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# **NYSE Common Customer Gateway (CCG)**

## **FIX Specification and API**

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## Revision History

March 17, 2009	3.9	Naomi Fingerhut	<ol style="list-style-type: none"> <li>1. Tag 438 will be returned in HHMMSS from CBS (already in production).</li> <li>2. Value of "OCX" has been removed from tag 9487.</li> <li>3. "Replaced" messages in a cancel replace chain will have the replacement quantity appear in tag 38.</li> <li>4. Text in tag 58 for Cancel Replace response changed to "Replaced".</li> <li>5. Tag 151 will have the current leaves quantity in "Replaced" messages.</li> <li>6. In "Replaced" messages, tag 37 will be returned with the ClOrderID of the cancel replace request.</li> <li>7. Tags 17 and 19 have new Activity ID format as optional on a session basis with the implementation of CCG version 3.2.</li> <li>8. Changed Table 28 to reflect tag 58 text to be "Replaced" as a response to a cancel replace request, instead of "UR OUT".</li> <li>9. Tag 59 updated to include text "GTC and GTX are not supported when using direct routing to a Broker's Handheld device."</li> <li>10. Tag 63 will no longer support values other than "0".</li> <li>11. Tag 64 will no longer be supported.</li> <li>12. Tag 111 now supports value of zero.</li> <li>13. Removed all NYSE unsupported FIX tags from Appendix A.</li> <li>14. Added overview in section 1.3 describing NYSE CCG Certification testing procedures.</li> <li>15. Links to the documentation describing system enhancements for SDBK and CCG:  <a href="http://www.nyse.com/pdfs/NYSETECH_INFO_MEMO022609.pdf">http://www.nyse.com/pdfs/NYSETECH_INFO_MEMO022609.pdf</a>  <a href="http://www.nyse.com/pdfs/022009TradingTechInfoMemo-SDBK.pdf">http://www.nyse.com/pdfs/022009TradingTechInfoMemo-SDBK.pdf</a>  <a href="http://www.nyse.com/pdfs/SDBKImplementationNotice_20090327.pdf">http://www.nyse.com/pdfs/SDBKImplementationNotice_20090327.pdf</a> </li> </ol>
April 1st, 2009	4.0	Naomi Fingerhut Marc Abend	Document Specification format change
May 29, 2009	4.1	Naomi Fingerhut	<ol style="list-style-type: none"> <li>1. Added tag 41 to Execution Report section 7.6.</li> <li>2. Added note to sections 3.3 and 4.3 "Arca symbols routed through CCG will not return tags 9570 and 9578 on execution reports."</li> </ol>

			<ol style="list-style-type: none"> <li>3. Section 3.2 – changed GTX description</li> <li>4. Added note to tag 18 in sections 7.1, 7.6 and Appendix A that states “If DNI or DNR is present on an order with a time in force other than GTC or GTX, SDBK shall reject.”</li> <li>5. Added new field description in tag 9570 for Matchpoint executions: N = New York (routed to Matchpoint).</li> <li>6. Added a value of [3] in tags 39 and 150 representing “Done for Day” in sections 7.6 and Appendix A.</li> <li>7. Changed tag 41 values in cancel reduce message table (section 7.2) to reflect the original COrderID.</li> <li>8. Added note to Tag 9487 in sections 3.3 and Appendix A that states “ISO, DNS &amp; SOC routing instructions are not valid on odd lot orders.”</li> <li>9. Added tags 57 and 143 as conditionally required for cancels and replaces of BBSS/CBS orders in section 7.2, 7.3 and 7.4 and in Appendix A.</li> <li>10. Added a description of BBSS and CBS order routing to section 3</li> </ol>
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# **1 Overview**

## **1.1 About this Document**

This document describes the implementation of the FIX 4.2 Protocol on the New York Stock Exchange via the NYSE CCG FIX Gateways.

This document assumes the reader thoroughly understands the FIX 4.2 protocol available at <http://www.fixprotocol.org/>. This document is not intended as a guide to constructing a FIX client. Rather, it is a checklist to ensure that a firm's FIX client, constructed according to the FIX 4.2 specifications, will be compatible with the NYSE CCG FIX Gateway.

## **1.2 About the NYSE CCG FIX Gateway**

NYSE CCG is the Common Customer Gateway application that is designed to be the strategic entry point for any user planning to transact business with any NYSE Euronext system. The initial implementation of CCG will provide access to the NYSE, NYSE Arca and NYSE AMEX equities only. In the future, CCG will be updated to be the exclusive means for customers to transact business with all NYSE Euronext products: NYSE Arca equities, options, bonds, and any other future NYSE Euronext products. For CCG production questions, please contact the Connectivity Team at [connectivity@nyx.com](mailto:connectivity@nyx.com) or 1-888-689-7739. For UAT test environment questions, please contact Member Firm Services at [firmtesting@nyx.com](mailto:firmtesting@nyx.com) or 1-866-873-7422.

As new services or features are added to SDBK and CCG, the NYSE sends out Trader Update emails informing you of these impending changes. If you wish to receive these updates, please contact your NYSE Relationship Manager or register using the following link: [http://www.nyse.com/pdfs/SDBKImplementationNotice\\_20090327.pdf](http://www.nyse.com/pdfs/SDBKImplementationNotice_20090327.pdf). These updates are also posted to the NYSE website and can be found at <http://traderupdates.nyse.com>.

## **1.3 NYSE CCG FIX Certification**

NYSE Technologies has constructed a Web-based certification tool, ttCert, which is an interactive automated tool with sets of tests based on the type of business you conduct with the NYSE. To supplement ttCert, a second testing environment has been implemented, UAT (User Acceptance Test). UAT is set of systems which duplicates what exists in production, and uses production software versions. Orders entered through CCG will traverse SDBK and be executed in a real Display Book.

Please send an email to [firmtesting@nyx.com](mailto:firmtesting@nyx.com) to obtain connectivity and procedure information.

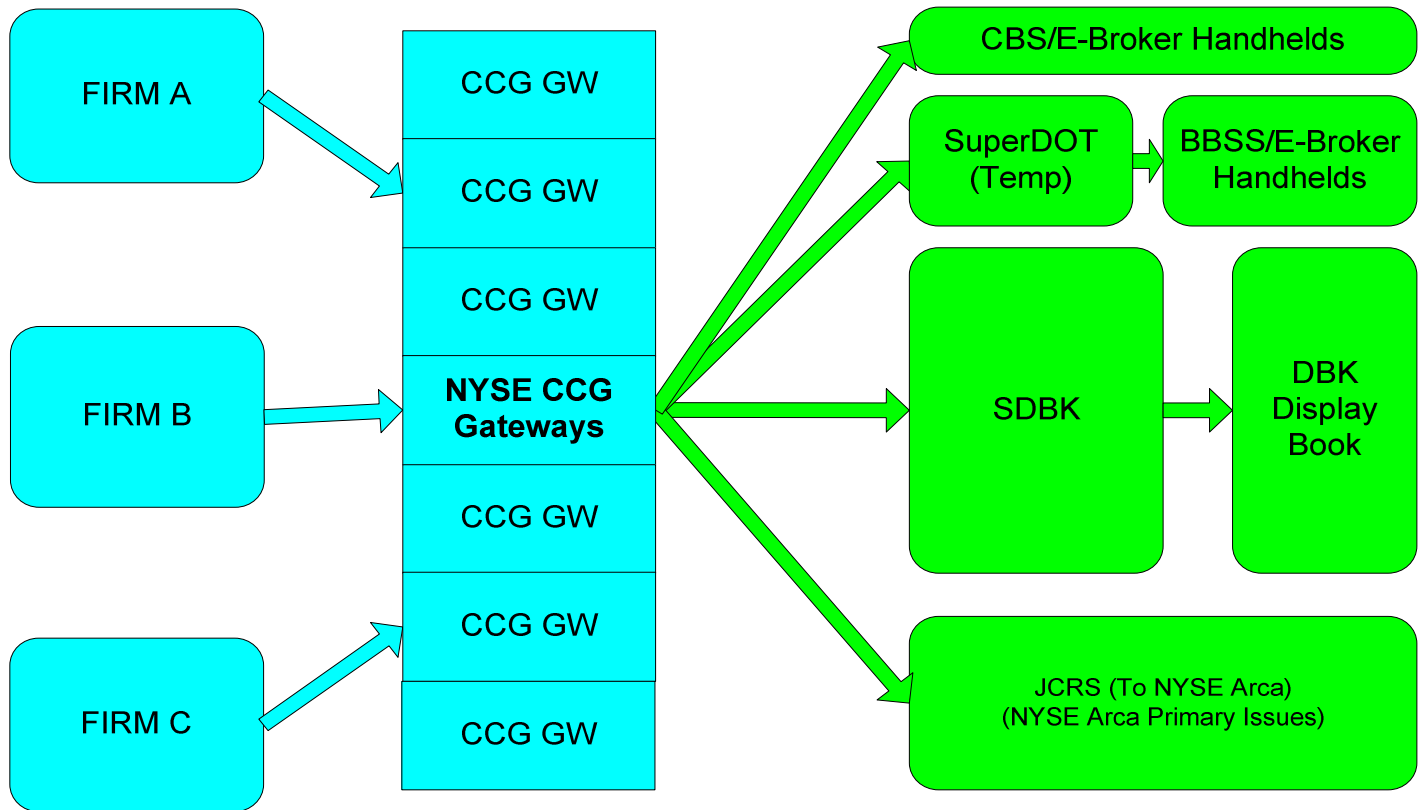
## **1.4 SDBK Phase 2 Future Enhancements**

The second phase of SDBK contains enhancements and/or modifications that may require system changes for your firm (please refer to the NYSE Trader Update Memo <http://www.nyse.com/pdfs/022009TradingTechInfoMemo-SDBK.pdf>). The phase 2 enhancements are listed below:

1. "Done for Day" message
2. Expanded Account <Tag 1>
3. "Cancel on Disconnect" feature
4. "Bulk Cancel" message

## 2 System Architecture

Each client sends orders to their assigned session on the NYSE CCG FIX Gateway. The NYSE CCG FIX Gateway then routes the order to the appropriate destination depending on the tag values contained in the order.



Legend	
Abbreviation	Full Name
BBSS	Broker Booth Support System
CBS	Combined Broker Systems
CCG	Common Customer Gateway
DBK	Display Book
JCRS	Joint Customer Routing System
SDBK	Super Display Book
SDOT	Super Designated Order Turnaround

## 3 NYSE Equities Specific Information

### 3.1 Hours of Operation

#### Hours of Operation for NYSE Equities Exchange

NYSE accepts and acknowledges orders starting at 7:30am EST

Opening Auction – 9:30 AM EST

Core Trading Session – 9:30 AM – 4:00 PM EST

After Hours Crossing Session I - 4:15pm to 5:00pm EST (only accessible via Matchpoint)

### 3.2 Multi Day orders (GTCs)

Platform this applies to:

- NYSE Equities
- NYSE Amex Equities

To send multi day orders clients must send the following on their order messages:

- Good Till Cancel: TimeInForce (Tag 59) = 1 (GTC).
- ***Good Till Crossing (GTX) - please be advised that GTX orders for a stock that has migrated to SDBK will not be rejected by CCG; it will convert to a GTC order that is not eligible for the crossing session and remain on the Display Book until executed or canceled.***

### 3.3 NYSE Defined FIX Fields

The following FIX fields have been added or created due to customer demand. They are used to assist customers in trade reconciliation and also for billing purposes.

#### LastMkt (Tag 30)

The FIX LastMkt field will be specified on execution reports.

Values for this field:

- N – NYSE
- P – NYSE Arca
- A – NYSE AMEX

The client may need this field for back office clearing and reporting purposes.

#### SecurityExchange (Tag 207)

Original/initial order information (start of the order chain). This tag designates the NYSE exchange to which an order or cancel replace request is to be sent. Valid values are:

- N – NYSE
- P – NYSE Arca
- A – NYSE AMEX

CCG will route to the appropriate executing market center regardless of the value designated on incoming messages. CCG will return the actual handling market center on execution reports. This tag is required on all orders and cancel replace requests.

#### DBKLINKID (Tag 9483)

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This tag contains a value that associates all buy and sell execution reports to the tape print in a Display Book transaction.

Value for this field: **6 Numeric characters.**

### **Routing Instruction (9487)**

Per Reg NMS, the use of this tag will prevent certain orders from being sent to an away market center. If using tag 9487, tag 57 cannot also be present.

