HEADER		✓	A Logon	
98	EncryptMethod	Method of encryption	✓	0 None / Other	67
108	HeartBtInt	Heartbeat interval	✓	Numerical	70
141	ResetSeqNumFlag	Sequence numbers reset flag	0	Y Yes, reset sequence numbers N No	77
789	NextExpectedMsgSeqNum	Next Expected Message Sequence Number	+	Integer(15)	72
	Message TRAILER		✓		

## **Message Usage**

The issuer of this message can either be the client application or the CCG. As described in the Session Management chapter, the utility of this message is to a establish a UTP-FIX.4.2 session logon.

# **4.2** HeartBeat (0)

#### **Message Fields**

✓ Always required / + Conditionally required / 0 optional / I Ignored

Tag	Field	Description	Require d	Values / Comments	Pge
	Message HEADER		✓	0 HeartBeat	
112	TestReqID	Test request message identifier	+	String	80
	Message TRAILER		✓		

#### **Message Usage**

The issuer of this message can either be the client application or the CCG.

The Heartbeat message monitors the status of the communication link during inactivity periods. The HeartBtInt field of the Logon (A) message is used to declare at logon the timeout interval for generating heartbeats. If HeartBtInt is set to zero then no regular heartbeat messages is generated.

When either the client application or the CCG has not sent any data for <*HeartBtInt value*> seconds, it transmits a Heartbeat message.

When either the client application or the CCG has not received any data for [<*HeartBtInt value*> + "some reasonable transmission time"] seconds, it transmits a Test Request (1) message.

If there is still no Heartbeat message received after [<*HeartBtInt value>* + "some reasonable transmission time"] seconds then the connection should be considered lost.

On the CCG side, "some reasonable transmission time" is set to 5 seconds.

Note that a Test Request (1) message can be sent independently from the HeartBtInt value, which forces a Heartbeat message. Heartbeats issued as the result of a Test Request (1) message sending must contain the TestReqID value transmitted in the Test Request (1) message. This is useful to verify that the Heartbeat is the result of the Test Request and not as the result of a regular timeout.

# 4.3 Test Request (1)

#### **Message Fields**

✓ Always required / + Conditionally required / 0 optional / I Ignored

Tag	Field	Description	Require d	Values / Comments	Pge
	Message HEADER		<b>√</b>	1 TestRequest	
112	TestReqID	Test request message identifier	+	String	80
	Message TRAILER		✓		

#### **Message Usage**

The issuer of this message can either be the client application or the CCG.

This message forces a HeartBeat (0) message from the opposite side. The test request message checks sequence numbers or verifies communication line status.

The opposite application responds to the Test Request with a HeartBeat (0) message containing the TestReqID. The TestReqID is used to verify that the opposite application is generating the HeartBeat (0) as the result of a Test Request and not a normal timeout.

Any string can be used as the TestReqID (one suggestion is to use a timestamp string).

# 4.4 Resend Request (2)

### **Message Fields**

✓ Always required / + Conditionally required / 0 optional / I Ignored

Tag	Field	Description	Require d	Values / Comments	Pge
	Message HEADER		✓	2 ResendRequest	
7	BeginSeqNo	Sequence number beginning of messages to be resent	✓	Integer	62

Tag	Field	Description	Require d	Values / Comments	Pge
16	EndSeqNo	Sequence number ending of messages to be resent	✓	Integer	67
	Message TRAILER		✓		

#### **Message Usage**

The issuer of this message can either be the client application or the CCG. This message is sent by the receiving application to initiate the retransmission of messages.

This function is used when a sequence number gap is detected, if the receiving application lost a message, or as a function of the initialisation process.

The resend request can be used to request a single message, a range of messages or all messages subsequent to a particular message:

- To request a single message: BeginSeqNo = EndSeqNo.
- To request a range of messages: BeginSeqNo = first message of range, EndSeqNo = last message of range.
- To request all messages subsequent to a particular message: BeginSeqNo = first message of range, EndSeqNo = 0 (represents infinity).

In all messages sent as the result of a resend request, PossDupFlag field must be provided with  $\mathbf{Y}$ . Messages lacking the PossDupFlag field or with PossDupFlag provided with  $\mathbf{N}$  are treated as original transmissions.

Upon receipt of a Resend Request, the resender has 3 ways to respond. It can:

- Retransmit the requested messages (in order) with the original sequence numbers and PossDupFlag set to Y.
- Issue a Sequence Reset (4) \_Sequence\_Reset\_(message with PossDupFlag set to Y to replace the retransmission of administrative or application messages.
- Mix these two possibilities.

# **4.5** Reject (3)

#### **Message Fields**

✓ Always required / + Conditionally required / 0 optional / I Ignored

Tag	Field	Description	Require d	Values / Comments	Pge
	Message HEADER		✓	3 Reject	
45	RefSeqNum	Reference sequence number of the message rejected	✓	Integer	77
371	RefTagID	Field tag reference	0	Integer	77
372	RefMsgType	Message type reference	0	A 0 1 2 3 4 5 D F q G H 8 9 h (for future use) I r y j	77
373	SessionRejectReason	Session reject reason code identifier	0	Integer	78
58	Text	Request status or error text	0	String (40)	81
	Message TRAILER		✓		

## **Message Usage**

The issuer of this message can only be the CCG, which generates the message as per FIX.4.2 specifications.

If the CCG receives this message from the client application, it sends a Logout (5) message.

# 4.6 Sequence Reset (4)

#### **Message Fields**

✓ Always required / + Conditionally required / 0 optional / I Ignored

Tag	Field	Description	Require d	Values / Comments	Pge
	Message HEADER		✓	4 Sequence Reset	
123	GapFillFlag	Sequence Reset mode indicator	+	Y Gap Fill message, MsgSeqNum field valid N Sequence Reset, ignore MsgSeqNum	69
36	NewSeqNo	New Sequence Number	✓	Integer (15)	73
	Message TRAILER		✓		

### **Message Usage**

The issuer of this message can either be the client application or the CCG. This message can be sent in 2 modes according to the GapFillFlag value: the GapFill mode in case GapFillFlag =  $\mathbf{Y}$ , and the Reset mode in case GapFillFlag =  $\mathbf{N}$  or is not present. But:

- This message is not used by the CCG in Reset mode.
- This message, if received from a client by the CCG and in Reset mode, is not accepted and the CCG responds with a Logout (5) message.

The sequence reset message can be used in the following situations:

- During normal resend processing, the sending application may choose not to send a message (e.g. an aged order). The Sequence Reset can be used to mark the place of that message.
- During normal resend processing, a number of administrative messages are not resent, the Sequence Reset message is used to fill the sequence gap created.

#### In both cases:

- GapFillFlag should be set to Y.
- PossDupFlag should be set to Y.
- MsgSeqNum should conform to standard message sequencing rules (i.e. the MsgSeqNum of the SequenceReset-GapFill message should represent the beginning MsgSeqNum in the GapFill range because the remote side is expecting that next message).

# 4.7 Logout (5)

### **Message Fields**

<b>√</b>	Always required	I / + Conditionally	y required /	O optional /	I Ignored
----------	-----------------	---------------------	--------------	--------------	-----------

Tag	Field	Description	Require d	Values / Comments	Pge
	Message HEADER		✓	5 Logout	
58	Text	Request status or error text	0	String (40)	81
	Message TRAILER		✓		

## **Message Usage**

This message is used to initiate and confirm a nominal termination of a UTP-FIX.4.2 session. A session disconnection without exchange of these messages can be considered as a degraded one.

# 5 Application Messages

Each Application message is either inbound or outbound, not both. Inbound Application messages are the following ones: New Order (D), Order Cancel Request (F), Order Mass Cancel Request (q), Order Cancel/Replace Request (G) and Price Input (I).

Outbound Application messages are the following ones: Execution Report (8), Order Cancel Reject (9), Order Mass Cancel Report (r), Request Ack (y) and Business Message Reject (j).

# 5.1 New Order (D)

## **Message Fields**

✓ Always required / + Conditionally required / 0 optional / I Ignored

Tag	Field	Description	Required	Values / Comments	Pge
	Message HEADER		$\checkmark$	D New Order	
11	ClOrdID	Client Order Identifier	<b>✓</b>	String(30), printable characters 0.9 a.z A.Z "#\$&()/:;<=>@[]^_`#{} bl ank	64
55	Symbol	Instrument identifier	✓	String(12) (ISIN format)	79
54	Side	Order Side	✓	1 Buy 2 Sell 8 Cross (new order only)	78
40	OrdType	Price type of the order	<b>✓</b>	1 Market 2 Limit 3 Stop 4 Stop Limit P Pegged (in New Order (D) only) K Market To Limit	75

Tag	Field	Description	Required	Values / Comments	Pge
59	TimeInForce	Time in Force Validity	0	<ol> <li>Day</li> <li>Good Till Cancel</li> <li>VFA (Valid for Auction)</li> <li>Immediate Or Cancel</li> <li>Fill Or Kill</li> <li>Good Till Date or Time</li> <li>VFC (Valid for Closing)</li> </ol>	81
18	ExecInst	Execution Instruction	+	R Primary Peg X Cross for European markets	67
44	Price	Price	+	Price(10)	76
99	StopPx	Stop Price	+	Price(10)	79
38	OrderQty	Total Order Quantity	✓	Quantity(9)	74
110	MinQty	Minimum Quantity	+	Quantity(9)	72
111	MaxFloor	Disclosed Quantity	+	Quantity(9)	71
126	ExpireTime	ExpireTime	+	LocalMktTime(YYYYMMDD-hh:mm:ss)	69
432	ExpireDate	Expiration Date	+	LocalMktDate	69
388	DiscretionInst	Discretion Instruction	+	0 Related to displayed price	66
389	DiscretionOffset	Discretion Offset	0	Price(10) ('0' only possible value)	66
211	PegDifference	Price Difference for a Pegged Order	+	Price(10) ('0' only possible value)	76
21	Handlinst	Instructions for order handling on Broker trading floor	ı	1 Automated execution order, private, no Broker intervention 2 Automated execution order, public, Broker intervention OK 3 Manual order, best execution	70
60	TransactTime	Transaction Time	1	LocalMktTime(YYYYMM DD-hh:mm:ss)	82
9941	TechnicalOrdType	Order Technical Origin	0	I Index trading arbitrage P Portfolio strategy G Unwind order A Other orders C Cross margining	80
9930	ConfirmFlag	Confirmation Indicator	0	Not confirmed     Confirmed	65

Repeating group   1   Client   2   House   6   Liquidity Provider   7   Related Party   Must be the first tag of the repeating group   1   Account   Number   0   String(12)   6   Must be the first tag of the repeating group   109   ClientID   Client Identifier   0   String(8)   6   6   Must be the first tag of the repeating group   7   Must be the first tag of the repeating group   7   Must be the first tag of the repeating group   7   Must be the first tag of the repeating group   7   Must be the first tag of the repeating group   7   Must be the first tag of the repeating group   7   Must be the first tag of the repeating group   7   Must be the first tag of the repeating group   7   Must be the first tag of the repeating group   7   Must be the first tag of the repeating group   7   Must be the first tag of the repeating group   7   Must be the first tag of the repeating group   7   Must be the first tag o		Tag	Field	Description	Required	Values / Comments	Pge
Repeating group  Repeat		9933	NoClearingEntries		✓	1 or 2	73
Repeating group  109		47	Rule80A	Order Origin	<b>✓</b>	2 House 6 Liquidity Provider 7 Related Party Must be the first tag of	77
Repeating group  9952 FreeText Free Text 0 String(18) 6  439 ClearingFirm Give-up Firm Identifier 0 String(8) 6  77 OpenClose Posting Action 0 Open Colose 7  9938 ClearingHandlingT Sype  Operation Mode 1 Automatic extraction 2 Automatic allocation Blank Systematic posting 1 Early session 2 Core session 3 Late session 12 Early and Core sessions 13 Early and Core sessions 13 Early and Core sessions 13 Early and Late session 14 Sessions 15 Early and Late sessions 15 Early and Late sessions 16 Early and Late sessions 17 Early and Late sessions 18 Early and Late sessions 19 Early and Late sessions 19 Early and Late sessions 10 Early sessions 10 Early and Late sessions 11 Early and Late sessions 12 Early and Late sessions 13 Early and Late sessions 13 Early and Late sessions 14 Early and Late sessions 15 Early and Late sessions 16 Early		1	Account		0	String(12)	62
group  439 ClearingFirm Give-up Firm Identifier 0 String(8) 6  77 OpenClose Posting Action 0 Open C Close 7  9938 ClearingHandlingT Special Poperation String(8) Operation Mode 1 Automatic extraction Elank Systematic posting 1 Early session 2 Core session 3 Late session 12 Early and Core sessions 13 Early and Late sessions 13 Early and Late sessions 13 Early and Late sessions 13 Core and Late sessions 23 Core and Late sessions 14 Sessions 23 Core and Late sessions 25 Core and Late sessions 25 Core and Late sessions 25 Core and Late sessions 26 Core and Late sessions 27 Core and Late sessions 27 Core and Late sessions 28 Core and Late sessions 29 Core and Late sessions 20 Core and Late S		109	ClientID	Client Identifier	0	String(8)	64
A39   ClearingFirm   Give-up Firm Identifier   O   String(8)   6		9952	FreeText	Free Text	0	String(18)	69
9938 ClearingHandlingT ype Mode Clearing Operation ype Mode O String(3)  386 NoTradingSessions Number of repeating TradingSessionID TradingSession 2 Core session 3 Late session 12 Early and Core sessions 13 Early and Late sessions 13 Early and Late sessions 23 Core and Late sessions 23 Core and Late sessions 8	group	439	ClearingFirm	Give-up Firm Identifier	0		63
9938 ClearingHandlingT ype		77	OpenClose	Posting Action	0		74
Repeating group  TradingSessionID		9938			0	1 Automatic extraction 2 Automatic allocation	64
Repeating group  TradingSessionID		386	NoTradingSessions			1, 2 or 3	73
123 All sessions  ('12', '13', '23', '123' are only possible in messages sent by the UTP trading engine, else Repeating Group principle is to be used)		336	TradingSessionID	Trading Session		1 Early session 2 Core session 3 Late session 12 Early and Core sessions 13 Early and Late sessions 23 Core and Late sessions 123 All sessions ('12', '13', '23', '123' are only possible in messages sent by the UTP trading engine, else Repeating Group principle is to be	81
Message TRAILER   ✓			Message TRAILER		✓		

#### **Message Usage**

The New Order message requests the creation of a new order.

The following fields constitute the clearing date information: Rule80A, Account, ClearingFirm, ClientID, FreeText, OpenClose and ClearingHandlingType. For a cross order NoClearingEntries must be 2 and two set of clearing data must be used to provide the buyer and seller counterpart clearing information: the first set for buyer and the second set for seller.

Please refer to section Creating an Order (page 23) for more information regarding order creation.

