



CHIXOE Interface Specification

Chi-X Australia Trading System

1 March 2020

Published Version 6.2

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System response times may vary for a number of reasons including market conditions, trading volumes and system performance.

VERSION HISTORY

VERSION	DESCRIPTION	DATE
1.0	First Release	04-11-2013
1.1	Key changes: <ul style="list-style-type: none"> • Inserted fields to support short sales 	02-12-2013
1.2	Key changes: <ul style="list-style-type: none"> • Updated reasons for Cancel/Reject Order Acknowledgement messages • Add No Self Trade Order Number, Prevented Trade Price, Prevented Trade Quantity and Prevented Liquidity Indicator to Replace Order Acknowledgement messages 	30-01-2014
1.3	Key Changes <ul style="list-style-type: none"> • Updated the descriptions on the use of Self Trade Prevention 	05-02-2014
1.4	Key Changes <ul style="list-style-type: none"> • Updated descriptions of fields in Add/Replace Order Message and Replace Order Acknowledgement Message in relation to <i>Account</i>, <i>ClientXref</i>, <i>IntermediaryID</i> and <i>OrderOrigin</i>. 	28-03-2014
	Key Changes <ul style="list-style-type: none"> • Updated description of Order Type Replace Order Message 	30-07-2014
3.0	Key Changes <ul style="list-style-type: none"> • Updated descriptions for visible MOC order • Support for MEQ 	13-05-2015
4.0	Key Changes <ul style="list-style-type: none"> • Inserted field into Execution message to support attributed market 	01-07-2015
5.0	Key Changes <ul style="list-style-type: none"> • Support for participant attribution on Chi-X & ASX quoted ETFs 	01-12-2015
5.2p4	Key Changes <ul style="list-style-type: none"> • Support for field Last Market 	08-06-2017
5.5	Key Changes Support for fields: <ul style="list-style-type: none"> • T1Settlement in Order-related messages • Settlement Date in Execution-related message 	30-01-2018
5.6	Key Changes Support for MEQSE (Minimum Execution Quantity Single Execution)	19-06-2018
5.6p2	Key Changes MEQSE Supports Broker Preference	06-12-2018
6.0	Key Changes <ul style="list-style-type: none"> • Added Cancel Trade Message 	22-01-2019
6.2	Key Changes <ul style="list-style-type: none"> • Accepts MOC MEQSE Orders • Removes Visible MOC Support 	09-05-2019

1 Introduction

This document is the Chi-X Order and Execution (“**CHIXOE**”) protocol specification for the order and trade interface between the Chi-X Trading System (“**Trading System**”) and its participants. The trading interface allows participants to submit, replace, and cancel orders as well as receive executions from Trading System. CHIXOE is similar to the popular **OUCH** protocol.

Chi-X provides CHIXOE as an alternative option to its FIX interface for participants. CHIXOE is a fixed length interface, providing participants with a fast and highly efficient way to connect to Trading System.

2 Data Types

This chapter described the data types that are used in the CHIXOE protocol.

2.1 Integer

Integer fields are unsigned big-endian (network byte order) binary encoded numbers.

2.2 Alpha

Alpha fields consist of alphabetical letters. They are presented in left-justified and padded on the right with spaces. For example, if the user name is "ABCD", it should be sent as "ABCD_ _" ("_" represents a space).

2.3 Numeric

Numeric fields consist of digits which are ASCII coded. They are presented in right justification and are space-filled from the left. For example, if the Sequence Number is 1, it should be sent as " _ _ _ _ _ _ _ _ 1" ("_" represents a space).

2.4 Alphanumeric

Alphanumeric text fields consist of alphabetical letters, digits and spaces. They are presented in left justification and are padded with spaces to the right. For example, if a password is "AB23CD", it should be sent as "AB23CD_ _" ("_" represents a space).

2.5 Price

Price is an integer field. When converted to a decimal format, prices are in fixed point format with 9 whole number digits followed by 4 decimal places. The maximum representable price is 214,748.3647 (decimal, 7FFFFFFF hex).

3 Session

This section describes the session characteristics of the CHIXOE protocol. Session level messages are specified in Section 4. The CHIXOE session protocol is compatible with NASDAQ OMX SoupBin TCP protocol.

3.1 Session Protocol

1. The CHIXOE protocol is built on a session layer on top of TCP/IP sockets. Sessions include both sequenced and non-sequenced messages. The sequenced messages are application messages transferred from server to client, and the non-sequenced messages are the session level messages and carrying application messages transferred from client to server.
2. Sequenced messages include acknowledgement, reject, order and execution messages.
3. Login, logout and heartbeat messages are the examples of non-sequenced messages.
4. Sequenced messages can be retrieved and recovered.
5. Trading System will terminate a connection if the Message Type in the Session message is undefined.

3.2 Session Initialisation

1. A CHIXOE session is initialised when the client establishes a TCP session and sends a login packet.
2. When Trading System receives the login packet, it will either respond with a login accept acknowledgement packet and starts transferring sequenced data, or it will reject the login and terminates the session (if appropriate).
3. If Trading System does not receive a login packet within 30 seconds, it will terminate the session.

3.3 Sequential Messaging

1. The first session level sequenced message of the day will have the sequence number of "1".
2. Subsequent sequenced messages will have the next incremental value implicitly assigned as the sequence number.
3. Session recovery is done by providing the appropriate sequence number.

3.4 Session Recovery

1. Recovering a session is done by counting the number of sequenced messages which have already been received and providing the next expected sequence number of the message to be received when reconnecting to the server.
2. The new session will start from the next expected sequenced message.

4 Session Messages

This section describes the session level messages delivered between Trading System and the clients.

4.1 Debug Message

Debug messages are bidirectional and are used for application development and troubleshooting. They should only be used during development phases. This message is ignored by Trading System.

DEBUG MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Message Length	0	2	Integer	Length of message excluding this field
Message Type	2	1	Alpha	"+" – Debug Message
Text	3	Variable	Alphanumeric	Free form text

Figure 1: Debug Message

4.2 Inbound Session Messages

This section describes the session messages sent from clients to Trading System.

4.2.1 Login

The Login message is sent to the server when a client tries to establish a session connection to Trading System. It also allows session recovery by providing the sequence number when sending the login request message.

LOGIN REQUEST MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Message Length	0	2	Integer	Length of message excluding this field
Message Type	2	1	Alpha	"L" – Login Message
Username	3	6	Alphanumeric	Username
Password	9	10	Alphanumeric	Password
Requested Session	19	10	Alphanumeric	Login requested session ID. Leave this field blank for initial login; and provide Session ID for subsequent logins.
Sequence Number	29	20	Numeric	The next expected sequence number of the feed from which to start. "1" indicates starting from the beginning of the day. "0" indicates the last message generated by the system bypassing recovery.

