NYSE Common Customer Gateway (CCG)

FIX Specification and API

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Revision History

Date	Version	Updates
March 17, 2009	3.9	1. Tag 438 will be returned in HHMMSS from CBS (already in production). 2. Value of "OCX" has been removed from tag 9487. 3. "Replaced" messages in a cancel replace chain will have the replacement quantity appear in tag 38. 4. Text in tag 58 for Cancel Replace response changed to "Replaced". 5. Tag 151 will have the current leaves quantity in "Replaced" messages. 6. In "Replaced" messages, tag 37 will be returned with the ClOrderID of the cancel replace request. 7. Tags 17 and 19 have new Activity ID format as optional on a session basis with the implementation of CCG version 3.2. 8. Changed Table 28 to reflect tag 58 text to be "Replaced" as a response to a cancel replace request, instead of "UR OUT". 9. Tag 59 updated to include text "GTC and GTX are not supported when using direct routing to a Broker's Handheld device." 10. Tag 63 will no longer support values other than "0". 11. Tag 64 will no longer be supported. 12. Tag 111 now supports value of zero. 13. Removed all NYSE unsupported FIX tags from Appendix A. 14. Added overview in section 1.3 describing NYSE CCG Certification testing procedures. 15. Links to the documentation describing system enhancements for SDBK and CCG: http://www.nyse.com/pdfs/NYSETECH_INFOMEMO022609.pdf http://www.nyse.com/pdfs/022009TradingTechInfoMemo-SDBK.pdf http://www.nyse.com/pdfs/SDBKImplementationNotice_20090327.pdf
April 1, 2009	4.0	Document Specification format change.
May 29, 2009	4.1	1. Added tag 41 to Execution Report section 7.6. 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." 3. Section 3.2 – changed GTX description. 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." 5. Added new field description in tag 9570 for NYSE MatchPoint executions: N = New York (routed to NYSE MatchPoint). 6. Added a value of [3] in tags 39 and 150 representing "Done for Day" in sections 7.6 and Appendix A. 7. Changed tag 41 values in cancel reduce message table (section 7.2) to reflect the original ClOrderID. 8. Added note to Tag 9487 in sections 3.3 and Appendix A that states "ISO, DNS & SOC routing instructions are not valid on odd lot orders." 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. 10. Added a description of BBSS and CBS order routing to section 3.

September 4, 2009	4.2	1. Added tag 141 to Appendix A.
		2. Added comment to BBSS/CBS Order Routing Section 3.3: "GTC Time in Force is not valid for orders routed to BBSS and CBS".
		3. Added comment to Section 4.3 re: Routing Arca symbols through CCG: "Please note – Cancels of Arca orders routed through CCG must be sent on the same FIX session as the original order.
		4. Added comment to Section 7.2 – "Please note – If a cancel replace request is received at the same time the original order is being executed, it is possible to receive a "Replaced" message (tags 39 and 150 = 5) with a zero leaves quantity (tag 151=0)."
		5. Added tag 111 to Section 7.4.
		6. Added comment to Section 7.4 - Cancel Replace of an oddlot portion of a PRL (Partial Round Lot) is not permitted.
		7. Added value of "3" to tag 102 representing "order is already in pending cancel or pending replace status."
		8. Added value of "9" to tag 9578 representing "Oddlot execution."
		9. Added comment to Tag 111 – "This tag not valid for orders routed to BBSS or CBS."
		10. Removed values "5" and "6" from tag 57.
		11. Added value "CO" to tag 9487 representing Closing Offset Order type and added note – not valid for Nasdaq securities.
		12. Added note to tag 9487 stating "ISO, DNS, SOC and CO routing instructions are not valid for Odd Lot orders."
		13. Added comments to Section 3.3 and tag 38 – CBS will support order size of up to 99,999,900 shares. BBSS and SDBK will support order size of up to 6,500,000 shares.
		14. Added values 1 (Cash), 2 (Next Day) and 8 (Sellers Option) to SettlementType tag 63 and comment "If 63=8, then tag 287 must also be present".
		15. Added tag 287 throughout document.
		16. Added Section 4.4 – NYSE Amex Supports Nasdaq Equity Securities.
		17. Added Closing Offset (CO) order type to Section 8 NYSE Equities Order Types.
		18. Added tags 143 and 57 to Cancel and Cancel Replace sections 7.3 and 7.4 respectively.
		19. Changed the "Required" status on numerous tags to be "C" (conditionally required).
		20. Changed tag 151 description – Leaves Quantity on order acknowledgements will now reflect the true leaves quantity and not a value of zero.
		21. Added Section 4.4 describing CCG Routing to NYSE MatchPoint.
		22. Updated Tag 9570 to include new values J and K for Direct Edge A & X respectively.
		23. Added note to tag 40 – Values 5, A and B are not valid for Nasdaq securities.

February 8, 2010	4.3	1. Changed Section 1.4 heading from "SDBK Phase 2 Future Enhancements" to "Future Enhancements."
		2. Section 1.4 – deleted "Done for Day" message and Expanded Account <Tag 1>. Added Trading in Shares.
		3. Changed section 1.4 description paragraph.
		4. Section 1.2 – deleted 2nd paragraph and added same content to Section 1.4.
		5. Added value of "Y" to tag 9570 representing BATS Y.
		6. Removed "All Oddlot executions will contain a value of 3 or 7." From section 3.3, Liquidity Indicator Tag 9578 description.
		7. Added paragraph to section 3.3 detailing new "Done For Day" message.
		8. Added new tag 9426 BillingRate to Section 7.6 and Appendix A.
		9. Added note to 7.6 and Appendix A for Tag 1 – "will not be returned on BBSS executions" and "will be truncated to 12 characters on execution reports of Arca primary symbols.
		10. Added comment to tag 151 – "Please note: this tag will not appear on Pending Replace messages."
		11. Added tags 102 and 103 to Section 7.6 and Appendix A.
		12. Removed Stop Limit from Section 8.
		13. Changed sentence in Section 8, Dark Reserve Order Description from "All dark reserve orders will be rejected prior to the open…" to read "All dark reserve orders entered prior to the open will receive an unsolicited cancel…."
		14. Removed "Valid values A through Z" from tag 47 description and added "Reference Appendix B for valid values."
		15. Added paragraph and chart to Section 3.3 detailing new BillingRate tag 9426.
		16. Added chart to Drop Copy section 4.6 explaining message types that will/will not be sent on drop copy sessions.
		17. Added Closing Offset to section 4.2.
		18. Added value of "1" to tag 57 throughout document.
		19. Changed tag 59 to be "Required=Y" throughout document.
		20. Added StatusResp tag 9425 to Execution Report Section 7.6.

June 3, 2010	4.4	1. Removed "Trading in shares" from Section 1.4. Trading in shares is now available. 2. Added SBS to Section 2 in the diagram and legend, replacing SuperDOT. 3. Updated phone number information for the Connectivity and Firm Testing groups in Section 1.2. 4. Removed references to odd lots and PRLs. 5. Removed tag 40 value of 'A'. 6. Added verbiage "1 to 4 numeric characters" to the first sentence in the BBSS/CBS Order Routing paragraph in Section 3.3. 7. Removed "Market on Close (Odd Lots)" description in Section 4.2. 8. Corrected Drop Copy Message Type in Section 4.6. Replaced messages contain 39=5. 9. Removed "SDOT will return HHMM only" from tag 438 Values column in Appendix A. Added "This is displayed in Eastern Standard Time" to the current description. 10. Updated description field for tag 111. 11. Updated tag 373 value of '9' with supplemental information. 12. Changed the name of tag 9429 from "CMSLeavesQty" to "NewOrdQty." 13. Changed the name of tag 9430 from "NYSEDirect+" to "AutoExInd" and updated the description. 14. Changed the description of tag 57 for the value of 7 from NYSE Direct (NX) to "autoex". 15. Removed reference to tag 9423 in the description field for tags 375 and 437. 16. Updated tag 1 information. This tag is now returned on acks, replaces, and executions. 17. Removed indentation for tags 375, 337, 437, and 438 since they are no longer part of a repeating group.
July 23, 2010	4.5	Add Sell Short Exempt as valid order side in Tag 54 <Side>.
September 2, 2010	4.6	1. Removal of GTX Time-in-Force throughout document. 2. Added Cancel on Disconnect description to Section 4.8. 3. Added Trading in Shares description to section 4.9. 4. Changed description of Tags 95 and 96 for Cancel on Disconnect feature in Sections 5 and Appendix A, and made them conditionally required in Section 5. 5. Changed maximum order quantity to be 25,000,000 to all NYSE systems in Section 3.3 and Tag 38 throughout document. 6. Removed Cancel on Disconnect as a Future Enhancement in Section 1.4. 7. Changed tags 9428 and 9429 to no longer have the restriction that they must contain roundlots.
October 5, 2010	4.7	1. Changed MOC/LOC wording to reflect "3:45-3:58 no cancels or reductions unless for legitimate error. After 3:58, no cancels or reductions at all" in Section 4.2. 2. Changed Billing Rate liquidity indicator chart to reflect new values in Section 3.3.

November 5, 2010	4.8	Updated valid values in Tag 9570 <ExecAwayMktId>.
March 1, 2011	4.9	1. Updated note to Tag 40 stating only value of 2 "Limit" is valid for Nasdaq orders to the NYSE Matching Engine, and values 1" Market" or 2 "Limit" for Nasdaq orders to the Broker Systems. All other values are invalid for Nasdaq securities. 2. Effective 2/28/11 the NYSE decommissioned the MatchPoint facility. MatchPoint references were removed in this document.
June 17, 2011	5.0	1. Took out references to the ttCert test environment from section 1.3. ttCert is no longer supported. UAT remains available. 2. Updated descriptions and verbiage for tags 21, 49, 76, and 9433. 3. Added description for new tag 109 <ClientID> to Sections 7.1, 7.4, 7.6.
October 24, 2011	5.1	1. Added Section 4.10 for new order type: Retail Orders. 2. Added new conditional Tag 9403 <OffsetPrice>, to MsgType 'D' and 'G' (Sections 7.1 and 7.4) and Appendix A. 3. Added new values to Tag 9487 <Routing Instruction> to MsgType 'D' and 'G' (Sections 7.1 and 7.4), Section 8, and Appendix A. 4. Removed Tags 49, 50, 52, 57, 115, 143 from MsgType 'D'. 5. Removed Tags 57 and 143 from MsgType 'F' and 'G' (Sections 7.3 & 7.4). 6. Removed Tag 142 from MsgType '8' (Section 7.6). 7. Updated Firm Testing Group's contact number in Section 4.6. 8. Added two new values to Tag 9578 <BillingIndicator>. 9. Updated description for Tag 142. 10. Updated Drop Copy Application, Section 4.6. 11. Added new value, 99, to Tag 103. 12. Removed Tag 21 from Sections 7.1, 7.4, and Appendix A. It is not a required tag.
January 26, 2012	5.2	1. Section 3.3, updated BBSS/CBS Order Routing description. Distinguished max order size to Display Book versus BBSS and Broker Handhelds, updated tag 38 throughout the doc. 2. Section 4.6, updated the message types that will not drop copy. Deleted 39=A, which does not exist. Modified 39=3 to 'Done For Day.' 3. Section 4.10, updated the description for Retail Orders. 4. Moved 'Done For Day Subscription Service' from Section 3.3 to Section 4.11 and updated the description. 5. Sections 7.1, 7.4 & Appendix A, decreased the OffsetPrice "greater than or equal to" value from 0.0020 to 0.0010. Updated tag 44 and tag 99 values. 6. Section 7.6, updated tag 58 size to a max of 40 characters. 7. Section 8, updated Retail Price Improvement (RPI) description. Updated Retail Taker order types (RTO, RTNR, and RTR) to include values 3 and 4 in tag 54. Updated SOC order type to include 59=0 as a valid value. 8. Updated descriptions throughout the document for RPI, RTO, RTNR, and RTR orders.

