NASDAQ®

FIX for Orders
Programming Specification

for FIX 4.2

September 13, 2005

version 2005-07

Confidentiality/Disclaimer

Contents

1 Overview

This document contains the FIX 4.2 protocols used by NASDAQ, the functionality of NASDAQ FIX, and the user requirements for accessing the NASDAQ FIX protocol. This document outlines the messages transmitted via FIX for entering orders into NASDAQ market center. This document considers neither messages transmitted via other entry points into NASDAQ nor applications other than NASDAQ market center. Future releases will include other NASDAQ applications.

Users should be familiar with the FIX 4.2 specifications, as this document supplements those specifications.

NASDAQ supports:

- Order;
- Cancel;
- Cancel/Replace; and
- Order Status.

These messages are not currently supported in NASDAQ FIX:

Quote Processing
Mass Quote
Quote Acknowledgement
Quote Cancel
Quote Request
Quote Status Request

Market Data
Market Data Request
Market Data – Snapshot / Full Refresh
Market Data – Incremental Refresh

Other
Advertisements
Allocation
Allocation ACK
Bid Request
Bid Response
E-mail
Indications of Interest
List Execute
List Status
List Strike Price
News
Security Definition
Security Definition Request
Security Status
Security Status Request
Settlement Instructions
Trading Session Status
Trading Session Status Request

As new NASDAQ FIX functionality becomes available, you will receive technical updates detailing that functionality. At the same time the technical update is distributed, this programming specification will be updated on the NASDAQ Trader web site.

1.1   Related Documentation

The *NASDAQ FIX Trade Reporting Programming Specification* is here:
http://www.nasdaqtrader.com/trader/tradingservices/specsinstallguides/fixactspec.pdf

The *NASDAQ FIX ACES Programming Specification* is here:
http://www.nasdaqtrader.com/trader/tradingservices/specsinstallguides/fixacesspec.pdf

1.2   NASDAQ Customer Support

☎	NASDAQ FIX Support	800-243-4284
✉	NASDAQ FIX Support	mailto:NASDAQFIX@NASDAQ.COM
☎	NASDAQ Testing Facility	800-288-3783
☎	NASDAQ Subscriber Services	800-777-5606
☎	NASDAQ Trading Services	800-219-4861

1.3   Publication Information

This section contains the information for the last six publications of this specification.
Additional historical information is in section 8.

Date	Version	Enhancements
May 24, 2005	2005-06	General Updates Added filtered drop copy functionality. Modification of TIF is now allowed.
April 19, 2005	2005-05	General Updates Added tag 11, MaxFloor to all MsgType = 8; updated tag 18, ExecInst, tag 100, ExDestination; and tag 9307, PfdMktMkr in New Order Single; and added tag 58, Text, to Accepted Cancel message.
April 5, 2005	2005-04	NASDAQ FIX Routing 2 With this release, NASDAQ introduces functionality that allows you to enter super-aggressive and thru orders, peg to the NASDAQ Inside or NBBO, enter a 2-character peg difference amount, and route to non-participant, external market centers.
March 17, 2005	2005-03	NASDAQ FIX software version 6.1 With this release, NASDAQ introduces functionality that allows you to enter GTC and GTX orders, define an order as DNI or DNR, and provide multiple values in ExecInst. We have also added an optional display size

Date	Version	Enhancements
		tag.
February 10, 2005	2005-02	NASDAQ FIX Routing and Pre-Market NASDAQ introduces functionality that allows you to route orders to the NASDAQ Market Center only. NASDAQ announces the addition of pre-market session from 8:00 a.m. to 9:25 a.m.
January 21, 2005	2005-01	NASDAQ FIX software version 5.4 With this release, NASDAQ introduces functionality that allows you to update both price and size with a cancel/replace message. We have also added optional refresh and reserve size tags and a memo tag.

2   Session Overview

2.1   Architecture
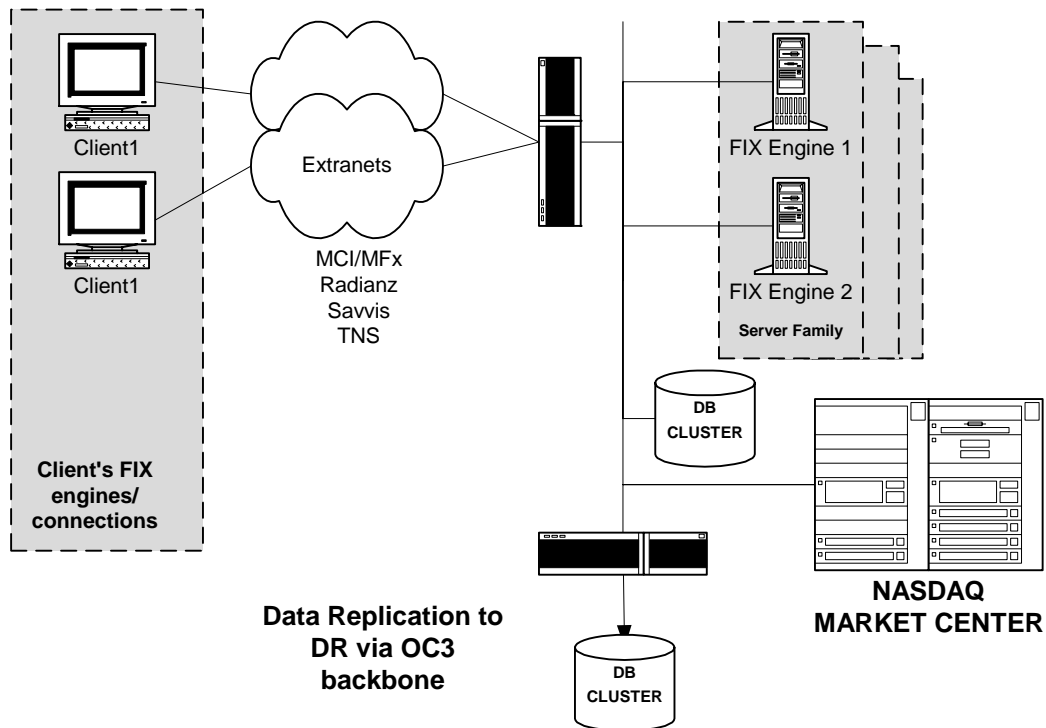
2.2   Connectivity

- A connector ID is good for one and only one I1I2.
- The initial logon message is validated for both the sender comp ID (MPID) and the sender sub ID (I1I2).
- If logon fails, the user will not receive a message indicating this failure.
- Subsequent administrative and application messages will validate the connector ID and I1I2.

2.3   Hours of Operation

All times are Eastern. Please see Appendix B: Order Timeline.

2.3.1   Regular Trading Day

Logon/Logoff

FIX Startup	FIX Shutdown
4:00 a.m. ET	7:00 p.m. ET

- NASDAQ FIX will be up and accessible at 4:00 a.m.
- NASDAQ FIX will remain up and running until 7:00 p.m.
- Although it is not required, we suggest you log off at the end of your trading day. Otherwise, NASDAQ will log you off at shutdown.

Order Entry for NMS Security Trading

Start Time	End Time
7:30 a.m. ET	4:00 p.m. ET

Order Entry for Exchange-listed Security Trading

Start Time	End Time
7:30 a.m. ET	6:30 p.m. ET

- Orders entered between 4:00 a.m. and 7:30 a.m. will be rejected.
- Orders for NMS securities submitted after 4:00 p.m. will be rejected with a NOT WITHIN ALLOWABLE TIME message, as the current implementation of NASDAQ FIX will support only IOC and DAY orders.
- Orders for exchange-listed securities submitted after 6:30 p.m. will be rejected with a NOT WITHIN ALLOWABLE TIME message.
- Order Cancel and Cancel Replace requests for NMS securities made after 4:00 p.m., while possible, will most likely receive an ORDER NOT FOUND message, as these will be for DAY or IOC orders.
- Order Cancel and Cancel Replace requests for exchange-listed securities made after 6:30 p.m., while possible, will most likely receive an ORDER NOT FOUND message, as these will be for the X trading session. See Section 2.4 information.
- NASDAQ will continue to generate Execution Reports for NMS securities after the 4:00 p.m. market close until all reports have been generated.
- NASDAQ will continue to generate Execution Reports for exchange-listed securities after the 6:30 p.m. session close until all reports have been generated.

NASDAQ FIX will reset its inbound and outbound sequence numbers to 1 at approximately 7:00 p.m. each day.

2.3.2 Early Close Trading Day

A planned early market close usually occurs at 1:00 p.m. NASDAQ will notify you of an early close by Head Trader Alert that will provide closing times. In unforeseen circumstances, an unplanned early market close may be necessary. Again, NASDAQ will notify you of such an event by Head Trader Alert. Head Trader Alerts are available online at: http://www.nasdaqtrader.com/dynamic/newsindex/headtraderalerts_2004.stm.

Logon/Logoff

FIX Startup	FIX Shutdown
4:00 a.m. ET	4:00 p.m. ET

- As with regular trading days, NASDAQ FIX will be up and accessible at 4:00 a.m.
- Logons are accepted any time after 4:00 a.m., and all messaging remains the same through market open.
- NASDAQ FIX will remain up and running until 4:00 p.m.
- Logoffs are not required. If you choose to log off, do so by 4:00 p.m.

Order Entry for NMS Security Trading

Start Time	End Time (Market Close)
7:30 a.m. ET	1:00 p.m. ET

Order Entry for Exchange-listed Security Trading

Start Time	End Time (Session Close)
7:30 a.m. ET	3:30 p.m. ET

- Orders entered between 4:00 a.m. and 7:30 a.m. will be rejected.
- Orders for NMS securities submitted after 1:00 p.m. will be rejected with a NOT WITHIN ALLOWABLE TIME message, as the current implementation of NASDAQ FIX will support only IOC and DAY orders.
- Orders for exchange-listed securities submitted after 3:30 p.m. will be rejected with a NOT WITHIN ALLOWABLE TIME message.
- Order Cancel and Cancel Replace requests for NMS securities made after 1:00 p.m., while possible, will most likely receive an ORDER NOT FOUND message, as these will be for DAY or IOC orders.

- Order Cancel and Cancel Replace requests for exchange-listed securities made after 3:30 p.m., while possible, will most likely receive an ORDER NOT FOUND message, as these will be for the X trading session. See Section 2.4 for additional information.
- NASDAQ will continue to generate Execution Reports for NMS securities after the 1:00 p.m. market close until all reports have been generated.
- NASDAQ will continue to generate Execution Reports for exchange-listed securities after the 3:30 p.m. session close until all reports have been generated.

NASDAQ FIX will reset its inbound and outbound sequence numbers to 1 at approximately 4:00 p.m. each day.

2.3.3   Non-trading Days

All messages, including logon, will be rejected on non-trading days. Of course, users will be able to logon and test on User Acceptance Test days.

2.4   Trading Session ID (336=?)

NASDAQ has defined a new trading session. This new session includes pre-market, regular market, and extended market hours. These trading sessions are defined in `TradingSessionID` [336] by the values "P" and "X". Orders with a trading session ID of "P" will be displayed to the market during the regular trading day. Orders with a trading session ID of "X" will be displayed during the regular and extended markets. These rules apply to both NMS and Listed securities.

2.5   Encryption

NASDAQ FIX, in its initial releases, will not support use of encrypted messages. While these specifications indicate that the use of tags 90 and 91 are optional in the message header, no encryption/decryption is intended.

2.6   Expiry

When an expiry event has occurred, the FIX engine will respond to the submitting user as follows:

If the inbound message was a 35=D or 35=E, NASDAQ will send an execution report (35=8) with an ExecType Rejected (150=8), OrdRejReason (103=8), and text in tag 58 to the effect of *Transaction Time Expired*.

If the inbound message was a 35=F or 35=G, NASDAQ will send an execution report (35=8) with an ExecType Rejected (150=8), CxlRejReason (102=8), and text in tag 58 to the effect of *Transaction Time Expired*.

As a default, your connector will be set up to perform this expiry checking. If you notice that all of your inbound messages are being rejected because of expiry checking, it may be

that your and our system clocks are significantly different. Please call our FIX Support Group, and they will temporarily disable expiry checking for your connectors.

2.7   Session Rejects

Sometimes, messages that are inbound to NASDAQ FIX are rejected directly resulting in session level rejects. In these cases, you will receive a reject message (35=3) that includes the reject reason (tag 373) and detailed, specific causes of the reject (tag 58). Each reject reason in tag 58 is associated with a number in the range of 0001-0199. The session reject message format is in section 4.1.5.

3   NASDAQ FIX for Orders

3.1   Tags

3.1.1   Supported Message Types (35=?)

TYPE	Message	Inbound, Outbound, or Both
0	Heartbeat	B
1	Test Request	B
2	Resend Request	B
3	Reject	O
4	Sequence Reset	B
5	Logout	B
8	Execution Report	O
9	Order Cancel Reject	O
A	Logon	B
D	Order Single	I
F	Order Cancel Request	I
G	Cancel/Replace Request	I
H	Order Status Request	I

NASDAQ FIX uses execution reports to communicate various statuses of the order. These reports go out when NASDAQ FIX/NASDAQ:

- Accepts/acknowledges an order;
- Rejects an order;
- Pends a cancel;
- Accepts/processes a cancel;
- Pends a cancel/replace;
- Accepts/processes a cancel/replace;
- Rejects a cancel/replace; and
- Executes a trade.

Each of these events will be mapped out in this section, depicting what the execution report will convey under each scenario. The table of reject reasons will be conveyed in their respective sections.

In the NASDAQ market center, certain situations result in your orders being made "Not Available." This "Not Available" state is not supported in FIX, and so no corresponding execution report is generated. For instance, if an issue goes into an Issue Halt state, any orders for that stock are made "Not Available." When the halt is lifted, the orders are made

available again. Similarly, if a NASDAQ supervisor performs an "Office Outage," that firm's orders are placed in a "Not Available" state. When the outage is lifted, those orders are made available again. FIX does not send a message in either scenario to let the user know the "Not Available" state or the following "Available State."

3.1.2 Supported Order Types (40=?)

NASDAQ FIX supports Market (1), Limit (2), and Pegged (P) order types. Exchange-listed securities cannot be part of a pegged order. Pegged orders are discussed in detail in section 3.3.

3.1.3 Supported Order TIFs (59 =?)

NASDAQ FIX supports DAY (0), OPG (2), IOC (3), CLO (7), GTC (1), and GTX (5) orders.

GTC orders are valid for one year. If they are not executed by that time, they will be cancelled automatically.   GTC orders are susceptible to corporate actions. Order Quantity, Reserve Quantity, Leaves Quantity, Cumulative Quantity, Price, and Max Floor may all change based on these corporate actions. You will not receive notice of these changes via UM, but you can access all order details by either an Order Status Request or a Recap file. If a GTC order is cancelled as a result of a corporate action, then you will receive an OUT. If ClOrdIds are unique, then you will be able to differentiate between GTC orders that remain on the book. Please keep this issue in mind when you assign ClOrdID values.

You may enter GTX orders one of two ways. You may use value 5 (GTX) in tag 59. You may also use value 1 (GTC) in tag 59 and value X (regular and extended trading hours) in tag 336, TradingSessionID, similarly to how you enter DAYX orders now. If you select 59 = 5 and 336 = P, then NASDAQ will process this order as a GTX.

GTD, FOK, and OPG may be supported in subsequent releases.

3.1.4 Price fields

NASDAQ supports decimal pricing, but does not support sub-penny pricing. Any orders that are received with price fields held in amounts that are more granular than 0.01 will be:

Side	Action
Buys	Rounded down to the nearest 0.01
Sells	Rounded up to the nearest 0.01

3.1.5 AvgPx

An average price is returned only on Fills, Partial Fills, and Execution Reports. The average price is computed using this formula:

$$AvgPx = [(AvgPx * CumQty) + (LastShares * LastPx)] / (LastShares + CumQty).$$

If $MsgType = 8$ and the message is not a fill or partial fill, then $AvgPx = 0$. If $OrdStatus \neq 1$ or 2, then $AvgPx = 0$.

3.2   NASDAQ Implementation of FIX

3.2.1   Mass Order Cancel

You can choose to cancel all open orders automatically upon disconnect in these situations:

- Logout sent by the firm;
- NASDAQ initiated server fail-over;
- NASDAQ initiated connection kill;
- Network failure and resulting disconnects; and
- Client FIX engine failure.

You must first send written authorization to NASDAQ. Mass cancel should be used in extraordinary circumstances only and not for routine log off. Mass cancel will be performed manually if NASDAQ's FIX engine fails. If you do not have an authorization on file, then NASDAQ will consult you first. When the connection is re-established, you will receive the UROUTS resulting from the cancels.

The FIX engine will cancel all open orders. As some trades may happen too close to logoff to be reported, we cannot assure complete cancellation of all open orders.

While mass cancel is in progress, you are not allowed to log on.   Please allow at least 10 seconds between connection attempts.

NASDAQ's Mass Cancel Indicator has three values:

> N = you do not participate in mass cancel;
> Y = you participate in mass cancel and all orders are applicable; and
> O = you participate in mass cancel, but you want On Open, On Close, and Imbalance Only orders excluded from the cancel.

If you choose "O", then orders with tags (9376 = I) or (59 = 2 or 7) or (40 = 5 or B) will be excluded from mass cancel.

3.2.2   Not Available Status

Issue halts, office outages, and customer-initiated supervisory transactions can cause orders to become "not available." An issue halt results from a supervisory action to suspend trading in a security due to market conditions. An office outage results directly from a customer communication to NASDAQ. Several other supervisory transactions can cause orders to become "not available." In each of these situations, NASDAQ FIX will not send notification that that the order status is now not available to the user. The order may, however, become available again without user intervention. Again, NASDAQ FIX will not send notification that the order is now available to the user. Users should note that if they query NASDAQ FIX, the order will appear open without reference to its current status.

It is important that users understand that the market may move while an order is unavailable and that the order may become available in different market conditions. Users

should pay particular attention to issue halts, so that they can either cancel the order or keep track of the market in case the order is made available. In all situations where an order is made "not available," users are able to cancel the order.

3.2.3 Purged Orders

A purged order is another type of not available order. A purged order may result from a user request to a NASDAQ Supervisor to purge orders. NASDAQ FIX will not send the user notification of the change in order status.   Purged orders do not automatically become active again. The user may request the NASDAQ Supervisor reinstate a purged order to an active status. If a purged order is not reinstated and its Time-In-Force is DAY, it will be cancelled by the system at the end of the day. The user will receive a cancel UM.

3.2.4 Order Status after NASDAQ-generated Events

Some infrequent supervisory cases exist in which NASDAQ Market Operations personnel may take action that will not result in message communications back to the originating user on orders. Certain events, such as Office Outages, Mass Order Purges, and Position State Changes result in orders changing (often to a status of not available) without corresponding notification to the originating user. Typically, users initiate these events as a result of phone, power, or infrastructural problems at their sites. Please note that a mass order purge is not the same as a mass order cancel. NASDAQ Operations manually initiates a mass order purge. The NASDAQ FIX Engine initiates a mass order cancel in the event that your FIX engine loses communication with NASDAQ.

If these events do, however, occur, and an order status is requested of NASDAQ FIX, there will be no notification of the change in order status. That is, an `OrdStatus` of `9-Suspended`, is not supported.

The order status message is designed only to relate summary information regarding the order status, primarily:

- original order quantity;
- total shares executed;
- leaves quantity; and
- average price.

`OrdStatus` will reflect the most recent message status of the order, i.e. new if an Acknowledgement was generated or canceled if so. The order status, suspended, will not be supported until FIX supports a suspend message in response to events such as mass purge.

3.2.5 Done for Day

NASDAQ FIX will no longer send done for day messages. DAY orders, which expire at the end of the day, will be cancelled, and you will receive a cancel message.

3.2.6   Other Unsolicited Cancels

There are a number of situations in which NASDAQ's system can return a cancel of an order without that cancel being specifically requested by you. The end of day canceling of DAY orders will result in a spin of these canceled DAY orders that will be passed on to you. Similarly, a spin will occur for exchange-listed securities. When this occurs, the Cancel Accept message will be as outlined above with one very specific difference. Tag 11, ClOrdId, when created for one of these unsolicited cancels, will contain the Original order id, just as tag 41 will. Whereas normally tag 11 responds with your *cancel* order ID, unsolicited cancels respond with the *original* order ID.

Other cases result in an unsolicited cancel message. If a customer submits an IOC order and that order is determined to be marketable and happens to be delivered to an ECN, the ECN can either accept it or decline it. If a decline occurs, and your IOC order is rechecked for marketability and it is no longer marketable (the inside has moved), a cancel (obviously unsolicited) will be returned. Here too, the tag 11 will contain the OrigOrdId.