Valid values are as follows:

- ISO – Intermarket Sweep Order
- DNS – Do Not Ship
- SOC – NMS IOC

**Note:** ISO, DNS and SOC routing instructions are not valid on odd lot orders.

### **ExecAwayMktID (Tag 9570)**

This Tag contains the Market Center ID (see valid values below) and, optionally, the Market Maker ID separated by a slash (e.g., D/EDGA). **If this tag is present, you will not receive Tag 9578.**

Values for this field:

B = Boston Stock Exchange  
C = National Stock Exchange (formerly Cincinnati Stock Exchange)  
D = National Association of Securities Dealers  
I = International Securities Exchange  
M = Chicago Stock Exchange  
N = New York (routed to Matchpoint)  
P = NYSE Arca Exchange (formerly Pacific Stock Exchange)  
T = National Association of Securities Dealers Automated Quotation (Old)  
W = Chicago Board Options Exchange  
X = Philadelphia Stock Exchange  
Z = BATS Exchange

### **Liquidity/Billing Indicator (Tag 9578)**

The BillingIndicator is a proprietary FIX field sent on execution reports by NYSE on trades to indicate what effect an order has had on the liquidity of the book. Client's rates are determined by whether an order adds or removes liquidity from the book. **If this tag is present, you will not receive Tag 9570.**

The values that clients can expect to receive in this field are:

1 = Taker  
2 = Provider  
3 = Blended  
4 = Opening/Provider (Prior-Day GTC Orders)  
5 = Opening/Provider  
6 = Closing/Provider  
7 = Closing/Blended

All Oddlot executions will contain a value of 3 or 7.

Please note: Arca primary symbols routed through CCG will not return tags 9570 and 9578 on execution reports.

## **BBSS/CBS Order Routing**

Routing orders to the Broker Booth Support System (BBSS) and Combined Broker System (CBS) requires the use of FIX tag 143, indicating the 2-character BBSS Agency code or the Broker Badge number of a Floor Broker. If routing to BBSS, tag 57 must be present and contain a value of "4". Tags 143 and/or 57 must also be present when sending a Cancel, Cancel Replace and/or Cancel Reduce message against an order that was routed to BBSS or CBS. You will not receive either tags 143 or 57 on any NYSE outbound message to you, including acknowledgements for Orders, Cancels, Cancel Replaces, Cancel Reduces, all Execution Reports, Names Later and Price Corrections and Busts.

## 4 NYSE Equities Information

### 4.1 NYSE Equities Symbology

Orders for instruments with suffixes (different classes of stock, preferred stock, etc.) can be sent in the following way:

- Symbol and Suffix notation (i.e. 55=VIA 65=B, 55=AA 65=PR and 55=IBM 65=PRA)

The FIX field for symbol suffixes is SymbolSfx (Tag 65). On all execution reports, symbols will be reported in Symbol and Suffix notation.

#### **Symbology Reference for NYSE Equities**

<b><u>Security Categorization</u></b>	<b><u>NYSE Symbol Suffix (Tag 65)</u></b>
Called	CL
Class A	A
Class B	B
Class A Called	ACL
Class B Called	BCL
Class A When Issued	AWI
Class B When Issued	BWI
Convertible	CV
Convertible Called	CVCL
Class A Convertible	ACV
Class B Convertible	BCV
Preferred	PR
Preferred Class A	PRA
Preferred Class B	PRB
Preferred Class A Called	PRACL
Preferred Class B Called	PRBCL
Preferred Class A Convertible	PRACV
Preferred Class B Convertible	PRBCV
Preferred Class A When Issued	PRAWI
Preferred Class B When Issued	PRBWI
Preferred When Issued	PRWI
Preferred Class A When Distributed	PRAWD
Preferred Class B When Distributed	PRBWD
Preferred When Distributed	PRWD
Partial Paid	PP
Rights	RT
Rights When Issued	RTWI
Units	U
Warrants	WS
Warrants Class A	WSA
Warrants Class B	WSB
Warrant When Issued	WSWI
When Distributed	WD
When Issued	WI

## 4.2 Opening and Closing Auction Orders

NYSE offers both opening and closing auctions for **NYSE & NYSE Amex Primary Symbols only**. The schedule for these auctions is listed below.

- **Opening Auction** - **9:30 AM EST**
- **Closing Auction** - **4:00 PM EST**

### **At the Opening (Market Open, Note: not valid for odd lots)**

To place an order for the opening auction specify TimeInForce (59) =2 (at the opening).

- Market on Open:

Orders must be submitted before the specified securities Opening Trade (typically, **9:30am** EST) and the FIX New Order Single (35=D) Message **MUST** contain the following Tags in order to be included in the Opening Auction:

OrdType (40) = 1 (Market)  
TimeInForce (59) = 2

- Limit on Open:

Orders must be submitted before the specified securities Opening Trade (typically, **9:30am** EST) and the FIX New Order Single (35=D) Message **MUST** contain the following Tags in order to be included in the Opening Auction:

OrdType (40) = 2 (Limit)  
TimeInForce (59) = 2

### **Closing Auction**

To place an order for the closing auction (valid only for NYSE & NYSE Amex primary symbols) specify OrdType (40) =5 (Market on close), OrdType (40) =A (Market on close for odd lots only) or OrdType (40) =B (Limit on close).

- Market on Close:

Orders must be submitted before **3:40pm EST (unless the order is taking the opposite side of a published Rule 123C imbalance)** and the FIX New Order Single (35=D) Message **MUST** contain the following Tags in order to be included in the Closing Auction:

OrdType (40) = 5 (Market On Close)  
TimeInForce (59) = 0

- Market on Close (Odd Lots):

Orders must be submitted before **3:40pm EST (unless the order is taking the opposite side of a published Rule 123C imbalance)** and the FIX New Order Single (35=D) Message **MUST** contain the following Tags in order to be included in the Closing Auction:

OrdType (40) = A (On Close)  
TimeInForce (59) = 0

- Limit on Close:

Orders must be submitted before **3:40pm EST (unless the order is taking the opposite side of a published Rule 123C imbalance)** and the FIX New Order Single (35=D) Message **MUST** contain the following Tags in order to be included in the Closing Auction:

OrdType (40) = B (Limit On Close)  
TimeInForce (59) = 0

Please note: NYSE systems will reject all cancel & cancel replace requests sent after 3:50 PM for any previously entered MOC and LOC order, including orders that were entered to offset a previously published imbalance.

### 4.3 CCG Routing of NYSE Arca Primary Symbols

When an order for an NYSE Arca Primary Symbol is received, it is automatically routed to NYSE Arca through a special route. (See "System Architecture" Section)

In order to trade through this route, the mnemonic you intend to use must have permission to trade on NYSE Arca. If the NYSE mnemonic sent on the order(s) is not permitted, the order(s) will receive an unsolicited cancel.

**There are certain limitations for using CCG to route to NYSE Arca:**

- Order Message Type: New Order and Cancel Only.
- OrderType: Market or Limit Only
- Side: Buy, Sell, or Sell Short Only
- TimeInForce: Day or IOC Only

**Any deviation from the supported messaging above will result in a reject.**

Please note: Arca symbols routed through CCG will not return tags 9570 and 9578 on execution reports.

### 4.4 Drop Copy Application

NYSE provides a service whereby firms can receive copies of Orders, Reports, ERCs, Makes, Cancels, Cancel Replaces, UR OUTs and/or Replaced messages for a given firm mnemonic. The owner of the trading mnemonic determines which of these message types they wish to send to the drop copy recipient. Each mnemonic can only have one drop copy recipient for these duplicate messages and the drop copy recipient must have four separate CCG sessions in production.

To request new drop copy CCG FIX 4.2 sessions, please contact Member Firm Services at [firmtesting@nyx.com](mailto:firmtesting@nyx.com) or 1-866-873-7422. To request that a mnemonic be enabled for drop copy service, the owner of the mnemonic should contact Broker Services at [mnemonics@nyx.com](mailto:mnemonics@nyx.com) or 212-656-5778.

## 5 NYSE Message Format

### 5.1 NYSE Specific Message Format Notes

The FIX message header defines the source and destination of the messages. To communicate with CCG the following should be observed:

- The FIX session is identified by the SenderCompID [49]. In FIX this can be any unique string generated by the source computer when the FIX session is initialized. SenderCompID[49] and OnBehalfOfCompId[115] are assigned by NYSE Member Firm Services/Application Support and are required fields.
- Inbound SenderCompID [49] holds the identifier of the user and the firm device; TargetCompID [56] holds the string |CCG|. Outbound the identifier in SenderCompID [49] is switched with the identifier in the TargetCompID [56] field.
- Outbound TargetCompID [56] holds the identifier of the user and the CCG Gateway; SenderCompID [49] holds the string |CCG|. Outbound the identifier in the DeliverToCompId[128] field is switched with the OnBehalfOfCompId[115].


FIX supports the encryption of messages (and of separate fields), but this form of traffic encryption is not currently supported by NYSE.


In order to provide maximum flexibility for its users, the FIX protocol accommodates *User Defined Fields*. This document introduces user-defined fields needed to accommodate CCG Order and Report functionality not handled in FIX. User Defined Fields with a value greater than 9999 are not accepted and only those tags registered on the [www.fixprotocol.org](http://www.fixprotocol.org) website are accepted. This document also has semantic modifications to specific FIX fields for use with CCG.

### 5.2 NYSE Specific Order Identification Notes

The order originators and/or entering entities must populate ClOrdID[11] with an identification number that corresponds to the Branch Code and Sequence Number of the originator. The data type of ClOrdID[11] is a character string, and its value is a unique identifier (branch, sequence number and session date). Reports contain an OrderID [37] field that is assigned by the order processor and refers to the order that starts an order chain. The order originator and/or entering entity must use a unique ClOrdID for subsequent orders, cancels, and cancel replace requests. The messages are chained together since each message refers to the previous message by including its ClOrdID in the field OrigClOrdID [41]. **CCG does not guarantee uniqueness of ClOrdID.**

*FIX Message Identifiers with NYSE Extensions*

Tag	Field Name	Description
11	ClOrdID	Unique identifier for an Order as assigned by the order originator. Uniqueness must be guaranteed by mnemonic within a single trading day (across multiple lines of a firm), the session date is required as part of the field.  <b>The ClOrdID must be unique within a single trading day for a given firm mnemonic. CCG does NOT validate the uniqueness of ClOrdID, it will simply forward the order to the downstream systems.</b>
37	OrderID	Represents the originating/initial order in an order chain.

Tag	Field Name	Description
41	OrigClOrdID	<p>ClOrdID of the previous order (NOT the initial order in a cancel replace chain) as assigned by the order originator, used to identify the previous order in cancel and cancel/replace requests.</p> <p> In some cases, as in the Cancel Replace, the OrigClOrdID value differs from FIX 4.2</p>

FIX generates a chain of messages, each of which bears a message identifier that can be traced back to the original/initial order (i.e. OrderID[37]). The order processor assigns an identifier (OrderID [37]) to the order itself.

## 6 Session Protocol

This section discusses FIX Session Protocol, which is responsible for providing reliable, ordered transport of FIX Application messages.

All messages sent by your firm must have one SenderCompID that is agreed upon in advance with NYSE and a TargetCompID of "CCG"

Only the following FIX Session MsgTypes may be sent to the NYSE CCG FIX:

Type	Message Name	Message Purpose
0	Heartbeat	Sent to monitor the communication link in intervals of 30 or 60 seconds as set in the initial logon message.
1	Test Request	When data has not been received for [ <i>HeartBtInt</i> + <i>transmission time</i> ] seconds. A test request forces a heartbeat from the opposing application.
2	Resend Request	Sent by the receiving application to initiate the retransmission of a message.
3	Reject	Response to messages that cannot be passed through to the application level due to "serious errors."
4	Sequence Reset (Gap Fill)	Used by the sending application to reset incoming sequence number on the opposing side. Also used in lieu of messages not present during a <i>Sequence Reset</i> retransmission
5	Logout	Initiates or confirms the termination of a FIX session.
A	Logon	Sent by an application requesting to initiate a FIX session.

### 6.1 Logon

The Logon message is used to establish a FIX connection to NYSE trading systems. Session establishment can occur around 7:30am EST, once the CCG lines are up.

Establishing a FIX connection to an application through NYSE involves three distinct operations: creation of a telecommunications level link, authentication/acceptance of the initiator by the acceptor and message sequence synchronization. The sequence of operations is as follows:

- The session initiator establishes a telecommunication link with the session acceptor using the NYSE mechanism for identifying the application. The session level message protocol is FIX and the transmission protocol is TCP/IP. **CCG supports FIX 4.2 only.**
- The initiator sends a *Logon* message. NYSE authenticates the FIX session by intercepting the FIX Logon message and checking the SenderCompID. If the ID matches the ID derived from the source IP address, NYSE transmits the message to CCG. If the initiator is authenticated, the acceptor responds with a *Logon* message. CCG sends a test request after a logon is accepted. If authentication fails, the session accepts or shuts down the connection and logs the attempt.

After authentication, the initiator and acceptor synchronize their messages through interrogation of the *MsgSeqNum* field before sending any queued or new messages. Message sequences are maintained for each FIX session, identified by the SenderCompID [49]. A comparison of the *MsgSeqNum* in the *Logon* message to the internally monitored next expected sequence number would indicate any message gaps. Likewise, the initiator can detect gaps by comparing the acknowledgment *Logon* message *MsgSeqNum* to the next expected value.