August 3, 2012	5.3	1. Section 2, removed references to JCRS from the System Architecture diagram and Legend. Added UTP to the diagram and Legend.
		2. Section 4.3, removed section information. The routing of NYSE Arca primary symbols through CCG to Arca was decommissioned on Feb 6, 2012.
		3. Section 4.8, added Market On Open and Limit On Open order types to the list of those that will not be canceled as part of the Cancel On Disconnect service.
		4. Added Section 4.12, Introduction of New Universal Trade Platform for NY Cash Equity Markets. Added Section 4.13, Gateway Throttle Mechanism.
		5. Sections 7.1, 7.4 & Appendix A, added tag 110, MinQty.
		6. Section 7.6, updated descriptions for tags 6, 14, and 375.
		7. Added Section 8, Failure Recovery.
		8. The old Section 8, NYSE Equities Order Types is now Section 9. Updated descriptions in Section 9:
		a) Added "Minimum Trade Size Order" as a new order type.
		b) Removed requirement for Retail Taker orders to mandatorily contain 59=3 when sending 40=1. All Retail Taker orders are already treated as IOC.
		9. Appendix A, updated descriptions for tags 6, 14, 65, and 375. Removed tag 100.
		10. Removed references to CCG-to-Arca routing throughout the document. CCG no longer routes to Arca. Removed value of 'P' from tag 30 (LastMkt) and tag 207 (SecurityExchange) descriptions.
		11. Updated tag 52, 60, and 122 descriptions throughout the document. Removed references to UTC (Universal Time Coordinated) and replaced with the synonymous term, GMT (Greenwich Mean Time).
		12. NYSE Amex LLC (aka NYSE Amex Equities) was renamed to NYSE MKT LLC on 5/10/2012. The name change has been updated throughout this document.
		13. Corrected various typos and spacing issues throughout the document.
October 5, 2012	5.4	Revised Appendix B with updated Order Capacity account type descriptions
February 1, 2013	5.5	Incorporated changes in support of new Self-Trade Prevention and Client ID (MPID) designations for incoming orders and cancel replacement messages.
May 3, 2013	5.6	Added changes in support of Self-Trade Prevention Phase 2
		• Accept STP designation on Market and Stop Orders
		• Removed all references to SDBK now that UTP migration has been completed
		• Updated system diagrams to remove SDBK
August 14, 2013	5.7	Added changes in support of Mid-Point Passive Liquidity order (MPL), Add Liquidity Only order (ALO) and Passive Do Not Ship order (PDNS).

Contents

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 implementation of CCG will provide access to the NYSE and NYSE MKT equities (including Nasdaq symbols traded under Unlisted Trading Privilege). In the future, CCG will be updated to be the exclusive means for customers to transact business with all NYSE Euronext products: NYSE Arca options, bonds, and any other future NYSE Euronext products. For CCG production questions, please contact the Connectivity Team by e-mail or call 1-888-689-7739 x1. For UAT test environment questions, please contact the NYSE Firm Testing Group by e-mail or call 1-888-689-7739 x2.

1.3 NYSE CCG FIX Certification

The UAT (User Acceptance Test) environment is a set of systems which duplicates what exists in production, and uses production software versions. Orders entered through CCG will be sent to our Trading Engine UTP for processing.

Send email to the Firm Testing Group to obtain connectivity and procedure information.

1.4 Future Enhancements

Future enhancements and/or modifications may require system changes for your firm. Please refer to the NYSE Publications website http://usequities.nyx.com/connecting/Technical-Specifications to obtain the latest Technology Member Firm Notifications and specification documents.

 To automatically receive these notifications by email, you can register at http://markets.nyx.com/nyse/trader-updates or contact your NYSE Relationship Manager.

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.
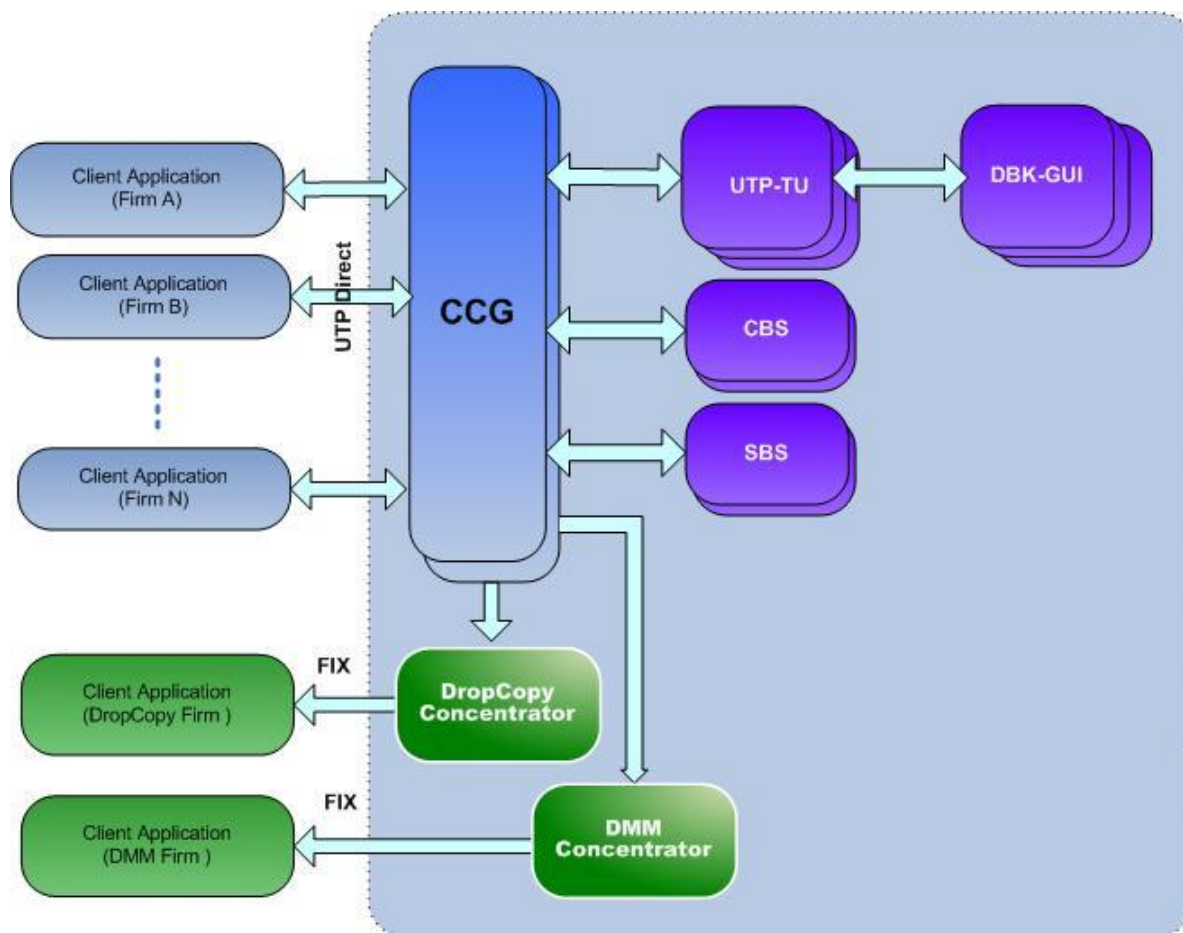
Figure 1: NYSE Classic – CCG FIX Architecture

Legend	
Abbreviation	**Full Name**
BBSS	Broker Booth Support System
CBS	Combined Broker Systems
CCG	Common Customer Gateway
DBK GUI	Display Book Graphical User Interface
SBS	Super Broker System
UTP	Universal Trading Platform – Trading Unit

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

3.2 Multi Day orders (GTCs)

Platform this applies to:

- NYSE Equities
- NYSE MKT Equities

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

- Good Till Cancel: TimeInForce (Tag 59) = 1 (GTC).

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
- A – NYSE MKT

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
- A – NYSE MKT

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.

SelfTradeType (Tag 7928)

This optional tag allows will designate that the incoming order should be prevented from trading against another order with the same ClientId (MPID).

- N – STPN (Newest)– cancel arriving interest
- O – STPO (Oldest) – cancel resting interest

DBExecID (Tag 9483)

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
- CO – Closing Offset Order
- RPI – Retail Price Improvement Order
- RTO – Retail Only Order
- RTNR – Retail Non-Routable Order
- RTR – Retail Routable Order

NOTE: CO ORDERS ARE NOT *VALID FOR NASDAQ SECURITIES.*

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/ABCD). **If this tag is present, you will not receive Tag 9578.**

Values for this field:

A = NYSE MKT LLC
B = Boston Stock Exchange
C = National Stock Exchange
D = FINRA ADF
F = Algo order executed at NYSE Group
G = Algo order executed Away
I = International Securities Exchange
J = Direct Edge A (EDGA)
K = Direct Edge X (EDGX)
M = Chicago Stock Exchange
N = New York Stock Exchange
P = NYSE Arca Exchange
T = Nasdaq
W = Chicago Board Options Exchange
X = Philadelphia Stock Exchange
Y = BATS Y
Z = BATS Exchange

Liquidity/Billing Indicator (Tag 9578)

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
8 = Retail Order Provider
9 = Retail Order Taker

Billing Rate (Tag 9426)

BillingRate is a proprietary FIX field sent on execution reports by NYSE that consolidates all billing information, including away market information, into a single FIX Tag. This Tag will be present in addition to either Tag 9570 <ExecAwayMktId> or Tag 9578 <BillingIndicator> described above. The new billing values in support of the Mid-Point Passive Liquidity order type (MPL) will only be returned in this Tag.