#### **Conditionally required fields**

Please refer to section Tag Combinations for Supported Orders (page 52) for the specific conditions of the fields Price, StopPx, MinQty, MaxFloor, DiscretionOffset and PegDifference.

# **5.2** Order Cancel Request (F)

## **Message Fields**

✓ Always required / + conditionally required / 0 optional / I Ignored

Tag	Field	Description	Require d	Values / Comments	Pge
	Message HEADER	Message type	✓	F Order Cancel Request	
37	OrderID	Engine Order Identifier	0	String(24)	74
11	ClOrdID	Client Order Identifier	0	String(30), printable characters 09 az AZ "#\$&()/:; <=>@[]^_`#{} bl ank	64
41	OrigClOrdID	Original Client Order Identifier	✓	String(30) (CIOrdID of the order to be modified / cancelled)	75
55	Symbol	Instrument identifier	✓	String(12) (ISIN format)	79

Tag	Field	Description	Require d	Values / Comments	Pge
38	OrderQty	Total Order Quantity	ı	Quantity(9)	74
60	TransactTime	Transaction Time	1	LocalMktTime(YYYYMMDD- hh:mm:ss)	82
	Message TRAILER		✓		

#### **Message Usage**

The Order Cancel Request message requests the cancellation of all of the remaining quantity of an existing order.

Please refer to section Cancelling an Order (page 25) for more information regarding single order cancellation.

# **5.3** Order Mass Cancel Request (q)

## **Message Fields**

✓ Always required / + conditionally required / 0 optional / I Ignored

Tag	Field	Description	Require d	Values / Comments	Pge
	Message HEADER	Message type	✓	q Order Mass Cancel Request	
11	ClOrdID	Client Order Identifier	0	String(30), printable characters 09 az AZ "#\$&()/:; <=>@[]^_`#{} bl ank	64
55	Symbol	Instrument identifier	+	String(12) (ISIN format)	79
9945	ClassID	Class Identifier	+	String(2)	63
530	MassCancelRequestT ype	Specifies if a mass cancellation criteria is requested	I	<ul> <li>7 Cancel all orders         belonging to the         specified ClassID or         Symbol</li> <li>8 Cancel orders matching         the specified criteria</li> </ul>	71
54	Side	Order Side	+	1 Buy 2 Sell 8 Cross (new order only)	78

Tag	Field	Description	Require d	Values / Comments	Pge	
9941	TechnicalOrdType	Order Technical Origin	+	I Index trading arbitrage P Portfolio strategy G Unwind order A Other orders C Cross margining	80	
47	Rule80A	Order Origin	+	<ul><li>1 Client</li><li>2 House</li><li>6 Liquidity Provider</li><li>7 Related Party</li></ul>	77	
1	Account	Client Account Number	1	String(12)	62	
9960	CancelByLocationID	Identifier of the Issuing Agency whose orders are to be cancelled	+	SenderLocationID value	63	
60	TransactTime	Transaction Time	ı	LocalMktTime(YYYYMMDD- hh:mm:ss)	82	
	Message TRAILER   ✓					

#### **Message Usage**

The Order Mass Cancel Request message requests the cancellation of all of the remaining quantity of a group of orders matching criteria within the request. This orders mass cancellation function is also called Bulk Cancel. The following conditions must be met:

- Either the ClassID field or the Symbol field must be populated;
- Optional additional criteria may be specified with the CancelByLocationID, Side, TechnicalOrdType and Rule80A fields. If no optional criteria is specified, all remaining orders of the issuing firm are cancelled for the populated ClassID or Symbol

## **Important Note:**

If CancelByLocationID criteria is not specified, all remaining orders of all connections of the issuing firm, are cancelled for the populated ClassID or Symbol along with the other additional criteria

Please refer to section Cancelling Several Orders (page 26) for more information regarding bulk order cancellation.

# **5.4 Order Cancel/Replace Request (G)**

#### **Message Fields**

✓ Always required / + conditionally required¹ / 0 optional / I Ignored

Always required / + conditionally required / 0 optional / righted					
Tag	Field	Description	Require d	Values / Comments	Pge
	Message HEADER	Message type	✓	G Order Cancel / Replace Request	
37	OrderID	Engine Order Identifier	0	String(24)	74
11	ClOrdID	Client Order Identifier	<b>✓</b>	String(30), printable characters 09 az AZ "#\$&()/:;<=>@[]^_`#{} bl ank	64
41	OrigClOrdID	Original Client Order Identifier	✓	String(30) (CIOrdID of the order to be modified / cancelled)	75
55	Symbol	Instrument identifier	✓	String(12) (ISIN format)	79
54	Side	Order Side	✓	1 Buy 2 Sell 8 Cross (new order only)	78
40	OrdType	Price type of the order	✓	1 Market 2 Limit 3 Stop 4 Stop Limit P Pegged (in New Order (D) only) K Market To Limit	75

<sup>&</sup>lt;sup>1</sup> Caution: In order to keep an order field value unchanged when the order is replaced, the G message must own the same value for that field as the original value in the D message. This also applies to optional fields.

Tag	Field	Description	Require d	Values / Comments	Pge
59	TimeInForce	Time in Force Validity	0	<ol> <li>Day</li> <li>Good Till Cancel</li> <li>VFA (Valid for Auction)</li> <li>Immediate Or Cancel</li> <li>Fill Or Kill</li> <li>Good Till Date or Time</li> <li>VFC (Valid for Closing)</li> </ol>	81
18	ExecInst	Execution Instruction	+	R Primary Peg X Cross for European markets	67
44	Price	Price	+	Price(10)	76
99	StopPx	Stop Price	+	Price(10)	79
38	OrderQty	Total Order Quantity	✓	Quantity(9)	74
111	MaxFloor	Disclosed Quantity	+	Quantity(9)	71
126	ExpireTime	ExpireTime	+	LocalMktTime(YYYYMMDD- hh:mm:ss)	69
432	ExpireDate	Expiration Date	+	LocalMktDate	69
388	DiscretionInst	Discretion Instruction	+	Related to displayed price	66
389	DiscretionOffset	Discretion Offset	0	Price(10) ('0' only possible value)	66
211	PegDifference	Price Difference for a Pegged Order	I	Price(10) ('0' only possible value)	76
21	Handlinst	Instructions for order handling on Broker trading floor	ı	value)  1 Automated execution order, private, no Broker intervention 2 Automated execution order, public, Broker intervention OK 3 Manual order, best execution	
60	TransactTime	Transaction Time	ı	LocalMktTime(YYYYMMDD-hh:mm:ss)	82
9941	TechnicalOrdType	Order Technical Origin	0	I Index trading arbitrage P Portfolio strategy G Unwind order A Other orders C Cross margining	80

Tag	Field	Description	Require d	Values / Comments	Pge
9930	ConfirmFlag	Confirmation Indicator	0	Not confirmed     Confirmed	65
47	Rule80A	Order Origin	✓	<ol> <li>Client</li> <li>House</li> <li>Liquidity Provider</li> <li>Related Party</li> </ol>	77
1	Account	Client Account Number	0	String(12)	62
109	ClientID	Client Identifier	0	String(8)	64
9952	FreeText	Free Text	0	String(18)	69
439	ClearingFirm	Give-up Firm Identifier	0	String(8)	63
77	OpenClose	Posting Action	0	O Open C Close	74
9938	ClearingHandlingTyp e	Clearing Operation Mode	0	0 Manual mode 1 Automatic extraction 2 Automatic allocation Blank Systematic posting	64
386	NoTradingSessions	Number of repeating TradingSessionID	0	1, 2 or 3	73

	Tag	Field	Description	Require d	Values / Comments	Pge
Repeating group	336	TradingSessionID	Trading Session Identifier	+	String(3)  1 Early session 2 Core session 3 Late session 12 Early and Core sessions 13 Early and Late sessions 23 Core and Late sessions 123 All sessions  ('12', '13', '23', '123' are only possible in messages sent by the UTP trading engine, else Repeating Group principle is to be used)	81
		Message TRAILER		✓		

#### **Message Usage**

The Cancel/Replace request is used in two situations:

- Changing any valid attribute of an open order (i.e. reduce or increase quantity, change limit price, change instructions, etc.). However, this message is not used to cancel the remaining quantity of an outstanding order (use Cancel Order (F) message for this purpose). Please refer to section Replacing an Order (page 24) for more information regarding order replacement.
- Confirming a new order that can be executed upon entry, but whose matching price hits a collar (in that case, the remaining quantity of that order is rejected); please refer to section Confirming an Order (page 25).

In case of quantity update, please refer to section Replacing an Order (page 24) for more information regarding order replacement.

## 5.5 Price Input (I)

#### **Message Fields**

✓ Always required / + conditionally required

Tag	Field	Description	Requir ed	Values	Pge
	Message HEADER	Message type	✓	P Price Input	
55	Symbol	Instrument identifier	✓	String(12) (ISIN format)	79
44	Price	Price	+	Price(10)	76
9950	InputPxType	Input Price Type	✓	V Valuation trade A Alternative Indicative Price (AIP)	70
	Message TRAILER		✓		

#### **Message Usage**

This message allows injecting prices within the trading engine, either to update the reference price of an instrument with a valuation price or external price from a primary market, and/or to broadcast indicative prices to market participants.

The engine confirms the price input with a Request Ack (y) message.

The type of price is specified by the InputPxType field:

- If set to V (valuation trade), a trade message is broadcasted to market participants with the provided price or the reference price depending on the instrument class configuration.
- If set to A (Alternative Indicative Price), the instrument's reference price is updated with the provided price and a price output message is broadcasted to market participants.

## **5.6 Execution Report (8)**

#### **Message Fields**

✓ Always provided / + conditionally provided / I Never provided

Tag	Field	Description	Provide d	Values	Pg e	
	Message HEADER	Message type	✓	8 Execution Report		
11	ClOrdID	Client Order Identifier	+	String(30), printable characters 09 az AZ "#\$&()/:; <=>@[]^_`#{} bl ank	64	
41	OrigClOrdID	Original Client Order Identifier	+	String(30) (ClOrdID of the order to be modified / cancelled)		
37	OrderID	Engine Order Identifier	+	String(24)		
17	ExecID	Execution Report Identifier	✓	String(24)	67	
20	ExecTransType	Transaction Type	<b>✓</b>	<ul> <li>Not Trade Cancellation</li> <li>Trade Cancellation</li> <li>Correct (for possible future use)</li> <li>Status</li> </ul>	68	
60	TransactTime	Transaction Time	✓	LocalMktTime(YYYYMMDD-hh:mm:ss)	82	
103	OrdRejReason	Order Rejection Reason	+	<ul> <li>Broker option</li> <li>Unknown symbol</li> <li>Exchange closed</li> <li>Order exceeds limit</li> <li>Too late to enter</li> <li>Unknown Order</li> <li>Duplicate Order</li> <li>Duplicate of a verbally communicated order</li> <li>Stale Order</li> </ul>	74	

Tag	Field	Description	Provide d	Values	Pg e
39	OrdStatus	Order Status	1	<ul> <li>New</li> <li>Partially filled</li> <li>Filled</li> <li>Done for Day</li> <li>Cancelled</li> <li>Replaced</li> <li>Pending Cancel</li> <li>Rejected</li> <li>Expired</li> <li>Pending Replace</li> <li>Cancelled by Market Operation</li> <li>Eliminated by Corporate event</li> </ul>	75
150	ExecType	Execution Type	<b>✓</b>	<ul> <li>New</li> <li>Partially filled</li> <li>Filled</li> <li>Done for Day</li> <li>Cancelled</li> <li>Replaced</li> <li>Pending Cancel</li> <li>Rejected</li> <li>Expired</li> <li>Pending Replace</li> <li>Trade Creation</li> <li>Cancelled by Market Operation</li> <li>Eliminated by Corporate event</li> </ul>	68
19	ExecRefID	Trade Reference Identifier	+	String(24)	68
31	LastPx	Price of Fill	+	Price(10)	70
32	LastShares	Quantity of Fill	+	Price(10)	70
6	AvgPx	Average Price of Fills on this order	✓	Price(10)	62
55	Symbol	Instrument identifier	+	String(12) (ISIN format)	79
54	Side	Order Side	+	1 Buy 2 Sell 8 Cross (new order only)	78

Tag	Field	Description	Provide d	Values	Pg e
40	OrdType	Price type of the order	+	1 Market 2 Limit 3 Stop 4 Stop Limit P Pegged (in New Order (D) only) K Market To Limit	75
59	TimeInForce	Time in Force Validity	+	<ol> <li>Day</li> <li>Good Till Cancel</li> <li>VFA (Valid for Auction)</li> <li>Immediate Or Cancel</li> <li>Fill Or Kill</li> <li>Good Till Date or Time</li> <li>VFC (Valid for Closing)</li> </ol>	81
126	ExpireTime	Expiration Time	+	LocalMktTime(YYYYMMDD-hh:mm:ss)	69
432	ExpireDate	LocalMktDate	+	LocalMktDate	69
18	ExecInst	Execution Instruction	+	R Primary Peg X Cross for European markets	67
44	Price	Price	+	Price(10)	76
99	StopPx	Stop Price	+	Price(10)	79
38	OrderQty	Total Order Quantity	+	Quantity(9)	74
151	LeavesQty	Leaves Quantity	✓	Quantity(9)	71
14	CumQty	Cumulated Quantity	✓	Quantity(9)	65
388	DiscretionInst	Discretion Instruction	+	0 Related to displayed price	66
389	DiscretionOffset	Discretion Offset	+	Price(10) ('0' only possible value)	66
211	PegDifference	Price Difference for a Pegged Order	+	Price(10) ('0' only possible value)	76
9941	TechnicalOrdType	Order Technical Origin	+	I Index trading arbitrage P Portfolio strategy G Unwind order A Other orders C Cross margining	80
47	Rule80A	Order Origin	+	<ul><li>1 Client</li><li>2 House</li><li>6 Liquidity Provider</li><li>7 Related Party</li></ul>	77
1	Account	Client Account Number	+	String(12)	62

Tag	Field	Description	Provide d	Values	Pg e
109	ClientID	Client Identifier	+	String(8)	64
9952	FreeText	Free Text	+	String(18)	69
439	ClearingFirm	Give-up Firm Identifier	+	String(8)	63
77	OpenClose	Posting Action	+	O Open C Close	74
9938	ClearingHandlingType	Clearing Operation Mode	+	0 Manual mode 1 Automatic extraction 2 Automatic allocation Blank Systematic posting	64
9730	LiquidityIndicator	Effect Indicator on Liquidity	+	<ul> <li>A Add liquidity</li> <li>R Remove liquidity, or Cross order</li> <li>X Routed (for possible future use)</li> <li>O Opening trade, or Trade creation by MO</li> </ul>	71
9731	UTPExID	Trade Reference Identifier by day for a given instrument	+	String(24)	82
336	TradingSessionID	Trading Session Identifier	1	String(3)  1 Early session  2 Core session  3 Late session  12 Early and Core sessions  13 Early and Late sessions  23 Core and Late sessions  123 All sessions  ('12', '13', '23', '123' are only possible in messages sent by the UTP trading engine, else Repeating Group principle is to be used)	81
9955	ErrorCode	Error code	<b>√</b>	String(5)	67
58	Text	Request status or error text	✓	String (40)	81
382	NoContraBrokers	Number of ContraBrokers repeating group instances	+	1	73

Tag	Field	Description	Provide d	Values	Pg e
375	ContraBroker	ID of the counterpart firm in case of internal matching	+	Firm ID (agreed upon clearing value) String (11)	65
9962	CollarRejType	Type of collar hit in case of rejection	+	H High collar L Low collar	65
9963	CollarRejPx	Price of collar hit in case of rejection	+	Price(10)	65
	Message TRAILER		1		

#### **Message Usage**

The Execution Report message is used to:

#### ■ Respond to:

- A New Order (D) request when the request is accepted and the order created. In this case the Execution Report message will be called, in this document the "New Order (D) request creation response".
- A New Order (D) request when the request is rejected. In this case the Execution Report message will be called in this document the "New Order (D) request rejection response".
  - Remark: if the term "New Order (D) request responses" is used, it refers to the Execution Reports in the 2 cases.

