The OTC Montage Data Feed℠ (OMDF℠)

Data Feed Interface Specification

Version 14.3
Revised: July 2015

Published by:
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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 Feed℠ (UQDF℠)** 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 Feed℠ (UTDF℠)** provides trade data from the UTP participants for securities listed on the NASDAQ Stock Market®.

- **OTC Montage Data Feed℠ (OMDF℠)** 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 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.

1.2.1 Implementation of New Message Header Formats

In **January 2015**, the committee has requested that the SIP add an additional timestamp that would be provided by participants. This will create two new timestamps being provided by participants for inclusion on the outbound data services. The new timestamps definitions are being determined and will be provided as soon as they become available.

With the recent addition of the **second timestamp requirement** the Message Header release will be revised and the following proposed changes are now schedule to be implemented in **July 2015**.

As requested by the Policy/Technical Committees, the SIPs will make modifications to the Message Header Protocol to support Participant Timestamp information in the inbound protocol specifications and the outbound data feed specifications (UQDF, UTDF & OMDF).

Additionally, as agreed to by the Participants and the SIPs, a new Transaction ID field will be supported in the Outbound Services. The Output Transaction ID information is intended for use by Participants/SIPs only and will be identified as '**Reserved for Internal Use**' on the Output Specifications.

Based on the committee's request for a second participant timestamp, the revised message header will be as follows:

MULTICAST OUTBOUND UTP TIMESTAMP CHANGE			
EXISTING OUTBOUND MESSAGE HEADER FORMAT		PROPOSED OUTBOUND MESSAGE HEADER FORMAT (includes Participant Timestamp 2	
Field Name	**Length**	**Field Name**	**Length**
Message Category	1	Message Category	1
Message Type	1	Message Type	1
Session Identifier	1	Session Identifier	1
Retransmission Requestor	2	Retransmission Requestor	2
Message Sequence Number	8	Message Sequence Number	8
Market Center Originator ID	1	Market Center Originator ID	1
Time Stamp (HHMMSSnnn)	**9**	**SIP Time Stamp**	**6**
(Not Applicable)	*N/A*	**Reserved**	**3**
Reserved (UQ/OM); Sub Market Center ID (UT)	1	Reserved (UQ/OM); Sub Market Center ID (UT)	1
(Not Applicable)	*N/A*	**Participant Timestamp 1**	**6**
(Not Applicable)	*N/A*	**Participant Timestamp 2**	**6**
(Not Applicable)	*N/A*	**Transaction ID**	**7**
Total Length	**24**	**Total Length**	**43**

In order to facilitate these improvements the UTP SIP Back End software will be backward compatible, allowing for rapid fallback from new (revised) message header format to existing (current) message header format. While there is no intention of publishing both new (revised) and existing (current) format on any single channel over the course of the day, data recipients should be prepared to receive both.

The UTP SIP intends to use existing message formats and types in order to minimize the impact on data recipients. To facilitate the improvements a message header change will be made to (a) provide the additional content and (b) indicate whether the message format is new (existing) or old (current).

What changes are being made to the message header format?

The Session Identifier in the message header will be redefined to indicate which version of message header is present for the message:

- 'A': existing (current) format, all sessions
- 'U': existing (current) format, U.S. market session
- '1': new (revised) format (session indication is no longer differentiated)

The message header Time Stamp field will be redefined to provide the SIP Timestamp in terms of the number of microseconds since midnight EST. The value will be revised and reduced in size. Revised timestamp will represent the number of microseconds since midnight EST. The value will be a 6-byte string of ASCII-displayable characters relative to ASCII space (" ") representative of a base95 number.

The existing **Reserved** field: The three remaining bytes of the **existing** timestamp filed will be added to the current 1 byte and reserved for future use.