Examples that clients can expect to receive in this field are:

Displayed Liquidity Categories	New Displayed Liquidity Indicator Values
0 Round Lots	"0"
Greater than 0 and less than 1 round lot (1-99 shares)	"1"
From 1 to less than 20 round lots (100-1,999 shares)	"2"
From 20 to less than 50 round lots (2,000-4,999 shares)	"3"
From 50 to less than 100 round lots (5,000-9,999 shares)	"4"
From 100 to less than 200 round lots (10,000-19,999 shares)	"5"
From 200 round lots and up (20,000 shares or more)	"6"
Reserved for future use.	"7" – "9"

- 2/2 – represents a report for less than 20 round lots that provided liquidity.
- 2/3 – represents a report for less than 50 round lots but greater than 20 round lots that provided liquidity.
- 2/6 – represents a report for greater than 200 round lots that provided liquidity.

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,
1 to 4 numeric characters, of a Floor Broker. The ClientID, a 4 byte alpha numeric value representing the firm's Market Participant ID (MPID), FIX tag 109, is also required. If routing to BBSS, tag 57 must be present and contain a value of "4". Tags 143 and 57 (tag 57 required for BBSS only) 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. GTC Time in Force is not valid for orders routed to BBSS and CBS. The maximum order size for orders routed to the NYSE Matching Engine is 25,000,000 shares. BBSS and Broker Handhelds can accept orders of up to 99,000,000 shares.

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

Security Categorization	NYSE Symbol Suffix (Tag 65)
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 MKT 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 Nasdaq securities)

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 MKT primary symbols) specify OrdType (40) =5 (Market on close) or OrdType (40) =B (Limit on close).

- Market on Close:

   Orders must be submitted before **_3:45pm 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

- Limit on Close:

   Orders must be submitted before **_3:45pm 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

- Closing Offset

   The Closing Offset order is a day limit order to buy or sell and will be accepted up until 4:00 p.m., regardless of any imbalance or side of imbalance. CO orders provide liquidity to offset imbalances at the Close and execute at the closing price. CO orders will trade if marketable to fill any remaining imbalance and will yield to **all** other interest. Within the CO

allocation, CO orders will be filled in time priority. CO orders on the same side of the imbalance will not participate. The FIX New Order Single (35=D) Message **MUST** contain the following Tags:

RoutingInstruction (9487) = CO (Closing Offset)
TimeInForce (59) = 0

Please note: NYSE systems will reject all cancel & cancel replace requests sent after 3:58pm for any previously entered MOC and LOC order, including orders that were entered to offset a previously published imbalance. Cancels or reduces sent between 3:45pm and 3:58pm will **only** be accepted to correct a legitimate error. Closing Auction is not valid for Nasdaq securities.

4.3 CCG Routing of NYSE Arca Primary Symbols - Decommissioned

Effective Feb 6, 2012, the NYSE no longer supports the routing of NYSE Arca Primary symbols through CCG.

4.4 CCG Routing to NYSE MatchPoint - Decommissioned

Effective Feb 28, 2011, the NYSE has decommissioned the MatchPoint facility and all associated routing via CCG and ARCA FIX connections.

4.5 NYSE MKT LLC Trading of Nasdaq Equity Securities via Unlisted Trading Privilege

NYSE MKT LLC (formerly known as NYSE Amex LLC) has implemented trading of Nasdaq-listed equities and select ETFs on an Unlisted Trading Privilege basis as an additional trading venue, supplementing NYSE Arca. NYSE MKT Unlisted Trading Privilege will be powered by the new NYSE market model, highlighted by its high touch, high-tech, floor-based parity model. For trading of Nasdaq Equity and ETF securities, there will be some processing differences on how on NYSE MKT handles trading of these securities. For example, there will be no opening or closing auctions in Nasdaq Equity securities. Nasdaq securities will be opened on a quote and therefore no opening imbalance publications will be disseminated. Similarly, there will be no closing auction in Nasdaq securities and therefore there will be no closing message published to the tape and no MOC/LOC or Order Imbalance publications disseminated. In regards to order types, only Market and Limit orders are valid to the Broker Systems for Nasdaq securities, and only Limit orders are valid for Nasdaq securities destined to the NYSE Matching Engine. All other order types are invalid for Nasdaq securities.

4.6 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. The following chart displays the message types that can be received via drop copy:

Drop Copy Type	Message Type
ORD CPY	35=D (Orders)
ORD CPY	35=F (Reduces)
ORD CPY	35=F (Cancels)
ORD CPY	35=G (Cancel Replaces)
RPT CPY	35=8 (Reports/Executions)
RPT CPY	35=8 (ERCs)
ADMR CPY	35=8 (UROUTs)
ADMR CPY	39=5 (Replaced)

The following message types will not receive a Drop Copy:

Drop Copy Type	Message Type	Field/Value
ORDCPY	35=8	39=0 (New – Order Acknowledgement)
RPTCPY	35=8	39=3 (Done for Day)
N/A	35=8	39=6 (Pending Cxl)

Broker Systems Destined Orders

For customers who subscribe to Order Drop Copy services, these messages will now return the original order's "SenderComplD" (FIX Tag 49) in FIX Tag 50 (SenderSubID) on drop copy messages. FIX Tag 49 (SenderCompID) will continue to be populated with the Drop Copy connection ID as it does today. For customers that populate Tag 50 (SenderSubID) on an incoming order, we will overwrite this information on any Order Drop Copy message returned with the original order's "SenderCompID". In addition, for any orders entered directly into the NYSE Broker Booth Support System®, the "SenderSubID" field will not be populated.

Please note that the original order's "SenderComplD" will not be returned on any outgoing messages (specifically, Message Type = 8) from the NYSE received over a drop copy connection. This includes order acknowledgments, UROUT messages and reports.

To request new drop copy CCG FIX 4.2 sessions, please contact the Firm Testing Group by e-mail or 1-888-689-7739 x2. To request that a mnemonic be enabled for drop copy service, the owner of the mnemonic should contact Broker Services by e-mail or call 1-212-656-5778.

4.7 NYSE Support of SEC Alternative Uptick Rule

In support of the SEC amendments to Rules 200(g) and 201 of Regulation SHO, otherwise known as the SEC Alternative Uptick Rule, the NYSE and NYSE MKT has re-introduced Sell Short Exempt as a valid order type. Effective February 28, 2011 the NYSE and NYSE MKT accepts Sell Short Exempt orders.

4.8 Cancel on Disconnect

A FIX session can be configured to automatically cancel all open day orders if the firm's FIX session disconnects from CCG during that session. Firms can control this feature by way of Tags 95 and 96 in the logon message. For the initial implementation, this customer-directed optional designation will be available only for orders that currently reside at the NYSE Matching Engine (UTP). The Cancel on Disconnect service is currently not available for orders routed through CCG to NYSE BBSS® or NYSE eBroker™. The optional auto cancel upon disconnect service will only cancel open market or limit orders with a time-in-force of "Day". Any current day or prior day Good Till Cancel (GTC) orders, Market "At the Close", Limit "At the Close" (MOC/LOC), or Closing Offset (CO) orders will not be canceled as part of this service.

For the purposes of this new optional service, the NYSE will use the following criteria to initiate the auto-cancel service:
   a) loss of the physical or network connection to CCG detected; or
   b) failure to receive heartbeats within the specified heartbeat interval on an inactive session (See section 6.3 for further details); or
   c) upon receipt of a FIX Logout message (message type 5).

However, the NYSE will not initiate the auto-cancel service due to an internal NYSE CCG server outage or failure.

Members and member organizations should note that NYSE is providing this optional service as an alternative to the present manual process. Executions may occur at or about the same time that a firm experiences a disconnect, and before the auto cancel feature completes cancelation of open day orders. If this should occur, all executions occurring prior to the activation of the auto cancel feature will be valid, and any resulting execution reports will be returned to the firm along with any "UR Outs" upon re-establishing the FIX connection.

In order to take advantage of this new service, please refer to Section 6.1 for further details.

4.9 Trading in Shares

The NYSE has eliminated the use of separate systems for roundlot and oddlot order processing. All orders, regardless of size, will be processed into the Exchange's Matching Engine (Display Book) for execution. Market and marketable limit oddlot orders will be eligible for automatic execution on arrival under the same rules as roundlot orders are today.

4.10 Retail Orders

The NYSE has established a new Retail Liquidity Program for customers. FIX customers may route Retail Price Improvement (RPI) orders or Retail Takers orders directly to the NYSE Matching engine with new designated values in the Routing Instruction Tag (9487). Retail Orders destined to the Broker systems (NYSE BBSS® and NYSE eBroker handheld™) will be rejected back to the originator.

Retail Price Improvement Orders provide potential price improvement to incoming order flow in the form of non-displayed interest that is better than the protected best bid/offer. RPI orders designates a minimum amount of price improvement by populating a new 'Offset Price' field in the new order message, and are designed to only execute with Retail Taker orders. The limit price and offset price must be submitted in multiples of the minimum price improvement value, currently set at $0.0010. In addition, any RPI interest that would result in an execution below $1.00 will be prevented from trading.

Retail Takers which are treated as IOC interest, are available in three varieties:
1. Retail Only orders only interact with RPI Orders
2. Retail Non-Routable orders may interact with RPI interest and/or other interest on the Limit order book
3. Retail Routable Orders may interact with RPI interest, other interest on the Limit order book and/or can be routed away to other markets for execution

When RPI orders execute with Retail Taker orders, a new billing indicator value will be returned. Depending on the type of Retail Taker order, Retail Taker orders that execute with non-RPI interest will receive an existing billing value. For more information about Retail Orders please refer to Chapter 8 "NYSE Equities Order Types".

4.11 Done For Day Subscription Service

A subscription based service for NYSE and NYSE MKT Equities that immediately returns an unsolicited "UROUT" message for all open "Day" orders as each individual security's closing trade is processed. For securities that do not have a closing transaction, an unsolicited "UROUT" message will be returned at the designated 4:45 p.m. cutoff time. FIX tags 39 and 150 will contain a value of "3". Firms interested in testing this new service can contact the Firm Testing Group by e-mail or call 1-888-689-7739 Option 2.

4.12 Universal Trading Platform (UTP) for NY Cash Equities Markets

NYSE Euronext has completed the introduction of the new Universal Trading Platform (UTP) for our U.S.-based NYSE and NYSE MKT cash equities markets. UTP provides a core standardized matching engine technology platform across all NYSE Euronext markets. With UTP, clients can expect higher throughput and lower latency.

4.13 Gateway Throttle Mechanism

In order to protect the Trading Engine from an overload of incoming messages, the CCG Gateway employs a session-level throttle mechanism. This is a configurable value currently set to 1000 messages per second on a rolling 1 second basis. In the event this throttle mechanism is activated, the gateway will slow the sending of incoming messages down to the Trading Engine during the throttle period (i.e. messages will be queued) so as to not exceed the defined message threshold.

4.14 Self-Trade Prevention Service

The New York Stock Exchange (and NYSE MKT) introduced a new service, Self-Trade Prevention (STP). This new service is designed to allow firms to better manage their order flow and prevent unintended executions with themselves. STP is currently available for limit orders, Market orders and Stop orders. MTS IOC orders and orders sent to Floor brokers that have the STP modifiers will be supported in a later phase.