3.2.7   Possible Duplicates and Resends

You should set tag 43, PossDupFlag, if you are sending a message with a sequence number that was already used. This tag is required for retransmissions. NASDAQ will process as follows:

If tag 43 =	& Seq # is a dup	then, NASDAQ will…
Y	Y	ignore the message.
Y	N	process the message normally.
N	Y	drop the connection.
N	N	process the message normally.

You should set tag 97, PossResend, if you are sending a message that may be a duplicate of another message. NASDAQ will process as follows:

If tag 97 =	& tag 11 is a dup	then, NASDAQ will…
Y	Y	reject the message.
N	Y	reject the message.
Y	N	process the message normally.
N	N	process the message normally.

3.2.8   Reject Messages

Messages can be rejected when tag content validation fails, resulting in business level rejects. Messages can also be rejected by the application. Both business and application rejects include order, cancel, and cancel/replace rejects.   The message formats for these rejects are in sections 4.3.2.3, 4.3.2.6, and 4.3.2.9.

3.2.9   Broker Dealer On Behalf Ofs

NASDAQ allows broker dealers to enter transactions on behalf of a customer. To do so, broker dealers submit tag 115, OnBehalfOfId, and tag 116, OnBehalfOfSubId. The meaning of these tags is no different for broker dealer processing than it is for standard processing.

Tags 115 and 116 are not validated and are not sent to the destination system. NASDAQ will echo these values in tags 128 and 129 on the outbound message.

3.2.10   Service Bureau On Behalf Ofs

NASDAQ allows service bureaus to submit transactions for several customers over a single connector. These customers enter the application as their own entity, that is, with their own MPID. Service bureaus are no longer required to have a distinct connector for each customer. A service bureau may, however, have multiple connectors and use them however they wish.

Service bureaus will be required to submit both their NASDAQ-assigned dummy I1I2s and each customer I1I2 for each message. Specifically, the service bureau will submit a message containing:
- Tag 49, SenderCompId, the service bureau's company ID;
- Tag 50, SenderSubId, the service bureau's stub I1I2;
- Tag 115, OnBehalfOfId, the individual customer's MPID; and
- Tag 116, OnBehalfOfSubId, the individual customer's I1I2.

The processing of these tags for service bureaus differs from standard processing. The MPID submitted in tag 49 is a 4-character code that identifies the service bureau. It could be a valid NASDAQ MPID or a representative code used for FIX processing only. This flexibility is allowed because the value is not passed to a destination system. Likewise, the dummy I1I2 submitted in tag 50 is not passed to the destination system. It is used only for identification purposes.

If a service bureau submits a message that includes values for tags 49 and 50, but does not include values in both tag 115 and tag 116, then the message will be rejected.

On messages from NASDAQ to the service bureau, tags 115 and 116 are unused. The individual customer's MPID is returned to the service bureau in tag 128, DeliverToCompId, and the I1I2 is returned in tag 129, DeliverToSubId.

3.3 NASDAQ Order Functionality

3.3.1 Pegged Orders

The price of a pegged order will automatically be adjusted to reflect the price movement of the NASDAQ Inside. A pegged order will, therefore, track the inside and assure that the order's price position relative to the inside bid or ask price remains consistent.

You will be able to enter two types of pegged orders:

- Regular pegged orders are pegged to a price equal to the inside quote on the same side of the National market. A regular buy order will be pegged to the Inside Bid price. A regular sell order will be pegged to the Inside Offer price.

- Reverse pegged orders are pegged to a price that is better than the inside quote on the contra side of the market. A reverse pegged buy order will be pegged to a price that is better than the Inside Offer price. A reverse pegged sell order will be pegged to a price that is better than the Inside Bid price.

Short sale orders may be entered as a regular and reverse pegged orders.

You will specify pegged orders using peg option, peg offset value, and cap price. The peg option defines if the order will be pegged. If pegged, set `OrdType` (40) = P (pegged). To indicate the type of pegged order, set `ExecInst` (18) = R for a regular pegged order where the order will be pegged to the inside on the same side or set `ExecInst` (18) = P for a reverse pegged order where the order will be pegged to the inside on the opposite side of the market.

Cap Price is an optional field that defines a limit price at which the pegging action stops. By setting this limit, you can prevent the order from executing at an undesirable price. Failure to enter a cap price will allow the order price to continue pegging to the Inside Bid/offer allowing the order to execute at any price. At order entry, if the Inside exceeds the Cap Price for a Buy order or the Inside is less than the Cap Price for a Sell order, the system converts the order to a standard limit order. Both buy and sell orders cannot be priced higher than the cap price. Once the buy order reaches the cap price, the price becomes fixed at that cap price. All pegging action is terminated, effectively converting the order into a standard limit order.

Pegged orders:

- can have only DAY as TIF;
- cannot be preferenced;
- do not require an order price;
- are regulated by all existing order entry and update rules; and
- will receive the same solicited and unsolicited messages as other orders.

Orders for exchange-listed securities cannot be pegged.

3.3.2   Discretionary Orders

A discretionary order allows you to enter an order that is displayed to the market at a specified price, but executable at a price that is better than the displayed price, as defined by an incremental price improvement spread.

Discretionary orders:

- can have only DAY as TIF;
- cannot be preferenced;
- are regulated by all existing order entry and update rules; and
- will receive the same solicited and unsolicited messages as other orders.

Participants will specify discretionary orders using the following parameters:

Display Price is the price at which the order quantity is quoted and displayed. The user may enter a limit price in the price tag (44) to fix the price range at which the order is displayed and executable. The display price may be at or away from the current inside price on that side. Orders entered with a price of Market will be rejected immediately and returned to the entering firm. The user may peg the display price of the discretionary order using the rules and parameters defined for a regular pegged order type to provide a floating price range at which the order is displayed and executable. The user will not be able to use the reverse pegged option for discretionary orders.

You may indicate an incremental value that is applied to the display price to establish a price range within which the discretionary order may be executed. The values of DiscretionOffset (389) are from .01 to .99. If DiscretionOffset is specified, then DiscretionInst (388) is required.   This field identifies the price to which a DiscretionOffset is related to which it should be added. The only DiscretionInst value supported at this time is 0. Discretionary orders entered with a discretionary offset of zero (0) will be rejected immediately and returned to the entering firm.

Discretionary short sale orders cannot be entered as pegged or reverse pegged. Discretionary orders cannot be entered as reverse pegged.

Orders for exchange-listed securities cannot be discretionary.

3.3.3   Opening Cross

The Opening Cross release introduces two new order types (tag 40 and tag 59): market on open and limit on open. These orders are executable only during the Opening Cross.

On Open orders:
- will be processed as unpreferenced.
- can be entered as buy, sell, sell short, and sell short exempt.
- will not support a pegged display price or a discretionary price.
- will have the attributable indicator set for full anonymity.
- will have the AIQ set to allow internalization.
- will have the Price Improvement Indicator set to 'No'.

- will have the dividend/split indicators (DNR and DNI) set to 'No'.

Reserve size will be consolidated with the display size by the system for execution purposes.

The Opening Cross release also includes Imbalance Only orders (tag 9376 = imbalance only (IO)). This algorithm identifies specific On Open orders that are liquidity-providing orders intended to offset a buy/sell imbalance during the opening cross auction. This value currently exists for Closing Cross. For this release, the definition of that value is expanded.

An On Open Imbalance Order Only order has TimeInForce = 2 and SMExecAlgorFlag = I.
An On Close Imbalance Order Only order has TimeInForce = 7 and SMExecAlgorFlag = I.

IO orders:
- will be processed as unpreferenced.
- can be entered as buy, sell, sell short, and sell short exempt.
- must be limit priced.
- will have the attributable indicator set to full anonymity.
- will have the AIQ set to allow internalization.
- must have an order type of limit on open.
- must specify IO in the prioritization algorithm field.
- will have the Price Improvement Indicator set to 'No'.
- will have the dividend/split indicators (DNR and DNI) set to 'No'.
- will not support a pegged display price or a discretionary price.

Market price IO orders will be rejected. IO orders whose limit price is more aggressive than the predicted 9:30 a.m. NASDAQ Market Center Inside will be re-priced to the appropriate bid/ask price starting from the pre-open information dissemination period start time. Reserve size will be consolidated with the display size by the system for execution purposes.

All executions performed during the Opening Cross are subject to auto-ex only. No order delivery will be performed. All auto-ex participants will participate in the Opening Cross process by default. They are not allowed to opt out. Delivery MPs are allowed to indicate their participation in the Opening Cross or not.

On Open orders can be entered at session open at 7:30 a.m. and cannot be entered after 9:28 a.m. They are not displayed and are executed during the opening cross.

Imbalance Only orders can be entered at session open at 7:30 a.m. Opening Cross Imbalance Only orders should be entered before market open at 9:30 a.m. After that time, if the order TimeInForce = 2, then the order will be rejected. If the order TimeInForce = 7, then the order will be accepted for Closing Cross.

At 9:28 a.m., NASDAQ starts calculating and disseminating the opening imbalance information, halts order entry, order cancels, and order cancel/replace orders for regular market on open orders, and halts order cancels for imbalance only and limit on open orders.

NASDAQ will differentiate between early and late regular day orders (DAY and IOC). Regular day orders received prior to 9:28 a.m. will be considered early orders that participate fully in the opening cross. Regular day orders received after 9:28 a.m. are considered late orders that participate in the opening cross only to the extent that there is liquidity available on the other side at the crossing price.

3.3.4   Closing Cross

The Closing Cross release introduces two new order types (tag 40 and tag 59): market on close and limit on close. These orders are executable only during the Closing Cross.

OC orders:
- will be processed as unpreferred.
- can be entered as buy, sell, sell short, and sell short exempt.
- will not support a pegged display price or a discretionary price.
- will have the attributable indicator set for full anonymity.
- will have the AIQ set to allow internalization.
- will have the Price Improvement Indicator set to 'No'.
- will have the dividend/split indicators (DNR and DNI) set to 'No'.

Reserve size will be consolidated with the display size by the system for execution purposes. You can enter the new prioritization algorithm value, imbalance only, described below.

The Closing Cross release also introduces a new prioritization algorithm value (tag 9376), imbalance only (IO). This algorithm identifies specific On Close orders that are liquidity-providing orders intended to offset a buy/sell imbalance during the closing cross auction.

An On Close Imbalance Order Only order has TimeInForce = 7 and SMExecAlgorFlag = I. An On Open Imbalance Order Only order has TimeInForce = 2 and SMExecAlgorFlag = I. The Opening Cross is explained in the next section.

IO orders:
- will be processed as unpreferred.
- can be entered as buy, sell, sell short, and sell short exempt.
- must be limit priced.
- will have the attributable indicator set to full anonymity.
- will have the AIQ set to allow internalization.
- must have an order type of LOC.
- must specify IO in the prioritization algorithm field.
- will have the Price Improvement Indicator set to 'No'.
- will have the dividend/split indicators (DNR and DNI) set to 'No'.
- will not support a pegged display price or a discretionary price.

Market price IO orders will be rejected. IO orders whose limit price is more aggressive than the NASDAQ market center Inside will be re-priced to the appropriate bid/ask price starting

from the pre-close information dissemination period start time. Reserve size will be consolidated with the display size by the system for execution purposes.

All executions performed during the Closing Cross are subject to auto-ex only. No order delivery will be performed. All auto-ex participants will participate in the Closing Cross process by default. They are not allowed to opt out. Delivery MPs are allowed to indicate their participation in the Closing Cross or not.

On regular trading days, OC order entry can be entered at 09:30:01 a.m. and will not be accepted after 3:50 p.m. IO orders can be entered at 3:30 p.m. and will not be accepted after 4:00 p.m. OC and IO orders are not displayable and are not included in the display quote (attributable and non-attributable) and inside calculations. Please note that these times do not apply to early close days.

At 3:50 p.m., NASDAQ starts calculating and disseminating the imbalance information, halts order entry, order cancels, and order cancel/replace orders for regular OC orders, and halts order cancels for IO orders.

3.3.5   Behavior of IOC, IOX, DAY, and DAYX Orders

If order is submitted:	IOC order	IOX order	DAY order	X (DAYX) Order
Session Open **7:30 a.m. - 8:00 a.m.**	Pended & put in queue until market open at 9:30.	Rejected.	Pended & put in queue until market open at 9:30.	Put on the book & able to lock or cross other X orders or quotes until pre-market session at 8:00.
Pre-Market Session **8:00 a.m. - 9:25 a.m.**	Pended & put in queue until market open at 9:30.	Either executed or rejected as non-executable.	Pended & put in queue until market open at 9:30.	Either executed or put on the book.
Pre-Open Session **9:25 - 9:30 a.m.**	Pended & put in queue until market open (9:30).	Either executed or rejected as non-executable.	Pended & put on a queue until market open (9:30).	Either executed or put on the book.
9:30 a.m. - market close (typically 4:00 p.m.)	Either executed or rejected as non-executable.	Acts as IOC. Either executed or rejected as non-executable.	Either executed or put on the book.	Either executed or put on the book.
After Market Close	Rejected.	Rejected.	Rejected.	Rejected.

4   Message Formats

The following tables describe NASDAQ's special handling or requirements for each of the supported FIX messages.

4.1   Standard Messages

All inbound messages will begin with a standard header and end with a standard footer.

4.1.1   Header Inbound to NASDAQ

Tag	Field Name	Req'd	NASDAQ Implementation
8	BeginString	Y	FIX.4.2, unencrypted, must be first field in the message.
9	BodyLength	Y	Unencrypted, must be second field in the message.
34	MsgSeqNum	Y	Integer message sequence number.
35	MsgType	Y	Unencrypted, must be third field in the message. See section 3.1.1 for supported message types.
43	PossDupFlag	N	Required for retransmissions. Indicates possible retransmission of message with this sequence number Valid values: Y = Possible duplicate N = Original transmission
49	SenderCompID	Y	To be supplied by Member. This is your 4-character ID assigned to you by NASDAQ as part of your NASDAQ connectivity. For service bureau on behalf ofs, this tag contains the service bureau's company ID. See section 3.2.10.
50	SenderSubID	Y (NASDAQ)	User ID must be supplied here. NASDAQ assigns this ID to you as part of your NASDAQ connectivity. For service bureau on behalf ofs, this tag contains the service bureau's stub I1I2. See section 3.2.10.
52	SendingTime	Y	YYYYMMDD-HH:MM:SS Currently, this tag is not functional.
56	TargetCompID	Y	NSDQ
57	TargetSubID	Y	1-character indicator to indicate destination system within NASDAQ. S = NASDAQ market center trading If tag 57 is any other value, NASDAQ will reject.

Tag	Field Name	Req'd	NASDAQ Implementation
90	SecureDataLen	N	Not supported in initial release. Encrypted length. Required to identify any such section of the message. See the FIX specifications.
91	SecureData	N	Not supported in initial release. See the FIX specifications.
97	PossResend	N	This tag is required if the message is being resent and is a possible duplicate of a different message sequence number.
115	OnBehalfOfCompID	N	You can use this field to submit your customer's MPID. This value will be returned to you in tag 128 on the outbound message. Please note that while it is possible for you submit a chain of transactions with inconsistent values for this tag in different messages, you are strongly advised not to do so. For broker dealer on behalf ofs, this tag contains the customer's MPID. See section 3.2.9 For service bureau on behalf ofs, this tag contains the individual customer's MPID. See section 3.2.10.
116	OnBehalfOfSubID	N	You can use this field to submit your customer's I1I2. This value will be returned to you in tag 129 on the outbound message. Please note that while it is possible for you submit a chain of transactions with inconsistent values for this tag in different messages, you are strongly advised not to do so. For broker dealer on behalf ofs, this tag contains the customer's MPID. See section 3.2.9. For service bureau on behalf ofs, this tag contains the individual customer's I1I2. See section 3.2.10.
122	OrigSendingTime	N	YYYYMMDD-HH:MM:SS Required for message resends.

4.1.2   Trailer Inbound to NASDAQ

Tag	Field Name	Req'd	NASDAQ Implementation
10	CheckSum	Y	See FIX specifications.

4.1.3   Header Outbound from NASDAQ

Tag	Field Name	Req'd	NASDAQ Implementation
8	BeginString	Y	FIX.4.2, unencrypted, must be first field in the message.
9	BodyLength	Y	Unencrypted, must be second field in the message.
34	MsgSeqNum	Y	See the FIX specifications.
35	MsgType	Y	Unencrypted, must be third field in the message. Refer to Supported Message types.
43	PossDupFlag	N	Required for retransmissions. See the FIX specifications.
49	SenderCompID	Y	Will hold "NSDQ".
50	SenderSubID	N	1-character indicator to denote which destination system within NASDAQ was involved. S = NASDAQ market center
52	SendingTime	Y	YYYYMMDD-HH:MM:SS Please note that this time is the time the message left NASDAQ's FIX application. It has no relevancy to execution time, reject time, or cancel time in the destination systems.
56	TargetCompID	Y	From 49 on the original inbound message.
57	TargetSubID	Y	From 50 on the original inbound message.
90	SecureDataLen	N	Not supported in initial release. Encrypted length. Required to identify any such section of the message. See the FIX specifications.
91	SecureData	N	Not supported in initial release. See the FIX specifications.
115	OnBehalfOfCompID	N	This field will not be populated. See tag 128.
116	OnBehalfOfSubID	N	This field will not be populated. See tag 129.
122	OrigSendingTime	N	YYYYMMDD-HH:MM:SS. Required for message resends.
128	DeliverToCompID	N	Your MPID as stated in tag 115 in the inbound message is returned to the service bureau in this tag. Please see the explanation after this table. For service bureau on behalf of messages, this field contains the service bureau's customer's MPID.
129	DeliverToSubID	N	Your I1I2 as stated in tag 116 in the inbound header is returned to the service bureau in this tag. Please see the explanation below. For service bureau on behalf of messages, this

Tag	Field Name	Req'd	NASDAQ Implementation
			field contains the service bureau's customer's I1I2.

Sent from A to B via Q:

      If A sends to Q, then:
            SenderCompID = A
            TargetCompID = Q
            DeliverToCompID = B

      If Q sends to B, then:
            SenderCompID = Q
            OnBehalfOfCompID = A
            TargetCompID = B
            OnBehalfOfSendingTime = A's time

B responds to A via Q:

      If B sends to Q, then:
            SenderCompID = B
            TargetCompID = Q
            DeliverToCompID = A

      If Q sends to A, then:
            SenderCompID = Q
            OnBehalfOfCompID = B
            TargetCompID = A
            OnBehalfOfSendingTime = B's time

4.1.4   Trailer Outbound from NASDAQ

Tag	Field Name	Req'd	NASDAQ Implementation
10	CheckSum	Y	See FIX specifications.

4.1.5   Session Reject

Tag	Field Name	Req'd	Comments
	Standard Header		`MsgType` = 3
45	RefSeqNum	Y	`MsgSeqNum` of Rejected message
58	Text	Y (NASDAQ)	Where possible, coded message that includes an indicator and text to explain reason for rejection. 0001 Invalid tag number 0002 Required tag missing 0003 Tag not defined for this message type 0004 Undefined Tag 0005 Tag specified without a value 0006 Value is incorrect (out of range) for tag 0007 Incorrect data format for value 0009 Signature problem 0010 Tag CompID problem 0011 SendingTime accuracy problem 0012 Invalid value for MsgType tag
371	RefTagId	N	The tag number, if appropriate, being referenced in tag 373.
372	RefMsgType	N	The message type, tag 35, of the FIX message being referenced.
373	SessionRejectReason	Y (NASDAQ)	As per FIX specifications, the reason for the reject: Valid values: 0 = Invalid tag number 1 = Required tag missing 2 = Tag not defined for this message type 3 = Undefined Tag 4 = Tag specified without a value 5 = Value is incorrect (out of range) for this tag 6 = Incorrect data format for value 7 = Decryption problem 8 = Signature problem 9 = CompID problem 10 = SendingTime accuracy problem 11 = Invalid MsgType
5149	Memo	N	This tag will contain the text in the message that is being rejected.
	Standard Trailer		

4.2   Administrative Messages

4.2.1   Heartbeat

Tag	Field Name	Req'd	Comments
	Standard Header	Y	`MsgType` = 0
112	TestReqID	N	Required when the heartbeat is in response to a Test Request. It is the `TestReqID` received from `TestRequest` message.
	Standard Trailer	Y	

4.2.2   Logon

After establishing your TCP connection with NASDAQ FIX, a Logon must be the first message that you send. NASDAQ will respond with its own Logon. You must wait for that Logon before sending additional messages. Messages received without a prior logon will be rejected with a "Please Logon" message.