Figure 2: Login Request Message

4.2.2 Logout

The Logout message is used for sending a session termination request to Trading System. Trading System will close the session immediately after receiving a logout request message.

LOGOUT REQUEST MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Message Length	0	2	Integer	Length of message excluding this field
Message Type	2	1	Alpha	"O" – Logout Message

Figure 3: Logout Request Message

4.2.3 Client Heartbeat Message

The Client Heartbeat message is used for sending heartbeat messages to Trading System from the client side on a regular interval. If Trading System does not receive any message including heartbeat from the client for more than 15 seconds, the session will be terminated.

CLIENT HEARTBEAT MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Message Length	0	2	Integer	Length of message excluding this field
Message Type	2	1	Alpha	"R" – Client Heartbeat Message

Figure 4: Client Heartbeat Message

4.2.4 Unsequenced Data Message

An Unsequenced Data message is a message sent by a client which contains order requests. These messages are not sequenced and may be lost in the event of a socket failure. All unsequenced messages can be sent repeatedly. This gives the client the ability, in the case of a connection loss or an application error, to re-send any unsequenced message if it is uncertain whether the CHIXOE server received it.

UNSEQUENCED DATA MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Message Length	0	2	Integer	Length of message excluding this field
Message Type	2	1	Alpha	"U" – Unsequenced Data Message
Data	3	Variable	See section "Inbound Application Message"	Inbound application message

Figure 5: Unsequenced Data Message

4.3 Outbound Session Messages

This section describes session messages sent from Trading System to the clients.

4.3.1 Login Accept Acknowledgement

The Login Accept Acknowledgement message is used for acknowledging a login request message sent by the client upon successful login.

LOGIN ACCEPT ACKNOWLEDGEMENT MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Message Length	0	2	Integer	Length of message excluding this field
Message Type	2	1	Alpha	"A" – Login Accepted Message
Session	3	10	Alphanumeric	The session ID currently logged into.
Sequence Number	13	20	Numeric	The next expected sequence number.

Figure 6: Login Accept Acknowledgement Message

4.3.2 Login Reject Acknowledgement

The Login Reject Acknowledgement message is used for acknowledging the failure of a login request message sent by the client.

LOGIN REJECT ACKNOWLEDGEMENT MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Message Length	0	2	Integer	Length of message excluding this field
Message Type	2	1	Alpha	"J" – Login Rejected Message

Reject Reason	3	1	Alpha	Reject reason: "A" – Invalid username/password "S" – Invalid session ID
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Figure 7: Login Reject Acknowledgement Message

4.3.3 Server Heartbeat Message

If a session is idle for more than one second, Trading System will send a heartbeat message.

SERVER HEARTBEAT MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Message Length	0	2	Integer	Length of message excluding this field
Message Type	2	1	Alpha	"H" – Server Heartbeat Message

Figure 8: Server Heartbeat Message

4.3.4 Sequenced Data Message

The Sequenced Data message is a message sent by Trading System which contains outbound application messages. Since messages are delivered in sequence, the first sequenced data message of the current day has the sequence number '1', and the succeeding sequenced messages are each assigned implicitly with the next sequence number.

SEQUENCED DATA MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Message Length	0	2	Integer	Length of message excluding this field
Message Type	2	1	Alpha	"S" – Sequenced Data Message
Data	3	Variable	See section "Outbound Application Message"	Outbound application message

Figure 9: Sequenced Data Message

4.3.5 End of Session Message

The server will send an End of Session message to denote that the current session is finished. The connection will be closed shortly after this packet, and the user will no longer be able to reconnect to the current session.

END OF SESSION MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Message Length	0	2	Integer	Length of message excluding this field
Message Type	2	1	Alpha	"Z" – End of Session Message

Figure 10: End of Session Message

5 Inbound Application Messages

Application messages from client to server are carried by Unsequenced Data messages.

5.1 Add Order Message

An Add Order message is used to enter a new order into Trading System. Every valid order that is sent is acknowledged by an Add Order Acknowledgement message. An Add Order message with a non-unique Client Order ID will be ignored without acknowledgement.

A valid immediate order which fails to execute is acknowledged with an Order State of "D" (Dead).

If any field in an Add Order message contains unsupported values, the order will be rejected.

ADD ORDER MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Message Type	0	1	Alpha	"O" – Add Order Message
Client Order ID	1	14	Alphanumeric	Must be unique per CHIXOE account within a trading day.
Symbol ID	15	6	Alphanumeric	Unique security identifier.
Side	21	1	Alpha	Side of order. Supported values: "B" = Buy "S" = Sell "T" = Short sell
Quantity	22	4	Integer	Total number of shares. The maximum value is 2,147,483,647.
Price	26	4	Price	Price of the order. For pegged orders, the value specified in this field serves as a limit on the pegged order price. Only positive values are valid. The maximum value is 214,748.3647. Must be set to zero for MOC order.
Time in Force	30	4	Integer	Specifies how long the order remains in effect. Supported values: 0 = IOC 99999 = Day 100000 = FOK 100001 = Preference and Kill 100002 = Preference or Kill
Order Type	34	1	Alpha	Types of order: "A" = Limit "M" = Mid-Point Peg "R" = NearPointX (Primary) Peg "S" = FarPointX (Market) Peg "C" = MOC
Account	35	10	Alphanumeric	Blank or free-text. Used to provide any internal account information. Set first byte to integer null and all other bytes to space for no value.
Client Cross Ref	45	15	Alphanumeric	Can be used to provide additional client side cross reference information. Set first byte to integer null and all other bytes to space for no value.
Clearing Firm	60	4	Integer	CHES Clearing Participant ID. Must be a valid 5 digit CHES PID.
No Self-Trade	64	15	Alphanumeric	Identified as a Self-Trade Prevention (STP) order.

ADD ORDER MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
				<p>Orders from the same participant with the same No Self-Trade value will not be allowed to match with each other. The action that will be taken to avoid self-trade is controlled by the No Trade Feat.</p> <p>Filling this field with spaces means that self-trade prevention checking is disabled for this order.</p>
No Trade Feat	79	1	Alpha	<p>Defines the behaviour of self-trade prevention.</p> <p>Supported values: "N" = Cancel Newest Order (the incoming order is cancelled). "D" = Decrement and Cancel (the quantity of the larger order will be reduced, and the smaller order(s) are cancelled) "X" = Booking Purpose Trade. The resultant trade is reported to CHES as a booking purpose trade and a synthetic order cancellation is created on the CHIXMD feed to enable subscribers to properly manage their market picture.</p> <p>"_" (space) is valid ONLY if No Self-Trade is also filled with spaces.</p> <p>For order with MEQSE = Y, this field can be set with "X" only for non-empty value of No Self-Trade.</p> <p>If two self-trade prevention orders have different No Trade Feat, the system will use the behaviour specified in the incoming aggressive order.</p>
Order Capacity	80	1	Alpha	<p>Designates the capacity of the firm placing the order.</p> <p>Supported values: "A" = Agency "P" = Principal "M" = Mixed Agency and Principal</p>
Directed Wholesale	81	1	Alpha	<p>Directed wholesale indicator</p> <p>Supported Values: "Y" = True "N" = False</p>
Intermediary ID	82	10	Alpha	<p>Intermediary identifier – may be populated with AFS licence number</p> <p>Set first byte to integer null and all other bytes to space for no value</p>
Order Origin	92	20	Alpha	<p>Origin of order information that provides an internal client identifier.</p> <p>Set first byte to integer null and all other bytes to space for no value</p>
Order Restrictions	112	1	Alpha	<p>Broker Preferencing logic can ONLY be enabled/disabled by contacting Market Operations to request that it be configured as a default setting on a per FIX Gateway basis. If a participant elects to have broker preferencing enabled, this field permits the default setting to be overridden provided the override order has TIF = IOC or FOK</p> <p>I = Override broker preference default setting</p>