One of these two STP modifiers, along with matching ClientID's (MPIDs), must be present on each order to prevent two orders from the same firm from trading with each other.

STP Cancel Newest (STPN)
- An incoming order marked with the STPN designation will not execute against opposite side resting interest that is also marked with the STP designation for the same ClientID (MPID). Instead, the incoming order or repriced order will be automatically cancelled back to the order originator. The resting order remains on the order book.

STP Cancel Oldest (STPO)
- An incoming order marked with the STPO designation will not execute against opposite side resting interest that is also marked with the STP designation for the same ClientID or MPID. Instead, the resting order will be automatically cancelled back to the order originator. The incoming order will then continue to auto execute or be placed in the order book.

4.15 Mid-Point Passive Liquidity (MPL) Order

Pending SEC approval, the New York Stock Exchange and NYSE MKT will introduce a new Mid-Point Passive Liquidity (MPL) order type. MPL Orders are un-displayed limit orders that will be priced at the midpoint of the Protected Best Bid Best Offer (PBBO). Users of an MPL Order will have the option of applying additional modifiers to the order type as well as interacting with all other order types. MPL orders will not participate at the Open, Close or in any manual trade. MPL orders can be sent directly to the NYSE Matching Engine or to NYSE Broker Systems.

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 Firm Testing and Connectivity Groups 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 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. ⚠ **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.**
37	OrderID	Represents the originating/initial order in an order chain.
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 and cancel/replace requests. ↕ In some cases, as in the Cancel Replace, the OrigClOrdID value differs from FIX 4.2

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 [*HeartBtInt + transmission time*] 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 *Sequence Reset* 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
	Standard Header	Y	MsgType[35] = A

Tag		Field Name	Req'd	Comments
98		EncryptMethod	Y	Must be |0| (Always unencrypted)
108		HeartBtInt	Y	The Heartbeat interval in seconds.
95		RawDataLength	C	The number of bytes in a raw data field. Note: This tag must contain a value of "1" if tag 96 is present and contains a value of "0" or "1".
96		RawData	C	Unformatted raw data, which can include bitmaps, word processor documents, etc. Valid Values: 0 = Not Subscribed 1 = Activate Cancel on Disconnect
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
		Standard Trailer	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 Test Request 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
	Standard Header	Y	MsgType[35] = 5
58	Text	N	Text is limited to 25 characters.
	Standard Trailer	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
	Standard Header	Y	MsgType[35] = 0
112	TestReqId	N	Required when the heartbeat is the result of a Test Request message.
	Standard Trailer	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
	Standard Header	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.
	Standard Trailer	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
	Standard Header	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).
	Standard Trailer	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
	Standard Header	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.
	Standard Trailer	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 provides 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
	Standard Header	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 (SenderCompID, TargetCompID, or both) 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.
	Standard Trailer	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 message.

3.   SenderCompID Problem.

4.   TargetCompID Problem.

5.   Sending Time accuracy problem: Poss Dup flag is set and OrigSendingTime 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 *Logon* confirmation back, send a *ResendRequest* if a message gap was detected in the *Logon* sequence number.
Logout	If a message gap was detected, issue a *ResendRequest* to retrieve all missing messages followed by a *Logout* message, which serves as a confirmation of the logout request. Do not terminate the session. The initiator of the *Logout* sequence has responsibility to terminate the session. This allows the *Logout* initiator to respond to any *ResendRequest* message. If the user side was the initiator of the *Logout* sequence, then this is a *Logout* confirmation and the session should be immediately terminated upon receipt. The session acceptor can terminate the session immediately when the initiator sends an invalid Logon message. This reduces the threat of unauthorized connection attempts.
ResendRequest	Perform the Resend processing first, followed by a *ResendRequest* of your own in order to fill the incoming message gap.
SeqReset-Reset	Ignore the incoming sequence number. The *NewSeqNo* field of the *SeqReset* message contains the sequence number of the next message to be transmitted.
SeqReset-GapFill	Send a *ResendRequest* back. Gap Fill messages behave similar to a *SeqReset* message. However, it is important to insure that no messages have been inadvertently skipped over. This means that *GapFill* messages must be received in sequence. An out of sequence *GapFill* 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	C	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 Firm Testing and Connectivity Groups (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.* Maximum length = 10.
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).
57	TargetSubID	C	CCG uses this string for valid NYSE routing codes. Values accepted by the NYSE include 4 (Broker Systems), and 7 (AutoExecute). May be blank for orders routed to the Trading Engine. When populated, Tag 9487 (Routing Instruction) cannot also be populated. Value of "4" is required for all orders, cancels, cancel replaces and cancel reduces routed to Broker Systems. Returned from Broker Systems on Order Reject messages only.
97	PossResend	C	Required when message may be a duplicate of another message sent under a different sequence number.
115	OnBehalfOfCompID	Y	Firm Mnemonic assigned by NYSE.

Tag	Field Name	Req'd	Field Description
116	OnBehalfOfSubID	N	Trading partner SubID used when delivering messages via a third party.
122	OrigSendingTime	C	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	Contains the value in tag 143 from the original order.
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. ***Note: Not to be included within SecureData field***
89	Signature	N	***Note: Not to be included within SecureData field***
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, Cancel Reduce 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 *Order* for execution.
F	Order Cancel Request	Requests the cancellation of the remaining quantity of an existing *Order* or the reduction in quantity of an existing *Order*.
G	Order Cancel/Replace Request	Used to change the parameters of an existing Order. 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 *Order* Changes to an existing *Order* Relay *Order* status information Fill information on working *Orders* Reject *Orders*
9	Order Cancel Reject	Issued upon receipt of a *Cancel Request* or *Cancel/Replace Request* 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
	Standard Header		*Y*	*MsgType = D*
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: *BBB^NNNN/MMDDYYYY*. 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. **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.** *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.**
18	ExecInst	Instructions for order handling on	N	E = DNI (Do Not Increase)

Tag	Field	Description	Req.	Values
		exchange trading floor.		F = DNR (Do not Reduce) M = Mid-Price Peg (MPL) indicator Note: If DNI or DNR is present on an order with a time in force other than GTC, the DNI/DNR designation will be ignored.
38	OrderQty	Indicates share quantity on order	Y	Number of shares trading: 1 – 25,000,000 to Matching Engine 1 – 99,000,000 for all Broker Systems
40	OrdType	Indicates order type	Y	1 = Market 2 = Limit 3 = Stop 5 = Market on close B = Limit On Close Please note: Only value 2 "Limit" is valid for Nasdaq orders to the NYSE Matching Engine, and values 1" Market" or 2 "Limit" for Nasdaq orders to the Broker Systems. All other values are invalid for Nasdaq securities.
44	Price	Indicates price on order in decimals.	C	.0001 – 999,999.99 Not required for Market orders Note: Subpenny price only accepted under $1.00. Note: For RPI orders, limit prices will be accepted in sub-pennies above and below $1.00, but must be in multiples of the minimum offset price (currently defined as $0.0010).
47	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. **Note: This Tag is required unless Tag 9460 is present.**	Y	Reference Appendix B for valid values and definitions
54	Side	Side of the Order	Y	1 = Buy 2 = Sell 3 = Buy Minus 4 = Sell Plus 5 = Sell Short 6 = Sell Short Exempt Note: Sell Short Exempt orders will not be accepted prior to the adoption of SEC Alternative Uptick Rule (Rule 201) being in effect.
55	Symbol	This field must contain a valid symbol in upper case lettering.	Y	Ticker symbol.

Tag	Field	Description	Req.	Values
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.	Y	0 = Day 1 = GTC (Good Till Cancel) 2 = OPG (At the Opening) 3 = IOC (Immediate Or Cancel) * GTC is not supported when using direct routing to a Broker's Handheld device. GTCs sent for Nasdaq securities will be treated as day orders.
60	TransactTime	GMT Transaction Time	N	YYYYMMDD-HH:MM:SS
63	SettlmntTyp	Indicates order settlement period. Absence of this field is interpreted as Regular.	N	0 = Regular 1 = Cash 2 = Next Day 8 = Seller's Option Note: Values 1, 2 and 8 are only valid on orders routed to BBSS and CBS. If 63=8, tag 287 must also be present.
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. **Note:** Required _only_ when OrdType Stop is used.	N	.0001-999,999.99
109	ClientID	4 byte alphanumeric MPID value	C	Contains the Sending firm's Market Participant ID (MPID). Required when routing new and cancel/replace messages to Broker Systems. Returned on acknowledgements, replaces, executions, and order drop copy messages. Required when designating an order with Self Trade Prevention (Tag 7928) to the Trading Engine. Returned on all order activities.
110	MinQty	Minimum number of shares to be traded in order for an execution to occur.	C	A Minimum Trade Size Quantity for orders with a Time in Force of "IOC" or orders designated as "SOC" or "ISO". Value may be Zero.
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 the quantity of the order, or in multiples of the round lot parameter associated with the stock symbol (formerly known as the UOT).

Tag	Field	Description	Req.	Values
				NOTE: This tag is not valid for orders routed to BBSS or CBS
207	SecurityExchange	Market used to help identify a security. ***Note:*** *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 A = NYSE MKT Equities
287	SellerDays	Indicates number of days for Seller's Option settlement type.	C	Specifies the number of days that may elapse before delivery of the security. This tag is required if tag 63=8. Maximum number of days supported is 60.
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
7928	SelfTradeType	Used to prevent the order from trading against another order with the same ClientId (MPID).	N	"N" – Cancel Newest (or arriving order) "O" – Cancel Oldest (or resting order) Returned on all orders and order activities. Available to all Order types. Note: Market on Close and Limit on Close orders will not be validated for Self-Trade Prevention.
9403	OffsetPrice	Offset or minimum price improvement value from the current Bid or Offer.	C	This tag is required if 9487=RPI Value must be zero, greater than or equal to the minimum offset value ($0.0010) and must be in multiples of $0.0010.
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.
9487	RoutingInstruction	Routing Instructions ***Note***: *See NYSE Equities Order Types Section for definitions.*	N	ISO = Inter-Market Sweep DNS = Do Not Ship SOC = NMS IOC CO = Closing Offset Order RPI = Retail Price Improvement Order RTO = Retail Only Order RTNR = Retail Non-Routable Order

Tag	Field	Description	Req.	Values
				RTR = Retail Routable Order
				ALO = Add Liquidity Only
				PDNS = Passive Do Not Ship (Reserved for Future Use)
				Note: *When using Tag 9487, Tag 57 cannot also be present*
				Note: *CO Orders are* not *valid for Nasdaq Securities.*
9568	MinimumTriggerVol (MTV)	Minimum Trigger Volume for Mid-Point Passive Liquidity (MPL) order	N	Value may be Zero Cannot be present if MPL order is also designated as STP.
	Standard Trailer		***Y***	

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], NewOrdQty[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 DMM'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, UTP 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

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

Please note – If a cancel replace request is received at the same time the original order is being executed, it is possible to receive a "Replaced" message (tags 39 and 150 = 5) with a zero leaves quantity (tag 151=0).