Tag	Field Name	Req'd	Comments
	Standard Header	Y	`MsgType` = A
95	RawDataLength	N	
96	RawData	N	
98	EncryptMethod	Y	Must be 0.
108	HeartBtInt	Y	NASDAQ recommends an interval between 30-60 seconds. If you submit a value of less than 30 seconds, the logon will be rejected.
	Standard Trailer	Y	

4.2.3   Test Request

The `HeartBtInt` that is specified in the Logon message will be used to make sure that your connection is alive and functioning. If NASDAQ detects inactivity for a period longer than the `HeartBtInt` + 1 second, we will send a Test Request to determine if you are still active. If after another `HeartBtInt`, there is still no activity, NASDAQ will send another test request.   If there is still no activity after this additional `HeartBtInt`, NASDAQ will immediately send a logout message and the connection will be closed. It is expected that similar logic will be used on your side in order to detect host activity.

Tag	Field Name	Req'd	Comments
	Standard Header	Y	`MsgType` = 1
112	TestReqID	Y	Date/Time combination

Tag	Field Name	Req'd	Comments
	Standard Trailer	Y	

4.2.4 Resend Request

Tag	Field Name	Req'd	Comments
	Standard Header	Y	`MsgType` = 2
7	BeginSeqNo	Y	Beginning sequence number of Requested Message
16	EndSeqNo	Y	Ending sequence number of Requested Message
	Standard Trailer	Y	

4.2.5 Sequence Reset

Tag	Field Name	Req'd	Comments
	Standard Header	Y	`MsgType` = 4
36	NewSeqNum	Y	Next expected sequence number
123	GapFillFlag	N	
	Standard Trailer	Y	

4.2.6 Logout

Logouts will occur as a normal end of day routine but may also occur as a result of inactivity. It is the your responsibility to logout prior to 5:00 p.m. each trading day.

Tag	Field Name	Req'd	Comments
	Standard Header	Y	`MsgType` = 5
58	Text	N	
	Standard Trailer	Y	

4.3   Application Messages

4.3.1   Inbound to NASDAQ

Note: An invalid FIX tag on an inbound message will result in no response.

4.3.1.1 New Order – Single

You use this message to send orders to NASDAQ.   You will receive either an Order Acknowledgement or a reject message in response.

Tag	Field Name	Req'd	Comments
	Standard Header	Y	`MsgType` = D
1	Account	N	Account mnemonic as agreed between broker and institution. Limited to 20 characters.
11	ClOrdID	Y	Must be unique for each order. Limited to 20 characters.
15	Currency	N	Reserved for future use.
18	ExecInst	N	Valid values: E = Do Not Increase (DNI) F = Do Not Reduce (DNR) R = regular pegged to NASDAQ Inside P = reverse pegged to NASDAQ Inside H = regular pegged to NBBO (default) (Production, Routing 2, 7/11) Q = reverse pegged to NBBO (Production, Routing 2, 7/11) You may enter more than one value in this tag, separated by a space. For example: 18=E F R You cannot enter any combination of R, P, H, and Q. If this tag is not present and 59 = 1, then your action is not subject to corporate action.
21	HandlInst	Y	Valid value: 1 = automated execution order, private, no broker intervention
22	IDSource	N	Reserved for future use.
38	OrderQty	Y	For NMS orders, acceptable values range from 1 to 999999. No commas, decimals, or spaces are allowed, nor are negative numbers. This value represents the total Order Quantity. If `MaxFloor` (Tag 111) is not present, the display quantity will be set to the Order Quantity. If `MaxFloor`

Tag	Field Name	Req'd	Comments
			(Tag 111) is present, the display quantity will be set to the Max Floor size and the reserve size will be set to the difference between Order Quantity and `MaxFloor`). (Order Quantity – `MaxFloor`). To enter an odd lot: Enter total order quantity in `OrderQty` (Tag 38) To enter an order with reserve: Enter total order quantity (display + reserve) in `OrderQty` (Tag 38). Enter display quantity in `MaxFloor` (Tag 111). The order's display quantity will be set to Max Floor. Reserve size will be set to (Order Quantity – `MaxFloor`). Refresh size will be set to Max Floor. To enter an order without reserve: Enter total order quantity in `OrderQty` (Tag 38). Do not include `MaxFloor` (Tag 111) in the message. For exchange-listed securities, only round lot multiples and mixed lots are allowed. Odd lots are not allowed and will be rejected if entered. An order submitted to ITS must be in round lots.
40	OrdType	Y	Valid Values: 1 = market 2 = limit P = pegged If tag 40 contains any other value, NASDAQ will reject the order. Exchange-listed security orders cannot be pegged. Please see note at the end of this table.
44	Price	N	Required if tag 40 = 2. 1-10 character decimal price. "12.34" is the correct presentation of twelve dollars and thirty-four cents. If tag 40 = 1 or 5 and tag 44 is present, NASDAQ will reject the order. If tag 40 = P and tag 44 is present, then this tag will be treated as the Peg Cap Price.
48	SecurityID	N	Reserved for future use.
54	Side	Y	Valid Values: 1 = buy 2 = sell 5 = sell short

Tag	Field Name	Req'd	Comments
			6 = sell short exempt If tag 54 is any other value, NASDAQ will reject.
55	Symbol	Y	1-14 character security identifier. Spaces, periods, commas are not allowed. All incoming messages will send the symbol as entered. If the symbol is sent in lower case, then NASDAQ will reject it. This field will contain the base listed symbol only for listed securities. See SymbolSfx [65] field for additional information about the security.
59	TimeInForce	N	Valid values: 0= DAY (default) 1 = GTC 2 = At the Opening (OPG) 3 = Immediate or Cancel (IOC) 5 = GTX 7 = At the Close If tag 59 contains any other value, then NASDAQ will reject it. NASDAQ automatically converts MKT orders to IOC. X and IOX orders are supported. Please see the chart in section 3.3.5 to understand the behavior of these orders. In order to create an IOX order, this tag 59 should be coded with a "3" while tag 336 is coded with an X. In order to create an X order, this tag 59 should be coded with a "0" while tag 336 is coded with an X. Please see note at the end of this table.
60	TransactTime	Y	The time that you released this request. If NASDAQ FIX receives a New Order Single that is more than 120 seconds old, the transaction will be rejected. That is, if tag 60 is more than 120 seconds older than the NASDAQ FIX engine's GMT, then the order is rejected with a 103=4. It is important that you are aware of possible variances between our time stamp and your time stamp. NASDAQ's clocks are synchronized with the Global Positioning Satellite that is maintained by the Department of Defense.

Tag	Field Name	Req'd	Comments
65	SymbolSfx	N	This field will contain only the additional information about the security (e.g. preferred, warrants, etc.) for listed securities. This additional information must be in CMS format and is uppercase. No delimiters are allowed in this tag. For example, security "OXY PRB" would be formatted as follows: `Symbol` [55]: OXY `SymbolSfx` [65]: PRB
76	ExecBroker	N	If a give-up MPID is to be indicated to NASDAQ market center, place the MPID here. Give-Up trades are prohibited through the ITS system for exchange-listed securities.
99	StopPx	N	Reserved for future use.
100	ExDestination	N	This tag indicates the execution destination for your order. If this tag is not present, then no preference exists and the order may execute with both NASDAQ and up to three exchanges. The order will execute within the price level in NASDAQ first, then it will route to an exchange. For NMS securities (Production, Routing 2, 7/11), the allowed values are: A = American Stock Exchange B = Boston Stock Exchange C = Cincinnati Stock Exchange M = Chicago Stock Exchange N = New York Stock Exchange O = NASDAQ (executes only in NASDAQ without trading through an exchange's quote) P = ARCA/EX Pacific Stock Exchange W = Chicago Board Options Exchange (CBOE) X = Philadelphia Stock Exchange Y = Attain (Production, Routing 2, 7/11) Z = Instinet (Production, Routing 2, 7/11) blank = executes with both NASDAQ and an Exchange (default) For Exchange-listed securities, the allowed values are: A = American Stock Exchange B = Boston Stock Exchange C = Cincinnati Stock Exchange

Tag	Field Name	Req'd	Comments
			M = Chicago Stock Exchange N = New York Stock Exchange O = NASDAQ (executes only in NASDAQ without trading through an exchange's quote) P = ARCA/EX Pacific Stock Exchange W = Chicago Board Options Exchange (CBOE) X = Philadelphia Stock Exchange blank = executes with both NASDAQ and an Exchange (default)
111	MaxFloor	N	Optional 1-6 character field indicating the display quantity and refresh quantity. Must be in shares in round lot multiples. Example 1 - New Order Entered with Max Floor: In FIX New Order Single Message `OrdQty` = 10000 and Max Floor = 1000. In NASDAQ market center, the display quantity = 1000, Reserve Quantity = 9000 and Refresh Quantity = 1000. Example 2 - New Order Entered without Max Floor: In FIX New Order Single Message `OrdQty` = 10000.In NASDAQ market center, the display quantity = 10000, Reserve Quantity = 0 and Refresh Quantity = 0.
211	PegDifference	N	.01 - .99 allowed for regular and reverse pegged.
336	TradingSessionID	N	Values are: P = Regular market hours (default) X = Regular and extended trading hours
388	DiscretionInst	N	Required only if tag 389 is present. Code to identify the price that a `DiscretionOffset` is related to and should be mathematically added to. NASDAQ supports only a value of 0 = related to display price.
389	DiscretionOffset	N	If present, this field implies a discretionary order. This value (.01-.99) is applied to the display price to establish the price range within which the discretionary order may be executed.
440	ClearingAccount	N	1-4 character numeric clearing number. Orders preferenced to ITS exchanges must be cleared through the primary clearing arrangement.

Tag	Field Name	Req'd	Comments
528	OrderCapacity	N	Valid values: A = Agency P = Principal R = Riskless Principal If tag 528 is anything else, NASDAQ will reject the order.
5149	Memo	N	Free format, 60-character text field. Single and double quotes, pipes, and carets are not allowed. This text cannot be changed in an order modify message.
9211	SMAttribFlag	N	Indicates whether the order should be anonymous or not. Non-attributable = anonymous Y = attributable (default) N = pre-trade and post-trade non-attributable ("SIZE") P = pre-trade non-attributable
9212	SMAIQFlag	N	This value is used to specify whether internalization is allowed on this order. Keep in mind that AIQ means *anti*-internalization. I = allow this order to match orders with same MPID. Y = never allow internalization. Orders with the same MPID will not match with this order.
9214	SMBnchdFlag	N	For NMS orders, a 1-character indicator, B, for bunched orders. This tag is passed back on execution reports.
9233	ComplResp	N	For exchange-listed securities, this field contains the complaint ID (ITS reference number) when an order being preferred to an exchange is to satisfy a complaint. The ID number is obtained from NASDAQ Market Watch as part of our notification of the complaint to the participant.
9234	BlkOrdFlag	N	For exchange-listed securities, allows a participant to submit a block order, indicated by a 'Y' in this field, The flag is applicable only if it is indicated on an ITS commitment. It will be ignored if the order is preferred to a security participant or to only exchange-listed securities. Currently, two reasons exist to use this tag: 1. It may indicate an order has a sizeable quantity, 10,000 shares or more, or a large order value, $200,000 or greater. It may also

Tag	Field Name	Req'd	Comments
			indicate that the order is away from the inside.
			2. It may indicate that the commitment may be in response to a complaint received via ITS, and the order has to be executed at the block price to satisfy the complaint.
9307	PfdMktMkr	N	For both NMS and exchange-listed securities, if you are preferencing this order to a particular Market Maker at the inside, place their MPID here. An order entered without preferences will be routed to the ITS system if it is marketable against an exchange's quote. An Order Entry participant can direct only a preferenced order to a specific exchange-listed security participant or enter an order that is exchange-listed only (the NASDAQ exchange) to access exchange-listed market participants only. OE firms are prohibited to trade with ITS participants.
9376	SMExecAlgorFlag	N	For NMS orders, value that indicates which execution algorithm is to be used. A = super-aggressive H = thru order I = imbalance only P = summary order T = price/time (default) U = auto-ex Allowed values for exchange-listed securities are: T = price/time S = trading sweep for exchange-listed securities The price/time algorithm (T) is used when your order is matched at a price level and it goes against crossing orders on a pure time basis. That is, those that were there first, get hit first. The price/time algorithm is used most frequently. Your order will cross with NASDAQ first and if the order is marketable, then go out to an alternate exchange to seek fill. If order is not marketable, then post residual in NASDAQ book. NB: NASDAQ presumes that unless otherwise instructed, all orders are routable. An auto-ex order (U) will execute only against automatic execution participants that do not charge an access fee in the NASDAQ Market Center book.

Tag	Field Name	Req'd	Comments
			The Imbalance-Only algorithm (I) identifies specific On Open or On Close orders that are liquidity-providing orders intended to offset a buy/sell imbalance during the opening and closing cross auctions.
			The sweep algorithm (S) allows participants the option to trade through the BBO when executing their exchange-listed security orders. A participant is allowed to select the "S" algorithm only if it has an open/valid quotation in the security. This option is applicable if either the order is preferenced to an exchange-listed security market participant or the order is an exchange-listed security only order.
	Standard Trailer	Y	

Note: NASDAQ will still support an alternative means of coding *at the close* orders. If desired, you may code tag 40 to include the values, 5 = Market on Close (MOC) and B = Limit on Close (LOC). Please note that if this tag = 5 or B and tag 59 contains any value, then we will ignore the value coded in 59. This is not the preferred means of coding *at the close* order types, but it is accepted.

4.3.1.2 Order Cancel Request

You use this message to cancel orders that you have sent to NASDAQ. NASDAQ will always return both a Pending Cancel when the inbound cancel request is received by NASDAQ FIX, and either an Accepted Cancel or a Rejected Cancel after the cancel is acted upon by the destination system. We intend to send the Pending Cancel message before the Cancel Acknowledgement message, but that sequence is not guaranteed. NASDAQ views a cancel request as a request to cancel any remaining quantity on an order. As such, any value passed in tag 38 in a cancel request is superfluous.

Tag	Field Name	Req'd	Comments
	Standard Header	Y	`MsgType` = F
1	Account	N	Account mnemonic as agreed between broker and institution. Limited to 20 characters. The sum of tags 1 and 11 cannot exceed 19 characters.
11	ClOrdID	Y	This is your new and unique ID for this request. Limited to 20 characters.
37	OrderID	N	This is NASDAQ's reference number for the order to be canceled. If you do not supply this number, then NASDAQ will supply it for you.
38	OrderQty	N	NASDAQ will always cancel any remaining quantity in response to a cancel request.
41	OrigClOrdID	Y	This is your unique id of the original order, the order to be canceled. Limited to 20 characters.
54	Side	Y	Must be the same as the side of the original order.
55	Symbol	Y	Must be the same as the symbol of the original order. All incoming messages will send the symbol as entered. If the symbol is sent in lower case, then NASDAQ will reject it. For exchange-listed securities, this field will contain the base listed symbol only. See `SymbolSfx` [65] field for additional information about the security.
60	TransactTime	Y	The time that you released this request.
65	SymbolSfx	N	For exchange-listed securities, this field will contain only the additional information about the security (e.g. preferred, warrants, etc.). This additional information must be in CMS format and is uppercase. No delimiters are allowed in this tag. For example, security "OXY PRB" would be formatted as follows: `Symbol` [55]: OXY `SymbolSfx` [65]: PRB

Tag	Field Name	Req'd	Comments
125	CxlType	N	Not used. Whereas this was a required tag in earlier versions of FIX, this tag is no longer used. If it is present on any cancel requests inbound to NASDAQ, we will ignore it.
5149	Memo	N	Free format, 60-character text field. Single and double quotes, pipes, and carets are not allowed.
	Standard Trailer	Y	

4.3.1.3 Cancel/Replace Request (Order Modification Request)

You use this message to cancel/replace orders that you have sent to NASDAQ. NASDAQ will return both a Pending Cancel/Replace, when the inbound cancel request is received by NASDAQ FIX, and either an Accepted Cancel/Replace or a Rejected Cancel/Replace after the cancel is acted upon by the destination system.

Tag	Field Name	Req'd	Comments
	Standard Header	Y	`MsgType` = G
1	Account	N	Account mnemonic as agreed between broker and institution. Limited to 20 characters
11	ClOrdID	Y	This is your new and unique ID for this request. Limited to 20 characters.
18	ExecInst	N	As per the original New Order Single.
21	HandlInst	Y	Valid value: 1 = automated execution order, private, no broker intervention
37	OrderID	N	This is NASDAQ's reference number for the order to be canceled. If you have not taken an action against the original order, then this number is the ID as passed back in the original order acknowledgement. If you have taken an action against the original order, such as a cancel/replace, then this number is the ID as passed back in the associated acknowledgement message.
38	OrderQty	Y	This value represents the new total Order Quantity. This new order quantity will be compared to the original Order Quantity to determine whether to increment or decrement the order. For NMS orders, acceptable values range from 1 to 999999. Exchange-listed security orders allow only round and mixed lots. If incrementing the order and the original `MaxFloor` is greater than 0, the Reserve Size will be increased. If incrementing the order and there is no original `MaxFloor`, the display quantity will be increased. If decrementing the order, the Display Quantity will be decreased. If the decrement quantity is greater than the display size and Reserve Size is greater than 0, Reserve Size will be decreased. If `MaxFloor` is specified on the `CxlRpl` and there was none on the original order, the Qty increment will be applied to Reserve and all subsequent Qty increments will be applied to Reserve. Please refer to the `MaxFloor` field description for further details.

Tag	Field Name	Req'd	Comments
40	OrdType	Y	Must be the same as the original order. Exchange-listed security orders do not allow pegged orders.
41	OrigClOrdID	Y	ClOrderID of the order to be canceled. (Original ClOrderID if order has not been replaced or ClOrderID of last Replace.)
44	Price	N	1-10 character decimal price. 12.34 is the correct presentation of twelve dollars and thirty four cents.
54	Side	Y	Must be the same as the side of the original order.
55	Symbol	Y	Must be the same as the symbol of the original order. All incoming messages will send the symbol as entered. If the symbol is sent in lower case, then we will reject it. For exchange-listed securities, this field will contain the base listed symbol only. See SymbolSfx [65] field for additional information about the security.
59	TimeInForce	N	Valid values: 0= DAY 1 = GTC 2 = At the Opening (OPG) 3 = Immediate or Cancel (IOC) 5 = GTX 7 = At the Close You may modify DAY to GTC and GTC to DAY only.
60	TransactTime	Y	The time that you released this request. If NASDAQ FIX receives a cancel/replace request that is more than 120 seconds old, the transaction will be rejected. That is, if tag 60 is more than 120 seconds older than the NASDAQ FIX engine's GMT, then the order is rejected with a 103=4. It is important that you are aware of possible variances between our time stamp and your time stamp. NASDAQ's clocks are synchronized with the Global Positioning Satellite that is maintained by the Department of Defense.
65	SymbolSfx	N	For exchange-listed securities, this field will contain only the additional information about the security (e.g. preferred, warrants, etc.). This additional information must be in CMS format and is uppercase. No delimiters are allowed in this tag. For example, security "OXY PRB" would be formatted as follows: Symbol [55]: OXY

Tag	Field Name	Req'd	Comments
			`SymbolSfx` [65]: PRB
76	ExecBroker	N	Must be the same as the `ExecBroker` of the original order. For exchange-listed securities, Give-Up trades are prohibited through the ITS system.
111	MaxFloor	N	Optional 1-6 character field indicating the new refresh quantity. Must be in shares in round lot multiples. The new Max Floor Size will update the Refresh Size. Example 1 – Cancel Replace Decrement: The FIX New Order Single was entered with the following values: `OrdQty` = 10000 `MaxFloor` = 1000 The order has the following values: Display Quantity = 1000 Reserve Quantity = 9000 Refresh Quantity = 1000 A FIX Cancel/Replace Message is entered with `OrdQty` = 8000. Since the Original Order Quantity is greater than Cancel/Replace Order Quantity, the order will be decremented by 2000 shares. The display quantity will be decremented by 1000 and the Reserve Quantity will be decremented by 1000. Then the order will be Refreshed by 1000 resulting in the following values: Display Quantity = 1000 Reserve Quantity = 7000 Refresh Quantity = 1000 Example 2 - Cancel Replace Increment with MaxFloor: The FIX New Order Single was entered with the following values: `OrdQty` = 10000 `MaxFloor` = 1000 The order has the following values: Display Quantity = 1000 Reserve Quantity = 9000 Refresh Quantity = 1000 A FIX Cancel/Replace Message is entered with `OrdQty` = 12000. Since the Original Order Quantity is less than Cancel/Replace Order Quantity, the order will be incremented by 2000 shares. Since the order has a `MaxFloor`, the reserve quantity will be incremented by 2000 resulting in the following values:

Tag	Field Name	Req'd	Comments
			Display Quantity = 1000 Reserve Quantity = 11000 Refresh Quantity = 1000 Example 3 - Cancel Replace Increment without MaxFloor: The FIX New Order Single was entered with the following values: OrdQty = 10000 The order has the following values: Display Quantity = 10000 A FIX Cancel/Replace Message is entered with OrdQty = 12000. Since the Original Order Quantity is less than Cancel/Replace Order Quantity, the order will be incremented by 2000 shares. Since the order does not have a MaxFloor, the display quantity will be incremented by 2000 resulting in Display Quantity = 12000.
211	PegDifference	N	Must be the same as the original order.
336	TradingSessionID	N	Must be the same as the original order.
5149	Memo	N	Free format, 60-character text field. Single and double quotes, pipes, and carets are not allowed. This text cannot be modified.
	Standard Trailer	Y	

Example 1: Cancel/Replace Decrement of 1 share resulting in a Mixed lot display quantity

The FIX New Order Single was entered with the following values:
OrdQty = 500
MaxFloor = 200

The order has the following values:
Display Quantity = 200
Reserve Quantity = 300
Refresh Quantity = 200

A FIX Cancel/Replace Message is entered with OrdQty = 499. Since the Original Order Quantity is greater than Cancel/Replace Order Quantity, display quantity will be decremented by 1 share (500 – 499) resulting in the following values:
Display Quantity = 199
Reserve Quantity = 300
Refresh Quantity = 200

When the display quantity is a mixed lot, the display size is rounded down to the nearest round lot on feeds and displays. In this case, the display size will be disseminated as 1 round lot.