The Logon message format is as follows:

Tag	Field Name	Req'd	Comments	
	<i>Standard Header</i>	Y	MsgType[35] = A	
98	EncryptMethod	Y	Must be  0  (Always unencrypted)	
108	HeartBtInt	Y	The Heartbeat interval in seconds.	
95	RawDataLength	N	The number of bytes in a raw data field.	
96	RawData	N	Unformatted raw data, which can include bitmaps, word processor documents, etc.	
141	ResetSeqNumFlag	N	Indicates both sides of a FIX session should reset the sequence numbers.	
383	MaxMessageSize	N	Can be used to specify the maximum number of bytes supported for messages received.	
384	NoMsgTypes	N	Specifies the number of repeating MsgTypes.	
→	35	MsgType	N	Specifies a specific, supported MsgType. Required if NoMsgTypes is > 0.
→	385	MsgDirection	N	Indicates direction (send vs. receive) of a supported MsgType. Required if NoMsgTypes is > 0
	<i>Standard Trailer</i>	Y		

## 6.2 Logout

Normal termination of the message exchange session is completed via the exchange of *Logout* messages. Before sending the Logout message, a TestRequest message should be issued to force a Heartbeat from the other side. The Logout initiator waits for the opposite side to respond with a confirming Logout message. The FIX session is terminated upon receipt of the logout response from the user.

The Logout message format is as follows:

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType[35] = 5
58	Text	N	Text is limited to 25 characters.
	<i>Standard Trailer</i>	Y	

## 6.3 Heartbeat and Test Request

The heartbeat monitors the status of the communication link.

If the Heartbeat message is in response to a Test Request message, the field TestReqId[112] must be included in order for the recipient to be aware the message is in response to a Test Request and not a timeout. A TestReq is sent if the session heartbeat interval expires.

The Heartbeat message format is as follows:

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType[35] = 0
112	TestReqId	N	Required when the heartbeat is the result of a Test Request message.
	<i>Standard Trailer</i>	Y	

The Test Request message checks sequence numbers or verifies the communication line status (i.e. up/down). The opposite application responds to the Test Request message with a Heartbeat message containing the TestReqID[112].

Use of the field TestReqID[112] verifies that the opposite application is generating the heartbeat as the result of the Test Request message and not a timeout.

The Test Request message format is as follows:

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType[35] = 1
112	TestReqID	Y	Identifier included in Test Request message when the receiving application has not generated a heartbeat in 'n' seconds.
	<i>Standard Trailer</i>	Y	

## 6.4 Resend Request

A Resend Request message is generated by the receiving application, when a sequence number gap is detected. This message can be used to request the resending of a single message, a range of messages or all messages after a specified message.

If the sender chooses to not resend a specific message (i.e. an order because of movement or changes in the market), the sender can use a Sequence Reset Gapfill message. This message allows the sender to skip messages that the sender does not wish to resend.

The following are examples of resend requests:

- To request a single message: BeginSeqNo[7] = EndSeqNo[16].
- To request a range of messages, BegSeqNo[7] = first message of the range, EndSeqNo[16] = last message of the range.
- To request all messages after a specific message: BeginSeqNo[7] = first message of the range, EndSeqNo[16] = 0 (represents infinity).

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType[35] = 2
7	BeginSeqNo	Y	The message sequence number of the first message in the range of messages to be re-sent.
16	EndSeqNo	Y	The message sequence number of the last message in the range of messages to be re-sent. If the request is for a single message then BeginSeqNo[7] = EndSeqNo[16]. If the request is for all the messages subsequent to a particular message, EndSeqNo[16] = "0" (representing infinity).
	<i>Standard Trailer</i>	Y	

CCG always sends a resend request to request all messages subsequent to a particular message: BeginSeqNo = first message of range, EndSeqNo = 0 (represents infinity); but if firms do the following, CCG honors it:

To request a single message: BeginSeqNo = EndSeqNo

To request a range of messages: BeginSeqNo = first message of range, EndSeqNo = last message of range.

## 6.5 Sequence Reset

The Sequence Reset (Gap Fill) message is used to reset the next expected incoming sequence number. The Sequence Reset message can be used in the following situations:

- During normal resend processing – the firm may choose not to send a message (e.g. a stale order).

- During normal resend processing - the firm does not resend a number of administrative messages the Sequence Reset message is used to fill the sequence gap created.
- In the event of an application failure, it may be necessary to force the synchronization of sequence numbers on both sides.
- When a gap is detected in the inbound stream, a ResendReq message is sent requesting gapfill to infinity. Other than SeqReset- Reset, out of sequence messages are discarded. ResendReq should not be repeated on each incoming out of sequence message.

The Sequence Reset message always signifies that the application should be reset to the new sequence number to be transmitted.

The Sequence Reset message format is as follows:

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType[35] = 4
123	GapFillFlag	N	Indicates that the Sequence Reset message is replacing administrative or application messages, which are not present. Valid Values: Y = Gap Fill message, MsgSeqNum field valid. N = Sequence Reset, ignore MsgSeqNum.
36	NewSeqNo	Y	The new valid sequence number.
	<i>Standard Trailer</i>	Y	

## 6.6 Reject

The Reject message is generated upon receipt of an invalid message and is displayed in the Text[58] field.

The reject message should be issued when a message is received but cannot be properly processed due to a session-level rule violation. An example of when a reject may be appropriate would be the receipt of a message with invalid basic data (e.g. MsgType=&), which successfully passes CheckSum and BodyLength checks. As a rule, messages should be forwarded to the trading application for business level rejections whenever possible. In addition to the basic data validation referenced above, the FIX Engine rejects incoming messages and provide a meaningful text message if:

1. There is a tag sequence error (message has passed basic validation but intermixed header/body tags).
2. Required tags are missing.
3. Inappropriate version tags are present.
4. There is a SenderCompID mismatch.

The Reject message format is as follows:

Tag	Field Name	Req'd	Comments
	<i>Standard Header</i>	Y	MsgType[35] = 3
45	RefSeqNum	Y	The reference sequence number of the rejected message.

Tag	Field Name	Req'd	Comments
373	SessionRejectReason	N	A code, which identifies the reason for the session level 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
371	RefTagId	N	The tag number of the FIX field being referenced.
372	RefMsgType	N	The MsgType of the FIX message being referenced.
58	Text	N	Reject text, which identifies the reason for the rejected message. Text is limited to 25 characters.
	<i>Standard Trailer</i>	Y	

## 6.7 Sequencing and Reconnecting

When the incoming sequence number does not match the next expected number, corrective processing is required. The FIX specification assumes that if the incoming message has a sequence number less than expected and the PossDupFlag is not set, there has been a serious error. The specification strongly recommends that the session be terminated and manual intervention be initiated. If the incoming sequence number is greater than expected, it indicates that messages were missed and retransmission of the messages is requested via the *Resend Request*. If the incoming sequence number is less than expected and the PossDupFlag is not set, the FIX Engine sends Logout message with text referring to the error and terminate the session. A Logout message can also be initiated from the FIX engine for the following reasons:

1. Receipt of bad data.
2. Incoming Seq Num Less Than Expected Sequence number and it is Not a poss dup message/Seq Reset Reset message.
3. SenderCompID Problem.
4. TargetCompID Problem
5. Sending Time accuracy problem: Poss Dup flag is set and Orig Sending Time is later than Sending Time.
6. Sending Time accuracy problem: Sending time value is either not specified in GMT OR is not within 2 minutes of atomic clock.
7. Invalid Logon Message received.

Upon receipt of a *Resend Request*, the responder can respond in one of three ways:

1. Retransmit the requested messages (in order) with the original sequence numbers and *PossDupFlag* set to "Y".
2. Issue a *SeqReset - GapFill with PossDupFlag set to "Y"* message to replace the retransmission of administrative and application messages.
3. Issue a *SeqReset-Reset with PossDupFlag set to "Y"* to force sequence number synchronization.

During the gap fill process, administrative messages, other than Reject, should not be retransmitted. A special *SeqReset - GapFill* message is generated for *Logon, Logout, ResendRequest, Heartbeat, TestRequest* and *SeqReset-Reset* and *SeqReset-GapFill*. The *SeqReset-GapFill* message can also be used to skip application messages that the sender chooses not to retransmit (e.g. aged orders).

If an inadvertently retransmitted administrative message (*PossDupFlag* flag set indicating a resend) is received, it is processed for sequence number integrity only; any other processing of this message is skipped.

#### CCG Responses to Sequence Number Errors by Message Type

Message Type	Action to Be Taken on Sequence # Mismatch
Logon	Must always be the first message transmitted. Authenticate and accept the connection. After sending a <i>Logon</i> confirmation back, send a <i>ResendRequest</i> if a message gap was detected in the <i>Logon</i> sequence number.
Logout	If a message gap was detected, issue a <i>ResendRequest</i> to retrieve all missing messages followed by a <i>Logout</i> message, which serves as a confirmation of the logout request. Do not terminate the session. The initiator of the <i>Logout</i> sequence has responsibility to terminate the session. This allows the <i>Logout</i> initiator to respond to any <i>ResendRequest</i> message. If the user side was the initiator of the <i>Logout</i> sequence, then this is a <i>Logout</i> confirmation and the session should be immediately terminated upon receipt. The session acceptor can terminate the session immediately when the initiator sends an invalid <i>Logon</i> message. This reduces the threat of unauthorized connection attempts.
ResendRequest	Perform the Resend processing first, followed by a <i>ResendRequest</i> of your own in order to fill the incoming message gap.
SeqReset-Reset	Ignore the incoming sequence number. The <i>NewSeqNo</i> field of the <i>SeqReset</i> message contains the sequence number of the next message to be transmitted.
SeqReset-GapFill	Send a <i>ResendRequest</i> back. Gap Fill messages behave similar to a <i>SeqReset</i> message. However, it is important to insure that no messages have been inadvertently skipped over. This means that <i>GapFill</i> messages must be received in sequence. An out of sequence <i>GapFill</i> is an abnormal condition
All Other Messages	Perform Gap Fill operations.

## 6.8 Message Delivery

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

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

### Sequence Numbers

At the start of day, sequence numbers are initialized at the start of a FIX session starting at 1. The user can generate a Sequence Reset message to reset the next expected incoming sequence number for use in session re-initialization. NYSE systems only accept a sequence reset to sequence number 0001 (for CCG there are no leading zeros) for use in session re-initialization. Sequence numbers cannot be made up of all zeros.

### Heartbeats

During periods of message inactivity, according to the FIX protocol, FIX applications generate Heartbeat messages at regular time intervals. Both parties, using the HeartBtInt field in the Logon message, declare the heartbeat interval.

**Ordered Message Processing**

The FIX protocol assumes ordered delivery of messages between parties. When a message with a higher than expected sequence number arrives, the protocol engine requests the message originator to fill the gap, and stops transmitting messages to the application until it does so. Supported method is, for example, if the receiver misses the second of five messages, the application could ignore messages 3 through 5 and generate a resend request for messages 2 through 5, or, preferably 2 through 0 (where 0 represents infinity).

**Possible Duplicates**

A possible duplicate message is generated in response to a resend request made by a FIX Engine. In the FIX protocol, the message is a retransmission with the same sequence number of the application data with the PossDupFlag [43] included and set to |Y| in the header.

**Possible Resends**

The FIX protocol supports the resending of messages with the PossResend flag [97] set with a new FIX sequence number. This is useful when an order remains unacknowledged for an inordinate length of time and the end-user suspects it had never been sent.

**Required Fields**

Each message within the protocol is comprised of required, optional and conditionally required fields (fields which are required based on the presence or value of other fields). Systems should be designed to operate when only the required and conditionally required fields are present. NYSE’s FIX Engine’s interpretation is that the required and conditionally required fields must be present otherwise messages are rejected.

**Message Header**

Each Application and Administrative message is preceded by the FIX standard message header. The FIX message header identifies the message type, length, destination, sequence number, origination point and time.

Tag	Field Name	Req’d	Field Description
8	BeginString	Y	FIX.4.2   (Always unencrypted)
9	BodyLength	Y	(Always unencrypted, must be second field in message)
34	MsgSeqNum	Y	(Can be embedded within encrypted data section.) part of the FIX Session Protocol.
35	MsgType	Y	(Always unencrypted, must be third field in message)
43	PossDupFlag	N	Always required for retransmitted messages, whether prompted by the sending system or as the result of a resend request. Handled locally by the FIX Engine.
49	SenderCompID	Y	(Always unencrypted) Identifies the session. SenderCompId[49] is defined as an alphanumeric on input. Assigned by NYSE Member Firm Services/Application Support (i.e. ABC_DEFG01). On output is defined as “CCG”.
50	SenderSubID	N	The FIX specification allows this field to be within the encrypted data section.
52	SendingTime	Y	YYYYMMDD-HH:MM:SS (Always in GMT time)
56	TargetCompID	Y	On input to CCG identifies the target application, e.g. CCG. (Always unencrypted) On output from CCG is defined as an alphanumeric representing the device name (i.e. ABC_DEFG01).