An Order Cancel/Replace Request (G) when the request is accepted and the modified order cancelled then the modifying order created. In this case 2 Execution Report messages are successively sent: The 1<sup>st</sup> one will be called in this document the "Order Cancel/Replace Request (G) pending response". It indicates that the Order Cancellation/Replacement is being processed and holds information associated with the order to be modified. The 2<sup>nd</sup> one will be called in this document the "Order Cancel/Replace Request (G) replaced response". It indicates that the Order Cancellation/Replacement is done and holds information associated with the new order.

#### Notes:

- if the term "Order Cancel/Replace Request (G) responses" is used, it refers to the 2 "pending" and "replaced" Execution Reports described above.
- it's the Order Cancel Reject (9) message which is used to respond to the Order Cancel/Replace Request (G) when the request is rejected.
- An Order Cancel Request (F) when the request is accepted and the order cancelled. In this case 2 Execution Report messages are successively sent. The 1<sup>st</sup> one will be called in this document the "Order Cancel Request (F) pending response". It indicates that the Order Cancellation is being processed. The 2<sup>nd</sup> one will be called in this document the "Order Cancel Request (F) cancelled response". It indicates that the Order Cancellation is done.

Remark1: if the term "Order Cancel Request (F) responses" is used, it refers to the 2 "pending" and "cancelled" Execution Reports described above.

Remark2: it's the Order Cancel Reject (9) message which is used to respond to the Order Cancel Request (F) when the request is rejected.

• An Order Mass Cancel Request (q) when the request is accepted and the orders cancelled. In this case one Execution Report message is sent for each cancelled order. They will be called in this document the "Order Mass Cancel Request (q) responses".

#### Notes:

- Order Mass Cancel Request (q) responses message is sent to the connection that owns the order, including when bulk cancel is issued by other connection.
- Order Cancel Reject (9) message is used to respond to the Order Mass Cancel Request (q) when the request is rejected.
- Relay non-sollicited order status information reports in case:
  - An order has been created upon Trading Desk operation. In this case the Execution Report message will be called in this document the "Trading Desk order creation report".
  - An order has been executed (partially filled or filled). In this case the Execution Report message will be called in this document the "Order partial fill execution report" in case of partial order execution, or the "Order fill execution report" in case of full order execution.

Note: if the term "Order execution reports" is used, it refers to the 2 "partial fill execution" and "fill execution" Execution Reports described above.

- An order has expired. In this case the Execution Report message will be called in this document the "Order expiration report".
- An order book retransmission in case of disaster recovery is underway. In this case the Execution Report messages will be called in this document the "Order Book Retransmission reports".
- An order has been rejected for collars. In this case the Execution Report message will be called in this document the "Order collar rejection reports".

Note: when an order is rejected for collars, before this rejection it is first created or modified -at least-, can also be partially filled, and the rejection for collars always immediately follows these "before rejection" events. When the term "Order collar rejection reports" is used, it includes the associated Execution Reports to these events.

- Of trading desk Trade Creation. In this case the Execution Report messages (one for each order of the trade created) will be called in this document the "Trade creation reports".
- Of trading desk Trade Cancellation. In this case the Execution Report messages (one for each order of the trade cancelled) will be called in this document the "Trade cancellation reports".

Remark: if the term "Non-sollicited reports" is used, it refers to the Execution Reports sending cases described in this "Relay non-sollicited order status information reports" section.

#### "Order information reports" notion:

Each of these different Execution Report sending cases provides, among all fields listed in the Execution Report message description, only some of them and not the same ones according to the case (for example Trade cancellation reports report information linked to orders having been executed and whose execution is cancelled, but not all the information reported in Order execution reports linked to the same orders when they had been executed). Most of these Execution Report sending cases can be grouped in a "higher-level case", the "Order information reports" case. It is often referenced, in the 9-Fields Description section, for the fields identified as used in the Execution Report message, to specify their "Condition" part, as it includes Execution Report sending cases reporting commonly held information, depending on the "order" mentionned in the group name "Order execution reports". This "Order information reports" is constituted of:

- New Order (D) request creation response: in this case, the "order" is the one created.
- Order Cancel/Replace Request (G) responses: in this case, the "orders" are firstly the order requested to be modified but not yet modified, and secondly the modifying order.
- Order Cancel Request (F) responses: in this case, the "order" is the order cancelled.
- Trading Desk order creation report: in this case, the "order" is the one created.
- Order execution reports: in this case, the "order" is the one executed.

- Order expiration report: in this case, the "order" is the one expired.
- Trade creation reports: in this case, the "orders" are the 2 orders executed in this trade.

=> Only the New Order (D) request rejection response and Trade cancellation reports are not included in the Order information reports Execution Reports group.

Each execution report contains three fields which are used to communicate both the current state of the order as understood by the broker and the purpose of the message: OrdStatus, ExecType and ExecTransType.

In an execution report the OrdStatus is used to convey the current state of the order. If an order simultaneously exists in more than one order state, the value with highest precedence is the value that is reported in this field. Table 1 below provides order status sorted by precedence:

Precedence	Order Status	Description
8	Pending Cancel	Order with an Cancel Order (F) request pending, used to confirm receipt of an Order Cancel Request. <i>Does not indicate that the order has been canceled.</i>
7	Pending Replace	Order with a Cancel/Replace Order (G) request pending, used to confirm receipt of an Order Cancel/Replace Request. DOES NOT INDICATE THAT THE ORDER HAS BEEN REPLACED.
6	Done for Day	Order not, or partially, filled; no further executions forthcoming for the trading day.
5	Filled	Order completely filled (no remaining quantity).
4	Cancelled	Cancelled order with or without executions.
4	Expired	Order has been canceled in broker's system due to time in force instructions.
3	Partially filled	Outstanding order with executions and remaining quantity.
2	Replaced	Replaced order with or without executions.
1	New	Outstanding order with no executions.
1	Rejected	Order has been rejected by broker. Note: An order can be rejected subsequent to order acknowledgment, i.e. an order can pass from New to Rejected status.

Table 1: Order Status

The ExecType is used to identify the purpose of the Execution Report message. To transmit a change in OrdStatus for an order, the Trading Engine sends an Execution Report with the new OrdStatus value in both the ExecType and the OrdStatus fields to signify this message is changing the state of the order. The only exception to this rule is that when rejecting a Cancel Order (F) or Cancel/Replace Order (G) request the Cancel Reject (9) message is used both to reject the request and to communicate the current OrdStatus. An ExecType of Pending Cancel or Pending Replace is used to indicate that a cancel or cancel / replace request is being processed. An ExecType of Cancelled or Replace is used to indicate that the cancel or cancel / replace request has been successfully processed.

Any fills which occur and need to be communicated to the customer while an order is "pending" and waiting to achieve a new state (i.e. via an Cancel/Replace Order (G) request) contains the "original" (current order prior to state change request) order parameters (i.e. ClOrdID, OrderQty, Price, etc). These fills will cause the CumQty and AvgPx to be updated. An order cannot be considered replaced until it has been explicitly accepted and confirmed to have reached the replaced status via an execution report with ExecType=Replace, at which time the effect of the replacement (ClOrdID, new quantity or limit price, etc.) will be seen. Note that due to the precedence rules above, in reports where ExecType=Replace, OrdStatus may not be Replaced. For example, for an order first partially filled and then replaced, in the Execution Report where ExecType=Replace, OrdStatus is Partially filled.

Requests to cancel or cancel / replace an order are only acted upon when there is an outstanding order quantity. Requests to replace the OrderQty to a level less than the CumQty will be rejected by the Trading Engine. Requests to modify a filled order will be rejected. The OrderQty, CumQty, LeavesQty and AvgPx fields should be calculated to reflect the cumulative result of all versions of an order. For example, if partially filled order A were replaced by order B, the OrderQty, CumQty, LeavesQty and AvgPx on order B's fills should represent the cumulative result of order A plus those on order B.

The general rule is: The OrderQty=CumQty+LeavesQty.

There can be exceptions to this rule when ExecType and/or OrdStatus are Cancelled, DoneForTheDay (e.g. on a day order), Expired, or Rejected in which case the order is no longer active and LeavesQty could be 0.

Execution report messages are transmitted with a transaction type (ExecTransType) Not Trade Cancellation, Trade Cancellation or Status. Transaction type. Transaction type Trade Cancellation modifies the state of the message identified in field ExecRefID, and is used to cancel a previously reported execution.

- The Not Trade Cancellation transaction type indicates that this message represents a new order, a change in status of the order, or a new fill against an existing order. The combination of the ExecTransType, ExecType and OrdStatus fields will indicate how the message is to be applied to an order.
- The Trade Cancellation transaction type applies at the execution level. The Trade Cancellation transaction will be used to cancel an execution which has been reported in error. The canceled execution will be identified in the ExecRefID field.
- The Status transaction type indicates that this message just reports the status of an order.

#### **Execution Report message Signature Tags**

As described in the previous section, the Execution Report (8) message can be sent in several different situations. The table below allows to identify what is the exact situation having led to the sending of the message, what is exactly reported by the message. The 2<sup>nd</sup> column repeats the general sending cases described in the previous "Message Usage" section. The 3<sup>rd</sup> column describes sub-cases of the previous general cases. The 4<sup>th</sup> column reminds the associated designations, given in this document, of the general sending cases. Then the next columns give the values of fields allowing to identify the described cases by the mean of Tags 150, 20, 39. In a given line, the signature of the described Execution Report sending general case or sub-case is the set of combinations Fields/Values being in green in the line.

Sending Case ID	General Execution Report sending cases  Description of the general message sending cases. An Execution Report is sent	Sub-cases  Description of particular sub-cases of general cases described in 1 <sup>st</sup> column.	General case associated designation in current document	ExecType [150] value in this case	ExecTrans Type [20] value in this case	OrdStatus [39] value in this case	Text [58] value in this case
1	in response to a New Order (D) request received and accepted, to report this order creation, or to report an order creation by the Trading Desk.	/	New Order (D) request creation response Or Trading Desk order creation report	0	0	0	New order
2	in response to a New Order (D) request received and rejected, to report the order rejection.	The sub-cases of this general case are all the possible errors on a New Order request -> see "UTP for Equities - Error List" document for their specification	New Order (D) request rejection response	8	0	8	Depending on rejection reason -> see "UTP for Equities - Error List"
3	in 1 <sup>st</sup> response to an Order Cancel/Replace Request (G) request received and accepted, to report the acceptation of the request and the pending modification.	/	Order Cancel/Replace Request (G) pending response	E	0	E	Cancel/Replace pending
4	in 2 <sup>nd</sup> response to an Order Cancel/Replace Request (G) request received and accepted, to report the order modification.	<i>Sub-cases</i> ↓	Order Cancel/Replace Request (G) replaced response	5	0	Depending on sub-case ↓	Replaced
4.1	Sub-case →	Order partially filled, then modified.		5	0	1	Replaced
4.2	Sub-case →	Order, whose status is not Partial Fill, modified.		5	0	5	Replaced
5	in response to an Order Cancel Request (F) request sent from a member and accepted, to report the acceptation of the request and the pending cancellation.	/	Order Cancel Request (F) pending response	6	0	6	Cancel pending

Sending Case ID	General Execution Report sending cases  Description of the general message sending cases. An Execution Report is sent	Sub-cases  Description of particular sub-cases of general cases described in 1 <sup>st</sup> column.	General case associated designation in current document	ExecType [150] value in this case	ExecTrans Type [20] value in this case	OrdStatus [39] value in this case	Text [58] value in this case
6	in response to an Order Cancel Request (F) request received and accepted, to report the order cancellation.	<i>Sub-cases</i> ↓	Order Cancel Request (F) cancelled response	4	0	Depending on sub-case ↓	Depending on sub-case ↓
6.1	Sub-case →	The cancel request is a request sent from a member		4	0	4	Cancelled by User
6.2	Sub-case →	The cancel request is a request sent from the Trading Desk		4	0	S	Cancelled by Trading Desk
7	in response to an Order Mass Cancel Request (q) request received and accepted, to report the order rejection.	<i>Sub-cases</i> ↓	Order Mass Cancel Request (q) responses	4	0	Depending on sub-case ↓	Depending on sub-case ↓
7.1	Sub-case →	The mass cancel request is a request sent from a member		4	0	4	Cancel Bulk
7.2	Sub-case →	The mass cancel request is a request sent from the Trading Desk		4	0	S	Canceled by Trading Desk
8	to report an order execution.	<i>Sub-cases</i> ↓	Order execution reports	Depending on sub-case ↓	0	Depending on sub-case ↓	Depending on sub-case ↓
8.1	Sub-case →	Order partial execution		1	0	1	Partial Fill
8.2	Sub-case →	Order full execution		2	0	2	Fill
9	to report an order expiration or automatic cancellation.	<i>Sub-cases</i> ↓	Order expiration report	Depending on sub-case	0	Depending on sub-case ↓	Depending on sub-case ↓
9.1	Sub-case →	Order expired (VFA/VFC order eliminated at the end of the auction, GTT/GTD order eliminated at its expiration time/date, etc)		3	0	3	Depending on sub-sub-cases
9.2	Sub-case →	IOC order partially filled then cancelled at its entry		4	0	4	Expire remaining IOC

