

SSEOMS

Customer Specification 4.2

MiFID II Extension – Flat Tags

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Disclaimer

The information contained herein was obtained from reliable sources, but Bloomberg does not guaranty its accuracy. Certain information in this report has been derived from the descriptions of Financial Information Exchange Protocol available at www.fixprotocol.org. For more information about the FIX protocol, please visit www.fixprotocol.org.

Introduction

The Bloomberg EMSxNet Fixbook is a comprehensive resource for information related to the application of the FIX protocol for all Bloomberg Electronic Trading platforms. Bloomberg EMSxNet supports FIX versions 4.0, 4.1, and 4.2. This document will cover FIX connectivity specific to the Bloomberg EMSxNet platform and is based on FIX version 4.2.

Audience

The Fixbook is intended for use by business and technical professionals within Bloomberg as well as clients and their third party OMS and FIX vendors. The information in this document should not be disclosed to any person other than the intended recipient or those involved in the integration or evaluation of Bloomberg SSEOMS used for the purpose for which this document is provided.

Network Connectivity

Bloomberg provides electronic trading connectivity "out of the box" for every platform via the Bloomberg market data (Anywhere) network. Clients that wish to utilize FIX protocol messaging must connect to Bloomberg over Private IP Network via dual leased lines and routers, or by provisioning bandwidth through one of the network service providers currently connected to the FIX network. Bloomberg also has the capability to connect via the Bloomberg market data (Anywhere) infrastructure. The following options are currently recommended for FIX connectivity. In all cases individual customer connectivity and bandwidth capacity recommendations are made based on continual automated monitoring as well as evaluation by Bloomberg customer support personnel:

- Dual Leased T1 (2-meg) lines and routers through Bloomberg (US)
- Dual Leased E1 (2-meg) lines and routers through Bloomberg (Europe)
- Dual Leased T1 (2-meg) lines and routers through Bloomberg (Asia)
- Network connectivity through Third Party Network Providers such as: ATR, Bridge IOE, Macgregor, NYFIX, and others for certain Bloomberg® Applications
- Application and Network connectivity through one of the many major FIX vendors certified with the Bloomberg.

Connectivity Requests and Production Issues

REQUESTS	CONTACT INFORMATION
New Requests/ Sales	Bloomberg Sales: Americas: +1 212 318 2000 EMEA: +44 20 7330 7500 Asia Pacific: +81 3 3201 8900
Implementation	Bloomberg Electronic Trading Operations Implementation (ETOI): Americas: +1 212 617 3430 EMEA: +44 20 7330 7500 Asia Pacific: + 81 3 3201 3582
Production Support	Bloomberg Electronic Trading Operations Support (ETOS): Americas: +1 212 617 3430 EMEA: +44 20 7073 3330 Asia Pacific: +81 3 3201 8989

The FIX Certification Process

Bloomberg is one of the only FIX destinations that maintains a global staff of dedicated FIX integration specialists. The Bloomberg test system is available during normal market hours and clients can logon at their discretion during an implementation project. Client requiring their own dedicated BETA SSEOMS Database should contact their Bloomberg Account Manager or SSEOMS Representative.

FIX Certification

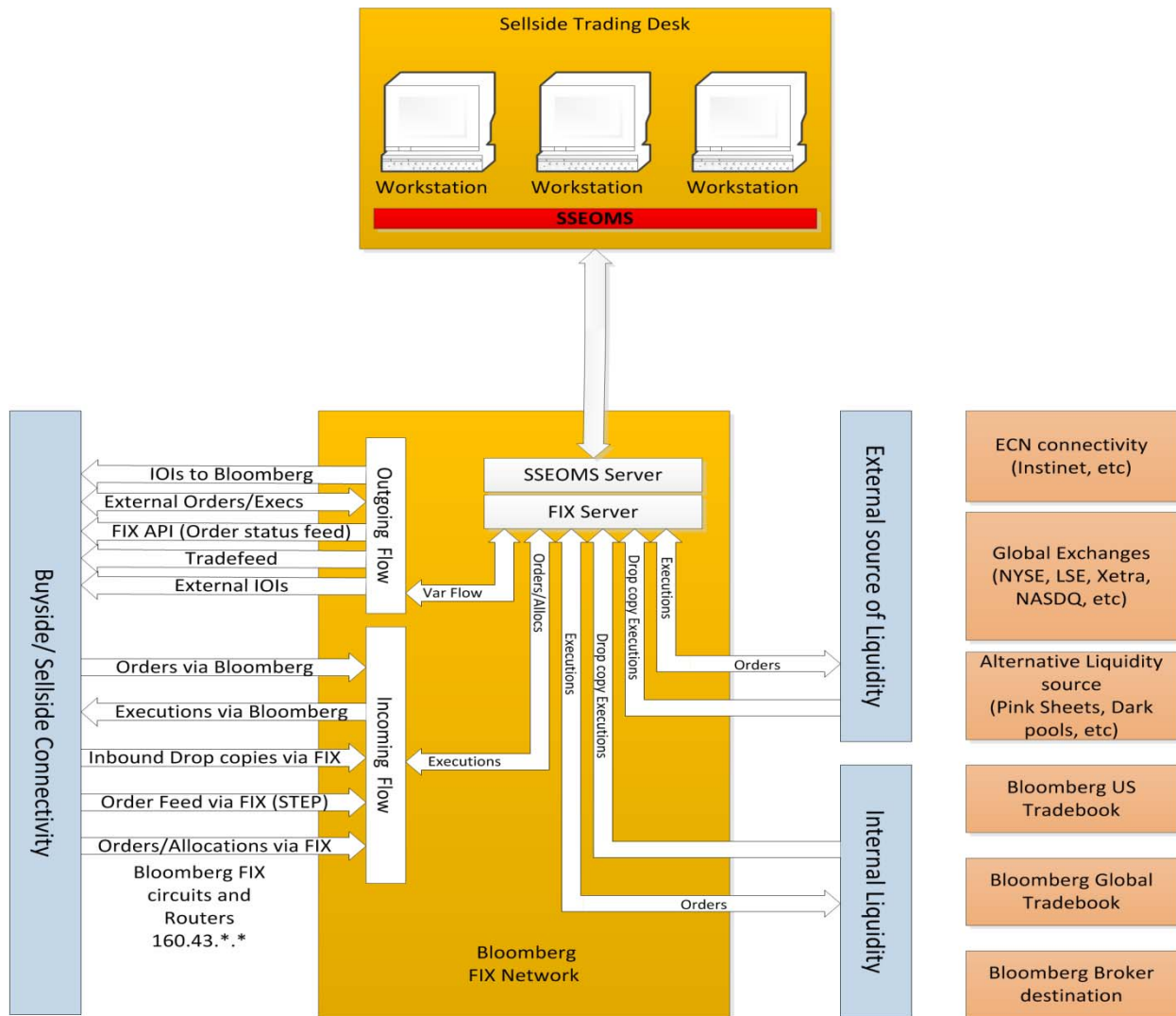
Prospective clients must complete the following requirements:

- **Session Level:** Clients must successfully initiate a FIX connection to the Bloomberg Test server and complete a series of basic session level sequence number tests.
- **Application Level:** Clients must successfully complete a series of application level tests to ensure that all execution reports received from Bloomberg update properly in their front and back end systems.
- **Production Network Connectivity:** Clients are required to successfully telnet from their production server to the Bloomberg production server IP and port **before** they are enabled in production.

- **Post Production Move Test:** Clients are required to initiate a FIX connection to the production servers and complete a test trade with a Bloomberg Electronic Trading Operations representative.

Bloomberg EMSxNet

The Bloomberg FIX Network allows normalized FIX access to clients worldwide to Bloomberg's large broker order routing network. Clients can choose to send in orders using any order entry interface of their choice. FIX protocol version 4.2 is used at the session level for communication. The Bloomberg FIX Network offers support for the Equities and Futures asset classes including associated sell side algorithms. Support for other asset classes will be available in the near future.



Protocol

SSEOMS does not support a formal version of FIX protocol. In general we conform heavily to FIX 4.2, but offer support for Tags that are defined in FIX versions 4.3 - 5.0 on both FIX 4.2 and FIX 4.4 sessions.

