

FIX – Rules of Engagement

UBS Multilateral Trading Facility (UBS MTF)

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1. INTRODUCTION

1.1 Purpose and scope of this document

This document is a tool to help counterparties understand the implementation of the FIX protocol for UBS MTF. The document is designed to facilitate the work required to establish FIX trading connectivity and is intended to supplement the published FIX protocol specification, found at <http://www.fixtradingcommunity.org/>.

The fundamental objective of this document is to highlight the requirements to take advantage of UBS Multilateral Trading Facility (**UBS MTF**). It is intended to direct the user as to options and necessary parameters for the counterparty use of this facility.

1.2 Documentation format

This document defines UBS's implementation of UBS MTF within version 4.2 of the FIX protocol.

1.3 In scope

This specification includes the support for UBS MTF.

To access the MTF, connection must be made to the UBS European hub in London. Connection via any of the other UBS regional entry points will not be supported.

1.4 Out scope

Any support for other UBS products, example, DMA and Algos for cash equities are defined in other Rules of Engagement documents.

2. FUNCTIONAL OVERVIEW

The Markets in Financial Instruments Directive has been a catalyst for change in the European execution market place, with the result that the importance of credible electronic trading technology and the ability to harness technology to source liquidity have become paramount for the broking community.

UBS MTF will operate as what is termed a “dark order book” and continuous matching will occur at the mid, bid or offer price of the primary best bid and offer.

Access to UBS MTF is restricted to its members and requires supplementary documentation over and above the standard trading terms and conditions that regulate more traditional execution services. This documentation can be obtained via your usual relationship manager.

2.1 How does it work

UBS MTF supports the following:

- The member sends a UBS MTF order in a dedicated FIX session.
- When the order is received by UBS a “Pending New” message will NOT be returned, although this can be switched on for an MTF member.
- An order could be rejected under a number of scenarios including:
 - Instrument symbol not recognised
 - Instrument is not supported on UBS MTF.
- UBS MTF cannot match any orders in an instrument until valid Bid and Ask quotes are established on the primary market.
- An acknowledgement that the order has been accepted into UBS MTF is sent back to the member.
- Members receive fills back in real time.
- Members are able to amend or cancel orders up until the final execution occurs.

2.2 Symbology

There will be a new universe of stocks created for UBS MTF however this list will be fungible with internal UBS systems. The list of stocks for go live will be limited to an approved subset of stocks in the ESMA list of approved securities for regulated markets. It is anticipated that this list will include over time Swiss listed stocks.

In all cases the Symbol[55] value must be the Uniform Symbology Code. This code is being adopted by European execution venues to uniformly identify securities traded across Europe. The following details on how this code is formatted has been extracted from information at the website - http://en.wikipedia.org/wiki/Uniform_Symbology

The Uniform Symbology Algorithm is designed to be human readable, fit into 6 characters, have no symbol clashes and where possible, be derivable from another, freely available code.

It will consist of a stock code followed by a single, lower case letter designating the primary listing exchange. The stock code will be derived from the “local code” published by the primary exchange. These will be truncated where necessary.

If the local code contains a single letter class designator of A through Z (eg. “STE A”) then the single letter class designator shall be retained and the code will be truncated to a maximum of 4 characters, plus the single letter class (A through Z) designator. For some Nordic stocks the share designator will be prefixed with “SDB” (eg. “SDBA”). In this case the “SDB” should be removed and the single letter class (A through Z) designator will be retained.

Any codes containing spaces, periods, underscores or second words (other than the single letter class (A through Z) described above) will be truncated at the space, period, etc. All remaining non-alphanumeric characters should be removed.

Market codes by market centre (including examples)

Market Centre	MIC	Market Code	Sample Local Symbol	Uniform Symbology Code	Sample Company Name
Copenhagen Stock Exchange	XCSE	c	DANSK	DANSKc	Danske Bank Ord
Deutsche Borse/Germany	XETR	d	EXS1	EXS1d	iShares DAX ETF
Euronext Amsterdam	XAMS	a	HEIA	HEIAa	Heineken
Euronext Brussels	XBRU	b	INB	INBb	INBEV
Euronext Paris	XPAR	p	RNO	RNOp	Renault
Euronext Lisbon/Portugal	XLIS	u	ALTR	ALTRu	ALTRI SGPS
Helsinki Stock Exchange	XHEL	h	NOK1V	NOK1Vh	Nokia
Irish Stock Exchange	XDUB	i	GNC	GNCi	Greencore Group plc
London Stock Exchange	XLON	l	VOD	VODl	Vodafone Group Ord
Madrid/Spain (Espana)	XMAD	e	COL	COLe	INMOB Colonial
Borsa Italiana/Milan	XMIL	m	SPM	SPMm	Saipem
Oslo Stock Exchange	XOSL	o	NHY	NHYo	Norsk Hydro
Reykjavik, Iceland	XICE	r	OSSR	OSSRr	Ossur Ord
Stockholm Stock Exchange	XSTO	s	VOLB	VOLBs	Volvo B Ord
Vienna Stock Exchange	XWBO	v	VIG	VIGv	Vienna Insurance Group
Luxembourg Stock Exchange	XLUX	x	BIP	BIPx	BIP Investment Partners
Swiss Exchange/Zurich	XVTX	z	UBSN	UBSNz	UBS N Ord

2.3 Exchange Mnemonics

UBS will send a value based on the Market Identification Code (MIC) standard in the LastMkt<30> field on FIX ER message. The value is XUBS.