Example 2: Cancel/Replace Decrement that causes a Refresh

The FIX New Order Single was entered with the following values:
OrdQty = 500
MaxFloor = 100

The order has the following values:
Display Quantity = 100
Reserve Quantity = 400
Refresh Quantity = 100

A FIX Cancel/Replace Message is entered with OrdQty = 450. Since the Original Order Quantity is greater than Cancel/Replace Order Quantity, display quantity will be decremented by 50 shares (500 – 450) resulting in the following values:
Display Quantity = 50
Reserve Quantity = 400
Refresh Quantity = 100

Because the display quantity is less than a round lot, the display quantity will be refreshed to a round lot resulting in the following values:
Display Quantity = 100
Reserve Quantity = 350
Refresh Quantity = 100

4.3.1.4 Order Status Request

You use this message to obtain an order's status. The tags below are the only tags considered by NASDAQ on this message. All other tags are ignored.

Tag	Field Name	Req'd	Comments
	Standard Header	Y	`MsgType` = H
11	ClOrdID	Y	This is your unique ID of the original order, the order whose status you are requesting.
37	OrderID	N	This is NASDAQ's reference number for the order whose status you are requesting, as passed back in the original order acknowledgement.
54	Side	Y	Must be the same as the side of the original order.
55	Symbol	Y	Must be the same as the symbol of the original order. All incoming messages will send the symbol as entered. If the symbol is sent in lower case, then we will reject it. For exchange-listed securities, this field will contain the base listed symbol only. See `SymbolSfx` [65] field for additional information about the security.
65	SymbolSfx	N	For exchange-listed securities, this field will contain only the additional information about the security (e.g. preferred, warrants, etc.). This additional information must be in CMS format and is uppercase. No delimiters are allowed in this tag. For example, security "OXY PRB" would be formatted as follows: `Symbol` [55]: OXY `SymbolSfx` [65]: PRB
5149	Memo	N	Free format, 60-character text field. Single and double quotes, pipes, and carets are not allowed.
	Standard Trailer	Y	

4.3.1.5 Complaint Message

Tag	Field	Req'd	Name/Meaning
	Standard Header	Y	MsgType = 8
1	Account	N	This field is limited to 20 characters.
6	AvgPx	Y	0.0
11	ClOrdID	N	This is your unique ID of the original order, the order whose status you are requesting.
14	CumQty	Y	0
17	ExecID	Y	0
20	ExecTransType	Y	Valid value: 0 = New
37	OrderID	Y	
39	OrdStatus	Y	0
54	Side	Y	As per New Order Single.
55	Symbol	Y	Stock market or exchange assigned symbol of a specific security. For exchange-listed securities, this symbol must represent a CQS security and must be in CMS format. For example: OXY PRB ROY PR
65	SymbolSfx	N	For exchange-listed securities, this field will contain only the additional information about the security (e.g. preferred, warrants, etc.). This additional information must be in CMS format and is uppercase. No delimiters are allowed in this tag. For example, security "OXY PRB" would be formatted as follows: Symbol [55]: OXY SymbolSfx [65]: PRB
100	ExDestination	N	A = American Stock Exchange B = Boston Stock Exchange C = Cincinnati Stock Exchange M = Chicago Stock Exchange N = New York Stock Exchange O = NASDAQ P = ARCA/EX Pacific Stock Exchange W = Chicago Board Options Exchange X = Philadelphia Stock Exchange Y = Attain Z = Instinet

Tag	Field	Req'd	Name/Meaning
150	ExecType	Y	
151	LeavesQty	Y	
5149	Memo	Q	Free format, 60-character text field to expand upon complaint code. Single and double quotes, pipes, and carets are not allowed.
9829	ComplaintCode	Q	91 = block trade through 92 = locked market 93 = lock/ship 94 = pre open report 95 = quote error 96 = quote change 97 = resend comm. 98 = trade through 99 = why cancel
	Standard Trailer	Y	

4.3.2 Outbound from NASDAQ

4.3.2.1 Order Acknowledgement

You will receive this message when NASDAQ FIX receives a New Order Single, and its destination system has accepted that order.

Tag	Field Name	Req'd	Comments
	Standard Header	Y	`MsgType` = 8
1	Account	N	This field is limited to 20 characters.
6	AvgPx	Y	0.0
11	ClOrdID	Y	NASDAQ FIX will return the Client Order ID, as submitted on the original New Order Single.
14	CumQty	Y	0
15	Currency	N	Not present in initial releases.
17	ExecID	Y	Uniquely generated by NASDAQ FIX, this is an identifier for this message.
18	ExecInst	N	As per New Order Single.
20	ExecTransType	Y	Valid value: 0 = New
37	OrderID	Y	NASDAQ's Order Reference number, as generated by its destination system.
38	OrderQty	Y	The order's original quantity.
39	OrdStatus	Y	Valid value: 0 = New
40	OrdType	N	As per the original New Order Single.
44	Price	N	As per the original New Order Single. If tag 40 = P and tag 44 is present, this tag is the Peg Cap Price.
54	Side	Y	As per the original New Order Single.
55	Symbol	Y	As per the New Order Single.
59	TimeInForce	N	As per the New Order Single.
65	SymbolSfx	N	As per the New Order Single.
111	MaxFloor	N	1-6 character field indicating the display quantity and refresh quantity. Must be in shares in round lot multiples. If MaxFloor = 0, then this tag will not be returned.
150	ExecType	Y	Valid value: 0 = New
151	LeavesQty	Y	For an Order Acknowledgement, Leaves Qty is equal to `OrderQty`.

Tag	Field Name	Req'd	Comments
211	PegDifference	N	As per original order.
336	TradingSessionID	N	NASDAQ will echo the value of the new order single message.
388	DiscretionInst	N	Code to identify the price a `DiscretionOffset` is related to and should be mathematically added to. NASDAQ supports only a value of 0 = related to display price. Required if `DiscretionOffset` is specified. This tag will be returned only if it was present in the original New Order Single.
389	DiscretionOffset	N	If present implies a discretionary order. This value (.01-.99) is applied to the display price to establish the price range within which the discretionary order may be executed. This tag will be returned only if it was present in the original New Order Single.
5149	Memo	N	This tag will contain the text included in the New Order Single.
	Standard Trailer	Y	

4.3.2.2 Execution/Trade Report

You will receive this message when your order has been executed.

Tag	Field Name	Req'd	Comments
	Standard Header	Y	`MsgType` = 8
1	Account	N	This field is limited to 20 characters.
6	AvgPx	Y	An average price is returned on Fills and Partial fills. The average price is computed using this formula: $AvgPx = [(AvgPx * CumQty) + (LastShares * LastPx)] / (LastShares + CumQty)$.
11	ClOrdID	Y	NASDAQ FIX will return the Client Order Id as submitted on the original New Order Single
14	CumQty	Y	Cumulative quantity executed against this order.
15	Currency	N	Not present in initial releases.
17	ExecID	Y	Uniquely generated by NASDAQ FIX, this is an identifier for this message.
18	ExecInst	N	As per the New Order Single.
19	ExecRefID	N	Not present in Execution reports for trade reports.
20	ExecTransType	Y	0 = New
31	LastPx	Y	Price of shares executed in this fill.
32	LastShares	Y	Number of shares executed in this fill.
37	OrderID	Y	NASDAQ's Order Reference number for the original order that is being executed, as generated by its destination system.
38	OrderQty	Y	The order's original quantity, or, as per State matrixes in FIX 4.2 specifications.
39	OrdStatus	Y	Valid values: 1 = Partially filled 2 = Filled
40	OrdType	N	As per the New Order Single.
41	OrigClOrdID	Y	`ClOrdID` of the first order in a Cancel Replace chain.
44	Price	N	As per the New Order Single.
54	Side	Y	As per the New Order Single.
55	Symbol	Y	As per the New Order Single.
59	TimeInForce	N	As per the New Order Single.
60	TransactTime	N	Time of the execution as per execution venue system.

Tag	Field Name	Req'd	Comments
65	SymbolSfx	N	As per the New Order Single.
76	ExecBroker	N	This tag echoes the value that was submitted in the incoming new order single.
111	MaxFloor	N	1-6 character field indicating the display quantity and refresh quantity. Must be in shares in round lot multiples. If MaxFloor = 0, then this tag will not be returned.
150	ExecType	Y	Valid values: 1 = Partial Fill 2 = Fill
151	LeavesQty	Y	Quantity left on the order, as per State Matrixes – Appendix D of FIX specifications. Note that in initial implementations, the Leaves quantity returned here is the sum of unexecuted display and reserve quantities.
211	PegDifference	N	As per the New Order Single.
336	TradingSessionID	N	As per the New Order Single.
375	ContraBroker	N	MPID. First field in repeating group. Required if NoContraBrokers > 0. This field will be present in the message if the OrdStatus = 1 or 2. For exchange-listed securities: 4-char MPID or 4-char exchange Exchange Values: American Stock Exchange = AMEX Boston Stock Exchange = BOSX Cincinnati Stock Exchange = CINN Chicago Stock Exchange = XMSE New York Stock Exchange = NYSE Pacific Stock Exchange = PACX Philadelphia Stock Exchange = PHLX
382	NoContraBrokers	N	Number of ContraBrokers repeating group instances. This field will be present in the message if the OrdStatus = 1 or 2.
388	DiscretionInst	N	Code to identify the price to which a DiscretionOffset is related and should be added. NASDAQ market center supports only a value of 0 = related to display price. Required if DiscretionOffset is specified. This tag will be returned only if it was present in the original New Order Single.

Tag	Field Name	Req'd	Comments
389	DiscretionOffset	N	If present implies a discretionary order. This value (.01-.99) is applied to the display price to establish the price range within which the discretionary order may be executed. This tag will be returned only if it was present in the original New Order Single.
440	ClearingAccount	N	1-4 character numeric clearing number.
5149	Memo	N	This tag will contain the text included in the New Order Single.
9231	TradeThruFlag	N	For exchange-listed securities, Y identifies when the order that corresponds to this trade report is traded through another market center.
9730	LiqProvFlg	Y	Required on trade reports, this indicates whether the execution of this order accessed liquidity or provided liquidity. Valid values: A = adds liquidity (provided) R = removes liquidity (accessor) I = during closing cross, adds liquidity D = during closing cross, removes liquidity S = during opening cross, adds liquidity E = during opening cross, removes liquidity B = routed accessor
9870	ReserveSize	N	Indicates the leaves quantity of the reserve size. Reserve size must be either in round lot multiples or in mixed lots. You may configure your system, so that you do not receive this tag.
9872	DisplaySize	N	Indicates the display quantity. You may configure your system, so that you do not receive this tag.
	Standard Trailer	Y	

4.3.2.3 Order Reject

You will receive this message when a New Order Single message is rejected. Tag 103, `OrdRejectReason`, and the `ExecType` =8 signify the fact that this message is a reject. NASDAQ will include tag 103.   Specific causes, i.e. more detailed explanations, will be conveyed by tag 58.   Although tag 58 is intended as text, NASDAQ will communicate reasoning via a series of codes, so as both to economize message length and to allow application decision on your part without the need for parsing text.

Tag	Field Name	Req'd	Comments
	Standard Header	Y	`MsgType` = 8
1	Account	N	This field is limited to 20 characters.
6	AvgPx	Y	0.0
11	ClOrdID	Y	NASDAQ FIX will return the Client Order ID as submitted on the original New Order Single.
14	CumQty	Y	Set to 0 for an Order Reject.
15	Currency	N	Not present in initial releases.
17	ExecID	Y	Uniquely generated by NASDAQ FIX, this is an identifier for this message.
18	ExecInst	N	As per the New Order Single.
20	ExecTransType	Y	0 = New
37	OrderID	Y	NASDAQ's Order Reference number, as generated by its destination system.
38	OrderQty	Y	The order's original quantity.
39	OrdStatus	Y	8 = Rejected
40	OrdType	N	As per the New Order Single.
44	Price	N	As per the New Order Single. If tag 40 = P and tag 44 is present, this tag is the Peg Cap Price.
54	Side	Y	As per the New Order Single.
55	Symbol	Y	As per the New Order Single.
58	Text	N	Where possible, a coded message to explain reason for rejection. Business reject and application reject codes are in section 7.
59	TimeInForce	N	If this tag was present in the original New Order Single, it will be returned here. Otherwise, this tag will not be returned.
65	SymbolSfx	N	As per the New Order Single.
103	OrdRejReason	N	Code to identify reason for order rejection. Valid values: 0 = Broker option 1 = Unknown symbol

Tag	Field Name	Req'd	Comments
			2 = Exchange closed 3 = Order exceeds limit 4 = Too late to enter 5 = Unknown Order 6 = Duplicate Order (e.g. dupe ClOrdID) 7 = Duplicate of a verbally communicated order 8 = Stale Order
111	MaxFloor	N	1-6 character field indicating the display quantity and refresh quantity. Must be in shares in round lot multiples. If MaxFloor = 0, then this tag will not be returned.
150	ExecType	Y	8 = Rejected
151	LeavesQty	Y	For an Order reject, Leaves Qty is equal to OrderQty.
211	PegDifference	N	As per the New Order Single.
388	DiscretionInst	N	Code to identify the price to which a DiscretionOffset is related and should be added. NASDAQ market center only supports a value of 0 = related to display price. Required if DiscretionOffset is specified. This tag will be returned only if it was present in the original New Order Single.
389	DiscretionOffset	N	If present implies a discretionary order. This value (.01-.99) is applied to the display price to establish the price range within which the discretionary order may be executed. This tag will be returned only if it was present in the original New Order Single.
5149	Memo	N	This tag will contain the text included in the New Order Single.
	Standard Trailer	Y	

4.3.2.4 Pending Cancel

You will receive this message in response to a Cancel Request. This message is followed by either an Accepted Cancel or a Rejected Cancel after the request has been acted upon. Although there is no guarantee of sequencing, the intent is to return the Pending Cancel before the Cancel Acknowledgement. It is, therefore, incumbent upon you to have cancel processing logic that anticipates this possibility.

Tag	Field Name	Req'd	Comments
	Standard Header	Y	`MsgType` = 8
1	Account	N	This field is limited to 20 characters.
6	AvgPx	Y	0.0
11	ClOrdID	Y	NASDAQ FIX will return the Client Order ID as submitted on the Cancel request.
14	CumQty	Y	For a pending cancel, this represents the current total executed quantity against this order when the cancel request was received. As per State Matrixes, Appendix D of FIX specifications.
15	Currency	N	Not present, in initial releases.
17	ExecID	Y	Uniquely generated by NASDAQ FIX, this is an identifier for this message.
18	ExecInst	N	As per the New Order Single.
20	ExecTransType	Y	For this pending message: 0 = New
37	OrderID	Y	NASDAQ's Order Reference number for the order attempting to be canceled, as generated by its destination system.
38	OrderQty	Y	The order's original quantity or from state matrixes in FIX 4.2 specifications.
39	OrdStatus	Y	Valid value: 6 = pending cancel
40	OrdType	N	As per the New Order Single.
41	OrigClOrdID	Y	Returns your unique ID of the order to be cancelled.
44	Price	N	As per the New Order Single. If tag 40 = P and tag 44 is present, this tag is the Peg Cap Price.
54	Side	Y	As per the New Order Single.
55	Symbol	Y	As per the New Order Single.
59	TimeInForce	N	As per the New Order Single.
65	SymbolSfx	N	As per the New Order Single.
111	MaxFloor	N	1-6 character field indicating the display quantity and refresh quantity. Must be in shares in round lot

Tag	Field Name	Req'd	Comments
			multiples. If MaxFloor = 0, then this tag will not be returned.
150	ExecType	Y	Valid values: 6 = pending cancel D = restated (`ExecutionRpt` sent unsolicited by sell side with `ExecRestatementReason` set)
151	LeavesQty	Y	For a pending cancel, this represents the current leaves quantity for this order when the cancel request was received.
211	PegDifference	N	As per the New Order Single.
336	TradingSessionID	N	As per the New Order Single.
388	DiscretionInst	N	Code to identify the price to which a `DiscretionOffset` is related and should be added. NASDAQ market center only supports a value of 0 = related to display price. Required if `DiscretionOffset` is specified. This tag will be returned only if it was present in the original New Order Single.
389	DiscretionOffset	N	If present implies a discretionary order. This value (.01-.99) is applied to the display price to establish the price range within which the discretionary order may be executed. This tag will be returned only if it was present in the original New Order Single.
5149	Memo	N	This tag will contain the text included in the Cancel Request.
	Standard Trailer	Y	

4.3.2.5 Accepted Cancel

You will receive this message in response to a Cancel Request, unless that request is rejected. The accepted cancel conveys that the remaining quantity or a portion thereof has been cancelled. NASDAQ presumes that a cancel request is for all remaining shares. NASDAQ may cancel part of the remaining quantity. This message is usually preceded by a Pending Cancel, although sequencing is not guaranteed.

Tag	Field Name	Req'd	Comments
	Standard Header	Y	`MsgType` = 8
1	Account	N	This field is limited to 20 characters.
6	AvgPx	Y	0.0 if no fills have occurred.
11	ClOrdID	Y	NASDAQ FIX will return the Client Order ID as submitted on the Cancel request.
14	CumQty	Y	For a cancel, this represents the total executed quantity against this order when the cancel occurred.
15	Currency	N	Not present in initial releases.
17	ExecID	Y	Uniquely generated by NASDAQ FIX, this is an identifier for this message.
18	ExecInst	N	As per the original New Order Single.
20	ExecTransType	Y	Valid value: 0 = New
31	LastPx	Y	Set to 0 for Accepted Cancels.
32	LastShares	Y	Set to 0 for Accepted Cancels.
37	OrderID	Y	NASDAQ's Order Reference number for the order attempting to be canceled, as generated by its destination system.
38	OrderQty	Y	The order's original quantity or from State matrixes as per FIX 4.2 specifications.
39	OrdStatus	Y	Valid value: 4 = Cancelled
40	OrdType	Y	As per the New Order Single.
41	OrigClOrdID	Y	Returns your unique ID of the order to be cancelled.
44	Price	N	As per the original New Order Single. If tag 40 = P and tag 44 is present, this tag is the Peg Cap Price.
54	Side	Y	As per the New Order Single.
55	Symbol	Y	As per the New Order Single.
58	Text	N	This tag is returned only for unsolicited cancels.
59	TimeInForce	N	As per the New Order Single.