Three new additional fields will be added to the message header for the new message format:

- **Participant Timestamp 1:** a participant-provided timestamp representing the number of microseconds since midnight EST. The value will be a 6-byte string of ASCII-displayable characters relative to ASCII space (" ") representative of a base95 number. The SIP will simply pass through the value provided by the participant where applicable; for transactions originating from participants not using the new input content and for SIP-generated messages, this field will contain all space (six ASCII ' ' characters).

- **Participant Timestamp 2:** a participant-provided timestamp representing the number of microseconds since midnight EST. The value will be a 6-byte string of ASCII-displayable characters relative to ASCII space (" ") representative of a base95 number. The SIP will simply pass through the value provided by the participant where applicable; for transactions originating from participants not using the new input content and for SIP-generated messages, this field will contain all space (six ASCII ' ' characters).

- **Transaction ID:** a transaction identifier reserved for UTP usage. The transaction identifier will be a single string of 7 ASCII-displayable characters. This is intended for UTP SIP internal use only and Data Vendors may ignore/disregard this field.

How will time fields within existing message formats be changed?

The UTP SIP will make one modification to the LULD Price Band Effective Time Field in order to provide a greater granularity to the microsecond.

- **The Price Band Message's (category 'A', type 'P')** LULD Price Band Effective Time field will be modified to contain a "wall time" time value precise to the microsecond level for the new (proposed) message format (i.e. Session Identifier = '1') in the format "HMSnnnnnn", where:
    - H: an ASCII-displayable character representing the hours portion of the timestamp; values are defined in Appendix F
    - M: an ASCII-displayable character representing the minutes portion of the timestamp; values are defined in Appendix F
    - S: an ASCII-displayable character representing the seconds portion of the timestamp; values are defined in Appendix F
    - nnnnnn: microsecond portion of timestamp (numeric)

- There are no changes at this time for the various Date/Time fields published on the UTP data feeds; these fields will continue to provide precision to the nearest second. Fields include:
    - Cross SRO Trading Action (category 'A', type 'H'), field Action Date/Time (UQDF/UTDF/OMDF)
    - Market Center Trading Action (category 'A', type 'K'), field Action Date/Time (UQDF/UTDF/OMDF)
    - Prior Day As-Of Trade (category 'T', type 'H'), field Prior Day Trade Date/Time (UTDF)

1.2.2 Changes for Exchange Traded Managed Funds (ETMFs)

In 4th Quarter 2015, the UTP SIP will modify the Issue Symbol Directory Message (Category A – Type B) format to add a new Issue Sub-Type field. As outlined in UTP Vendor Alert #2015-10, Nasdaq will use the Issue Sub-Type field to denote an Exchange Traded Managed Fund (ETMF).

Approved by the SEC in November 2014, ETMFs are new Nasdaq-listed instruments that combine features of open-end mutual funds and exchange- traded funds (ETFs). ETMFs will trade on Nasdaq using a new trading protocol called ‘‘NAV-Based Trading.’’ In NAV-Based Trading, all bids, offers, and execution prices will be expressed as a premium/discount (which may be zero) to the ETMF’s next-determined net asset value (NAV). Executions using NAV-Based Trading will be binding at the time orders are matched on Nasdaq’s facilities, with the transaction prices contingent upon the determination of the ETMF’s NAV at the end of the business day.

To address format limitations for order and trade systems, Nasdaq will represent that ETMF’s next-determined NAV via a proxy price (e.g., $100.00) and a premium/discount of a stated amount to the next-determined NAV. This will be represented by the same increment/decrement from the proxy price used to denote NAV (e.g., NAV-$0.01 would be represented as $99.99; NAV+$0.01 as $100.01).

The UTP SIP will disseminate all ETMF data elements, including quotations, trades and Limit Up Limit Down (LULD) price bands in proxy price format only. Under Regulation NMS rules, all UTP participants will have the option to quote and trade ETMFs.

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 **OTC Montage Data Feed (OMDF)**. All references to a time of day in this specification are in Eastern Standard/Daylight Time.

This document was last updated on July **1, 2015.** 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, UTP SIP will post a UTP Vendor Alert to the NASDAQ Trader^{SM} website with the details of the release.

