

The UTP Plan Quotation Data FeedSM (UQDFSM)

Data Feed Interface Specification

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1.0 Introduction

1.1 Background

Section 12(f) of the Securities and Exchange Act of 1934 permits NASDAQ® to extend “unlisted trading privileges” (UTP) for its listed securities. Through UTP, other U.S. exchanges and markets are able to quote and trade issues listed on the NASDAQ Stock Market®. Under the UTP Plan, all U.S. exchanges, that quote and trade NASDAQ listed securities, must provide their data to a centralized securities information processor (SIP) for data consolidation and dissemination.

NASDAQ, in its current role as the SIP for the UTP Plan, supports following data feed products:

- **UTP Quotation Data FeedSM (UQDFSM)** provides best bid and offer (BBO) quotes from the UTP participants as well as the consolidated national best bid and offer (National BBO) quotes for securities listed on the NASDAQ Stock Market®.
- **UTP Trade Data FeedSM (UTDFSM)** provides trade data from the UTP participants for securities listed on the NASDAQ Stock Market®.
- **OTC Montage Data FeedSM (OMDFSM)** provides data for over-the-counter brokers that quote securities listed on the NASDAQ Stock Market® via the Financial Industry Regulatory Authority (FINRA-formerly NASD)® Alternative Display Facility (NASD ADF). For information on this market center, please refer to the FINRA web site at www.finra.org/RegulatorySystems/ADF/index.htm.

Usage of the information contained on this data feed is subject to NASDAQ reporting and administrative policies as outlined in the *NASDAQ Data Feed Subscriber Agreement* and *NASDAQ Distributor Agreement*. Please consult with the appropriate personnel within your firm about your contractual requirements before implementing a new system.

Under the UTP plan, UQDF and UTDF are part of the Level 1 entitlement. For the fee schedule, please refer to the UTP Pricing page on NASDAQ Trader at <http://www.nasdaqtrader.com/content/productsservices/pricelist/nasdaqomxpricelist.pdf>.

1.2 Upcoming Data Feed Enhancements

At the request of the UTP Operating Committee, the UTP SIP has implemented a quarterly release schedule for the SIP data feeds.

There is a formal process by which the UTP Operating Committee will decide the enhancements to be included in each release. Both UTP participants and market data distributors may submit UTP data feed enhancement requests to NASDAQ for possible consideration. The UTP Operating Committee will periodically vote on which enhancement requests to include in the upcoming quarterly data feed release. Once the UTP Operating Committee has made its decision, NASDAQ will update the data feed format specifications as necessary.

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1.2.1 Bandwidth Increase Planned for Q3 2014

As announced in [UTP Vendor Alert 2014-002](#), the UTPOC recently completed the March 2014 capacity analysis. Based on the results of this study and the ongoing efforts to improve the performance of the UTP SIP, the UTP SIP will increase the bandwidth allocations for the UTP Data Feeds effective Monday June 30, 2014.

1.3 Connectivity Options

As of November 2004, the UTP operating committee authorized the UTP SIP to begin to offer direct access to its data feeds through the extranet providers. These extranet providers are connected directly to the NASDAQ primary data center and disaster recovery facility. Please visit the following links for the approved [Direct Connectivity](#) or [extranet](#) providers.

1.4 Scope

This document defines the communications interface and message format requirements for the output from **UTP Quotation Data Feed (UQDF)**. All references to a time of day in this specification are in Eastern Standard/Daylight Time.

This document was last updated on **April 2014**. Please refer to Appendix G of this document for version control information. The UTP Plan reserves the right to add, delete, or modify the message formats outlined in this document as needed. In advance of any data format changes, NASDAQ will post a UTP Vendor Alert to the NASDAQ TraderSM Web site with the details of the release.

Although NASDAQ will attempt to update this specification on a quarterly basis, UQDF subscribers should read all UTP Vendor Alerts to ensure that they are have the most up-to-date information on technical and administrative changes. Vendors may request to receive automatic e-mail notification of NASDAQ Trader postings by sending a message to dataproductions@nasdaqomx.com.

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2.0 Transmission Characteristics

2.1 Bandwidth Allocations

As noted below, the SIP broadcasts two (a primary and a back-up) multicast groups for its data feeds. For this data feed, the SIP disseminates data via three logical channels for each multicast group on the extranets. The current bandwidth allocation for the IP multicast channels are as follows:

2.1.1 Current Bandwidth Allocation Table:

UTP Data Feed	Bandwidth Allocation (per multicast group)
UQDF (A-CD)	42,666,666 bits per second (bps)
UQDF (CE-FD)	42,666,666 bps
UQDF (FE-LK)	42,666,667 bps
UQDF (LL-PB)	42,666,667 bps
UQDF (PC-SP)	42,666,667 bps
UQDF (SQ-ZZ)*	42,666,667 bps
Total	256.00 Mega Bits Per Second (Mbps)

*Channel 6 will go to ZZZZ, accounting for all remaining securities.

2.1.2 Future Bandwidth Allocation Table:

For additional information, please refer to [UTP Vendor Alert #2014-02](#).

UTP Data Feed	Bandwidth Allocation (per multicast group)
UQDF (A-CD)	65,333,333 bits per second (bps)
UQDF (CE-FD)	65,333,333 bps
UQDF (FE-LK)	65,333,333 bps
UQDF (LL-PB)	65,333,333 bps
UQDF (PC-SP)	65,333,334 bps
UQDF (SQ-ZZ)*	65,333,334 bps
Total	392.00 Mega Bits Per Second (Mbps)

*Channel 6 will go to ZZZZ, accounting for all remaining securities.

In order to best utilize the bandwidth allocated, the SIP may periodically rebalance the bandwidth apportionment between the channels by changing throttle limits.

Market data will be split between the six channels based on the first character of the issue symbol as detailed in the above table. Control messages and general administrative messages, which do not contain an issue symbol, will be disseminated on all channels.

Please note that UTP Plan reserves the right to modify the bandwidth allocation for these IP calls as system capacity dictates. Extranet customers are required to maintain sufficient network capacity to handle the data feed products ordered.

2.2 Transmission Protocol

2.2.1 Protocol Overview

Regardless of network option, SIP data feed transmissions will be transmitted in a non-interactive simplex mode using Internet Protocol (IP) multicast. A broadcast transmission

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with no answer back will be employed. A version of Cisco's Protocol Independent Multicast (PIM) routing protocol will be used to route multicast packets through the network. All transmissions will be in standard ASCII code with 7 data bits (8th bit is zero).

SIP data feeds are designed to adhere to Request for Comment (RFC) 1112 standard from The NIC Group for IP multicast protocol. This RFC states:

IP multicasting is the transmission of an IP datagram to a "host group", a set of zero or more hosts identified by a single IP destination address. A multicast datagram is delivered to all members of its destination host group with the same "best-efforts" reliability as regular unicast IP datagrams, i.e., the datagram is not guaranteed to arrive intact at all members of the destination group or in the same order relative to other datagrams.

To minimize data loss, SIP provides primary and back-up groups for its data feed services. The data messages are identical for two groups with the exception of the following UDP message header field values: Source IP Address, Destination IP Address, UDP Source Port Number, and UDP Destination Port Number.

The purpose of two host groups is to provide an extra layer of data redundancy within the extranet and end-user networks. By reading and utilizing both multicast groups into their production environment, IP multicast customers can help to protect themselves against network anomalies which could cause interruptions in data flow. To minimize data loss, UTP SIP strongly recommends that data feed customers process both the primary and back-up groups within their networks.

2.2.2 Current IP Multicast Addresses

Each IP multicast stream will be assigned a unique Class D host group address for transmission via the extranets. The Class D addresses have been registered by UTP SIP with The NIC Group.

Data Feed	Primary Groups			Back-Up Groups		
	Class D IP Address	Port ₁₆	Port ₁₀	Class D IP Address	Port ₁₆	Port ₁₀
UQDF (A-CD)	224.0.17.48	D8EA	55530	224.0.17.49	D8EB	55531
UQDF (CE-FD)	224.0.17.50	D8EC	55532	224.0.17.51	D8ED	55533
UQDF (FE-LK)	224.0.17.52	D8EE	55534	224.0.17.53	D8EF	55535
UQDF (LL-PB)	224.0.17.54	D8F0	55536	224.0.17.55	D8F1	55537
UQDF (PC-SP)	224.0.17.56	D8F2	55538	224.0.17.57	D8F3	55539
UQDF (SQ-ZZ)*	224.0.17.58	D8F4	55540	224.0.17.59	D8F5	55541

*Channel 6 will go to ZZZZ, accounting for all remaining securities.

2.3 Transmission Block

Messages sent to data feed recipients are blocked to provide more efficient line utilization. Each block contains a maximum of 1000 data characters. Messages may not span blocks. Each message in a block ends in a Unit Separator (US) except the last message, which ends in an End of Text (ETX). With the exception of certain messages (e.g. Control messages), each message sent over this data feed contains a fixed format header and a text section that has a format and length that varies for each message type.

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DATA BLOCK FORMAT

UDP/IP Headers	S O H	Message 1 header and text	U S	Message 2 header and text	U S	Message n header and text	E T X
1000 Byte Block (Max) from SOH to ETX							

2.4 UDP/IP Headers

Each IP datagram includes the IP and UDP headers as well as the block text data. The datagram fields can be read left to right starting at the top and working your way down through the datagram.

		0		16		32			
IP	VERSION 4 bits		HEADER LENGTH 4 bits		TYPE OF SERVICE 8 bits		TOTAL LENGTH (in bytes) 16 bits		
	IDENTIFICATION 16 bits					FLAGS 3 bits		FRAGMENT OFFSET 13 bits	
	TIME TO LIVE 8 bits			PROTOCOL 8 bits			IP HEADER CHECKSUM 16 bits		
	SOURCE IP ADDRESS 32 bits								
	DESTINATION IP ADDRESS 32 bits								
UDP	UDP SOURCE PORT NUMBER 16 bits					UDP DESTINATION PORT NUMBER 16 bits			
	UDP LENGTH 16 bits					UDP CHECKSUM 16 bits			
	UDP Data (BLOCK DATA < 1000 BYTES)								

2.5 Field Descriptions

2.5.1 IP Header Fields

The following field descriptions pertain to the IP header:

- **VERSION** – 4 bit field used to define the current version of the IP protocol for transmission. The value will be set to 4.
- **HEADER LENGTH** – 4 bit field to define the number of 32 bit words in the IP header portion of the datagram. For multicast packets being generated by NASDAQ, the value will be set to 5.
- **TYPE OF SERVICE** – 8 bit field with the first 3 bits generally ignored by most network equipment. The next 5 bits are set to zero. Based on this description this field will always have the value of zero (0) for all multicast packets.
- **TOTAL LENGTH** – 16 bit field contains the length in bytes of the entire IP datagram (including UDP header). Since the maximum length of the block text is 1000 bytes, the maximum value for this field is 1028.
- **IDENTIFICATION FIELD** – 16 bit field contains a value that is incremented by one for each packet sent by the system. Not supported for UDP/IP packets.
- **FLAGS AND FRAGMENT OFFSET** – Combined 16 bit field is only used when an IP datagram is fragmented. Not supported for UDP/IP packets.

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- **TIME TO LIVE (TTL)** – 8 bit field contains a value that determines the number of routers that a datagram can pass through. Each router that forwards the datagram will decrement this value by one; when it reaches zero, the router throws it away. It is initially set to 32 by the multicast source systems.
- **PROTOCOL** – 8 bit field contains a value representing the next level encapsulated protocol. Since multicast uses UDP, the value is set to 0x17, which is 23 decimals.
- **HEADER CHECKSUM** – 16 bit field contains a checksum made up of the IP header fields only. The calculation is based on the one's complement sum of the header broken into 16 bit words.
- **IP SOURCE ADDRESS** – 32 bit field contains the Registered Class C address of the multicast datagram source system. Address may vary depending on origin (system and location) of NASDAQ data. NASDAQ strongly warns customers against coding their systems for a particular IP source address. **NASDAQ will not notify data feed customers in advance when it changes the origin of data.**
- **IP DESTINATION ADDRESS** – 32 bit field contains the Registered Class D address for each IP Multicast Group. Please see table above for a list of current multicast groups.

2.5.2 UDP Header Fields

The following field descriptions pertain to the UDP header:

- **UDP SOURCE PORT NUMBER** – 16 bit field identifies the Port₁₆ address for each IP multicast group. Please see table above for a list of the current source port numbers.
- **UDP DESTINATION PORT NUMBER** – 16 bit field identifies the Port₁₀ address for each IP multicast group. Please see table above for a list of the current destination port numbers.
- **UDP LENGTH** – 16 bit field contains the length in bytes of the UDP headers plus the Data Block. The maximum value is 1008.
- **UDP CHECKSUM** – 16 bit field contains a checksum made up of the UDP header plus the Data Block. In addition, it includes the UDP pseudo header, which is made up of selected fields from the IP headers such as Source Address, IP Destination Address, Protocol, and UDP Length. The calculation is based on the one's complement sum of the datagram broken into 16 bit words.

2.5.3 UDP Data Fields

The following field descriptions pertain to the Data Block transmission:

- **SOH AND ETX** – The start of a block of data will be indicated by the Start of Header (SOH) control character. The end of the block will be signified by an End of Text (ETX) control character.
- **US** – The Unit Separator (US) character is utilized in message blocks with multiple messages to signify the end of the preceding message but not the end of the block.
- **BLOCK TEXT** – The block text may consist of one or more messages. A message may not span block boundaries. A message shall consist of a Message Header and a Message Text. Each message in a block shall be delimited by a US character except the last message, which will be delimited by an ETX character.
- **DATA FORMAT** – Alphanumeric fields will be left justified and space (hex 20) filled unless otherwise noted. Numeric fields will be right justified and zero (hex 30) filled unless otherwise noted.

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2.6 Retransmission Capability

The SIP front-end processor will log messages transmitted to recipients. The message formats are defined in subsequent sections of this document. This log will be accessible as a record of messages sent, and will provide a full retransmission capability. Message types not logged and therefore unavailable for retransmission include:

Message Category	Type	Value
C	T	Line Integrity

Retransmission requests may be made by sending an electronic mail message to retrang@nasdaqomx.com. Retransmission requests will only be honored during the period from the Start of Day (Category C – Type I) message through the End of Retransmission Request (Category C – Type K) message. The recipient can specify by message sequence number which message range the recipient would like retransmitted. Please call to SIP Operations at +1 203 926 3400 should you experience any issues with retransmission requests.

To ensure proper identification of each vendor, a line specific password must be supplied to the operator taking the request. To request a retransmission, the firm must provide the following information to SIP Operations Center:

- Data Feed Subscriber's Firm Name
- Assigned Retransmission Password
- Missing Message Sequence Number(s)
- Contact Name and Telephone Number

Retransmissions will be assigned a low priority in the outgoing message queue in order to prevent any delay or interference with current message delivery. As with original transmissions, retransmissions are broadcast to all direct connect subscribers on both networks. **It is the responsibility of the data feed recipient to ignore retransmitted messages not intended for their firm.** Retransmission messages can be identified by the following attributes:

- **Message Blocking:** Retransmission messages will never be mixed with current messages in the same message block, but current message blocks and retransmission blocks can be interspersed.
- **Message Sequence Number:** The message header will contain the same message sequence number as the original message. Please note that if the Message Sequence Number is reset, no intra-day messages sent prior to the reset control message can be retransmitted.
- **Retransmission Requester:** The message header will contain the unique two-character retransmission requester assigned to the intended recipient. Each firm is given a unique two-character retransmission requester that they should code for in its system. Refer to section 3.4 for more information on the retransmission requester.
- **Date/Time:** The message header will contain the same date and time stamp as the original message.

To obtain the retransmission requester and passwords for your firm, please contact NASDAQ Market Data Distribution 301.978.5307 or via electronic mail at dataproducs@nasdaqomx.com.

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Message Header

3.0 Message Header

The Message Header consists of the following data fields:

Message Category	Message Type	Session Identifier	Retransmission Requester	Message Sequence Number
1	1	1	2	8

Market Center Originator ID	Time Stamp	Reserved
1	9	1

24 BYTES

Note: Alphanumeric fields are left justified and space filled unless otherwise specified. Numeric fields are right justified and zero filled unless otherwise specified.

3.1 Message Category

The Message Category is a 1 byte, alphanumeric field. This field, along with the Message Type, identifies the message. The following table defines the Message Categories that UQDF can transmit:

Category	Usage
Q	Quote
A	Administrative
C	Control

3.2 Message Type

The Message Type is a 1 byte, alphanumeric field. This field, along with the Message Category, identifies the message. The following defines the Message Types that UQDF transmits.