Tag	Field Name	Req'd	Field Description
57	TargetSubID	C	CCG uses this string for valid NYSE routing codes. Required for all orders, cancels, cancel replaces and cancel reduces routed to BBSS.
97	PossResend	N	Required when message may be a duplicate of another message sent under a different sequence number.
115	OnBehalfOfCompID	Y	Firm Mnemonic assigned by NYSE.
116	OnBehalfOfSubID	N	Trading partner SubID used when delivering messages via a third party.
122	OrigSendingTime	N	Required for message resends. If data is not available set to same value as SendingTime.
128	DeliverToCompID	N	Outbound messages will contain the Firm Mnemonic.
129	DeliverToSubID	N	Trading partner SubID used when delivering messages via a third party.
142	SenderLocationID	N	Branch identification (same as BBB in ClOrdID [11]).
143	TargetLocationID	C	Trading partner LocationID (i.e. broker booth information, or a broker's badge number for e-Broker handheld routing). Required for all orders, cancels, cancel replaces and cancel reduces routed to BBSS and CBS.
144	OnBehalfOfLocationID	N	Trading partner LocationID (i.e. geographic location and/or desk) used when delivering messages via a third party.
145	DeliverToLocationID	N	Trading partner LocationID (i.e. geographic location and/or desk) used when delivering messages via a third party.

The inbound value of SenderCompId[49] is switched with the inbound value of TargetCompId[56] to generate the outbound message header from CCG. The same logic holds for the inbound value of OnBehalfOfCompId[115] and if present the inbound value of DeliverToCompId[128] to generate the outbound message header from CCG.

### **Message Trailer**

The standard FIX message trailer terminates all Application and Administrative FIX messages. The trailer is used to segregate messages and contains the three digit character representation of the Checksum[10] value.

Tag	Field Name	Req'd	Comments
93	SignatureLength	N	Required when trailer contains signature. <b>Note: Not to be included within SecureData field</b>
89	Signature	N	<b>Note: Not to be included within SecureData field</b>
10	Checksum	Y	(Always unencrypted, always last field in message)

## 7 FIX Application Protocol

This section describes some of the FIX Application messages. It is not a complete reference and should be used in conjunction with the FIX protocol specification. Order, Cancel, CancelReduce and Cancel Replace acknowledgements will be returned with all tags submitted on the original request.

Only the following FIX Application MsgTypes may be sent to or received from NYSE CCG FIX:

Type	Message Name	Message Purpose
D	Order – Single	Used for submission of a new <i>Order</i> for execution.
F	Order Cancel Request	Requests the cancellation of the remaining quantity of an existing <i>Order</i> or the reduction in quantity of an existing <i>Order</i> .
G	Order Cancel/Replace Request	Used to change the parameters of an existing <i>Order</i> . Treated as a new order with a unique sequence number. Cancel Replace can also be used for “Makes” messages.
8	Execution Report	Confirm Receipt of an <i>Order</i> Changes to an existing <i>Order</i> Relay <i>Order</i> status information Fill information on working <i>Orders</i> Reject <i>Orders</i>
9	Order Cancel Reject	Issued upon receipt of a <i>Cancel Request</i> or <i>Cancel/Replace Request</i> that does not meet requirements.

### 7.1 New Order – Single

In addition to requirements for the standard FIX message header, the following fields are used by the application layer for a NYSE CCG New Order – Single message.

Tag	Field	Description	Req.	Values
	<b>Standard Header</b>		<b>Y</b>	<b>MsgType = D</b>
1	Account	This field can be used for miscellaneous information.	N	Up to 32 alphanumeric characters
11	ClOrdID	Identifier of the order as assigned by order originator. This field is used for access to the FIX Order File.  Each user is required to guarantee that the same Branch Code and Sequence number combination is not used by the SAME mnemonic more than once in a single processing day.	Y	Format: <i>BBB^NNNN/MMDDYYYY</i> . Branch code is 2 to 3 alphas, 1 space delimiter; sequence number is up to 4 numerics, which cannot be all zeros and the sequence number must be padded with leading zeros, ex. 0001.  <b>The value for this field must be in UPPERCASE (e.g. BBB^NNNN/MMDDYYYY). Any deviation from this format will result in the message rejected by CCG.</b>  <b>HMQ, YYY, RRR, ZZZ, TTT, QQQ, ZYY, ZYZ or ZYX should not be used; NYSE rejects transmission with these branch codes since they are reserved. No leading or trailing blanks or special characters are allowed.</b>
18	ExecInst	Instructions for order handling on exchange trading floor.	N	E = DNI (Do Not Increase) F = DNR (Do not Reduce)  Note: If DNI or DNR is present on an order with a time in force other than GTC or GTX, SDBK shall reject..

Tag	Field	Description	Req.	Values
21	HandInst	Identifies transaction type	Y	1 = Automatic
38	OrderQty	Indicates share quantity on order	Y	Number of shares 1 – 6,500,000
40	OrdType	Indicates order type	Y	1 = Market 2 = Limit 3 = Stop 5 = Market on close (used for round lots and partial round lots [PRLs] during the regular trading session) A = On close (used for odd lots during the regular trading session; can be used for odd lots, round lots and PRLs during the Crossing Session) B = Limit On Close (not valid for odd lots - used for round lots and partial round lots [PRLs] during the regular trading session)
44	Price	Indicates price on order in decimals.	Y	.01-999,999.99
47	OrderCapacity (aka Rule80A)	Represents the Account Type, which reflects the type of trade as well as the relationship between the beneficial owner of the account and the member organization clearing the trade.  <b>Note: This Tag is required unless Tag 9460 is present.</b>	Y	Valid values: A through Z (see Appendix B for definitions).
49	SenderCompID	Identifies the session.	Y	Agreed upon value between entering firm and NYSE.
50	SenderSubID	Identifies the trader or user	N	Customer defined
52	SendingTime	This value must be within 120 seconds of the Atomic Clock, or CCG will reject the order.	Y	Time in UTC format. YYYYMMDD-HH:MM:SS
54	Side	Side of the Order	Y	1 = Buy 2 = Sell 3 = Buy Minus 4 = Sell Plus 5 = Sell Short
55	Symbol	This field must contain a valid symbol in upper case lettering.	Y	Ticker symbol.
57	TargetSubID	Represents the valid NYSE Routing Codes  Note: Member Firms should make the distinction as to how orders should be entered. If this tag is used, Tag 9487	N	2 = Specialist's Post (RPX) 4 = Overrides Preset Booth Routing parameters (OVR) 5 = One-Sided Crossing Session (OS) 6 = Two-Sided Crossing Session (TS) 7 = NYSE Direct (NX)

Tag	Field	Description	Req.	Values
		cannot also be present. If neither Tag 57 nor tag 9487 is included in the message, CCG routes the order to its proper destination based upon its stock symbol, quantity, and price.		Value of "4" is required for all orders, cancels, cancel replaces and cancel reduces routed to BBSS.  Note: One-sided and two-sided crossing sessions are not supported in SDBK (must use Matchpoint).
58	Text	Free Format Text String	N	Up to 25 Characters.  Note: This field will not be returned with the same value on execution reports.
59	TimeInForce	If a value is not present in this field, the default is Day.	N	0 = Day 1 = GTC (Good Till Cancel) 2 = OPG (At the Opening - not supported for odd lots) 3 = IOC (Immediate Or Cancel) 5 = GTX (Good Till Crossing)  * GTC and GTX are not supported when using direct routing to a Broker's Handheld device. GTX is not supported in SDBK (must use Matchpoint).
60	TransactTime	Transaction Time	Y	Time in UTC format. YYYYMMDD-HH:MM:SS
63	SettlmntTyp	Indicates order settlement period. Absence of this field is interpreted as Regular.	N	0 = Regular
65	SymbolSfx	This field must contain a valid symbol suffix in upper case lettering.	N	Valid Suffix value
97	PossResend	Indicates the message may contain information that was sent under another sequence number.	N	Y = Possible Resend N = Original Transmission
99	StopPx	Set to dictate stop price on stop orders. <b>Note:</b> Required <i>only</i> when <i>OrdType Stop</i> is used.	N	.01-999,999.99
111	MaxFloor	Maximum number of shares within an order to be shown on the exchange floor at any given time.	N	The minimum value for this tag is zero. If specifying a quantity other than zero, the value must be equal to one (1) times the securities unit of trade (i.e., 100 shares minimum for a 100-share UOT security, 10 shares minimum for a 10-share UOT security and 1 share minimum for a 1-share UOT security).
115	OnBehalfOfCompID	1-4 alpha characters identifying the entering member firm and/or clearing firm	Y	Firm Mnemonic assigned by the NYSE.
143	TargetLocationID	Trading Partner/Booth Location ID	N	2 alpha-numeric characters for Broker Booth routing or 1-4 numeric for Broker handheld (broker badge number)

Tag	Field	Description	Req.	Values
				Required for all orders, cancels, cancel replaces and cancel reduces routed to BBSS and CBS.
207	SecurityExchange	Market used to help identify a security.  <b>Note:</b> Even though this tag is required, it is currently not used in routing decisions. Routing is based on symbol and the exchange that is listed as the primary marketplace.	Y	N = NYSE P = NYSE Arca A = NYSE Amex Equities
377	SolicitedFlag	Indicates whether the order was solicited.	N	Y = Was solicited N = Was not solicited
439	ClearingFirm	Names the clearing member designated by another clearing or non-clearing member for settlement of its Exchange transactions.	N	Clearing Firm Value
9460	OrderCapacity2	Additional value representing accounting type.  Note: If using Tag 9460, Tag 47 cannot also be present. Tag 9460 cannot be used if Tag 47 is present	N	Q - Indicates that an error was made in the execution of a previous order (for example, wrong stock or wrong side of the market, etc.) or on missing the market on a held order.  Tag 47 will also accept a value of Q.
9432	MiscDataLine4	Miscellaneous Text Field	N	1-27 Character Text Field
9487	RoutingInstruction	NMS Routing Instructions  <b>Note:</b> See NYSE Equities Order Types Section for definitions.	N	ISO = Inter-Market Sweep DNS = Do Not Ship SOC = NMS IOC <b>Note:</b> When using Tag 9487, Tag 57 cannot also be present
	<b>Standard Trailer</b>		<b>Y</b>	

## 7.2 Cancel Reduce & Cancel Replace Information

The following section outlines the order chain logic in Cancel Requests (Message Type F) and Cancel/Replace (Message Type G) messages.

### **Cancel to Reduce Message (35=F) Information**

A Cancel Request (Message Type F) can also be used to reduce the quantity of an order (also known as a partial cancel). When reducing the quantity of an order, the OrderQty[38], CMSLeavesQty[9429] and CxlQty[9428] fields must be present. The original ClOrdID (i.e. OrigClOrdId[41]) is referenced and OrderID[37] (the start of the Order chain) must be present, allowing the user to keep their position on the Specialist's book.

The Table Below illustrates the use of OrderID[37] in multiple Cancel to Reduce (Leaves) Message Type F messages. Note that in the example below OrderID[37] always refers to the start of the Order Chain.

*Use of OrderID[37] in Multiple Cancel Request Messages - Type F*

	Message Sequence	Msg. Type	ClOrdID[11]	OrigClOrdID[41]	OrderID[37]
1	Order	D	JWB 0001/03102009		
2	Cancel to Reduce	F	JWB 0002/03102009	JWB 0001/03102009	JWB 0001/03102009
3	Cancel to Reduce	F	JWB 0003/03102009	JWB 0001/03102009	JWB 0001/03102009
4	Cancel to Reduce	F	JWB 0004/03102009	JWB 0001/03102009	JWB 0001/03102009



*Note:*

*If there are multiple Cancel to Reduce (Leaves) messages for a specific Order, the OrderID[37] must reference the original/initial order in the chain and must be consistent throughout. The OrderQty[38] field is the original/initial order quantity, SDBK calculates the fills against the reduction.*

### **Cancel Replace (MsgType = G) Order Chain**

The table below illustrates the use of OrderID[37] in multiple Cancel Replace Message Type G messages. Note that in the examples below OrderID[37] references the start of the "new" Order chain and is populated with the OrigClOrdId[41] tag value.

*Use of OrderID[37] in Multiple Cancel Replace Messages - Type G*

	Message Sequence	Msg. Type	ClOrdId[11]	OrigClOrdId[41]	OrderID[37]
1	Order	D	JWB 0001/03102009		
2	Cancel Replace	G	JWB 0002/03102009	JWB 0001/03102009	JWB 0001/03102009
3	Cancel Replace	G	JWB 0003/03102009	JWB 0002/03102009	JWB 0002/03102009
4	Cancel Replace	G	JWB 0004/03102009	JWB 0003/03102009	JWB 0003/03102009

**Cancel Replace (MsgType = G) followed by Cancel Reduce Messages and subsequent Cancel Replaces**

The table below illustrates the use of OrderID[37] in multiple Cancel Replace Message Type G messages followed by multiple Cancel to Reduce Message Type F. Note in the examples below the value of OrderID[37] changes as the message type changes from Message Type G to Message Type F.