ADD ORDER MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
				" " (space) = Do not override broker preference default setting
Short Sell Naked Quantity	113	4	Integer	For a short sell order, this field defines the portion of order quantity (defined by <i>Quantity</i>) that is naked. Must be set to zero for non-short sell order.
Short Sell Covered Quantity	117	4	Integer	For a short sell order, this field defines the portion of order quantity (defined by <i>Quantity</i>) that is covered. Must be set to zero for non-short sell order.
Short Sell Long Quantity	121	4	Integer	For a short sell order, this field defines the portion of order quantity (defined by <i>Quantity</i>) that is owned by the participant who places the order. The sum of <i>Short Sell Naked Quantity</i> , <i>Short Sell Covered Quantity</i> and <i>Short Sell Long Quantity</i> should equal to the <i>Quantity</i> for a short sell order. The <i>Short Sell Long Quantity</i> itself should not be equal to the <i>Quantity</i> . Must be set to zero for non-short sell order.
Minimum Execution Quantity	125	4	Integer	Minimum Execution Quantity (MEQ) is only supported on the following orders <ul style="list-style-type: none"> • Orders where TIF = IOC; P&K • Price Improvement Orders (pegged orders); and • MOC hidden orders Set to zero for no MEQ.
T1Settlement	129	1	Alpha	Possible values: "Y" = True "N" = False Fill this field with " " (space) means that T1Settlement is ignored and treated as "N" The T1Settlement field is only applicable to the 'Warrant Trade Report Facility'. Please note that the 'Warrants Trade Report Facility' uses the hidden MOC order type and matching mechanism. Please refer to the Order Type Overview document for details on the Warrant Trade Report Facility.
MEQSE	130	1	Alpha	MEQSE (Minimum Execution Quantity Single Execution) is only supported on the following orders that have Minimum Execution Quantity Specified: <ul style="list-style-type: none"> • Pegged orders • MOC hidden orders Possible values: "Y" = Minimum Execution Quantity Single Execution "N" = Minimum Execution Quantity Fill this field with " " (space) means that MEQSE is ignored

Figure 11: Add Order Message

5.2 Replace Order Message

In the Replace Order message the client must provide 2 client order ID's. The first one must point to a live order (Client Order ID) in Trading System and the other one must be a new ID (New Client Order ID). If the Client Order ID does not exist in Trading System or the New Client Order ID is not valid, the Replace Order message will be ignored and no acknowledgement will be sent to the client.

If the order exists but other details are not valid, the replace action fails and the original order will be canceled and removed from the order book. In this case the New Client Order ID may be reused in next Add or Replace Order message.

The Quantity field in the Replace Order message indicates the total number of shares of the whole order chain. If a client wants to modify the Quantity field, the new Quantity must include all executed shares of the order.

An order cannot be replaced with a new total number of shares less than the total number of executed shares. In this situation, the Replace order will be canceled.

For an order replaced with a new total number of shares equal to the total number of executed shares, the Replace Order message is accepted and acknowledged with Order State equals "D" (Dead). In this case, the order will be canceled automatically.

To leave the order quantity unchanged, the Quantity field should be set to 0 (zero).

REPLACE ORDER MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Message Type	0	1	Alpha	"U" – Replace Order Message
Client Order ID	1	14	Alphanumeric	Client Order ID for the order which is being replaced. Must match exactly with the Client Order ID of the current live order.
New Client Order ID	15	14	Alphanumeric	Must be unique per CHIXOE account within a trading day.
Quantity	29	4	Integer	Total number of shares including previous executions on this order chain. Set it to 0 (zero) to leave the order quantity unchanged. The maximum value is 2,147,483,647.
Price	33	4	Price	Price of the order. For pegged orders, the value specified in this field serves as a limit on the pegged order price. Only positive values are allowed. The maximum value is 214,748.3647. Must be set to zero for MOC order.
Time in Force	37	4	Integer	Specifies how long the order remains in effect. Supported values: 0 = IOC 99999 = Day 100000 = FOK 100001 = Preference and Kill 100002 = Preference or Kill
Order Type	41	1	Alpha	Types of order: "A" = Limit "M" = Mid-Point Peg "R" = NearPointX (Primary) Peg "S" = FarPointX (Market) Peg "C" = MOC Order Type cannot be changed for Limit or MOC orders. Peg orders can be changed to different peg type.
Account	42	10	Alphanumeric	Blank or free-text. Used to provide any internal account information. Set first byte to integer null and all other bytes

REPLACE ORDER MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
				to space to leave content unchanged. Set it to blank (all spaces) to clear existing content.
Client Cross Ref	52	15	Alphanumeric	Can be used to provide additional client side cross reference information. Set first byte to integer null and all other bytes to space to leave content unchanged. Set it to blank (all spaces) to clear existing content.
No Self-Trade	67	15	Alphanumeric	Identified as a Self-Trade Prevention (STP) order. Orders from the same participant with the same No Self-Trade value will not be allowed to match with each other. The action that will be taken to avoid self-trade is controlled by the No Trade Feat. Filling this field with spaces means that self-trade prevention checking is disabled for this order.
No Trade Feat	82	1	Alpha	Defines the behaviour of self-trade prevention. Supported values: "N" = Cancel Newest Order (the incoming order is cancelled). "D" = Decrement and Cancel (the quantity of the larger order will be reduced, and the smaller order(s) are cancelled) "X" = Booking Purpose Trade. The resultant trade is sent to CHESSE as a booking purpose trade and a synthetic order cancellation is created on the CHIXMD feed to enable subscribers to properly manage their market picture. " " (space) is valid ONLY if No Self-Trade is also filled with spaces. For order with MEQSE = Y, this field can be set with "X" only for non-empty value of No Self-Trade. If two self-trade prevention orders have different No Trade Feat, the system will use the behaviour specified in the incoming order.
Order Capacity	83	1	Alpha	Designates the capacity of the firm placing the order. Supported values: "A" = Agency "P" = Principal "M" = Mixed Agency and Principal
Directed Wholesale	84	1	Alpha	Directed wholesale indicator Supported Values: "Y" = True "N" = False
Intermediary ID	85	10	Alpha	Intermediary identifier – may be populated with AFS licence number. Set first byte to integer null and all other bytes to space to leave content unchanged. Set it to blank (all spaces) to clear existing content.
Order Origin	95	20	Alpha	Origin of order information that provides an internal client identifier. Set first byte to integer null and all other bytes to space to leave content unchanged. Set it to blank (all spaces) to clear existing content.
Short Sell Naked	115	4	Integer	Refer to Add Order Message for description.