FIX Messages

Standard FIX Header

The following list the Standard FIX Header for all Products:

Tag	Field Name	Description	Format	Req
8	BeginString	Identifies the beginning of a new message	String	Y
9	BodyLength	Details the message length	Int	Y
34	MsgSeqNum	Message Sequence Number	Int	Y
35	MsgType	<u>Administrative message types:</u> 0 = Heartbeat 1 = Test Request 2 = Resend Request 3 = Reject 4 = Sequence Reset 5 = Logout A = Logon <u>Application message types:</u> 6 = Indication of Interest 7 = Advertisement 8 = Execution Report 9 = Order Cancel Reject D = Single Order E = Order - List F = Order Cancel Request G = Order Cancel/Replace Request J = Allocation P = Allocation ACK Q = Don't know Trade (DK) j = Business Message Reject	Char	Y
49	SenderCompID	Identifies the Firm sending the message	String	Y
50	SenderSubID	Identify specific message originator	String(9)	Y
52	SendingTime	Time of message expressed in GMT Time (GMT) YYYYMMDD-	UTC timestamp	Y

		HH:MM:SSssssss		
56	TargetCompID	Identifies receiving firm	String	Y
57	TargetSubID	Assigned value used to identify specific individual or unit intended to receive message	String(9)	N
115	OnBehalfOfCompID	Identifies the trading partner Company/Firm when delivering messages via a third party	String(10)	N
116	OnBehalfOfSubID	Identifies the trading partner SubID used when delivering messages via a third party.	String(9)	N
128	DeliverToCompID	Identifies the firm targeted to receive the message if the message is delivered by a third party	String(20)	N
129	DeliverToSubID	Identifies specific message recipient (ie. Trader) if delivered by a third party	String(20)	N

Standard FIX Trailer

The following list the Standard FIX Trailer for all Products:

Tag	Field Name	Description	Format	Req
10	Checksum	Simple Checksum	Int	Y

Order Protocol – OMS to Gateway

Buy-Side/Sell-Side Order Entry - New Order (35=D)

The following lists the body of the FIX message sent for New Order entries to Bloomberg SSEOMS. Note: the Bloomberg ETOI project manager will negotiate the tag that the trade contra will be received in for every connection request.

New Order Single (35=D)

The following lists the body of the FIX message sent for New Order entries to Bloomberg SSEOMS. **Note: the Bloomberg ETOI project manager will work to determine the Contra tag which will be used for Counterparty Identification.**

Definition of Messages

Tag	Field Name	Description	Format	Req
	Standard Header	Message Type (35=D)		Y
1	Account	Customer Account. Can be used as the Contra tag. Note – If this tag is being used for counterparty identification the value must be an Account within SSEOMS	String (10)	N
11	CIOrdID	Client Order ID, unique throughout the life of the order per firm.	String (20)	Y
12	Commission	Commission Amount	Amt	CR
13	CommType	<i>Valid Values:</i> 1 = per shares 2 = percentage 3 = absolute	Char	N
15	Currency	ISO 4217 Currency Code	String(3)	Y
18	ExecInst	<i>Valid Values:</i> 1 = Not Held 2 = Work 3 = Go along 4 = Over the day 5 = Held 6 = Participate don't initiate 7 = Strict scale 8 = Try to scale 9 = Stay on bidside 0 = Stay on offerside A = No cross (cross is forbidden) B = OK to cross C = Call first D = Percent of volume E = Do not increase (DNI) F = Do not reduce (DNR) G = All or non (AON) I = Institutions only N = Non-Negotiable S = Suspend U = Customer Display Instruction X = Trade Along	Multiple Value String(3)	N
21	HandInst	Order instructions for order handling on Broker trading floor. <i>Valid Values:</i>	Char	N

Tag	Field Name	Description	Format	Req
		1 = Automated execution order, private, no broker intervention 2 = Automated execution order, public, broker intervention OK 3 = Manual order, best execution		
22	IDSource	<i>Valid Values:</i> 1 = CUSIP 2 = SEDOL 4 = ISIN Note: Use of Security ID is strongly recommended for effective symbol validation.	Char	N
38	OrderQty	Number of shares ordered.	Qty	Y
40	OrderTyp	<i>Valid Values</i> 1 = Market 2 = Limit 3 = Stop 4 = Stop Limit 5 = Market on close B = Limit on close P = Pegged	Char	Y
44	Price	Price per share	Price	CR
47	Rule80A	<i>Valid Values:</i> A = Agency (AOTC) P = Principal (DEAL) R = Riskless *Cannot be combined with Tag 528	Char	N
48	SecurityID	Security ID of specified ID Source (tag 22) Note – Use of Security ID is strongly recommended for effective symbol validation.	String (13)	CR
50	SenderSubID	Identifies the user sending the message. Note - Value will output to the UserName column in SSEOMS. If the value is a UUID we will translate to the user's login name.	String(9)	Y

Tag	Field Name	Description	Format	Req
52	SendingTime	Time the request was sent expressed in GMT. <i>Valid format:</i> Time (GMT) YYYYMMDD-HH:MM:SSsssss	UTC Time stamp	Y
54	Side	<i>Valid Values:</i> 1 = Buy 2 = Sell 5 = Short Sell 6 = Short Sell Exempt H = Undisclosed Sell	Char	Y
55	Symbol	Ticker Symbol for the order. Note the first 8 characters will be read as the Symbol. Subsequent characters are loaded as an Exchange Code.	String(8)	Y
57	TargetSubID	Can be used to target the SSEOMS Broker destination.	String(9)	N
58	Text	Free form text field	String (60)	N
59	TimeInForce	<i>Valid Values:</i> 0 = Day 1 = Good till cancel (GTC) 2 = At the Opening (OPG) 3 = Immediate or Cancel (IOC) 4 = Fill or Kill (FOK) 6 = Good till Date (GTD) 7 = At the Closing Auction	Char	Y
60	TransactTime	Time request was initiated in GMT. <i>Valid Format:</i> Time (GMT) YYYYMMDD-HH:MM:SSsssss	UTC Time stamp	Y
63	SettlmntTyp	Settlement Type. <i>Valid Values:</i> 0 = Regular 1 = Cash 2 = Next Day 3 = T+2 4 = T+3 5 = T+4 6 = Future (requires Tag 64) 8 = Sellers Option (requires Tag 64)	Char	N

Tag	Field Name	Description	Format	Req
		9 = T+5		
64	FutSettDate	Future Settlement Date. Required when SettMntTyp is Future or Sellers Option. <i>Valid Format:</i> YYYYMMDD	LocalMkt Date	CR
65	SymbolSfx	Additional information about the security eg: Warrants or Preferreds.	String(5)	N
77	OpenClose	O = Open C = Close	char	N
99	StopPx	Stop Price per share	Price	CR
100	ExDestination	Exchange Code of symbol. <i>Valid Values:</i> Bloomberg or Reuters Exchange Codes Note - Sending 100 or 207 is strongly recommended for effective symbol validation.	String(4)	N
109	ClientID	Customer Account. Can be used as the Contra tag. Note – If this tag is being used for counterparty identification the value must be an Account within SSEOMS.	String (10)	N
110	MinQty	Minimum quantity of an order to be executed.	Qty	N
111	MaxFloor	Maximum quantity (number of shares) within an order to be shown on the exchange floor.	Qty	N
114	LocateReqd	Indicates whether the Broker is to locate the stock in conjunction with a short sell order. <i>Valid Values:</i> Y = Yes N = No	Char	CR
115	OnBehalfOfCompID	Identifies the sender when coming from a third party system. Can be used as the Contra tag. Note – If this tag is being used for SSEOMS counterparty identification this must be a 4 digit value which exists as an Account in SSEOMS	String (10)	N
126	ExpireTime	Date and time of order expiration.	UTC	CR