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	Req.	Values
	Standard Header		**Y**	**MsgType = F**
1	Account	This field can be used for miscellaneous information.	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. **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 Order in the order chain.** **The value for this field must be in UPPERCASE (e.g.**

Tag	Field	Description	Req.	Values
				BBB^NNNN/MMDDYYYY). Any deviation from this format will result in the message rejected by CCG.
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 A = NYSE MKT Equities
9428	CxlQty	Desired quantity to be canceled	N	Required when NewOrdQty [9429] is present. **Used for Cancel Reduce Only**
9429	NewOrdQty	New order quantity (includes the open and executed amount).	N	Required when CxlQty [9428] is present. **Used for Cancel Reduce Only**
9442	SolicitedFlag	The Solicited Flag is not used in CCG.	N	Returned in subsequent messages
	Standard Trailer		*Y*	

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.

Tag	Field	Description	Req.	Values
	Standard Header		**Y**	**MsgType = G**
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.) **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 rejected by CCG.**
18	ExecInst	Used for Good Till Cancel order instructions.	N	E = DNI (Do not Increase) F = DNR (Do Not Reduce) M = Mid-Price Peg (MPL) indicator
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.). **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.**
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 B = Limit On Close Please note: Only value 2 "Limit" is valid for Nasdaq orders to the NYSE Matching Engine, and values 1" Market" or 2 "Limit" for Nasdaq orders to the Broker Systems. All other values are invalid for Nasdaq securities.
41	OrigClOrdID	ClOrdID of the previous live order in the chain.	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 rejected by CCG.**
44	Price	This value can be changed	C	.0001 – 999,999.99 Contains the new price of the replacement order. Not required for Market orders. Note: Sub penny price only accepted under $1.00

Tag	Field	Description	Req.	Values
				Note: For RPI orders, limit prices will be accepted in sub-pennies above and below $1.00, but must be in multiples of the minimum offset price (currently defined as $0.0010).
47	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.	Y	See "New Order – Single" Message (Section 7.1) Reference Appendix B for valid values and definitions
54	Side	Side of order. This value cannot be changed an 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 6 = Sell Short Exempt Note: Sell Short Exempt orders will not be accepted prior to the adoption of SEC Alternative Uptick Rule (Rule 201) being in effect.
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.	Y	0=Day 1=GTC 2=At the Opening 3=IOC
63	SettlmntTyp	Indicates order settlement period.	N	0 = Regular Way 1 = Cash 2 = Next Day 8 = Seller's Option Note: Values 1, 2 and 8 are only valid on orders routed to BBSS and CBS. If 63=8, tag 287 must also be present.
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)
109	ClientID	4 byte alphanumeric MPID value	C	Contains the Sending firm's Market Participant ID (MPID). Required when routing new and cancel/replace messages to Broker Systems. Returned on acknowledgements, replaces, executions, and order drop copy messages. Required when designating an order with Self Trade Prevention (Tag 7928) to the Trading Engine. Returned on order and cancel/replacement acknowledgements and order drop copies only.

Tag	Field	Description	Req.	Values
110	MinQty	Minimum number of shares to be traded in order for an execution to occur.	C	A Minimum Trade Size Quantity for orders with a Time in Force of "IOC" or orders designated as "SOC" or "ISO". Value may be Zero.
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 the quantity of the order, or in multiples of the round lot parameter associated with the stock symbol (formerly known as the UOT) NOTE: This tag is not valid for orders routed to BBSS or CBS
207	SecurityExchange	Market used to help identify a security.	Y	N = NYSE A = NYSE MKT Equities
287	SellerDays	Indicates number of days for Seller's Option settlement type.	C	Specifies the number of days that may elapse before delivery of the security. This tag is required if tag 63=8.
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 designated by another clearing or non-clearing member for settlement of its Exchange transactions.	N	Name of clearing member designated by another clearing or non-clearing member for settlement of its Exchange transactions.
7928	SelfTradeType	Used to prevent the order from trading against another order with the same ClientId (MPID).	N	"N" – Cancel Newest (or arriving order) "O" – Cancel Oldest (or resting order) Available to all Order types. Note: Market on Close and Limit on Close orders will not be validated for Self-Trade Prevention.
9403	OffsetPrice	Offset or minimum price improvement value from the current Bid or Offer.	C	This tag is required if 9487=RPI Value must be zero, greater than or equal to the minimum offset value ($0.0010)and must be in multiples of $0.0010.
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	Routing Instructions	N	ISO = Inter-Market Sweep DNS = Do Not Ship SOC = NMS IOC

Tag	Field	Description	Req.	Values
				CO = Closing Offset Order (*not valid for Nasdaq securities*)
				RPI = Retail Price Improvement Order
				RTO = Retail Only Order
				RTNR = Retail Non-Routable Order
				RTR = Retail Routable Order
				ALO = Add Liquidity Only
				PDNS = Passive Do Not Ship (Reserved for Future Use)
				Note: *When using Tag 9487, Tag 57 cannot also be present*
9568	MinimumTriggerVol (MTV)	Minimum Trigger Volume for Mid-Point Passive Liquidity (MPL) order	N	Value may be Zero. Cannot be present if MPL order is also designated as STP.
	Standard Trailer		*Y*	

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	Req.	Values
	Standard Header		*Y*	*MsgType = 9*
11	ClOrdID	Unique identifier of the order	Y	Unique identifier of the order
30	LastMkt	Market of execution for last fill.	Y	N = NYSE A = NYSE MKT Equities **CCG will return the actual handling market center value.**
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 **not** 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
41	OrigClOrdID	Unique identifier of the cancel request, which is assigned by institution.	Y	ClOrdID of the order that cannot be canceled or replaced. This value does **not** 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

Tag	Field	Description	Req.	Values
				Text is limited to 25 characters.
60	TransactTime	GMT Transaction Time	Y	YYYYMMDD-HH:MM:SS
102	CxlRejReason	Code to identify reason for cancel rejection.	N	Valid values: 0 = Too Late To Cancel or Too Late to Cxl/Rpl 1 = Unknown order / Invalid Data 3 = Order is already in pending cancel or pending replace status.
207	SecurityExchange	Market used to help identify a security.	Y	N = NYSE A = NYSE MKT Equities CCG will return the actual handling market center value.
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
	Standard Trailer		*Y*	

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
	Standard Header		*Y*	*MsgType = 8*
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, unless the mnemonic being used is subscribed to this service. E-mail the Mnemonics Group if you wish to subscribe. **Note: If subscribed to this service, CumQty[14] will also be enabled.**
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, unless the mnemonic being used is subscribed to this service. E-mail the Mnemonics Group if you wish to subscribe. **Note: If subscribed to this service, AvgPx[6] will also be enabled.**
17	ExecID	Execution ID as assigned by the exchange	Y	0 on Order Ack, or UROUT Identifier of this report. The existing format is BBB^NNNN/MMDDYYYY^GGGRRRSSS 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.

Tag	Field	Description	Req.	Values
				0001. Note: GGGRRRSSS represents the Activity ID. **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:** BBB^NNNN/MMDDYYYY^**RRRRRSSSSS** **The expansion of the activity ID increases the number of activities on a single order from 999 to 99,999.**
18	ExecInst	Instructions for order handling.	N	Value returned from original order Note: If DNI or DNR is present on an order with a time in force other than GTC, the DNI/DNR designation will be ignored.
19	ExecRefID	Identifier used with Trade Bust and Trade Correction transactions.	N	If Activity ID is present, concatenate into ClOrdID[11]. **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:** BBB^NNNN/MMDDYYYY^**RRRRRSSSSS** **The expansion of the activity ID increases the number of activities on a single order from 999 to 99,999.**
20	ExecTransType	Identifies transaction type	Y	0 = New 1 = Cancel 2 = Correction 3 = Status
29	LastCapacity	Broker Capacity in order execution	N	1 = Agent 2 = Cross as agent 3 = Cross as principal 4 = Principal
30	LastMkt	Market of execution for last fill.	Y	N = NYSE A = NYSE MKT Equities **CCG will return the actual handling market center value.**
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

Tag	Field	Description	Req.	Values
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 1 = Market 2 = Limit 3 = Stop 5 = Market On Close B = Limit On Close Note: Only value 2 "Limit" is valid for Nasdaq orders to the NYSE Matching Engine, and values 1" Market" or 2 "Limit" for Nasdaq orders to the Broker Systems. All other values are invalid for Nasdaq securities.
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.	N	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	C	Value returned from original order Not returned for Market or Stop orders. For Stop order price, please see Tag 99.
47	OrderCapacity	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 40 characters.
59	TimeInForce	Value returned from original order	Y	Value returned from original order
60	TransactTime	GMT Transaction Time	Y	YYYYMMDD-HH:MM:SS
63	SettlmntTyp	Indicates order settlement period	N	0 = Regular 1 = Cash 2 = Next Day 8 = Seller's Option Note: Values 1, 2 and 8 are only valid on orders routed to BBSS and CBS. If 63=8, then tag 287 must

Tag	Field	Description	Req.	Values
				also be present.
65	SymbolSfx	Additional information about the security (e.g. preferred, warrants, etc.)	N	Value returned from original order
76	ExecBroker	Identifies executing / give-up broker.	N	Standard NASD market-maker mnemonic is preferred. Contains either the clearing number or badge number, if present.
99	StopPx	Original Stop Order price.	N	Order's original stop price.
102	CxlRejReason	Cancel Reject reason	N	Code to identify reason for cancel rejection. **The following valid values are supported by NYSE:** Valid values: 0 = Too Late To Cancel 1 = Unknown order / Invalid Data 3 = Order is already in pending cancel or pending replace status
103	OrdRejReason	Order Reject reason	N	Code to identify reason for order rejection. **The following valid values are supported by NYSE:** Valid values: 0 = Broker Option 1 = Unknown Symbol 2 = Exchange Closed 3 = Exceeds Limit/Invalid Data 4 = Too Late To Enter 5 = Unknown Order 6 = Duplicate Order 99 = Other (only for orders sent directly to a Broker's HandHeld)
109	ClientID	4 byte alphanumeric MPID value	C	Contains the Sending firm's Market Participant ID (MPID). Required when routing new and cancel/replace messages to Broker Systems. Returned on acknowledgements, replaces, executions, and order drop copy messages. Required when designating an order with Self Trade Prevention (Tag 7928) to the Trading Engine. Returned on all order and cancel/replacement activities and drop copies only.
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	Current open quantity of an order (original OrderQty minus total executed quantity

Tag	Field	Description	Req.	Values
				For Pending Replace messages (cancel acknowledgements), the value returned is zero.
207	SecurityExchange	Market used to help identify a security.	Y	N = NYSE A = NYSE MKT Equities CCG will return the actual handling market center value.
287	SellerDays	Indicates number of days for Seller's Option settlement type.	C	Specifies the number of days that may elapse before delivery of the security. This tag is required if tag 63=8.
337	ContraTrader	Identifies the trader (e.g. "badge number') of the Contra Broker.	N	Contra Trader Identifier
375	ContraBroker	Identifies the Contra side of the trade.	N	Contra Broker Identifier Execution Reports will contain 'ANON' in this field for NYSE executions. Away Market executions will always contain AHX.
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
437	ContraTradeQty	Quantity traded with the Contra Broker.	N	Share Quantity Traded with Contra
438	ContraTradeTime	Indicates the Execution time in hours and minutes	N	HHMMSS (CBS) HHMM (UTP)
439	ClearingFirm	Optional field: names the clearing member designated by another clearing or non-clearing member for settlement of its Exchange transactions.	N	Clearing Member Identifier
7928	SelfTradeType	Used to prevent the order from trading against another order with the same ClientId (MPID).	N	"N" – Cancel Newest (or arriving order) "O" – Cancel Oldest (or resting order) Returned on all order or cancel/replacement activities originally designated as STP.
9425	StatusResp	Trade correction or busted trade information	N	Admin responses generated as a result of the Execution Report Correction (ERC) information: 1 = Busted Trade 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.
9426	BillingRate	Consolidated billing information.with the additional Billing Tier	C	Returned on execution reports. Required to receive new MPL billing values.