REPLACE ORDER MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Quantity				<p>If the original order is a short sell order and the Quantity in this replace request is zero (unchanged), this field has to be set to zero as well.</p> <p>If the original order is a short sell order and the Quantity in this replace request is not zero, corresponding short sell quantity fields have to be provided for validation.</p>
Short Sell Covered Quantity	119	4	Integer	<p>Refer to Add Order Message for description.</p> <p>If the original order is a short sell order and the Quantity in this replace request is zero (unchanged), this field has to be set to zero as well.</p> <p>If the original order is a short sell order and the Quantity in this replace request is not zero, corresponding short sell quantity fields have to be provided for validation.</p>
Short Sell Long Quantity	123	4	Integer	<p>Refer to Add Order Message for description.</p> <p>If the original order is a short sell order and the Quantity in this replace request is zero (unchanged), this field has to be set to zero as well.</p> <p>If the original order is a short sell order and the Quantity in this replace request is not zero, corresponding short sell quantity fields have to be provided for validation.</p>
Minimum Execution Quantity	127	4	Integer	Refer to Add Order Message for description.

Figure 12: Replace Order Message

5.3 Cancel Order Message

A Cancel Order message is used to cancel an order.

A Cancel Order message is acknowledged by an Order Cancel Acknowledgement message. If the order doesn't exist in the Trading System, the Cancel Order message will be ignored without acknowledgement.

CANCEL ORDER MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Message Type	0	1	Alpha	"X" – Cancel Order Message
Client Order ID	1	14	Alphanumeric	Client Order ID for the order which is being CANCELLED. Must match exactly with the Client Order ID of the current live order.

Figure 13: Cancel Order Message

5.4 Cancel Trade Message

A Cancel Trade message is used to cancel a crossed (same 4-digit Trading PID) trade.

A Cancel Trade message is acknowledged by a Trade Cancellation message (Section 6.6). The Cancel Trade message will be ignored without acknowledgement if the entered Execution ID:

- does not exist in Trading System, or

- does not correspond to a crossed (same PID) trade, or
- is not eligible to delete due to market settings of Chi-X

CANCEL TRADE MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Message Type	0	1	Alpha	"Z" – Cancel Trade Message
Execution ID	1	8	Integer	Execution ID for the execution which is being CANCELLED. Must match exactly with the Execution ID in Trading System.

Figure 14: Cancel Trade Message

6 Outbound Application Messages

Application messages from the server to client are carried by a Sequenced Data message.

6.1 System Message

A System message delivers system events to all clients.

SYSTEM MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Message Type	0	1	Alpha	"S" – System Message
Timestamp	1	8	Integer	Number of nanoseconds past midnight Australian time.
Event Code	9	1	Alpha	Supported Values: "S" = Start of Day. Always the first message. Indicates the market is open and ready to start accepting orders. "E" = End of Day. Indicates the market is closed and will not accept any new orders today except Market on Close orders (MOC). Clients may still receive a trade message for MOC Executions or Cancelled MOC trades. "M" = MOC Close. Indicates that MOC orders can no longer be entered. Final MOC trades will be issued after this event.

Figure 15: System Message

6.2 Add Order Acknowledgement Message

An Add Order Acknowledgement message acknowledges the acceptance of a valid Add Order message. All data fields from the Add Order message are carried in the Add Order Acknowledgement message.

If the Order State in the Add Order Acknowledgement message equals "D" (Dead), it means that the order has been accepted but has failed to execute, i.e., the order was accepted and cancelled. No additional messages will be sent for that order.

ADD ORDER ACKNOWLEDGEMENT MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Message Type	0	1	Alpha	"A" – Add Order Acknowledgement Message
Timestamp	1	8	Integer	Number of nanoseconds past midnight.
Client Order ID	9	14	Alphanumeric	Client Order ID as entered.
Symbol ID	23	6	Alphanumeric	Unique security identifier as entered.
Side	29	1	Alpha	Side as entered. Values: "B" = Buy "S" = Sell "T" = Short sell
Order ID	30	8	Integer	Trading System order reference number.
Quantity	38	4	Integer	Total number of shares accepted.
Price	42	4	Price	Accepted price of the order.
Time in Force	46	4	Integer	Time in Force as accepted. Values: 0 = IOC 99999 = Day 100000 = FOK 100001 = Preference and Kill 100002 = Preference or Kill

ADD ORDER ACKNOWLEDGEMENT MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Order Type	50	1	Alpha	Order Type value as accepted
Account	51	10	Alphanumeric	Account as entered.
Order State	61	1	Alpha	Order state upon acceptance. Values: "L" = Live "D" = Dead
Client Cross Ref	62	15	Alphanumeric	Client Cross Ref value as accepted.
Clearing Firm	77	4	Integer	Clearing Firm value as accepted.
No Self-Trade	81	15	Alphanumeric	No Self-Trade value as accepted.
No Trade Feat	96	1	Alpha	No Trade Feat value as accepted.
Order Capacity	97	1	Alpha	Capacity of the firm placing the order as entered. Values: "A" – Agency "P" – Principle "M" – Mixed
Directed Wholesale	98	1	Alpha	Directed wholesale indicator as accepted.
Intermediary ID	99	10	Alpha	Intermediary identifier as accepted.
Order Origin	109	20	Alpha	Origin of order information as accepted.
Order Restriction	129	1	Alpha	Order restriction information as accepted
Short Sell Naked Quantity	130	4	Integer	Short Sell Naked Quantity as accepted.
Short Sell Covered Quantity	134	4	Integer	Short Sell Covered Quantity as accepted.
Short Sell Long Quantity	138	4	Integer	Short Sell Long Quantity as accepted.
Minimum Execution Quantity	142	4	Integer	Minimum Execution Quantity as accepted.
T1Settlement	146	1	Alpha	T1Settlement value as accepted.
MEQSE	147	1	Alpha	MEQSE value as accepted.