Tag	Field Name	Description	Format	Req
		Required for GTD Orders. <i>Valid Format:</i> Time (GMT) YYYYMMDD-HH:MM:SSsssss	Time stamp	
128	DeliverToComplD	Can be used to target the SSEOMS Broker destination.	String(4)	N
167	SecurityType	Indicates the type of security. <i>Valid Values</i> CS = Common Stock OPT = Options PS = Preferred Stock WAR = Warrant	String(4)	N
200	MaturityMonthYear	Month and Year of the maturity for SecurityType=Opt. Required if MaturityDay is specified. <i>Valid Format:</i> YYYYMM	Month-Year	CR
201	PutOrCall	Indicates whether an Option is for a put or call. <i>Valid Values:</i> 0 = Put 1 = Call	Char	CR
202	StrikePrice	Strike Price for an Option	Price	CR
205	MaturityDay	Day of Month used in conjunction with MaturityMonthYear to specify the maturity date for SecurityType=OPT. <i>Valid Values:</i> 1-31	Day-of-Month	CR
207	SecurityExchange	Exchange Code of symbol. <i>Valid Values:</i> Bloomberg or Reuters Exchange Codes Note - Sending 100 or 207 is strongly recommended for effective symbol validation.	String(4)	N
211	PegDifference	Amount (signed) added to the price of the peg for a pegged order	PriceOffset	N
528	OrderCapacity	Designates the capacity of the firm placing the order. A = Agency P = Principal	Char	C

Tag	Field Name	Description	Format	Req
		R = Riskless Principal W = Agent for Other Member * Cannot be used with Tag 47		
1724	OrderOrigination	Identifies the origin of the order. Valid values: 1 = Order received from a customer 2 = Order received from within the firm 3 = Order received from another broker-dealer 4 = Order received from a customer or originated with the firm 5 = Order received from a direct access or sponsored access customer	Char	N
2704	ExDestinationType	This is used by the client on the order level to instruct the broker where he can trade the order. 0 = No trading venue restriction 1 = Can be traded only on a trading venue 2 = Can be traded only on a Systematic Internaliser (SI) 3 = Can be traded on a trading venue or Systematic Internaliser (SI).	Char	N
5700	LocateBroker	Broker to locate shares on a Short Sell order and 114=Y Conditionally required based on Broker	String(4)	N
5701	LocateID	Broker to locate shares on a Short Sell order and 114=Y Conditionally required based on Broker.	String(4)	N
8015	OrderAttributes	Used to indicate properties of the order being routed to a member or trading venue 0 = Aggregated order (AGGR) 1 = Pending allocation (PNAL) 2 = Liquidity provision 4 = Algorithmic order 5 = Order Came from SI 6 = APA Reporting Flag 7 = Execution Instructed by Client 8 = Large In Scale	Char	N

Tag	Field Name	Description	Format	Req
20001	PartyIDExecutingFirm	Identifies the Executing Firm	String (20)	N
20003	PartyIDClientID	Identifies the Client LEI	String (20)	N
20013	PartyIDOrderOriginationFirm	Identifies the Firm routing the order	String (20)	N
20063	PartyIDSystematicInternaliser	Broker SI	String (MIC)	N
20072	PartyIDReportingIntermediary	Identifies the Reporting APA	String (MIC)	N
20073	PartyIDExecutionVenue	Identifies the Venue of Execution for Transaction Reporting	String (MIC)	N
20122	InvestmentDecisionMaker	Identifies the Investment Decision maker for Transaction Reporting	String(20)	N

Cancel/Replace Request (35=G) – OMS to Gateway

The following lists the body of the FIX message sent for cancel/replace requests:

Definition of Messages

Tag	Field Name	Description	Format	Req
	Standard Header	Message Type (35=G)		
1	Account	Customer Account Note – If this tag is being used for counterparty identification the value must be an Account within SSEOMS	String(10)	N
11	ClOrdID	Client Order ID, unique throughout the life of the order per firm.	String(20)	Y
15	Currency	ISO 4217 Currency Code	String(3)	Y
21	HandInst	Order instructions for order handling on Broker trading floor. <i>Valid Values:</i> 1 = Automated execution order, private, no broker intervention Only supported by SSEOMS 2 = Automated execution order, public,	Char	N

		broker intervention OK 3 = Manual order, best execution		
22	IDSource	<i>Valid Values:</i> 1 = CUSIP 2 = SEDOL 4 = ISIN Note – Use of Security ID is strongly recommended for effective symbol validation.	Char	N
37	OrderID	Unique Order Identifier assigned by the SSEOMS Broker.	String(20)	Y
38	OrderQty	Number of shares ordered.	Qty	Y
40	OrderTyp	<i>Valid Values:</i> 1 = Market 2 = Limit 3 = Stop 4 = Stop Limit 5 = Market on close B = Limit on close P = Pegged	Char	Y
41	OrigClOrdID	ClOrdID of the previous non rejected order. Not necessarily the first client order ID of the day.	String(20)	Y
44	Price	Price per share	Price	N
48	SecurityID	Security ID of specified ID Source (tag 22) Note – Use of Security ID is strongly recommended for effective symbol validation.	String(13)	CR
50	SenderSubID	Action user on Replace Event	String(9)	N
52	SendingTime	Time the request was sent expressed in GMT. <i>Valid format:</i> Time (GMT) YYYYMMDD-HH:MM:SSsssss	UTC Timestamp	Y
54	Side	<i>Valid Values</i> 1 = Buy 2 = Sell 5 = Short Sell 6 = Short Sell Exempt	Char	Y

		H = Undisclosed Sell		
58	Text	Free form text field	String(60)	N
59	TimeInForce	<p><i>Valid Values:</i></p> <p>0 = Day 1 = Good till cancel (GTC) 2 = At the Opening (OPG) 3 = Immediate or Cancel (IOC) 4 = Fill or Kill (FOK) 6 = Good till Date (GTD) 7 = At the Closing Auction</p>	Char	Y
60	TransactTime	<p>Time request was initiated in GMT. <i>Valid Format:</i></p> <p>Time (GMT) YYYYMMDD-HH:MM:SSssssss</p>	UTC Timestamp	Y
77	OpenClose	O = Open C = Close	char	N
99	StopPx	Stop Price per share.	Price	CR
100	ExDestination	<p>Exchange Code of symbol. <i>Valid Values:</i></p> <p>Bloomberg or Reuters Exchange Codes</p> <p>Note - Sending 100 or 207 is strongly recommended for effective symbol validation.</p>	String(4)	N
109	ClientID	<p>Customer Account. Can be used as the Contra tag.</p> <p>Note –If this tag is being used for counterparty identification the value must be an Account within SSEOMS</p>	String(10)	N
110	MinQty	Minimum quantity of an order to be executed.	Qty	N
111	MaxFloor	Maximum quantity (number of shares) within an order to be shown on the exchange floor.	Qty	N
115	OnBehalfOfCompanyId	<p>Identifies the sender when coming from a third party system. Can be used for Customer Account</p> <p>Note –If this tag is being used for counterparty identification the value must be an Account within SSEOMS</p>	String(4)	N
126	ExpireTime	Date and time of order expiration.	UTC Time	Y

		Required for GTD Orders. <i>Format:</i> Time (GMT) YYYYMMDD- HH:MM:SSssssss	stamp	
128	DeliverToCompl D	Can be used to target the SSEOMS Broker destination.	String(4)	N
167	SecurityType	Indicates the type of security. <i>Valid Values</i> CS = Common Stock OPT = Options PS = Preferred Stock WAR = Warrant	String(4)	N
200	MaturityMonthY ear	Month and Year of the maturity for SecurityType=Opt. Required if MaturityDay is specified. <i>Valid Format:</i> YYYYMM	Month- Year	CR
201	PutOrCall	Indicates whether an Option is for a put or call. <i>Valid Values:</i> 0 = Put 1 = Call	Char	CR
202	StrikePrice	Strike Price for an Option	Price	CR
205	MaturityDay	Day of Month used in conjunction with MaturtyMonthYear to specify the maturity date for SecurityType=OPT. <i>Valid Values:</i> 1-31	Day-of- Month	CR
207	SecurityExchan ge	Exchange Code of symbol. <i>Valid Values:</i> Bloomberg or Reuters Exchange Codes Note - Sending 100 or 207 is strongly recommended for effective symbol validation.	String(4)	N
211	PegDifference	Amount (signed) added to the price of the peg for a pegged order	PriceOffS et	N
2704	ExDestinationT ype	This is used by the client on the order level to instruct the broker where he can trade the order. 0 = No trading venue restriction 1 = Can be traded only on a trading	Char	N

		venue 2 = Can be traded only on a Systematic Internaliser (SI) 3 = Can be traded on a trading venue or Systematic Internaliser (SI).		
8015	OrderAttributes	Used to indicate properties of the order being routed to a member or trading venue 0 = Aggregated order (AGGR) 1 = Pending allocation (PNAL) 2 = Liquidity provision 4 = Algorithmic order 5 = Order Came from SI 6 = APA Reporting Flag 7 = Execution Instructed by Client 8 = Large In Scale	Char	N
5700	LocateBroker	Broker to locate shares on a Short Sell order and 114=Y Conditionally required based on Broker	String(4)	N
5701	LocateID	Broker to locate shares on a Short Sell order and 114=Y Conditionally required based on Broker.	String(4)	N
20001	PartyIDExecutingFirm	Identifies the Executing Firm	String (20)	N
20003	PartyIDClientID	Identifies the Client LEI	String (20)	N
20013	PartyIDOrderOriginationFirm	Identifies the Firm routing the order	String (20)	N
20063	PartyIDSystematicInternaliser	Broker SI	String (MIC)	N
20072	PartyIDReportingIntermediary	Identifies the Reporting APA	String (MIC)	N
20073	PartyIDExecutionVenue	Identifies the Venue of Execution for Transaction Reporting	String (MIC)	N
20122	InvestmentDecisionMaker	Identifies the Investment Decision maker for Transaction Reporting	String(20)	N