*Use of OrderID[37] in a Cancel Replace Message (Type G) Followed by Cancel to Reduce Message (Type F)*

	Message Sequence	Msg. Type	ClOrdId[11]	OrigClOrdId[41]	OrderID[37]
1	Order	D	JWB 0001/03102009		
2	Cancel Replace	G	JWB 0002/03102009	JWB 0001/03102009	JWB 0001/03102009
3	Cancel Replace	G	JWB 0003/03102009	JWB 0002/03102009	JWB 0002/03102009
4	Cancel to Reduce	F	JWB 0004/03102009	JWB 0003/03102009	JWB 0003/03102009
5	Cancel to Reduce	F	JWB 0005/03102009	JWB 0003/03102009	JWB 0003/03102009
6	Cancel Replace	G	JWB 0006/03102009	JWB 0003/03102009	JWB 0003/03102009
7	Cancel Replace	G	JWB 0007/03102009	JWB 0006/03102009	JWB 0006/03102009

### 7.3 Order Cancel Request

In addition to requirements for the standard FIX message header, the following fields are used by the application layer for a NYSE Order Cancel Request.

Tag	Field	Description	Required	Values
	<b>Standard Header</b>		<b>Y</b>	<b>MsgType = F</b>
1	Account	This tag is accepted by CCG, but it will not be returned	N	32 character account information field
11	ClOrdID	Unique ID of cancel request.	Y	CCG does not validate ClOrdID for uniqueness. The value for this field must be in UPPERCASE (e.g. BBB^NNNN/MMDDYYYY). Any deviation from this format will result in the message being rejected by CCG.
37	OrderID	Original/initial order information (start of the order chain)	Y	Populate with original/initial order information (start of the order chain). The format should be BBB^NNNN/MMDDYYYY. The sequence number must be padded with leading zeros, ex. 0001. On multiple Cancel to Reduce (Leaves) messages referencing a single Order, OrderID must refer to the original/initial Order in the chain.  <b>Note: If a Cancel to Reduce (Message Type F) is generated and the previous message uses a Cancel Replace (Message Type G), fill with the OrigClOrdId[41] of the Cancel Replace message. On all subsequent Cancel to Reduce messages refer to the "new" initial</b>

Tag	Field	Description	Required	Values
				<b>Order in the order chain.</b> <b>The value for this field must be in UPPERCASE (e.g. BBB^NNNN/MMDDYYYY). Any deviation from this format will result in the message rejected by CCG.</b>
38	OrderQty		Y	Original/Initial Order quantity
41	OrigClOrdID	ClOrdID of the previous order in the chain to be cancelled.	Y	The value for this field must be in UPPERCASE (e.g. BBB^NNNN/MMDDYYYY). Any deviation from this format will result in the message being rejected by CCG.
54	Side	Side of order	Y	Must match original order
55	Symbol	Valid ticker symbol as defined by NYSE	Y	Must match original order
58	Text	Free format text String	N	The length of this field is limited to 25 characters. Not required to repeat in a Cancel message.
65	SymbolSfx	Valid Symbol Suffix	N	Must match original order
207	SecurityExchange	Market used to help identify a security.	Y	N = NYSE P = NYSE Arca A = NYSE Amex Equities
9429	CMSLeavesQty	New order quantity (includes the open and executed amount).	N	Required when CxlQty [9428] is present. Cannot be an Odd Lot or PRL. <b>Used for Cancel Reduce Only</b>
9428	CxlQty		N	Required when CMSLeavesQty [9429] is present. Cannot be an Odd Lot or PRL. <b>Used for Cancel Reduce Only</b>
9442	SolicitedFlag	The Solicited Flag is not used in CCG.	N	Returned in subsequent messages
	<b>Standard Trailer</b>		<b>Y</b>	

NOTE: Header tags 57 and 143 are required for all cancels and cancel reduces of orders routed to BBSS. Tag 143 is required for all cancels and cancel reduces of orders routed to CBS.

## 7.4 Order Cancel/Replace Request

In addition to requirements for the standard FIX message header, the following fields are used by the application layer for a NYSE Order Cancel/Replace Request. Please note: Cancel Replace cannot be used to modify the quantity from a round lot to an odd lot and vice versa.

Tag	Field	Description	Required	Values
	<b>Standard Header</b>		<b>Y</b>	<b>MsgType = G</b>
1	Account	This field can be used for miscellaneous information.	N	32 character account information field
11	ClOrdID	Unique ID of the Cancel Replace	Y	The format is BBB^NNNN/MMDDYYYY (Note: For CCG, the sequence number must be padded with leading zeros, ex. 0001.) <b>CCG does not validate ClOrdID for uniqueness.</b> <b>The value for this field must be in UPPERCASE (e.g. BBB^NNNN/MMDDYYYY). Any deviation from this format will result in the message rejected by CCG.</b>
18	ExecInst	Used for Good-'til-Canceled order instructions.	N	E = DNI (Do not Increase) F = DNR (Do Not Reduce)
21	HandlInst	Validation is not performed on this Tag, but is required.	Y	1 = Automatic Execution
37	OrderID	Original/initial order information (start of the order chain)	Y	Populate with original/initial order information (start of the order chain). The format should be BBB^NNNN/MMDDYYYY. (Note: For CCG, the sequence number must be padded with leading zeros, ex. 0001.) <b>The value for this field must be in UPPERCASE (e.g. BBB^NNNN/MMDDYYYY). Any deviation from this format will result in the message rejected by CCG.</b>
38	OrderQty	This value can be changed	Y	Desired Quantity
40	OrdType	This value can be changed	Y	1=Market 2=Limit 3=Stop  5 = Market on close (used for round lots and partial round lots [PRLs] during the regular trading session) A = On close (used for odd lots during the regular trading session; can be used for odd lots, round lots and PRLs during the Crossing Session) B = Limit On Close (used for round lots and partial round lots [PRLs])

Tag	Field	Description	Required	Values
				during the regular trading session)
41	OrigClOrdID	ClOrdID of the previous message in the order chain.	Y	<b>The value for this field must be in UPPERCASE (e.g. BBB^NNNN/MMDDYYYY). Any deviation from this format will result in the message rejected by CCG.</b>
44	Price	This value can be changed	N	Contains the new price of the replacement order.  <b>Required for Limit Orders</b>
47	OrderCapacity (aka Rule80A)	Represents the Account Type, which reflects the type of trade as well as the relationship between the beneficial owner of the account and the member organization clearing the trade.	Y	See "New Order – Single" Message (Section 7.1) Valid values: A through Z (see Appendix B for definitions).
54	Side	Side of order. This value cannot be changed and must be the value from the original order	Y	This value cannot be changed and must be the value from the original order. 1 = Buy 2 = Sell 3 = Buy minus 4 = Sell Plus 5 = Sell Short
55	Symbol	Valid symbol as defined by NYSE	Y	This value cannot be changed and must be the value from the original order.
58	Text	Free Format Text String	N	Text is limited to 25 characters
59	TimeInForce	This value can be changed.	N	0=Day 1=GTC 2=At the Opening (not supported for odd lots) 3=IOC 5=GTX (Good-'til-Crossing)
63	SettlmntTyp	Indicates order settlement period.	N	Only "0" supported
65	SymbolSfx	Valid Suffix Value	Y	This value must match the original order.
99	StopPx	This value can be changed	N	Required for 40 = 3 (Stop)
207	SecurityExchange	Market used to help identify a security.	Y	N = NYSE P = NYSE Arca A = NYSE Amex Equities
377	SolicitedFlag	Indicates whether or not the order was solicited	N	Indicates whether or not the order was solicited
439	Clearing Firm	Optional field: names the clearing member	N	Name of clearing member designated by another clearing or non-clearing

Tag	Field	Description	Required	Values
		designated by another clearing or non-clearing member for settlement of its Exchange transactions.		member for settlement of its Exchange transactions.
9432	MiscDataLine4	Miscellaneous Text Field	N	1-27 Character Text Field
9460	OrderCapacity2	Additional value representing accounting type.  Note: If using Tag 9460, Tag 47 cannot also be present. Tag 9460 cannot be used if Tag 47 is present	N	Q - Indicates that an error was made in the execution of a previous order (for example, wrong stock or wrong side of the market, etc.) or on missing the market on a held order.  Tag 47 will also accept a value of Q.
9461	AddQty	The additional quantity to be added to the order	N	Required for "MAKES" "ADD" Only booth-routed order quantity may be updated.
9487	RoutingInstruction	NMS Routing Instructions	N	ISO = Inter-Market Sweep DNS = Do Not Ship SOC = NMS IOC <b>Note:</b> When using Tag 9487, Tag 57 cannot also be present
	<b>Standard Trailer</b>		<b>Y</b>	

NOTE: Header tags 57 and 143 are required for all cancel replaces of orders routed to BBSS. Tag 143 is required for cancel replaces of orders routed to CBS.

## 7.5 Order Cancel Reject

In addition to requirements for the standard FIX message header, the following fields are returned by the application layer on a NYSE CCG Order Cancel or Cancel/Replace Reject Message.

Tag	Field	Description	Required	Values
	<b>Standard Header</b>		<b>Y</b>	<b>MsgType = 9</b>
11	ClOrdID	Unique identifier of the order	Y	Unique identifier of the order
30	LastMkt	Market of execution for last fill.	Y	N = NYSE P = NYSE Arca A = NYSE Amex Equities  <b>CCG will return the actual handling market center value.</b>
37	OrderID	Unique identifier of the cancel request, which is assigned by NYSE.	Y	If CxlRejReason = "Unknown Order", specify 'NONE' otherwise will be the ClOrdID of the order that cannot be canceled or replaced. This value does <b>not</b> apply to the initial order of the day.
39	OrdStatus	This value is applied after the Cancel Reject function is completed.	Y	Valid values: 8 = Rejected

Tag	Field	Description	Required	Values
41	OrigCOrdID	Unique identifier of the cancel request, which is assigned by institution.	Y	COrdID of the order that cannot be canceled or replaced. This value does <b>not</b> apply to the initial order of the day.
58	Text	Description of rejection	Y	Fill with Reject Message text: REJ^-^UNMATCHED^CANCEL Or REJ^-^INV^CANCEL^DATA Text is limited to 25 characters.
60	TransactTime	Transaction Time	Y	Time in UTC format. YYYYMMDD-HH:MM:SS
102	CxlRejReason	Code to identify reason for cancel rejection.	N	Valid values: 0 = Too Late To Cancel 1 = Unknown order
207	SecurityExchange	Market used to help identify a security.	Y	N = NYSE P = NYSE Arca A = NYSE Amex Equities  <b>CCG will return the actual handling market center value.</b>
434	CxlRejResponseTo	Identifies the type of request that a Cancel Reject is in response to.	Y	1 = Order Cancel Request 2 = Order Cancel/Replace Request
	<b>Standard Trailer</b>		<b>Y</b>	

## 7.6 Execution Report

The FIX Execution Report message (Message Type 8) is used for the following purposes:

- To confirm the receipt of an order.
- To confirm changes to an existing order (i.e. accept cancel and replace requests).
- To relay order status and administrative information.
- To relay fill information on working orders.
- To reject orders.

FIX sends acknowledgments and unsolicited ADMIN messages as Execution Reports in the following cases:

- Confirmation of cancellation or replacement requests.
- Corrections to prices.
- Notification of busted trades.
- Notification that price is correct.

Each FIX Execution message describes the current state of the order and execution status. State changes are sent as separate messages and are not used to convey new partial fill details.

In addition to the standard FIX message header, the following fields are returned on a NYSE CCG Execution Report message type 8.