Figure 16: Add Order Acknowledgement Message

6.3 Replace Order Acknowledgement Message

A Replace Order Acknowledgement message acknowledges the acceptance of a valid Replace Order Message. All data fields from the Replace Order message are carried in this message.

If the Order State in this acknowledgement message equals "D" (Dead), it means that the Replace Order Message was accepted and quantity in the Replace Order Message equals the total executed quantity in the original order. In this case, the corresponding order will be canceled automatically.

REPLACE ORDER ACKNOWLEDGEMENT MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Message Type	0	1	Alpha	"U" – Replace Order Acknowledgement Message
Timestamp	1	8	Integer	Number of nanoseconds past midnight.
New Client Order ID	9	14	Alphanumeric	New Client Order ID as entered.
Previous Client Order ID	23	14	Alphanumeric	Client Order ID of the order replaced.
Symbol ID	37	6	Alphanumeric	Unique security identifier as entered on the original order in the chain.
Side	43	1	Alpha	Side as entered on the original order in the chain. Values: "B" = Buy "S" = Sell "T" = Short sell

REPLACE ORDER ACKNOWLEDGEMENT MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Order ID	44	8	Integer	Trading System order reference number.
Quantity	52	4	Integer	Total number of shares outstanding.
Price	56	4	Price	Accepted price of the replacement.
Time in Force	60	4	Integer	Time in Force as accepted. Values: 0 = IOC 99999 = Day 100000 = FOK 100001 = Preference and Kill 100002 = Preference or Kill
Order Type	64	1	Alpha	Order Type value as accepted
Account	65	10	Alphanumeric	Account as entered or latest field value if it is entered as blank.
Order State	75	1	Alpha	Order state upon replacement. Values: "L" = Live "D" = Dead
Client Cross Ref	76	15	Alphanumeric	Client Cross Ref value as accepted or latest field value if it is entered as blank.
No Self-Trade	91	15	Alphanumeric	No Self-Trade value as accepted.
No Trade Feat	106	1	Alpha	No Trade Feat value as accepted.
Order Capacity	107	1	Alpha	Order Capacity as accepted.
Directed Wholesale	108	1	Alpha	Directed wholesale indicator as accepted.
Intermediary ID	109	10	Alpha	Intermediary identifier as accepted or latest field value if it is entered as blank.
Order Origin	119	20	Alpha	Origin of order information as accepted or latest field value if it is entered as blank.
Short Sell Naked Quantity	139	4	Integer	Short Sell Naked Quantity as accepted or latest field value if Quantity in the request is set to zero.
Short Sell Covered Quantity	143	4	Integer	Short Sell Covered Quantity as accepted or latest field value if Quantity in the request is set to zero.
Short Sell Long Quantity	147	4	Integer	Short Sell Long Quantity as accepted or latest field value if Quantity in the request is set to zero.
Replace Reason	151	1	Alphanumeric	Reason for the order replace Supported values: "4" = Broker option, if a replace request is originated from a Cross Session Order Management gateway and is accepted. "5" = Partial Decline Of Order Quantity, if the quantity of order is reduced due to the No Trade Feat instruction. "O" = Other
No Self-Trade Order Number	152	8	Integer	If the order is replaced due to the STP, this tag will be filled with the Chi-X Order ID of the participant's contra order that would have matched. A value of zero means this acknowledgement was not triggered by STP.
Prevented Trade Price	160	4	Price	Price of the trade which was prevented by Self-Trade Prevention ("Decrement and Cancel" rule) A value of zero means that this acknowledgement was not triggered by STP.
Prevented Trade Quantity	164	4	Integer	Quantity of the trade which was prevented by Self-Trade Prevention ("Decrement and Cancel" rule) A value of zero means that this

REPLACE ORDER ACKNOWLEDGEMENT MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
				acknowledgement was not triggered by STP.
Prevented Liquidity Indicator	168	1	Alpha	Liquidity Indicator of the trade which was prevented by Self-Trade Prevention ("Decrement and Cancel" rule). Possible Value: "A" = Order added liquidity "R" = Order removed liquidity " " (space) = This acknowledgement was not triggered by STP.
Minimum Execution Quantity	169	4	Integer	Minimum Execution Quantity as accepted.

Figure 17: Replace Order Acknowledgement Message

6.4 Cancel Order Acknowledgement Message

A Cancel Order Acknowledgement message informs the client that an order has been canceled. This can be acknowledging a Cancel Order message or it can be an automatic order cancellation.

CANCEL ORDER ACKNOWLEDGEMENT MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Message Type	0	1	Alpha	"C" – Cancel Order Acknowledgement Message
Timestamp	1	8	Integer	Number of nanoseconds past midnight.
Client Order ID	9	14	Alphanumeric	Client Order ID of the canceled order.
Order ID	23	8	Integer	Trading System order reference number.
Canceled Quantity	31	4	Integer	Number of shares canceled. This is the number of untraded shares of the order.
Reason	35	1	Alphanumeric	Reason for the order cancellation Supported values: "U" = User requested the order to be canceled. Sent in response to a Cancel Order Message or a Replace Order Message. "I" = Immediate order executed and no further matches available on the book. Hence the remaining shares were immediately canceled. "s" = This order was manually canceled by a supervisory terminal. "L" = User logged off or disconnected "M" = Invalid Time in Force. "Z" = Invalid quantity. "C" = Invalid capacity. "X" = Invalid price. "T" = Invalid self-trade prevention order. "Y" = Invalid order type. "E" = Invalid directed wholesale. "G" = Invalid short sell naked/covered/long quantity. "P" = Price check failed. "Q" = Pegged order not allowed. "W" = Self-trade prevention restriction. "4" = Broker option, if a cancel request is originated from a Cross Session Order Management gateway and is accepted. "r" = Short sell order restriction. "d" = Done for day. "K" = Invalid MEQ. "O" = Other.
No Self Trade Order Number	36	8	Integer	If the order is cancelled due to the STP, this tag will be filled with the Chi-X Order ID of the participant's contra order that would have matched.

CANCEL ORDER ACKNOWLEDGEMENT MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
				A value of zero means this acknowledgement was not triggered by STP.
Prevented Trade Price	44	4	Price	Price of the trade which was prevented by Self Trade Prevention ("Decrement and Cancel" rule) A value of zero means this acknowledgement was not triggered by STP.
Prevented Trade Quantity	48	4	Integer	Quantity of the trade which was prevented by Self Trade Prevention ("Decrement and Cancel" rule) A value of zero means this acknowledgement was not triggered by STP.
Prevented Liquidity Indicator	52	1	Alpha	Liquidity Indicator of the trade which was prevented by Self Trade Prevention ("Decrement and Cancel" rule). Possible Value: "A" = Order added liquidity "R" = Order removed liquidity "_" (space) = This acknowledgement was not triggered by STP.

Figure 18: Cancel Order Acknowledgement Message

6.5 Execution Message

An Execution message is sent when an order has been fully or partially traded.