Cancel Request (35=F) – OMS to Gateway

The following lists the body of the FIX message sent for cancel requests:

Definition of Messages

Tag	Field Name	Description	Format	Req
	Standard Header	Message Type (35=F)		
1	Account	Customer Account Note – If this tag is being used for counterparty identification the value must be an Account within SSEOMS	String (10)	N
11	ClOrdID	Client Order ID, unique throughout the life of the order per firm.	String (20)	Y
22	IDSource	<i>Valid Values:</i> 1 = CUSIP 2 = SEDOL 4 = ISIN Note – Use of Security ID is strongly recommended for effective symbol validation.	Char	N
37	OrderID	Unique Order Identifier assigned by the SSEOMS Broker.	String (20)	Y
38	OrderQty	Number of Shares of the Order	Qty	Y
41	OrigClOrdID	ClOrdID of the previous non rejected order. Not necessarily the first client order ID of the day.	String (20)	Y
44	Price	Price per share	Price	CR
48	SecurityID	Security ID of specified IDSource (Tag 22) Note – Use of Security ID is strongly recommended for effective symbol validation.	String (13)	CR
50	SenderSubID	Action User of Cancel Event	String (10)	N
52	SendingTime	Time the request was sent expressed in GMT. <i>Valid format:</i> Time (GMT) YYYYMMDD-HH:MM:SSsssss	UTC Time stamp	Y
54	Side	<i>Valid Values:</i>	Char	Y

		1 = Buy 2 = Sell 5 = Short Sell 6 = Short Sell Exempt H = Undisclosed Sell		
58	Text	Free form text field	String (60)	N
59	TimeInForce	<i>Valid Values:</i> 0 = Day 1 = Good till cancel (GTC) 2 = At the Opening (OPG) 3 = Immediate or Cancel (IOC) 4 = Fill or Kill (FOK) 6 = Good till Date (GTD) 7 = At the Closing Auction	Char	Y
60	TransactTime	Time request was initiated in GMT. <i>Valid Format:</i> Time (GMT) YYYYMMDD-HH:MM:SSsssss	UTC Time stamp	Y
109	ClientID	Client Account Identifier Note –If this tag is being used for counterparty identification the value must be an Account within SSEOMS	String (10)	N
111	MaxFloor	Maximum quantity (number of shares) within an order to be shown on the exchange floor at any given time.	Qty	N
115	OnBehalfOfCompID	Identifies the sender when coming from a third party system. Note –If this tag is being used for counterparty identification the value must be an Account within SSEOMS.	String(10)	CR
128	DeliverToCompID	Can be used to target the SSEOMS Broker destination.	String(4)	N
207	SecurityExchange	Exchange code of symbol Note - Sending 100 or 207 is strongly recommended for effective symbol validation.	String(4)	N
20001	PartyIDExecutingFirm	Identifies the Executing Firm	String (20)	N
20003	PartyIDClientID	Identifies the Client LEI	String (20)	N

20013	PartyIDOrderOriginationFirm	Identifies the Firm routing the order	String (20)	N
20063	PartyIDSystematicInternaliser	Broker SI	String (MIC)	N
20072	PartyIDReportingIntermediary	Identifies the Reporting APA	String (MIC)	N
20073	PartyIDExecutionVenue	Identifies the Venue of Execution for Transaction Reporting	String (MIC)	N

Order Protocol – Gateway to OMS

Execution Report (solicited) (35=8)

The following lists the body of the FIX message received for execution reports to SSEOMS:

Definition of Messages

Tag	Field Name	Description	Format	Sent
	Standard Header	Message Type (35=8)		
1	Account	Customer Account	String(10)	Y
6	AvgPx	Calculated average price of all fills on this order	Price	Y
11	ClientOrderID	Client Order ID, unique throughout the life of the order per firm.	String(20)	Y
14	CumQty	Total quantity filled	Qty	Y
15	Currency	ISO 4217 Currency Code	String(3)	Y
17	ExecID	Unique identifier of execution message as assigned by external party.	String(20)	Y
18	ExecInst	Valid Values: 1 = Not Held 2 = Work 3 = Go along 4 = Over the day 5 = Held 6 = Participate don't initiate 7 = Strict scale 8 = Try to scale 9 = Stay on bidside	Multiple Value String(3)	N

		<p>0 = Stay on offerside A = No cross (cross is forbidden) B = OK to cross C = Call first D = Percent of volume E = Do not increase (DNI) F = Do not reduce (DNR) G = All or non (AON) I = Institutions only N = Non-Negotiable S = Suspend U = Customer Display Instruction X = Trade Along</p>		
19	ExecRefID	Required for Trade Cancel and Trade Correct. References the value sent in tag 17 of the original trade.	String(20)	N
20	ExecTransType	<p><i>Valid Values</i></p> <p>0 = New 1 = Cancel 2 = Correct 3 = Status</p>	Char	Y
21	HandInst	<p>Order instructions for order handling on Broker trading floor. <i>Valid Values:</i></p> <p>1 = Automated execution order, private, no broker intervention 2 = Automated execution order, public, broker intervention OK 3 = Manual order, best execution</p>	Char	N
22	IDSource	<p><i>Valid Values:</i></p> <p>1 = CUSIP 2 = SEDOL 4 = ISIN</p> <p>Note – Use of Security ID is strongly recommended for effective symbol validation.</p>	Char	N
29	LastCapacity	<p>1 - Agent (AOTC) 2 - Cross as agent (AOTC) 3 - Cross as principal (MTCH) 4 - Principal (DEAL) 5 - Riskless principal (DEAL)*</p>	Char	N
30	LastMkt	Market of execution for last fill	String	N

		Standard FIX Values or ISO MIC code		
31	LastPx	Price of this (last) fill. Required if ExecType = Trade or Trade Correct	Price	Y
32	LastQty	Quantity bought/sold this (last) fill. Required if ExecType=Trade or Trade Correct	Qty	Y
37	OrderID	Unique Order Identifier assigned by the SSEOMS Broker.	String(20)	Y
38	OrderQty	Number of Shares of the Order	Qty	Y
39	OrdStatus	<p><i>Valid Values:</i></p> <p>0 = New 1 = Partial Fill 2 = Filled 3 = Done for Day 4 = Canceled 5 = Replaced 6 = Pending Cancel 8 = Rejected B = Calculated E = Pending Replace</p>	Char	Y
40	OrderTyp	<p><i>Valid Values:</i></p> <p>1 = Market 2 = Limit 3 = Stop 4 = Stop Limit</p>	Char	Y
44	Price	Price per share	Price	N
48	SecurityID	<p>Security ID of specified IDSource</p> <p>Note – Use of Security ID is strongly recommended for effective symbol validation.</p>	String(13)	CR
50	SenderSubID	User associated with the Order	String(10)	Y
52	SendingTime	<p>Time the request was sent expressed in GMT. <i>Valid format:</i></p> <p>Time (GMT) YYYYMMDD-HH:MM:SSsssss</p>	UTC Time stamp	N
54	Side	<p><i>Valid Values</i></p> <p>1 = Buy 2 = Sell 5 = Short Sell</p>	Char	Y