Quotation Messages:

Category	Type	Usage
Q	E	UTP Participant BBO Short Form
Q	F	UTP Participant BBO Long Form

Administrative Messages:

Category	Type	Usage
A	A	General Administrative Message
A	B	Issue Symbol Directory Message
A	R	Closing Quote Recap
A	H	Cross SRO Trading Action
A	K	Non-Regulatory Market Center Action
A	V	Reg SHO Short Sale Price Test Restricted Indicator
A	C	Market Wide Circuit Breaker Decline Level Message
A	D	Market Wide Circuit Breaker Status Message
A	P	Price Band Message

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Control Messages:

Category	Type	Usage
C	I	Start of Day
C	J	End of Day
C	O	Market Session Open
C	C	Market Session Close
C	K	End of Retransmission Requests
C	Z	End of Transmissions
C	T	Line Integrity
C	L	Sequence Number Reset
C	P	Quote Wipe-Out

3.3 Session Identifier

The Session Identifier is a 1 byte, alphabetic field that indicates the market session to which the message applies. The associated values are as follows:

Code	Value
A	All Market Sessions or Session Independent
U	U.S. Market Session (including pre-and post-market)

** Note: U.S. Market Session includes both pre- and post-market sessions..

Message Header

3.4 Retransmission Requester

The Retransmission Requester is a 2 byte, Alphanumeric field that signifies the intended recipient of the message. All values will be upper case and space filled. Retransmissions will be sent to all recipients, and it is the responsibility of each recipient to discard retransmitted messages not requested by him. The exception is a retransmission with an "R" Retransmission Requester, which denotes a retransmission addressed to all recipients.

Certain specific or global retransmission codes exist. For UQDF, the codes are as follows:

Code	Value
O (space)	An original transmission to all recipients.
R (space)	A retransmission to all recipients.
T (space)	A test cycle transmission to all.
Vendor Specific ID	A retransmission to an individual firm. Identifiers to be assigned by the SIP administrator as needed.

The SIP will also assign a special two-character retransmission requester to each direct subscriber. Customers should code their system to process the two-character code assigned to their firm as well as the three global values outlined above.

3.5 Message Sequence Number (MSN)

The Message Sequence Number is designed to identify each message for tracking purposes. At the beginning of each operational cycle this number will begin with zero as the first message, and will be incremented by one each time a new message is transmitted with the following exceptions:

- Retransmitted messages have the sequence number of the original message.
- Line Integrity Messages (Category C – Type T) do not cause the counter to be incremented by one. These messages are assigned the sequence number of the last message sent that was not a retransmission.
- Sequence Number Reset Messages (Category C – Type L) contain the number to which the Message Sequence Number counter is to be reset. This number will be either zero or some number greater than the highest number previously transmitted.
- Category C – Type J (End of Day), Category C – Type K (End of Retransmission Requests), and Category C – Type Z (End of Transmissions) will be transmitted three times to ensure positive recognition. The message sequence counter is incremented by one on the first message of the transmission sequence only.
- Category C – Type I (Start of Day), and Category C – Type M (Start of Test Cycle) will contain a message sequence number of zero. Category C – Type I messages will be transmitted three times to ensure positive recognition, but will have zero as the sequence number on all three messages. Please note that the start of each test cycle will begin with zero.

Refer to Section 9 of this document for additional information on UQDF control messages.

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Message Header

3.6 Market Center Originator ID

The Originator ID is a 1 byte, alphabetic field that indicates the UTP participant or system that originated the message. To date, the following Originator IDs have been assigned by the SIP:

Code	Value
A	NYSE MKT
B	NASDAQ OMX BX
C	National Stock Exchange
D	FINRA ADF
E	Market Independent (Generated by SIP)
I	International Securities Exchange
J	EDGA Exchange, Inc
K	EDGX Exchange, Inc
M	Chicago Stock Exchange
N	NYSE Euronext
P	NYSE Arca Exchange
Q	NASDAQ OMX
W	Chicago Board Options Exchange
X	NASDAQ OMX PHLX
Y	BATS Y-Exchange, Inc
Z	BATS Exchange Inc

3.7 Time

The Time Stamp field is a 9 byte, alphanumeric field. Since the SIP only disseminates the current day's data, the data feed header shows a Time only field. The Time Stamp field denotes the military time (to the nearest millisecond) that the record was originally received or created by the SIP system. The time format is HHMMSSCCC.

3.8 Reserved

This one-byte field will be reserved for future use. Initially this field will be space filled.

Field Occurrences

4.0 Data Formats

This section outlines the message formats used to disseminate information on the UTP Quotation Data Feed. The field values for the message formats are described in Section 6 of this document.

As part of a message format release the UTP SIP will make the following changes to the UTP quote message formats:

- Introduction of a new reserve byte within the quote messages to be defined at a future time
- Introduction of a new Retail Interest indication of interest on the Bid, Ask or both the Bid and Ask to the long form quote message
- Introduction of Limit Up / Limit Down indicators for both the BBO and NBBO on the long and short form quote messages
- Introduction of a new data element to the long and short form quote messages indicating if the message was generated by the SIP.

4.1 UTP Quotation Messages

The following message formats are used to disseminate quotation data for NASDAQ listed securities. For processing guidelines, please refer to Section 7.0 of this document.

4.1.1 Short-Form UTP Participant BBO Quotation

Category Q - Type E

The SIP will use the short form of this message format only if the UTP participant's quotation meets the following criteria:

- The Issue Symbol is 5 characters or less;
- Both Bid and Ask Prices can be stated in 6 bytes (see Appendix A for price format table);
- Both Bid and Ask Prices are stated in US Dollars; and
- Both Bid and Ask Sizes are 99 round lots or less.
- Retail Interest Indicator value is <space>

Issue Symbol	Reserved	SIP Generated Update	Quote Condition	LULD BBO Indicator
5	1	1	1	1

Bid Price Denominator	Bid Price	Bid Size	Ask Price Denominator	Ask Price	Ask Size
1	6	2	1	6	2

National BBO Appendage Indicator	LULD National BBO Indicator	FINRA ADF MPID Appendage Indicator
1	1	1

30 BYTES

Field Occurrences**4.1.2 Long-Form UTP Participant BBO Quotation***Category Q - Type F*

Issue Symbol 11	Reserved 1	SIP Generated Update 1	Quote Condition 1	LULD BBO Indicator 1	Retail Interest Indicator 1
Bid Price Denominator 1	Bid Price 10	Bid Size 7	Ask Price Denominator 1	Ask Price 10	Ask Size 7
Currency 3	National BBO Appendage Indicator 1		LULD National BBO Indicator 1		FINRA ADF MPID Appendage Indicator 1

58 BYTES**4.1.3 National BBO Appendage Indicator**

If the UTP participant's quotation impacts the national best bid and offer of the issue, a National BBO Appendage will be added to the original short- or long-form message. The appendage will include all relevant information concerning the Best Bid and Best Ask of the issue and the originating market center.

Within the Quotation message, the National BBO Indicator will denote the type of appendage to be included. The allowable National BBO Indicator values are as follows:

Code	Value
0	No National BBO Change – The UTP participant's quote does not affect the National BBO. Vendors should continue to show the existing National BBO. No appendage is required.
1	No National BBO Can be Calculated – The National BBO cannot be calculated therefore vendors should show National BBO fields as blank. No appendage is required.
2	Short Form National BBO Appendage Attached – A new National BBO was generated as a result of the UTP participant's quote update and the new National BBO information is contained in the attached short form appendage. See criteria for the short form appendage below.
3	Long Form National BBO Appendage Attached – A new National BBO was generated as a result of the UTP participant's quote update and the new information is contained in the attached long form appendage.
4	Quote Contains All National BBO Information – Current UTP participant's quote is itself the National BBO. Vendors should update National BBO to reflect this new quote and single market center. (National Best Bid Market Center and National Best Ask Market Center fields should be updated to reflect the Market Center Originator ID value in the UQDF message header.) No appendage is required.

To economize on bandwidth, the simplest form of the National BBO Appendage will be used whenever possible. Since the National Bid Tick Indicator is included in the Quote Appendage, the SIP will only be able to use **the National BBO Appendage Indicator value of "4" for those issues not subject to the NASD Short Sale Rule 3350 (NASDAQ Capital Market Issues) during normal business hours.**

Field Occurrences

Please note that the National BBO should not be used alone to determine the current trading status for an issue. **Firms must read the Trading Action administrative message (outlined in section 4.2.2) for trading halt, quotation resumption, and trading resumption status updates.**

4.1.3.1. Short Form National BBO Appendage

The Short-Form National BBO Appendage can contain either one-sided or two-sided National BBO quotation information. The criteria for the Short-Form National BBO Appendage is as follows:

- Both National Best Bid and National Best Ask Prices can be stated in 6 bytes (see Appendix A for price format table);
- Both National Best Bid and National Best Ask Prices are stated in US Dollars; and
- Both National Best Bid and National Best Ask Sizes are 99 round lots or less.

NBBO Quote Condition	National Best Bid Market Center	National Best Bid Price Denominator	National Best Bid Price	National Best Bid Size
1	1	1	6	2

Reserved	National Best Ask Market Center	National Best Ask Price Denominator	National Best Ask Price	National Best Ask Size
1	1	1	6	2

22 BYTES

4.1.3.2. Long Form National BBO Appendage

The Long Form National BBO Appendage can contain either a one-sided or a two-sided National BBO quote.

NBBO Quote Condition	National Best Bid MC	National Best Bid Price Denominator	National Best Bid Price	National Best Bid Size
1	1	1	10	7

Reserved	National Best Ask MC	National Best Ask Price Denominator	National Best Ask Price	National Best Ask Size
1	1	1	10	7

Currency
3

43 BYTES

Note: Effective with the September 24, 2007 enhancement, the National Bid Tick Indicator will be <space> filled for all NASDAQ-listed securities and rename the field as Reserved.

Field Occurrences

4.1.4 FINRA ADF MPID Appendage Indicator

If the FINRA ADF participant's BBO quotation impacts their single participant at either the Bid or Ask side of their market for the issue, a FINRA ADF MPID Appendage will be added to the original short- or long-form message. This appendage will include the ADF's single participant for its best bid and size and/or the ADF's single participant for its best ask and size.

Within the Quotation message, the FINRA ADF MPID Indicator will denote the type of appendage to be included. The allowable values are as follows:

Code	Value
0	No ADF MPID changes – Current ADF quote does not affect the FINRA MPID. Vendors should continue to show the existing FINRA MPID(s). No appendage required.
1	No ADF MPID exists – There is no calculation of the FINRA MPID(s). Vendors should show the FINRA MPID fields as blank. No appendage is required.
2	ADF MPID(s) attached - FINRA MPID was generated and the information is contained in the attached appendage.
<space>	Not applicable - Quotation originates from a UTP participant other than the FINRA. Vendors should continue to show the existing FINRA MPID(s). No appendage is required.

The following appendage will be added to the UTP BBO quotation message when necessary:

4.1.4.1. FINRA ADF MPID Appendage

Bid ADF MPID	Ask ADF MPID
4	4

Field Occurrences

4.2 Administrative Messages

The following message formats are used to disseminate administrative data for NASDAQ Listed securities. For processing guidelines, please refer to Section 8.0 of this document.

4.2.1 General Administrative Message

Category A - Type A

This free format, variable length text message may be used to notify data feed subscribers of special situations. The administrative message can be used anytime throughout the day.

Text 1 – 300

Up to 300 BYTES

4.2.2 Cross SRO Trading Action Message

Category A - Type H

This fixed format message will be used to inform subscribers of trading actions – such as halts, pauses, quotation resumptions and trading resumptions – impacting the trading of a NASDAQ-listed issue across all UTP participants.

Issue Symbol 11	Action 1	Action Date/Time 7	Reason Code 6
--------------------	-------------	-----------------------	------------------

25 BYTES

Field Occurrences**4.2.3 Session Close Recap Message***Category A - Type R*

At the request of the market data community, the UTP SIP generates a Session Close Recap message that reflects the National BBO quotation information at the close of the normal market session. To generate this recap, the UTP SIP takes a snapshot of the National BBO at the time that the Market Close event is generated. The UTP SIP also includes as attachments most recent quote update from each UTP participant at the time of the snapshot event.

Please note that the UQDF Session Close Recap message is intended for informational purposes only. The UTP Operating Plan does not recognize an official NBBO closing value at this time.

The Session Close Recap Message is comprised of two sections. The label contains the National BBO at the market close. The attachment(s) reflects the UTP participant BBO quotation(s) at the market close.

Message Label:

Issue Symbol	National Best Bid Market Center	National Best Bid Price Denominator	National Best Bid Price	National Best Bid Size
11	1	1	10	7

Reserved	National Best Ask Market Center	National Best Ask Price Denominator	National Best Ask Price	National Best Ask Size
1	1	1	10	7

Currency	Special Condition	Number of Market Center Attachments
3	1	2

56 BYTES

Message Attachment(s):

Market Center (MC) ID	Bid Price Denominator	Bid Price	Bid Size	Ask Price Denominator
1	1	10	7	1

Ask Price	Ask Size
10	7

37 BYTES

Note: Effective with the September 24, 2007 enhancement, the National Bid Tick Indicator will be <space> filled for all NASDAQ-listed securities and rename the field as Reserved.

Field Occurrences**4.2.4 Market Center Trading Action***Category A – Type K*

This fixed format message will inform UTP data feed subscribers of when a UTP participant invokes or releases a market center-specific trading halt / trading pause for a NASDAQ-listed security. In contrast to the Cross SRO Trading Action (Category A – Type H) data format, the Market Center Trading Action (Category A – Type K) message impacts trading activity only for the UTP participant identified in the Market Center (MC) ID field.

Other UTP participants may continue to quote and trade the issue as normal. Because the issue remains active on other markets, it is incumbent on the UTP participant sending the Market Center Trading Action message to request the SIP to do a quote wipeout or to mark any quotation data that it submits to the SIP with a non-NBBO eligible quotation condition value during a market center-specific trading halt / trading pause.

Issue Symbol	Action	Action Date/Time	Market Center (MC) ID
11	1	7	1

20 BYTES

4.2.5 Issue Symbol Directory Message*Category A – Type B*

The Issue Symbol Directory message provides basic company and trading information for NASDAQ-listed securities. Each Issue Symbol Directory message shall consist of the following data fields:

Issue Symbol	Old Issue Symbol	Issue Name	Issue Type	Market Category
11	11	30	1	1

Authenticity	Short Sale Threshold Indicator	Round Lot Size	Financial Status Indicator
1	1	5	1

62 Bytes

Field Occurrences**4.2.6 Regulation SHO Short Sale Price Test Restricted Indicator***Category A – Type V*

The Securities and Exchange Commission (SEC) implemented changes to Rule 201 of the Regulation SHO (Reg SHO). For details, please refer to [SEC Release Number 34-61595](#).

In association with the Reg SHO rule change, the UTP SIP will introduce a Reg SHO Short Sale Price Test Restricted Indicator. As part of the pre-opening spin process, NASDAQ, as the primary listing market, will generate Reg SHO Short Sale Price Test Restricted Indicator messages indicating the Rule 201 status for all NASDAQ-listed securities. NASDAQ will also send the Reg SHO Short Sale Price Test Restricted Indicator message in the event of an intraday status change.

Each Reg SHO Short Sale Price Test Restricted Indicator message shall consist of the following data fields:

Issue Symbol	Reg SHO Action
11	1

12 BYTES

4.2.7 Limit Up-Limit Down Price Band Message*Category A - Type P*

The Securities and Exchange Commission (SEC) is in the process of adopting a Plan, to be implemented in two phases, to provide for a market-wide Limit Up–Limit Down (LULD) mechanism intended to address extraordinary market volatility in NMS Stocks. The new LULD procedures are designed to prevent trades in individual NMS Stocks from occurring outside of specified Upper and Lower Limit Price Bands.

This fixed format message will be used to inform subscribers of the price band in affect for the issue.

Issue Symbol	LULD Price Band Indicator	LULD Price Band Effective Time	Price Denominator	Limit Down Price	Price Denominator	Limit Up Price
11	1	9	1	10	1	10

43 BYTES

Field Occurrences**4.2.8 Market Wide Circuit Breaker Decline Level Message***Category A - Type C*

A Market Wide Circuit Breaker (MWCB) Level message will inform participants and the UTP data recipients what the daily MWCB breach points are set to for the current trading day.

The MWCB Levels will generally remain in effect for the remainder of the current trading day and will be reset each trading day based on the prior day's closing value of the S&P 500 index. However, there can be situations where the breach levels were set due to erroneous activity. In this case the breach levels may reset and disseminate the MWCB breach levels again. Participants and UTP data recipients should process and use the most recently disseminated levels for that trading day.

MWCB Denominator	MWCB Level 1	Reserved	MWCB Level 2	Reserved	MWCB Level 3	Reserved
1	12	3	12	3	12	3

46 Bytes

4.2.9 Market Wide Circuit Breaker Status message*Category A - Type D*

A Market Wide Circuit Breaker (MWCB) Status message will inform participants and the UTP data recipients when a MWCB has breached one of the established levels.