Tag	Field	Description	Req.	Values
		information		1 = Taker 2 = Provider 3 = Blended 4 = Opening/Provider (Prior Day GTC Orders) 5 = Opening/Provider 6 = Closing/Provider 7 = Closing/Blended 8 = Retail Order Provider 9 = Retail Order Taker 10 = Retail Taker MPL 11 = MPL Taker 12 = MPL Provider Note: Not currently supported for BBSS or Direct to Handheld orders.
9430	AutoExInd	Routing Code	N	Value = NX If present, indicates the trade was executed automatically.
9433	Execution Information	Indicates the Executing DMM's/Executing Broker's number.	N	Executing DMM's/Executing Broker's 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: **GGGRRRSSS** Sent in Execution Reports for orders sent to BBSS
9483	DBExecId	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 be present.	N	A = NYSE MKT LLC B = Nasdaq BX (Boston) C = National Stock Exchange D = FINRA ADF F = Algo order executed at NYSE Group G = Algo order executed Away I = International Securities Exchange J = Direct Edge A (EDGA) K = Direct Edge X (EDGX) M = Chicago Stock Exchange N = New York Stock Exchange P = NYSE Arca Exchange T = Nasdaq W = Chicago Board Options Exchange X = Philadelphia Stock Exchange Y = BATS Y Z = BATS Exchange

Tag	Field	Description	Req.	Values
9578	BillingIndicator	Execution Report Billing Indicators If this tag is present, Tag 9570 will not 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 8 = Retail Order Provider 9 = Retail Order Taker Note: Will not support new 2 byte billing indicator for MPL order executions.
9579	ExpERCReference Number	Expanded Activity ID	N	Format: **RRRRRSSSSS** ***** 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: **RRRRRSSSSS** ***** Will contain the activity id embedded in the ExecRefID field. (Will appear on execution report change messages)
	Standard Trailer		*Y*	

8   Failure Recovery

In the event of CCG gateway failure or hardware failure resulting in a non-recoverable scenario of CCG, the application rolls to the spare server. The spare server assumes the IP of the failed server and the data volume is mounted (shown in figure 2). This recovery process is completely transparent to the clients connected to that gateway.
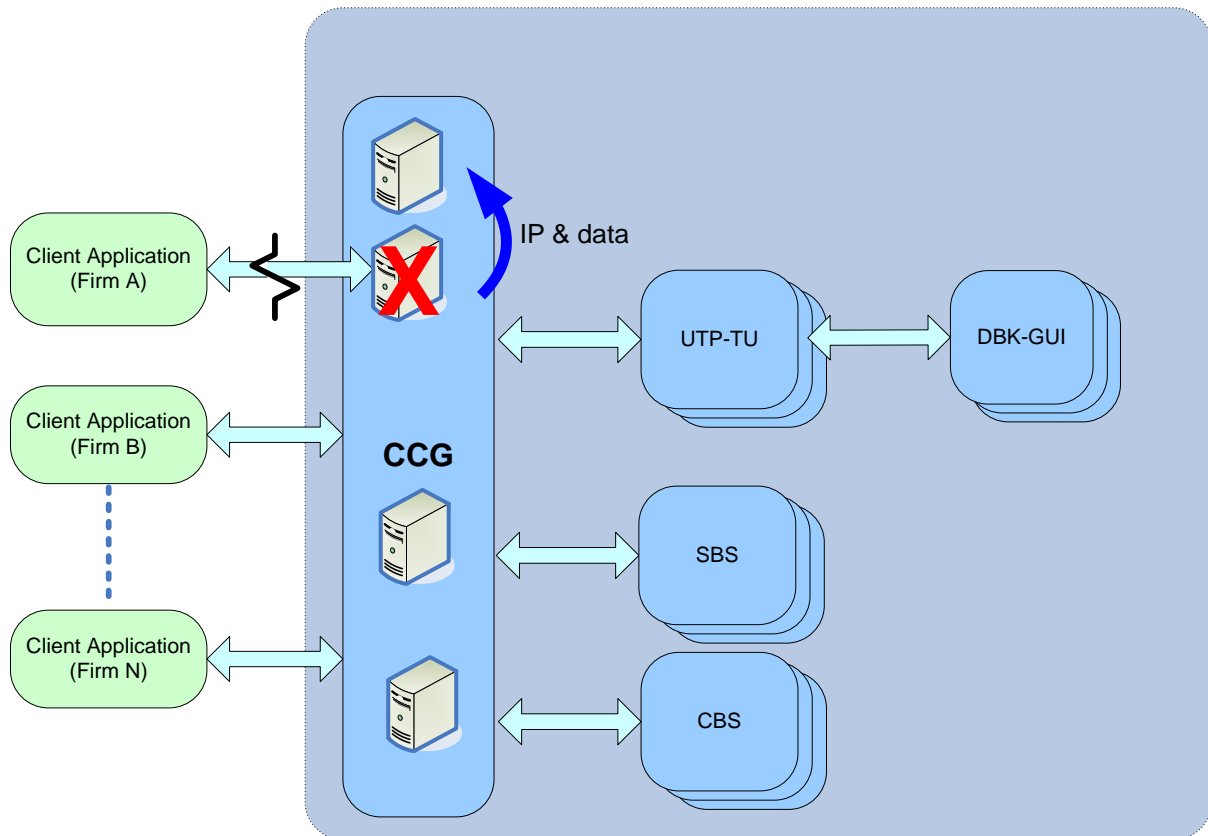

Figure 2: CCG FIX – Failure Recovery

The CCG will start accepting incoming connections after the recovery has been completed. Subsequent attempts to connect to the server will be successful (shown in figure 3). The application level recovery will be handled by the gateway and the client based on the sequence number of the messages last received on either side and is detailed in the next section.
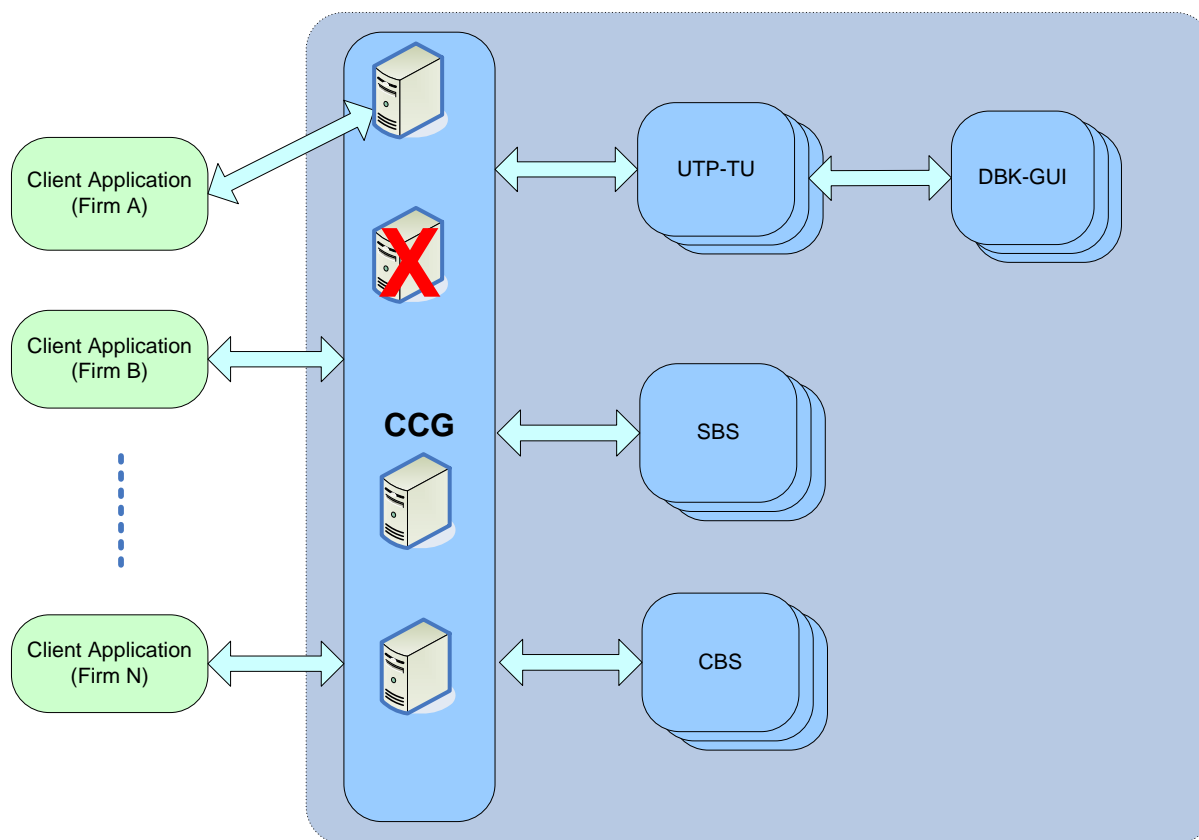

Figure 3: CCG FIX – After Recovery

9 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 MKT Equities Note: Valid only for Nasdaq securities destined for the Broker Systems
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 MKT Equities
Buy Minus Order	OrdType (40) = 1 (market) or 2 (limit) 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 MKT Equities
Sell Plus Order	OrdType (40) = 1 (market) or 2 (limit) 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 MKT Equities
Sell Short Order	OrdType (40) = 1 (market) or 2 (limit) 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 MKT Equities
Sell Short Exempt Order	OrdType (40) = 1 (market) or 2 (limit) Side (54) = 6	A limit or market order to sell short a security that is exempt current Sell Short restrictions.	NYSE & NYSE MKT Equities
Stop Order	OrdType (40) = 3 (Stop)	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 MKT Equities Not valid on Nasdaq securities
Day Order	OrdType (40) = 1 (market) or 2 (limit) 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 MKT Equities
IOC (Immediate Or Cancel)	OrdType (40) = 2 (limit) 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 MKT Equities
Minimum Trade Size Order	OrdType (40) = 2 (limit) TimeInForce (59) = 3 MinQty (110) >= 0	A Minimum Trade Size Quantity for orders with a Time in Force of "IOC" or orders designated as "SOC" or "ISO".	NYSE & NYSE MKT Equities