Tag	Field	Description	Req.	Values
	<b>Standard Header</b>		<b>Y</b>	<b>MsgType = 8</b>
1	Account	This field can be used for miscellaneous information.	N	Value returned from original order Up to 32 alphanumeric characters
6	AvgPx	Average Price of executions	Y	Always Zero
11	ClOrdID	Unique identifier of the order as assigned by order originator.  CCG does not validate ClOrdID for uniqueness.	Y	The format will be BBB^NNNN/MMDDYYYY.  The value for this field will be returned in UPPERCASE (e.g. BBB^NNNN/MMDDYYYY).
14	CumQty	Total Quantity of shares executed	Y	Always Zero
17	ExecID	Execution ID as assigned by the exchange	Y	0 on Order Ack Identifier of this report. The existing format is BBB^NNNN/MMDDYYYY^GGRRRSSS where BBB is the Branch, ^ is a space, NNNN is the Sequence Number (up to 4 digits), MMDDYYYY is the original order date, ^ is a space, GGG is the Group #, RRR is the Ref. # and SSS is the Seq. #. The sequence number must be padded with leading zeros, ex. 0001. Note: GGRRRSSS represents the Activity ID.  <b>The new Expanded Activity ID format embedded at the end of</b>

Tag	Field	Description	Req.	Values
				<p><b>the ExecID field is available to the firms by session basis. It will increase in size to ten characters and will be formatted as follows:</b></p> <p>BBB^NNNN/MMDDYYYY^RRRRRSSSSS</p> <p><b>The expansion of the activity ID increases the number of activities on a single order from 999 to 99,999.</b></p> <p><b>Note:</b> In order to avoid any difficulty that may be caused by an ExecID rolling over after 999 actions, NYSE suggests using the new user tag 9579.</p>
18	ExecInst	Instructions for order handling.	N	<p>Value returned from original order</p> <p>Note: If DNI or DNR is present on an order with a time in force other than GTC or GTX, SDBK shall reject..</p>
19	ExecRefID	Identifier used with Trade Bust and Trade Correction transactions.	N	<p>If Activity ID is present, concatenate into ClOrdID[11].</p> <p><b>The new Expanded Activity ID format embedded at the end of the ExecID field is available to the firms by session basis. It will increase in size to ten characters and will be formatted as follows:</b></p> <p>BBB^NNNN/MMDDYYYY^RRRRRSSSSS</p> <p><b>The expansion of the activity ID increases the number of activities on a single order from 999 to 99,999.</b></p> <p><b>Note:</b> In order to avoid any difficulty that may be caused by an ExecID rolling over after 999 actions, NYSE suggests using the new user tag 9704.</p>
20	ExecTransType	Identifies transaction type	Y	0 = New
29	LastCapacity	Broker Capacity in order execution	N	<p>1 = Agent</p> <p>2 = Cross as agent</p> <p>3 = Cross as principal</p> <p>4 = Principal</p>
30	LastMkt	Market of execution for last fill.	Y	<p>N = NYSE</p> <p>P = NYSE Arca</p> <p>A = NYSE Amex Equities</p> <p><b>CCG will return the actual handling market center value.</b></p>

Tag	Field	Description	Req.	Values
31	LastPx	Price on Execution	Y	0 on Order Ack Price at Execution on Partial Fill or Fill
32	LastShares	Shares Executed	Y	0 on Order Ack Shares Bought or Sold on Partial Fill or Fill
37	OrderID	Provides the ClOrdID (Tag 11) of the active order	Y	The format is BBB^NNNN/MMDDYYYY. The value for this field will be returned in UPPERCASE (e.g. BBB^NNNN/MMDDYYYY).
38	OrderQty	Contains the order quantity from the original order	Y	Value Returned from Order
39	OrdStatus	Status of the order	Y	0 = New (On order acknowledgement) 1 = Partially filled (If Leaves Qty <151> is not 0.) 2 = Filled (If Leaves Qty <151> is 0.) 3 = Done for Day 4 = Canceled 5 = Replaced 6 = Pending Cancel 8 = Rejected E = Pending Replace
40	OrdType	Value returned from original order	Y	Value returned from original order
41	OrigClOrdID	ClOrdID of the previous order (NOT the initial order in a cancel replace chain) as assigned by the order originator, used to identify the previous order in cancel, cancel reduce and cancel/replace requests.		The format is BBB^NNNN/MMDDYYYY. The value for this field will be returned in UPPERCASE (e.g. BBB^NNNN/MMDDYYYY).
44	Price	Value returned from original order	Y	Value returned from original order
47	OrderCapacity (aka Rule80A)	Value returned from original order	Y	Value returned from original order
54	Side	Value returned from original order	Y	Value returned from original order
55	Symbol	Value returned from original order	Y	Value returned from original order
58	Text	Free format text string	N	Text is limited to 25 characters.
59	TimeInForce	Value returned from original order	Y	Value returned from original order
60	TransactTime	Transaction Time	Y	Time in UTC format. YYYYMMDD-HH:MM:SS
63	SettlmntTyp	Indicates order settlement period	N	0 = Regular All other values will not be supported by SDBK
65	SymbolSfx	Additional information about the security (e.g. preferred, warrants,	N	Value returned from original order

Tag	Field	Description	Req.	Values
		etc.)		
76	ExecBroker	Identifies executing / give-up broker.	N	Standard NASD market-maker mnemonic is preferred.
99	StopPx	Limit price per share.	N	Limit price per share.
150	ExecType	If LastShares is zero, set to 0; if LastShares equals OrderQty, set to 2; otherwise set to 1.	Y	0 = New 1 = Partially filled 2 = Filled 3 = Done for Day 4 = Canceled 5 = Replaced 6 = Pending Cancel 8 = Rejected E = Pending Replace
151	LeavesQty	Leaves remaining on order	Y	OrderQty (Tag 38) minus LastShares (Tag 32). On order acknowledgements, this value will always be 0.
207	SecurityExchange	Market used to help identify a security.	Y	N = NYSE P = NYSE Arca A = NYSE Amex Equities  <b>CCG will return the actual handling market center value.</b>
382	NoContraBrokers	Number of Contra Brokers repeating group instances.  Required if the value for NoContraBrokers [382] is greater than 0.	N	Number of Contra Brokers
→	375	ContraBroker		Identifies the Contra side of the trade.  Required if NoContraBrokers[9423] is greater than 0. First field in repeating group.
			N	Contra Broker Identifier  Execution Reports from Arca will contain  ANON  in this field.  <i>Note: It is possible to have more than five contra sets although only five will be included per execution report. If there are more than five contras, they appear in consecutive reports in sets of five at most.</i>
→	337	ContraTrader		Identifies the trader (e.g. "badge number") of the Contra Broker.
			N	Contra Trader Identifier
→	437	ContraTradeQty		Quantity traded with the Contra Broker.  Required if NoContraBrokers (Tag 9423) is greater than 0.
			N	Share Quantity Traded with Contra
→	438	ContraTradeTime		Indicates the Execution time in hours and minutes
			N	HHMMSS (CBS) HHMM (SDBK)
439	ClearingFirm	Optional field: names the clearing member	N	Clearing Member Identifier

Tag	Field	Description	Req.	Values
		designated by another clearing or non-clearing member for settlement of its Exchange transactions.		
9428	Cancel Quantity	Required when CMS Leaves Qty specified in Tag 9429.	N	Returned on Acknowledgement for Cancel Reduce only
9429	CMSLeavesQty	New order quantity (includes the open and executed amount). Required when CxlQty Tag 9428 is present. Cannot be an Odd Lot or PRL.	N	Returned on Acknowledgement for Cancel Reduce only
9430	NYSEDirect+™	Routing Code	N	If present, is set to  NX  representing the trade was executed using the NYSEDirect+ parameters.
9433	Execution Information	Indicates the Executing Specialists/Executing Brokers number.	N	Executing Specialists/Executing Brokers number
9436	MemoAB	Relative to NYSE Rule 108(a), Tag 9436 is used to indicate Parity/ No Parity. Tag 9436 is also used to indicate whether a Report was part of a Cross transaction.	N	10 character field; a period is returned for any character not entered.
9440	ERCReferenceNumber	Execution Report Change Reference ID	N	Format: <b>GGGRRRSS</b> (Sent in Execution Reports for orders sent to BBSS and non-SDBK migrated stocks)
9483	DBKLinkId	Associates all buy and sell execution reports and tape prints in the Display Book trade.	N	6 Numeric Characters
9570	ExecAwayMktId	Contains The Market Center ID (see valid values below) and, optionally, the Market Maker ID separated by a slash (e.g., D/EDGA).  If this tag is present, Tag 9578 will not also be present.	N	B = Nasdaq BX (Boston) C = National Stock Exchange D = National Association of Securities Dealers (new) I = International Securities Exchange M = Chicago Stock Exchange N = New York (routed to Matchpoint) P = NYSE Arca Exchange T = National Association of Securities Dealers Automated Quotation (old) W = Chicago Board Options Exchange X = Philadelphia Stock Exchange Z = BATS Exchange

<b>Tag</b>	<b>Field</b>	<b>Description</b>	<b>Req.</b>	<b>Values</b>
9578	BillingIndicator	Execution Report Billing Indicators  If this tag is present, Tag 9570 will not also be present.	N	1 = Taker 2 = Provider 3 = Blended 4 = Opening/Provider (Prior Day GTC Orders) 5 = Opening/Provider 6 = Closing/Provider 7 = Closing/Blended
9579	ExpERCReference Number	Expanded Activity ID	N	Format: <b>RRRRRSSSSS</b> *Will contain the activity id embedded in the ExecID field. (Will appear on execution report change messages)
9704	PrevExpERCReferenceNumber	Expanded Activity ID referencing execution report being modified	N	Format: <b>RRRRRSSSSS</b> *Will contain the activity id embedded in the ExecRefID field. (Will appear on execution report change messages)
	<b>Standard Traler</b>		<b>Y</b>	

## 8 NYSE Equities Order Types

Order Type	Fix tags	Description	Exchange Platform
Market Order	OrdType (40)=1 (market)	An order to buy or sell that is to be executed at the best price obtainable.	- NYSE & NYSE AMEX Equities
Limit Order	OrdType (40) = 2 (limit)	An order to buy or sell at a specified price or better. A marketable limit order is a limit order to buy/sell at or above/below the consolidated best offer/bid for the security	- NYSE & NYSE AMEX Equities
Buy Minus Order	OrdType (40) = 1 or 2 Side (54) = 3	A limit or market order to buy a stated amount of a security provided that the price to be obtained is not higher than the last sale if the last sale was a "minus" or "zero minus" tick.	- NYSE & NYSE AMEX Equities
Sell Plus Order	OrdType (40) = 1 or 2 Side (54) = 4	A limit or market order to sell a stated amount of a security provided that the price to be obtained is not lower than the last sale if the last sale was a "plus" or "zero plus" tick.	- NYSE & NYSE AMEX Equities
Sell Short Order	OrdType (40) = 1 or 2 Side (54) = 5	A limit or market order to sell short a security not owned by the seller. The short sale rules apply to all traders using this function.	- NYSE & NYSE AMEX Equities
Stop Order	OrdType (40) = 3 (Stop) or OrdType (40) = 4 (Stop Limit)	An order to buy or sell at the market price triggered once a security has traded at a stop price set by the customer.	- NYSE & NYSE AMEX Equities
Day Order	OrdType (40) = 1 or 2 TimeInForce (59) = 0	A market or limit order that, if not executed, expires at the end of the trading day on which it was entered.	- NYSE & NYSE AMEX Equities
IOC (immediate Or Cancel)	OrdType (40) = 2 TimeInForce (59) = 3	A market or limit order that trades immediately and automatically cancels any unfilled portion. These orders will route to protected quotes, if the order cannot be executed at the NYSE.	- NYSE & NYSE AMEX Equities
Block Reserve Order	OrdType (40) = 2 (limit) MaxFloor (111) = (show size)	A limit order with a minimum published amount of 100 shares that replenishes at the minimum or at a different amount set by the user after each execution. Both the displayed portion and hidden reserve portion will participate in all electronic executions.	- NYSE & NYSE AMEX Equities
Dark Reserve Order	OrdType (40) = 2 (limit) MaxFloor (111) = 0 (Zero)	A limit order with zero published quantity that will not be displayed to the DMM or in NYSE OpenBook®. Dark Reserve orders can be priced at, between or outside the displayed quote. This order type will not participate in manual, floor based trades, including the opening and closing trades, but will participate in all electronic executions. All dark reserve orders will be rejected prior to the open so as not to trigger "a clean up trade" after the opening trade when the DMM is making an aftermarket.	- NYSE & NYSE AMEX Equities
Intermarket Sweep Order	OrdType (40) = 2	An immediate or cancel limit order that trades at the NYSE only and will trade through even when	- NYSE & NYSE AMEX

Order Type	Fix tags	Description	Exchange Platform
(ISO)	TimeInForce (59) = 3 RoutingInst. (9487) = ISO <b>Note: Tag 57 cannot be present</b>	another market center is publishing a better quotation. When sending an Intermarket Sweep Order, the sender fulfills RegNMS order-protection obligations and NYSE Rules by concurrently sending orders to market centers with better prices.	Equities
RegNMS Immediate or Cancel Order (SOC)	OrdType (40) = 1 or 2 TimeInForce (59) = 3 RoutingInst. (9487) = SOC <b>Note: Tag 57 cannot be present</b>	A market or limit immediate or cancel order that is to be executed in whole or in part on the NYSE only. This type of IOC order will not trade through protected quotes.	- NYSE & NYSE AMEX Equities
Do Not Ship (DNS)	OrdType (40) = 2 TimeInForce (59) = 0 RoutingInst. (9487) = DNS <b>Note: Tag 57 cannot be present</b>	A limit Day order that is to be executed in whole or in part by the NYSE only. The portion not executed is quoted, and in the event the order would require routing to an away market center, it would be immediately cancelled.	- NYSE & NYSE AMEX Equities
Opening Only Order	<b>Market</b> OrdType (40) = 1 (Market)  Timeinforce (59) = 2  Or <b>Limit</b> OrdType (40) =2 (Limit)  TimeInForce (59) = 2	A market or limit order that is to be routed as an on open order to participate in the market opening or reopening process. Any balance not executed following the opening trade is cancelled. OPG orders entered after the market open are automatically cancelled. Not supported for odd lots.	- NYSE & NYSE AMEX Equities
Market On Close (MOC)	OrdType (40) = 5  Or  OrdType (40) = A for odd lots only	A market order that is to be executed only during the closing auction	- NYSE & NYSE AMEX Equities
Limit on Close (LOC)	OrdType (40) = B	A limit DAY order that is entered for execution at the closing price, and if not so executed, is to be treated as cancelled.	- NYSE & NYSE AMEX Equities
Good Till Cancel (GTC)	OrdType (40) =2 (Limit)  TimeInForce (59) = 1	A limit order that remains active until it is executed or canceled by the customer. GTC orders may be entered with a market price but generally do not carry over from one day to the next.	- NYSE & NYSE AMEX Equities

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# Appendix A: CCG FIX Field Definitions

The following is a catalog of FIX 4.2 fields used to define the NYSE CCG application and session protocol messages.