EXECUTION MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Message Type	0	1	Alpha	"E" – Execution Message
Timestamp	1	8	Integer	Number of nanoseconds past midnight.
Client Order ID	9	14	Alphanumeric	Client Order ID of the executed order.
Last Quantity	23	4	Integer	Shares bought/sold on this execution.
Last Price	27	4	Price	Price of this fill.
Liquidity Flag	31	1	Alpha	Supported values: "A" = Added (for the passive firm). "R" = Removed (for the aggressor).
Execution ID	32	8	Integer	Unique execution reference number. The matching buy and sell executions share the same Execution ID.
Last Capacity	40	1	Alphanumeric	Supported values are "1" = Agent "2" = Cross as agent "3" = Cross as principal "4" = Principal "5" = Mixed "6" = Cross as Mixed Values of 2, 3 or 6 essentially indicate that the client has executed against themselves. Crossing determined by reference to first 3 digits of trading PID
Trade Type	41	1	Alphanumeric	Supported values are "I" = MOC trade with indicative price "M" = MOC trade with final price "_" (space) = Other
Cross Type	42	1	Alphanumeric	Supported values are "B" = Broker preferenced crossing "_" (space) = Other
Trade Report Type	43	1	Alphanumeric	Supported values are

EXECUTION MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
				"X" = Booking purpose trade (due to self-trade prevention where the NoTradeFeat = X) " " (space) = Normal trade
Contra Participant ID	44	5	Alphanumeric	Participant ID of contra side. All spaces for *non-attribution instrument. * By default all CXA Quoted & ASX's ETF instruments are attributed.
Last Market	49	4	Alphanumeric	Supported values: "CXAC" = (Limit) "CXAP" = (Mid-Point) "CXAN" = (Near Point) "CXAF" = (Far Point) "CXAM" = (MOC) " " (4-space) = Other/Indicative trade Note: This value is determined by the venue of the resting or 'Maker' order in a trade pair. <u>Both sides</u> of the trade contain the same value
Settlement Date	53	8	Alphanumeric	Supported values: " " (space filled) - This will be the normal value. Default CHESSE settlement timings will be applied to the trade; "YYYYMMDD" - a settlement date (with format YYYYMMDD) will be returned only if a warrant trade report is reported with T+1 Settlement specified. A settlement date is only populated where a shortened settlement date (from T+2 to T+1) has been requested by both buyer and seller and the trade is a warrant trade report. Please refer to the Order Type Overview document for details on the Warrant Trade Report Facility .

Figure 19: Execution Message

6.6 Trade Cancellation Message

A Trade Cancellation Message is sent when an execution has been cancelled.

TRADE CANCELLATION MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Message Type	0	1	Alpha	"B" – Trade Cancellation Message
Timestamp	1	8	Integer	Number of nanoseconds past midnight.
Client Order ID	9	14	Alphanumeric	Client Order ID of the rejected order.
Execution ID	23	8	Integer	The Execution ID as sent in the Execution Message.
Reason	31	1	Alpha	Reason for the order cancellation. Supported values: "S" = The trade was manually cancelled by Chi-X supervisory terminal "M" = MOC Trade cancelled. "P" = Crossed (same PID) trade that was cancelled by participant.
Last Market	32	4	Alphanumeric	Supported values: "CXAC" = (Limit) "CXAP" = (Mid-Point) "CXAN" = (Near Point) "CXAF" = (Far Point) "CXAM" = (MOC)

TRADE CANCELLATION MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
				"____"(4-space) = Other/Indicative trade

6.7 Reject Acknowledgement Message

A Reject Acknowledgement message is sent to reject an Add Order message or a Replace Order message.

REJECT ACKNOWLEDGEMENT MESSAGE				
NAME	OFFSET	LENGTH	TYPE	REMARKS
Message Type	0	1	Alpha	"J" – Reject Acknowledgement Message
Timestamp	1	8	Integer	Number of nanoseconds past midnight.
Client Order ID	9	14	Alphanumeric	Client Order ID of the rejected order.
Reject Reason	23	1	Alpha	Reason for the order rejection. Supported values: "M" = Invalid Time in Force. "Z" = Invalid quantity. "S" = Invalid security identifier. "C" = Invalid capacity "R" = Order not allowed at this time. "X" = Invalid price. "T" = Invalid self-trade prevention order. "Y" = Invalid order type. "A" = Invalid side. "B" = Invalid clearing firm. "E" = Invalid directed wholesale. "F" = Invalid order restriction. "G" = Invalid short sell naked/covered/long quantity. "H" = Order cannot be accepted for this security at this time. "J" = MOC order not allowed. "P" = Price check failed. "Q" = Pegged order not allowed. "V" = Exceed order value limit. "c" = User does not have permission to enter an order on the given board. "i" = Short sell order restriction. "j" = Visible MOC orders are not allowed in the trading session. "K" = Invalid MEQ. "O" = Other. "L" = Invalid T1Settlement value "I" = T1Settlement is not supported for this order type "m" = Security does not support T1Settlement for MOC "N" = Invalid MEQSE. "n" = Invalid NoTradeFeat for MEQSE. "o"=MEQSE not support for non-pegged/non-MOC order. "p"=Invalid MinQty for MEQSE.

Figure 20: Reject Acknowledgement Message

7 Appendix A – CHIXOE Examples

7.1 Login

Client is able to login to CHIXOE Gateway successfully.

Login – Inbound message			
Name	Length	Type	Example Value
Message Type	1	Alpha	"L"
Username	6	Alphanumeric	"user "
Password	10	Alphanumeric	"password "
Requested Session	10	Alphanumeric	" " (spaces for initial login)
Sequence Number	20	Numeric	1

Login Accept Acknowledgement – Outbound message			
Name	Length	Type	Example Value
Message Type	1	Alpha	"A"
Session	10	Alphanumeric	"20130723 " (default session will be today's date in YYYYMMDD format)
Sequence Number	20	Numeric	1

Client fails to login with invalid user name.

Login – Inbound message			
Name	Length	Type	Example Value
Message Type	1	Alpha	"L"
Username	6	Alphanumeric	"user22"
Password	10	Alphanumeric	"password "
Requested Session	10	Alphanumeric	" "
Sequence Number	20	Numeric	1

Login Reject Acknowledgement – Outbound message			
Name	Length	Type	Example value
Message Type	1	Alpha	"J"
Reject Reason	1	Alpha	"A" (Invalid user name)

Client fails to login with invalid session ID.

Login – Inbound message			
Name	Length	Type	Example Value
Message Type	1	Alpha	"L"
Username	6	Alphanumeric	"user "
Password	10	Alphanumeric	"password "
Requested Session	10	Alphanumeric	"20120722 "
Sequence Number	20	Numeric	1

Login Reject Acknowledgement – Outbound message			
Name	Length	Type	Example value
Message Type	1	Alpha	"J"
Reject Reason	1	Alpha	"S" (Invalid session ID)

7.2 System Message

Client receives an event message from the system.