		6 = Short Sell Exempt H = Undisclosed Sell		
58	Text	Free form text field	String(60)	N
59	TimeInForce	<i>Valid Values:</i> 0 = Day 1 = Good till cancel (GTC) 2 = At the Opening (OPG) 3 = Immediate or Cancel (IOC) 4 = Fill or Kill (FOK) 6 = Good till Date (GTD) 7 = At the Closing Auction	Char	N
60	TransactTime	Time request was initiated in GMT. Format: Time (GMT) YYYYMMDD-HH:MM:SSsssss	UTC Time stamp	N
75	TradeDate	Indicates date of trade referenced in message. Format: YYYYMMDD	LocalMkt Date	N
99	StopPx	Stop Price per share	Price	CR
126	ExpireTime	Date and time of order expiration. Required for GTD Orders. <i>Format:</i> Time (GMT) YYYYMMDD-HH:MM:SSsssss	UTC Time stamp	N
Beginning of MiscFee Repeating Group				
136	NoMiscFees	Number of repeating groups of miscellaneous fees	Int	N
137	→ MiscFeeAmt	Miscellaneous fee value	Amt	N
138	→ MiscFeeCurr	Currency of miscellaneous fee	String(3)	N
139	→ MiscFeeType	Indicates type of miscellaneous fee	Char	N
End of MiscFee Repeating Group				
150	ExecType	<i>Valid Values:</i> 0 = New 1 = Partial Fill 2 = Filled 3 = Done for Day 4 = Canceled	Char	Y

		5 = Replaced 6 = Pending Cancel/Replace 8 = Rejected D = Restated E = Pending Replace		
151	LeavesQty	Quantity open for further execution	Qty	Y
574	MatchType	Used where the Broker is acting as an SI for the given instrument 9 = Systematic Internaliser	Char	N
828	TrdType	Defines Type of Trade 2 = EFP (Exchange for physical) 65 = Package trade	Int	N
829	TrdSubType	Further qualification to the trade type 37 = Crossed Trade	Int	N
851	LastLiquidityInd	Indicator to identify whether this fill was a result of a liquidity provider providing or liquidity taker taking the liquidity. Valid values: 1 – Added Liquidity 2 – Removed Liquidity 3 – Liquidity Routed Out 4 – Auction 5 – Triggered stop order 6 – Triggered contingency order 7 – Triggered market order	Int	N
855	SecondaryTrdType	Additional TrdType (828) assigned to a trade by trade match system 64 = BENC	Int	N
1724	OrderOrigination	5 (order received from a direct access or sponsored access customer)	Char	N
2524	TradeReportingIndicator	0 = Trade has not (yet) been reported 1 = Trade has or will be reported by a trading venue as an "on-book" trade 2 = Trade has or will be reported as a "systematic internaliser" seller trade 3 = Trade has or will be reported as a "systematic internaliser" buyer trade 4 = Trade has or will be reported as a "non-systematic internaliser" seller trader	Int	N

		5 = Trade has or will be reported under a sub-delegation arrangement by an investment firm to a reporting facility (e.g. APA) on behalf of another investment firm		
2667	Algorithmic Trade Indicator	0 = No algorithm was involved 1 = The trade was an algorithmic trade	Char	N
8013	Waiver Flags	Supports multiple space delimited values 0 = NLIQ 1 = OLIQ 2 = PRIC 3 = RFPT 4 = ILQD 5 = SIZE - Above market standard size 6 = LRGS - Deferral 7 = ILQD 8 = SIZE - Specific to the instrument 9 = LRGS – No Price or Size	String	N
8014	OTC Flags	Supports multiple space delimited values 13 = Special Dividend (SDIV) 14 = Price Improvement (RPRI) 16 = Trade Exempted (TNCP) 17 = Price is pending 18 = Price is not applicable	String	N
8015	OrderAttributeType	Used to indicate properties of the order being routed to a member or trading venue. This Field supports multiple space separated values 0 = Aggregated order (AGGR) 1 = Pending allocation (PNAL) 2 = Liquidity provision 4 = Algorithmic order 5 = Order Came from SI 6 = APA Reporting Flag 7 = Execution Instructed by Client 8 = Large In Scale	Char	N
20001	PartyIDExecutingFirm	Identifies the Executing Firm	String	N
20003	PartyIDClientID	Identifies the Client LEI	String	N
20013	PartyIDOrderOriginationFirm	Identifies the Firm routing the order	String	N
20063	PartyIDSystemat	Broker SI	String	N

	icInternaliser		(MIC)	
20072	PartyIDReportingIntermediary	Identifies the Reporting APA	String (MIC)	N
20073	PartyIDExecutionVenue	Identifies the Venue of Execution for Transaction Reporting	String (MIC)	N

Cancel/Replace Reject (35=9) – OMS to Gateway

The following lists the body of the FIX message sent for Cancel Rejections from the Gateway to the OMS.

Definition of Messages

Tag	Field Name	Description	Format	Req
	Standard Header	Message Type (35=9)		
11	ClientOrderID	Client Order ID, unique throughout the life of the order per firm.	String(20)	Y
37	OrderID	Unique Order Identifier assigned by the SSEOMS Broker.	String(20)	Y
39	OrdStatus	<i>Valid Values:</i> 0 = New 1 = Partial Fill 2 = Filled 3 = Done for Day 4 = Canceled 5 = Replaced 6 = Pending Cancel 8 = Rejected E = Pending Replace	Char	Y
41	OrigClOrdID	ClientOrdID of the previous non-rejected order	String(20)	Y
50	SenderSubID	User associated with the Order	String(9)	Y
58	Text	Free form text field	String(60)	Y
60	TransactTime	Time request was initiated in GMT. <i>Valid Format:</i> Time (GMT) YYYYMMDD-HH:MM:SSsssss	UTC Time Stamp	N
150	ExecType	<i>Valid Values:</i> 0 = New	Char	Y

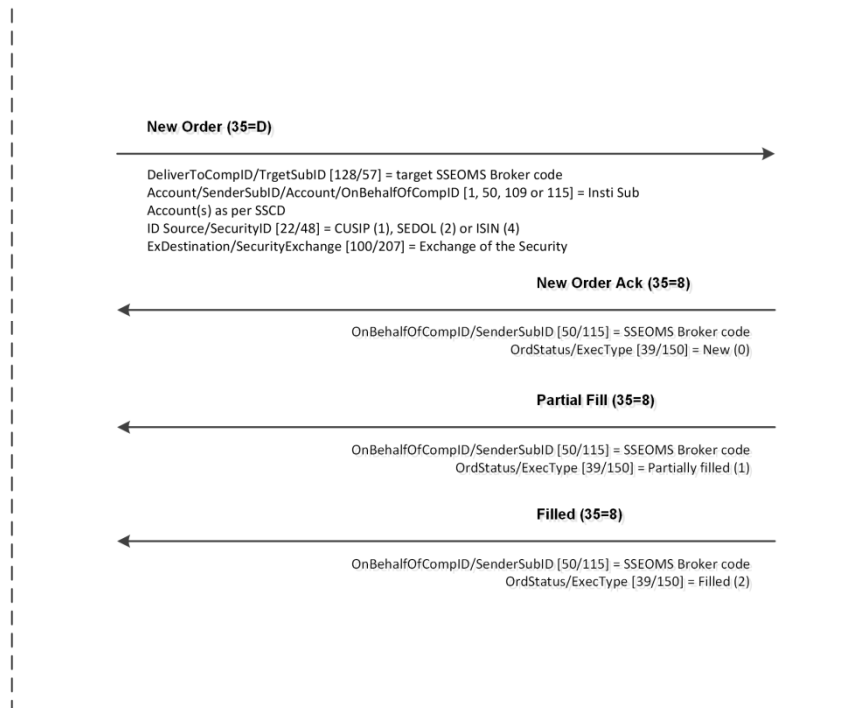
		1 = Partial Fill 2 = Filled 3 = Done for Day 4 = Canceled 5 = Replaced 6 = Pending Cancel/Replace 8 = Rejected D = Restated E = Pending Replace		
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Order Protocol - Example Message Flows

OMS

New order into SSEOMS - ack'd – Fill

SSEOMS



OMS

New order into SSEOMS - ack'd – Cancel/Replace

SSEOMS

New Order (35=D)