<b>Tag</b>	<b>Field</b>	<b>Format</b>	<b>Values</b>
1	Account	String	32 character account information field.
6	AvgPx	Price	The average price is computed from data in the FIX order file for the current order chain. NYSE will always return this tag with a value of "0".
7	BeginSeqNo	int	Message sequence number of first message in range to be present
8	BeginString	String	Identifies beginning of new message and protocol version. ALWAYS FIRST FIELD IN MESSAGE. (Always unencrypted) Valid values: FIX.4.2 Note: CCG only supports FIX 4.2.
9	BodyLength	int	Message length, in bytes, forward to the CheckSum field. ALWAYS SECOND FIELD IN MESSAGE. (Always unencrypted)
10	Checksum	String	Three byte, simple checksum . ALWAYS LAST FIELD IN MESSAGE; i.e. serves, with the trailing <SOH>, as the end-of-message delimiter. Always defined as three characters. (Always unencrypted)
11	ClOrdID	String	Identifier of the order as assigned by order originator. This field is used for access to the FIX Order File. The format is BBB^NNNN/MMDDYYYY. Branch code is 2 to 3 alpha, 1 space delimiter; sequence number is up to 4 numerics, cannot be all zeros and the sequence number must be padded with leading zeros, ex. 0001.) Each user is required to guarantee that the same Branch and Sequence number combination is not used by the SAME user more than once in a single processing day within a group of sessions using the same mnemonic. Violating this rule causes the order to be rejected by CCG. Branch Codes less than 2 characters are rejected. <b>CCG does not validate ClOrdID for uniqueness.</b>  <b>The value for this field must be in UPPERCASE (e.g. BBB^NNNN/MMDDYYYY).</b>  <b>Note: HMQ, YYY, RRR, ZZZ, TTT, QQQ, ZYY, ZYZ or ZYX should not be used; NYSE rejects transmission with these branch codes since they are reserved.</b>  <b>CCG Note: No leading or trailing blanks or special characters are allowed.</b>
14	CumQty	Qty	Cumulative number of executed shares for the current order chain based on the current Execution report and information retrieved from the FIX order file. NYSE will

Tag	Field	Format	Values
			always return this tag with a value of "0".
16	EndSeqNo	int	Message sequence number of last message in range to be resent. If request is for a single message BeginSeqNo = EndSeqNo. If request is for all messages subsequent to a particular message, EndSeqNo = "0" (representing infinity).
17	ExecID	String	<p>Identifier of this report. The format is BBB^NNNN/MMDDYYYY^GGRRRSSSS, where BBB is the Branch, ^ is a space, NNNN is the Sequence Number (up to 4 digits), MMDDYYYY is the original order date, ^ is a space, GGG is the Group #, RRR is the Ref. # and SSS is the Seq. #. (Note: For CCG, the sequence number must be padded with leading zeros, ex. 0001.)</p> <p><b>The new Expanded Activity ID format embedded at the end of the ExecID field is available to the firms by session basis. It will increase in size to ten characters and will be formatted as follows:</b></p> <p>BBB^NNNN/MMDDYYYY^RRRRRSSSSS</p> <p><b>The expansion of the activity ID increases the number of activities on a single order from 999 to 99,999.</b></p> <p>Identifier of execution message as assigned by NYSE (is 0 (zero) for ExecTransType=3 (Status)). For an Order Reject, is set to  0 . A value of  0  will generate a "UR OUT" report since there is no execution. Note: GGRRRSSSS represents the Activity ID.</p>
18	ExecInst	Multiple Value String	<p>Instructions for order handling on exchange trading floor. If more than one instruction is applicable to an order, this field can contain multiple instructions separated by space.</p> <p>Can contain multiple instructions, space delimited. E and F are mutually exclusive; if both 'E' and 'F' are present, only one (arbitrarily chosen) is used.</p> <p>Valid Values: E =  DNI  F =  DNR </p> <p>Note: If DNI or DNR is present on an order with a time in force other than GTC or GTX, SDBK shall reject.</p>
19	ExecRefID	String	<p>Reference identifier used with Cancel and Correct transaction types.</p> <p>If Activity ID is present concatenate into ClOrdId[11].</p> <p><b>The new Expanded Activity ID format embedded at the end of the ExecID field is available to the firms by session basis. It will increase in size to ten characters and will be formatted as follows:</b></p> <p>BBB^NNNN/MMDDYYYY^RRRRRSSSSS</p> <p><b>The expansion of the activity ID increases the</b></p>

Tag	Field	Format	Values
			<b>number of activities on a single order from 999 to 99,999.</b>
20	ExecTransType	char	Identifies transaction type. Valid values: 0=New 1=Cancel 2=Correct 3=Status For an Execution Report, set to  0  for  New . For a Cancel with Replacement, with a LeavesQty[151] greater than 0, set to  0  for  New . For a straight Cancel, set to  0  for  New . Done for Day messages will contain a value of [0]
21	HandlInst	char	Instructions for order handling on Broker trading floor Valid values: 1= Automatic Operation
29	LastCapacity	char	Broker capacity in order execution Valid values: 1 = Agent 2 = Cross as agent 3 = Cross as principal 4 = Principal
30	LastMkt	Exchange	Market of execution for last fill. N = NYSE P = NYSE Arca A = NYSE Amex Equities <b>CCG will return the actual handling market center value.</b>
31	LastPx	Price	Price of this (last) fill. Field not required for ExecTransType = 3 (Status)
32	LastShares	Qty	Quantity of shares bought/sold on this (last) fill. Field not required for ExecTransType = 3 (Status) (Prior to FIX 4.2 this field was of type int)
34	MsgSeqNum	int	Integer message sequence number.

Tag	Field	Format	Values
35	MsgType	String	<p>Defines message type.</p> <p><b>ALWAYS THIRD FIELD IN THE MESSAGE.</b> (Always unencrypted)</p> <p><b>The following valid message types are supported by NYSE:</b></p> <p>0 = Heartbeat  1 = Test Request  2 = Resend Request  3 = Reject  4 = Sequence Reset  5 = Logout  8 = Execution Report  9 = Order Cancel Reject  A = Logon  D = Order – Single  F = Order Cancel Request  G = Order Cancel/Replace Request</p>
36	NewSeqNo	int	New sequence number.
37	OrderID	String	<p>Unique identifier for Order as assigned by NYSE. Uniqueness must be guaranteed within a single trading day. Firms which accept multi-day orders should consider embedding a date within the OrderID field to assure uniqueness across days.</p> <p>The format is BBB^NNNN/MMDDYYYY. Branch code is 2 to 3 alpha, 1 space delimiter; sequence number is up to 4 numerics, cannot be all zeros. (Note: The sequence number must be padded with leading zeros, ex. 0001.)</p> <p>OrdId is defined as BBB two to three alpha characters (representing the Branch code) one space delineator and NNNN is up to four numeric characters (representing the Sequence number).</p> <p>Each user is required to guarantee that the same Branch and Sequence number combination is not used by the SAME user more than once in a single processing day within a group of sessions using the same mnemonic.</p> <p>Violating this rule causes the order to be rejected. Branch Codes less than 2 characters are rejected.</p> <p><b>The value for this field must be in UPPERCASE (e.g. BBB^NNNN/MMDDYYYY).</b></p> <p><b>Note: HMQ, YYY, RRR, ZZZ, TTT, QQQ, ZYY, ZYZ or ZYX should not be used; NYSE rejects transmission with these branch codes since they are reserved.</b></p>
38	OrderQty	Qty	Number of shares ordered

Tag	Field	Format	Values
39	OrdStatus	char	Identifies current status of order. The following valid values are supported by NYSE: Valid values: 0 = New 1 = Partially filled 2 = Filled 3 = Done for Day 4 = Canceled 5 = Replaced 6 = Pending Cancel 8 = Rejected E = Pending Replace
40	OrdType	char	Order type. <b>The following valid values are supported by NYSE:</b> Valid values: OrdType provides basic information about the equity order. Order type can be combined with price information. Valid Values: 1 = Market 2 = Limit 3 = Stop 5 = Market on close (used for round lots and partial round lots [PRLs] during the regular trading session) A = On close (used for odd lots during the regular trading session; can be used for odd lots, round lots and PRLs during the Crossing Session) B = Limit On Close (used for round lots and partial round lots [PRLs] during the regular trading session)
41	OrigClOrdID	String	The format is BBB^NNNN/MMDDYYYY. Branch code is 2 to 3 alpha, 1 space delimiter; sequence number is up to 4 numerics, cannot be all zeros.. The sequence number must be padded with leading zeros, ex. 0001. OrigClOrdId is defined as BBB two to three alpha characters (representing the Branch code) one space delineator and NNNN is up to four numeric characters (representing the Sequence number). Each user is required to guarantee that the same Branch and Sequence number combination is not used by the SAME user more than once in a single processing day within a group of sessions using the same mnemonic. Violating this rule causes the order to be rejected. Branch Codes less than 2 characters are rejected. <b>The value for this field must be in UPPERCASE (e.g. BBB^NNNN/MMDDYYYY).</b> <b>Note: HMQ, YYY, RRR, ZZZ, TTT, QQQ, ZYY, ZYZ or ZYX should not be used; NYSE rejects transmission with these branch codes since they are reserved.</b>
43	PossDupFlag	Boolean	Indicates possible retransmission of message with this sequence number Valid values Y = Possible duplicate N = Original transmission
44	Price	Price	Price per share
45	RefSeqNum	int	Reference message sequence number

<b>Tag</b>	<b>Field</b>	<b>Format</b>	<b>Values</b>
47	Rule80A (aka OrderCapacity)		Represents the Account Type, which reflects the type of trade as well as the relationship between the beneficial owner of the account and the member organization clearing the trade. Valid values A through Z (see Appendix B for definitions).
49	SenderCompID	String	(Always unencrypted). Identifies the session. Assigned by NYSE Member Firm Services/Application Support. On output is defined as CCG.
50	SenderSubID	String	Assigned value used to identify specific message originator (desk, trader, etc.)
52	SendingTime	UTCTime stamp	Time of message transmission (always expressed in UTC (Universal Time Coordinated, also known as "GMT") Time in UTC format: YYYYMMDD-HH:MM:SS
54	Side	char	Side of order Valid values: 1 = Buy 2 = Sell 3 = Buy Minus 4 = Sell Plus 5 = Sell Short
55	Symbol	String	Ticker symbol as defined by the NYSE.
56	TargetCompID	String	On input is defined as CCG. Identifies the target application.
57	TargetSubID	String	Required if TargetLocationID [143] is present. Represents the valid NYSE routing codes. Valid Values: 2 = Specialist's Post (RPX) 4 = Overrides Preset Booth Routing parameters (OVR) 5 = One-Sided Crossing Session (OS) 6 = Two-Sided Crossing Session (TS) 7 = NYSE Direct (NX)  Value of "4" is required for all orders, cancels, cancel replaces and cancel reduces routed to BBSS.  Note: One-sided and two-sided crossing sessions are not supported in SDBK (must use Matchopint).
58	Text	String	Free format text string Text is limited to 25 characters.