Although NASDAQ will attempt to update this specification on a routine basis, OMDF subscribers must read these Vendor Alerts to ensure that they are prepared for product changes. Vendors may request to receive automatic e-mail notification of NASDAQ Trader postings by sending a message to *dataproducts@nasdaqomx.com*.

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 one logical channel for each multicast group on the extranets. The current bandwidth allocation for the IP multicast channel is as follows:

2.1.1 Current Bandwidth Allocation Table

For additional information, please refer to UTP Vendor Alert #2015-05. The UTP Participants have updated their traffic projections for July, 2015, and completed its migration from a 1-second planning interval to 100-milliseconds (1/10 of a second). The use of the 100-millisecond interval better reflects system utilization during bursts of traffic. The maximum output traffic rates for UTP data services will be as follows:

New 100-Millisecond bandwidth recommendation, effective June 29, 2015:

UTP Data Feed	New Bandwidth Allocation Megabits Per 100-Millisecond (Mbp100ms) (per multicast group)
OMDF (A-Z)	2.0 Mbp 100ms
Total	***2.0 Mega Bits Per 100 milliseconds***

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 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 (8^{th} 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 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. For the OMDF data feed, the IP multicast addresses and port assignments are as follows:

	Primary Groups			Back-Up Groups		
Data Feed	**Class D IP Address**	**$Port_{16}$**	**$Port_{10}$**	**Class D IP Address**	**$Port_{16}$**	**$Port_{10}$**
OMDF (A-Z)	224.0.17.42	D802	55298	224.0.17.43	D803	55299

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.

DATA BLOCK FORMAT

UDP/IP Headers	SOH	Message 1 header and text	US	Message 2 header and text	US	Message n header and text	ETX
	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.
- **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 <u>not</u> 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 $Port_{16}$ 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 $Port_{10}$ 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.

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.

Retransmission requests may be made by sending an electronic mail message to retranq@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 *dataproducts@nasdaqomx.com*.

3.0 Message Header

As requested by the Policy/Technical Committees, the SIPs will make modifications to the Message Header Protocol to support new Participant Timestamp information in the inbound protocol specifications and the outbound data feed specifications (UQDF, UTDF & OMDF).

With the recent addition of the **second timestamp requirement** the following proposed changes are schedule to be implemented in **July2015**, until such time the existing message format will continue to be supported.

The following details the message header formats **POST** implementation. This will be a Hot-Cut release and all data recipients will be required to process the new header formats or risk loss of data.

MULTICAST OUTBOUND UTP TIMESTAMP CHANGE			
EXISTING OUTBOUND MESSAGE HEADER FORMAT		PROPOSED OUTBOUND MESSAGE HEADER FORMAT (includes Participant Timestamp 2	
Field Name	**Length**	**Field Name**	**Length**
Message Category	1	Message Category	1
Message Type	1	Message Type	1
Session Identifier	1	Session Identifier	1
Retransmission Requestor	2	Retransmission Requestor	2
Message Sequence Number	8	Message Sequence Number	8
Market Center Originator ID	1	Market Center Originator ID	1
Time Stamp (HHMMSSnnn)	**9**	**SIP Time Stamp**	**6**
(Not Applicable)	*N/A*	**Reserved**	**3**
Reserved (UQ/OM); Sub Market Center ID (UT)	1	Reserved (UQ/OM); Sub Market Center ID (UT)	1
(Not Applicable)	*N/A*	**Participant Timestamp 1**	**6**
(Not Applicable)	*N/A*	**Participant Timestamp 2**	**6**
(Not Applicable)	*N/A*	**Transaction ID**	**7**
Total Length	**24**	**Total Length**	**43**

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 character. This field, along with the Message Type, identifies the message. The following table defines the Message Categories that OMDF can transmit:

Category	Usage
Q	Quote
C	Control
A	Administrative and Maintenance Records

3.2 Message Type

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

Quotation Messages:

Category	Type	Usage
Q	M	FINRA ADF Market Maker Quote (Short Form)
Q	N	FINRA ADF Market Maker Quote (Long Form)

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	M	Start of Test Cycle
C	N	End of Test Cycle
C	T	Line Integrity
C	L	Sequence Number Reset
C	P	Quote Wipe-Out

Administrative Messages:

Category	Type	Usage
A	A	General Administrative Message
A	B	Issue Symbol Directory Message
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

With the implementation of the message header change, **scheduled for July 27, 2015**, the Session Identifier will no longer differentiate between sessions. Instead this field will be revised to indicate what version of a header format vendors should be expecting.

3.3 Message Header Format / Session Identifier

This is a 1 byte, alphabetic field. The associated values are as follows:

Code	Value
A	Current Message Header Format - All Market Sessions or Session Independent (Session differentiation to be retired)
U	Current Message Header Format - U.S. Market Session (including pre-and post-market) (Session differentiation to be retired)
1	New Message Header Format (Session no longer differentiated)

3.4 Retransmission Requester

The Retransmission Requester is a 2 byte, Alphanumeric, space-filled identifier that signifies the intended recipient of the message. 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.

Certain specific or global retransmission codes exist. For the OMDF, 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.

These retransmission codes are upper case and space filled. 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:

- Regular retransmission messages have the sequence number of the original message.
- Line Integrity Messages (Category C – Type T) contain the sequence number of the last message transmitted that was not a retransmitted message.
- Sequence Number Reset Messages (Category C – Type L) contain the number to which the Message Sequence Number counter is to be reset. This Message Sequence Number will either be zero or some number greater than the highest number previously transmitted.
- The following control messages will be transmitted three times to ensure positive recognition: End of Day (Category C – Type J), End of Retransmission Requests (Category C – Type K), and End of Transmissions (Category C – Type Z). For each of these message types, the message sequence counter is incremented by one on the first transmission only.
- The following control messages will contain a message sequence number of zero: Start of Day (Category C – Type I) and Start of Test Cycle (Category C – Type M). 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 OMDF control messages.

3.6 Market Center Originator ID

The Originator ID is a 1 byte, alphanumeric character that indicates the market center, which originated the message. The characters currently in use for OMDF issues are:

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

*Note: These Market Center Originator IDs will only appear in administrative or control messages. Only the Market Center Originator ID of "D" will appear in quotation messages.

3.7 SIP TimeStamp

The SIP Time Stamp field will be redefined to provide the SIP Timestamp in terms of the number of microseconds since midnight EST. The value will be revised and reduced in size. Revised timestamp will represent the number of microseconds since midnight EST. The value will be a 6-byte string of ASCII-displayable characters relative to ASCII space (“ ”) representative of a base95 number, examples are as follows:

Event	Wall Time ET	base95						Microseconds from midnight
SOD	03:58:00.000000	!	p	>	N	L	M	14280000000
Participant entry	04:00:00.000000	!	q	k	J	r	C	14400000000
Market Open	09:30:00.000000	$	G	t	2	a		34200000000
Random Time	10:15:05.123456	$	i	)	>	A	g	36905123456
Market Close	16:00:00.000000	'	J	0	I	L	M	57600000000
EOD	20:10:00.000000	)	D	@	&	?	>	72600000000
EOT	20:16:00.000000	)	H	g	z	R		72960000000

Please Note: For the Market Close Example the base95 code is:
(‘J0lLM = “single quote, Uppercase J, zero, lowercase L, uppercase L, Uppercase M)

3.8 Reserved

This field will be expanded to a 4 byte field reserved for future use. This field will be space filled.

3.9 TimeStamp1

A participant-provided timestamp representing the number of microseconds since midnight EST. The value will be a 6-byte string of ASCII-displayable characters relative to ASCII space (“ ”) representative of a base95 number. The SIP will simply pass through the value provided by the participant where applicable; for transactions originating from participants not using the new input content and for SIP-generated messages, this field will contain all space (six ASCII ‘ ’ characters).