System Message – Outbound message			
Name	Length	Type	Example value
Message Type	1	Alpha	"S"
Timestamp	8	Integer	36086385000000 (10:01:26,385)
Event Code	1	Alpha	"S" (Start of Day)

7.3 Add Order

Client adds a limit day order successfully.

Add Order – Inbound message			
Name	Length	Type	Example value
Message Type	1	Alpha	"O"
Client Order ID	14	Alphanumeric	"36179815 "
Symbol ID	6	Alphanumeric	"VOD.L "
Side	1	Alpha	"B"
Quantity	4	Integer	1000
Price	4	Price	100
Time in Force	4	Integer	99999 (Day order)
Order Type	1	Alpha	"A" (Limit order)
Account	10	Alphanumeric	" "
Client Cross Ref	15	Alphanumeric	" "
Clearing Firm	4	Integer	1234
No Self Trade	15	Alphanumeric	" " (Disable STP checking)
No Trade Feat	1	Alpha	" "
Order Capacity	1	Alpha	"A" (Agency)
Directed Wholesale	1	Alpha	"N" (False)
Intermediary ID	10	Alpha	"1234567890"
Order Origin	20	Alpha	" "
Order Restrictions	1	Alpha	" " (Do not change default setting)
Short Sell Naked Quantity	4	Integer	0
Short Sell Covered Quantity	4	Integer	0
Short Sell Long Quantity	4	Integer	0
Minimum Execution Quantity	4	Integer	0
T1 Settlement	1	Alpha	" "
MEQSE	1	Alpha	" "

Add Order Acknowledgement – Outbound message			
Name	Length	Type	Example value
Message Type	1	Alpha	"A"
Timestamp	8	Integer	36086385000000 (10:01:26,385)
Client Order ID	14	Alphanumeric	"36179815 "
Symbol ID	6	Alphanumeric	"VOD.L "
Side	1	Alpha	"B"
Order ID	8	Integer	1
Quantity	4	Integer	1000
Price	4	Price	100
Time in Force	4	Integer	99999
Order Type	1	Alpha	"A"
Account	10	Alphanumeric	" "

Add Order Acknowledgement – Outbound message			
Name	Length	Type	Example value
Order State	1	Alpha	"L" (Order inserted into book)
Client Cross Ref	15	Alphanumeric	" "
Clearing Firm	4	Integer	1234
No Self Trade	15	Alphanumeric	" "
No Trade Feat	1	Alpha	" "
Order Capacity	1	Alpha	"A"
Directed Wholesale	1	Alpha	"N" (False)
Intermediary ID	10	Alpha	"1234567890"
Order Origin	20	Alpha	" "
Order Restriction	1	Alpha	" "
Short Sell Naked Quantity	4	Integer	0
Short Sell Covered Quantity	4	Integer	0
Short Sell Long Quantity	4	Integer	0
Minimum Execution Quantity	4	Integer	0
T1Settlement	1	Alpha	" "
MEQSE	1	Alpha	" "

Client adds an IOC order successfully and the order is indicated as dead in the acknowledgement.

Add Order – Inbound message			
Name	Length	Type	Example value
Message Type	1	Alpha	"O"
Client Order ID	14	Alphanumeric	"36179817 "
Symbol ID	6	Alphanumeric	"VOD.L "
Side	1	Alpha	"B"
Quantity	4	Integer	1000
Price	4	Price	100
Time in Force	4	Integer	0 (IOC order)
Order Type	1	Alpha	"A" (Limit order)
Account	10	Alphanumeric	" "
Client Cross Ref	15	Alphanumeric	" "
Clearing Firm	4	Integer	1234
No Self Trade	15	Alphanumeric	" " (Disable STP checking)
No Trade Feat	1	Alpha	" "
Order Capacity	1	Alpha	"A" (Agency)
Directed Wholesale	1	Alpha	"N" (False)
Intermediary ID	10	Alpha	"1234567890"
Order Origin	20	Alpha	" "
Order Restriction	1	Alpha	" "
Short Sell Naked Quantity	4	Integer	0
Short Sell Covered Quantity	4	Integer	0
Short Sell Long Quantity	4	Integer	0
Minimum Execution Quantity	4	Integer	0
T1Settlement	1	Alpha	" "
MEQSE	1	Alpha	" "

Add Order Acknowledgement – Outbound message			
Name	Length	Type	Example value
Message Type	1	Alpha	"A"
Timestamp	8	Integer	36086385000000 (10:01:26,385)
Client Order ID	14	Alphanumeric	"36179817 "

Add Order Acknowledgement – Outbound message			
Name	Length	Type	Example value
Symbol ID	6	Alphanumeric	"VOD.L "
Side	1	Alpha	"B"
Order ID	8	Integer	2
Quantity	4	Integer	1000
Price	4	Price	100
Time in Force	4	Integer	0
Order Type	1	Alpha	"A"
Account	10	Alphanumeric	" "
Order State	1	Alpha	"D" (Order cancelled)
Client Cross Ref	15	Alphanumeric	" "
Clearing Firm	4	Integer	1234
No Self Trade	15	Alphanumeric	" "
No Trade Feat	1	Alpha	" "
Order Capacity	1	Alpha	"A"
Directed Wholesale	1	Alpha	"N" (False)
Intermediary ID	10	Alpha	"1234567890"
Order Origin	20	Alpha	" "
Order Restriction	1	Alpha	" "
Short Sell Naked Quantity	4	Integer	0
Short Sell Covered Quantity	4	Integer	0
Short Sell Long Quantity	4	Integer	0
Minimum Execution Quantity	4	Integer	0
T1 Settlement	1	Alpha	" "
MEQSE	1	Alpha	" "

Client fails to add an IOC order because "No Trade Feat" must be defined for STP order.