Tag	Field	Format	Values
59	TimeInForce	char	<p>Specifies how long the order remains in effect. Absence of this field is interpreted as DAY. The value of 4(FOK) is not supported and a reject message with Text [58] set to  Service unavailable for &lt;symbol&gt;   is returned. The value of 6 is not supported and a Reject message with Text [58] set to  Good till date not supported  is returned.</p> <p>* GTC and GTX are not supported when using direct routing to a Broker's Handheld device. GTX is not supported in SDBK.</p> <p><b>The following valid values are supported by NYSE:</b> Valid values: 0 = Day 1 = GTC (Good Till Cancel) 2 = OPG (At the Opening – not supported for odd lots) 3 = IOC (Immediate Or Cancel) 5 = GTX (Good Till Crossing)</p>
60	TransactTime	UTCTime stamp	<p>Time of execution/order creation (expressed in UTC (Universal Time Coordinated, also known as "GMT") Greenwich Mean Time. Time in UTC format: YYYYMMDD-HH:MM:SS</p>
63	SettlmntTyp	char	<p>Indicates order settlement period. Absence of this field is interpreted as Regular. Regular is defined as the default settlement period for the particular security on the exchange of execution.</p> <p><b>The following valid values are supported by NYSE:</b> Valid values: 0 = Regular *All other values are not supported by SDBK.</p>
65	SymbolSfx	String	<p>Additional information about the security (e.g. preferred, warrants, etc.). Note also see SecurityType. Valid values: As defined in the NYSE Stock and bond Symbol Directory and in the AMEX Fitch Directory</p>
76	ExecBroker	String	Identifies executing / give-up broker. Standard NASD market-maker mnemonic is preferred.
90	SecureDataLen	int	Length of encrypted message
91	SecureData	data	Actual encrypted data stream
93	SignatureLength	int	Number of bytes in signature field.
97	PossResend	Boolean	<p>Indicates that message may contain information that has been sent under another sequence number. Valid Values: Y = Possible Resend N = Original Transmission</p>
98	EncryptMethod	int	Must be  0  (Always unencrypted)
99	StopPx	Price	Limit price per share
100	ExDestination	Exchange	<p>Execution destination as defined by institution when order is entered.</p> <p><b>The following valid value is supported by NYSE:</b> Valid values:</p>

Tag	Field	Format	Values
			N = NYSE
102	CxlRejReason	int	Code to identify reason for cancel rejection. <b>The following valid values are supported by NYSE:</b> Valid values: 0 = Too Late To Cancel 1 = Unknown order
111	MaxFloor	Qty	The minimum value for this tag is zero. If specifying a quantity other than zero, the value must be equal to one (1) times the securities unit of trade (i.e., 100 shares minimum for a 100-share UOT security, 10 shares minimum for a 10-share UOT security and 1 share minimum for a 1-share UOT security).
112	TestReqID	String	Identifier included in Test Request message to be returned in resulting Heartbeat
114	LocateReqd	Boolean	Indicates whether the broker is to locate the stock in conjunction with a short sell order.  Valid values: Y = Indicates the broker is responsible for locating the stock N = Indicates the broker is not required to locate
115	OnBehalfOfCompID	String	Firm Mnemonic.
116	OnBehalfOfSubID	String	Trading partner SubId used when delivering messages via a third party.
123	GapFillFlag	Boolean	Indicates that the Sequence Reset message is replacing administrative or application messages, which are not present. Valid values: Y = Gap Fill message, MsgSeqNum field valid N = Sequence Reset, ignore MsgSeqNum
128	DeliverToCompID	String	Assigned value used to identify the firm targeted to receive the message if the message is delivered by a third party i.e. the third party firm identifier would be delivered in the TargetCompID field and the ultimate receiver firm ID in this field.  In outbound messages it will contain the Firm Mnemonic
129	DeliverToSubID	String	Assigned value used to identify specific message recipient (i.e. trader) if the message is delivered by a third party
142	SenderLocationID	String	Branch identification (same as BBB in ClOrdId[11].
143	TargetLocationID	String	Trading partner LocationId (i.e. geographic location and/or desk, and/or the broker booth information, and/or broker badge number).  Required for all orders, cancels, cancel replaces and cancel reduces routed to BBSS and CBS.
144	OnBehalfOfLocationID	String	Trading partner LocationId (i.e. geographic location and/or desk) used when delivering messages via a third party.
145	DeliverToLocationID	String	Trading partner LocationId (i.e. geographic location and/or desk) used when delivering messages via a third party.

Tag	Field	Format	Values
150	ExecType	char	Describes the specific ExecutionRpt (i.e. Filled) while OrdStatus always identifies the current order status (i.e. Partially Filled) <b>The following valid values are supported by NYSE:</b> 0 = New 1 = Partially filled 2 = Filled 3 = Done for Day 4 = Canceled 5 = Replaced 6 = Pending Cancel 8 = Rejected E = Pending Replace
151	LeavesQty	Qty	Amount of shares open for further execution. If the OrdStatus is Canceled, DoneForTheDay, Expired, Calculated, or Rejected (in which case the order is no longer active) then LeavesQty could be 0, otherwise LeavesQty = OrderQty - LastShares.
207	SecurityExchange	Exchange	Market used to help identify a security. Valid values:  N  = NYSE.  P   = NYSE Arca  A  = NYSE Alternext U.S. <b>CCG will route to appropriate executing market destination regardless of the value designated on incoming messages.</b> <b>CCG will return the actual handling market center on outgoing messages.</b>
337	ContraTrader	String	Identifies the trader (e.g. "badge number") of the ContraBroker.
371	RefTagID	int	The tag number of the FIX field being referenced.
372	RefMsgType	String	The MsgType of the FIX message being referenced.
373	SessionRejectReason	int	Code to identify reason for a session-level Reject message. 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
375	ContraBroker	String	Identifies contra broker. Standard NASD market-maker mnemonic is preferred. Execution Reports from NYSE Arca will contain "ANON" in this field.

Tag	Field	Format	Values
377	SolicitedFlag	Boolean	The Solicited Flag is not used in CCG and is returned in subsequent messages.
382	NoContraBrokers	int	The number of ContraBroker entries.
434	CxlRejResponseTo	int	Identifies the type of request that a Cancel Reject is in response to.
437	ContraTradeQty	Qty	Quantity traded with the ContraBroker.
438	ContraTradeTime	String	Indicates the Execution time in hours, minutes and seconds (HHMMSS) from CBS (in production today) and from SDBK SDOT will return HHMM only
439	ClearingFirm	String	Firm that clears the trade. Used if different from the executing firm.
440	ClearingAccount	String	Supplemental accounting information forwarded to clearing house/firm.

## **User Defined Fields supported by CCG**

Tag	Field	Values
9425	StatusResp	Admin responses generated as a result of the Execution Report Correction (ERC) information: 1 = Busted Trade 2 = Names Later 3 = Corrected Price 4 = Price is Correct 5 = Report CHG  If StatusResp [9425] is present, Side [54] must appear representing the past tense of the order instruction.
9428	CxlQty	Required when CMSLeavesQty specified, Tag <9429>
9429	CMSLeavesQty	If present, set to the new quantity to take effect (includes the open and executed amount). Cannot be an Odd Lot or PRL.
9430	NYSEDirect+™	Valid Value =  NX  Routing Code returned on the Execution Report
9432	MiscDataLine4	Indicates Specialists/Brokers number. For any firm that routes orders to BBSS, the firm's internal information (for example, firm clearing number or Broker Badge number) is reported, if it conforms to the format.
9433	ExecutionInformation	Indicates Specialists/Brokers number. For any firm that routes orders to BBSS, the firm's internal information (for example, firm clearing number or Broker Badge number) is reported, if it conforms to the format.
9436	MemoAB	10 character text field; a period is returned for any character not entered  Relative to NYSE Rule 108(a) where brokers permit specialists who are establishing or increasing positions in their specialty securities to be on parity with the trading crowd, Tag 9436 is used to indicate Parity/ No Parity. Tag 9436 is also used to indicate whether a Report was part of a Cross transaction. Examples: Memo A (First 4 characters of Tag 9436) may contain Verbal ID or Sponsoring Badge or memo.

Tag	Field	Values
		<p>Memo B (characters 5 through 10 of Tag 9436)</p> <p>NP... No Parity</p> <p>NPCROS No Parity/Cross</p> <p>NPB... No Parity/Bill</p> <p>NPNB.. No Parity/ No Bill</p> <p>NPXP.. No Parity/Principal Cross</p> <p>NPXA.. No Parity/Agent Cross</p> <p>P..... Parity</p> <p>P.B... Parity/Bill</p> <p>P.NB.. Parity/ No Bill</p> <p>P.CROS Parity/ Cross</p> <p>P.XP.. Parity/Principal Cross</p> <p>P.XA.. Parity/ Agent Cross</p> <p>Unused characters at the end of the tag may be used for a memo.</p>
9440	ERCReferenceNumber	<p>Format:</p> <p><b>GGGRRRSS</b></p> <p>(Sent in Execution Reports for orders sent to BBSS and non-SDBK migrated stocks)</p>
9460	OrderCapacity2	<p>Additional value representing accounting type.</p> <p>Valid Values:</p> <p>Q = Indicates that an error was made in the execution of a previous order (for example, wrong stock or wrong side of the market, etc.) or on missing the market on a held order.</p> <p><b>Note: If using Tag 9460, Tag 47 cannot also be present. Tag 9460 cannot be used if Tag 47 is present.</b></p>
9461	AddQty	The additional quantity to be added to the order. Required for "MAKES" "ADD" Only booth-routed order quantity may be updated.
9483	DBKLinkId	<p>Associates all buy and sell execution reports and tape prints in the Display Book trade.</p> <p>6 Numeric Characters</p>
9487	RoutingInstruction	<p><i>ISO = INTER-MARKET SWEEP</i></p> <p><i>DNS = DO NOT SHIP</i></p> <p><i>SOC = NMS IOC</i></p> <p><b>NOTE: ISO, DNS AND SOC ROUTING INSTRUCTIONS ARE NOT VALID ON ODD LOT ORDERS.</b></p> <p><b>NOTE: THIS TAG IS INSTEAD OF TAG &lt;57&gt;. WHEN USING THIS TAG, TAG &lt;57&gt; CANNOT ALSO BE PRESENT.</b></p>
9570	ExecAwayMktId	<p>Contains The Market Center ID (see valid values below) and, optionally, the Market Maker ID separated by a slash (e.g., D/EDGA). If this tag is present, Tag 9578 will not also be present.</p> <p>B = Nasdaq BX (Boston)</p> <p>C = National Stock Exchange</p> <p>D = National Association of Securities Dealers (new)</p> <p>I = International Securities Exchange</p> <p>M = Chicago Stock Exchange</p> <p>N = New York (routed to Matchpoint)</p> <p>P = NYSE Arca Exchange</p> <p>T = National Association of Securities Dealers Automated Quotation (old)</p> <p>W = Chicago Board Options Exchange</p>

Tag	Field	Values
		X = Philadelphia Stock Exchange Z = BATS Exchange
9578	BillingIndicator	Execution Report Billing Indicators. If this tag is present, Tag 9570 will not also be present.  Valid Values: 1 = Taker 2 = Provider 3 = Blended 4 = Opening/Provider (Prior Day GTC Orders) 5 = Opening/Provider 6 = Closing/Provider 7 = Closing/Blended
9579	ExpERCReferenceNumber	Format: <b>RRRRRSSSSS</b> *Will contain the expanded activity id embedded in the ExecId <17> tag. This tag will be present on execution reports, report changes and admin responses.
9704	PrevExpERCReferenceNumber	Format: <b>RRRRRSSSSS</b> *Will contain the expanded activity id embedded in the ExecRefId <19> tag. This tag will be present on execution report corrections and admin responses.

## Appendix B: OrderCapacity Tag 47 (Rule 80A)

47	Rule80A (aka OrderCapacity)	<p>Represents the Account Type, which reflects the type of trade as well as the relationship between the beneficial owner of the account and the member organization clearing the trade.</p> <p>Valid Values:</p> <ul style="list-style-type: none"> <li>A = Not a member/member organization and not an individual investor.</li> <li>B = Short exempt transaction (refer to A account type)</li> <li>C = Program Trade, non-index arbitrage (refer to P account type).</li> <li>D = Program trade, index arbitrage (refer to P account type)</li> <li>E = Short exempt transaction (refer to P account type)</li> <li>F = Short exempt transaction (refer to W account type)</li> <li>G = Do not use for NYSE Equity Orders</li> <li>H = Short exempt transaction (refer to I account type)</li> <li>I = Individual investor, not a discretionary or managed account.</li> <li>J = Program trade, index arbitrage (refer to I account type)</li> <li>K = Program trade, non-index arbitrage (refer to I account type)</li> <li>L = Short exempt transaction for member competing market maker affiliated with the firm clearing the trade (refer to W account type).</li> <li>M = Program trade, index arbitrage (refer to W account type)</li> <li>N = Program trade, non-index arbitrage (refer to W account type)</li> <li>O = Member competing market-maker affiliated with the firm clearing the trade (refer to P account type)</li> <li>P = The Member Firm that is clearing the trade or an affiliated member of the Member Firm</li> </ul>
		<ul style="list-style-type: none"> <li>Q = Indicates that an error was made in the execution of a previous order (for example, wrong stock or wrong side of the market, etc.) or on missing the market on a held order.</li> <li>R = Non-member competing market-maker (refer to A type)</li> <li>S = Do not use for NYSE Equity Orders</li> <li>T = Member competing market-maker not affiliated with the firm clearing the trade (refer to W type)</li> <li>U = Program trade, index arbitrage (refer to A account type)</li> <li>V = Do not use for NYSE Equity Orders</li> </ul>

- W = Member or member organization not affiliated with the firm clearing the trade
- X = Short exempt transaction for member competing market-maker not affiliated with the firm clearing the trade (refer to A account type)
- Y = Program trade, non-index arbitrage (refer to A account type)
- Z = Short exempt transaction for non-member competing market-maker (refer to A and R account types).