Sending Case ID	General Execution Report sending cases  Description of the general message sending cases.  An Execution Report is sent	Sub-cases  Description of particular sub-cases of general cases described in 1st column.	General case associated designation in current document	ExecType [150] value in this case	ExecTrans Type [20] value in this case	OrdStatus [39] value in this case	Text [58] value in this case
9.3	Sub-case →	Order eliminated by a Corporate Event		0	0	0	Cancelled due to OST
9.4	Sub-case →	Order eliminated at PS		С	0	С	Depending on sub-sub-cases
10	to report a trade creation by the Trading Desk.	/	Trade creation reports	G	0	2	Fill
11	to report a trade cancellation by the Trading Desk.	Sub-cases ↓	Trade cancellation reports	2	1	Depending on sub-case ↓	Trade break
11.1	Sub-case →	Order partially filled, then the trade leading to this order execution is cancelled.		2	1	1	Trade break
11.2	Sub-case →	Order filled, then the trade leading to this order execution is cancelled.		2	1	2	Trade break
11.3	Sub-case →	VFA or VFC order partially filled at auction, then cancelled, then the trade leading to this order execution is cancelled.		2	1	3	Trade break
11.4	Sub-case →	IOC order partially filled then cancelled at its entry, then the trade leading to this order execution is cancelled.		2	1	4	Trade break
11.5	Sub-case →	Order partially filled, then modified, then the trade leading to the order partial fill execution is cancelled.		2	1	5	Trade break
11.6	Sub-case →	Order partially filled then rejected for collars at its entry, then the trade leading to this order execution is cancelled.		2	1	8	Trade break
12	to report an order retransmission	<i>Sub-cases</i> ↓	Order execution reports	Depending on sub-case ↓	3	Depending on sub-case ↓	Depending on sub-case ↓

Sending Case ID	General Execution Report sending cases  Description of the general message sending cases.  An Execution Report is sent	Sub-cases  Description of particular sub-cases of general cases described in 1st column.	General case associated designation in current document	ExecType [150] value in this case	ExecTrans Type [20] value in this case	OrdStatus [39] value in this case	Text [58] value in this case
12.1	Sub-case →	Order without any execution		0	3	0	Order Status
12.2	Sub-case →	Order partially filled		1	3	1	Order Status

## **5.7** Order Cancel Reject (9)

#### **Message Fields**

✓ Always provided / + conditionally provided / I Never provided

Tag	Field	Description	Provide d	Values	Pge
	Message HEADER	Message type	✓	9 Cancel Reject	
11	ClOrdID	Client Order Identifier	✓	String(30), printable characters 09 az AZ "#\$&()/:; <=>@[]^_`#{} bl ank	64
41	OrigClOrdID	Original Client Order Identifier	+	String(30) (CIOrdID of the order to be modified / cancelled)	75
37	OrderID	Engine Order Identifier	+	String(24)	74
55	Symbol	Instrument identifier	+	String(12) (ISIN format)	79
18	ExecInst	Execution Instruction	+	R Primary Peg X Cross for European markets	67
39	OrdStatus	Order Status	<b>✓</b>	<ul> <li>New</li> <li>Partially filled</li> <li>Filled</li> <li>Done for Day</li> <li>Cancelled</li> <li>Replaced</li> <li>Pending Cancel</li> <li>Rejected</li> <li>Expired</li> <li>Pending Replace</li> <li>Cancelled by Market Operation</li> <li>Eliminated by Corporate event</li> </ul>	75
9955	ErrorCode	Error code	✓	String(5)	67
58	Text	Request status or error text	✓	String (40)	81

Tag	Field	Description	Provide d	Values	Pge
102	CxlRejReason	Reason for Cancel Rejection	✓	<ul> <li>Too late to cancel</li> <li>Unknown order</li> <li>Broker Option</li> <li>Order already in Pending Cancel or Pending Replace status</li> </ul>	66
434	CxIRejResponseTo	Origin of Cancel Rejection	<b>✓</b>	Cancel Order request     Cancel/Replace Order request	66
	Message TRAILER		✓		

#### **Message Usage**

The Order Cancel Reject message is issued upon receipt of a cancel request or cancel / replace request message which cannot be honoured. Requests to change price or decrease quantity are executed only when an outstanding quantity exists. Filled orders cannot be changed.

When rejecting a cancel / replace Request, the Order Cancel Reject message provides the ClOrdlD and OrigClOrdlD values which were specified on the cancel / replace request message for identification.

The Execution Report (8) message responds to accepted cancel request and cancel / replace request messages.

## **5.8 Order Mass Cancel Report (r)**

#### **Message Fields**

✓ Always provided / + conditionally provided / I Never provided

		ays provided / + condition			
Tag	Field	Description	Require d	Values / Comments	Pge
	Message HEADER	Message type	✓	r Order Mass Cancel Report	
11	CIOrdID	Client Order Identifier	+	String(30), printable characters 09 az AZ "#\$&()/:; <=>@[]^_`#{} bl ank	64
55	Symbol	Instrument identifier	+	String(12) (ISIN format)	79
9945	ClassID	Class Identifier	+	String(2)	63
530	MassCancelRequestT ype	Specifies if a mass cancellation criteria is requested	✓	<ul> <li>7 Cancel all orders         belonging to the         specified ClassID or         Symbol</li> <li>8 Cancel orders matching         the specified criteria</li> </ul>	71
54	Side	Order Side	+	<ul><li>1 Buy</li><li>2 Sell</li><li>8 Cross (new order only)</li></ul>	78
9941	TechnicalOrdType	Order Technical Origin	+	<ul> <li>I Index trading arbitrage</li> <li>P Portfolio strategy</li> <li>G Unwind order</li> <li>A Other orders</li> <li>C Cross margining</li> </ul>	80
47	Rule80A	Order Origin	+	<ul><li>1 Client</li><li>2 House</li><li>6 Liquidity Provider</li><li>7 Related Party</li></ul>	77
1	Account	Client Account Number	1	String(12)	62
9960	CancelByLocationID	Identifier of the Issuing Agency whose orders are to be cancelled	+	SenderLocationID value	63
533	TotalAffectedOrders	Number of orders cancelled	✓	Integer	81
60	TransactTime	Transaction Time	1	LocalMktTime(YYYYMMDD- hh:mm:ss)	82
	Message TRAILER		✓		

#### **Message Usage**

This message is used to:

- Acknowledge an Order Mass Cancel Request (q) (in case of Bulk Cancel request rejection, the Order Cancel Reject (9) message is used). In this case the TotalAffectedOrders field is set to -1.
- Report the end of the mass cancel processing. In this case the TotalAffectedOrders field is set to <Number of orders cancelled by the Mass Cancel request>.

Following the sending of the Order Mass Cancel Report (r) acknowledgment message, and before the sending of the Order Mass Cancel Report (r) report message, an Execution Report (8) message is sent for each order concerned by the mass cancel. This message reports the cancellation of the order and is sent to the order issuer. So the Order Mass Cancel Report (r) message allows the issuer of the request, possibly different from any issuer of all the orders cancelled, to get an answer to its request.

## 5.9 Request Ack (y)

#### **Message Fields**

✓ Always provided / + conditionally provided / I Never provided

Tag	Field	Description	Provide d	Values	Pge
	Message HEADER	Message type	✓	y Request Ack	
55	Symbol	Instrument identifier	✓	String(12) (ISIN format)	79
9954	OrigMsgType	Message type of the original request	✓	I Price Input	76
9953	OrigMsgSeqNum	Message Sequence Number of the original request	✓	Integer(15)	75
9955	ErrorCode	Error code	✓	String(5)	67
58	Text	Request status or error text	✓	String (40)	81
	Message TRAILER		✓		

#### **Message Usage**

This message is a generic response to a request.

- OrigMsgType and OrigMsgSeqNum fields identify the request message and its type.
- ErrorCode provides a reason in case of request rejection. If the request is accepted, ErrorCode is set to 0 (success).
- Text is a human readable translation of ErrorCode.

## **5.10** Business Message Reject (j)

#### **Message Fields**

✓ Always provided / + conditionally provided / I Never provided

Tag	Field	Description	Provided	Values	Pge
	Message HEADER	Message type	✓	j Business Message Reject	
45	RefSeqNum	Reference sequence number of the message rejected	✓	Integer	77
379	BusinessRejectRefID	Identifier of the message rejected	+	String(30) (ClOrdID of the message rejected)	63

Tag	Field	Description	Provided	Values	Pge
372	RefMsgType	Message type reference	+	A 0 1 2 3 3 4 5 D F q G H 8 8 9 h (for future use) I r y i	77
380	BusinessRejectReason	Business message reject reason code identifier	✓	0 Other 1 Unkown ID 2 Unknown Symbol 3 Unsupported Message Type 4 Application not available 5 Conditionnally required field missing	62
58	Text	Request status or error text	+	String (40)	81
	Message TRAILER		<b>√</b>		

#### **Message Usage**

This message is used to reject an application-level message which fulfills sessionlevel rules and cannot be rejected via any other means. Note if the message fails a session-level rule(e.g. body length is incorrect), a Reject (3) message should be issued.

# 6 Tag Combinations for Supported Orders

Table 2 below provides the expected tag combinations and their values for the orders supported by UTP.

		Legend: For	bidden – I	Mandatory	– Optional (	<u>default value</u> if not	<b>provided)</b> – Ignored			(*) not supported yet, for possible future us
Type & S	Type & Sub-type		Side	Prices		Quan	tities	Order Name		
OrdType	ExecInst	TimeInForce	Side	Price	StopPx	DiscretionOffset	PegDifference	MaxFloor	MinQty	Order Name
4		<u>0</u> , 1, 2, 3, 4, 6	1, 2							Market Order
1		7	1, 2							Market On Close Order
		<u>0</u> , 1, 2, 3, 4, 6	1, 2	Price				Quantity	Quantity	Limit Order
		7	1, 2	Price				Quantity		Limit On Close Order
		<u>0</u> , 1, 4, 6	1, 2	Price		Price		Quantity		Discretionary Order
2	X		8	Price						Cross
		3	8	Price						Guaranteed IOC Cross*
	6	<u>0</u> , 1, 6	8	Price						Guaranteed PNP Cross*
	M	<u>0</u> , 1, 6	8							Guaranteed Mid-point Cross
3		<u>0</u> , 1, 6	1, 2		Price					Stop Order
4		<u>0,</u> 1, 6	1, 2	Price	Price					Stop Limit Order
Р	Þ	<u>0</u> , 1, 6	1, 2	Price			Price			Market Pegged Order
F	R	<u>0</u> , 1, 6	1, 2	Price			0			Primary Pegged Order
К		<u>0</u> , 1, 2, 3, 4, 6	1, 2						Quantity	Market To Limit
, ,		7	1, 2							MTL On Close

**Table 2: Tag Combinations & Values for Supported Orders** 

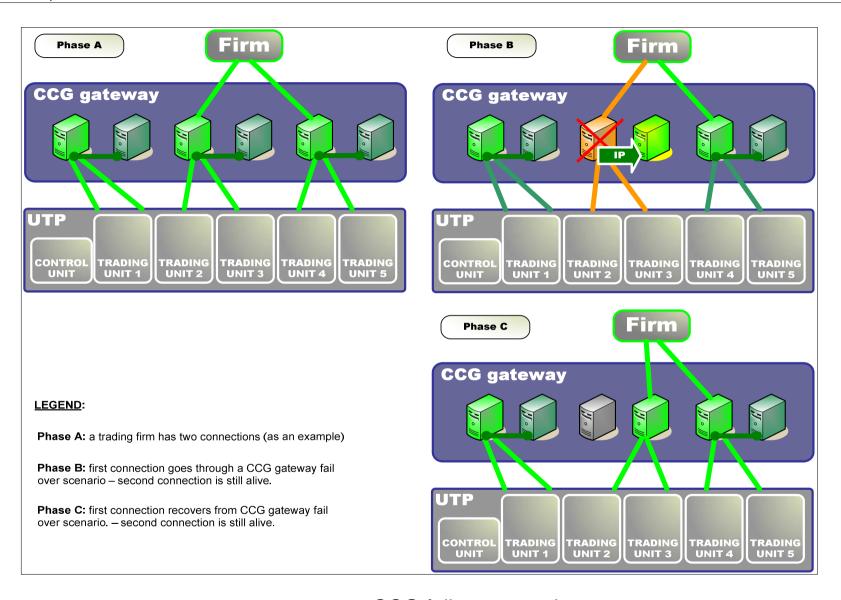
## 7 CCG High Availability

## **7.1** Failover implementation overview

In the unlikely yet possible event of CCG hardware failure, the CCG application will allow client connections to run a smooth and 100 % safe recovery as follows:

- Clients will be able to reconnect immediately and transparently without changing the destination ip address and port (owing to clustering technology)
- The CCG ensures no data loss within outbound messages delivered to clients by sending duplicate messages if necessary. However, duplication will be kept to a minimum (a minimal amount of duplicate messages owing to SAN technology)

The diagram below gives an illustration of CCG fail over scenario.



CCG failover senario

## 7.2 Client recovery method

Client applications will need to implement conservatory measures to address the event of CCG failover. Basically, client applications will need to detect the likelihood of outbound messages duplicates and to deal with the likelihood of inbound messages gaps.

From the clients' perspective, these conservatory measures are as follows:

During failover period:

- Even though the failover period is very short (typically a few seconds), clients may choose to access their previously entered orders from any of their other surviving connections; e.g., clients may choose to issue a bulk cancel by specifying the username of the connection that is experiencing a failover with the field CancelByLocationID.

- After the failover period:
- Messages received: Client applications must be able to detect any duplicate messages sent by the CCG. As mentioned in previous section, a minimal amount of duplicates may be sent by the CCG to prevent any outbound data loss.
- Messages sent: Customer Application must be able to detect any gap by checking NextExpectedMsgSeqNum contained in logon response from CCG Binary. The gap must then be deal with according to Customer policy, ie, choice between resending messages or not. If Customer choice is to resend, UTP will reject any duplicate - thanks to ClOrdId uniqueness.

Regarding outbound messages (messages received by customer) duplicate detection method, in addition to Possressend flag set to Yes, Customer Application will need to use the following fields, dependant upon message type:

Order fill execution report: DeliverToCompID, Symbol, UTPExID, Side

Trade Creation Report: DeliverToCompID, Symbol, UTPExID

Request Ack (y): DeliverToCompID, Symbol, OrigMsgType,

OrigMsgSeqNum

All other received messages: DeliverToCompID, Symbol, CIOrdID, OrderID.