Add Order – Inbound message			
Name	Length	Type	Example value
Message Type	1	Alpha	"O"
Client Order ID	14	Alphanumeric	"36179818 "
Symbol ID	6	Alphanumeric	"VOD.L "
Side	1	Alpha	"B"
Quantity	4	Integer	1000
Price	4	Price	100
Time in Force	4	Integer	0 (IOC order)
Order Type	1	Alpha	"A" (Limit order)
Account	10	Alphanumeric	" "
Client Cross Ref	15	Alphanumeric	" "
Clearing Firm	4	Integer	1234
No Self Trade	15	Alphanumeric	"ABCD "
No Trade Feat	1	Alpha	" "
Order Capacity	1	Alpha	"A" (Agency)
Directed Wholesale	1	Alpha	"N" (False)
Intermediary ID	10	Alpha	"1234567890"
Order Origin	20	Alpha	" "
Order Restriction	1	Alpha	" "
Short Sell Naked Quantity	4	Integer	0
Short Sell Covered Quantity	4	Integer	0
Short Sell Long Quantity	4	Integer	0
Minimum Execution Quantity	4	Integer	0
T1 Settlement	1	Alpha	" "
MEQSE	1	Alpha	" "

Reject Acknowledgement – Outbound message			
Name	Length	Type	Example value
Message Type	1	Alpha	"J"
Timestamp	8	Integer	36086385000000 (10:01:26,385)
Client Order ID	14	Alphanumeric	"36179818 "
Reject Reason	1	Alpha	"T" (Invalid STP order, No Trade Feat must be defined)

7.4 Replace Order

Client replaces an order successfully

Replace Order – Inbound message			
Name	Length	Type	Example Value
Message Type	1	Alpha	"U"
Client Order ID	14	Alphanumeric	"36179815"
New Client Order ID	14	Alphanumeric	"36179816"
Quantity	4	Integer	2000
Price	4	Price	100
Time in Force	4	Integer	99999
Order Type	1	Alpha	"A"
Account	10	Alphanumeric	" "
Client Cross Ref	15	Alphanumeric	" "
No Self Trade	15	Alphanumeric	" "
No Trade Feat	1	Alpha	" "
Order Capacity	1	Alpha	"A"
Directed Wholesale	1	Alpha	"N"
Intermediary ID	10	Alpha	"1234567890"
Order Origin	20	Alpha	" "
Short Sell Naked Quantity	4	Integer	0
Short Sell Covered Quantity	4	Integer	0
Short Sell Long Quantity	4	Integer	0
Minimum Execution Quantity	4	Integer	0

Replace Order Acknowledgement – Outbound message			
Name	Length	Type	Example Value
Message Type	1	Alpha	"U"
Timestamp	8	Integer	36086385000000 (10:01:26,385)
New Client Order ID	14	Alphanumeric	"36179816"
Previous Client Order ID	14	Alphanumeric	"36179815"
Symbol ID	6	Alphanumeric	"VOD.L "
Side	1	Alpha	"B"
Order ID	8	Integer	1
Quantity	4	Integer	2000
Price	4	Price	100
Time in Force	4	Integer	99999
Order Type	1	Alpha	"A"
Account	10	Alphanumeric	" "
Order State	1	Alpha	"I"
Client Cross Ref	15	Alphanumeric	" "
No Self Trade	15	Alphanumeric	" "
No Trade Feat	1	Alpha	" "
Order Capacity	1	Alpha	"A"
Directed Wholesale	1	Alpha	"N"
Intermediary ID	10	Alpha	"1234567890"
Order Origin	20	Alpha	" "
Short Sell Naked Quantity	4	Integer	0
Short Sell Covered Quantity	4	Integer	0
Short Sell Long Quantity	4	Integer	0
No Self Trade Order Number	8	Integer	0
Replace Reason	1	Alphanumeric	"O"
Minimum Execution Quantity	4	Integer	0

Client fails to replace an order because “No Trade Feat” is not defined. The order will be cancelled in this case.

Replace Order – Inbound message			
Name	Length	Type	Example Value
Message Type	1	Alpha	“U”
Client Order ID	14	Alphanumeric	“36179822”
New Client Order ID	14	Alphanumeric	“36179823”
Quantity	4	Integer	1000
Price	4	Price	100
Time in Force	4	Integer	99999
Order Type	1	Alpha	“A”
Account	10	Alphanumeric	“ ”
Client Cross Ref	15	Alphanumeric	“ ”
No Self Trade	15	Alphanumeric	“ABCD”
No Trade Feat	1	Alpha	“ ” (must be defined when STP is enabled)
Order Capacity	1	Alpha	“A”
Directed Wholesale	1	Alpha	“N”
Intermediary ID	10	Alpha	“1234567890”
Order Origin	20	Alpha	“ ”
Short Sell Naked Quantity	4	Integer	0
Short Sell Covered Quantity	4	Integer	0
Short Sell Long Quantity	4	Integer	0
Minimum Execution Quantity	4	Integer	0

Cancel Order Acknowledgement – Outbound message			
Name	Length	Type	Example Value
Message Type	1	Alpha	“C”
Timestamp	8	Integer	36086385000000 (10:01:26,385)
Client Order ID	14	Alphanumeric	“36179822”
Order ID	8	Integer	1
Canceled Quantity	4	Integer	1000
Reason	1	Alpha	“T” (invalid STP order)
No Self Trade Order Number	8	Integer	0
Prevented Trade Price	4	Price	0
Prevented Trade Quantity	4	Integer	0
Prevented Liquidity Indicator	1	Alpha	“ ”

7.5 Cancel Order

Client cancels an order successfully.

Cancel Order – Inbound message			
Name	Length	Type	Example Value
Message Type	1	Alpha	“X”
Client Order ID	14	Alphanumeric	“36179816”

Cancel Order Acknowledgement – Outbound message			
Name	Length	Type	Example Value
Message Type	1	Alpha	“C”
Timestamp	8	Integer	36086385000000 (10:01:26,385)
Client Order ID	14	Alphanumeric	“36179816”
Order ID	8	Integer	1

Cancel Order Acknowledgement – Outbound message			
Name	Length	Type	Example Value
Canceled Quantity	4	Integer	2000
Reason	1	Alpha	“U”
No Self Trade Order Number	8	Integer	0
Prevented Trade Price	4	Price	0
Prevented Trade Quantity	4	Integer	0
Prevented Liquidity Indicator	1	Alpha	“ ”

7.6 Execution

Client receives an execution after a trade is done.

Execution message			
Name	Length	Type	Example Value
Message Type	1	Alpha	“E”
Timestamp	8	Integer	36086385000000 (10:01:26,385)
Client Order ID	14	Alphanumeric	“36179834 ”
Last Quantity	4	Integer	1000
Last Price	4	Price	100
Liquidity Flag	1	Alpha	“R”
Execution ID	8	Integer	130000001
Last Capacity	1	Alphanumeric	“4”
Trade Type	1	Alphanumeric	“ ”
Cross Type	1	Alphanumeric	“ ”
Trade Report Type	1	Alphanumeric	“ ”
Contra Participant ID	5	Alphanumeric	“ ”
Last Market	4	Alphanumeric	“CXAC”
Settlement Date	8	Alpha	“ ”

7.7 Trade Cancellation

Client receives a MOC trade cancellation.

Trade Cancellation message			
Name	Length	Type	Example Value
Message Type	1	Alpha	“B”
Timestamp	8	Integer	36086385000000 (10:01:26,385)
Client Order ID	14	Alphanumeric	“36179834 ”
Execution ID	8	Integer	130000001
Reason	1	Alpha	“M”
Last Market	4	Alphanumeric	“ ”