Order Type	FIX tags	Description	Exchange Platform
Block Reserve Order	OrdType (40) = 2 (limit) MaxFloor (111) = (show size) TimeInForce (59) = 0 (Day)	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 MKT Equities
Dark Reserve Order	OrdType (40) = 2 (limit) MaxFloor (111) = 0 (Zero) TimeInForce (59) = 0 (Day)	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 entered prior to the open will receive an unsolicited cancel, so as not to trigger "a clean-up trade" after the opening trade when the DMM is making an aftermarket.	NYSE & NYSE MKT Equities
Intermarket Sweep Order (ISO)	OrdType (40) = 2 (limit) TimeInForce (59) = 3 RoutingInst. (9487) = ISO **Note: Tag 57 cannot be present**	An immediate or cancel limit order that trades at the NYSE only and will trade through even when 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.	NYSE & NYSE MKT Equities
RegNMS Immediate or Cancel Order (SOC)	OrdType (40) = 1 (market) or 2 (limit) TimeInForce (59) = 0 or 3 RoutingInst. (9487) = SOC **Note: Tag 57 cannot be present**	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 MKT Equities
Do Not Ship (DNS)	OrdType (40) = 2 (limit) TimeInForce (59) = 0 RoutingInst. (9487) = DNS **Note: Tag 57 cannot be present**	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 MKT Equities
Closing Offset (CO)	OrdType (40) = 2 (limit) TimeInForce (59) = 0 RoutingInst. (9487) = CO **Note: Tag 57 cannot be present** **Note: Not valid for Nasdaq securities**	A limit Day order that can only execute at the close to offset a market imbalance.	NYSE & NYSE MKT Equities
Opening Only Order	**Market** OrdType (40) = 1 (Market) TimeInforce (59) = 2 Or **Limit** 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.	NYSE & NYSE MKT Equities

Order Type	FIX tags	Description	Exchange Platform
Market On Close (MOC)	OrdType (40) = 5 (market on close)	A market order that is to be executed only during the closing auction.	NYSE & NYSE MKT Equities
Limit on Close (LOC)	OrdType (40) = B (limit on close)	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 MKT 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 MKT Equities
Retail Price Improvement (RPI)	OrdType (40) = 2 (limit) Side (54) = 1, 2, 5, or 6 TimeInForce (59) = 0 RoutingInst. (9487) = RPI ***Note: OffsetPrice (9403) is required for this order type.*** ***Note: LMT Price is allowed in sub-pennies for values greater than $1.00 and less than $1.00, but must be in multiples of the minimum offset price (currently defined as $0.0010).*** ***Note: Not allowed for Z-mnemonics***	Will only trade with Retail Taker orders. Incoming RPI interest in sub-pennies is accepted—however, any RPI interest that would result in an execution below $1.00 will be prevented from trading.	NYSE & NYSE MKT Equities
Retail Taker Type 1 Retail Only (RTO)	OrdType (40) = 1 (market) or 2 (limit) Side (54) = 1, 2, 3, 4, 5, or 6 TimeInForce (59) = 0 or 3 RoutingInst. (9487) = RTO ***Note: Not allowed for Z-mnemonics***	Retail Taker order that only trades against Retail Price Improvement (RPI) orders. All Retail Taker orders are treated as IOC.	NYSE & NYSE MKT Equities
Retail Taker Type 2 Retail Non-Routable (RTNR)	OrdType (40) = 1 (market) or 2 (limit) Side (54) = 1, 2, 3, 4, 5, or 6 TimeInForce (59) = 0 or 3 RoutingInst. (9487) = RTNR ***Note: Not allowed for Z-mnemonics***	A DNS Retail Taker order that interacts with Retail Providing interest and/or other interest that resides on the limit order book. All Retail Taker orders are treated as IOC.	NYSE & NYSE MKT Equities
Retail Taker Type 3 Retail Routable (RTR)	OrdType (40) = 1 (market) or 2 (limit) Side (54) = 1, 2, 3, 4, 5, or 6	Retail Taker order that interacts with Retail Providing interest, other interest that resides on the limit order book and/or can be routed away to other markets for execution. All Retail Taker orders are treated as IOC.	NYSE & NYSE MKT Equities

Order Type	FIX tags	Description	Exchange Platform
	TimeInForce (59) = 0 or 3 RoutingInst. (9487) = RTR *Note: Not allowed for Z-mnemonics*		
SelfTrade Prevention Order (STP)	OrdType (40) = 1 (market), 2 (limit), 3 (Stop), 5 (MOC) or B (LOC) Side (54) = 1, 2, 3, 4, 5, or 6 TimeInForce (59) = 0, 2, or 3 SelfTradeType (7928) = N or O ClientID (109) = must be present.	Customer order designation that prevents two orders with the same ClientID (MPID) from trading against each other on the NYSE Market. Notes: Market on Close and Limit on Close orders will not be validated for Self-Trade Prevention. MinQty (110) designation invalid for STP order.	NYSE & NYSE MKT Equities
Mid-Point Passive Liquidity Order (MPL)	OrdType (40) = 2 (limit) Side (54) = 1, 2, 3, 4, 5, or 6 TimeInForce (59) = 0 (Day) or 3 (IOC) Price (44) = must be greater than $1.00 (sub-pennies are invalid) ExecInst (18) = M (Mid-Point Peg) MinimumTriggerVol (9568) = greater than or equal to 0. RoutingInstruction (9487) = May contain one of the following: ALO, DNS, ISO or SOC	An undisplayed limit order that will provide price improvement by executing at the mid-point of the Protected BBO. May optionally contain the STP order designation. May optionally contain a Minimum Trigger Volume (MTQ). If designated as ALO, OrderQty must be equal to or greater than one round lot.	NYSE & NYSE MKT Equities
Add Liquidity Only Order (ALO)	OrdType (40) = 2 (limit) or B (limit on close) Side (54) = 1, 2, 3, 4, 5, or 6 TimeInForce (59) = 0 (Day) ExecInst (18) = M (Required for initial implementation). RoutingInstruction (9487) = ALO	A limit or limit on close order that expresses intent to add liquidity only. Interest will automatically reprice to prevent taking liquidity. May optionally contain the STP order designation.	NYSE & NYSE MKT Equities
Passive Do Not Ship (PDNS)	OrdType (40) = 2 (limit) or B (limit on close) Side (54) = 1, 2, 3, 4, 5, or 6 TimeInForce (59) = 0 (Day) RoutingInstruction (9487) = PDNS	Reserved for Future Use: A PDNS order is a limit order to buy or sell that is to be quoted and/or executed in whole or in part only by the NYSE and will be automatically be re-priced if interest required to route to another market center. May optionally contain the STP order designation.	NYSE & NYSE MKT Equities

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.

Tag	Field	Format	Values
1	Account	String	32 character account information field
6	AvgPx	Price	The average price of the executions on the order. NYSE will return this tag with a value of "0", unless the mnemonic being used is subscribed to this service. E-mail the Mnemonics Group if you wish to subscribe. **Note: If subscribed to this service, CumQty[14] will also be enabled.**
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. **CCG does not validate ClOrdID for uniqueness.** **The value for this field must be in UPPERCASE (e.g. BBB^NNNN/MMDDYYYY).** **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.** **CCG Note:** **No leading or trailing blanks or special characters are allowed.**
14	CumQty	Qty	The total quantity of shares executed. NYSE will return this tag with a value of "0", unless the mnemonic being used is subscribed to this service.

Tag	Field	Format	Values
			the Mnemonics Group if you wish to subscribe. **Note: If subscribed to this service, AvgPx[6] will also be enabled.**
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	Identifier of this report. The format is BBB^NNNN/MMDDYYYY^GGGRRRSSS, 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.) **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:** BBB^NNNN/MMDDYYYY^**RRRRRSSSSS** **The expansion of the activity ID increases the number of activities on a single order from 999 to 99,999.** 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: GGGRRRSSS represents the Activity ID.
18	ExecInst	Multiple Value String	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. 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. Valid Values: E = DNI F = DNR M = Mid-Price Peg (MPL) Note: If DNI or DNR is present on an order with a time in force other than GTC, the DNI/DNR designation will be ignored.
19	ExecRefID	String	Reference identifier used with Cancel and Correct transaction types. If Activity ID is present concatenate into ClOrdId[11]. **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:** BBB^NNNN/MMDDYYYY^**RRRRRSSSSS** **The expansion of the activity ID increases the number of activities on a single order from 999 to 99,999.**

Tag	Field	Format	Values
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]
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 A = NYSE MKT Equities **CCG will return the actual handling market center value.**
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.
35	MsgType	String	Defines message type. **ALWAYS THIRD FIELD IN THE MESSAGE**. (Always unencrypted) **The following valid message types are supported by NYSE:** 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
36	NewSeqNo	int	New sequence number.
37	OrderID	String	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. The format is BBB^NNNN/MMDDYYYY. Branch code is 2 to 3 alpha, 1

Tag	Field	Format	Values
			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.)
			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).
			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.
			The value for this field must be in UPPERCASE (e.g. BBB^NNNN/MMDDYYYY).
			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.**
38	OrderQty	Qty	Number of shares trading:
			1 – 25,000,000 to Display Book
			1 – 99,000,000 for all Broker Systems
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	OrdType provides basic information about the equity order. Order type can be combined with price information.
			The following valid values are supported by NYSE:
			1 = Market
			2 = Limit
			3 = Stop
			5 = Market on close
			B = Limit On Close
			Please note: Only value 2 "Limit" is valid for Nasdaq orders to the NYSE Matching Engine and values 1" Market" or 2 "Limit" for Nasdaq orders to the Broker Systems. All other values are invalid for Nasdaq securities.
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).

Tag	Field	Format	Values
			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.
			The value for this field must be in UPPERCASE (e.g. BBB^NNNN/MMDDYYYY).
			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.**
43	PossDupFlag	Boolean	Indicates possible retransmission of message with this sequence number
			Valid values
			Y = Possible duplicate
			N = Original transmission
44	Price	Price	Order's limit price.
45	RefSeqNum	int	Reference message sequence number
47	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. Reference Appendix B for valid values and definitions
49	SenderCompID	String	(Always unencrypted). Identifies the session.
			Assigned by NYSE Firm Testing and Connectivity Groups.
			On output is defined as CCG.
50	SenderSubID	String	Assigned value used to identify specific message originator (desk, trader, etc.)
52	SendingTime	Time Stamp	Time of message transmission in GMT 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
			6 = Sell Short Exempt
			Note: Sell Short Exempt orders will not be accepted prior to the adoption of SEC Alternative Uptick Rule (Rule 201) being in effect.
55	Symbol	String	Ticker symbol as defined by the NYSE.
56	TargetCompID	String	On input is defined as CCG.
			Identifies the target application.