# **7.3 CCG recovery protocol kinematics**

The two diagrams below provide an illustration of the two possible UTP-FIX.4.2 recovery protocol kinematics: firstly the "With Resend" one, and secondly the "With GapFill" one:

After Crash

Inbound

Orderld Seq

ID-004 3

ID-002 4

OutBound

ID-001

Seq OrderId

3 ID-002

5 ID-004

4 ID-003

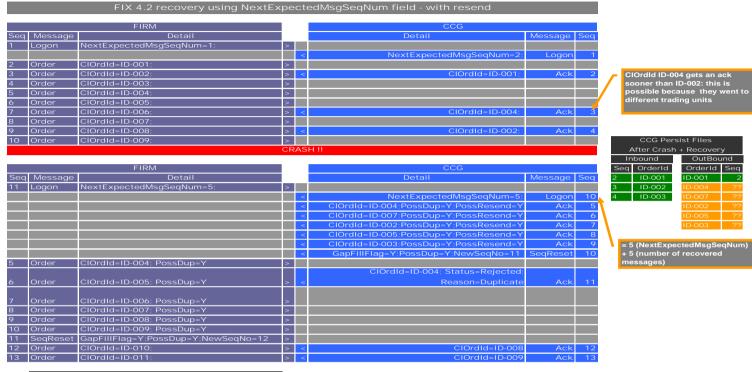
6 ID-005

7 ID-006

8 ID-007

9 ID-008

10 ID-009



	Final state
OrderId	Comment
ID-001	Acked
ID-002	Dup-Acked
ID-003	Acked
ID-004	Dup-Acked
ID-005	Acked
ID-006	Acked
ID-007	Acked
ID-008	Acked
ID-009	Acked
ID-010	pending
ID-011	pending

Firm Persist Files

After Crash

Inbound

OrderId

ID-004

ID-002

OutBound

Seq OrderId

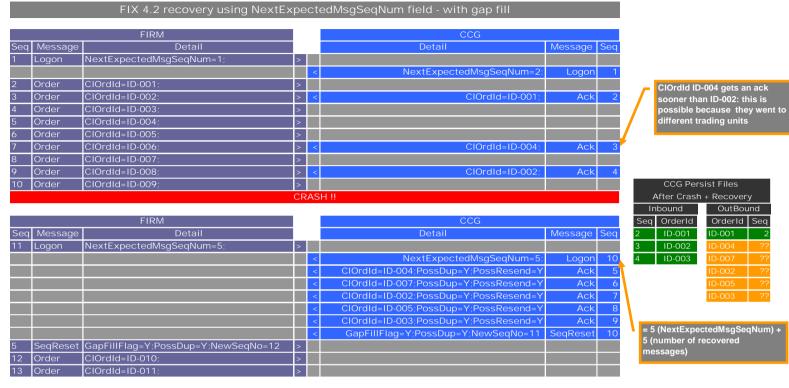
D-001 D-002

ID-003

ID-005

ID-006

ID-009



	Final state
OrderId	Comment
ID-001	Acked
ID-002	Dup-Acked
ID-003	Acked
ID-004	Dup-Acked
ID-005	Acked
ID-006	Gap-Filled
ID-007	Acked
ID-008	Gap-Filled
ID-009	Gap-Filled
ID-010	pending
ID-011	pending

## 8 Exchange Business Continuity

For the specific case of exchange primary data center disaster, the present section provides guidelines regarding business continuity principles in term of exchange secondary data center connectivity and firm order book integrity.

## **8.1** Exchange Secondary DC Connectivity

Prior to connecting to exchange secondary DC (data center), the customer application must be restarted as though it were the beginning of a new trading day. Please refer to First Logon of the day (page 12) section.

## **8.2** Firm Order Book Integrity

Once connected to exchange secondary DC (data center), the customer application must be able to recover firm order book from the exchange secondary DC. Please refer to section Order Book Retransmission (page 27) for more information.

# 9 Fields Description

- A	62
Account	62
AvgPx	62
- B –	62
BeginSegNo	62
BeginString	
BodyLength	
BusinessRejectReason	
BusinessRejectRefID	
- C	63
CancelByLocationID	63
CheckSum	63
ClassID	63
ClearingFirm	63
ClearingHandlingType	
ClientID	
CIOrdID	
CollarRejPx	65
CollarRejType	65
ConfirmFlag	65
ContraBroker	65
CumQty	65
CxlRejReason	66
CxlRejResponseTo	66
- D	66
DeliverToComplD	
DiscretionInst	
DiscretionOffset	
- E	67
EncryptMethod	
EndSeqNo	
ErrorCode	
ExecID	
LACOID	

Execinst	67
ExecRefID	
ExecTransType	68
ExecType	68
ExpireDate	69
ExpireTime	69
- F	69
FreeText	69
- G	69
GapFillFlag	
- H	70
Handlinst	
HeartBtInt	
-1	70
InputPxType	70
-L	<b>7</b> 0
LastPx	70
LastShares	
LeavesQty	71
LiquidityIndicator	71
- M	71
MassCancelRequestType	71
MaxFloor	
MinQty	
MsgSeqNum	
MsgType	
- N	72
NextExpectedMsgSeqNum	
NewSeqNo	73
NoClearingEntries	73
NoContraBrokers	73
NoTradingSessions	

- 0	73
OnBehalfOfCompID	
OpenClose	
OrderID	74
OrderQty	
OrdRejReason	
OrdStatus	
OrdType	
OrigClOrdID	
OrigMsgSeqNum	
OrigMsgType	
. P.	76
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PegDifference	76
PegDifferencePossDupFlag	76 76
PegDifference PossDupFlag PossResend	76 76 76
PegDifferencePossDupFlag	76 76 76
PegDifference PossDupFlag PossResend	76 76 76
PegDifference	76 76 76 76
PegDifference	
PegDifference	

Rule80A	77
- S	78
SenderCompID	
SenderLocationID	
SendingTime	78
SessionRejectReason	78
Side	78
StopPx	79
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- т	80
TargetCompID	
TechnicalOrdType	
TestReqID	
Text	
TimeInForce	81
TotalAffectedOrders	81
TradingSessionID	81
TransactTime	82
- U	82
IITDEVID	82



#### Account

Client Account Number		
Tag	1	
Description	Client Account Number of the investor account.	
Possible values	String(12)	
	In New Order (D) and Order Cancel/Replace Request (G):	
	Optional	
	In Order Mass Cancel Request (q):	
	Ignored (for possible future use, as a Bulk Cancel optional criterion)	
Condition	In Execution Report (8):	
	In Order information reports and Trade cancellation reports: provided	
	with the Account value associated with the order, if any. Else not	
	provided.	
	In New Order (D) request rejection response: provided with the Account	
	value of the request, if any. Else not provided.	
	New Order (D)	
	Order Cancel/Replace Request (G)	
Used In	Order Mass Cancel Request (q)	
	Execution Report (8)	
	Order Mass Cancel Report (r)	

### **AvgPx**

Average Price of Fills	
Tag	6
Description	Calculated average price of all fills on this order.
Possible values	Price(10)
Condition	Always provided (with '0' if the order has not been executed)
Used In	Execution Report (8)

## - B -

#### **BeginSeqNo**

Sequence number beginning of messages to be resent	
Tag	7
Description	Message sequence number of first message in range to be resent.
Possible values	Integer
Condition	Mandatory
Used In	Resend Request (2)

## **BeginString**

Beginning of message identifier	
Tag	8
Description	Identifies beginning of message and protocol version. Must be first field
Description	in message. Always unencrypted.
Possible values	FIX.4.2
	Mandatory in Inbound messages.
Condition	Always provided in Outbound messages.
	Must be 1 <sup>st</sup> field in message.
Used In	Message Header

## **BodyLength**

Message length	
Tag	9
Description	Message length, in bytes, forward to checksum field. Must be second field in message. Always unencrypted.
Possible values	Integer
Condition	Mandatory in Inbound messages. Always provided in Outbound messages. Must be 2 <sup>nd</sup> field in message.
Used In	Message Header

## BusinessRejectReason

Business message reject reason code identifier	
Tag	380
Description	Field used to identify the reason of rejection.

Possible values	<ul> <li>Other</li> <li>Unkown ID</li> <li>Unknown Symbol</li> <li>Unsupported Message Type</li> <li>Application not available</li> <li>Conditionnally required field missing</li> </ul>
Condition	Always provided
Used In	Business Message Reject (j)

## **BusinessRejectRefID**

Identifier of the message rejected	
Tag_	379
Description	Field used to identify the message rejected. This field is valuated with the ClOrdID value of the rejected message, when there is.
Possible values	String(30) (ClOrdID of the message rejected)
Condition	Provided with the CIOrdID value of the rejected message, when there is.  Else not provided.
Used In	Business Message Reject (j)

## - C -

## **CancelByLocationID**

Identifier of the Issuing Agency whose orders are to be cancelled	
Tag	9960
Description	Criterion for selecting the orders to cancel in case of bulk cancellation.
Possible values	SenderLocationID value
	In Order Mass Cancel Request (q): Optional criteria.
Condition	In Order Mass Cancel Report (r): Provided with the value of the Order Mass Cancel Request (q), if any. Else not provided.
Used In	Order Mass Cancel Request (q) Order Mass Cancel Report (r)
See also	Other possible criteria to be applied on a Order Mass Cancel Request (q): Rule80A Side TechnicalOrdType

#### CheckSum

CheckSum	
Tag	10
Description	Three bytes. Simple checksum. Always unencrypted. Always last field in
	message.
Possible values	String(3)
Condition	Mandatory in Inbound messages.
	Always provided in Outbound messages.
Used In	Message Trailer

#### ClassID

Class Identifier	
Tag	9945
Description	Identifier of an instrument class.
Possible values	String(2)
Condition	Mutually exclusive with Symbol:. One, and only one, of these 2 fields
	must be specified.
Used In	Order Mass Cancel Request (q)
	Order Mass Cancel Report (r)

## ClearingFirm

Give-up Firm Identifier		
Tag	439	
	Identifier of the Give-up firm when a Give-up is executed (a Give-up is a	
Description	trade executed by one firm for the client of another firm - Give-up Firm -	
	that the client orders to be turned over to the second firm).	
Possible values	String(8)	
	In New Order (D) and Order Cancel/Replace Request (G):	
	Optional	
	In Execution Report (8):	
	In Order information reports: provided with the ClearingFirm value	
Condition	associated with the order, if any. Else not provided.	
	In New Order (D) request rejection response: provided with the	
	ClearingFirm value of the request, if any. Else not provided.	
	In Trade cancellation reports: Never provided.	
	New Order (D)	
Used In	Order Cancel/Replace Request (G)	
	Execution Report (8)	

## ClearingHandlingType

Clearing Operation Mode	
Tag	9938 (proprietary)
Description	<ul> <li>Indicates the pre-posting and give-up action to be taken by the clearing system when a trade has occurred, following a given order.</li> <li>Manual mode (or Manual pre-posting and/or pre-give-up): the clearing system redirects the information to the member's back office workstation without processing it. It does not post the trade to the designated account or give up the trade to the designated give-up member.</li> <li>Automatic extraction (or Automatic posting): the clearing system immediately posts the trade to the designated account.</li> <li>Automatic allocation (or Automatic give-up): the clearing system immediately gives up the trade to the designated give-up member. If an account number is provided, it also performs a pre-posting.</li> <li>Systematic posting. This means pre-posting if the account number is given, and Pre-Give-up if the data item ID of clearing system member that is the beneficiary of a give-up is provided.</li> </ul>
Possible values	Manual mode     Automatic extraction     Automatic allocation     Blank Systematic posting
Condition	In New Order (D) and Order Cancel/Replace Request (G): Optional. Absence of this field is interpretated as 'Systematic posting'  In Execution Report (8): In Order information reports: provided with the ClearingHandlingType value associated with the order, if any. Absence of this field is interpretated as 'Systematic posting'.  In New Order (D) request rejection response: provided with the ClearingHandlingType value of the request, if any. Absence of this field is interpretated as 'Systematic posting'.  In Trade cancellation reports: Never provided.
Used In	New Order (D) Order Cancel/Replace Request (G) Execution Report (8)

#### ClientID

Client Identifier	
Tag	109
Description	Field used to identify the client (investor).
Possible values	String(8)

Condition	In New Order (D) and Order Cancel/Replace Request (G): Optional
	In Execution Report (8): In Order information reports: provided with the ClientID value associated with the order, if any. Else not provided.
	In New Order (D) request rejection response: provided with the ClientID value of the request, if any. Else not provided.
	In Trade cancellation reports: Never provided.
	New Order (D)
Used In	Order Cancel/Replace Request (G)
	Execution Report (8)
See also	OnBehalfOfCompID (Identifier of the Firm to which the order belongs
	(Inbound messages))
	DeliverToCompID (Identifier of the Firm to which the order belongs
	(Application Outbound messages))

#### **CIOrdID**

Client Order Identifier		
Tag	11	
Description	Field used to identify an order or cancellation. This Client Order ID is defined by front-end application and used to identify an order or a cancellation and match messages received from the Trading Engine (order outcome, order rejection notices, execution notices, etc.). This field may also be used for the multiplexing of different traders connected to the same Broker order entry application. This ID must be unique for all orders & cancellations sent a given day by a Broker.  Note: an order can also be identified by OrderID.	
Possible values	String(30), printable characters 09 az AZ "#\$&()/:;<=>@[]^_`#{} bl ank	
Condition	In New Order (D), Order Cancel Request (F), Order Mass Cancel Request (g) and Order Cancel/Replace Request (G):  Mandatory  In Execution Report (8): In New Order (D) request creation response: Always provided with the value indicated in the request (and so the value associated with the created order).  In New Order (D) request rejection response: Provided with the value indicated in the request except in case of rejection for "ClOrdID not valuated" reason.  In Order Cancel/Replace Request (G) responses: Always provided with the value indicated in the request.	