The MWCB Status message will be generated **once** for each level if the S&P 500 declines past the established breaker decline level for the trading day.

MWCB Status Level Indicator	Reserved
1	3

4 Bytes

4.3 Control Messages

Control messages consist of a message header only. For processing information, please refer to Section 9 of this document.

The UTP Plan Quotation Data Feed (UQDF)

Field Occurrences

5.0 Field Occurrences Within Messages

This table provides the Message Category and Message Type for the UQDF format for each message field. Please note that the following abbreviations will be used to identify message appendages or attachments:

SF = Short Form National BBO Appendage to UTP Participant BBO Quote

LF = Long Form National BBO Appendage to UTP Participant BBO Quote

MC = Market Center Attachment to Session Close Recap

ADF = FINRA ADF MPID Appendage to UTP Participant BBO Quote

Field Name	Message Category	Message Type
A		
Action	A	H
	A	K
Action Date/Time	A	H
	A	K
Ask ADF MPID	Q	E (ADF)
	Q	F (ADF)
Ask Price Denominator	Q	E, F
	A	R (MC)
Ask Price (Short Form)	Q	E
Ask Price (Long Form)	Q	F
	A	R (MC)
Ask Size (Short Form)	Q	E
Ask Size (Long Form)	Q	F
	A	R (MC)
Authenticity	A	B
B		
Bid ADF MPID	Q	E (ADF)
	Q	F (ADF)
Bid Price Denominator	Q	E, F
	A	R (MC)
Bid Price (Short Form)	Q	E
Bid Price (Long Form)	Q	F
	A	R (MC)
Bid Size (Short Form)	Q	E
Bid Size (Long Form)	Q	F
	A	R (MC)
C		
Currency	Q	F
	Q	E, F (LF)
	A	R
F		
Financial Status Indicator	A	B

The UTP Plan Quotation Data Feed (UQDF)

Field Occurrences

Field Name	Message Category	Message Type
I		
Issue Name	A	B
Issue Symbol	Q	E, F
	A	B, P, R, H, K, V
Issue Type	A	B
L		
Limit Down Price	A	P
Limit Up Price	A	P
LULD Price Band Effective Time	A	P
LULD Price Band Indicator	A	P
LULD BBO Indicator	Q	E, F
LULD NBBO Indicator	Q	E, F
M		
Market Tier	A	B
Market Center (MC) ID	A	R (MC)
	A	K
Market Wide Circuit Breaker (MWCB) Level 1, 2 or 3	A	C
MWCB Status Indicator	A	D
MWCB Denominator	A	C
N		
National Best Ask Market Center	Q	E, F (SF & LF)
	A	R
National Best Ask Price Denominator	Q	E, F (SF & LF)
	A	R
National Best Ask Price (Short Form)	Q	E, F (SF)
National Best Ask Price (Long Form)	Q	E, F (LF)
	A	R
National Best Ask Size (Short Form)	Q	E, F (SF)
National Best Ask Size (Long Form)	Q	E, F (LF)
	A	R
National BBO Appendage Indicator	Q	E, F
National Best Bid Market Center	Q	E, F (SF & LF)
	A	R
National Best Bid Price Denominator	Q	E, F (SF & LF)
	A	R
National Best Bid Price (Short Form)	Q	E, F (SF)
National Best Bid Price (Long Form)	Q	E, F (LF)
	A	R
National Best Bid Size (Short Form)	Q	E, F (SF)
National Best Bid Size (Long Form)	Q	E, F (LF)
	A	R
National BBO Quote Condition	Q	E, F (SF & LF)

The UTP Plan Quotation Data Feed (UQDF)

Field Occurrences

Field Name	Message Category	Message Type
National Bid Tick Indicator	Q A	E, F (SF & LF) R
Number of Market Center Attachments	A	R
O		
Old Issue Symbol	A	B
P		
Price Denominator	A	P
Q		
Quote Condition	Q	E, F
R		
Reason Code	A	H
Reg SHO Action	A	V
Reserved	Q A	E, F C, D
Retail Interest Indicator	Q	F
Round Lot Size	A	B
S		
Special Condition	A	R
Short Sale Threshold Indicator	A	B
SIP Generated Update	Q	E, F

Field Descriptions

6.0 Field Descriptions

Note: Unless otherwise noted, all alphabetic or alphanumeric fields will be left justified and space-filled. All numeric fields will be right justified and zero-filled.

A

Action

Category A – Type H; Category A – Type K

1 byte, Alphanumeric. The Action is used to indicate the current trading status for the stated issue.

As part of the new NASDAQ Market Center IPO opening process, the SIP will redefine the "T" action code to denote a trading resumption for the UTP market centers. For more information on how Trading Halt messages will be disseminated under the proposed NASDAQ rule filing, please refer to section 8.2 of this document.

Code	Value
H	Trading Halt
Q	Quotation Resumption
T	Trading Resumption – UTP's
P	Volatility Trading Pause

Action Date/Time

Category A – Type H; Category A – Type K

7 bytes, Alphanumeric (including special characters). The Action Date/Time field will reflect the time of the most recent attribute change (action or reason code). The Action Date/Time is stated in the following format:

Date Year	Date Month	Date Day	Time Hour	Time Minute	Time Second
2	1	1	1	1	1

Date Year: The year the transaction occurred. This two-byte field will be stated in numeric format, with possible values 00 to 99.

Date Month: The month the transaction occurred. This one byte field is stated in ASCII text format. The numeric month value will be converted into a single ASCII character based on the Date/Time translation table.

Date Day: The day of the month the transaction occurred. This one byte field is stated in ASCII text format. The day value will be converted into a single ASCII character based on the Date/Time translation table.

Time Hour: The hour of the day the transaction occurred in military time. This one byte field is stated in ASCII text format. The hour value will be converted into a single ASCII character based on the Date/Time translation table.

Field Descriptions

Time Minute: The minute of the hour the transaction occurred. This one byte field is stated in ASCII text format. The minute value will be converted into a single ASCII character based on the Date/Time translation table.

Time Second: The second of the minute the transaction occurred. This one byte field is stated in ASCII text format. The second value will be converted into a single ASCII character based on the Date/Time translation table.

Note: The Date/Time translation table is located in Appendix F of this document.

Ask ADF MPID

ADF Attachment to Category Q – Types E,F

4 bytes, Alphanumeric. This alphanumeric field indicates the single FINRA Market Participant that is responsible for generating the best ask and size portion of their BBO.

Ask Price Denominator

Category Q – Type E; Category Q – Type F; Attachment(s) to Category A – Type R;

1 byte, Alphanumeric. This field denotes the whole dollar and decimal digit composition of the Ask Price field. **Refer to Appendix A for associated values.**

Ask Price (Short-Form)

Category Q – Type E

6 bytes, Numeric. The Ask price is the lowest price that a Market Center is willing to sell a security for at a given time. The Ask price is represented in a combination of whole dollar and decimal digits the Ask Price Denominator field should be used to determine how to process this field.

Ask Price (Long-Form)

Category Q – Type F; Attachment(s) to Category A – Type R

10 bytes, Numeric. The Ask price is the lowest price that a Market Center is willing to sell a security for at any given time. The Ask price is represented in a combination of whole dollar and decimal digits; the Ask Price Denominator field should be used to determine how to process this field.

Ask Size (Short-Form)

Category Q – Type E

2 bytes, Numeric. The Ask Size represents the amount of shares available at the Market Center's Ask Price in a given security. It will be represented in round lots.

Ask Size (Long-Form)

Category Q – Type F; Attachment(s) to Category A – Type R

7 bytes, Numeric. The Ask Size represents the amount of shares available at the Market Center's Ask Price in a given security. It will be represented in round lots.

Field Descriptions

Authenticity

Category A – Type Q

1 byte, Alphanumeric. The field denotes if an issue or quoting participant record is set-up in NASDAQ systems in a live/production, test, or demo state. Please note that firms should only show live issues and quoting participants on public quotation displays. The associated values are as follows:

Code	Value
P	Live/Production
T	Test
D	Demo
X	Deleted

B

Bid ADF MPID

ADF Attachment to Category Q – Types E,F

4 bytes, Alphanumeric. This alphanumeric field indicates the single FINRA Market Participant that is responsible for generating the best bid and size portion of their BBO.

Bid Price Denominator

Category Q – Type E; Category Q – Type F

1 byte, Alphanumeric. This field denotes the whole dollar and decimal digit composition of the Bid Price field. **Refer to Appendix A for associated values.**

Bid Price (Short-Form)

Category Q – Type E

6 bytes, Numeric. The Bid Price is the highest price that a Market Center is willing to buy a security for at any given time. The Bid Price is represented in a combination of whole dollar and decimal digits. The Bid Price Denominator field should be used to determine how to process this field.

Bid Price (Long-Form)

Category Q – Type F; Attachment(s) to Category A – Type R

10 bytes, Numeric. The Bid Price is the highest price that a Market Center is willing to buy a security for at any given time. The Bid Price is represented in a combination of whole dollar and decimal digits. The Bid Price Denominator field should be used to determine how to process this field.

Bid Size (Short-Form)

Category Q – Type E

2 bytes, Numeric. The Bid Size represents the amount of shares available for the Market Center's Bid Price in a given security. It will be represented in round lots.

Field Descriptions

Bid Size (Long-Form)

Category Q – Type F; Attachment(s) to Category A – Type R

7 bytes, Numeric. The Bid Size represents the amount of shares available for the Market Center's Bid Price in a given security. It will be represented in round lots.

C

Currency

Category Q – Type F; Long Form Appendage to Category Q – Types E, F; Category A – Type R;

3 bytes, Alphanumeric. This field defines the currency of an issue in ISO Currency codes. The current value is as follows:

Code	Value
USD	US Dollars

E

Financial Status Indicator

Category A – Type B

1 byte, Alphanumeric. This field denotes the current financial status of the issuer. The allowable values are as follows:

Code	Value
C	Creations Suspended: ETP Issuer has suspended the creations or redemption units
D	Deficient: Issuer Failed to Meet NASDAQ Continued Listing Requirements
E	Delinquent: Issuer Missed Regulatory Filing Deadline
Q	Bankrupt: Issuer Has Filed for Bankruptcy
N	Normal (Default): Issuer Is NOT Deficient, Delinquent, or Bankrupt.
G	Deficient and Bankrupt
H	Deficient and Delinquent
J	Delinquent and Bankrupt
K	Deficient, Delinquent, and Bankrupt

Notes: External Market Data Distributors must provide the Financial Status Indicator field for NASDAQ-listed securities to their customer displays. Once the Financial Status Indicator field is in place, NASDAQ plans to discontinue the use of fifth character symbol suffixes for delinquent or bankrupt issues.

FINRA ADF MPID Appendage Indicator

Category Q – Types E, F

1 byte, Alphanumeric. The FINRA ADF MPID Appendage Indicator indicates the type of appendage to follow. If no appendage is attached, this field indicates the reason. The associated values are as follows:

Code	Value
0	No ADF MPID changes – Current ADF quote does not affect the FINRA MPID. Vendors should continue to show the existing FINRA MPID(s). No appendage required.

The UTP Plan Quotation Data Feed (UQDF)

Field Descriptions

Code	Value
1	No ADF MPID exists – There is no calculation of the FINRA MPID(s)'s. Vendors should show the FINRA MPID fields as blank. No appendage is required.
2	ADF MPID(s) attached - A new FINRA MPID was generated and the new information is contained in the attached appendage.
<space>	Not Applicable – Quotation originates from a UTP participant other than the FINRA. Vendors should continue to show the existing FINRA MPID(s). No appendage required.

Issue Name

Category A – Type B

30 bytes, Alphanumeric. This field denotes the firm name for the issue in the NASDAQ system. Please note that NASDAQ may need to abbreviate name due to the thirty-byte limitation.

Issue Symbol (Short-Form)

Category Q – Type E

5 bytes, Alphanumeric. This field indicates the security identifier assigned by NASDAQ for a given issue. To download the NASDAQ symbol directory, please visit the NASDAQ Trader web site at <http://www.nasdaqtrader.com/Trader.aspx?id=symbollookup>. To access the list of security additions, deletions, or changes for NASDAQ-listed securities, please use the NASDAQ Equities Daily List available at <http://www.nasdaqtrader.com/Trader.aspx?id=DailyListPD>.

Issue Symbol (Long-Form)

Category Q – Type F; Category A – Type P; Category A – Type B; Category A – Type R; Category A – Type H; Category A – Type K; Category A – Type V

11 bytes, Alphanumeric. This field indicates the security identifier assigned by NASDAQ for a given issue.

Issue Type

Category A – Type B

1 byte, Alphanumeric. This field identifies the security class for the issue as assigned by NASDAQ. The associated values are as follows:

Code	Value
A	American Depositary Receipt
B	Bond
C	Common Shares
D	Bond Derivative
E	Equity Derivative
F	Depositary Receipt
G	Corporate Bond
L	Limited Partnership
M	Miscellaneous
N	Note
O	Ordinary Shares

Code	Value
P	Preferred Shares
R	Rights
S	Shares of Beneficial Interest
T	Convertible Debenture
U	Unit
V	Units of Beneficial Interest
W	Warrant
X	Index Warrant
Y	Put Warrant
Z	Unclassified

L

Field Descriptions**LULD BBO Indicator**

Category Q – Types E, F

1 byte, alphanumeric. The LULD BBO Indicator is used to describe whether or not the participant quotation is executable within the context of the price band for the issue.

Value	State
<space>	Limit Up Limit Down Not applicable
A	Bid Price above Upper Limit Price Band – Bid is Non-Executable
B	Ask Price below Lower Limit Price Band – Ask is Non-Executable
C	Bid and Ask outside price band. Not executable

LULD National BBO Indicator

Category Q – Types E, F

1 byte, alphanumeric. The National LULD Indicator is used to describe the limit state of the National Best Bid and Offer with respect to the price band for the issue.

Code	Value
<space>	Limit Up-Limit Down Not Applicable
A	National Best Bid and National Best Ask are Executable
B	National Best Bid below Lower Limit Price Band – National Best Bid is Non-Executable
C	National Best Ask above Upper Limit Price Band – National Best Ask is Non-Executable
D	National Best Bid below Lower Limit Price Band and National Best Ask above Upper Limit Price Band – National Best Bid and National Best Ask are Non-Executable
E	National Best Bid equals Upper Limit Price Band – National Best Bid is in Limit State
F	National Best Offer equals Lower Limit Price Band – National Best Ask is in Limit State
G	National Best Bid equals Upper Limit Price Band – National Best Bid is in Limit State and National Best Ask above Upper Limit Price Band – National Best Ask is Non-Executable
H	National Best Ask equals Lower Limit Price Band – National Best Ask is in Limit State and National Best Bid below Lower Limit Price Band – National Best Bid is Non-Executable
I	National Best Bid equals Upper Limit Price Band and National Best Ask equals Lower Limit Price Band *crossed not in limit state

LULD Price Band Indicator

Category A – Type P

1 byte, Alphanumeric. The LULD Price Band Indicator denotes the event that initiated the price band message being disseminated.

Code	Value
A	Opening Update
B	Intra-Day Update
C	Restated Value
D	Suspended during trading halt or trading pause
E	Re-Opening Update
F	Outside price band rule hours
<space>	None provided

Field Descriptions

LULD Price Band Effective Time

Category A – Type P

9 bytes, numeric field. The LULD Price Band Effective Time field denotes the military time (to the nearest millisecond) that the Price Band originally became effective. The time format is HHMMSSCC.

Limit Down Price

Category A – Type P

10 bytes, numeric. The Limit Down Price represents the lower boundary of the price range for executable quotes. A Limit State occurs when the National Best Ask Price is equal to the Limit Down Price.

Limit Up Price

Category A – Type P

10 bytes, numeric. The Limit Up Price represents the upper boundary of the price range for executable quotes. A Limit State occurs when the National Best Bid Price is equal to the Limit Up Price.