Tag	Field	Format	Values
57	TargetSubID	String	Required if TargetLocationID [143] is present. Represents the valid NYSE routing codes. Valid Values: 4 = Broker Routed Orders 7 = AutoEx Value of "4" is required for all orders, cancels, cancel replaces and cancel reduces routed to BBSS.
58	Text	String	Free format text string On Order messages, up to 25 characters. On Report messages up to 40 characters.
59	TimeInForce	char	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 <symbol> | 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. * GTC is not supported when using direct routing to a Broker's Handheld device. GTCs sent for Nasdaq securities will be treated as day orders. **The following valid values are supported by NYSE:** Valid values: 0 = Day 1 = GTC (Good Till Cancel) 2 = OPG (At the Opening) 3 = IOC (Immediate Or Cancel)
60	TransactTime	GMT Time Stamp	Time of execution/order: YYYYMMDD-HH:MM:SS
63	SettlmntTyp	char	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. **The following valid values are supported by NYSE:** Valid values: 0 = Regular 1 = Cash 2 = Next Day 8 = Seller's Option Note: Values 1, 2 and 8 are only valid on orders routed to BBSS and CBS. If 63=8, then tag 287 must also be present.
65	SymbolSfx	String	Additional information about the security (e.g. preferred, warrants, etc.). See Section 4.1 for valid values.
76	ExecBroker	String	Identifies executing / give-up broker. Standard NASD market-maker mnemonic is preferred. Contains either the clearing number or badge number, if present.
90	SecureDataLen	int	Length of encrypted message
91	SecureData	data	Actual encrypted data stream

Tag	Field	Format	Values
93	SignatureLength	int	Number of bytes in signature field.
95	RawDataLength	int	The number of bytes in a raw data field. Note: This tag must contain a value of "1" if tag 96 is present and contains a value of "0" or "1".
96	RawData	int	Unformatted raw data, which can include bitmaps, word processor documents, etc. Valid Values: 0 = Not Subscribed 1 = Activate Cancel on Disconnect
97	PossResend	Boolean	Indicates that message may contain information that has been sent under another sequence number. Valid Values: Y = Possible Resend N = Original Transmission
98	EncryptMethod	int	Must be |0| (Always unencrypted)
99	StopPx	Price	Limit price per share. Order's stop price.
102	CxlRejReason	int	Code to identify reason for cancel rejection. **The following valid values are supported by NYSE:** Valid values: 0 = Too Late To Cancel 1 = Unknown order 3 = Order is already in pending cancel or pending replace status
103	OrdRejReason	int	Code to identify reason for order rejection. **The following valid values are supported by NYSE:** Valid values: 0 = Broker Option 1 = Unknown Symbol 2 = Exchange Closed 3 = Order Exceeds Limit 4 = Too Late To Enter 5 = Unknown Order 6 = Duplicate Order 99 = Other (only for orders sent directly to a Broker's HandHeld)
109	ClientID	String	Contains a Sender firm's Market Participant ID (MPID) in 4 byte alphanumeric format. Returned on acknowledgements, executions, and order drop copy messages from Broker Systems. Required when designating an order with Self Trade Prevention (Tag 7928) to the Trading Engine. Returned on all order and cancel/replacement activities and drop copies.
110	MinQty	Qty	A Minimum Trade Size Quantity for orders with a Time in Force of "IOC" or orders designated as "SOC" or "ISO". Value may be Zero. NOTE: Valid for UTP-migrated symbols only.

Tag	Field	Format	Values
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. NOTE: This tag is not valid for orders routed to BBSS or CBS
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.
122	OrigSendingTime	Time Stamp	Original time of message transmission, always expressed in GMT (Greenwich Mean Time) when transmitting orders as the result of resend request. Required for message resends, If data is not available, set to same as SendingTime [52].
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
141	ResetSeqNumFlag	Boolean	Indicates that both sides of the FIX session should reset sequence numbers. Valid Values: Y = Yes, reset sequence numbers N = No
142	SenderLocationID	String	Contains the value in tag 143 from the original order.
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.
150	ExecType	char	Describes the specific ExecutionRpt (i.e. Filled) while OrdStatus always identifies the current order status (i.e. Partially Filled)

Tag	Field	Format	Values
			The following valid values are supported by NYSE: 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, DoneForDay, Expired, Calculated, or Rejected (in which case the order is no longer active) then LeavesQty could be 0, otherwise LeavesQty = OrderQty - LastShares. Please note: this tag will not appear on Pending Replace messages
207	SecurityExchange	Exchange	Market used to help identify a security. Valid values: |N| = NYSE |A| = NYSE MKT CCG will route to appropriate executing market destination regardless of the value designated on incoming messages. CCG will return the actual handling market center on outgoing messages.
287	SellerDays	int	Specifies the number of days that may elapse before delivery of the security. This tag is required if tag 63=8.
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 (SenderCompID, TargetCompID, or both) 10 = SendingTime accuracy problem 11 = Invalid MsgType
375	ContraBroker	String	Identifies contra broker. Execution Reports will contain 'ANON' in this field for NYSE executions. Away Market executions will always contain AHX.
377	SolicitedFlag	Boolean	The Solicited Flag is not used in CCG and is returned in subsequent messages.

Tag	Field	Format	Values
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 UTP. This is displayed in Eastern Standard Time (EST/EDT).
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
7928	SelfTradeType	"N" – Cancel Newest (or arriving order) "O" – Cancel Oldest (or resting order) Available to all Order types. Note: Market on Close and Limit on Close orders will not be validated for Self-Trade Prevention.
9403	OffsetPrice	Offset or minimum price improvement value from the current Bid or Offer. This tag is required if 9487=RPI Value must be zero, greater than or equal to the minimum offset value ($0.0010) and must be in multiples of $0.0010.
9425	StatusResp	Admin responses generated as a result of the Execution Report Correction (ERC) information: 1 = Busted Trade 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.
9426	BillingRate	Combines current values of Tags 9570 and 9578 into one tag and supports additional NYSE Billing Tier information: Field may contain an Away Market Indicator with optional MMID separated by "/". Example format = D/EDGA. Or Field may contain Billing Indicator with optional billing tier separated by a "/".: Example format = 2/2 (represents a report for less than 2000 shares that provided liquidity) Example format = 2/3 (represents a report for less than 5000 shares but greater than 1999 shares that provided liquidity) Support new 2 byte MPL billing indicator values: 1 = Taker 2 = Provider 3 = Blended 4 = Opening/Provider (Prior Day GTC Orders) 5 = Opening/Provider 6 = Closing/Provider 7 = Closing/Blended 8 = Retail Order Provider 9 = Retail Order Taker 10 = Retail Taker MPL 11 = Taker MPL 12 = Provider MPL
9428	CxlQty	Required when NewOrdQty specified, Tag <9429>
9429	NewOrdQty	If present, set to the new quantity to take effect (includes the open and executed amount).
9430	AutoExInd	Valid Value = |NX| Routing Code returned on the Execution Report. If present, indicates the trade was executed automatically.

Tag	Field	Values
9432	MiscDataLine4	Indicates DMMs/Broker's 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 DMMs/Broker's Give-up number. For any firm that routes orders to BBSS, this value is reported.
9436	MemoAB	10 character text field; a period is returned for any character not entered Relative to NYSE Rule 108(a) where brokers permit DMMs 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. Memo B (characters 5 through 10 of Tag 9436) NP…. No Parity NPCROS No Parity/Cross NPB... No Parity/Bill NPNB.. No Parity/ No Bill NPXP.. No Parity/Principal Cross NPXA.. No Parity/Agent Cross P…… Parity P.B... Parity/Bill P.NB.. Parity/ No Bill P.CROS Parity/ Cross P.XP.. Parity/Principal Cross P.XA.. Parity/ Agent Cross Unused characters at the end of the tag may be used for a memo.
9440	ERCReferenceNumber	Format: **GGGRRRSSS** Sent in Execution Reports for orders sent to
9460	OrderCapacity2	Additional value representing accounting type. Valid Values: 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. **Note: If using Tag 9460, Tag 47 cannot also be present. Tag 9460 cannot be used if Tag 47 is present.**
9461	AddQty	The additional quantity to be added to the order. Required for "MAKES" "ADD" Only booth-routed order quantity may be updated.
9483	DBExecId	Associates all buy and sell execution reports and tape prints in the Display Book trade. 6 Numeric Characters
9487	RoutingInstruction	ISO = Inter-Market Sweep DNS = Do Not Ship SOC = NMS IOC CO = Closing Offset Order RPI = Retail Price Improvement Order RTO = Retail Only Order

Tag	Field	Values
		RTNR = Retail Non-Routable Order
		RTR = Retail Routable Order
		Note: *This tag is instead of tag <57>. When using this tag, tag <57> cannot also be present.*
		Note: CO Orders are *not* valid for Nasdaq Securities.
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 be present.
		A = NYSE MKT LLC
		B = Nasdaq BX (Boston)
		C = National Stock Exchange
		D = FINRA ADF
		F = Algo order executed at NYSE Group
		G = Algo order executed Away
		I = International Securities Exchange
		J = Direct Edge A (EDGA)
		K = Direct Edge X (EDGX)
		M = Chicago Stock Exchange
		N = New York Stock Exchange
		P = NYSE Arca Exchange
		T = Nasdaq
		W = Chicago Board Options Exchange
		X = Philadelphia Stock Exchange
		Y = BATS Y
		Z = BATS Exchange
9578	BillingIndicator	Execution Report Billing Indicators.
		If this tag is present, Tag 9570 will not 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
		8 = Retail Order Provider
		9 = Retail Order Taker
		Note: Does not support new 2 byte MPL billing values (see BillingRate field).
9568	MinimumTriggerVol (MTQ)	Minimum Trigger Quantity for resting MPL order.
		Zero is considered a valid value.
9579	ExpERCReferenceNumber	Format:
		RRRRRSSSSS
		*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:
		RRRRRSSSSS
		*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	Field	Values		
47	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	=	Not a member/member organization and not an individual investor.
		C	=	Program Trade, non-index arbitrage for the proprietary account of a member/member organization or an affiliate of the member/member organization.
		D	=	Program trade, index arbitrage for the proprietary account of a member/member organization or an affiliate of the member/member organization.
		I	=	Individual investor, not a discretionary or managed account.
		J	=	Program trade, index arbitrage for the account of an individual investor.
		K	=	Program trade, non-index arbitrage for the account of an individual investor.
		P	=	Non-Program trading for the proprietary account of a member/member organization or an affiliate of the member/member organization.
		Q	=	Proprietary trade by a member on the Floor relating to the member's own error. All trades to establish or liquidate positions in the member's error account must be identified with this account type.
		U	=	Program trade, index arbitrage, agency.
		Y	=	Program trade, non-index arbitrage, agency.