	In Order Cancel Request (F) responses and Order Mass Cancel Request (q) responses: Always provided with the value indicated in the request.
	In Non-sollicited reports: Always provided with the ClOrdID value associated with the concerned order of the report.
	In Order Cancel Reject (9): In Order Cancel/Replace Request (G) request rejection response:
	Provided with the value indicated in the request, except in case of rejection for "ClOrdID not valuated" reason.
	In Order Cancel Request (F) and Order Mass Cancel Request (q) rejection responses:
	Provided with the value indicated in the request, if any. Else not.
	New Order (D)
	Order Cancel Request (F)
	Order Mass Cancel Request (q)
Used In	Order Cancel/Replace Request (G)
	Execution Report (8)
	Order Cancel Reject (9)
	Order Mass Cancel Report (r)
See also	OrderID (Engine Order Identifier)
333 4.133	OrigClOrdID (Original Client Order Identifier)

## CollarRejPx

Price of collar hit in case of rejection	
Tag	9963
Description	Hit collar price in case of order rejection due to collar logic.
Possible values	Price(10)
Condition	Provided in Order collar rejection reports. Not provided in other cases.
Used In	Execution Report (8)

## CollarRejType

Type of collar hit in case of rejection	
Tag	9962
Description	Hit collar (high or low) in case of order rejection due to collar logic.
Possible values	H High collar
	L Low collar
Condition	Provided in Order collar rejection reports. Not provided in other cases.
Used In	Execution Report (8)

## ConfirmFlag

Confirmation Indicator	
Tag	9930 (proprietary)
Description	Field used as a flag indicating if the order entry or modification is confirmed by the broker issuing the order or not.  If the order is not confirmed by the issuing broker, additional checks on price and quantity are performed by the Trading Engine. On the other hand, a confirmed order is not subject to these additionall checks.
Possible values	Not confirmed     Confirmed
Condition	Optional. Absence of this field is interpretated as 'Not confirmed'.
Used In	New Order (D) Order Cancel/Replace Request (G)

#### ContraBroker

ID of the counterpart firm in case of internal matching	
_ Tag_	375
Description	Identifier of the counterpart firm in case the execution report concerns a internal matching.
Possible values	Firm ID (agreed upon clearing value) String (11)
Condition	Part of the optional Contrabrokers repeating group, introduced by NoContraBrokers.  Provided, with the DeliverToCompID value associated with the couterpart order, when NoContraBrokers provided (that is: in Order execution reports and Trade cancellation reports in case of IMS execution).  Else not provided.
Used In	Execution Report (8)
See also_	NoContraBrokers

#### **CumQty**

Cumulated Quantity	
Tag	14
	Field used to indicate the total number of shares filled.
Description	If an order is partially filled for a quantity q1 then partially filled for a
Description	quantity q <sub>2</sub> , in the first execution report message CumQty=q <sub>1</sub> and then in
	the second execution report message CumQty=q1+q2.
Possible values	Quantity(9)
Condition	Always provided (with '0' if the order has not been executed).
Used In	Execution Report (8)
See also	OrderQty (Total Order Quantity)
	Leaves Qty (Leaves Quantity)

## CxIRejReason

Reason for Cancel Rejection	
Tag	102
Description	Field used as a code to identify reason for cancel rejection.
Possible values	<ul> <li>Too late to cancel</li> <li>Unknown order</li> <li>Broker Option</li> <li>Order already in Pending Cancel or Pending Replace status</li> </ul>
Condition	Always provided
Used In	Order Cancel Reject (9)

## CxIRejResponseTo

Origin of Cancel R	ejection
Tag	434
Description	Field used to identify the type of request that a Cancel Reject is in
	response to.
Possible values	1 Cancel Order request
	2 Cancel/Replace Order request
Condition	Always provided
Used In	Order Cancel Reject (9)



## **DeliverToCompID**

Identifier of the Firm to which the order belongs (Application Outbound messages)	
Tag	128
Description	Identifier, in Outbound messages, of the Firm to which the order belongs. In other words, it's the identifier of the Firm targeted to receive the message. This field holds the same information than the one held by the OnBehalfOfCompID field in Inbound messages.
Possible values	String(11)
Condition	In Inbound (Administrative or Application) messages: Ignored.  In Outbound Application messages: Always provided, with the reference identifier of the Firm (mandatory OnBehalfOfCompID field in Inbound Application messages).  In Outbound Administrative messages:
Used In	Never provided.  Message Header

Identifier of the Firm to which the order belongs (Application Outbound messages)	
See also	OnBehalfOfCompID (Identifier of the Firm to which the order belongs (Inbound messages))  TargetCompID (Identifier of the message receptor (Firm ID or Service Bureau ID in Outbound messages))

#### **DiscretionInst**

Discretion Instruct	ion
Tag	388
Description	Identifies the price a DiscretionOffset is related to and should be mathematically added to.
Possible values	Related to displayed price
Condition	In New Order (D) and Order Cancel/Replace Request (G): Mandatory if DiscretionOffset field present. Else Ignored.  In Execution Report (8): Provided with 0 if set to 0 in New Order (D) or Order Cancel/Replace Request (G). Else not.
Used In	New Order (D) Order Cancel/Replace Request (G) Execution Report (8)

#### **DiscretionOffset**

Discretion Offset	
Tag	389
Description	Amount (signed) added to the "related to" price specified via DiscretionInst.
Possible values	Price(10) ('0' only possible value)
Condition	In New Order (D) and Order Cancel/Replace Request (G): Optional  In Execution Report (8): Provided with 0 if set to 0 in New Order (D) or Order Cancel/Replace Request (G). Else not.
Used In	New Order (D) Order Cancel/Replace Request (G) Execution Report (8)



## **EncryptMethod**

Method of encryption	
Tag	98
Description	Method of encryption for the new FIX session.
Possible values	None / Other
Condition	Mandatory in Inbound Logon (A).
	Always provided in Outbond Logon (A).
Used In	Logon (A)

## **EndSeqNo**

Sequence number ending of messages to be resent	
Tag	16
Description	Message sequence number of last message in range to be resent. If request is for a single message BeginSeqNo =EndSeqNo. If request is for all messages subsequent to a particular message, EndSeqNo = "0" (representing infinity).
Possible values	Integer
Condition	Mandatory
Used In	Resend Request (2)

#### **ErrorCode**

Error code	
Tag	9955
Description	Error code in case of rejection. This field is for future use. Indeed, at present, even if it is always provided, the value is most of time equal to '00000' and not significant.
Possible values	String(5)
Condition	Always provided
	Execution Report (8)
Used In	Order Cancel Reject (9) Request Ack (y)

#### **ExecID**

Execution Report Identifier	
Tag	17
	Unique identifier for Execution Report assigned by Exchange Set to zero for ExecTransType=3. Uniqueness will be guaranteed within a single trading day only.
Description	Remark: do not confuse, this field is an Execution Report identifier, with "Execution Report" term to be understood as the message type and not only as a report of an order execution/trade (and so it includes also Execution Reports for cancellation for example, etc). The fields ExecRefID and UTPExID are, them, reference identifiers of order executions/trades.
Possible values	String(24)
Condition	Always provided
Used In	Execution Report (8)
See also	ExecTransType (Transaction Type) ExecRefID (Trade Reference Identifier by day for all instruments) UTPExID (Trade Reference Identifier by day for a given instrument)

#### **ExecInst**

Execution Instruction	
Tag	18
Description	Field used as instructions for order handling on exchange trading floor.
Possible values	R Primary Peg
	X Cross for European markets

Execution Instruction		
	In New Order (D):  Must be <b>R</b> if OrdType = <b>P</b> (Pegged)  Must be <b>X</b> if OrdType = <b>2</b> and Side = <b>8</b> (Cross)  Else Forbidden.	
	In Order Cancel/Replace Request (G):  Must be <b>R</b> if OrdType = <b>P</b> (Pegged)  Else Forbidden. Rem: an Order Cancel/Replace Request (G) request with <b>X</b> as Execlnst value is not allowed.	
Condition	In Execution Report (8): In Order information reports: Provided with the ExecInst value associated with the concerned order, if any. Else not provided.	
	In New Order (D) request rejection response: Provided if field valuated in the requests. Else not provided.	
	In Trade cancellation reports: Never provided.	
	In Order Cancel Reject (9): Never provided.	
Used In	New Order (D) Order Cancel/Replace Request (G) Execution Report (8) Order Cancel Reject (9)	

#### **ExecRefID**

Trade Reference I	dentifier by day for all instruments
Tag	19
	Field used as a reference identifier of a trade, for a given instrument This field is provided in the case of a fill or partial fill order execution, or of a trade cancellation. For example, let x be the reference identifier of a given trade, x is reported in the 2 Execution Report sent for the 2 sides of the trade, and if this trade is cancelled, x is again reported in the 2 Execution Report sent for the 2 sides of the trade.
Description	Remark1: do not confuse, this field is a Trade Reference Identifier unique for all instruments for a given day, while UTPExID is a Trade Reference Identifier unique for a given instrument and for a given day.
	Remark2: do not confuse, this field is a Trade Reference Identifier, while ExecID is an Execution Report (to be understood as the message type and not as a "trade report") Reference Identifier.
Possible values	String(24)

Trade Reference Identifier by day for all instruments	
Condition	In Order execution reports and Trade cancellation reports: provided with the reference identifier of the concerned execution, unique for the current day and for all instruments.  Not provided in other cases.
Used In	Execution Report (8)
See also	UTPExID (Trade Reference Identifier by day for a given instrument)  ExecID (Execution Report Identifier)

## **ExecTransType**

Transaction Type	
Tag	20
Description	Field used to identify transaction type.
Possible values	Not Trade Cancellation
	1 Trade Cancellation
	Correct (for possible future use)
	3 Status
Condition	Always provided: with '3' in Order Book Retransmission reports, '1' in
	Trade cancellation reports, and '0' in other cases.
Used In	Execution Report (8)

## ExecType

Francisco Trans	
Execution Type	
Tag	150
Description	Field used to describe the specific execution report (i.e. <i>Pending Cancel</i> ) while OrdStatus will always identify the current order status (i.e. <i>Partially Filled</i> ).
Possible values	<ul> <li>New</li> <li>Partially filled</li> <li>Filled</li> <li>Done for Day</li> <li>Cancelled</li> <li>Replaced</li> <li>Pending Cancel</li> <li>Rejected</li> <li>Expired</li> <li>Pending Replace</li> <li>Trade Creation</li> <li>Cancelled by Market Operation</li> <li>Eliminated by Corporate event</li> </ul>
Condition	Always provided (see also Execution Report message Signature Tags section for more descriptions about this field and possible values)
Used In	Execution Report (8)
See also	OrdStatus (Order Status)

## **ExpireDate**

Expiration Date	
Tag	432
Description	Date of order expiration expressed in terms of the local market date. Maximum expiration date is one year minus one day, counting from current date. Rule is as follows: if MMDD part is lesser than current date, YYYY part must be current year plus one; else YYYY part must be current year.
Possible values	LocalMktDate
Condition	In New Order (D) and Order Cancel/Replace Request (G):  Mandatory if TimeInForce = 6 AND ExpireTime absent Forbidden if TimeInForce = 6 AND ExpireTime present Ignored if TimeInForce ≠ 6)  In Execution Report (8): In Order information reports: Provided with the ExpireDate value associated with the concerned order, if any. Else not provided.  In New Order (D) request rejection response: Provided with the ExpireDate value of the request, if any. Else not provided.  In Trade cancellation reports: Never provided.
Used In	New Order (D) Order Cancel/Replace Request (G) Execution Report (8)
See also	TimeInForce (Time in Force Validity)

#### **ExpireTime**

Expiration Time	
Tag	126
Description	Time of order expiration expressed in LocalMktTime. The format is the same than the UTCTimeStamp type (YYYYMMDD-hh:mm:ss), except that this is a local market timestamp. The date part (YYYYMMDD) must be the current date.
Possible values	LocalMktTime(YYYYMMDD-hh:mm:ss)
Condition	In New Order (D) and Order Cancel/Replace Request (G):  Mandatory if TimeInForce = 6 AND ExpireDate absent Forbidden TimeInForce = 6 AND ExpireDate present Ignored if TimeInForce ≠ 6  In Execution Report (8): In Order information reports: Provided with the ExpireTime value associated with the concerned order, if any. Else not provided.

	In New Order (D) request rejection response: Provided with the ExpireTime value of the request, if any. Else not provided.  In Trade cancellation reports: Never provided.
	New Order (D)
Used In	Order Cancel/Replace Request (G)
	Execution Report (8)
See also	TimeInForce (Time in Force Validity)

## - F -

#### FreeText

Free Text	
Tag	9952
Description	Free form text manually entered by the Trader issuing the order.
Possible values	String(18)
	In New Order (D) and Order Cancel/Replace Request (G): Optional
Condition	In Execution Report (8): In Order information reports: provided with the FreeText value associated with the order, if any. Else not provided.
	In New Order (D) request rejection response: provided with the FreeText value of the request, if any. Else not provided.
	In Trade cancellation reports: Never provided.
Used In	New Order (D) Order Cancel/Replace Request (G) Execution Report (8)

## - G -

### GapFillFlag

Sequence Reset mode indicator	
Tag	123
Description	Field used to indicate that the Sequence Reset message is replacing
	administrative or application messages which will not be resent.
Possible values	Y Gap Fill message, MsgSeqNum field valid
	N Sequence Reset, ignore MsgSeqNum
Condition	In Inbound Sequence Reset (4):
	Optional. Absence of this field is interpretated as "Sequence Reset,
	ignore MsgSeqNum".

Sequence Reset mode indicator	
	In Outbound Sequence Reset (4): Always provided with Y.
Used In	Sequence Reset (4)



#### Handlinst

Instructions for order handling on Broker trading floor	
FIX Tag	21
Description	Instructions for order handling on Broker trading floor
Possible values	1 Automated execution order, private, no Broker intervention 2 Automated execution order, public, Broker intervention OK 3 Manual order, best execution
Condition	Ignored
Used In	New Order (D) Order Cancel/Replace Request (G)

#### HeartBtInt

Heartbeat interval	
FIX Tag	108
Description	Heartbeat interval in seconds. Field used to declare the timeout interval for generating heartbeats (same value used by both sides). The HeartBtInt value should be agreed upon by both sides and specified by the Logon initiator and echoed back by the logon acceptor (CCG). Heartbeats can be disabled by setting HeartBtInt to zero.
Possible values	Numerical
Condition	Mandatory in Inbound Logon (A). Always provided in Outbound Logon (A).
Used In	Logon (A)



#### InputPxType

Input Price Type	
FIX Tag	9950
Description	Type of the input price.  If set to valuation trade, an Execution Report (8) message is broadcasted to market participants with the provided price or the reference price depending on the instrument class configuration.  If set to Alternative Indicative Price (AIP), the instrument's reference price is updated with the provided price and is broadcasted to market participants.
Possible values	V Valuation trade A Alternative Indicative Price (AIP)
Condition	Mandatory
Used In	Price Input (I)
See also	Price (Price)



#### **LastP**x

Price of Fill	
Tag	31
Description	This field is used to indicate the price of this (last) fill. Field not required
Description	for ExecTransType=3.
Possible values	Price(10)
Condition	Always provided: with the price of the concerned execution in Order
Condition	execution reports and Trade cancellation reports, with '0' in other cases.
Used In	Execution Report (8)
See also	LastShares (Quantity of Fill)
See also	ExecTransType (Transaction Type)

#### **LastShares**

Quantity of Fill	
Tag	32
Description	This field is used to indicate the quantity of shares bought/sold on this (last) fill. Field not required for ExecTransType=3.
Possible values	Quantity(9)

Quantity of Fill	
Condition	Always provided: with the quantity executed in the concerned execution in Order execution reports and Trade cancellation reports, with '0' in other cases.
Used In	Execution Report (8)
See also	LastPx (Price of Fill) ExecTransType (Transaction Type)

#### LeavesQty

Leaves Quantity	
Tag	151
Description	Field used to indicate the amount of shares open for further execution.  If OrdStatus is Canceled, DoneForTheDay, Expired, Calculated or
Description	Rejected (in which case the order is no longer active), then LeavesQty =
	0, otherwise LeavesQty = OrderQty – CumQty.
Possible values	Quantity(9)
Condition	Always provided (with '0' if the order has no remaining quantity)
Used In	Execution Report (8)
	CumQty (Cumulated Quantity)
See also	OrderQty (Total Order Quantity)
	OrdStatus (Order Status)