M

Market Tier

Category A – Type B

1 byte, Alphanumeric. This field denotes the listing market classification for the given security. The associated values are as follows:

Current Values:

Code	Value
Q	NASDAQ Global Select Market
G	NASDAQ Global Market
S	NASDAQ Capital Market

Market Center ID

Category A – Type K; Attachments to Category A – Type R

1 byte, Alphanumeric. This field indicates the UTP participant for which the Closing Quote Recap appendage was generated or the UTP participant requesting a market center trading action. The associated values are as follows:

Code	Value
A	NYSE MKT
B	NASDAQ OMX BX
C	National Stock Exchange
D	FINRA ADF
I	International Securities Exchange

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J	EDGA Exchange, Inc
K	EDGX Exchange, Inc
M	Chicago Stock Exchange
N	NYSE Euronext
P	NYSE Arca Exchange
Q	NASDAQ OMX
W	Chicago Board Options Exchange
X	NASDAQ OMX PHLX
Y	BATS Y-Exchange, Inc
Z	BATS Exchange Inc

Market Wide Circuit Breaker Status Level Indicator

Category A – Type D

1 byte, Alphanumeric, including special characters. This field indicates the MWCB level that has been breached. The associated values are as follows:

Code	Value
1	Market Wide Circuit Breaker Decline Level 1 Breached (7% decline)
2	Market Wide Circuit Breaker Decline Level 2 Breached (13% decline)
3	Market Wide Circuit Breaker Decline Level 3 Breached (20% decline)

Market Wide Circuit Breaker Level 1, Level 2 and Level 3 Values

Category A – Type C

12 bytes, Numeric. The MWCB level 1, level 2 and level 3 value identifies the daily established decline levels breached and is represented in a combination of whole dollar and decimal digits. The MWCB Denominator field should be used to determine how to process this field.

Market Wide Circuit Breaker Denominator

Category A – Type C

1 byte, alphanumeric. This field denotes the whole dollar and decimal digit composition of a Price field. MWCB Denominator field will follow a slightly different format. **Please refer to Appendix A1 for associated values.**

Field Descriptions

N

National Best Ask Market Center (MC)

Appendage to Category Q – Types E,F; Category A – Type R

1 byte, Alphanumeric. This field indicates the Market Center responsible for the National Best (lowest) Ask price. If there is no National BBO at the market close, this field will be blank in the Session Close Recap Message (Category A – Type R). The associated values are as follows:

Code	Value
A	NYSE MKT
B	NASDAQ OMX BX
C	National Stock Exchange
D	FINRA ADF
I	International Securities Exchange
J	EDGA Exchange, Inc
K	EDGX Exchange, Inc
M	Chicago Stock Exchange
N	NYSE Euronext
P	NYSE Arca Exchange
Q	NASDAQ OMX
W	Chicago Board Options Exchange
X	NASDAQ OMX PHLX
Y	BATS Y-Exchange, Inc
Z	BATS Exchange Inc
<space>	Not Applicable

National Best Ask Price Denominator

Appendages to Category Q – Types E,F; Category A – Type R

1 byte, Alphanumeric. This field denotes the whole dollar and decimal digit composition of the National Best Ask Price field. **Refer to Appendix A for associated values.**

National Best Ask Price (Short-Form)

Short Form Appendage to Category Q – Types E,F

6 bytes, Numeric. This field reflects the lowest ask price that any Market Center is willing to sell a security for at any given time. The National Best Ask Price is represented in a combination of whole dollar and decimal digits. The National Best Ask Price Denominator field should be used to determine how to process this field.

National Best Ask Price (Long-Form)

Long Form Appendage to Category Q – Types E,F; Category A – Type R

10 bytes, Numeric. This field reflects the lowest ask price that any Market Center is willing to sell a security for at any given time. The National Best Ask Price is represented in a

Field Descriptions

combination of whole dollar and decimal digits. The National Best Ask Price Denominator field should be used to determine how to process this field.

National Best Ask Size (Short-Form)

Short Form Appendage to Category Q – Types E,F

2 bytes, Numeric. The National Best Ask Size represents the amount of shares available at the National Best Market Center's Ask Price in a given security. It will be represented in round lots.

National Best Ask Size (Long-Form)

Long Form Appendage to Category Q – Types E,F; Category A – Type R

7 bytes, Numeric. The National Best Ask Size represents the amount of shares available at the National Best Market Center's Ask Price in a given security. It will be represented in round lots.

National BBO Appendage Indicator

Category Q – Type E; Category Q – Type F

1 byte, Alphanumeric. The National BBO Appendage Indicator indicates the type of appendage to follow. If no appendage is attached, this field indicates the reason. The associated values are as follows:

Code	Value
0	No National BBO Change – The UTP participant's quote does not affect the National BBO. Vendors should continue to show the existing National BBO. No appendage is required.
1	No National BBO Can be Calculated – The National BBO cannot be calculated therefore vendors should show National BBO fields as blank. No appendage is required.
2	Short Form National BBO Appendage Attached – A new National BBO was generated as a result of the UTP participant's quote update and the new National BBO information is contained in the attached short form appendage. See criteria for the short form appendage below.
3	Long Form National BBO Appendage Attached – A new National BBO was generated as a result of the UTP participant's quote update and the new information is contained in the attached long form appendage.
4	Quote Contains All National BBO Information – Current UTP participant's quote is itself the National BBO. Vendors should update National BBO to reflect this new quote and single market center. (National Best Bid Market Center and National Best Ask Market Center fields should be updated to reflect the Market Center Originator ID value in the UQDF message header.) No appendage is required.

Notes: To economize on bandwidth, the simplest form of the National BBO Appendage will be used whenever possible.

The National BBO should not be used alone to determine the current trading status for an issue.

Field Descriptions

National Best Bid Market Center (MC)

Appendages to Category Q – Type E,F; Category A – Type R

1 byte, Alphanumeric. This field indicates the Market Center responsible for the National Best (highest) Bid price. **Refer to National Best Ask Market Center definition for associated values.**

National Best Bid Price Denominator

Appendages to Category Q – Types E,F; Category A – Type R

1 byte, Alphanumeric. This field denotes the whole dollar and decimal digit composition of the National Best Bid Price field. **Refer to Appendix A for associated values.**

National Best Bid Price (Short-Form)

Short Form Appendage to Category Q – Types E,F

6 bytes, Numeric. The National Best Bid Price represents the highest price that any Market Center is willing to buy a security for at any given time. The National Best Bid Price is represented in a combination of whole dollar and decimal digits; the National Best Bid Price Denominator field should be used to determine how to process this field.

National Best Bid Price (Long-Form)

Long Form Appendage to Category Q – Types E,F; Category A – Type R

10 bytes, Numeric. The National Best Bid Price represents the highest price that any Market Center is willing to buy a security for at any given time. The National Best Bid Price is represented in a combination of whole dollar and decimal digits. The National Best Bid Price Denominator field should be used to determine how to process this field.

National Best Bid Size (Short-Form)

Short Form Appendage to Category Q – Types E,F

2 bytes, Numeric. The National Best Bid size represents the amount of shares available at the National Best Market Center's Bid Price in a given security. It will be represented in round lots.

National Best Bid Size (Long-Form)

Long Form Appendage to Category Q – Types E,F; Category A – Type R

7 bytes, Numeric. The National Best Bid size represents the amount of shares available at the National Best Market Center's Bid Price in a given security. It will be represented in round lots.

Number of Market Center Attachments

Category A – Type R

2 bytes, Alphanumeric. This field indicates the number of market center attachments associated with the Session Close Recap message. Possible values 00 to 20.

Field Descriptions

O

Old Issue Symbol – New

Category A – Type B

11 bytes, Alphanumeric. This field denotes the NASDAQ issue symbol previously assigned to the associated issue. This field will be populated only on the day that a security symbol changes. Otherwise, this field will be space filled.

P

Price Denominator

Category A – Type P

1 byte, alphanumeric. This field denotes the whole dollar and decimal digit composition of a Price field. **Refer to Appendix A for associated values.**

Q

Quote Condition

Category Q – Type E; Category Q – Type F; Appendages to Category Q – Types E,F

1 byte, Alphanumeric. This field defines the condition applicable to the quote. For descriptions of these conditions, refer to Appendix B – Glossary of Terms.

At the market center level, the allowable values are as follows:

Code	Value	Code	Value
A	Manual Ask, automated Bid *	O	Opening quote automated *
B	Manual Bid, automated Ask *	R	Regular, two-sided open quote automated *
F	Fast trading	U	Manual Bid and Ask (non-firm)
H	Manual Bid and Ask *	Y	Y- automated bid, no offer; or automated offer, no bid (one-sided automated) *
I	Order imbalance	X	Order influx
L	Closed quote	Z	No open/no resume
N	Non-firm quote		

At the National BBO level the following definitions will be supported. These values are intended to indicate the status of the NBBO as being either open or closed and are **not** an indication of an automatic status.

Code	Value
L	NBBO Closed
R	NBBO Regular, two-sided open
Y	NBBO Regular, one-sided open

Note: Firms should not use the Quote Condition field alone to determine trading status for a given issue. Firms must process the Trading Action administrative message for trading halt, trading pause, quotation resumption, and trading resumption status changes for NASDAQ-listed securities.

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Field Descriptions

R

Reason Code

Category A – Type H

6 bytes, Alphanumeric. This alphanumeric field indicates the reason for the current trading action status for an issue at the cross SRO level. The allowable values are as follows:

Code	Value
T1	Halt News Pending
T2	Halt News Dissemination
T5	Single Stock Trading Pause In Affect
T6	Regulatory Halt Extraordinary Market Activity
T8	Halt ETF
T12	Trading Halted; For information requested by NASDAQ
H4	Halt Non Compliance
H9	Halt Filings Not Current
H10	Halt SEC Trading Suspension
H11	Halt Regulatory Concern
O1	Operations Halt, Contact Market Operations
IPO1	IPO Issue not yet Trading
M1	Corporate Action
M2	Quotation Not Available
LU DP	Volatility Trading Pause
LU DS	Volatility Trading Pause – Straddle Condition
MWC1	Market Wide Circuit Breaker Halt – Level 1
MWC2	Market Wide Circuit Breaker Halt – Level 2
MWC3	Market Wide Circuit Breaker Halt – Level 3
MWC0	Market Wide Circuit Breaker Halt – Carry over from previous day
T3	News and Resumption Times
T7	Single Stock Trading Pause/Quotation-Only Period
R4	Qualifications Issues Reviewed/Resolved; Quotations/Trading to Resume
R9	Filing Requirements Satisfied/Resolved; Quotations/Trading To Resume
C3	Issuer News Not Forthcoming; Quotations/Trading To Resume
C4	Qualifications Halt ended; maint. req. met; Resume
C9	Qualifications Halt Concluded; Filings Met; Quotes/Trades To Resume
C11	Trade Halt Concluded By Other Regulatory Auth.; Quotes/Trades Resume
R1	New Issue Available
R2	Issue Available
IPOQ	IPO security released for quotation
IPOE	IPO security – positioning window extension
MWCQ	Market Wide Circuit Breaker Resumption
Space	Reason Not Available

Please note that NASDAQ would generate a new Cross SRO Trading Action message whenever one of the attributes in the Trading Action message was to change. The Action Date/Time field within the Trading Action message would reflect the time of the most recent data element change.

Notes: News Codes H4 and H9 will ordinarily be activated in situations where an SEC trading suspension is terminated and a NASDAQ trading halt is terminated, but the issuer in either instance is not in compliance with specific NASDAQ requirements in NASD rule 4120 and its interpretations. H4 and H9 codes indicate a qualifications halt,

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Field Descriptions

and quotations may not be displayed until the issuer meets NASDAQ requirements or is given a temporary exception.

Reg SHO Action

Category A – Type V

1 byte, Numeric. This field indicates the Reg SHO short sale price test status for a NASDAQ-listed issue at the time of dissemination. The allowable values are:

Code	Value
0	No price test in effect
1	Reg SHO Short Sale Price Test Restriction in effect due to an intra-day price drop in security
2	Reg SHO Short Sale Price Test Restriction remains in effect

Reserved:

Category A – Types R, C, D; Category Q – Type E; Category Q – Type F; Appendages to Category Q – Types E, F

1 byte, Alphanumeric. Space filled. This field is reserved for future use.

Retail Interest Indicator:

Category Q – Type F

1 byte, Alphanumeric. A Retail Interest indication of interest on the Bid, Ask or both the Bid and Ask will be identified as follows:

Code	Value
<space>	Retail Interest Not Applicable
A	Retail Interest on Bid Quote
B	Retail Interest on Ask Quote
C	Retail Interest on both Bid and Ask Quotes

Round Lot Size

Category A – Type B

5 bytes, Numeric. This field indicates the number of shares that make up a round lot for the given security. Allowable values are 00001 to 99999. For most NASDAQ issues, the round lot size is 100 shares.

S

Short Sale Threshold Indicator

Category A – Type B

1 byte, Alphanumeric. This field indicates if a security is subject to mandatory close-out of short sales under SEC Rule 203(b)(3). The allowable values are as follows:

Code	Value
Y	Issue is restricted under SEC Rule 203(b)(3)
N	Issue is not restricted
<space>	Threshold Indicator not available

Field Descriptions

SIP Generated Update

Category Q – Types E, F

1 byte, alphanumeric. The SIP Generated Update identifies the source of transaction used to generate this message.

Value	Description
<space>	Transaction originated from the market participant identified in the Market Center Originator ID field of the Message Header (refer to section 3.6)
E	This message is the result of a SIP-generated transaction (e.g. price band change)

Special Condition

Category A – Type R

1 byte, Alphanumeric. The Special Condition field indicates the reason why the 4 p.m. National BBO is not a two-sided quote. If the National BBO is a normal two-sided quote, the field will be left blank. The associated values are as follows:

Code	Value
O	One-sided National BBO at Market Close.
H	Trading Halt In Effect at Market Close.
M	No Eligible Market Participant Quotes in Issue at Market Close
Space	No special condition exists.

I

Text

Category A – Type A

Up to 300 characters, Alphanumeric. Free-form text is used to notify data feed subscribers of special situations.

Processing Guidelines

7.0 Quotation Processing Guidelines

The UQDF message formats are outlined in Section 4 of this document. The business rules for UQDF are as follows:

7.1 Vendor Display Rule

The US Securities and Exchange Commission (SEC) dictate how UTP data is to be displayed in its Vendor Display Rule (Rule 11Ac1-2, 17 CFR 240.11Ac1-2). For more information, please refer to the SEC website at <http://www.sec.gov>.

7.2 Hours of Operation

Current Hours: The hours of operation for the UTP Plan are 04:00 to 20:00. In order to handle pre-opening and post-closing processing, the SIP operational hours will be slightly longer. Please refer to Appendix C for the current UQDF Schedule of Transmissions.

The SIP may operate on a modified schedule on select holidays. In such an event, NASDAQ will publish a Vendor Alert with the modified schedule for the UTP data feed products on the NASDAQ Trader web site. Please note that each UTP market center has the right to set its own hours of operation.

7.3 Scope of Data

Under the UTP Plan, the SIP will process quotation and trade data from registered UTP participants for all NASDAQ listed securities only. The NASDAQ Issue Symbol Directory is available for download from the NASDAQ Trader website at <http://www.nasdaqtrader.com/Trader.aspx?id=symbollookup>.

NASDAQ handles security additions, deletions, and modifications as part of its normal overnight processing. UQDF subscribers should process the NASDAQ Daily List from the NASDAQ Trader website to ensure that they have the most up-to-date Issue Symbol Directory information. To access the Daily List, please refer to <http://www.nasdaqtrader.com/Trader.aspx?id=DailyListPD>.

7.4 Opening Process

Each UTP participant is required to refresh its quotations for NASDAQ Listed securities at the beginning of each business day. The SIP will open at 04:00 to handle pre-opening spins from UTP participants as necessary. Please note that it is the UTP participant's decision whether to provide a pre-opening spin or not.

7.5 Intra-Day Quote Processing

The U.S. market session runs from 09:30 to 16:00. During the US Session, all UTP participants are expected to submit quotation and trade data to the SIP. UTP participants may also elect to enter quotation data during the pre-market session (from 04:00 to 09:29:59) and post-market session 16:00 to 20:00.

Processing Guidelines

7.5.1 Market Center Originator ID

In UQDF message header, there is a one-character Market Center Originator ID field. This field will be used to identify the UTP participant that initiates the quotation, control, or administrative message. To date, the following Originator ID values have been assigned to UTP participants:

Originator ID Code	UTP Participant Name
A	NYSE MKT
B	NASDAQ OMX BX
C	National Stock Exchange
D	FINRA ADF
I	International Securities Exchange
J	EDGA Exchange, Inc
K	EDGX Exchange, Inc
M	Chicago Stock Exchange
N	NYSE Euronext
P	NYSE Arca Exchange
Q	NASDAQ OMX
W	Chicago Board Options Exchange
X	NASDAQ OMX PHLX
Y	BATS Y-Exchange, Inc
Z	BATS Exchange Inc

If the message is generated by the SIP system itself, the Originator ID will be "E".

Originator ID Code	UTP Participant Name
E	Market Independent (Generated by SIP)

7.5.2 Best Bid and Offer (BBO) Quotations

UTP participants are permitted, but not required, to enter BBO quotes for all NASDAQ Listed securities. If a UTP participant is active in an issue, it will submit intra-day quotation updates to the SIP for downstream dissemination. UTP participants may enter no-sided, one-sided, or two-sided quotations to the SIP for processing and dissemination. Please note that it is the responsibility of each UTP participant to validate the quality and integrity of its data prior to submission to the SIP.