DeliverToCompID/TrgetSubID [128/57] = target SSEOMS Broker code
 Account/SenderSubID/Account/OnBehalfOfCompID [1, 50, 109 or 115] = Insti Sub
 Account(s) as per SSCD
 ID Source/SecurityID [22/48] = CUSIP (1), SEDOL (2) or ISIN (4)
 ExDestination/SecurityExchange [100/207] = Exchange of the Security

New Order Ack (35=8)

OnBehalfOfCompID/SenderSubID [50/115] = SSEOMS Broker code
 OrdStatus/ExecType [39/150] = New (0)

Replace Request (35=G)

DeliverToCompID/TrgetSubID [128/57] = target SSEOMS Broker code
 Account/SenderSubID/Account/OnBehalfOfCompID [1, 50, 109 or 115] = Insti Sub
 Account(s) as per SSCD
 ID Source/SecurityID [22/48] = CUSIP (1), SEDOL (2) or ISIN (4)
 ExDestination/SecurityExchange [100/207] = Exchange of the Security

Pending Replace (35=8)

OnBehalfOfCompID/SenderSubID [50/115] = SSEOMS Broker code
 OrdStatus/ExecType [39/150] = Pending Replace (E)

Replaced (35=8)

OnBehalfOfCompID/SenderSubID [50/115] = SSEOMS Broker code
 OrdStatus/ExecType [39/150] = Replace (5)

OMS

New order into SSEOMS - ack'd – Cancel

SSEOMS

New Order (35=D)

DeliverToCompID/TrgetSubID [128/57] = target SSEOMS Broker code
 Account/SenderSubID/Account/OnBehalfOfCompID [1, 50, 109 or 115] = Insti Sub
 Account(s) as per SSCD
 ID Source/SecurityID [22/48] = CUSIP (1), SEDOL (2) or ISIN (4)
 ExDestination/SecurityExchange [100/207] = Exchange of the Security

New Order Ack (35=8)

OnBehalfOfCompID/SenderSubID [50/115] = SSEOMS Broker code
 OrdStatus/ExecType [39/150] = New (0)

Cancel Request (35=F)

DeliverToCompID/TrgetSubID [128/57] = target SSEOMS Broker code
 Account/SenderSubID/Account/OnBehalfOfCompID [1, 50, 109 or 115] = Insti Sub
 Account(s) as per SSCD
 ID Source/SecurityID [22/48] = CUSIP (1), SEDOL (2) or ISIN (4)
 ExDestination/SecurityExchange [100/207] = Exchange of the Security

Pending Cancel (35=8)

OnBehalfOfCompID/SenderSubID [50/115] = SSEOMS Broker code
 OrdStatus/ExecType [39/150] = Pending Cancel (6)

Canceled (35=8)

OnBehalfOfCompID/SenderSubID [50/115] = SSEOMS Broker code
 OrdStatus/ExecType [39/150] = Canceled (4)

External Trade Protocol – OMS to SSEOMS

Trade Drop Copy to SSEOMS - Unsolicited (35=8)

The following lists the specifications for the Body of the FIX tags that SSEOMS expects for Unsolicited Execution Reports from External Sources, referred to as an "Inbound Drop Copy".

Definition of Messages

Tag	Field Name	Description	Format	Sent
	Standard Header	Message Type (35=8)		
1	Account	Customer Account	String(10)	Y
6	AvgPx	Calculated average price of all fills on this order	Price	Y
11	ClientOrderID	Client Order ID, unique throughout the life of the order per firm.	String(20)	Y
14	CumQty	Total quantity filled	Qty	Y
15	Currency	ISO 4217 Currency Code	String(3)	Y
17	ExecID	Unique identifier of execution message as assigned by external party.	String(20)	Y
18	ExecInst	Valid Values: 1 = Not Held 2 = Work 3 = Go along 4 = Over the day 5 = Held 6 = Participate don't initiate 7 = Strict scale 8 = Try to scale 9 = Stay on bidside 0 = Stay on offerside A = No cross (cross is forbidden) B = OK to cross C = Call first D = Percent of volume E = Do not increase (DNI) F = Do not reduce (DNR) G = All or non (AON) I = Institutions only N = Non-Negotiable	Multiple Value String(3)	N

		S = Suspend U = Customer Display Instruction X = Trade Along		
19	ExecRefID	Required for Trade Cancel and Trade Correct. References the value sent in tag 17 of the original trade.	String(20)	N
20	ExecTransType	<i>Valid Values</i> 0 = New 1 = Cancel 2 = Correct 3 = Status	Char	Y
21	HandInst	Order instructions for order handling on Broker trading floor. <i>Valid Values:</i> 1 = Automated execution order, private, no broker intervention 2 = Automated execution order, public, broker intervention OK 3 = Manual order, best execution	Char	N
22	IDSource	<i>Valid Values:</i> 1 = CUSIP 2 = SEDOL 4 = ISIN Note – Use of Security ID is strongly recommended for effective symbol validation.	Char	N
29	LastCapacity	1 - Agent (AOTC) 2 - Cross as agent (AOTC) 3 - Cross as principal (MTCH) 4 - Principal (DEAL) 5 - Riskless principal (DEAL)*	Char	N
30	LastMkt	Market of execution for last fill Standard FIX Values or ISO MIC code	String	N
31	LastPx	Price of this (last) fill. Required if ExecType = Trade or Trade Correct	Price	Y
32	LastQty	Quantity bought/sold this (last) fill. Required if ExecType=Trade or Trade Correct	Qty	Y
37	OrderID	Unique Order Identifier assigned by the SSEOMS Broker.	String(20)	Y
38	OrderQty	Number of Shares of the Order	Qty	Y

39	OrdStatus	<p><i>Valid Values:</i></p> <p>0 = New 1 = Partial Fill 2 = Filled 3 = Done for Day 4 = Canceled 5 = Replaced 6 = Pending Cancel 8 = Rejected B = Calculated E = Pending Replace</p>	Char	Y
40	OrderTyp	<p><i>Valid Values:</i></p> <p>1 = Market 2 = Limit 3 = Stop 4 = Stop Limit</p>	Char	Y
44	Price	Price per share	Price	N
48	SecurityID	<p>Security ID of specified IDSource</p> <p>Note – Use of Security ID is strongly recommended for effective symbol validation.</p>	String(13)	CR
50	SenderSubID	User associated with the Order	String(10)	Y
52	SendingTime	<p>Time the request was sent expressed in GMT. <i>Valid format:</i></p> <p>Time (GMT) YYYYMMDD-HH:MM:SSsssss</p>	UTC Time stamp	N
54	Side	<p><i>Valid Values</i></p> <p>1 = Buy 2 = Sell 5 = Short Sell 6 = Short Sell Exempt</p> <p>H = Undisclosed Sell</p>	Char	Y
58	Text	Free form text field	String(60)	N
59	TimeInForce	<p><i>Valid Values:</i></p> <p>0 = Day 1 = Good till cancel (GTC) 2 = At the Opening (OPG)</p>	Char	N

		3 = Immediate or Cancel (IOC) 4 = Fill or Kill (FOK) 6 = Good till Date (GTD) 7 = At the Closing Auction		
60	TransactTime	Time request was initiated in GMT. Format: Time (GMT) YYYYMMDD- HH:MM:SSssssss	UTC Time stamp	N
75	TradeDate	Indicates date of trade referenced in message. Format: YYYYMMDD	LocalMkt Date	N
99	StopPx	Stop Price per share	Price	CR
126	ExpireTime	Date and time of order expiration. Required for GTD Orders. <i>Format:</i> Time (GMT) YYYYMMDD- HH:MM:SSssssss	UTC Time stamp	N
Beginning of MiscFee Repeating Group				
136	NoMiscFees	Number of repeating groups of miscellaneous fees	Int	N
137	→ MiscFeeAmt	Miscellaneous fee value	Amt	N
138	→ MiscFeeCurr	Currency of miscellaneous fee	String(3)	N
139	→ MiscFeeType	Indicates type of miscellaneous fee	Char	N
End of MiscFee Repeating Group				
150	ExecType	Valid Values: 0 = New 1 = Partial Fill 2 = Filled 3 = Done for Day 4 = Canceled 5 = Replaced 6 = Pending Cancel/Replace 8 = Rejected D = Restated E = Pending Replace	Char	Y
151	LeavesQty	Quantity open for further execution	Qty	Y
574	MatchType	Used where the Broker is acting as an SI for the given instrument 9 = Systematic Internaliser	Char	N