## LiquidityIndicator

Effect Indicator on Liquidity	
Tag	9730 (proprietary)
Description	Proprietary field sent on execution reports for OTC, Listed, and Bulletin Boards trades to indicate what effect an order has had on the liquidity of the book. Client's rates are determined by whether an order adds or removes liquidity from the book.  This is a configurable setting that is turned on at the request of the customer.
Possible values	<ul> <li>A Add liquidity</li> <li>R Remove liquidity, or Cross order</li> <li>X Routed (for possible future use)</li> <li>O Opening trade, or Trade creation by MO</li> </ul>
Condition	Always provided in Order execution reports and Trade cancellation reports. Else not provided.
Used In	Execution Report (8)

## - M -

## **MassCancelRequestType**

Specifies if a mass cancellation criteria is requested	
Tag	530
	Specifies if the Order Mass Cancellation is to be applied on all orders
Description	belonging to the specified ClassID or Symbol, or if one or more criteria
	are to be applied on this request.
Possible values	7 Cancel all orders belonging to the specified ClassID or Symbol
1 033ibic values	Cancel orders matching the specified criteria
	In Order Mass Cancel Request (q):
	Ignored. This field is not used or checked. Specified for compliancy with
Condition	the FIX protocol.
	In Order Mass Cancel Report (r):
	Always provided.
Used In	Order Mass Cancel Request (q)
0300 111	Order Mass Cancel Report (r)
	Possible criteria to be applied on a Order Mass Cancel Request (q):
	CancelByLocationID
See also	Rule80A
	Side
	TechnicalOrdType

#### MaxFloor

Disclosed Quantity	
Tag	111
Description	Maximum number of shares to be shown on the exchange.
Possible values	Quantity(9)
Condition	Forbidden if:  [OrdType = K (Market to Limit), 1 (Market), 3 (Stop), 4 (Stop Limit) or P (Pegged)]  OR  [OrdType = 2 and Side = 8 (Cross)]  OR  [TimeInForce = 3 (IOC) or 4 (FOK)].  Else Optional.
Used In	New Order (D) Order Cancel/Replace Request (G)
See also	MinQty (Minimum Quantity)

## MinQty

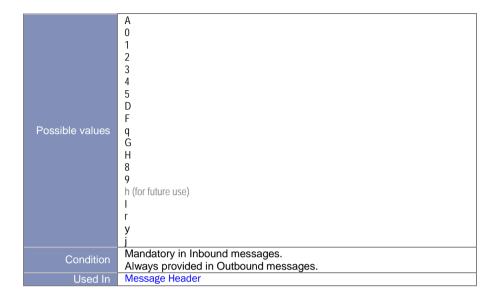
Minimum Quantity	
Tag	110
Description	Minimum quantity to be executed.
Possible values	Quantity(9)
Condition	Forbidden if:  [OrdType = 1 (Market), 3 (Stop), 4 (Stop Limit) or P (Pegged)]  OR  [TimeInForce = 4 (FOK)]  OR  [Current phase type is call].  Else Optional.
Used In	New Order (D)
See also	MaxFloor (Disclosed Quantity)

## **MsgSeqNum**

Message Sequence Number	
Tag	34
Description	Internal message sequence number.
Possible values	Integer(15)
Condition	Mandatory in Inbound messages.
	Always provided in Outbound messages.
Used In	Message Header

#### **MsgType**

Message type								
Tag	35							
Description	Defines unencryp	type.	Always	third	field	in	message.	Always



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#### **NextExpectedMsgSeqNum**

Next Expected Me	Next Expected Message Sequence Number				
Tag	789				
	Next expected MsgSegNum value to be received.				
Description	This field is used to support a new messages sequence numbers check				
	way at logon (see also Logon handshake section page 11).				
Possible values	Integer(15)				
	Optional in Inbound Logon (A) message:				
Condition	<ul> <li>-If provided, the process used to check the messages sequence numbers at logon is the one described in Logon using "NextExpectedMsgSeqNum" section.</li> <li>-If not provided, the process used to check the messages sequence numbers at logon is the one described in Intraday Logon scenarios section.</li> </ul>				
	In Outbound Logon (A) message: -If provided in Inbound Logon (A) message, then also provided as described in Nominal Logon section. If not provided in Inbound Logon (A) message, then not provided.				

Next Expected Message Sequence Number		
Used In	Logon (A)	
See also	MsgSeqNum (Message Sequence Number)	

## NewSeqNo

New Sequence Number				
Tag	36			
Description	In case SequenceReset is in Reset mode (see also Sequence Reset (4) message and its GapFillFlag field), NewSeqNo contains the sequence number of the next message to be transmitted.  In case SequenceReset is in GapFill mode, NewSeqNo contains the sequence number of the highest administrative message in this group plus 1.			
Possible values	Integer (15)			
Condition	Mandatory in Inbound messages. Always provided in Outbound messages.			
Used In	Sequence Reset (4)			

#### **NoClearingEntries**

Number of repeating Clearing Data Entries			
Tag	9933		
	The second clearing entry should be used when entering a cross order.		
Description			
	and the second entry contains the clearing data for the sell order.		
Possible values	1 or 2		
Condition	Mandatory		
Used In	New Order (D)		

#### **NoContraBrokers**

Number of ContraBrokers repeating group instances			
Tag	382		
Description	Number of ContraBrokers repeating group instances. Only provided in case of IMS execution. When provided, ContraBroker field is also provided.		
Describle and the	provided.		
Possible values	1		
Condition	Provided in Order execution reports and Trade cancellation reports in case of IMS (Internal Matching Service) execution.		
	Else not provided.		
Used In	Execution Report (8)		
See also	ContraBroker		

## **NoTradingSessions**

Number of repeating TradingSessionID			
Tag	386		
Description	Specifies the number of repeatingTradingSessions ID's		
Possible values	1, 2 or 3		
	Optional.  See also TradingSessionID "Condition" section.		
Condition	In European Cash Markets, this "Session validity" information (see also TradingSessionID) associated with the request is forced to "Valid for all sessions" by the UTP trading engine.		
Used In	New Order (D) Order Cancel/Replace Request (G)		
See also	TradingSessionID		

-0-

#### **OnBehalfOfCompID**

Identifier of the Firm to which the order belongs (Inbound messages)			
Tag	115		
Description	Identifier of the firm to which the order belongs. Outbound Application messages put this information into the <a href="DeliverToCompID">DeliverToCompID</a> field.		
Possible values	String(11) (agreed upon clearing value)		
Condition	In Inbound Application messages: Mandatory. Must be: -In case of Regular Access, the same value than the SenderCompID value (reference identifier of the Firm) given at logonIn case of Service Bureau Access, the reference identifier of the Firm on behalf of which the Service Bureau sends the message.  In Outbound Application messages: Never provided.  In Administrative messages: Ignored in Inbound messages. Never provided in Outbound messages.		
Used In	Message Header		
See also	DeliverToCompID SenderCompID		

## **OpenClose**

Posting Action			
Tag	77		
Description	Indicates whether the resulting position after a trade should be an opening position or closing position.		
Possible values	O Open C Close		
	In New Order (D) and Order Cancel/Replace Request (G): Optional		
Condition	In Execution Report (8): In Order information reports: provided with the OpenClose value associated with the order, if any. Else not provided.		
	In New Order (D) request rejection response: provided with the OpenClose value of the request, if any. Else not provided.		
	In Trade cancellation reports: Never provided.		
Used In	New Order (D) Order Cancel/Replace Request (G) Execution Report (8)		

#### OrderID

Engine Order Identifier				
Tag	37			
Description	Unique identifier for Order assigned by exchange			
Possible values	String(24)			
	In Order Cancel/Replace Request (G) and Order Cancel Request (F): Optional			
Condition	In Order Cancel Reject (9): Provided if provided in Order Cancel/Replace Request (G) or Order Cancel Request (F).			
	In Execution Report (8): In Order information reports and in Trade cancellation reports: Always provided with the value associated with the order.			
	In New Order (D) request rejection response: Never provided.			
Used In	Order Cancel Request (F) Order Cancel/Replace Request (G) Execution Report (8) Order Cancel Reject (9)			
See also	ClOrdID (Client Order Identifier)			

## **OrderQty**

Total Order Quantity				
Tag	38			
Description	Number of shares ordered.			
Possible values	Quantity(9)			
	In New Order (D) and Order Cancel/Replace Request (G):			
	Mandatory			
	In Order Cancel Request (F):			
	Ignored			
Constition	In Execution Report (8):			
Condition				
	In Order information reports and in Trade cancellation reports:			
	Always provided with the value associated with the order.			
	In New Order (D) request rejection response:			
	Provided with the value indicated in the request except in case of			
	rejection for "OrderQty not valuated" reason.			
	New Order (D)			
	Order Cancel Request (F)			
Used In	Order Cancel/Replace Request (G)			
	Execution Report (8)			
Coo alaa	CumQty (Cumulated Quantity)			
See also	LeavesQty (Leaves Quantity)			

## OrdRejReason

Order Rejection Reason			
Tag	103		
Description	Field used as a code to identify reason for order rejection.		
	Broker option		
	1 Unknown symbol		
	2 Exchange closed		
	3 Order exceeds limit		
Possible values	4 Too late to enter		
	5 Unknown Order		
	6 Duplicate Order		
	7 Duplicate of a verbally communicated order		
	8 Stale Order		
Condition Provided in New Order (D) request rejection response and Order rejection reports. Else not provided.			
		Used In	Execution Report (8)

#### **OrdStatus**

Order Status	
Tag	39
Description	Field used to identify the current status of an order.
Possible values	<ul> <li>New</li> <li>Partially filled</li> <li>Filled</li> <li>Done for Day</li> <li>Cancelled</li> <li>Replaced</li> <li>Pending Cancel</li> <li>Rejected</li> <li>Expired</li> <li>Pending Replace</li> <li>Cancelled by Market Operation</li> <li>Eliminated by Corporate event</li> </ul>
Condition	Always provided. In Order Cancel Reject (9), always provided with 8, whatever is the current state of the order requested to be cancelled or modified.
Used In	Execution Report (8) Order Cancel Reject (9)

## OrdType

Order Type	
Tag	40
Description	Price type of the order.
Possible values	<ul> <li>1 Market</li> <li>2 Limit</li> <li>3 Stop</li> <li>4 Stop Limit</li> <li>P Pegged (in New Order (D) only)</li> <li>K Market To Limit</li> </ul>
Condition	In New Order (D): Mandatory  In Order Cancel/Replace Request (G): Mandatory (without 'P' as a possible value)  In Execution Report (8): In Order information reports and in Trade cancellation reports: Always provided with the value associated with the order.  In New Order (D) request rejection response: Provided with the value indicated in the request except in case of rejection for "OrdType not valuated" reason.

Order Type	
Used In	New Order (D) Order Cancel/Replace Request (G) Execution Report (8)

## **OrigClOrdID**

Original Client Order Identifier	
Tag	41
	Field used to identify the order to modify or cancel in an order
Description	Cancel/Replace or Cancel request. It refers to the Client Order Identifier
	of the order to modify or cancel.
Possible values	String(30) (ClOrdID of the order to be modified / cancelled)
	In Order Cancel Request (F) and Order Cancel/Replace Request (G):
	Mandatory
	In Execution Report (8):
	In New Order (D) request responses: Never provided.
Condition	In Order Cancel/Replace Request (G) responses and Order Cancel Request (F) responses and Order Mass Cancel Request (q) responses and Non-sollicited reports: Always provided with the ClOrdID value of the order (modified, cancelled or whose trade is cancelled).
	In Order Cancel Reject (9):
	Provided if provided in the Order Cancel Request (F) or Order
	Cancel/Replace Request (G), with the same value. Else not.
	Order Cancel Request (F)
Headle	Order Cancel/Replace Request (G)
Used In	Execution Report (8)
	Order Cancel Reject (9)
See also	ClOrdID (Client Order Identifier)

### **OrigMsgSeqNum**

Message Sequence Number of the original request	
Tag	9953
Description	Internal message sequence number of the original request.
Possible values	Integer(15)
Condition	Always provided
Used In	Request Ack (y)
See also	MsgSeqNum (Message Sequence Number)

## OrigMsgType

Message type of the original request	
Tag	9954
Description	Internal message type of the original request.
Possible values	I Price Input
Condition	Always provided
Used In	Request Ack (y)

### - P -

## **PegDifference**

Price Difference for a Pegged Order	
Tag	211
Description	Field used to indicate the signed amount added to the peg for a pegged order.
Possible values	Price(10) ('0' only possible value)
Condition	In New Order (D):  Mandatory if [OrdType = P (Pegged order)]. Else Ignored.  In Order Cancel/Replace Request (G): Preliminary remark: a modification to a Pegged Order is forbidden. Ignored (for possible future use).  In Execution Report (8): Provided (with the value v) only in New Order (D) request rejection response on a New Order (D) request having OrdType = 'P' and PegDifference = v (≠ 0) Else not provided.
Used In	New Order (D) Order Cancel/Replace Request (G) Execution Report (8)

#### **PossDupFlag**

Message possible retransmission indicator	
Tag	43
Description	Indicates possible retransmission of message with this sequence number.
Possible values	Y Possible duplicate N Original transmission
Condition	Optional. If not present, to be interpretated as "Original transmission".
Used In	Message Header

#### **PossResend**

Indicator of message containing information already sent	
Tag	97
Description	Indicates that message may contain information that has been sent
	under another sequence number.
Possible values	Y Possible resend
	N Original transmission
Condition	Optional. If not present, to be interpretated as "Original transmission".
Used In	Message Header

#### **Price**

Price		
Tag	44	
Description	Price for an instrument, per unit of quantity (e.g. per share).	
Possible values	Price(10)	
Condition	In New Order (D) and Order Cancel/Replace Request (G):  Mandatory if OrdType = 2 (Limit) or 4 (Stop Limit)  Forbidden if OrdType = 1 (Market), 3 (Stop Loss) or K (Market to Limit)  Optional if OrdType = P (Peg)  In Price Input (I):  Mandatory if: (InputPxType = V AND the ClassValuationType value defined at the associated class level = F) OR (InputPxType = A AND the ClassAlPType value defined at the associated firm level = F)  Forbidden if: (InputPxType = V AND the ClassValuationType value defined at the associated class level = R)  Else Ignored.  In Execution Report (8):  In Order information reports and Trade cancellation reports: Provided with the value associated with the concerned order, if any. Else not	
	provided.  In New Order (D) request rejection response: Provided with the value in the request, if any. Else not provided.	
Used In	New Order (D) Order Cancel/Replace Request (G) Price Input (I) Execution Report (8)	

## -R-

## RefMsgType

Message type refe	Message type reference	
Tag	372	
Description	The type of the message being referenced.	
Possible values	A 0 1 2 3 3 4 5 5 D F q G H 8 8 9 h (for future use) I r y	
Condition	In Reject (3): Optional  In Business Message Reject (j): Always provided with the value of the MsgType field value received in the rejected message, except in the case of rejection for "MsgType field not valuated" reason.	
Used In	Reject (3) Business Message Reject (j)	