7.5.2.1 Price

UTP participants submit quotations and trades in the following price format: \$\$\$\$\$\$.dddd (10 numeric bytes, with the first six characters representing the whole dollar amount of the price and the last four digits the decimal amount of the price).

To maximize the use of UQDF short form message formats, the SIP may remove any leading or trailing zeros from the UTP participant's bid and ask prices for outbound dissemination. The SIP will not, however, round or materially alter the bid or ask price itself. While the standard minimum price variation (MPV) for quotations in the US securities markets is pennies, it is the responsibility of the UTP participant to submit prices in the proper price

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format. UQDF subscribers should be prepared to handle all of the price denominators outlined in Appendix A of this document.

As noted above, UTP participants may submit no-sided or one-sided quotes to the SIP if it is allowed under their marketplace rules. To indicate that it has no position on one side of the market, the UTP participant will enter zero as the price and size on that side of the market.

7.5.2.2. Quote Condition

UTP participants are required to enter a Quote Condition as part of their inbound message to the SIP. The following Quote Conditions are supported for NASDAQ issues:

Code	Value
A	Manual Ask, automated Bid *
B	Manual Bid, automated Ask *
F	Fast trading
H	Manual Bid and Ask *
I	Order imbalance
L	Closed quote
N	Non-firm quote
O	Opening quote automated *
R	Regular, two-sided open quote automated *
U	Manual Bid and Ask (non-firm)
Y	Y- automated bid, no offer; or automated offer, no bid (one-sided automated) *
X	Order influx
Z	No open/no resume

The SIP will only use those UTP participant quotes with one of the quote conditions marked with an asterisk (*) in its National BBO calculation. For a definition of these values, please refer to Appendix B – The Glossary of Terms.

Note: When a quote update is received with zero priced bid and/or ask and a zero size bid and/or ask you should remove any previous values associated for the security and market center and consider that market center as being closed in the issue.

At the National BBO level the following definitions will be supported. These values are intended to indicate the status of the NBBO as being either open or closed and are **not** an indication of an automatic status.

Code	Value
L	NBBO Closed
R	NBBO Regular, two-sided open
Y	NBBO Regular, one-sided open

Note: Firms should not use the Quote Condition field alone to determine trading status for a given issue. Firms must process the Trading Action administrative message for trading halt, quotation resumption, and trading resumption status changes for NASDAQ-listed securities. For Trading Action processing rules please refer to section 8.2 of this document.

Processing Guidelines

7.5.3 Closing Process

During normal operations, UTP participants may close their quotes anytime. When the UTP participant closes its quote, it will send a quote update with the Quote Condition value of "L". Please note that the UQDF supports a separate administrative message called Session Close Recap as defined in Section 8.4.

7.5.4 National Best Bid and Offer (National BBO) Quotations

The National BBO represents the highest bid price and lowest ask price available from a UTP participant at the current time. The SIP will calculate the National Best Bid and Offer based on eligible quotes entered by the UTP participants.

7.5.4.1. Calculation Rules

As stated above, the National BBO represents the highest bid price and lowest ask price available from a UTP participant. If there are multiple UTP participants at the best price, the National BBO will reflect the UTP participant with the largest display size at the price. If there are multiple UTP participants at the best price and size, the National Best Bid or Ask Market Center will reflect the UTP participant with the earliest quote update time at the given price level. The SIP calculation will include only those UTP participants with a National BBO-eligible Quote Condition code.

7.5.4.2. National BBO Appendage Indicator

The National BBO will be disseminated as an appendage to the UTP Participant BBO Quote message. The National BBO Appendage Indicator is used to notify data feed subscribers how to update their quote display. The field values are as follows:

Code	Value
0	No National BBO Change – The UTP participant's quote does not affect the National BBO. Vendors should continue to show the existing National BBO. No appendage is required.
1	No National BBO Can be Calculated – The National BBO cannot be calculated therefore vendors should show National BBO fields as blank. No appendage is required.
2	Short Form National BBO Appendage Attached – A new National BBO was generated as a result of the UTP participant's quote update and the new National BBO information is contained in the attached short form appendage. See criteria for the short form appendage below.
3	Long Form National BBO Appendage Attached – A new National BBO was generated as a result of the UTP participant's quote update and the new information is contained in the attached long form appendage.
4	Quote Contains All National BBO Information – Current UTP participant's quote is itself the National BBO. Vendors should update National BBO to reflect this new quote and single market center. (National Best Bid Market Center and National Best Ask Market Center fields should be updated to reflect the Market Center Originator ID value in the UQDF message header.) No appendage is required.

Processing Guidelines

The following examples are used to demonstrate how the National BBO Appendage Indicator will be populated. For this illustration, the current quote display is as follows:

National BBO	19.98	Q	19.99	C	61 x 20
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Market Center	ID	Bid	Ask	Size
NASDAQ	Q	19.98	19.99	61 x 15
NYSE Arca	P	19.98	20.03	38 x 49
Chicago Stock Exchange	M	19.83	20.00	5 x 7
FINRA ADF	D	19.96	19.99	8 x 9
National Stock Exchange	C	19.98	19.99	26 x 20
NASDAQ OMX BX	B	19.74	20.19	5 x 5

Example 1: The NASDAQ OMX BX updates its quote; however, it is still priced away from the National BBO. The National BBO Appendage Indicator value would be "0" to indicate that market data vendors should continue to show the existing National BBO quote.

Example 2: A trading halt is instituted, so the SIP will zero out the quotations of all market centers. The National BBO Appendage Indicator value on these quotation update messages would be "1" to indicate that no National BBO exists. In this instance, market data vendors should remove the current National BBO value and show no quote.

Note: There are other situations in which the SIP is unable to calculate a National BBO. The SIP will use a separate Trading Action message to relay the halt status for an issue. For the accurate trading status, firms must also process this administrative message.

Example 3: The National Stock Exchange, which is at the National Best Offer, decrements its display size to 15 round lots on the ask side. Given the price and size, the National BBO can be disseminated via the short form format. In this instance, the National BBO Appendage Indicator value would be "2" to indicate that the short form appendage is attached. Market data vendors should update their display to reflect the new National BBO quote.

Example 4: NASDAQ, which is at the National Best Bid, increases its display size to 110 round lots on bid side. Given the size, the National BBO must be disseminated via the long form format. The National BBO Appendage Indicator would be "3" to indicate the long form appendage is attached. Market data vendors should update their display to reflect the new National BBO quote.

Example 5: NASDAQ, which is at the National BBO, increases its display size to 25 round lots on the ask side. With the new size, NASDAQ becomes the market center with the largest size at the ask price as well as bid price. If the issue were listed on the NASDAQ Capital Market, the National BBO Appendage Indicator would be "4" to indicate that the NASDAQ quote itself is the National BBO. In this instance, market data vendors should replace the current National BBO quote. The new National BBO quote should reflect the bid and ask information in the UTP Participant BBO quote message and the market center identifier of "Q" for NASDAQ.

Processing Guidelines

7.5.4.3. *FINRA ADF MPID Appendage Indicator*

Reg NMS requirements – the ADF must identify a single participant quotation for its best bid and size and/or a single participant quotation for its best offer and size. The FINRA ADF MPID's will be disseminated as an appendage to the UTP Participant BBO Quote message. The FINRA ADF MPID Appendage Indicator is used to notify data feed subscribers how to update their display. The field values are as follows:

Code	Value
0	No ADF MPID changes – Current ADF quote does not affect the FINRA MPID. Vendors should continue to show the existing FINRA MPID(s). No appendage required.
1	No ADF MPID exists – There is no calculation of the FINRA MPID(s)'s. Vendors should show the FINRA MPID fields as blank. No appendage is required.
2	ADF MPID(s) attached - A new FINRA MPID was generated and the new information is contained in the attached appendage.
<space>	Not Applicable – Quotation originates from a UTP participant other than the FINRA. Vendors should continue to show the existing FINRA MPID(s). No appendage required.

Processing Guidelines

8.0 Administrative Message Processing Guidelines

UQDF uses administrative messages to communicate intra-day trading halt information and end-of-day recap information for individual issues. In addition, UQDF supports a free-form text message for those items that do not lend themselves easily to a fixed format message format.

8.1 General Administrative Messages

The General Administrative Message (Category A – Type A) is a free form text message used to notify UQDF subscribers of special situations or trading conditions. The length of the Administrative Message is variable but cannot exceed a maximum of 300 characters. The General Administrative Message format may be generated by a UTP participant or by the SIP Operations Center on an as-needed basis.

Since the General Administrative Message is a flexible format message, it is up to the individual data feed subscriber to decide how to process these messages. Firms may wish to code their systems to generate a systems alert for data operations as manual processing of the General Administrative message may be required.

8.2 Cross SRO Trading Action Messages

NASDAQ, in its role as the listing market, may institute a trading halt or trading pause in an issue due to news dissemination or regulatory reasons, or to suspend trading in an issue due to listing qualification problems. Under the UTP plan, all market centers will observe and abide by the trading action of the listing market. NASDAQ will relay halt and suspension information to the SIP via a Cross SRO Trading Action administrative message (Category A – Type H).

Please note that the Cross SRO Trading Action message is supported for operational as well as regulatory halts in this document.

The Cross SRO Trading Action message contains the following fields:

- Issue Symbol
- Action
- Action Date/Time
- Reason Code

As defined in Section 6 of this document, there are three types of trading actions:

Code	Value
H	Trading Halt
Q	Quotation Resumption
T	Trading Resumption – UTP's
P	Volatility Trading Pause

Processing Guidelines

When a trading halt or trading pause is instituted, the listing market will send a Cross SRO Trading Action message with an Action field value of "H" to the UTP SIP and the reason code populated with the Halt Reason. Upon receipt of this message, the UTP SIP will zero out the BBO quotes of all UTP participants and suspend the calculation of the National BBO. Within the UTP Participant BBO Quote message, the National BBO Appendage Indicator will be set to "1" to indicate that no National BBO exists.

Please note that the UTP SIP will disseminate a Cross SRO Trading Action message whenever the Action and/or Reason value for an issue is updated. During a halt, the UTP SIP may update Reason value for an issue without changing the trading status for the issue.

The length of a trading halt or trading pause may vary from security to security. If a trading halt spans multiple days, the primary exchange will send a Cross SRO Trading Action message to the UTP SIP at the start of the business day.

When the listing market is ready to lift the halt, it will send another Cross SRO Trading Action with an Action of "Q" and quote resumption Reason. To ensure an orderly market, a quote-only window is provided for quoting participant to adjust their positions before trading resumes in the issue. During this positioning period, UTP participants may enter quotations in the issue. As UTP participants enter data, the UTP SIP will calculate a National BBO. During the positioning window, the National BBO should be considered to be indicative.

Once an issue can begin trading, the listing market will send another Cross SRO Trading Action message with an Action value of "T" to indicate that trading is now allowed in the issue and the reason code populated with the trade resumption Reason. Upon receipt of the trading resumption message, the UTP SIP will resume the calculation of the National BBO provided that there are active UTP participants in the issue.

NASDAQ, as a primary listing market, has the authority to declare a five-minute trading pause for an individual security that does not exit a Limit State within 15 seconds. To support this scenario, the UTP SIP is modifying the Trading Halt-Cross SRO message format to support a new "P" (Pause) action value as well as a new "LUDP" and "LUDS" reason codes.

8.3 Market Center Trading Action Messages

The UTP SIP supports a different message format to relay market center specific trading actions. For trading halts and trading pauses that impact a single UTP participant, the UTP SIP will generate the Market Center Trading Action (Category A – Type K) message format.

The Market Center Trading Action contains the following fields:

- Issue Symbol
- Action
- Action Date/Time
- Market Center

This message will only be disseminated when there is a market center specific halt / pause situation in an individual security that impacts trading activity only on the market center generating the action. Trading and quoting activity may continue in other market centers

When a Market Center Trading Action is instituted, the SIP will send a Market Center Trading Action message with an Action field value of "H" and the market center ID populated with

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the UTP participant requesting the action for their market place. If requested by the UTP participant, the SIP will zero out the UTP BBO quotes for the identified market center. If the UTP participant does not request a quote wipeout, it is incumbent on the market center to update its quotation to a non-NBBO eligible quotation condition as long as the halt / pause is in effect.

The length of a Market Center Trading Action will vary from security to security and from market to market. If the action spans multiple days, the market center must send a Market Center Trading Action message to the SIP at the start of each business day for which the issue is halted / paused on its market.

Market centers that utilize this function may observe a quotation only window or may simultaneously resume trading and quoting activity. To ensure consistency in messaging, that the SIP will always send two Market Center Trading Action Messages to release the issue. The first will contain an Action value of "Q" to denote quote resumption. Once an issue can begin trading, the market center will send another Market Center Trading Action message with an Action value of "T" to indicate that trading is now allowed in the issue.

8.4 Session Close Recap

At the request of the market data community, the UTP SIP generates a Session Close Recap message for NASDAQ-listed issues at the conclusion of the regular market session. The Session Close Recap administrative message (Category A – Type R) is intended for informational purposes only and reflects the National Best Bid and Offer quotation (and associated UTP participant quotes) at the time of the Session Close control event. The Session Close Recap message itself consists of two parts:

- The message label reflects the National BBO at the time of the Session Close control event
- The message attachments reflect the UTP market center best and offer quotations that were included in the National BBO snapshot calculation.

The UTP SIP generates a Session Close Recap message for each and every NASDAQ-listed issue. If there is no National BBO at the time of the Session Close Event, the National Best Bid Price, National Best Bid Size, National Best Ask Price, and National Best Ask Size fields will be populated with zeros; the National Best Bid Market Center and National Best Ask Market Centers fields will be left blank, and the Special Condition Indicator field will be populated with the reason.

It should be noted that the UTP Operating Plan does not recognize an official NBBO closing value at this time. It should also be noted that UTP participants may continue to enter real-time quotation data through 8:00 p.m., ET. Because the Session Close Recap data is generated by the UTP SIP (and not the individual UTP market center participants), the message contains the Market Center Originator ID code of "E" in the message header.

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8.5 Issue Symbol Directory

The UTP SIP will disseminate Issue Symbol Directory messages for all active issues in the NASDAQ market system at approximately 4:00 a.m. E.T.

Within the Issue Symbol Directory, NASDAQ will provide the following key data elements that redistributors should display to their end-users:

- **Short Sale Threshold Indicator:** As dictated by the SEC, NASDAQ provides this indicator to denote if a security is subject to mandatory close-out of short sales under Rule 203(b)(3). To help firms adhere to this rule, NASDAQ recommends that redistributors include this indicator on displays.
- **Financial Status Indicator:** This field was added to the Issue Symbol Directory message as part of the message streamlining release in May 2005. In the interest of investor protection, NASDAQ will provide an indicator to denote if an issuer is delinquent in its regulatory filings, is deficient (below continuing listing standards), and/or bankrupt. NASDAQ will require that all external distributors provide this indicator on their end user displays.

If at all possible, the SIP recommends that redistributors integrate these indicators into their single security quote montages. For more information on NASDAQ's display recommendations and requirements, please refer to the NASDAQ Data Policies section of the NASDAQ Trader website at:

<http://www.nasdaqtrader.com/content/AdministrationSupport/AgreementsData/datapolicies.pdf>

8.6 Regulation SHO Short Sale Price Test Restricted Indicator

In May 2010, the SEC adopted amendments to Reg SHO under the Securities Exchange Act of 1934. As outlined in Release Number 34-61595, the SEC is establishing a short sale-related circuit breaker that, if triggered, will impose a restriction on the prices at which securities may be sold short ("short sale price test" or "short sale price test restriction").

Under the amended rule, the SEC requires that the U.S. exchanges establish procedures to prevent the execution or display of a short sale order of a covered security at a price that is less than or equal to the current national best bid when the price of that security decreases by 10% or more from the prior day's adjusted closing price.

Once the price test restriction has been triggered, Rule 201 (also known as the Alternative Uptick Rule) would apply to short sale orders in that security for the remainder of the day as well as the following day.

In association with the SEC rule change, the UTP SIP will introduce a new Reg SHO Short Sale Price Test Restricted Indicator administrative message format on the UTP data feeds to indicate that an issue has breached the SEC Rule 201 short sale price test threshold. On the UTP data feeds, the Reg SHO Short Sale Price Test Restricted Indicator message will be identified as Message Category A, Message Type V. The Reg SHO Short Sale Price Test Restricted Indicator message will include Issue Symbol and Reg SHO Action.