On the incoming order, there is no need to specify an exchange and hence ExDestination<100> is not supported and will be ignored.

2.4 TimeInForce<59> and OrdType<40>

The below table outlines the time in force and order type combinations supported on UBS MTF:

OrdType<40>	TimeInForce<59>	Description
P (Pegged)	0 (Day)	Crosses at bid, mid or offer of primary best Bid/Offer, else remains on the MTF order book priced at the bid, mid or offer of primary. Can contain optional limit price in Price<44> value. Tag 18 must be used to identify the reference price.
P (Pegged)	3 (IOC)	Crosses at bid, mid or offer of primary best Bid/Offer, else is deleted. Can contain optional limit price in Price<44> value. Tag 18 must be used to identify the reference price.

2.5 Internalization

UBS MTF will match orders according to price/time priority. It is possible to send an instruction that the order must not be matched with specific other orders. The following value is supported for the first phase:

➤ **Do not execute against own orders**

Do not cross two orders submitted by the same member. Required FIX tag:
 Internalization<9004>=4 (Do not execute against own orders)

No other values are currently supported.

2.6 Session Times

Session times will match those of the primary market where the underlying security is listed. There will be no trading in the open or closing auctions & if the primary market is suspended UBS MTF will go into a pending “primary live” state until connection is re-established.

3. FIX MESSAGE SPECIFICATIONS

The following FIX message definitions are specific to the handling required for UBS MTF. The details do not constitute all possible tags and values for each tag – only those relevant to UBS MTF. For a complete list of UBS supported values please refer to the UBS Rules of Engagement document for the specific product.

3.1 Standard FIX 4.2 Message Header

Fix Tag	Field Name	Description	UBS Req'd	UBS MTF Specific Values Currently Supported
8	BeginString	<i>(Always unencrypted, must be first field in message)</i>	Y	
9	BodyLength	<i>(Always unencrypted, must be second field in message)</i>	Y	
35	MsgType	<i>(Always unencrypted, must be third field in message)</i>	Y	
49	SenderCompID	<i>(Always unencrypted)</i>	Y	
56	TargetCompID	<i>(Always unencrypted)</i>	Y	
34	MsgSeqNum	<i>(Can be embedded within encrypted data section.)</i>	Y	
50	SenderSubID	<i>(Can be embedded within encrypted data section.)</i>	N	Optional, may be used to provide the identity of the trader who entered the order.
43	PossDupFlag	<i>(Can be embedded within encrypted data section.)</i>	N	Always required for retransmitted messages, whether prompted by the sending system or as the result of a resend request.
97	PossResend	<i>(Can be embedded within encrypted data section.)</i>	N	Required when message may be duplicate of another message sent under a different sequence number.
52	SendingTime	<i>(Can be embedded within encrypted data section.)</i>	Y	
122	OrigSendingTime	<i>(Can be embedded within encrypted data section.)</i>	N	Required for message resent as a result of a ResendRequest. If data is not available set to same value as SendingTime

3.2 New Order Single

Fix Tag	Field Name	Description	UBS Req'd	UBS MTF Specific Values Currently Supported
	<i>Standard Header</i>		Y	MsgType = D
11	ClOrdID	Unique identifier of the order as assigned by institution.	Y	

18	ExecInst	Instructions for order handling. Amendments to tag 18 are rejected.	Y	If tag 40=P, value must be M if buying or selling at the mid, value must be P if buying at offer or selling at bid, and value must be R if buying at bid or selling at offer.
55	Symbol	Ticker Symbol	Y	UMTF Code. See section 2.2.
54	Side	Side of order	Y	1: Buy 2: Sell
38	OrderQty	Number of shares ordered	Y	
40	OrdType	Order type	Y	P=Pegged. See section 2.4
60	TransactTime	Time the order was initiated	Y	
47	OrderCapacity	Designates the capacity of the firm placing the order	N	Values supported by UBS MTF: A: Agency P: Principal R: Riskless Principal If not submitted, value will default to Agency
59	TimeInForce	Day or IOC	Y	0: Day 3: IOC Absence of this field will cause the order to be rejected. See section 2.4.

The above fields are the minimum required on a UBS MTF order. The below fields are not mandatory, but may be required to be sent depending on the requirements for the order. Currency field is a conditional field and only validated if populated.