Tag	Field Name	Req'd	Comments
65	SymbolSfx	N	As per the New Order Single.
111	MaxFloor	N	1-6 character field indicating the display quantity and refresh quantity. Must be in shares in round lot multiples. If MaxFloor = 0, then this tag will not be returned.
150	ExecType	Y	Valid value: 4 = Cancel
151	LeavesQty	Y	Will be zero in most cases, but in the case of order delivery scenarios as mentioned below, this may be non-zero in cases where tag 378 = 5.
211	PegDifference	N	As per the New Order Single.
388	DiscretionInst	N	Code to identify the price to which a `DiscretionOffset` is related and should be added. NASDAQ market center supports only a value of 0 = related to display price. Required if `DiscretionOffset` is specified. This tag will be returned only if it was present in the original New Order Single.
389	DiscretionOffset	N	If present implies a discretionary order. This value (.01-.99) is applied to the display price to establish the price range within which the discretionary order may be executed. This tag will be returned only if it was present in the original New Order Single.
5149	Memo	N	This tag will contain the text included in the Cancel Request.
9870	ReserveSize	N	Indicates the quantity of the reserve size. Reserve size must be either in round lot multiples or in mixed lots. You may configure your system, so that you do not receive this tag.
9872	DisplaySize	N	Indicates the display quantity. You may configure your system, so that you do not receive this tag.
	Standard Trailer	Y	

4.3.2.6 Rejected Cancel

NASDAQ FIX sends this message when a Cancel Request is rejected. We will include tag 102 in its Cancel Reject messages.   Specific causes will be detailed in tag 58.

Tag	Field Name	Req'd	Comments
	Standard Header	Y	`MsgType` = 9
11	ClOrdID	Y	NASDAQ FIX will return the Client Order Id as submitted on the Cancel request.
37	OrderId	Y	If `CxlRejReason`=1, then this tag will be populated with "None". Otherwise, this tag will contain NASDAQ's order reference number.
39	OrdStatus	Y	Order status after the cancel reject is applied.
41	OrigClOrdID	Y	Returns your unique id of the original order – the order that was attempted to be canceled.
58	Text	N	Where possible, coded message to explain reason for rejection. Business reject and application reject codes are in section 7.
76	ExecBroker	N	Not used.
102	CxlRejReason	N	Code to identify reason for cancel rejection. Valid values: 0 = Too late to cancel 1 = Unknown order 2 = Broker Option 3 = Order already in Pending Cancel or Pending Replace status
5149	Memo	N	This tag will contain the text included in the Cancel Request.
	Standard Trailer	Y	

4.3.2.7 Pending Cancel/Replace

You will receive this message in response to a Cancel/Replace Request. Either an accept or reject message follows after the request has been acted upon by the destination system.

Tag	Field Name	Req'd	Comments
	Standard Header	Y	`MsgType` = 8
1	Account	N	This field is limited to 20 characters.
6	AvgPx	Y	0.0
11	ClOrdID	Y	NASDAQ FIX will return the Client Order Id as submitted on the Cancel/replace request.
14	CumQty	Y	For a pending cancel/replace, this represents the current total executed quantity against this order when the cancel request was received. As per State Matrixes – Appendix D of FIX specifications.
15	Currency	N	Not present, in initial releases
17	ExecID	Y	Uniquely generated by NASDAQ FIX, this is an identifier for this message.
18	ExecInst	N	As per the original New Order Single.
20	ExecTransType	Y	For this pending message: 0 = New
37	OrderID	Y	NASDAQ's Order Reference number for the order attempting to be canceled/replaced, as generated by its destination system.
38	OrderQty	Y	The order's original quantity, or, as per State matrixes as per FIX 4.2 specifications.
39	OrdStatus	Y	Valid value: E = pending replace
40	OrdType	N	As per the New Order Single.
41	OrigClOrdID	Y	Returns your unique id of the original order – the order to be canceled.
44	Price	N	If tag 40 = P and tag 44 is present, this tag is the Peg Cap Price.
54	Side	Y	As per the New Order Single.
55	Symbol	Y	As per the New Order Single.
59	TimeInForce	N	As per the New Order Single.
65	SymbolSfx	N	As per the New Order Single
111	MaxFloor	N	1-6 character field indicating the display quantity and refresh quantity. Must be in shares in round lot multiples. If MaxFloor = 0, then this tag will not be returned.

Tag	Field Name	Req'd	Comments
150	ExecType	Y	Valid value: E = Pending Replace
151	LeavesQty	Y	For a pending cancel/replace, this represents the current leaves quantity for this order when the cancel/replace request was received. Note that in initial implementations, the Leaves quantity returned here is the sum of unexecuted display, reserve, and delivery quantities.
211	PegDifference	N	As per the New Order Single.
388	DiscretionInst	N	Code to identify the price to which a `DiscretionOffset` is related and should be added. NASDAQ market center supports only a value of 0 = related to display price. Required if `DiscretionOffset` is specified. This tag will be returned only if it was present in the original New Order Single.
389	DiscretionOffset	N	If present implies a discretionary order. This value (.01-.99) is applied to the display price to establish the price range within which the discretionary order may be executed. This tag will be returned only if it was present in the original New Order Single.
5149	Memo	N	This tag will contain the text included in the Cancel/Replace Request.
	Standard Trailer	Y	

4.3.2.8 Accepted Cancel/Replace

You will receive this message in response to a Cancel/Replace Request, unless that request is rejected. This message is usually preceded by a Pending Cancel/Replace, although sequencing is not guaranteed.

Tag	Field Name	Req'd	Comments
	Standard Header	Y	`MsgType` = 8
1	Account	N	This field is limited to 20 characters.
6	AvgPx	Y	0.0
11	ClOrdID	Y	NASDAQ FIX will return the Client Order ID as submitted on the Cancel/Replace request.
14	CumQty	Y	As per State Matrixes, Appendix D of FIX specifications.
15	Currency	N	Not present in initial releases.
17	ExecID	Y	Uniquely generated by NASDAQ FIX, this is an identifier for this message.
18	ExecInst	N	Not present in initial releases.
19	ExecRefID	N	Reference ID.
20	ExecTransType	Y	Valid value: 0 = New
31	LastPx	N	0 for Cancel Replace acknowledgements.
32	LastShares	N	0 for Cancel Replace acknowledgements.
37	OrderID	Y	NASDAQ's Order Reference number for the order attempting to be cancel/replaced, as generated by its destination system.
38	OrderQty	Y	The order's original quantity, or, as per State matrixes as per FIX 4.2 specifications.
39	OrdStatus	Y	As per State matrixes in FIX 4.2 specifications.
40	OrdType	N	As per the New Order Single.
41	OrigClOrdID	Y	Unique ID of the order to be cancel/replaced.
44	Price	N	1-10 character decimal price. 12.34 is the correct presentation of twelve dollars and thirty four cents.
54	Side	Y	As per the New Order Single.
55	Symbol	Y	As per the New Order Single.
59	TimeInForce	N	As per the New Order Single.
65	SymbolSfx	N	As per the New Order Single.
111	MaxFloor	N	1-6 character field indicating the display quantity and refresh quantity. Must be in shares in round lot multiples. If MaxFloor = 0, then this tag will not be

Tag	Field Name	Req'd	Comments
			returned.
150	ExecType	Y	As per State matrixes in FIX 4.2 specifications.
151	LeavesQty	Y	The leaves quantity will be returned representing this order's leaves quantity as of the processing of this cancel replace. Note that in initial implementations, the Leaves quantity returned here is the sum of unexecuted display, reserve, and delivery quantities.
211	PegDifference	N	As per New Order Single.
388	DiscretionInst	N	Code to identify the price to which a `DiscretionOffset` is related and should be added. NASDAQ market center supports only a value of 0 = related to display price. Required if `DiscretionOffset` is specified. This tag will be returned only if it was present in the original New Order Single.
389	DiscretionOffset	N	If present implies a discretionary order. This value (.01-.99) is applied to the display price to establish the price range within which the discretionary order may be executed. This tag will be returned only if it was present in the original New Order Single.
5149	Memo	N	This tag will contain the text included in the Cancel/Replace Request.
9870	ReserveSize	N	Indicates the quantity of the reserve size. Reserve size must be either in round lot multiples or in mixed lots. You may configure your system, so that you do not receive this tag.
9872	DisplaySize	N	Indicates the display quantity. You may configure your system, so that you do not receive this tag.
	Standard Trailer	Y	

4.3.2.9 Rejected Cancel/Replace

You will receive this message when a Cancel/Replace is rejected. NASDAQ will include tag 102. Specific causes will be detailed in tag 58.

Tag	Field Name	Req'd	Comments
	Standard Header	Y	`MsgType` = 9
11	ClOrdID	Y	NASDAQ FIX will return the Client Order ID as submitted on the Cancel/Replace request.
37	OrderId	Y	If `CxlRejReason`=1, then this tag will be populated with "None". Otherwise, this tag will contain NASDAQ's order reference number.
39	OrdStatus	Y	Order status after the cancel/replace reject is applied.
41	OrigClOrdID	Y	Returns your unique ID of the order that was attempted to be replaced.
58	Text	N	Where possible, coded message to explain reason for rejection. Business reject and application reject codes are in section 7.
76	ExecBroker	N	Not used.
102	CxlRejReason	N	Code to identify reason for cancel rejection. Valid values: 0 = Too late to cancel 1 = Unknown order 2 = Broker Option 3 = Order already in Pending Cancel or Pending Replace status
5149	Memo	N	This tag will contain the text included in the Cancel/Replace Request.
	Standard Trailer	Y	

4.3.2.10 Order Status Response

You will receive this message in response to an Order Status Request. It represents the current state of the order when NASDAQ FIX receives the request. Should you submit an Order Status request for an order that has already been filled or canceled, the status request will receive a reject with Tag 58=0202 Unknown Client Order Id (ClOrdId).

Tag	Field Name	Req'd	Comments
	Standard Header	Y	`MsgType` = 8
1	Account	N	This field is limited to 20 characters.
6	AvgPx	Y	An average price is returned on Fills and Partial fills. The average price is computed using this formula: $\text{AvgPx} = [(\text{AvgPx} * \text{CumQty}) + (\text{LastShares} * \text{LastPx})] / (\text{LastShares} + \text{CumQty})$.
11	ClOrdID	Y	As per the New Order Single.
14	CumQty	Y	Total shares executed against this order to date.
15	Currency	N	As per the New Order Single.
17	ExecID	Y	Set to 0 for Order Status response.
18	ExecInst	N	Not present in initial releases.
20	ExecTransType	Y	Valid value: 3 = Status
37	OrderID	Y	NASDAQ's Order Reference number for the original order, as generated by its destination system.
38	OrderQty	Y	Original quantity of the order.
39	OrdStatus	Y	Identifies current status of order. Valid values: 0 = New 1 = Partially filled 5 = Replaced 6 = Pending Cancel (e.g. result of Order Cancel Request) A = Pending New C = Expired E = Pending Replace (e.g. result of Order Cancel/Replace Request)
40	OrdType	N	As per the New Order Single.
44	Price	N	As per the New Order Single.
54	Side	Y	As per the New Order Single.
55	Symbol	Y	As per the New Order Single.
59	TimeInForce	N	The TIF after considering all cancel/replace orders.
65	SymbolSfx	N	As per the New Order Single.
111	MaxFloor	N	1-6 character field indicating the display quantity and refresh quantity. Must be in shares in round lot

Tag	Field Name	Req'd	Comments
			multiples. If MaxFloor = 0, then this tag will not be returned.
150	ExecType	Y	As per State matrixes in FIX 4.2 specifications.
151	LeavesQty	Y	Quantity left on the order, as per State Matrixes – Appendix D of FIX specifications. Note that in initial implementations, the Leaves quantity is returned here.
5149	Memo	N	This tag will contain the text included in the New Order Single.
9870	ReserveSize	N	Indicates the current quantity of the reserve size. Reserve size must be either in round lot multiples or in mixed lots. You may configure your system, so that you do not receive this tag.
9872	DisplaySize	N	Indicates the display quantity. You may configure your system, so that you do not receive this tag.
	Standard Trailer	Y	

4.3.2.11 Trade Through Notification

Message notifies firm that their Bid/Ask was traded through.

Tag	Field	Req'd	Name/Meaning
???	Market Center		American Boston Cincinnati Chicago New York ARCA EX/Pacific Stock Exchange NASDAQ CBOE Philadelphia
31	LastPx	Q	Price of shares executed in this fill.
55	Symbol	Q	As per the New Order Single.
60	TransactTime	Q	Time of the execution as per execution venue system.
65	SymbolSfx	N	As per the New Order Single.

4.3.2.12 Restatement

While NASDAQ presumes that a Cancel Request is for all remaining shares, NASDAQ may cancel part of the remaining quantity. If a Cancel Request is received while the order has shares in delivery, a user may receive a Restatement and Accepted Cancel for a single Cancel Request. The first message will indicate the number of shares that were cancelled immediately, as they were not in delivery. If additional shares can be cancelled when the delivery is complete, that is, declined or partially declined, a second UR Out will be sent for that amount. If no additional shares can be cancelled after the delivery, the user will receive an Execution Report to indicate the trade. IOC (59 = 3) orders follow this same process.

Tag	Field Name	Req'd	Comments
	Standard Header	Y	`MsgType` = 8
1	Account	N	This field is limited to 20 characters.
6	AvgPx	Y	0.0 if no partial fills have occurred.
11	ClOrdID	Y	NASDAQ FIX will return the Client Order ID as submitted on the Cancel request.
14	CumQty	Y	For a restatement, this represents the total executed quantity against this order when the restatement occurred.
15	Currency	N	Not present in initial releases.
17	ExecID	Y	Identifier for this message uniquely generated by NASDAQ FIX.
18	ExecInst	N	As per the New Order Single.
20	ExecTransType	Y	Valid value: 0 = New
31	LastPx	Y	Set to 0 for Restatements.
32	LastShares	Y	Set to 0 for Restatements.
37	OrderID	Y	NASDAQ's Order Reference number for the original order attempting to be restated, as generated by its destination system.
38	OrderQty	Y	The restated order quantity.
39	OrdStatus	Y	Identifies current status of order.
40	OrdType	N	As per the New Order Single.
41	OrigClOrdID	Y	Returns the current ClOrdID of the order after any cancel/replace orders
44	Price	N	This field will be returned even if it was not included in the original order. If tag 40 = P and tag 44 is present, this tag is the Peg Cap Price.
54	Side	Y	As per the New Order Single.
55	Symbol	Y	As per the New Order Single.

Tag	Field Name	Req'd	Comments
59	TimeInForce	N	As per the original New Order Single.
65	SymbolSfx	N	As per the original New Order Single.
111	MaxFloor	N	1-6 character field indicating the display quantity and refresh quantity. Must be in shares in round lot multiples. If MaxFloor = 0, then this tag will not be returned.
150	ExecType	Y	Valid value: D = Restatement
151	LeavesQty	Y	Quantity left on the order.
211	PegDifference	N	As per New Order Single.
378	ExecRestatementReason	N	Used when communicating a specific unsolicited cancel. Valid value: 5 = Partial decline of `OrderQty` for exchange-initiated partial cancel
5149	Memo	N	This tag will contain the text included in the New Order Single.
9870	ReserveSize	N	Indicates the quantity of the reserve size. Reserve size must be either in round lot multiples or in mixed lots. You may configure your system, so that you do not receive this tag.
9872	DisplaySize	N	Indicates the display quantity. You may configure your system, so that you do not receive this tag.
	Standard Trailer	Y	

4.3.2.13 Drop Copies

NASDAQ FIX provides drop-copy services on both an application and execution level. A separate I1I2 is required to receive drop copies. The drop copy message will not conform to FIX 4.2 execution report specifications. Some of the expected and mandatory fields may be missing.

NASDAQ introduces functionality that allows you to filter drop copy messages. Messages will be filtered by entering I1I2. If the entering I1I2 on the execution report corresponds to an entering I1I2 that you provided for filtering, then that execution report will be drop copied. If the entering I1I2 on the execution report is not one of the I1I2s that you provided for filtering, then the execution report is not drop copied. If you would like to use filtered drop copies, please contact the FIX Support Group at 800-243-4284.

Application Drop Copy

NASDAQ is introducing additional drop copy functionality. This new functionality allows you to register to receive drop copies of all application messages. You must register to receive these new messages. Registration occurs on a connector-by-connector basis. Note that every application message that you receive over your primary connector will be duplicated on your drop copy connector. There is no message format table associated with this new functionality. If you would like to receive application drop copies, please contact the FIX Support Group at 800-243-4284.

Execution Drop Copy

Tag	Field Name	Req'd	Comments
	Standard Header	Y	`MsgType` = 8
1	Account	Y	As specified in New Order Single.
6	AvgPx	Y	The value of this tag is always 0.
11	ClOrdId	Y	`ClORDID` of the original order. This is the `CLORDID` of the first order in a Cancel Replace Chain.
14	CumQty	Y	The value of this tag is always 0.
17	ExecId	Y	Execution reference number returned from NASDAQ market center.
20	ExecTransType	Y	The value of this tag is always 0.
31	LastPx	Y	Price of this Partial Fill/Fill.
32	LastShares	Y	Executed quantity.
37	OrderID	Y	Unique `ORDERID` assigned by NASDAQ market center.
39	OrdStatus	Y	Order status indicating a Partial Fill/Fill.
54	Side	Y	Side indicating bought or sold.
55	Symbol	Y	Security Symbol.
60	TransactTime	Y	The time that you released this request.
65	SymbolSfx	Y	Security symbol suffix.

Tag	Field Name	Req'd	Comments
111	MaxFloor	N	1-6 character field indicating the display quantity and refresh quantity. Must be in shares in round lot multiples. If MaxFloor = 0, then this tag will not be returned.
150	ExecType	Y	Indicates indicating a Partial Fill/Fill.
151	LeavesQty	Y	Non-Restate leaves quantity.
375	ContraBroker	Y	The other side on this execution.
382	NoContraBrokers	Y	The number of ContraBroker entries.
440	ClearingAccount	Y	Clearing account.
5149	Memo	N	This tag will contain the text included in the New Order Single.
9730	LiqProvFlag	Y	Indicates indicating if the FIRM accessed or provided liquidity.
9870	ReserveSize	N	Indicates the quantity of the reserve size. Reserve size must be either in round lot multiples or in mixed lots. You may configure your system, so that you do not receive this tag.
	Standard Trailer	Y	

5 Appendix A: State Matrices

This section provides possible scenarios encountered during delivery. These scenarios complement the scenarios in the FIX 4.2 specifications. The matrices describe the messages received by a FIX client and its contents. Sub-scenarios or variations of the scenarios are indicated by repeating the time line for a new set of messages. For example, in scenario 4, line 5 is repeated to illustrate a sub-scenario.

These abbreviations are used in the matrices that follow:

This abbreviation…	means this…
0	New
1	Partially Filled
2	Filled
4	Cancel
5	Replaced
6	Pending Cancel
D	Restate
E	Pending Replaced
Cxl	Cancel
CxlRj	Cancel Reject
CxRp	Cancel Replaced
Exec	Execution
Ord	New Order

Scenario 1: Cancel Order Full Delivery/ Declined

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					1000				1000 shares go into delivery.
2		Exec(x)	0	0	0	1000	0	1000	0	
3	Cxl(y,x)					1000				
4		Exec(y,x)	6	6	0	1000	0	1000	0	
5		CxlRj(y,x)		0		1000				If Cancel is rejected by SM / FIX Engine.
5		Exec(y,x)	6	6	0	1000	0	1000	0	SM sends an additional pending Cancel message for orders in full delivery.
6		Exec(y,x)	4	4	0	1000	0	0	0	Delivery declined, Order is canceled.

Scenario 2: Cancel Order in Partial Delivery / Declined

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					1000				500 Shares go into delivery immediately.
2		Exec(x)	0	0	0	1000	0	1000	0	
3	Cxl(y,x)					1000				
4		Exec(y,x)	6	6	0	1000	0	1000	0	
5		CxlRj(y,x)		0		1000				Cancel is rejected by SM.
5		Exec(x)	D	6	0	500	0	500	0	Execution restatement is sent to indicate a partial cancel 500 shares that were not in delivery.
6		Exec(y,x)	4	4	0	500	0	0	0	Delivery declined, Order is canceled.

Scenario 3: Cancel Order in Full Delivery / Accepted

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					1000				1000 shares entered go into delivery.
2		Exec(x)	0	0	0	1000	0	1000	0	
3	Cxl(y,x)					1000				
4		Exec(y,x)	6	6	0	1000	0	1000	0	
5		CxlRj(y,x)		0		1000				Cancel rejected by SM.
5		Exec(y,x)	6	6	0	1000	0	1000	0	
6		Exec(x)	2	2	0	1000		0	1000	Delivery accepted in full results in execution.
7		CxlRj(y,x)		2		1000				Cancel gets rejected with TLTC.