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The defined values for the Reg SHO Action field will be as follows:

Reg SHO Action Code	Value
0	No Reg SHO Short Sale Price Test Restriction
1	Reg SHO Short Sale Price Test Restriction is in effect due to an intra-day price drop in security
2	Reg SHO Short Sale Price Test Restriction remains in effect

If the last price for a security falls by 10% or more from the adjusted prior day's NASDAQ Official Closing Price (NOCP) value, NASDAQ, as the primary market, will submit a Reg SHO Price Test Indicator message with a Reg SHO Action value of "1" (Short Sale Price Test Restriction In Effect Due to Intra-day Price Drop). Once disseminated, UTP participants will be prohibited by rule from executing or displaying any short sale orders priced less than or equal to the prevailing national best bid price. Under Rule 201, the short sale price test restriction will remain in effect for the remainder of the current trading day and for the next trading day.

Under the rules, NASDAQ reserves the right to reverse the Reg SHO Price Test Indicator if it determines that the original trigger was based on a trade transaction that was subsequently ruled to be clearly erroneous or on an improperly adjusted prior day's closing value. If NASDAQ is reversing the short sale price test restriction for an issue, it will generate a Reg SHO Action message with the Reg SHO Action value of "0" (No Reg SHO Short Sale Price Test Restriction) or "2" (Reg SHO Short Sale Price Test Remains In Effect) depending on the Reg SHO status of the NASDAQ-listed issue prior to the error.

Given that the short sale price test restriction spans multiple days, NASDAQ will disseminate Reg SHO Price Test Indicator messages for all NASDAQ-listed issues as part of its pre-opening processes on the UTP data feeds. In the spin, NASDAQ will indicate whether or not the issue is subject to the SEC Rule 201 short sale price test based on the prior day's trading activity. For those issues for which the Rule 201 restriction remains in effect, the Reg SHO Action value will be "2". For all other issues, the Reg SHO Action value will be "0".

8.7 Retail Interest Indicator

Pending the approval of the Securities and Exchange Commission (SEC), NYSE Euronext plans to introduce a new Retail Liquidity Program for its NYSE and NYSE MKT trading venues. For details, refer to the NYSE Euronext rule filing located online at <http://www.sec.gov/rules/sro/nyse/2011/34-65672.pdf>.

In support of the proposed rule, the UTP SIP will be modifying the UTP Participant BBO Long Form Quotation message to add a Retail Interest Indicator field. The allowable values for the new Retail Interest Indicator field will be:

Code	Value
<space>	Retail Interest Not Applicable
A	Retail Interest on Bid Quote
B	Retail Interest on Ask Quote
C	Retail Interest on both Bid and Ask Quotes

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8.8 New Limit Up-Limit Down Functionality

The Securities and Exchange Commission (SEC) has approved a pilot plan (<http://www.sec.gov/rules/sro/nms/2012/34-67091.pdf>), to address extraordinary market volatility in NMS Stocks by establishing a new Limit Up–Limit Down (LULD) mechanism. The new LULD procedures are designed to prevent trades in individual NMS Stocks from occurring outside of specified Upper and Lower Limit Price Bands.

Overview of LULD Functionality

- Trade prices will be the basis for the calculation and publication of Price Bands for NMS Stocks.
- Bid prices above the Upper Limit Price Bands and Offer prices below the Lower Limit Price Bands will be identified as Non-Executable and will not be included in the National Best Bid and/or National Best Offer calculations.
- National Best Bids that are below the Lower Limit Price Bands and National Best Offers that are above the Upper Limit Price Bands for NMS Stocks will be identified as Non-Executable.
- National Best Bids that are equal to the Upper Limit Price Bands and National Best Offers that are equal to the Lower Limit Price Bands for NMS Stocks will be identified as in Limit State.

Limit Up – Limit Down Price Band Messages

In support of the new LULD pilot program, the UTP SIP, shall calculate and disseminate to the public a Lower Price Band and an Upper Price Band for NASDAQ-listed securities during Regular Trading Hours.

The SIP shall calculate a Pro-Forma Reference Price on a continuous basis during Regular Trading Hours. If a Pro-Forma Reference Price has not moved by 1% or more from the Reference Price currently in effect, no new Price Bands shall be disseminated, and the current Reference Price shall remain the effective Reference Price.

When the Pro-Forma Reference Price has moved by 1% or more from the Reference Price currently in effect, the Pro-Forma Reference Price shall become the Reference Price, and the Processor shall disseminate new Price Bands based on the new Reference Price; provided however, that each new Reference Price shall remain in effect for at least 30 seconds.

LULD Quotation Update Messages

In support of the LULD rules, the UTP SIP will be replacing the UTP Participant Best Bid and Offer (BBO) quotation messages with new messages that include new LULD Indicator fields at both the market participant's BBO and the national BBO (NBBO) level as well as a new SIP Generated Update field.

As defined in the LULD rules, the UTP SIP is required to send a quote update if one side of the market for an individual security is outside the applicable price band. The LULD Indicator would denote that the national best bid or best offer price is non-executable. When both sides of the market reach the applicable price bands, the UTP SIP is required to denote that the individual security has entered a Limit State. Trading for the security would exit a Limit State if, within 15 seconds of entering the Limit State, all Limit State Quotations were executed or canceled in their entirety. If the market did not exit a Limit State within 15 seconds, the primary listing exchange would declare a five-minute trading pause, which would be applicable to all markets trading the security.

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LULD Changes to the Trading Action Messages

As noted above, NASDAQ, as a primary listing market, has the authority to declare a five-minute trading pause for an individual security that does not exit a Limit State within 15 seconds. To support this scenario, the UTP SIP is modifying the Trading Halt-Cross SRO message format to support a new "P" (Pause) action value as well as a new "LULD" reason code.

8.9 Market Wide Circuit Breaker Changes

The SEC has approved a joint SRO proposal to revise the existing market-wide circuit breakers, which halt trading in all NMS securities (as defined in Rule 600(b)(47) of Regulation NMS under the Act) in the event of extraordinary market volatility, in order to make them more meaningful in today's high-speed electronic markets.

As described in the SEC rule approval order, the market wide circuit breakers changes will: (i) replace the Dow Jones Industrial Average (DJIA) with the Standard & Poor's (S&P) 500 Index ("S&P 500") as the reference index; (ii) Recalculate the values of the threshold triggers daily rather than quarterly; (iii) reduce the 10%, 20%, and 30% market decline trigger percentages to 7%, 13%, and 20%; (iv) simply the length of the trading halts associated with each market decline level; and (v) streamline and extend the times when a market wide circuit breaker could be triggered.

The proposed Level 1, Level 2, and Level 3 circuit breakers would operate as follows:

Level 1 Halt - Before 3:25 p.m. – 15 minutes; at or after 3:25 p.m. – trading shall continue, unless there is a Level 3 halt.

Level 2 Halt - Before 3:25 p.m. – 15 minutes; at or after 3:25 p.m. – trading shall continue, unless there is a Level 3 halt.

Level 3 Halt - At any time – trading shall halt and not resume for the rest of the day.

In support of the new MWCB rules, the UTP SIP will be introducing two new administrative messages on UQDF, UTDF and OMDF.

8.9.1 Market Wide Circuit Breaker (MWCB) Decline Levels message

A Market Wide Circuit Breaker (MWCB) Level message will be disseminated as Category A - Type C to inform market participants of the daily MWCB decline points for the current trading day.

The MWCB Levels will set each morning based on the prior day's closing value of the S&P 500 index. Under normal circumstances, the MWCB levels will be disseminated prior to the regular market hours. In the unlikely event of an index calculation error, however, the UTP SIP reserves the right to update the MWCB levels intraday. UTP participants and UTP data feed recipients are advised to retain only the most recently disseminated levels for that trading day.

8.9.2 Market Wide Circuit Breaker Status message

A Market Wide Circuit Breaker (MWCB) Status message will be disseminated as inform participants and the UTP data recipients when a MWCB has breached one of the established levels. Following the Market Wide Circuit Breaker Status message, NASDAQ, as the primary market center, is expected to enter Trading Action – Cross SRO messages for all listed securities. To help differentiate MWCB actions from other halt actions, the UTP SIP will add new Reason code values as well.

Format Release and Testing Guidelines**9.0 Control Message Processing Guidelines**

As a result of the new MWCB changes the UTP SIP is removing all reference within the specifications related to the legacy Extraordinary Market Condition (EMC) processing. The following messages will no longer be supported and have been removed for the specification documents.

Category	Type	Usage
C	A	Emergency Market – Halt (retired April 2013)
C	R	Emergency Market – Quote Resume (retired April 2013)
C	B	Emergency Market – Trade Resume (retired April 2013)

In April the UTP fully implemented the new Market Wide Circuit Breaker (MWCB) rule changes. The SEC approved a joint SRO proposal to revise the existing market-wide circuit breakers, which halt trading in all NMS securities (as defined in Rule 600(b)(47) of Regulation NMS under the Act) in the event of extraordinary market volatility, in order to make them more meaningful in today's high-speed electronic markets.

9.1 Overview

A Control message is a fixed format message that performs a specific system function. All Control Messages consist of a standard Message Header only. Please refer to Section 3.0 for the layout of the UQDF Message Header.

Control messages are used to notify UQDF subscribers of certain system events. The SIP supports the following control messages on the UQDF data feed:

Category	Type	Usage
C	I	Start of Day
C	J	End of Day
C	O	Market Session Open
C	C	Market Session Close
C	Z	End of Transmissions
C	T	Line Integrity
C	L	Sequence Number Reset
C	P	Quote Wipe-Out

The following Control messages will be session-specific: Market Session Open, Market Session Close. All other control messages will be session independent. For a schedule of transmissions, please refer to Appendix C.

9.2 Control Message Description**9.2.1 Start Of Day**

Category C - Type I

The Start of Day control message signifies the beginning of each operational cycle for SIP Processing. Each day, the Start of Day control message will be sent to inform SIP subscribers that all subsequent data transmitted will be real-time updates and should be treated accordingly. The message will be sent three times, at one-minute intervals, with the same Message Sequence Number (00000000) on each message.

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9.2.2 End Of Day

Category C - Type J

The End of Day control message signals the end of active message dissemination for the SIP operational cycle. The system shall generate and disseminate the End of Day control message upon receipt of the appropriate inbound control messages from all inbound sources. The trigger message is the final End of Participant Reporting Quotes control message. The End of Day message will be sent three times, at one-minute intervals. The first End of Day control message will contain a Message Sequence Number one greater than the highest Message Sequence Number previously transmitted. The Message Sequence Numbers of the subsequent two control messages, however, will not be incremented.

9.2.3 Market Session Open

Category C - Type O

The Market Session Open Control Message signifies the opening of market systems for the session indicated in the Message Header. This message signifies the beginning of the Normal Market Session. The Message Sequence Number Field for the Session Open will contain a number one greater than the highest Message Sequence Number previously transmitted. Please note that each UTP participant may choose to provide a Market Session Open control message.

9.2.4 Market Session Close

Category C - Type C

The Session Close Control Message signals the closing of market systems for the session indicated in the Message Header. Upon receipt of this message, Vendors should close the appropriate market center security records in their files. The Message Sequence Number Field for the Market Session Close will contain a number one greater than the highest Message Sequence Number previously transmitted. Please note that each UTP participant may choose to provide a Market Session Close control message.

NOTE: Support of the Emergency Market Messages was discontinued on April 8, 2013 with the implementation of the Market Wide Circuit Breaker messages. Please refer to processing guidelines for information on MWCB.

For information on UTP circuit breakers, please refer to the Trading Halt section of the NASDAQ Trader website at (<http://www.nasdaqtrader.com/Trader.aspx?id=CircuitBreaker>).

9.2.5 End Of Retransmission Requests

Category C - Type K

This message signals that no further retransmission requests will be honored. The End of Retransmission Requests message will be sent three times, at one-minute intervals. The first End of Retransmission Requests control message will contain a Message Sequence Number one greater than the highest Message Sequence Number previously transmitted. The Message Sequence Numbers of the subsequent two control messages, however, will not be incremented. Although SIP operations may no longer accept retransmission requests after this control message is disseminated, it will disseminate retransmissions in queue.

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9.2.6 End Of Transmissions

Category C - Type Z

The End of Transmissions Message signals that there will be no further transmissions of data sent through the SIP line. This message will be transmitted at the end of the day, and will be the last message of the day. The End of Transmissions message will be sent three times, at one-minute intervals. The End of Transmissions control message will contain a Message Sequence Number one greater than the highest Message Sequence Number previously transmitted. The Message Sequence Numbers in the subsequent two control messages, however, will not be incremented.

9.2.7 Line Integrity

Category C - Type T

The Line Integrity Control Message will be transmitted at approximately one-minute intervals to verify the operational integrity of the SIP message transmission, and will be intermixed with other messages. The Message Sequence Number will not be incremented for the Line Integrity Message. The Message Sequence Number will be equal to the message sequence number of the last message sent. Line Integrity Messages will not be retransmitted.

9.2.8 Sequence Number Reset

Category C - Type L

The Sequence Number Reset Message forces the resetting of the Sequence Number. The Sequence Number will either be reset to zero or to a number greater than the last number previously transmitted. Please note that, if the Sequence Number Reset message is sent, the SIP will not be able to process retransmission requests for messages sent prior to the Sequence Number Reset control message.

9.2.9 Quote Wipe-Out

Category C - Type P

The Quote Wipe-Out message will be sent to indicate that a UTP Participant is experiencing a problem with their internal systems and, as a result, are not able to update their UTP BBO quotation information. The SIP will identify the UTP participant subject to the Quote Wipe Out via the Market Center Originator ID field. Upon receipt of this control message, the SIP will zero out all quotes for associated market center and recalculate the National BBO as necessary. Once the UTP participant resumes its normal operations, that participant will be required to enter fresh quotation information. The Message Sequence Number field for the Quote Wipe-Out control message will contain a number one greater than the highest Message Sequence Number previously transmitted.

Note: The SIP shall only disseminate the Quote Wipe-Out Control message when a UTP participant is requesting the SIP to remove its quote from **ALL** NASDAQ-listed securities.

As part of SIP Release 4.0, the SIP added the capability to remove a UTP participant's quote at the security level. If a UTP participant experiences a quoting problem that affects a single issue or a limited range of issues, the SIP has the capability of closing the market center's quote in only the impacted securities. Since the UTP participant is still active in most NASDAQ issues, however, the SIP will not send out a Quote Wipe-Out control message.

Format Release and Testing Guidelines

10.0 Format Release & Testing Guidelines

10.1 Release Notification

To keep pace with the changing business environment, UTP SIP may modify its data feed format specifications for UTP/SIP direct data feed customers. In advance of each release, UTP SIP will notify its direct connect customers of the format change via a Vendor Alert. The Notice will outline the scope of the changes as well as the testing and release schedule. Direct connect customers are required to modify and test their code based on NASDAQ notices.

In addition to the written communications, NASDAQ holds regular conference calls and in-person meetings to discuss upcoming initiatives with direct data feed customers. For information on the conference calls and about in-person meetings, please contact your NASDAQ market data sales representative at 301.978.5307 or dataproduts@nasdaq.com.

10.2 Release Types

When the SIP introduces new code, it will specify the release type in its outbound communications. The following release types are supported for its data feed products:

Release Type	When Used	Description
Hot Cut	NASDAQ is modifying existing data content	On the release date, NASDAQ will only support the new data formats. Firms <u>must</u> be prepared to support the new data format on the stated release date. If a firm has failed to code to the new data formats, it will lose data. If the hot cut release involves a message header format change, firms will need to coordinate their code release for the same weekend as NASDAQ's system change-over.
Parallel Period	NASDAQ is migrating to a new system platform for data dissemination	NASDAQ will support both the old and new data formats in production for a limited period of time. Firms may make the transition to the new data formats at any point during the parallel period. Firms will only lose data if they fail to migrate to the new message format by the end date of the parallel period.
New Data	NASDAQ is adding new data content	On the release date, NASDAQ will introduce a new data element. Firms should schedule the code release based on their customer needs.

Format Release and Testing Guidelines

Release Type	When Used	Description
Phase-In Period	<p>New data element or data processing change is driven by either:</p> <p>New regulatory rule OR New NASDAQ trading platform</p>	<p>To ensure a smooth transition for market participant firms, NASDAQ Transaction Services may opt to implement new rules or new systems in phases. Typically, NASDAQ will start the phase in with test securities before moving to production/live securities.</p> <p>If there is an associated data format change, firms will only see the new data elements for those phased-in securities.</p>

10.3 Types of Testing

In advance of each release, the SIP will offer test data for direct data feed customers to be used for quality assurance (QA) purposes. Depending on the scope of the changes, the testing period will range from one day to one month. For its data feed customers, the SIP offers the following types of testing opportunities:

Evening test transmissions: For its evening testing opportunities, the SIP will create sample messages in the new formats to be broadcast on select weeknights from 21:00 to 22:30. To generate the sample data, the SIP uses a test script to exercise the full range of values for the affected message formats. The test script used to generate the nightly data transmission will be available to direct data feed subscribers upon request.