## RefSeqNum

Reference sequence number of the message rejected	
Tag	45
Description	Reference sequence number of the message rejected
Possible values	Integer
Condition	Always provided
Used In	Reject (3)
Useu III	Business Message Reject (j)

## RefTagID

Field tag reference	
Tag	371
Description	The tag number of the FIX field being referenced.
Possible values	Integer
Condition	Optional
Used In	Reject (3)

#### ResetSeqNumFlag

Sequence numbers reset flag	
Tag	141
Description	Indicates that the both sides of the FIX session should reset sequence
Description	numbers.
Possible values	Y Yes, reset sequence numbers
Pussible values	N No
Condition	Optional. If not present, to be interpretated as "No reset".
Used In	Logon (A)
See also	MsgSeqNum

#### Rule80A

Order Origin	
Tag	47
Description	Indicates the account type for which the order is entered. For example, an order can be entered for a Client account, a House account or a Liquidity Provider.
Possible values	<ul><li>1 Client</li><li>2 House</li><li>6 Liquidity Provider</li><li>7 Related Party</li></ul>
Condition	In New Order (D) and Order Cancel/Replace Request (G): Mandatory  In Order Mass Cancel Request (q): Optional criteria.  In Order Mass Cancel Report (r): Provided with the value of the Order Mass Cancel Request (q), if any. Else not provided.  In Execution Report (8): In Order information reports: always provided with the Rule80A value associated with the order.  In New Order (D) request rejection response: provided with the Rule80A

	value of the request, if any. Else not provided.
	In Trade cancellation reports: Never provided.
Used In	New Order (D) Order Mass Cancel Request (q) Order Cancel/Replace Request (G) Execution Report (8) Order Mass Cancel Report (r)
See also	Other possible criteria to be applied on a Order Mass Cancel Request (q): CancelByLocationID Side TechnicalOrdType

## -5-

## SenderCompID

Identifier of the message sender (Firm ID or Service Bureau ID in Inbound messages)	
Tag	49
Description	This field holds the identifier of the message sender, which can be, in Inbound messages, the identifier of the Firm or the Service Bureau according to the Firm Access Type (see below), and which is, in Outbound messages, the identifier of the gateway. The information held by this field in Inbound messages is the same than the one held by the TargetCompID field in Outbound messages.  Regular Access: Firm identifier in Inbound messages; EURONEXT in Outbound messages.  Service Bureau Access: Service Bureau identifier in Inbound messages; EURONEXT in Outbound messages.
Possible values	String(11)
Condition	In Inbound (Administrative or Application) messages:  Mandatory. Must be:  -In case of Regular Access, the reference identifier of the Firm.  -In case of Service Bureau Access, the reference identifier of the Service Bureau.  In Outbound (Administrative or Application) messages:  Always provided with the identifier of the CCG:
Used In	Message Header
See also	TargetCompID OnBehalfOfCompID ClOrdID (Client Order Identifier)

#### SenderLocationID

Identifier of the Trading Application Issuer	
Tag	142
Description	Identifier, in the Inbound Logon (A) message, of the Trading Application Issuer. Mandatory and checked against connection name. In case of
	failure validation, logon reject with related reject reason.
Possible values	String(11)
	In Logon (A):
	Mandatory in Inbound Logon (A) message.
	Never provided in Outbound Logon (A) message.
Condition	• , ,
	In all other messages (administrative or application message):
	Ignored in Inbound messages.
	Never provided in Outbound messages.
Used In	Message Header

## **SendingTime**

Time of message transmission	
Tag	52
Description	Time of message transmission.
Possible values	LocalMktTime
Condition	Mandatory in Inbound messages.
Condition	Always provided in Outbound messages.
Used In	Message Header

## SessionRejectReason

Session reject reason code identifier	
Tag	373
Description	Code to identify reason for a session-level Reject message
Possible values	Integer
Condition	Optional
Used In	Reject (3)

#### Side

Order Side	
Tag	54
Description	Side of the order
	1 Buy
Possible values	2 Sell
	8 Cross (new order only)

	In New Order (D):
	Mandatory.
	In Order Cancel/Replace Request (G):
	Mandatory with 1 and 2 as only possible values.
	In Order Mass Canael Request (a)
	In Order Mass Cancel Request (q): Optional criteria.
	Optional chiena.
Condition	In Order Mass Cancel Report (r):
	Provided with the value of the Order Mass Cancel Request (q), if any.
	Else not provided.
	In Execution Report (8):
	In Order information reports and Trade cancellation reports: Always
	provided with the value of the concerned order.
	In New Order (D) request rejection responses Provided with the value of
	In New Order (D) request rejection response: Provided with the value of the request, if any. Else not provided.
	New Order (D)
	Order Mass Cancel Request (q)
Used In	Order Cancel/Replace Request (G)
	Execution Report (8)
	Order Mass Cancel Report (r)
	Other possible criteria to be applied on a Order Mass Cancel Request
	(q):
See also	CancelByLocationID
	Rule80A
	TechnicalOrdType

## **StopP**x

Stop Price	
Tag	99
Description	Trigger price for stop orders.
Possible values	Price(10)

Stop Price	
Condition	In New Order (D) and Order Cancel/Replace Request (G): Mandatory if OrdType = 3 (Stop) or 4 (Stop Limit) Forbidden for other OrdType values.  In Execution Report (8): In Order information reports: Provided with the StopPx value associated with the concerned order, if any. Else not provided.  In New Order (D) request rejection response: Provided if field valuated in the requests. Else not provided.  In Trade cancellation reports: Never provided.
Used In	New Order (D) Order Cancel/Replace Request (G) Execution Report (8)

#### **Symbol**

Instrument identifie	er
Tag	55
Description	Identifier of the instrument involved in the order.
Possible values	String(12) (ISIN format)
Condition	In New Order (D) and Order Cancel/Replace Request (G) and Price Input (I) and Order Cancel Request (F):  Mandatory.  In Order Mass Cancel Request (q):
	Mutually exclusive with ClassID. One, and only one, of these 2 fields must be specified.  In Order Cancel Reject (9): Provided with the value of the request, if any. Else not provided.
	In Request Ack (y): Always provided.  In Execution Report (8): In Order information reports and in Trade cancellation reports: Always provided with the value associated with the order.
	In New Order (D) request rejection response: Provided with the value indicated in the request except in case of rejection for "Symbol not valuated" reason.

Used In	New Order (D) Order Cancel Request (F) Order Mass Cancel Request (q) Order Cancel/Replace Request (G) Price Input (I) Execution Report (8) Order Cancel Reject (9) Request Ack (y) Order Mass Cancel Report (f)
	Order Mass Cancel Report (r)

### - T -

## **TargetCompID**

Identifier of the message receptor (Firm ID or Service Bureau ID in Outbound messages)	
	56
Tag	
Description	This field holds the identifier of the message receptor, which can be, in Outbound messages, the identifier of the Firm or the Service Bureau according to the Firm Access Type (see below), and which is, in Inbound messages, the identifier of the gateway. The information held by this field in Outbound messages is the same than the one held by the SenderCompID field in Inbound messages.  Regular Access: Firm identifier in Outbound messages; EURONEXT in Inbound messages.  Service Bureau Access: Service Bureau identifier in Outbound messages; EURONEXT in Inbound messages.
Possible values	String(11)
Condition	In Inbound (Administrative or Application) messages: Mandatory. Must be the identifier of the CCG.  In Outbound (Administrative or Application) messages: Always provided, with: -In case of Regular Access, the reference identifier of the FirmIn case of Service Bureau Access, the reference identifier of the Service Bureau.
Used In	Message Header
See also	SenderCompID DeliverToCompID

## **TechnicalOrdType**

Order Technical Origin	
Tag	9941 (proprietary)
Description	Indicates the nature of the order issuer; for example, it can be a manual
	entry, an order coming from a Program Trading system.

	I Index trading arbitrage
	P Portfolio strategy
Possible values	G Unwind order
Possible values	A Other orders
	1 1 2 1 1 2 1 1 2 1 2 1 2 1 2 1 2 1 2 1
	C Cross margining
	In New Order (D) and Order Cancel/Replace Request (G):
	Optional. Absence of this field is interpretated as 'Other orders'.
	In Order Mass Cancel Request (q):
	Optional criteria.
	l
	In Order Mass Cancel Report (r):
	Provided with the value of the Order Mass Cancel Request (q), if any.
	Else not provided.
Condition	
00.10.11	In Execution Report (8):
	In Order information reports: provided with the TechnicalOrdType value
	associated with the order, if any. Absence of this field is interpretated as
	'Other orders'.
	In New Order (D) request rejection response: provided with the
	TechnicalOrdType value of the request, if any. Absence of this field is
	interpretated as 'Other orders'.
	In Trade cancellation reports: Never provided.
	New Order (D)
Used In	Order Mass Cancel Request (q)
	Order Cancel/Replace Request (G)
	Execution Report (8)
	Order Mass Cancel Report (r)
See also	Other possible criteria to be applied on a Order Mass Cancel Request
	(q):
	CancelByLocationID
	Rule80A
	Side

## TestReqID

Test request message identifier	
Tag	112
Description	Identifier included in Test Request message to be returned in resulting Heartbeat.
_ Possible values_	String

Test request message identifier	
Condition	In Test Request (1):  Mandatory in Inbound Test Request (1).  Always provided in Outbound Test Request (1).  In HeartBeat (0):  Mandatory in Inbound HeartBeat (0) sent as response to a Test Request (1), with the same value than the one of the Test Request (1).  Ignored in Inbound HeartBeat (0) not sent as response to a Test Request (1).  Always provided in Outbound HeartBeat (0) received as response to a Test Request (1).  Never provided in Outbound HeartBeat (0) not received as response to a Test Request (1).
Used In	HeartBeat (0) Test Request (1)

#### **Text**

Request status or error text	
Tag	58
Description	Provides a status of the originating request or a textual explanation in case of request rejection.
Possible values	String (40)
Condition	In Execution Report (8), Order Cancel Reject (9) and Request Ack (y): Always provided.  In Reject (3), Logout (5) and Business Message Reject (j): Provided, when possible, with a message giving the rejection or logout reason.
Used In	Execution Report (8) Order Cancel Reject (9) Request Ack (y) Reject (3) Logout (5) Business Message Reject (j)

#### **TimeInForce**

Time in Force Validity	
Tag	59
Description	Specifies how long the order remains in effect. Absence of this field is interpreted as DAY.

Time in Force Validity	
Possible values	<ul> <li>Day</li> <li>Good Till Cancel</li> <li>VFA (Valid for Auction)</li> <li>Immediate Or Cancel</li> <li>Fill Or Kill</li> <li>Good Till Date or Time</li> <li>VFC (Valid for Closing)</li> </ul>
Condition	In New Order (D) and Order Cancel/Replace Request (G): Optional. Absence of this field is intepretated as 'Day'.  In Execution Report (8): In Order information reports and Trade cancellation reports: Always provided with the value associated with the concerned order.  In New Order (D) request rejection response: Provided with the value of the request, if any. Else not provided.
Used In	New Order (D) Order Cancel/Replace Request (G) Execution Report (8)
See also	ExpireTime (Expiration Time) ExpireDate (Expiration Date)

#### **TotalAffectedOrders**

Number of orders cancelled	
Tag	533
Description	Numbers of orders cancelled upon mass cancel request.
Possible values	Integer
Condition	Always provided, with -1 when the Order Mass Cancel Report (r) is sent to acknowledge the Order Mass Cancel Request (q), and with the number of orders cancelled when the Order Mass Cancel Report (r) is sent to report the end of the mass cancel processing.
Used In	Order Mass Cancel Report (r)

## **TradingSessionID**

Trading Session Identifier	
Tag	336
Description	Session or combination of sessions for which the order is valid.

Possible values	String(3)  1 Early session  2 Core session  3 Late session  12 Early and Core sessions  13 Early and Late sessions
	23 Core and Late sessions 123 All sessions ('12', '13', '23', '123' are only possible in messages sent by the UTP
	trading engine, else Repeating Group principle is to be used)
Condition	In New Order (D) and Order Cancel/Replace Request (G):  If NoTradingSessions absent, TradingSessionID instance(s), if there are, are ignored.  If NoTradingSessions = 1, one repeating TradingSessionID instance is mandatory. The others, if there are, are ignored.  If NoTradingSessions = 2, two repeating TradingSessionID instances are mandatory. The others, if there are, are ignored.  If NoTradingSessions = 3, three repeating TradingSessionID instances are mandatory. The others, if there are, are ignored.
	In European Cash Markets, this "Session validity" information (see also NoTradingSessions) associated with the request is forced to "Valid for all sessions" by the UTP trading engine.  In Execution Report (8): Never provided (for future use)
	New Order (D)
Used In	Order Cancel/Replace Request (G) Execution Report (8)
See also	NoTradingSessions

#### **TransactTime**

Transaction Time	
Tag	60
Description	Indicates the time order request was initiated/released by the trader or trading system, or the time of execution/order creation. The format is the same than the UTCTimeStamp type (YYYYMMDD-hh:mm:ss), except that this is a local market timestamp.
Possible values	LocalMktTime(YYYYMMDD-hh:mm:ss)
Condition	In New Order (D) and Order Cancel Request (F) and Order Mass Cancel Request (q) and Order Cancel/Replace Request (G): Ignored  In Order Mass Cancel Report (r):
	Not provided (for future use)

Transaction Time		
	In Execution Report (8):	
	Always provided	
Used In	New Order (D)	
	Order Cancel/Replace Request (G)	
	Order Cancel Request (F)	
	Order Mass Cancel Request (q)	
	Execution Report (8)	
	Order Mass Cancel Report (r)	

## - U -

#### **UTPExID**

Trade Reference Identifier by day for a given instrument		
Tag	9731 (proprietary)	
Description	Field used as a reference identifier of a trade, for the day and for a given instrument. This field is provided in the case of a fill or partial fill order execution, or of a trade cancellation. For example, let x be the reference identifier of a given trade, x is reported in the 2 Execution Report sent for the 2 sides of the trade, and if this trade is cancelled, x is again reported in the 2 Execution Report sent for the 2 sides of the trade.	
	Remark1: do not confuse, this field is a Trade Reference Identifier unique for a given instrument for a given day, while ExecRefID is a Trade Reference Identifier unique for all instruments for a given day.  Remark2: do not confuse, this field is a Trade Reference Identifier, while ExecID is an Execution Report (to be understood as the message type and not as a "trade report") Reference Identifier.	
Possible values	String(24)	
Condition	Provided with the reference identifier of the concerned execution, during the current day and for the concerned instrument, in case of Order execution reports and Trade cancellation reports, else with '0'.	
Used In	Execution Report (8)	
See also	ExecRefID (Trade Reference Identifier by day for all instruments)  ExecID (Execution Report Identifier)	