828	TrdType	Valid Values: 2 = EFP (Exchange for physical) 65 = Package trade	Int	N
829	TrdSubType	37 = Crossed Trade	Int	N
855	SecondaryTrdType	64 = BENC	Int	N
851	LastLiquidityInd	Indicator to identify whether this fill was a result of a liquidity provider providing or liquidity taker taking the liquidity. Valid values: 1 - Added Liquidity 2 - Removed Liquidity 3 - Liquidity Routed Out 4 - Auction 5 - Triggered stop order 6 - Triggered contingency order 7 - Triggered market order	Int	N
1724	OrderOrigination	5 (order received from a direct access or sponsored access customer)	Char	N
2524	TradeReportingIndicator	0 = Trade has not (yet) been reported 1 = Trade has or will be reported by a trading venue as an "on-book" trade 2 = Trade has or will be reported as a "systematic internaliser" seller trade 3 = Trade has or will be reported as a "systematic internaliser" buyer trade 4 = Trade has or will be reported as a "non-systematic internaliser" seller trader 5 = Trade has or will be reported under a sub-delegation arrangement by an investment firm to a reporting facility (e.g. APA) on behalf of another investment firm	Int	N
2667	Algorithmic Trade Indicator	0 = No algorithm was involved 1 = The trade was an algorithmic trade	Char	N
8013	Waiver Flags	Supports multiple space delimited values 0 = NLIQ 1 = OLIQ 2 = PRIC 3 = RFPT 4 = ILQD	String	N

		<p>5 = SIZE - Above market standard size 6 = LRGS - Deferral 7 = ILQD 8 = SIZE - Specific to the instrument 9 = LRGS – No Price or Size</p>		
8014	OTC Flags	<p>Supports multiple space delimited values</p> <p>13 = Special Dividend (SDIV) 14 = Price Improvement (RPRI) 16 = Trade Exempted (TNCP) 17 = Price is pending 18 = Price is not applicable</p>	String	N
8015	OrderAttributeType	<p>Used to indicate properties of the order being routed to a member or trading venue</p> <p>0 = Aggregated order (AGGR) 1 = Pending allocation (PNAL) 2 = Liquidity provision 4 = Algorithmic order 5 = Order Came from SI 6 = APA Reporting Flag 7 = Execution Instructed by Client 8 = Large In Scale</p>	Char	N
20001	PartyIDExecutingFirm	Identifies the Executing Firm	String (20)	N
20003	PartyIDClientID	Identifies the Client LEI	String (20)	N
20013	PartyIDOrderOriginationFirm	Identifies the Firm routing the order	String (20)	N
20063	PartyIDSystematicInternaliser	Broker SI	String (MIC)	N
20072	PartyIDReportingIntermediary	Identifies the Reporting APA	String (MIC)	N

External Trade Protocol - Example Message Flows

OMS

External Trade (“Drop Copy”) Inbound to SSEOMS

SSEOMS

External Trade – New “Drop Copy” Partial Fill (35=8, 150=1, 20=0)

DeliverToCompID/TargetSubID [128/57] = Target SSEOMS Broker-Code
 DeliverToSubID/SenderSubID [129/50] = BrokerSubID used for internal SSEOMS Book routing (Optional)
 ExecBroker/OnBehalfOfCompID [76/115] = Executing Broker AccountID from (SSCD<go>)
 ExecType [150] = 1 (PartialFill)
 ExecTransType[20]=0 (New)

External Trade - Cancellation (“Bust”) (35=8, 150=1, 20=1)

DeliverToCompID/TargetSubID [128/57] = Target SSEOMS Broker-Code
 DeliverToSubID/SenderSubID [129/50] = BrokerSubID used for internal SSEOMS Book routing (Optional)
 ExecBroker/OnBehalfOfCompID [76/115] = Executing Broker AccountID from (SSCD<go>)
 ExecType [150] = 1 (PartialFill)
 ExecTransType[20]=1 (Cancel)
 ExecRefID [19] = OriginalTag17 from Exec being Canceled/Busted

External Trade – New “Drop Copy” Partial Fill (35=8, 150=1, 20=0)

DeliverToCompID/TargetSubID [128/57] = Target SSEOMS Broker-Code
 DeliverToSubID/SenderSubID [129/50] = BrokerSubID used for internal SSEOMS Book routing (Optional)
 ExecBroker/OnBehalfOfCompID [76/115] = Executing Broker AccountID from (SSCD<go>)
 ExecType [150] = 1 (PartialFill)
 ExecTransType[20]=0 (New)

External Trade - Correction (35=8, 150=1, 20=1)

DeliverToCompID/TargetSubID [128/57] = Target SSEOMS Broker-Code
 DeliverToSubID/SenderSubID [129/50] = BrokerSubID used for internal SSEOMS Book routing (Optional)
 ExecBroker/OnBehalfOfCompID [76/115] = Executing Broker AccountID from (SSCD<go>)
 ExecType [150] = 1 (PartialFill)
 ExecTransType[20]=2 (Correct)
 ExecRefID [19] = OriginalTag17 from Exec being Corrected/Replaced

Post Trade Allocations Protocol - OMS to SSEOMS

Inbound Allocation Report (35=J)

The following lists the specifications for the body of the FIX message that SSEOMS can accept for inbound allocation reports. SSEOMS supports 'New' and 'Cancel' allocation messages (without miscellaneous fees) for FIX Versions 4.0-4.2 only.

Definitions of messages

Tag	Field Name	Description	Format	Req
	Standard Header	Message Type (35=J)		
6	AvgPx	Calculated average price of all fills on this order.	Price	Y
15	Currency	Identifies currency used for price	String(3)	Y

22	ID Source	Valid Values: 1 = CUSIP 2 = SEDOL 4 = ISIN Note – Use of Security ID is strongly recommended for effective symbol validation	Char	Y
48	SecurityID	Security ID of specified ID Source (tag 22) Note – Use of Security ID is strongly recommended for effective symbol validation	String(13)	Y
53	Shares	Total Number of Shares to be allocated	Qty	Y
54	Side	Side of order 1 = Buy 2 = Sell 5 = Sell short 6 = Sell short exempt 8 = Cross	Char	Y
55	Symbol	Ticker Symbol	String(8)	Y
58	Text	Free form text The maximum length supported is 150 characters	String(60)	Y
60	TransactTime	Time of execution/order creation (expressed in UTC (Universal Time Coordinated, also known as 'GMT') Time (GMT) YYYYMMDD-HH:MM:SSsssss	UTC Time stamp	Y
63	SettlmntTyp	Settlement Type. Valid Values: 0 = Regular 1 = Cash 2 = Next Day 3 = T+2 4 = T+3 5 = T+4 6 = Future (requires Tag 64) 8 = Sellers Option (requires Tag 64) 9 = T+5	Char	N
64	FutSettDate	Specific date of trade settlement (SettlementDate) in YYYYMMDD format.	Date	N
65	SymbolSfx	Additional information about the security eg: Warrants or Preferreds.	String(5)	N

70	AllocID	Identifier for allocation message, unique for each completed trade	String(20)	Y	
71	AllocTransType	Identifies allocation transaction type. Valid Values: 0 = New 2 = Cancel	Char(1)	Y	
72	RefAllocID	Reference identifier to be used with Cancel messages. It will be the same as AllocID. <i>Note: Required for cancel message only</i>	String (20)	Y	
Beginning of NoOrders Repeating Group					
73	NoOrders	Indicates number of orders to be combined for average pricing and allocation. Note: only tag 73=1 is supported	Char	Y	
11	→	CIOrdID	Unique Identifier for the Order assigned by the buy-side. Should follow the same format as sent on the Order Message	Amt	Y
37	→	OrderID	Unique Identifier for the Order assigned by the broker	String(3)	N
→198		SecondaryOrderID	<i>Secondary Identifier for the Order assigned by the broker</i>	Char	N
End of NoOrders Repeating Group					
75	TradeDate	Indicates date of trade referenced in this message in YYYYMMDD format.	LocalMkt Date	Y	
Beginning of NoAllocs Repeating Group					
78	NoAllocs	Number of repeating AllocAccount/AllocPrice entries.	Char	Y	
79	→	AllocAccount	Sub-account mnemonic The maximum length supported is 39 characters	String(10)	Y
80	→	AllocShares	Number of shares to be allocated to specific sub-account	Qty	Y
Tag		Field Name	Description	Format	Req
81	→	ProcessCode	Processing code for sub-account	Char	N
92	→	BrokerOfCredit	Broker to receive trade credit. <i>Note: If Broker of Credit is received it will not be processed, just displayed.</i>	String(4)	N
→208		NotifyBrokerOfCredit	Indicates whether or not details should be communicated to BrokerOfCredit	Char	N