44	Price		N	Optional, See section 2.4
110	MinQty	Displaying the minimum quantity of an order to be executed acting as an MAQ within UBS MTF	N	The value placed in tag 110 must be either null or set to a quantity that is either equal or less than the order quantity (tag 38). If remaining quantity of partially filled order falls below the value in tag 110, the MinQty in tag 110 becomes one (1) share.
9004	Internalization	Provides matching instructions	N	If present, Value = 4 (Do not execute against own orders). See section 2.5.
	<i>Standard Trailer</i>		Y	

3.3 Execution Report

Fix Tag	Field Name	Description	UBS Req'd	UBS MTF Specific Values Currently Supported
	<i>Standard Header</i>		Y	MsgType = 8
37	OrderID	Unique identifier of the order as assigned by the broker.	Y	
11	ClOrdID	Unique identifier of the order as assigned by the institution.	Y	

41	OrigClOrdID	Conditionally required for response Cancel or Cancel/Replace request	N	
17	ExecID	Unique identifier of execution message.	Y	Unique on a daily basis
150	ExecType	Describes the type of execution report	Y	
20	ExecTransType	Identifies transaction type	Y	New = 0 Cancel = 1
19	ExecRefID	Sent on Trade Cancel messages (ExecTransType = 1)	N	Cancellation is same reference as initial transaction prefixed with 1
55	Symbol	As sent on the originating order	Y	
54	Side	As sent on the originating order	Y	
38	OrderQty	As sent on the originating order	Y	
39	OrdStatus	Current status of the order	Y	
32	LastShares	Quantity of shares bought/sold on this (last) fill	N	
31	LastPx	Price of this (last) fill	N	
30	LastMkt	Venue of execution of this (last) fill	N	MIC for UBS MTF.
29	LastCapacity	Broker capacity on order execution	N	1: Agent 3: Riskless Principal 4: Principal
151	LeavesQty	Amount of shares open for further execution	Y	
14	CumQty	Amount of executed shares on the order	Y	
6	AvgPx	Average price of all fills on the order	Y	
60	TransactTime	Time the transaction represented by this Execution Report occurred	Y	
851	LastLiquidityInd	Applicable only on OrdStatus (39) of Partial or Filled.	N	1: Added Liquidity 2: Removed Liquidity
	<i>Standard Trailer</i>		Y	

3.4 Order Cancel Replace Request

Fix Tag	Field Name	Description	UBS Req'd	UBS MTF Specific Values Currently Supported
	<i>Standard Header</i>		Y	MsgType = G
11	ClOrdID	Unique identifier of replacement order as assigned by institution	Y	

41	OrigClOrdID	ClOrdID of the originating order	Y	
55	Symbol	As sent on the originating order	Y	
54	Side	As sent on the originating order	Y	
60	TransactTime	Time the replace request was initiated	Y	
38	OrderQty	Number of shares ordered	Y	
40	OrdType	Order type	Y	P=Pegged. See section 2.4
44	Price		N	Optional, See section 2.4
18	ExecInst	As sent on the originating order	Y	
59	TimeInForce	Day or IOC	Y	
110	MinQty	Displaying the minimum quantity of an order to be executed acting as an MAQ within UBS MTF	N	The value placed in tag 110 must be either null or set to a quantity that is either equal or less than the order quantity (tag 38)
9004	Internalization	Provides matching instructions	N	If present, Value = 4 (Do not execute against own orders). See section 2.5.
	<i>Standard Trailer</i>		Y	

3.5 Order Cancel Request

Fix Tag	Field Name	Description	UBS Req'd	UBS MTF Specific Values Currently Supported
	<i>Standard Header</i>		Y	MsgType = F
11	ClOrdID	Unique identifier of cancel request as assigned by institution	Y	
41	OrigClOrdID	ClOrdID of the originating order	Y	
55	Symbol	As sent on the originating order	Y	
54	Side	As sent on the originating order	Y	
60	TransactTime	Time the cancel request was initiated	Y	
	<i>Standard Trailer</i>		Y	

3.6 Order Cancel Reject

Fix Tag	Field Name	Description	UBS Req'd	UBS MTF Specific Values Currently Supported
	<i>Standard Header</i>		Y	MsgType = 9
11	ClOrdID	ClOrdID as assigned by the order cancel or replace request	Y	
41	OrigClOrdID	As sent on the originating order	Y	

37	OrderID		Y	
39	OrdStatus		Y	
	<i>Standard Trailer</i>		Y	

3.7 Don't Know Trade (DK)

Fix Tag	Field Name	Description	UBS Req'd	UBS MTF Specific Values Currently Supported
	<i>Standard Header</i>		Y	MsgType = Q
37	OrderID		Y	
17	ExecID	Execution ID of the problem execution	Y	
127	DKReason		Y	
55	Symbol	As sent on the originating order	Y	
54	Side	As sent on the originating order	Y	
38	OrderQty	As sent on the originating order	N	
32	LastShares	Required if specified on the execution report	N	
31	LastPx	Required if specified on the execution report	N	
	<i>Standard Trailer</i>		Y	

3.8 Order Rejection Codes

The following Rejection Codes will be sent back to Members in specific circumstances:

Code	Description
XE001	System is not enabled
XE002	Market is not open
XE003	Order is not eligible for trading
XE004	Order is not eligible for crossing
XE006	Instrument is not open
XE007	Market manually disabled
XE008	Instrument manually disabled
XE010	Account disabled
XE011	Instrument suspended

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