Scenario 4: Cancel Order in Partial Delivery / Accepted

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					1000				1000 shares entered, 500 shares go into delivery.
2		Exec(x)	0	0	0	1000	0	1000	0	
3	Cxl(y,x)					1000				
4		Exec(y,x)	6	6	0	1000	0	1000	0	
5		CxlRj(y,x)		0		1000				Cancel rejected by SM.
5		Exec(x)	D	6	0	500	0	500	0	Restatement indicating partial cancel of 500 shares not in delivery.
6		Exec(x)	2	2	0	500	500	0	500	Delivery accepted results in execution.
7		CxlRj(y,x)		2		1000				Cancel gets rejected with TLTC.

Scenario 5: Cancel Order in Full Delivery / Partially Accepted

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					1000				1000 Shares entered goes into delivery.
2		Exec(x)	0	0	0	1000	0	1000	0	
3	Cxl(y,x)					1000				
4		Exec(y,x)	6	6	0	1000		1000	0	
5		Exec(y,x)	6	6	0	1000	0	1000	0	SM sends an additional pending Cancel message for orders in full delivery.
6		Exec(x)	1	6	0	1000	500	0	500	Delivery accepted partially results in execution.
7		Exec(y,x)	4	4	0	1000	500	0	0	Remaining Quantity Canceled.

Scenario 6: Cancel Order in Partial Delivery / Partially Accepted

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					1000				1000 shares entered 500 shares go into delivery.
2		Exec(x)	0	0	0	1000	0	1000	0	
3	Cxl(y,x)					1000				
4		Exec(y,x)	6	6	0	1000	0	1000	0	
5		CxlRj(y,x)		0		1000				Cancel Rejected by SM.
5		Exec(x)	D	6	0	500	0	500	0	Restatement indicating partial cancel of 500 shares not in delivery.
6		Exec(x)	1	6	0	500	250	250	250	Delivery Partially accepted results in execution.
7		Exec(y,x)	4	4	0	500	250	0	0	Remaining Quantity Canceled.

Scenario 7: Cancel/Replace - Increment Quantity

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					1000				
2		Exec(x)	0	0	0	1000	0	1000	0	
3	CxRp(y,x)					2000				Cancel Replace incrementing Quantity.
4		Exec(y,x)	E	E	0	1000	0	1000		
5		Exec(y,x)	5	5	0	2000	0	2000		Order replaced.
6		Exec(y)	2	2	0	2000	2000	0	2000	New order executed for 2000 shares.

Scenario 8: Cancel/Replace - Increment Quantity/Refresh Size with Initial Refresh Size at 0

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					1000				Order entered without refresh size.
2		Exec(x)	0	0	0	1000	0	1000	0	
3	CxRp(y,x)					2000 1000 MF				Cancel Replace modifying Quantity and refresh size.
4		Exec(y,x)	E	E	0	1000	0	1000		
5		Exec(y,x)	5	5	0	2000 1000	0	2000		Order Replaced.
6		Exec(y)	2	2	0	2000 1000	2000	0	2000	New order fully executed.

Scenario 9: Cancel/Replace - Increment Quantity/Refresh Size with initial refresh size > 0

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				Order entered with refresh size of 1000.
2		Exec(x)	0	0	0	2000 1000	0	2000	0	
3	CxRp(y,x)					3000 2000				Cancel Replace modifying both Quantity and Refresh size.
4		Exec(y,x)	E	E	0	2000 1000	0	2000		
5		Exec(y,x)	5	5	0	3000 2000	0	3000		Order replaced with new order.
6		Exec(y)	2	2	0	3000 2000	3000	0	3000	New order fully executed.

Scenario 10: Cancel/Replace - Increment Quantity/Refresh Size with Initial refresh size > 0 with executions

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				Order entered with a refresh size of 1000.
2		Exec(x)	0	0	0	2000 1000	0	2000	0	
3	CxRp(y,x)					3000 2000				Cancel Replace modifying refresh size to 2000 and Quantity to 3000.
4		Exec(x)	1	1	0	2000 1000	1000	1000	1000	Partial Fill.

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
5		Exec(y,x)	E	E	0	2000 1000	1000	1000		
6		Exec(y,x)	5	1	0	3000 2000	1000	2000		Order replaced with new order.
7		Exec(y)	2	2	0	3000 2000	3000	0	2000	New order fully executed.

Scenario 11: Cancel/Replace - Decrement Refresh Size

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				Order entered with a refresh size of 1000.
2		Exec(x)	0	0	0	2000 1000	0	2000	0	
3	CxRp(y,x)					2000 500				Cancel replace decrementing only refresh size.
4		Exec(x)	1	1	0	2000 1000	1000	1000	1000	
5		Exec(y,x)	E	E	0	2000 1000	1000	1000		
6		Exec(y,x)	5	1	0	2000 500	1000	1000		Order replaced with new order.
7		Exec(y)	2	2	0	2000 500	2000	0	1000	New order fully executed.

Scenario 12: Cancel/Replace - Decrement Qty and Decrement Refresh Size

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				Order entered with refresh size of 1000.
2		Exec(x)	0	0	0	2000 1000	0	2000	0	
3	CxRp(y,x)					1500 500				Cancel replace decrementing both quantity and refresh size.
4		Exec(x)	1	1	0	2000 1000	1000	1000	1000	
5		Exec(y,x)	E	E	0	2000 1000	1000	1000		
6		Exec(y,x)	5	1	0	1500 500	1000	500		Order replaced by new order.
7		Exec(y)	2	2	0	1500 500	1500	0	500	New order fully executed.

Scenario 13: Cancel/Replace -Full Delivery Decrement Refresh Size

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				2000 shares entered go into delivery immediately.
2		Exec(x)	0	0	0	2000 1000	0	2000	0	
3	CxRp(y,x)					2000 500				Cancel replaces to decrement refresh size.

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
4		Exec(x)	1	1	0	2000 1000	1000	1000	1000	
5		Exec(y,x)	E	E	0	2000 1000	1000	1000		
6		CxlRj(y)		1						Cancel Replace Rejected, cannot modify refresh size when order is in full delivery.

Scenario 14: Cancel/Replace -Partial Delivery Decrement Refresh Size

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				1000 shares go into delivery immediately.
2		Exec(x)	0	0	0	2000 1000	0	2000	0	
3	CxRp(y,x)					2000 500				Cancel Replace to decrement refresh size.
4		Exec(x)	1	1	0	2000 1000	1000	1000	1000	
5		Exec(y,x)	E	E	0	2000 1000	1000	1000		
6		Exec(y,x)	5	1	0	2000 500	1000	1000		Order replaced with new order.
7		Exec(y)	2	2	0	2000 500	2000	0	1000	New order fully executed.

Scenario 15: Cancel/Replace -FULL Delivery Decrement Quantity - Delivery Declined

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				2000 shares entered go into delivery immediately.
2		Exec(x)	0	0	0	2000 1000	0	2000	0	
3	CxRp(y,x)					1500 1000				Cancel Replace decrementing to 1500 shares.
4		Exec(y,x)	E	E	0	2000 1000	0	2000	0	
5		Exec(y,x)	E	E	0	2000 1000	0	2000	0	
6		Exec(y,x)	5	5	0	1500 1000	0	1500	0	Delivery declined, order replaced with new order.

Scenario 16: Cancel/Replace -Partial Delivery Decrement Qty - Delivery Declined

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				2000 shares entered and 1000 shares go into delivery immediately.
2		Exec(x)	0	0	0	2000 1000	0	2000	0	
3	CxRp(y,x)					1500 500				Cancel Replace decrementing quantity to 1500 shares.
4		Exec(x)	1	1	0	2000 1000	1000	1000	1000	Execution for 1000 non-delivered shares.

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
5		Exec(y,x)	E	E	0	2000 1000	1000	1000		
6		Exec(y,x)	5	1	0	1500 500	1000	500		Delivery declined order replaced with new order.
7		Exec(y)	2	2	0	1500 500	1500	0	500	New order fully executed.

Scenario 17: Cancel/Replace -FULL Delivery Decrement Quantity - Delivery Accepted

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				2000 shares entered go into delivery immediately.
2		Exec(x)	0	0	0	2000 1000	0	2000		
3	CxRp(y,x)					1500 1000				Cancel Replace decrementing quantity to 1500 shares.
4		Exec(y,x)	E	E	0	2000 1000	0	2000		
5		Exec(y,x)	E	E	0	2000 1000	0	2000	0	SM sends an additional pending replace message for orders in full delivery.
6		Exec(x)	2	2	0	2000 1000	2000	0	2000	Delivery Accepted results in execution.
7		CxlRj(y,x)		2		1500 1000				Cancel Replace rejected as TLTC.

Scenario 18: Cancel/Replace -Partial Delivery Decrement Qty - Delivery Accepted

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				2000 shares entered 500 shares go into delivery.
2		Exec(x)	0	0	0	2000 1000	0	2000	0	
3	CxRp(y,x)					1000 500				Cancel Replace decrementing quantity to 1000.
4		Exec(x)	1	1	0	2000 1000	1000	1000	1000	1000 Non-delivered shares executed.
5		Exec(y,x)	E	E	0	2000 1000	1000	1000		
6		Exec(x)	D	E	0	1500 1000	1000	500		Restatement indicating cancel of 500 non-delivered shares.
7		Exec(x)	5	2	0	1500 500	1500	0	500	Delivery accepted order fully executed for the restated quantity.
8		CxlRj(y,x)		2		1500 500				Cancel Replace rejected as TLTC.

Scenario 19: Cancel/Replace -Partial Delivery Decrement Qty - Delivery Declined

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				2000 shares entered partially delivered to multiple destinations in the amounts 250, 250 and 500.
2		Exec(x)	0	0	0	2000 1000	0	2000	0	

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
3	CxRp(y,x)					1000 500				Cancel Replaces decrementing quantity to 1000.
4		Exec(x)	1	1	0	2000 1000	1000	1000	1000	Non-Delivered 1000 shares executed.
5		Exec(y,x)	E	E	0	2000 1000	1000	1000		
6		Exec(x)	D	E	0	1750 1000	1000	750		Restatement on decline of 250 shares delivered to destination 1.
7		Exec(x)	D	E	0	1500 1000	1000	500		Restatement on decline of 250 shares delivered to destination 2.
8		Exec(y,x)	5	2	0	1000 500	1000	0	0	Replaced Filled on decline of 500 shares from destination 3.

Scenario 20: Cancel/Replace - FULL Delivery Decrement Quantity - Delivery Partially Accepted

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				2000 shares entered goes into delivery.
2		Exec(x)	0	0	0	2000 1000	0	2000	0	
3	CxRp(y,x)					1500 1000				Cancel Replace decrementing quantity to 1500.
4		Exec(x)	1	1	0	2000 1000	1000	1000	1000	1000 shares Partially accepted.
5		Exec(y,x)	E	E	0	2000 1000	1000	1000	0	

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
6		Exec(y,x)	E	E	0	2000 1000	1000	1000	0	SM sends an additional pending replace message.
7		Exec(x)	1	E	0	2000 1000	1750	250	750	750 shares partially accepted.
8		Exec(y,x)	5	2	0	1750 1000	1750	0	0	Declined remaining quantity results in order being replaced/filled.

Scenario 21: Cancel/Replace -Partial Delivery Decrement Qty - Delivery Partially Accepted

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000 1000				2000 shares entered of which 500 goes into delivery.
2		Exec(x)	0	0	0	2000 1000	0	2000	0	
3	CxRp(y,x)					1000 500				Cancel Replace decrementing quantity to 1000 shares.
4		Exec(x)	1	1	0	2000 1000	1000	1000	1000	Execution for 1000 shares.
5		Exec(y,x)	E	E	0	2000 1000	1000	1000		
6		Exec(x)	D	E	0	1500 1000	1000	500		Restatement indicating cancel of 500 non-delivered shares.
7		Exec(x)	1	E	0	1500 1000	1250	250	250	250 shares partially accepted.
8		Exec(y,x)	5	2	0	1250 500	1250	0		Declined remaining quantity results in order being replaced/filled.

Scenario 22: Example Exec Restatement for NASDAQ market center-Generated Event

In this scenario, the order goes into delivery (1), and an acknowledgement is sent (2). 200 shares are executed (4), and the 300 shares remaining are submitted for auto-ex. Because of the price/blow-through rule, this remainder is canceled. A restatement of the order for 200 shares is sent (3).

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					500				500 shares entered.
2		Exec(x)	0	0	0	500	0	500		
3		Exec(x)	D	0	0	200	0	200	0	Restatement indicating the new order amount of 200 shares.
4		Exec(x)	2	2	0	200	200	0	200	Execution of 200 shares.

Scenario 23: Example Exec Restatement for an AIQ Event

If you submit a "Buy" AIQ order (tag 9212, SMAIQFlag) that is sent out for delivery (routed out to an ECN), partially executed, resubmitted for auto-execution, matched to the inside, and then finds one of your own "Sell" orders there, you will receive an exec restatement like the one in this scenario.

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					1200				1200 shares entered.
2		Exec(x)	0	0	0	1200	0	1200		
3		Exec(x)	D	0	0	900	0	900	0	Restatement indicating the new order amount of 900 shares.
4		Exec(x)	1	1	0	900	700	200	700	Partial Execution of 700 shares.
5		Exec(x)	4	4	0	900	700	0	0	Remaining Quantity Canceled.

Scenario 24: Cancel/Replace - Price Only

In this scenario a cancel replace is performed that changes only the price of an order. Concurrent changes of both price and size are not allowed.

Time	Msg Rcv [ClOrdID, OrigClOrdID]	Msg Sent [ClOrdID, OrigClOrdID]	Exec Type	Ord Status	Exec Trans	OrderQty/ MaxFloor	Cum Qty	Lvs Qty	Last Shares	Comments
1	Ord(x)					2000				Priced at 20.00
2		Exec(x)	0	0	0	2000	0	2000	0	
3	CxRp(y,x)					2000				Cancel Replace merely changing price to 20.01
4		Exec(y,x)	E	E	0	2000	0	2000	0	44 = 20.00
5		Exec(y,x)	5	5	0	2000	0	2000	0	44 = 20.01

6   Appendix B: Order Timeline
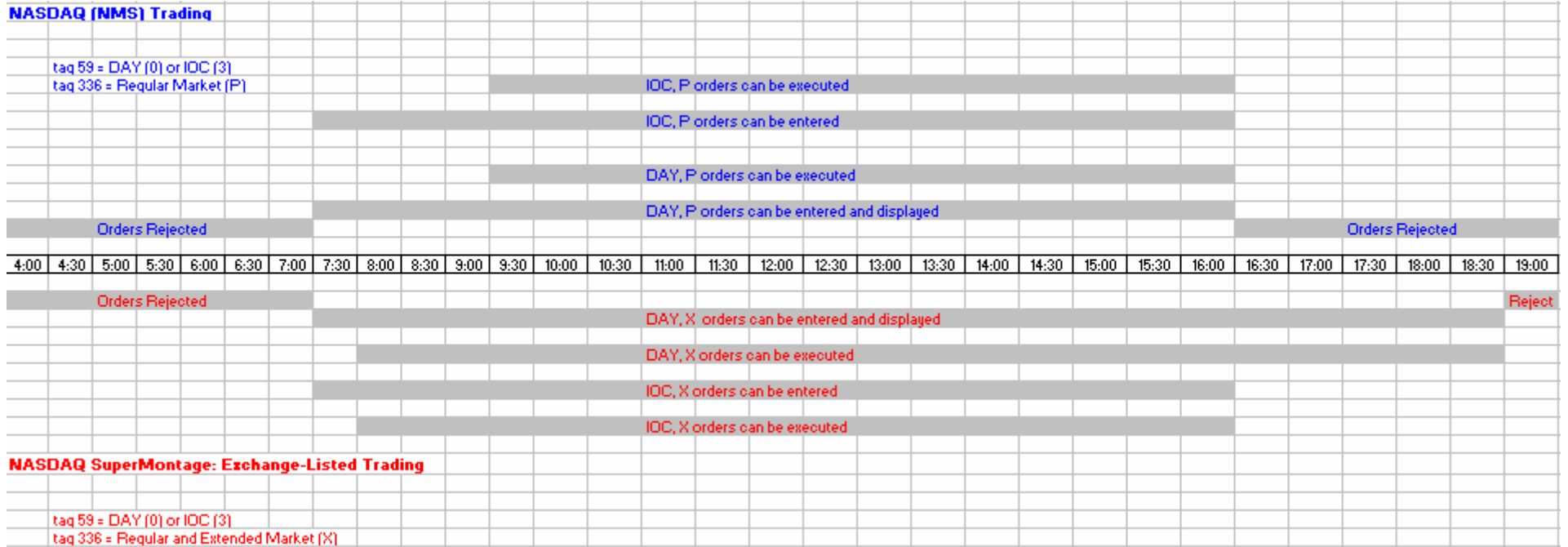
7   Appendix C: Reject Codes

The following table lists business reject errors that you will see in tag 58 of business level rejects.   See section 4.3.2 for reject message formats.

Tag 58
0200 Client Order ID (ClOrdID) exceeds the NASDAQ specified 20-character limit
0201 Original Client Order ID (OrigClOrdID) exceeds the NASDAQ specified 20-character limit
0202 Unknown Client Order ID (ClOrdID)
0203 Unknown Original Client Order ID (OrigClOrdID)
0204 Symbol does not match symbol from original order
0205 Side does not match side from original order
0206 Invalid SenderSubID
0207 Cannot send Cancel/Replace Request while in Pending New Order state
0208 Cannot send Cancel/Replace Request while in Pending Cancel state
0214 Non-supported Order Type (OrdType) value
0217 Non-supported Time In Force (TimeInForce) value
0219 Cannot send Cancel/Replace Request while in Pending Replace state
0220 Too Late To Cancel
0221 Price must be present on Limit Order
0216 Non-supported Side Value
0223 Cancel NACKed by NASDAQ Market Center - Not accepted
0224 No Client Order ID (ClOrdID)/Invalid ClOrdID provided
0225 No Original Client Order ID (ClOrdID) provided
0226 Invalid TargetSubID
0227 Invalid HandlInst
0228 Price not allowed on Market order
0229 Invalid Dispatch
0230 Order Rejected By NASDAQ Market Center
0231 Invalid Order Capacity
0232 Transaction Time is Missing
0233 PossDup Flag Must be Y or N or None
0234 PossResend Flag Must be Y or N or None
0235 Invalid Bunched Indicator
0236 Error UM has been processed - Possible Duplicate
0237 Cannot send Cancel Request while in Pending New Order state
0238 Cannot send Cancel Request while in Pending Cancel state

Tag 58
0239 Cannot send Cancel Request while in Pending Replace state
0240 Order Already Cancelled
0241 Client Order ID must be Alphanumeric
0300 Invalid Size
0301 Invalid Reserve/Refresh Size
0302 Order Not Accepted No Attributable Orders
0303 Too Late To Cancel
0304 Not Within Allowable Time
0305 MPID Not Authorized
0306 Size Over Limit
0307 Size Smaller Than Default
0308 Invalid Delta Update No Reserve Size
0309 Excessive Open Order Quantity
0310 Cannot Reinstate a Quote
0310 Cannot Reinstate - Order Not Purged
0311 Violation Shortsale Rule
0312 Order Rejected Due to Anti-Internalization
0313 Security in Trade Halt
0314 Security in Quote Halt
0315 Issue Set to Delete
0316 Order Not Executable
0317 Preferred Order Not Executable
0318 Preferred Order Not Executable
0319 Action Rejected
0320 Order Not Found
0321 Cannot Lock/Cross Market
0322 Quote Not Found
0323 Order Not Executed
0324 Invalid Update No Open Qty
0325 Cannot Cancel Quote
0326 Cannot Cancel/Replace Quote
0327 No Display Quote For Destination MPID
0328 [This message varies in meaning. The text following this message number explains the reason for the reject. Please see the explanation of this reject after this table.]
0499 Order NACKed by NASDAQ Market Center - Not accepted

Tag 58
0500 Replaced/Filled Orders cannot be Modified
0501 Invalid Quantity
0502 Error SIDE does not match original order / not present on cancel replace
0503 Internal Error Unable to Process Message
0504 Error Duplicate CLORDID
0505 Error MsgType Not Supported
0506 Illegal character(s) in ClOrdID
0507 Error Layer6 CLORDID not found
0508 Error Outbound NSMP Message I1I2 Invalid
0509 Error Order Not Found
0510 Cannot Modify Side/Tif/Symbol/OrdType
0511 Account exceeds maximum length of 20
0514 Error Drop Copy I1I2, No Inbound Messages Allowed
0515 If OrdType is P ExecInst must be R, P, Q or H
0521 Unknown Exchange Destination
0522 Preferenced Market Maker Not Allowed Unless ExDestination is O
0523 Unknown TradingSessionID
0612 Temporarily Not Available

A note about value 328:

Business reject messages from NASDAQ may contain the value 328, the text of which is undocumented in this specification. These values are undocumented because unique reject text may be returned to you for enhanced host processing rejects. Allowing a variable text reject through the use of tag 328 and its companion tags enables you to receive these unique rejects in unison with other methods of message delivery (API, CTCI, QIX). This flexibility eliminates the need for you to upgrade your access service software in unison with business rule changes.