→209	AllocHandInst	Indicates how the receiver (i.e. third party) of Allocation message should handle/process the account details	Char	N
→161	AllocText	Free format text related to a specific AllocAccount	String(60)	N
76 →	ExecBroker	Identifies executing / give-up broker.	String(4)	N
→109	ClientID	Firm identifier used in third party-transactions.	String(10)	N
12 →	Commission	Commission. Note if CommType is percentage, Commission of 5% should be represented as .05	Amt	N
13 →	CommType	Commission type. Valid Values: 1 = per share 2 = percentage 3 = absolute	Char	N
→154	AllocNetMoney	NetMoney for a specific AllocAccount	Amt	N
→119	SettlCurrAmt	Total amount due expressed in settlement currency	Amt	N
→120	SettlCurrency	SettlCurrency for this AllocAccount if different from 'overall' Currency. Required if SettlCurrAmt is specified.	String(3)	N
→153	AllocAvgPx	Average allocation price should be the same as AvgPx	Price	N
→155	AllocPrice	This field should be applicable only for Japanese clients , which uses the execution price	Price	N
156 →	SettlCurrFxRate	Foreign exchange rate used to compute SettlCurrAmt from Currency to SettlCurrency	Char	N
160 →	SettlCurrFxRateCalc	<i>Valid Values:</i> D : Divide M : Multiply	Char	N
End of NoAllocs Repeating Group				
118	NetMoney	Total amount due as the result of the transaction (e.g. for Buy order - principal + commission + fees) reported in currency of execution.	Amt	N

207	SecurityExchange	Exchange of the Security	String(4)	Y
381	GrossTradeAmt	Total amount traded (e.g. CumQty * AvgPx) expressed in units of currency.	Amt	N

Post Trade Allocations Protocol - SSEOMS to OMS

Allocation Report Acknowledgement (35=P)

The following lists the body of the FIX message received for allocation acknowledgements from SSEOMS:

Definition of Messages

Tag	Field Name	Description	Format	Req
58	Text	Free format text String. Descriptive text message when 87=1	String(60)	N
60	TransactTime	Time of execution/order creation (expressed in UTC (Universal Time Coordinated, also known as 'GMT') Time (GMT) YYYYMMDD-HH:MM:SSssssss	UTC Time stamp	N
70	AllocID	Identifier for allocation message, unique for each completed trade	String(20)	Y
75	TradeDate	Indicates date of trade referenced in this message in YYYYMMDD format.	LocalMkt Date	Y
87	AllocStatus	Indicates type of acknowledgement. <i>Valid Values:</i> 0 = Accepted 1 = Rejected 3 = Received (but not yet processed)	Char	Y
88	AllocRejCode	<i>Valid Values:</i> 7 = Other Note – Required when 87=1	Char	CR

Post Trade Allocations Protocol - Example Message Flows

OMS

New allocation into SSEOMS - ack'd - processed

SSEOMS

New Allocation (35=J)

DeliverToCompID/TrgetSubID [128/57] = target SSEOMS Broker code
 AllocTransType [71] = 0 (New)
 AllocAccount [79] = Insti Sub Account(s) as per SSCD
 AllocShares [80] = Number of shares per AllocAccount

Allocation Instruction ack (35=P)

AllocStatus [87] = 3 received
 (received, not yet processed)

Allocation Instruction ack (35=P)

AllocStatus [87] = 0 accepted
 (successfully processed)

OMS

New allocation into SSEOMS - ack'd - rejected

SSEOMS

New Allocation (35=J)

DeliverToCompID/TrgetSubID [128/57] = target SSEOMS Broker code
 AllocTransType [71] = 0 (New)
 AllocAccount [79] = Insti Sub Account(s) as per SSCD
 AllocShares [80] = Number of shares per AllocAccount

Allocation Instruction ack (35=P)

AllocStatus [87] = 3 received
 (received, not yet processed)

Allocation Instruction reject (35=P)

AllocStatus [87] = 1 rejected
 AllocRejCode(88) = 7 other
 Text (58) = Descriptive text
 message for a rejected message

OMS

New allocation into SSEOMS - ack'd - cancelled

SSEOMS

New Allocation (35=J)

DeliverToComplID/TrgetSubID [128/57] = target SSEOMS Broker code
AllocTransType [71] = 0 (New)
AllocAccount [79] = Insti Sub Account(s) as per SSCD
AllocShares [80] = Number of shares per AllocAccount

Allocation Instruction ack (35=P)

AllocStatus [87] = 3 received
(received, not yet processed)

New Allocation (35=J)

DeliverToComplID/TrgetSubID [128/57] = target SSEOMS Broker code
AllocTransType [71] = 2 (Cancel)
RefAllocID [72] = AllocID (70) of allocation to cancel
AllocAccount [79] = Insti Sub Account(s) as per SSCD
AllocShares [80] = Number of shares per AllocAccount

Appendix A – Options

Inbound Options Flow from OMS to SSEOMS is supported for FIX 4.2 only.

The FIX interface supports three methods of symbology for inbound options order or executions. The preferred method of symbol validation can be selected on a per session basis. The three valid methods are:

1. 55=<OCC root symbol>. e.g. 55=MSQ. Tag 200(MaturityMonthYear), 205(MaturityDay), 201(put or call) and 202 (strike) are also required to uniquely identify the option.
2. 55=<OCC root symbol><2-char suffix> (so-called OPRA style). e.g. 55=MSQDE. The first character in the suffix specifies maturity and type, and the 2nd character the strike price. Given that the latter is not accurate enough for the strike price, tag 202 is required.
3. 55=<OCC root symbol>+<2-char suffix> (HYBRID style). e.g. 55=MSQ+DE. The 2-char suffix is the same as described above. Tag 202 is required.

For the letter that specifies the maturity and type in OPRA or hybrid style, follow the following table:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Se p	Oct	Nov	Dec
Puts	M	N	O	P	Q	R	S	T	U	V	W	X
Call s	A	B	C	D	E	F	G	H	I	J	K	L

The letter that specifies the strike price is A-Z.

Note: SSEOMS does not use security IDs to identify options.

Appendix B – Bloomberg Symbology and Exchange Codes

Bloomberg Symbols and Exchanges can be found via either of the following Bloomberg websites:

<http://bsym.bloomberg.com/sym/>

<http://www.bloomberg.com/markets/symbolsearch/>

Note: Bloomberg accepts RIC (Reuters) Exchange mnemonics and will convert them to Bloomberg Exchange Codes.

Appendix C – Identify Security

Symbol Lookup is done in two phases:

1) Identification

- This is accomplished most easily with ID Source and Security ID (Tags 22 and 48 respectively).
- As such SSEOMS **strongly recommends** the use of ID Source and Security ID for effective symbol validation
- In the absence of ID source and Security ID we will attempt to identify the symbol with a combination of 55+65 and 100 or 207. In this case the Symbol in 55 needs to match Bloomberg's security master in order to load.
 - Ex – Symbol VALE/P would need to be sent as 55=VALE/P
 - 55=VALE | 65=P or 55=VALE-P or other variations will lead to *rejects*

2) Validation

- Assuming SSEOMS receives a valid Security ID we will move to validate what was loaded.
- Validation is accomplished most easily with an Exchange Code. We will attempt to lookup an Exchange Code in 3 places:
 - Tag 100, Tag 207 and the 9th and 10th Characters of Tag 55 if present.
- If SSEOMS receives a valid Exchange Code that is associated with the loaded Security ID, then SSEOMS has everything it needs to properly load the Symbol.
- If Exchange Code is not provided, SSEOMS will attempt to validate using the Currency
- If we cannot validate with Currency then the Order will be rejected.