Weekend production tests: In advance of major releases, UTP SIP will conduct user acceptance tests (UATs) on select Saturdays for market participants. As market participants enter information into its production systems, UTP SIP will broadcast this test data in the new data formats to direct data feed subscribers. Prior to each UAT, a Vendor Alert with registration information will be posted.

Weekend stress tests: For bandwidth upgrades and capacity-related releases, UTP SIP will attempt to simulate projected data rates as part of the production test on Saturdays. At the conclusion of the manual entry period, UTP SIP will start software drivers to stress test its system. Please note that the market close event and any post-closing reports will be disseminated only after the stress test is complete. When a UAT includes a stress test, UTP SIP will denote it in the Vendor Alert.

For a list of upcoming testing and release dates for data feed subscribers, please refer to the "Release Schedule" section of the NASDAQ Trader web site. **NASDAQ strongly recommends that all direct subscribers use these testing opportunities to check their hardware and software applications.** During the testing phase, NASDAQ Market Data Distribution may ask market data vendors or market participants to provide status updates and/or submit testing verification forms as part of the QA process.

Format Release and Testing Guidelines

10.4 Identification of test data

During normal operational hours, NASDAQ will identify test data in one of the following ways:

Test Retransmission Requester: In Section 3.4 of this document, the UTP SIP provides for a test retransmission requester for its data feed message header. NASDAQ populates this field for the test cycle messages only. Please refer to Appendix H of this document for the static content in the test cycle transmission.

Test Symbols: The SIP may send out intra-day test data using special issue symbols via the UTP/SIP data feed. NASDAQ will communicate test issues via the Symbol Directory download file on the NASDAQ Trader website at (<http://www.nasdaqtrader.com/Trader.aspx?id=symbollookup>)

During non-market hours, the UTP SIP will broadcast unmarked test data via the extranet providers. Customers should take necessary precautions to protect their systems against database corruption during evenings, weekends, and market holidays. Please refer to the Appendix C of this document for the current transmission schedule.

The UTP Plan Quotation Data Feed (UQDF)

Format Release and Testing Guidelines

Appendix A – Price Formats

The Price Denominator field is used to notify UQDF customers where to place the decimal point in a price field. The Price Denominator values are as follows:

Code	Denominator Value	Long Form Formats		Short Form Formats	
		Whole Dollar Digits	Decimal Digits	Whole Dollar Digits	Decimal Digits
B	100	8	2	4	2
C	1000	7	3	3	3
D	10,000	6	4	2	4

How to Use Table:

The price denominator field is designed to inform subscribers how to breakdown and read the price field. The following example is provided to ensure that customers understand the interdependency of these two fields.

As noted in section 4, the SIP will use the short form versions of a quote message under the following conditions:

1. Issue symbol is 5 characters or less;
2. Bid and Ask Prices are stated in US Dollars;
3. Bid and Ask Prices can be stated in 6 bytes or less (without the decimal point); and
4. Bid and Ask Sizes do not exceed 99 round lots.

Otherwise the long form version of the message format will be used.
Price Format Example (assumes 6-character short price and 10-character long price):

Short vs. Long Form Message	Output Price from SIP	Price Denom. Value	Translated Price
Short	015510	B	155.10
Short	001225	B	12.25
Short	025255	C	25.255
Long	0001551234	D	155.1234
Long	1234561234	D	123456.1234
Long	0005551234	D	555.1234
Short	501234	D	50.1234
Short	012400	B	124.00

Format Release and Testing Guidelines

Appendix A1 – MWCB price formats

In order to provide consistency within the market, the Security Industry Processors (SIPs) for the Consolidated Tapes have harmonized the message formats related to the market wide circuit breaker messages.

As such it is necessary to define the denominator processing for the Market Wide Circuit Breaker Decline messages (Category A – Type C) based on the following conversion.

The MWCB Denominator field values are as follows:

Code	MWCB Denominator Value	Formats	
		Whole Dollar Digits	Decimal Digits
A	10	11	1
B	100	10	2
C	1000	9	3
D	10,000	8	4
E	100,000	7	5
F	1,000,000	6	6
G	10,000,000	5	7
H	100,000,000	4	8

Format Release and Testing Guidelines

Appendix B –Glossary of Terms

Best Bid and Offer (BBO)

The highest bid price and lowest ask price with associated sizes reported by a UTP participant to the SIP. The BBO also includes a condition field to denote the state of the quote (e.g., open or closed).

Locked/Crossed:

A specific price “state” that a security is in. When a security is locked it means that the Bid and the Ask prices are equal. When a security is crossed it means that the Bid price is higher than the Ask price.

FINRA ADF:

Abbreviation for FINRA Alternative Display Facility. A quotation and trade reporting facility to be created for FINRA member firms that chooses not to join the NASDAQ Exchange. The FINRA ADF is expected to provide individual market participant quotes, FINRA BBO quotes, and trade data to the SIP. The FINRA BBO size should feature the largest market maker size shown in the ADF at the best bid or offer.

NASDAQ Best Bid and Offer (NASDAQ BBO)

The best bid and offer and the corresponding size unique to the NASDAQ market center. It is calculated by taking the NASDAQ inside quote and subtracting all quotes and order interest submitted by UTP participants. This data element will be disseminated via the UQDF data feed only.

National Best Bid and Offer (National BBO):

The highest bid and lowest offer prices available from those national securities association or exchange subject to the UTP Plan, with the corresponding number of shares available. The National BBO could reflect a different exchange on the ask side of the National BBO from the bid side. The number of shares available reflected on each side is not aggregated. The exchange setting the National BBO is based on a price, size, time calculation. This data element is disseminated via UQDF.

Primary market:

The listing market center for an issue.

Quote Conditions:

Depth on Ask Side

Redefined as Manual Ask, automated Bid (see new definition below).

Depth on Bid Side

Redefined as Manual Bid, automated Ask (see new definition below).

Fast Trading

For extremely active periods of short duration. While in this mode, the UTP participant will enter quotations on a “best efforts” basis.

Depth on Bid and Ask

Redefined as Manual Bid and Ask (see new definition below)

Manual Ask, automated Bid

This indicates that the market participant’s Ask is in a manual mode. While in this mode, automated execution is not eligible on the Ask side and can be traded through pursuant to Regulation NMS

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<u>Manual Bid, automated Ask</u>	This indicates that the market participant's Bid is in a manual mode. While in this mode, automated execution is not eligible on the Bid side and can be traded through pursuant to Regulation NMS requirements.
<u>Manual Bid and Ask</u>	This indicates that the market participant is in a manual mode on both the Bid and Ask. While in this mode, automated execution is not eligible on the Bid and Ask side and can be traded through pursuant to Regulation NMS requirements.
<u>Manual Bid and Ask (non-firm)</u>	This indicates that the market participant is in a manual mode on both the Bid and Ask, and is conducting an auction. While in this mode, automated execution is not eligible on the Bid and Ask side and the UTP participant has suspended the firm quote obligation for the reported security.
<u>No Open/No Resume</u>	If the UTP participant has a trading halt or an opening delay that is to be in effect for the rest of the trading day, this condition will be marked.
<u>Non-firm Quote</u>	The UTP participant has suspended the firm quote obligation for the reported security.
<u>Opening Quote</u>	The first quote from a given UTP participant for a security.
<u>Order Imbalance</u>	A halt condition used when there is a severe Buy or sell order imbalance. To prevent a disorderly market, trading is temporarily suspended by the UTP participant.
<u>Order Influx</u>	A halt condition used when there is a sudden order influx. To prevent a disorderly market, trading is temporarily suspended by the UTP participant.
<u>Quote Closed</u>	This condition is disseminated by the UTP participant to signify either the last quote of the day or the premature close for the day. In the latter case, the UTP participant may re-open the quote by subsequently submitting a quotation with a Regular Open Quote Condition
<u>Regular, Two Sided Open Quote</u>	Indicates a normal trading environment where the UTP participant is showing interest on both sides of the market.
<u>Regular, One Sided Open Quote</u>	Indicates a normal trading environment where the UTP participant is showing interest on only one side of the market (Bid or Ask).
<u>NASDAQ Bid Tick Indicator:</u>	SEC Regulation SHO, which became fully effective in January of 2005, provides a regulatory framework governing the short sales of securities. The SEC announced on June 13, 2007 that it voted to adopt final amendments to Rules 200 and 203 of Regulation SHO and to eliminate Rule 10a-1 as well as any short sale price test of

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any self-regulatory organization (SRO), i.e., the "Tick" Test.

National Bid Tick Indicator:

SEC Regulation SHO, which became fully effective in January of 2005, provides a regulatory framework governing the short sales of securities. The SEC [announced](#) on June 13, 2007 that it voted to adopt final amendments to Rules 200 and 203 of Regulation SHO and to **eliminate** Rule 10a-1 as well as any short sale price test of any self-regulatory organization (SRO), i.e., the "Tick" Test.

SIP:

Abbreviation for Security Information Processor. The firm that collects quotation and trade information from all exchanges and markets in NASDAQ listed securities and disseminates resultant data feed(s) to the public.

UTP

Abbreviation for Unlisted Trading Privileges. Section 12(f) of the Securities and Exchange Act of 1934 permits NASDAQ to extend "unlisted trading privileges" to other exchanges and national associations to quote and trade NASDAQ listed securities within their marketplace.

UTP Plan:

An industry committee that oversees the SIP and allocates revenues for SEC-mandated data for NASDAQ listed securities. The committee is comprised of representatives from the primary market and eligible UTP participants.

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Appendix C – Supported Transmission Schedule

Note: All times referenced regarding UQDF are approximate and are stated in US Eastern Time. This transmission schedule is based on a normal trading day. The UTP Plan may choose to alter this schedule with minimal advance notice.

Time	Transmission	Message Category	Message Type	Session ID	Market Center ID
03:58	Start of Day	C	I	A	E
03:59	Start of Day	C	I	A	E
04:00	Start of Day	C	I	A	E
04:00	Issue Symbol Directory Messages	A	B	U	Q
	Line Integrity (Control messages sent at one-minute intervals during SIP operational day)	C	T	A	E
	General Administrative Messages (Free form text messages are generated on an as-needed basis by the SIP or market center)	A	A	A	Various
	Message Sequence Number Reset/ Quote Wipe-Out (Control message will be generated by the SIP on an as-needed basis)	C C	L P	A A	E E
04:00 to 20:00	UQDF Quotation Messages (Pre-opening spins between 04:02 and 09:30; Live updates from 04:02 to 18:30)	Q	E,F	U	Various
04:00 to 20:00	Market Center Trading Action	A	K	U	E
04:00 to 20:00	Market Wide Circuit Breaker Decline Level Message	A	C	U	Various
04:00 to 20:00	Market Wide Circuit Breaker Status Message	A	D	U	Various
04:00 to 18:00	Reg SHO Short Sale Price Test Restricted Indicator (Full spin disseminated at NASDAQ system open; Disseminated intraday on an as-needed basis)	A	V	U	Q
04:00 to 20:00	Cross SRO Trading Action Messages (Disseminated on as-needed basis; Trading Action messages affect a single issue)	A	H	U	Q
09:30 to 16:00	Price Band Messages	A	P	U	E
09:30	U.S. Session Open Message	C	O	U	Various
16:00	U.S. Session Close Message	C	C	U	Various
16:00	Session Close Recap Message (National BBO and Market Center Quote Position as of U.S. Session Close)	A	R	U	E
20:10	End of Day Message (disseminated 3 times at approx 1 minute intervals)	C	J	A	E
20:13	End of Retransmission Message (disseminated 3 times at approx 1 minute intervals)	C	K	A	E
20:16	End of Transmissions Message (disseminated 3 times at approx 1 minute intervals) (Delayed when retransmissions are still active)	C	Z	A	E

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Appendix D – Intentionally left Blank

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Appendix E – Stock Symbol Convention

For NASDAQ-listed issues, NASDAQ will assign a symbol of 1 to 4 characters in length. For subordinate securities, NASDAQ may assign a 5 character symbol for which the last character relays information about the issue class or issue type. For the current list of fifth character symbol suffixes, please refer to [Current List of Fifth Character Symbol Suffixes for NASDAQ-listed Issues](#) on NASDAQ OMX Trader website.

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Appendix F – Action Date/Time Translation Table

The following translation table is used to represent the Date and Time Stamp fields located in the Message Header and Trading Action message.

TIME	ASCII	HEXADECIMAL	DECIMAL
0	0	30	48
1	1	31	49
2	2	32	50
3	3	33	51
4	4	34	52
5	5	35	53
6	6	36	54
7	7	37	55
8	8	38	56
9	9	39	57
10	:	3A	58
11	;	3B	59
12	<	3C	60
13	=	3D	61
14	>	3E	62
15	?	3F	63
16	@	40	64
17	A	41	65
18	B	42	66
19	C	43	67
20	D	44	68
21	E	45	69
22	F	46	70
23	G	47	71
24	H	48	72
25	I	49	73
26	J	4A	74
27	K	4B	75
28	L	4C	76
29	M	4D	77
30	N	4E	78
31	O	4F	79
32	P	50	80
33	Q	51	81

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TIME	ASCII	HEXADECIMAL	DECIMAL
34	R	52	82
35	S	53	83
36	T	54	84
37	U	55	85
38	V	56	86
39	W	57	87
40	X	58	88
41	Y	59	89
42	Z	5A	90
43	[5B	91
44	\	5C	92
45]	5D	93
46	^	5E	94
47	_	5F	95
48	`	60	96
49	a	61	97
50	b	62	98
51	c	63	99
52	d	64	100
53	e	65	101
54	f	66	102
55	g	67	103
56	h	68	104
57	i	69	105
58	j	6A	106
59	k	6B	107

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Appendix G – Version Control Information

The following table outlines the changes made to the document since it was originally published on January 15, 2002:

Version	Date	Description of Documentation Change(s)
1.1	3/4/2002	<ul style="list-style-type: none"> Changed WorldCom network name to Market Data Network (MDN) from Enterprise IP-Multicast Network (EIN). Changed IP sub-net addresses in Sections 3.2 and 3.5.1. Changed the Message Type for the following format to avoid conflict with legacy Level 1 Service: <ul style="list-style-type: none"> Closing Quote Recap from Category A – Type C to Category A – Type R. Added Appendix H – UTP Quote Test Cycle Messages to document. Changed the Quote Condition value for Regular One-Sided Open Quote to "Y".
1.2	6/14/2002	<ul style="list-style-type: none"> Added definition of IP Multicast protocol to section 3.2. Changed definitions for National Best Ask Market Center, National Best Bid Market Center, Quote Condition, and Special Condition fields in Section 7. Please refer to these definitions for new list of allowable values. Modified Section 9.2 for Trading Action message processing. Modified Section 9.3 for Session Closing Recap message processing. Updated Appendix B – Glossary of Terms, Appendix C- Transmission Schedule, Appendix D – Data Mapping from Legacy Services (appendix deleted from Specification in version 13.1, and Appendix – Symbol Suffixes.
1.2a	6/18/2002	<ul style="list-style-type: none"> Added Section 11 – Format Release & Testing Guidelines to the document.
1.2b	6/27/2002	<ul style="list-style-type: none"> Changed timing of End of Retransmission Requests and End of Transmissions messages in Appendix C.
1.3	7/1/2002	<ul style="list-style-type: none"> Added Appendix I – Data Quality Contacts.
2.0	9/4/2002	<ul style="list-style-type: none"> Added a new Quote Wipe-Out control message (Category C – Type P) to Sections 4.2 and 10.2. Modified Sections 5, 7, and 8 to note that the National BBO Appendage Indicator value of "4" will only be used for NASDAQ SmallCap issues once the National Bid Tick Indicator is added to UQDF in October 2002. Updated Sections 5, 6, 7, and 8 of the document to include a National Bid Tick Indicator field in the National BBO Appendage and Session Closing Recap message formats. The SIP will introduce this field as part of the October 2002 release. In the initial UQDF release, the SIP had marked the field as reserved for future use.