While some values of 328 are known at this time, inclusion of these in the specification would result in a still incomplete list due to ongoing system changes and implementations. Instead, we have listed several examples of possible explanations for 328.

In the rare event that your FIX engine does not automatically recognize these values because of the uniqueness of the messages, then please call the FIX Support Group. See section 1.2, NASDAQ Customer Support.

Example 1:
Enter a Day or GTC order prior to 9:28, status = K. If you decrement quantity or try to cancel the order after 9:28, you will receive reject **0328 Action Pended at This Time**.

Format is below, where tag 58 (reject code) = 0328 and tag 102 (reject reason) = 0 (too late to cancel)

```
8=FIX.4.2|9=162|35=9|34=149|49=NSDQ|50=S|52=20041203-
15:01:01|56=DLJP|57=03F9|11=120308061324|37=04804DT000MN|39=0|41=120308061
323|58=0328 ACTION PENDED AT THIS TIME|102=0|434=2|10=082|
```

Example 2:

Enter an On Open order prior to 9:28, status = Q. If you modify and the price is not better than the open price, you receive reject **0328 Invalid Price**. Format is below, where tag 58 (reject code) = 0328 and tag 102 (reject reason) = 0 (too late to cancel)

```
8=FIX.4.2|9=148|35=9|34=102|49=NSDQ|50=S|52=20041203-
14:28:21|56=DLJP|57=03F9|11=120308061317|37=04D04DT000MC|39=0|41=120308061
35|58=0328 INVALID PRICE|102=0|434=2|10=216|
```

Example 3:

Enter a Pegged order, where there is not an inside to peg to. You receive reject **0328 Order Not Accepted - No Current Insid**. Format is below where tag 58 (reject code) = 0328. The Order Reject Reason Tag 103 is not required and does not appear on this reject message.

```
8=FIX.4.2|9=246|35=8|34=168|49=NSDQ|50=S|52=20041203-
15:16:44|56=DLJP|57=03F9|6=0.0|11=120308061326|14=0|17=R000000000000000120
072|18=R|20=0|31=0|32=0|37=04D04DT000N1|38=200|39=8|40=P|54=1|55=JPST|58=0
328 ORDER NOT ACCEPTED - NO CURRENT INSID|59=0|150=8|151=200|10=164|
```

Example 4:

Enter an auto-ex only order. If it cannot auto execute, you'll receive the reject **0328 Cannot Autoex - Order Rejected**. Format is below where tag 58 (reject code) = 0328. The Order Reject Reason tag 103 is not required and does not appear on this reject message.

```
8=FIX4.2|9=242|35=8|34=180|49=NSDQ|50=S|52=20041203-
15:25:42|56=DLJP|57=03F9|6=0.0|11=120308061328|14=0|17=R000000042949672970
072|20=0|31=0|32=0|37=04D04DT000N4|38=200|39=8|40=2|44=4.33|54=2|55=JPST|5
8=0328 CANNOT AUTOEX - ORDER REJECTED|59=0|150=8|151=200|10=107|
```

The following table lists all of the application error codes. Note that some of these codes are not valid at this time, as they will not be returned given current FIX functionality.

Message Code	Meaning
4000	No Error(s)
4001	Function Suspended
4002	Function Unavailable

Message Code	Meaning
4003	Market Closed
4004	Market Not Yet Open
4005	System Not Available
4006	System Not Open
4007	Temporarily Not Available
4008	Corrupted Message
4009	Duplicate Transaction ID
4010	Error in Transaction Record Length
4011	Internal Constant Table
4012	Internal Conversion Table
4013	Internal Error
4014	Internal Translation Table
4015	Invalid Client Code
4016	Invalid Data - Must Be Numeric
4017	Invalid Data - Invalid Code
4018	Invalid Data - Invalid List Size
4019	Invalid Data - List Size Too Large
4020	Invalid Data - Must Be Alphanumeric
4021	Invalid Data - Must Be Numeric
4022	Invalid Data - Must Be Alpha
4023	Invalid Data - Must Be Nonnumeric
4024	Invalid Data - Numeric Too Large
4025	Invalid Data - String Too long
4026	Invalid Data - Too Many Iterations
4027	Invalid Data - Value Out Of range
4028	Invalid Deregistration Length
4029	Invalid Header Information
4030	Invalid Registration Record Length
4031	Max Outstanding Transaction Records Exceeded
4032	Message Lost
4033	Message Lost from Host
4034	Message Lost to Host
4035	Missing Disconnect Flag
4036	Missing Message Type

Message Code	Meaning
4037	Missing Token
4038	Missing Transaction ID
4039	No Translation For This Transaction
4040	No-Host-Confirmation Message Sent
4041	No-Host-Confirmation Message Undeliverable
4042	Too Many Errors in Transaction
4043	Undeliverable Message
4044	User Already Registered
4045	User Not Entitled to Register
4046	User Not Registered
4047	User Not Entitled For Transaction
4048	Price Over Limit
4049	Size Over Limit
4053	Invalid MPID
4100	Fraction too Small
4101	Decimal too Small
4102	A Free Transfer Must Be Free of Payment
4103	A List is Already Assigned To This Issue
4104	A Required Field is Missing
4105	ACES Not Available
4106	ACT Entry Suspended
4107	Price/Size Over Limit
4108	An Institution Cannot Enter a Free Transfer
4109	Beginning Bid Exceeds Ending Bid
4110	Beginning Ask Exceeds Ending Ask
4111	Beginning Ask Size Exceeds Ending Ask Size
4112	Beginning Bid Size Exceeds Ending Bid Size
4113	Beginning Price Exceeds Ending Price
4114	Beginning Time Exceeds Ending Time
4115	Beginning Volume Exceeds Ending Volume
4116	Better Quote
4117	Bid Must Be Less Than Offer
4118	Block Volume Reporting Closed
4119	Both Files are Locked Out

Message Code	Meaning
4120	Buffer Size Requested Exceeds Max
4121	CAE Not Available
4122	CLRN 9999 Test MM Only
4123	CUSIP Number Already Exists
4124	CXL Order Not Found
4125	CXL/Order Data MisMatch
4126	Can't Cancel This Entry
4127	Can't Withdraw After 4 p.m.
4128	Cannot Chg/Dlt Master Trmnl
4129	Check ISIN
4130	Check Limit Price
4131	Check Price
4132	Check Price & Qty
4133	Check Qty
4134	Check Quote
4135	Clearing Number and Name Must Be Updated
4136	Clearing Rej
4137	Clearing Relationship Already Exists
4138	Combination Of Free Of Payment and NonFungible Not Allowed
4139	Command Not Yet Implemented
4140	Commitment Expired
4141	Conflicting Data
4142	Contra Firm Not Authorized
4143	Contra MMID Already Cancelled
4144	Contra Must Be A Broker/Dealer
4145	Contra Not Ready
4146	Contra Or BrSeq Not Allowed
4147	Contra Or Price Not Allowed
4148	Counter Not Allowed
4149	Current MM Auth Not Active, Withdrawn or Del
4150	DIAGNOSTIC
4151	Data Communication Problems
4152	Delay Execution
4153	Deleted

Message Code	Meaning
4154	Duplicate Entry
4155	Emergency Market Conditions - Trading Halt
4156	Enter Both Bid and Offer Prices
4157	Entry Not Permitted For Exchanges
4158	Entry out of Turn
4159	Entry Placed in Queue
4161	Euro ExcSp & L/C - US Pot ExcSp
4162	Euro ExcSp & L/C - US Pot L/C
4163	Euro ExcSp - US Pot ExcSp
4164	Euro ExcSp-US Pot ExcSp & L/C
4165	Euro ExcSp-US Pot L/C
4166	Euro L/C - US Pot ExcSp
4167	Euro L/C - US Pot ExcSp & L/C
4168	Euro L/C - US Pot L/C
4169	Euro Pot L/C - US Pot L/C
4170	Euro Pot L/C - Us Pot ExcSp & L/C
4171	Euro Pot L/C
4172	Euro Pot L/C
4173	Euro Pot L/C-US Pot ExcSp
4174	Euro Security Volume Held
4175	Exceeds Capacity
4176	Exceeds Maximum Contract Amount
4177	ExcSp
4178	ExcSp & L/C
4179	Excessive Open Order Quantity
4180	Execution Failure
4181	Execution Time Required
4182	Execution Time Greater Than Trade Rept Time
4183	Executions Not Allowed
4184	Existing NASDAQ Security
4185	FOK Order Not Executed
4186	Firm Already Closed This Security
4187	Firm Already Opened This Security
4188	Firm Already Registered In Security

Message Code	Meaning
4189	Before Office Close Time.
4190	Firm No Quote For This Security
4191	MMP Not in Security
4192	Security not OTCBB
4193	Firm Not Authorized
4194	Firm Not Registered For This Security
4195	Firm Not Registered In Security
4196	Firm Not Required
4197	Firm Quote Not Allow For Exempt Security
4198	Firm Required
4199	Firm Withdrawn This Security
4200	Fixed Data Altered
4201	Flag Is Already Set
4202	Function Not Allowed
4203	M2 Match In Progress-No Actions Allowed
4204	Function Temporarily Inactive
4206	Giveup Table Exceeds Max Size
4207	I1I2 Already Allocated
4208	I1I2 Already exists
4209	I1I2 CAE Unauthorized
4210	Illegal Relative Drum Address
4211	Improper Form-T Trade
4212	Improper Open/Close Format
4213	Improper Reference Number
4214	Incorrect OCU Assignment
4215	Index Not Available
4216	Inside Quote Closed
4217	Insufficient Quantity
4218	Invalid AON Response
4219	Invalid Action
4220	Invalid Address
4221	Invalid Amount
4222	Invalid Announcement Indicator
4223	Invalid As-Of

Message Code	Meaning
4224	Invalid Ask
4225	Invalid Ask Indicator
4226	Invalid Ask Size
4227	Invalid Ask Size Indicator
4228	Invalid Authorization Code
4229	Invalid B/A Indicator
4230	Invalid B/S
4231	Invalid Back Indicator
4232	Invalid Bid
4233	Invalid Bid Indicator
4234	Invalid Bid Size
4235	Invalid Bid Size Indicator
4236	Invalid Br/Seq Number
4237	Invalid Buy/Sell Code
4238	Invalid CAE Security
4239	Invalid CHECKSUM
4240	Invalid CLID/EXID Relationship In TARS
4241	Invalid CUSIP Number
4242	Invalid Canned Message Code
4243	Invalid Category
4244	Invalid Character
4245	Invalid Clearance Entry
4246	Invalid Clearing Number
4247	Invalid Clearing Relationship
4248	Invalid Contra
4249	Invalid Control Number
4250	Invalid Currency Code
4251	Invalid Currency Description
4252	Invalid Data
4253	Invalid Data Change Indicator
4254	Invalid Date
4255	Invalid Day
4256	Invalid Dealer Code
4257	Invalid Dealer Currency Code

Message Code	Meaning
4258	Invalid Dealer/Dealer Currency
4259	Invalid Delimiter
4260	Invalid Denominator Entered
4261	Invalid Device Address
4262	Invalid Display Code
4263	Invalid Entry
4264	Invalid Epic Code
4265	Invalid Ex-Indicator
4266	Invalid Exchange CQS Entry
4267	Invalid Exposure Update
4268	Invalid FOK Order
4269	Invalid Firm
4270	Invalid Force Indicator
4271	Invalid Format
4272	Invalid Function
4273	Invalid Function Code
4274	Invalid Give-up ID
4275	Invalid I1I2
4276	Invalid I1I2 - New
4277	Invalid I1I2 - Old
4278	Invalid I1I2 Authorization
4279	Invalid IES - SEDOL
4280	Invalid IES Indicator
4281	Invalid ISO Code
4282	Invalid ITS Line 4
4283	Invalid ITS Origin SMM
4284	Invalid Index
4285	Invalid Indicator On No Quote
4286	Invalid Input
4287	Invalid Interest Amount
4288	Invalid Line 1A
4289	Invalid Location Identifier
4290	Invalid MM1/MM2
4291	Invalid MM1/MM3

Message Code	Meaning
4292	Invalid MM1/MM4
4293	Invalid MM2/MM3
4294	Invalid MM2/MM4
4295	Invalid MM3/MM4
4296	Invalid MMID
4297	Invalid Market Center
4298	Invalid Market ID
4299	Invalid Market Maker in Requested Order
4300	Invalid Message Type
4301	Invalid Minimum Quantity
4302	Invalid Multiline
4303	Invalid Name
4304	Invalid Non-Negotiable
4305	Invalid Number Entered
4306	Invalid Number Of Giveups
4307	Invalid O/C Indicator
4308	Invalid O/M/T Code
4309	Invalid OE Entered
4310	Invalid Oddlot MKT Maker
4311	Invalid Oddlot Mkt Order
4312	Invalid Order Destination
4313	Invalid Order Number
4314	Invalid Origin
4315	Invalid PCL Data
4316	Invalid Parameter
4317	Invalid Partial/Counter Combination
4318	Invalid Phone Number Entered
4319	Invalid Preference Combination
4320	Invalid Preference MM
4321	Invalid Preference Option
4322	Invalid Price
4323	Invalid Price Indicator
4324	Invalid Price Override
4325	Invalid Price Updates

Message Code	Meaning
4326	Invalid Price/Contract Indicator
4327	Invalid Price/Non-Negotiable
4328	Invalid Capacity
4329	Invalid Processing State Update
4330	Invalid Purchase Cust/Dealer Indicator
4331	Invalid Purchase Price
4332	Invalid Purchase Price Numerator
4333	Invalid Purchase Volume
4334	Invalid QSR Entry
4335	Invalid Qty/Qualifier
4336	Invalid Qualifier
4337	Invalid Quantity
4338	Invalid Quantity/Non-Negotiable
4339	Invalid Quantity/Price
4340	Invalid Quantity/SECID
4341	Invalid Quote Entered
4342	Invalid R.L. This MM
4343	Invalid RTE Code
4344	Invalid Read Displacement
4345	Invalid Read Length
4346	Invalid Reference Number
4347	Invalid Report Digit
4348	Invalid Request
4349	Invalid Retrieval Code
4350	Invalid Risk Management
4351	Invalid Round Lot
4352	Invalid SECID/Non-Negotiable
4353	Invalid SECID/Price
4354	Invalid Contra PA
4355	Invalid Sale Cust/Dealer Indicator
4356	Invalid Sale Price
4357	Invalid Sale Price Numerator
4358	Invalid Sale Volume
4359	Invalid Scan Parameters

Message Code	Meaning
4360	Invalid Security
4361	Invalid Security
4362	Invalid Security Class
4363	Invalid Security Code
4364	Invalid Security Selection
4365	Invalid Security Specification
4366	Invalid Security Status
4367	Invalid Security Sub-Type
4368	Invalid Security Type
4369	Invalid Selection
4370	Invalid Sequence Number
4371	Invalid Service Specification
4372	Invalid Settlement Amount
4373	Invalid Short Sale Indicator
4374	Invalid Side O/M Code
4375	Invalid Side/Non-Negotiable
4376	Invalid Side/Price
4377	Invalid Side/Price/Non-Negotiable
4378	Invalid Side/Quantity
4379	Invalid Side/SECID
4380	Invalid Size
4381	Invalid Special Trade Indicator
4382	Invalid State
4383	Invalid Status
4384	Invalid Status Indicator
4385	Invalid Supervisory Indicator
4386	Invalid Switch Sequence
4387	Invalid Symbol
4388	Invalid System
4389	Invalid System Designation
4390	Invalid TIF
4391	Invalid Terminal-Call NASD
4392	Invalid Terms
4393	Invalid Text

Message Code	Meaning
4394	Invalid Threshold Entered
4395	Invalid Time
4396	Invalid Time Combination
4397	Invalid Time Increment
4398	Invalid Time Indicator
4399	Invalid Time-In-Force
4400	Invalid Trade Modifier
4401	Invalid Trade Report Override
4402	Invalid Trade Status
4403	Invalid Trade Time Format
4404	Invalid Transaction Number
4405	Invalid Type
4406	Invalid Type/Addr
4407	Invalid Update
4408	Invalid Update Character
4409	Invalid User ID
4410	Invalid Volume Indicator
4411	Invalid Volume Report Format
4412	Invalid Withdrawal/Restore Code
4413	Issue Not ACT Authorized
4414	LSE/IES Not Available
4415	Not Clrg Eligible
4416	Limit Order Not Executed
4417	Limit Orders Not Allowed
4418	Limit Price Away From Current Inside
4419	Lock Rec Bit-SECID Is Rec Locked
4420	L/C Market
4421	Logon Already In Use
4422	Lot And Digit Are Required
4423	MFund Update Not Allowed
4424	MM Clearing Not ACT Authorized
4425	MM Dest Required
4426	MM Firm Not ACT Authorized
4427	MM Giveup Not ACT Authorized

Message Code	Meaning
4428	MM Must Be An Exchange
4429	MM Not In RT Table
4430	MM Temporarily Suspended
4431	MMID Already Exists
4432	MMID Not Authorized
4433	MMID Not Authorized For Function
4434	MMP Not Active
4437	Market Maker No Longer in Directory
4438	Market Maker Position Limit Exceeded
4439	Max MMP Exceeded
4440	Mkt Order Not Executed
4441	Mod SLD Required
4442	Mod T Not Allowed
4443	Mod T Required
4445	Must Be Principal If Pref Is All
4446	Must Be Update Terminal
4447	NNMSI/ITS Trading Suspended
4448	OTCBB Securities Not Available
4449	NO No/Was For .T Trades
4450	NASDAQ Market Suspended - Check News
4451	NASDAQ Not Open
4452	Need To File 15C2-11 To Register
4453	Negotiation Ended
4454	New Data Not Allowed For CXL
4455	New EQL Old Already In Temp
4456	New File Full
4457	New Terminal Not Installed Yet
4458	No Access-SECID in Tape Recovery
4459	No Buffer Addr For Release Funct
4460	No CAE MMs In Security
4461	No Change To Request
4462	No Clearing
4463	No Clearing Relationship Set Up
4464	No Data

Message Code	Meaning
4465	No Data Entered
4466	No Data Updated
4467	No Executable MMP's
4468	No Exposure Limit Record
4469	No Flag Is Set
4470	No I1I2 Given On An Update
4471	No I1I2 Found for MMID
4472	No I1I2/MMID Entry
4473	No I1I2/MMID Entry - New
4474	No I1I2/MMID Entry - Old
4475	No Indices Available
4476	No Inside Quote
4477	No MM/Giveup Relationship
4478	No MMID Associated With I1I2
4479	No Market Makers For Security
4480	No Market Making Positions
4481	No Match For I1I2
4482	No Matching Temp Entry
4483	No Modifier For As-Of Trade
4484	No More Data
4485	No News Available
4486	No No/Was For As-Of Trade
4487	No Open For Security
4488	No Opening Price Required
4489	No Price Check For OTCBB Securities
4490	No Reassignments Found
4491	No Request Entered
4492	No Routing Record for SECID
4493	No SDRUM Buffers Are Available
4495	No Scan Records For This Selection
4496	No Selection Parameter Entered
4497	No Statistics Available
4498	No Symbol Change In No/Was
4499	No Update Allowed-File In Recvry

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Message Code	Meaning
4500	No Update-Both Files in Recovery
4501	No Update-File In Tape Recovery
4502	No Update-File Is Being Verified
4503	No Update-Only File Is Bumped
4504	No Update-Only File in Recovery
4505	No Update-SRange Lock Conflict
4506	No Update-Update In SNAP Range
4507	No Update-Update Queues Are Full
4508	No Updates Allowed When State Is Deleted
4509	No/One-Sided Inside
4510	Non Zero Buffer Addr-Get Buf Fct
4511	Not A CQS Subscriber
4512	Not A Cross Trade
4513	Not A Reportable Open Trade
4514	Not An NMS Security
4515	Not An Open Trade
4516	Not Applicable
4517	Not Authorized
4518	Not Authorized As Supervisory Terminal
4519	Not Available
4520	Resubmit with an Effective Date
4521	Not Enough Room To Add a MMP
4522	Not In On-Line File
4523	Not UTP Security
4524	Not When Negotiating
4525	Not Within Allowable Time
4526	Not Within Correct Market
4527	Notify NASD Operations
4528	OCU Already In Table
4529	OE Clearing Not ACT Authorized
4530	OE Firm ID Required
4531	OE Firm Not ACT Authorized
4533	OE Giveup Not ACT Authorized
4534	OE MMID Already Cancelled

Message Code	Meaning
4535	OddLot Order Not Executed
4536	OddLot Orders Not Allowed
4537	Old EQL New Alrdy In Temp
4538	Old EQL Old Alrdy In Temp
4539	Old/New I1I2 Equal
4540	Only MM Can Correct This Trade
4541	Only NMS Security Eligible For UTP
4542	Open Order NG MKT MKR
4543	Open Order Not Executed
4544	Open/Close Not Permitted
4545	Order Cancelled
4546	Order Exdividend - Not Reinstated
4547	Order No Longer Open
4548	Order Not Accepted
4549	Order Not Allowed
4550	Order Not Executed
4551	Order Quantity Exceeds Tier Size
4552	Order Timed Out
4553	Order/Counter Not Available
4554	PLock Already Set-Set PLock FCT
4555	PLock Bit Set
4556	PLock Not Set-Unlock PLock FCT
4557	Pot. ExcSp & Pot L/C
4558	Pot ExcSp
4559	Pot L/C
4560	Preference MMID Duplicate
4561	Price Not Negotiable
4562	Price Out of Range
4563	Price/Size Not Available
4564	Process Not Available
4565	Processing Send Message Request
4566	Quote Away From Inside Market
4567	Quote Display Not Allowed
4568	Quote Must Be In Eighths

Message Code	Meaning
4569	Quote Update Not Allowed
4570	RLock Bit Set
4571	Record Already Exists
4572	Record Is Not Locked
4573	Record Modified During This Process
4574	Record is Currently In Use
4575	Requested Amount Below Minimum
4576	Retransmission Is Active Or Pending
4577	Routing Address Limit Exceeded
4578	SCD Or SOD In Use By ADMMP-SPIN
4579	SECID Has Finished Tape Recovery
4580	SECID Has Good Data Available
4581	SECID Names Do Not Compare
4582	SECID Not International
4583	SEDOL Required
4584	SEQ Prev Received
4589	SUPV Terminal Duplicate
4590	Security Already Exists
4591	Security Held - See News
4592	Security In Index
4593	Security Is Mandatory SOES
4594	Security Must Be Active In P & V Service
4595	Security Not Active
4596	Security Not Active On SOES
4597	Security Not Available-Plock Set
4598	Security Not Being Traded
4599	Security Not ITS
4602	Security Suspended
4603	Security Unavailable
4604	Short Sale Not Allowed
4605	Spread Too Wide
4606	Subscriber ID Not Found
4607	Super Cap Still Exceeded
4608	Supervisor May Read Only

Message Code	Meaning
4609	Switch Header Dest Not CA
4610	Symbol Already Exists
4611	Symbol Deleted
4612	Symbol Is Now In Tape Recovery
4613	System Control Flags
4614	System Suspended
4615	Take Out Must Be Within Inside
4616	Takeout Not Allowed
4617	Takeout Requires Active Quote
4618	Temp Area Full
4619	Terminal Not Authorized
4620	Terminal Not Authorized For Function
4621	Terminal Not Found
4622	Terminal Not In Table
4623	Terminal Not Supervisory
4624	There May Be More Trades
4625	Timer Full/Do Immediate
4626	Tmtr Invalid Oddlot
4627	Tmtr Invalid Security
4628	Tmtr Trade Not Reported - Status
4629	Trade Already Cancelled, Errored, or Corrected
4630	Trade Already Locked-In
4631	Trade Cancelled
4632	Trade Detail Must Be Updated
4633	Trade Held
4634	Trade Not Eligible For Resubmission
4635	Trade Sent To Clearing
4636	Unlock Function-SECID Not Locked
4637	Unlock Rec Bit-SECID Not Locked
4638	User ID Already Exists
4639	Valid CLID/EXID Relationship in TARS
4640	Viewer Is Not Eligible
4641	Vol Exceeds NASDAQ Capacity
4642	Vol Not Permitted CQS/NMS

Message Code	Meaning
4643	Volume Not In Thousands
4644	Volume Report Not Found
4645	Volume Reporting Not Allowed
4646	Write Length Exceeds ALCN or CN
4647	Zero Error
4648	Zero SECID
4650	Issue Set To Delete
4651	Invalid MMID State
4652	More Than 1 User Of This Program
4653	Euro ExcSp & L/C - US Pot ExcSp & L/C
4654	Invalid Modifier
4657	Invalid Account Number
4658	Invalid Location Code
4659	50 Entry Limit
4660	Entered Size Smaller Than Default
4661	Action Rejected
4662	Qte Closed Entry Prohibited
4663	*Temporarily Not Available
4664	Information Not Released
4665	Invalid Market ID
4666	Invalid Price/Contract Indicator
4667	At Least One Range Required
4668	CAE Enter Zero Price
4669	Opening Price Required
4670	Closing Report In Progress
4671	Oddlot Quote Not Allowed
4672	Order Not Available
4673	Order is Opening Order
4674	Order Requires a Price
4675	Invalid Price For Order
4676	First Price Must Be Zero
4677	Size Must Be Smaller Than Preceding Size
4678	Invalid or Missing Parameter
4679	Data Not Available

Message Code	Meaning
4680	No Current ACT Alerts
4681	Takeout Not Allowed-Match in Progress
4682	Order Not Found
4683	Quote Not Active
4684	Can't Match Fill-Or-Kills
4685	Can't Match Odd Lot
4686	Sequence Numbers Not Equal
4688	Execution Not In Progress
4689	Order Not Executable
4690	Violation ShortSale Rule
4691	Order Already Executed
4692	Invalid DNI/R
4693	DNI/R Must Be Buy Order
4694	Can't Cancel In Match Or Delivery
4695	Can't Correct in Match or Delivery
4696	Can't Reinstate - Order not Cancelled
4697	Order Partially Executed
4698	Can't Track Order
4699	Must Enter Secid
4700	Must Enter Side
4701	Must Enter Price
4702	No Events Found
4703	No More Events
4704	No More Executable Intervals
4705	No Executable Intervals Found
4706	Unadjusted Round Lot
4707	Reverse Split
4708	Matching Not Allowed
4709	Order Not Matchable
4710	Match Hasn't Started Yet
4711	Match Not In Progress
4712	Zero Exposure Time Not Cleared
4713	Sec Ctrl Event Flag Won't Allow
4714	Order Not In System Yesterday

Message Code	Meaning
4715	Use Scan For Current Day Order
4716	Order May Only Be Cancelled
4717	Order Requires Reinstatement
4718	Order Requires Correction
4719	Fraction Too Small
4720	Check Takeout Price & Override To Accept
4721	Action Not Allowed For Order
4722	Please Enter Request Again
4723	MMID Required
4724	Invalid MM Give-Up
4725	Invalid OE Give-Up
4726	Time Field Required
4727	Invalid Mask
4728	Invalid MMP
4729	Invalid Partition
4730	Invalid Desk Type
4731	Invalid Exchange Specialist
4732	Session Condition Not Found
4733	Market Already Open
4734	Security Trading Close in Effect
4735	Firm Suspended In This Security
4736	Security In Quote Halt
4737	Security In Trade Halt
4738	Max Number of Records Exceeded
4740	DNI/R Must Be a Buy Order
4741	MM Already in Correspondent Relationship
4742	MM Already in Other Arrangement
4743	Old Value Doesn't Match - Do Refresh
4746	Invalid P/A/R
4747	No Orders Found
4749	Order Not Available
4750	Order by Non-Auth Market Maker
4751	Causes Rej of all OE Orders Xmit OK
4752	Order Executed By Your Firm

Message Code	Meaning
4753	Executable Greater than Tier Max
4754	Principal Not Allowed
4755	Non mandatory L/C no MM at Inside
4756	Cancel/Correction Delayed
4760	Pre Open not allowed
4761	Orders Not Allowed
4762	Invalid Combination
4763	Trade Thru Not Open Or Pending
4764	Security Already Open
4765	No Corresponding POA
4766	Fill Request Time Has Expired
4767	Trade Thru Has been Canceled
4768	Trade Thru has been Filled
4769	Fill has been Requested
4770	Fill has been Canceled
4771	Can Not Request Fill
4772	Fill Request Can Not be Canceled
4773	Invalid Class
4774	No Request to Cancel
4775	Request already Canceled
4776	Fill Request Can Not be Corrected
4777	No request To Correct
4778	Invalid Side/Class Combination
4779	Invalid Class/Contra Combination
4780	Invalid Class/CID Combination
4781	Execution already Killed
4782	Execution Cannot be Corrected
4783	Invalid Trading Digit
4784	Invalid Tick Size
4785	Invalid Tick
4786	Invalid Auto Refresh Value
4787	Invalid Tick Default Value
4850	Gap Entry does Not Exist
4851	Invalid Beginning Sequence Number

Message Code	Meaning
4852	Invalid Ending Sequence Number
4853	Mismatch in Gap Status
4854	Input does Not Match Internal Data
4890	Position record not found
4900	Security Not Mandatory SOES
4901	Security Not SOES Eligible
4902	Invalid Side
4903	Invalid SOES Modifier
4904	OE Not Authorized for Giveup
4905	Giveup Firm Not Authorized For SOES
4906	Unadjusted Odd Lot
4907	MMP Not SOES Withdrawn
4908	SOES in Recovery Mode
4909	Preferencing Not Allowed
4910	Invalid Capacity
4932	OE Firm Only SOES MM
4935	MMP SOES Closed / Table Full
4936	MSOES MM Inactive
4944	Must Be In SOES To Quote
4954	Invalid SOES Order Entered
4985	SOES Executions Suspended - Check News
4986	SOES Exposure Below Minimum
4987	SOES Orders Suspended - Check News
4988	SOES Suspended - Check News
4991	Firm Not Active In SOES
4992	Firm Not Authorized For SOES
4993	Security Is Mandatory SOES
4994	No SOES MM In This Security
4996	Security Not Active On SOES
4999	Error(s)
4A00	Invalid Refresh Size
4A01	AIQ Not Allowed for Prefd Orders
4A02	Alt Clrng Not Allowed for Giveup
4A03	Attributable Indicator Required

Message Code	Meaning
4A04	Attributable Order Not Allowed
4A05	Firm Not Authorized to Use Give-Ups
4A06	Invalid AIQ indicator
4A07	Invalid ATR indicator
4A08	Invalid Attributable Indicator
4A09	Invalid Bunched Indicator
4A10	Invalid Destination Type
4A11	Invalid Div/Split Indicator
4A12	Invalid Giveup Status
4A13	Invalid IOC indicator
4A14	Invalid Memo
4A15	Invalid Non-negotiable
4A16	Invalid Order Destination
4A17	Invalid Override Indicator
4A18	Invalid Price Improvement Indicator
4A19	Invalid Priority
4A20	Invalid Reserve Size
4A21	Invalid TIF
4A22	Issue not UTP eligible
4A23	Odd Lot Invalid for Prefd Orders
4A24	OE Not Authorized
4A25	Exceeds Threshold Size. Override & Resend.
4A26	Order Exceeds Tier Threshold Size
4A27	Exceeds Threshold Value. Override & Resend.
4A28	Preferenced Orders Must be IOC
4A29	Refresh Size Not Allowed
4A30	Reject due to Issue Status
4A31	Reserve Entry Not Allowed
4A32	Reserve Size Not Allowed
4A33	Only IOC Sell Ords Allowed in Qte Md
4A34	Orders Not Accepted, Quotes Only
4A35	User Order Id Required
4A36	Invalid Bid Reserve Size
4A37	Invalid Ask Reserve Size

Message Code	Meaning
4A38	Invalid Bid Refresh Amount Size
4A39	Invalid Ask Refresh Amount Size
4A40	Ask Direction Code
4A41	Invalid Override Indicator
4A42	Quote Entry Status Not Active
4A43	Issue not UTP eligible
4A44	Quote Entry not Allowed
4A45	Invalid Mode
4A46	Cannot update single side quote
4A47	Reserve Processing Not Allowed
4A48	Must Maintain Display Qte Above Zero
4A49	No Display Quote for Preferenced MP
4A50	ECN Doesn't Charge Separate Access Fee
4A51	Invalid Price for Preferenced Order
4A52	Over Allowable Deviation. Override & Resend.
4A53	Away from the Inside. Overide & Resend.
4A54	Two Sided Quote Required
4A55	Order Reserve Decreased by X Shares
4A56	Invalid Delta Update, No Reserve Size
4A57	U R Out Z Shares
4A58	Too Late to Cancel
4A59	Too Late to Cancel X shares
4A60	Y Shares in Delivery, Cancel Pending
4A61	Can't Reinstate a Quote
4A62	Will L/C Market. Override & Resend.
4A63	Too Late to Replace
4A64	L/C - Non-displayed Odd Lot
4A65	Accepted. New Quantity - X
4A66	X Cancelled Due to Odd Lot Execution
4A67	Canceled Due to Internalization Rules
4A68	Non-attributable Orders Not Allowed
4A69	Alt Clrng Not Allwd. Sec in Transition
4A70	Invalid Order Type
4A71	Sum Qte Not Allwd. Sec in Transition

Message Code	Meaning
4A72	Qte Upd Not Allwd. Sec in Transition
4A73	Invalid Order Delivered Timestamp
4A74	Invalid Risk Management Indicator
4A75	Invalid Supercap Amount
4A76	Invalid Blockbuster Amount
4A77	Invalid Blockbuster Action
4A78	Invalid Sizeable Amount
4A79	Invalid Sizeable Action
4A80	Supercap Exceeds All Value
4A81	Blockbuster Exceeds Mkt Supercap
4A82	Sizable Exceeds Mkt Supercap
4A83	Sizeable Exceeds Mkt Blockbuster Amt
4A84	Blockbuster Below Minimum Amount
4A85	Sizeable Below Minimum Amount
4A86	Not Authorized To Update Risk File
4A87	Not Authorized To Update Default File
4A88	Invalid Capmarkcode
4A89	Invalid Market Type
4A90	Supercap Exceeds Default All Value
4A91	Blockbuster Exceeds Default Mkt Supercap
4A92	Sizeable Exceeds Default Mkt Supercap
4A93	Sizeable Exceeds Default Mkt Blockbuster Amt
4A94	No Default Record Found
4A95	Mkt Blockbuster Exceeds All Blockbuster
4A96	Mkt Sizeable Exceeds All Sizeable
4A97	Mkt Blockbuster Exceeds Default All Blockbuster
4A98	Mkt Sizeable Exceeds Default All Sizeable
4A99	Supercap Less Than Blockbuster
4B00	Supercap Less Than Default Blockbuster
4B01	All Supercap Less Than Mkt Supercap
4B02	All Blockbuster Less Than Mkt Blockbuster
4B03	All Sizeable Less Than Mkt Sizeable
4B04	All Supercap Less Than Default Mkt Supercap
4B05	All Blockbuster Less Than Default Mkt Blockbuster

Message Code	Meaning
4B06	All Sizeable Less Than Default Mkt Sizeable
4B07	Invalid Peg Type
4B08	Invalid Peg Offset
4B09	Invalid Discretionary Flag
4B10	Invalid Discretionary Offset
4B11	Pegged Orders Not Allowed
4B12	Pegged Cap/Offset Not Allowed
4B13	Discretionary Orders Not Allowed
4B14	Invalid Commitment ID
4B15	Invalid Exchange ID
4B16	Invalid Error Code
4B17	Invalid Complaint ID
4B18	Invalid Block Indicator
4B19	Giveup Entry not permitted for Exchanges
4B20	Only IOC/IOX sell orders allowed for quote mode
4B21	Cannot Lock/Cross NBBO
4FE1	TCDBF Read Unsuccessful
4FE2	TCDBF Write Unsuccessful
4FE3	TCDBF Lock Unsuccessful
4FE4	LineID Record Not Found
4FE5	Retransmission Record Fetch Error
4FE6	Impart Failure
4FE7	No Records Found
4FE8	Depart Failure
4FE9	Error in DMS operation
4FEA	DMS Timeout Error
4FEB	Market Data Vendor Record Fetch Error
4FEC	Retransmission Record Create Error
4FF0	Authentication Failed
4FF1	Authentication System Unavailable. Try Again.
4FF2	Authentication Logon Has Expired. Logon Again.
4FF3	Function Unavailable At This Time Period.

8 Appendix D: Publication History

This section provides information for publications prior to the last six. The information is in chronological order.

Date	Version	Enhancements
August 27, 2003	2003-01	Initial publication of this programming specification on the NASDAQ Trader web site.
October 10, 2003	2003-02	SuperMontage 4 Order Handling and Order Management These SuperMontage enhancements introduce pegged, discretionary, and summary/liquidity provider only orders; a new price improvement value; a new execution algorithm value; and new execution kill functionality.
November 7, 2003	2003-03	*NASDAQ SuperMontage: Exchange-Listed Trading* Currently, listed securities are traded on the CAES/ITS application and quoted on the IQMS platform. The *NASDAQ SuperMontage: Exchange-Listed Trading* release incorporates trading of listed securities to the SuperMontage application. Auto-Ex Order This order type will allow market participants to designate their order to execute only against automatic execution participants at the NASDAQ Best Bid or Offer (NASDAQ BBO) without delivering the order to any SuperMontage participant or market center that is not auto-ex and at the NASDAQ BBO.
January 12, 2004	2004-01	*NASDAQ SuperMontage: Exchange-Listed Trading* Additional updates for this release. General Updates Various updates to reflect current functionality.
February 13, 2004	2004-02	Closing Cross This release offers an enhanced Market Close process that allows the closing price for a security to be determined based on a single crossing price defined by a special class of orders that are valid only at Market Close. These enhancements also provide improvements to the NASDAQ Official Closing Price (NOCP) generation and dissemination. The initial implementation of the SuperMontage Closing Cross process is specific to NASDAQ; no listed securities will participate. The two new order types are Market

Date	Version	Enhancements
		On Close and Limit On Close. The new prioritization algorithm is Imbalance Only. *NASDAQ SuperMontage: Exchange-Listed Trading* Additional updates for this release.
April 20, 2004	2004-03	Introduction of *NASDAQ market center* The NASDAQ market center is a new, consolidated name for what is essentially already a consolidated offering that encompasses both SuperMontage for NASDAQ-listed and exchange-listed securities and the Automated Confirmation Transaction Service (ACT). The new naming convention is a simple, streamlined, and accurate reflection of our enhanced marketplace. Closing Cross 1.1 NASDAQ will split each dissemination spin for Net Order Imbalance Information into 5 individual spins, spread 1 second apart, with each spin covering approximately 20% of the applicable issues. NASDAQ market center report process will be modified to provide distinct values for Closing Cross liquidity providers and accessors. NASDAQ will execute OC order in parity with display size of Day/GTC interest (in time priority) at the Crossing Price. General Updates Various updates to reflect current functionality, including the removal of summary orders.
May 17, 2004	2004-04	Release 3.3 NASDAQ FIX now supports changing price through the cancel/replace function.
May 28, 2004	2004-05	Release 3.3 Functionality postponed This release that originally included changes to the processing associated with the Order Modify message for the NASDAQ Market Center Execution System has been postponed in order to give firms more time to prepare. NASDAQ will instead implement this functionality in July.
July 15, 2004	2004-06	Release 5.0 NASDAQ FIX will now support changing price through the cancel/replace function. This functionality is expected by end of July 2004. Opening Cross Scheduled for third quarter 2004, the NASDAQ Opening Cross will significantly improve NASDAQ's

Date	Version	Enhancements
		opening process. Multiple market participants will interact and discover the price at the open, providing a robust benchmark of trading interest at the open, enhanced liquidity for expiration days and enhanced pre-open trading for NASDAQ participants General Updates Various updates to reflect current functionality.
July 29, 2004	2004-07	Drop Copies NASDAQ is introducing additional drop copy functionality. This functionality allows you to register to receive drop copies of all application messages. Broker Dealer On Behalf Ofs NASDAQ allows broker dealers to submit transactions on behalf of a customer. General Updates Various updates to reflect current functionality.
August 31, 2004	2004-08	Expiry In order to prevent stale messages and, therefore, latent data from entering the system, NASDAQ has modified expiry functionality. General Updates Various updates to reflect current functionality.
October 27, 2004	2004-09	Service Bureau On Behalf Ofs (NASDAQ FIX software version 5.2) With this release, NASDAQ introduces functionality that allows service bureaus to submit transactions for different customers down a single connector. General Updates Various updates to reflect current functionality.
November 11, 2004	2004-10	NASDAQ FIX software version 5.3 With this release, NASDAQ adds tag 76, ExecBroker, to execution reports.
December 17, 2004	2004-11	General Updates Added an explanation of business reject tag 58 value, 328.