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Version	Date	Description of Documentation Change(s)
2.0 continued	9/4/2002	<ul style="list-style-type: none"> Modified Section 8.5.4.1 on the National BBO calculation rules. Removed the following note from document: "(Please note that size only changes will not impact the UTP participant quote update time.)" Added Section 8.5.4.3 – Processing section for National Bid Tick Indicator. Modified Appendix C to include the new Quote Wipe-Out control message. Modified Appendix I to include AMEX contact information.
3.0	5/30/2003	<ul style="list-style-type: none"> Modified Section 1 to reflect SIP data feed changes. Modified the bandwidth allocations based on the 2004 projections. Changed WorldCom to MCI throughout document to reflect the firm's new corporate entity. Revised Appendix B – Glossary of terms as follows: <ul style="list-style-type: none"> Replaced the definition for NASDAQ Trade Dissemination Service (NTDS) with the new data feeds that have replaced NTDS, NASDAQ Index Dissemination Service (NIDS) and NASDAQ ACT Trade Service (NATS). Removed Appendix D – Data Mapping from Legacy Services. Modified Test Cycle Messages as follows: <ul style="list-style-type: none"> Populated the Bid Tick Indicator in all relevant messages. Deleted Test Cycle Message #2 and modified the sequence number in all test cycle messages. Replaced Test Cycle Message #6 with a General Administrative message.
3.0a	8/29/2003	<ul style="list-style-type: none"> Modified Appendix F – Date and Time Translation Table: Time Values, 49 thru 59 were corrected to reflect ASCII values as lowercase alphabetic, "a" thru "k" respectively. Added Data Quality Contact for FINRA ADF to Appendix I
4.0	10/10/2003	<ul style="list-style-type: none"> Updated Section 1 to reflect the data feed enhancements planned for in 2004. Modified 2.1 – Interface Protocol: with the 2004 projected bandwidth allocations. Revised Sections 4.0 and 10.0 - to reflect the change to an 8-byte message sequence number and the addition of a one-byte reserved field to the message header format. Replaced Appendix H – Test Cycle Messages: Replaced all messages with the new message header.
4.0a	10/31/2003	<ul style="list-style-type: none"> Modified Sections 2.1 & 3.2 to increase the number of data channels for UTDF to three (from two) and to reflect the new UTDF data channel alphabetic split. Added notes to section 5, 7, and 8 to remind firms to process the Trading Action message for halt status information.

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Version	Date	Description of Documentation Change(s)
5.0	6/4/2004	<ul style="list-style-type: none"> Updated Section 1 to reflect the data feed enhancements planned for in the third quarter 2004 Updated reference to the MCI managed network throughout the document to reflect the name change. As of March 2004, the new network name is the MCI Financial Extranet (MFx). Revised Section 4.0 - Removed reference to the 20-byte message header that is no longer supported. Modified the Trading Action Message (Category A – Type H) to allow for the reason code to be populated Modified Section 7 to define reason code, currently a reserved field in the trading action message. Modified Section 9.2 - the processing rules for Trading Action Message to allow for reason code. Added the new Non-Regulatory Market Center Action message (Category A – Type K) to sections 4.2, 5.2.3 and 9.3. Modified Section 7 to define Market Center ID found within the Non-Regulatory Market Center Action message Revised Appendix C to reflect the new Non-Regulatory Market Center Action Message.
5.1	12/20/2004	<ul style="list-style-type: none"> Consolidated the Interface and Transmission Protocol sections. Renumbered and repaginated document as necessary. Added section 1.3 to reflect the new Extranet Offering for direct connectivity of market data. Also established link to website for current list of Extranet Providers.
6.0	01/07/2005	<ul style="list-style-type: none"> Added Section 1.2.1 detailing SIP 6.0 enhancements. Added the new Market Center Identifiers for New York Stock Exchange ("N") and Chicago Board Options Exchange ("W") to sections 3.6, 6.0 and 7.4.1. Modified the Operational Hours to reflect new SIP hours of 04:00 ET till 18:30 ET.
6.0a	03/07/2005	<ul style="list-style-type: none"> Modified Section 1.2.1 to include SIP 6.0a enhancements. Modified Section 3.2 to add Issue Symbol Directory (Category A – Type B) message as an allowable Administrative Message. Added new Issue Symbol Directory Message to Sections 4.2 and 8.5. Modified Sections 5.0 and 6.0 to include the new field values within the Issue Symbol Directory Message. Added Issue Symbol Directory Message to Appendix C.
6.1	05/09/2005	<ul style="list-style-type: none"> Modified document to reflect the increased bandwidth allocations to take effect June 13, 2005.
6.2	06/01/2005	<ul style="list-style-type: none"> Corrected the byte size for Issue Symbol and Old Issue Symbol within the Issue Symbol Directory message for section 4.2. This value was listed as 5 and should be 11.
7.0	08/19/2005	<ul style="list-style-type: none"> Modified Section 1.2.1 to reflect SIP Enhancement Release 7.0 <ul style="list-style-type: none"> 1.2.1.1 Details the new message header change to milliseconds Modified Sections 3.0 and 3.7 to reflect the new message header changes for the provisioning of milliseconds.

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Version	Date	Description of Documentation Change(s)
8.0	10/28/2005	<ul style="list-style-type: none"> Added Section 1.2.2 detailing SIP 8.0 enhancements. Added the new Market Center Originator ID's for International Securities Exchange ("I") and The Trade Reporting Facility LLC ("L") to sections 3.6, 6.0, 7.5.1 and 7.5.2.2. Redefined the Quote Condition Values in section 6.0 and in Appendix B – Glossary of Terms. New definitions are as follows: <ul style="list-style-type: none"> Manual Ask, automatic Bid (condition 'A'); Manual Bid automatic Ask (condition 'B'); and Manual Bid and Ask (condition 'H') Added Section 1.2.3 to document the Name Change for the NASDAQ SmallCap Market to the NASDAQ Capital Market.
8.0a	11/09/2005	<ul style="list-style-type: none"> Clarification changes to the Quote Condition values as defined by the UTP Operating Committee. Affected sections 6.0 and 7.5.2.2.
8.0b	2/06/2006	<ul style="list-style-type: none"> Updated Section 1.2 – Upcoming Initiatives section to reflect data feed changes to be implemented in 1st Quarter 2006. Modified document to reflect the message processing rules for the new IPO halt opening process: <ul style="list-style-type: none"> Added IPO/Halt opening process to the upcoming initiatives (section 1.2.3). Modified the Trading Action sections to reflect the new Action and Reason Code values to be introduced as part of the IPO halt opening process. <ul style="list-style-type: none"> Added new Reason Codes for IPO positioning window extensions to section 6.0 Revised the message processing guidelines in Section 8.2 to reflect new IPO Opening process.
9.0	3/17/2006	<ul style="list-style-type: none"> Modified Section 1.2 – to reflect the 2006 Data Feed Enhancements. <ul style="list-style-type: none"> 1.2.1 SIP Enhancement 9.0 <ul style="list-style-type: none"> Modified Quote Condition tables to reflect the new value of Manual Bid and Offer (non-firm) "U". 1.2.2 Bandwidth Allocation Changes 1.2.3 IPO Halt Opening Process Modified document to reflect the increased bandwidth allocations to take effect June 2006. Added Section 1.2.4 on New NASDAQ Listed Symbolology to take effect January 31, 2007. Added new Quote Condition definition to Appendix A - Glossary of Terms.
9.0a	4/01/2006	<ul style="list-style-type: none"> Revised Section 1.2 to reflect the addition of the new NASDAQ Market Tier Segmentation initiative for July 1, 2006. Modified Market Category Values within Section 6.0 to reflect the new market categories supported July 2006. <ul style="list-style-type: none"> Q = NASDAQ Global Select Market G = NASDAQ Global Market S = NASDAQ Capital Market

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Version	Date	Description of Documentation Change(s)
9.0b	6/19/2006	<ul style="list-style-type: none"> Modified the Operational Hours to reflect new SIP hours of 04:00 ET till 20:00 ET, tentatively scheduled for July 17, 2006. Added weekend test language to section 10 to reflect the new Saturday Stress test policy. Removed reference of NQDS as a UTP Plan governed data feed. Made notation of removal of test cycle messages with the implementation of the new operational hours.
10.0	08/30/2006	<ul style="list-style-type: none"> Modified Section 1.2 to reflect the SEC Regulation NMS changes for inclusion of the NASD ADF MPID attribution. Modified Section 3.2 to include the new Quote Message Types that will be supported with the Reg NMS changes. Added the following message formats that will replace the existing messages with the implementation of Reg NMS Changes: <ul style="list-style-type: none"> 4.1.3 New Short Form UTP Participant Quote Message 4.1.4 New Long Form UTP Participant Quote Message 4.1.6 New NASD ADF MIPD appendage Modified sections 5.0 and 6.0 to reflect the Reg NMS changes. Added Processing Guidelines to section 7.5.4.4 for NASD ADF MPID appendage processing.
10.0a	10/12/2006	<ul style="list-style-type: none"> Added an additional allowable value to the NASD ADF MPID appendage indicator field. Used to indicate not applicable when the BBO update is from a participant other than the NASD ADF.
10.1	04/02/2007	<ul style="list-style-type: none"> Modified Section 1.2 – to reflect the 2007 Data Feed Enhancements. <ul style="list-style-type: none"> 1.2.1 Bandwidth Allocation Changes 1.2.2 Addition of New York Stock Exchange LLC as a UTP market participant. Modified document to reflect the increased bandwidth allocations to take effect June 2007. Removed all message category and types that are no longer supported and updated document to reflect these changes.
10.2	8/22/2007	<ul style="list-style-type: none"> Modified the document through out to reflect the SEC Bid Tick Elimination.
10.3	11/05/2007	<ul style="list-style-type: none"> Updated Section 1.2 – Upcoming Initiatives section to reflect data feed changes to be implemented. <ul style="list-style-type: none"> 1.2.1 Bandwidth Allocation Changes 1.2.2 Financial Industry Regulatory Authority (FINRA) name change request
10.4	04/10/2008	<ul style="list-style-type: none"> Updated Section 1.2 – Upcoming Initiatives section to reflect data feed changes to be implemented. Added new Emergency Market Condition control message. <ul style="list-style-type: none"> Emergency Market Condition – Quote Resume (Category C – Type R) Modified the document throughout to reflect the new control message Removed appendix H that is no longer supported and renamed I to H.

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Version	Date	Description of Documentation Change(s)
10.4a	04/14/2008	<ul style="list-style-type: none"> Updated Section 1.2 – Upcoming Initiatives section to reflect new Bandwidth increase <ul style="list-style-type: none"> 1.2.2 Bandwidth Allocation Changes Modified document to reflect the increased bandwidth allocations to take effect July 2008.
10.4b	6/29/2008	<ul style="list-style-type: none"> Modified section 2.6 – Retransmission Capability to reflect new email and phone contact information.
10.4c	8/19/2008	<ul style="list-style-type: none"> Added the new Market Center Identifier for BATS Exchange Inc ("Z") to sections 3.6, 6.0 and 7.4.1.
10.4d	11/7/2008	<ul style="list-style-type: none"> Updated Section 1.2 – Upcoming Initiatives section to reflect new Bandwidth increase <ul style="list-style-type: none"> 1.2.1 Bandwidth Allocation Changes Modified document to reflect the increased bandwidth allocations to take effect January 2009.
11.0	04/17/2009	<ul style="list-style-type: none"> Updated section 1.2 – Upcoming Initiatives to reflect the new bandwidth increase and multicast IP changes. Modified document throughout to reflect the increased bandwidth allocations and addition of new IP multicast addresses, to take effect July 2009.
12.0	09/18/2009	<ul style="list-style-type: none"> Added the new Market Center Identifiers to sections 3.6, 6.0 and 7.4.1.for: <ul style="list-style-type: none"> BATS Y-Exchange Inc. (BATS), ("Y") EDGA Exchange, Inc. (EDGA), ("J") EDGX Exchange, Inc. (EDGX), ("K")
12.0a	11/9/2009	<ul style="list-style-type: none"> Added clarification language around the Session Close Recap Message in section 4.2.3 and 8.4
12.1	05/25/2010	<ul style="list-style-type: none"> Added new allowable reason codes to support the new Single Stock trading pause functionality.
12.1a	07/02/2010	<ul style="list-style-type: none"> Revised the definition for the Market Center Trading Action message (Category A – Type K) to remove the term "non-regulatory".
12.b	7/14/2010	<ul style="list-style-type: none"> Added new data format and processing rule sections for the Reg SHO Short Sale Price Test Restricted Indicator message to be released on or before November 10, 2010. Updated Trading Action sections to denote that the Category A – Type H message format is used for trading halts and trading pauses that impact all UTP participants.
12.c	3/18/2011	<ul style="list-style-type: none"> Revised Appendix C to reflect the start time for Reg SHO messages from 6:45 to 6:00 AM
12.1d	11/04/2011	<ul style="list-style-type: none"> Updated Section 1.2 – Upcoming Initiatives section to reflect new Bandwidth increase <ul style="list-style-type: none"> 1.2.1 Redistribution of Symbols Across UTP Data Channels 1.2.2 Bandwidth Allocation Changes Modified document to reflect the increased bandwidth allocations to take effect February 2012.

Appendices

Version	Date	Description of Documentation Change(s)
13.0		<ul style="list-style-type: none"> • Revised the Market Center Identifiers to sections 3.6, 6.0 and 7.4.1.for: <ul style="list-style-type: none"> ◦ Name change for NYSE AMEX to NYSE MKT (“A”) • Added a new “Retail Interest Indicator” to the Long Form Quote Message. • In support of Limit Up-Limit Down, the UTP SIP will: <ul style="list-style-type: none"> ◦ Introduce a new administrative message to relay Limit Up-Limit Down Price Bands: Category A – Type P message format will be calculated and disseminated by the UTP SIP during normal market hours ◦ Introduce new UTP Participant Best Bid and Offer (BBO) Quotation message formats, the UTP Participant BBO Short Form Quotation will be identified as Category Q – Type E and the UTP Participant BBO Long Form Quotation will be Category Q – Type F ◦ Modify the Trading Action – Cross SRO message format to support new Action and Reason code values associated with Limit Up-Limit Down. • In support of Market Wide Circuit Breaker rule, the UTP SIP will: <ul style="list-style-type: none"> ◦ Introduce a new Market Wide Circuit Breaker Decline Level message (Category A – Type C) to relay the current day’s trigger threshold values to UTP market participants. The new message, which will reflect the 7%, 13% and 20% trigger thresholds for the S&P 500, will be disseminated via UQDF, UTDF and OMDf prior to the market open. ◦ Introduce a new Market Wide Circuit Breaker Status message (Category A – Type D) to relay when a trigger threshold has been breached. The new message format would be disseminated by the UTP SIP if the S&P 500 Index falls below the trigger points. ◦ Modify the Trading Action – Cross SRO message format to support new Reason codes for Market Wide Circuit Breakers. In the event of a Market Wide Circuit Breaker, The NASDAQ Stock Market will be responsible for sending out Trading Action messages for its listed securities as appropriate. To differentiate market wide circuit breakers from other trading actions, NASDAQ is expected to populate the Reason field in the Trading Action message with a “MWCB” value.
13.0a	06/12/2012	<ul style="list-style-type: none"> • Minor editorial clean up • Added Appendix A1 to define Market Wide Circuit Breaker Denominator conversion rules for MWCB Decline Level Message (Category A-Type C)

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Version	Date	Description of Documentation Change(s)
13.0b	08/27/2012	<ul style="list-style-type: none"> Modified the Reason Code Values for LULD and MWCB. The following new codes will be supported: <ul style="list-style-type: none"> LUDP MWC1, MWC2, MWC3, MWCQ Included additional information related to the implementation dates for each message format. <ul style="list-style-type: none"> UTP Quote Messages (Category Q – Types E,F) will be implemented as a HOT CUT on October 1, 2012 New LULD/MWCB administrative messages will be implemented with the SEC release scheduled for February 2013.
13.0c	10/17/2012	<ul style="list-style-type: none"> Modified document to reflect the increased bandwidth allocations to take effect January 2013.
13.0d	01/14/2013	<ul style="list-style-type: none"> Added a new reason code for MWCB Halts to reflect when a Level 3 breach is being carried over to the next trading day. <ul style="list-style-type: none"> MWCO
13.0e	02/22/2013	<ul style="list-style-type: none"> Added a new reason code for LULD to reflect when the National Best Bid is less than the lower price band and the National Best Offer is greater than the upper price band. <ul style="list-style-type: none"> LUDS – Limit up/Limit down Straddle State
13.0f	03/08/2013	<ul style="list-style-type: none"> Updated the Transmission Schedule (Appendix C) to account for NASDAQ's Early Market Open: <ul style="list-style-type: none"> Moved up the Start of Day message time by two minutes. Moved up the start time of Reg SHO Short Sale Price Test Restricted Indicator, Cross SRO Trading Action Messages and Emergency Market Halt/Resume Messages to begin at 04:00. Documented the termination of the Emergency Market Control Messages formats that will be retired once the new Market Wide Circuit Breaker changes are implemented on April 8, 2013. Removed Message Formats that are no longer in existence.
13.1	07/05/2013	<ul style="list-style-type: none"> Added new Financial Status Indicator value of "C" Creation Suspended. Modified document and removed reference of the legacy Emergency Market Condition Processing.
13.2	04/14/2014	<ul style="list-style-type: none"> Modified document to reflect the increased bandwidth allocations to take effect June 30, 2014.

Appendices

Appendix H – Data Quality Contacts

Under the UTP Plan, the SIP will process quotation and trade data from registered UTP participants for all NASDAQ listed securities only. The UTP Data Quality Contact list is available at:

<http://www.nasdaqtrader.com/content/technicalsupport/specifications/utp/utpdataqualitylist.pdf>