- **If from an Exchange:** denotes the time where the quote bid price and/or the offer price for a security is designated with an Exchange’s Matching Engine Publication timestamp. Exchanges use a clock sync methodology ensuring that timestamps are accurate within tolerances of 100 microseconds or less.
- **If from the FINRA Alternative Display Facility (ADF):** denotes the time of the quote bid price and/or the offer price for a security that a FINRA member reports to the FINRA Alternative Display Facility. FINRA shall convert times that its members report to it in seconds or milliseconds to microseconds and shall provide such times to the Processor in microseconds since midnight Eastern Time (ET).

3.10 TimeStamp2

Will be used by the FINRA ADF and/or a FINRA TRF to provided timestamp representing the number of microseconds since midnight EST. The value will be a 6-byte string of ASCII-displayable characters relative to ASCII space (“ ”) representative of a base95 number. The SIP will simply pass through the value provided by the participant where applicable; for transactions originating from participants not using the new input content and for SIP-generated messages, this field will contain all space (six ASCII ‘ ’ characters).

- **<u>If from an Exchange:</u> Timestamp 2 will be blank.**
- **<u>If from the FINRA Alternative Display Facility (ADF):</u>**
  - **If the FINRA ADF provides a proprietary feed of its quotation information, then the FINRA ADF will publish the time of the quotation as also published on the facility’s proprietary feed.** FINRA shall convert times that it reports quotations on its proprietary feed in seconds or milliseconds to microseconds and shall provide such times to the Processor in microseconds since midnight Eastern Time (ET).
  - **If the FINRA ADF does not have a proprietary quotation feed then Timestamp 2 will be blank.**

3.11 Transaction ID

Transaction ID is 7 bytes Alphanumeric, including special characters, comprised of a participant-provided transaction ID. The Transaction ID field is intended for UTP SIP internal use only and Data Recipients should ignore/disregard this field to the extent that it does not impact their normal data processing.

4.0 Data Formats

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

4.1 FINRA ADF Quotation Messages

The following message formats are used to disseminate market participant (MP) quotation data from the FINRA Alternative Display Facility for NASDAQ Listed issues. For processing guidelines, please refer to Section 7.0 of this document.

4.1.1 Short Form FINRA ADF Market Participant Quotation

Category Q – Type M

The SIP will use the short form of this message format only if the FINRA market 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.

Issue Symbol	Quote Condition	MPID	MP Location ID	Reserved	Bid Price Denominator
5	1	4	1	1	1

Bid Price	Bid Size	Ask Price Denominator	Ask Price	Ask Size	FINRA BBO Appendage Indicator
6	2	1	6	2	1

31 BYTES

4.1.2 Long Form FINRA ADF Market Participant Quotation

Category Q – Type N

For FINRA market participant quotations that do <u>not</u> meet the criteria for a short record, a Long Form FINRA ADF Quotation message will be disseminated.

Issue Symbol	Quote Condition	MPID	MP Location ID	Reserved
11	1	4	1	1

Bid Price Denominator	Bid Price	Bid Size	Ask Price Denominator	Ask Price
1	10	7	1	10

Ask Size	Currency	FINRA BBO Appendage Indicator
7	3	1

58 BYTES

4.1.3 FINRA ADF BBO Appendages

With the recent Regulation NMS and Limit Up / Limit Down regulatory changes that have been implemented, FINRA requested the UTP SIP to implement a processing change to stop the FINRA ADF BBO Appendage to the Short Form (Category Q - Type M) and Long Form (Category Q – Type N) FINRA ADF Market Participant Quotation Messages on OMDF. The UTP Operating Committee (UTPOC) approved the OMDF change request.

OMDF will continue to carry the individual FINRA ADF market participant quotations. Firms will also continue to receive the FINRA BBO quotation with associated FINRA ADF participant attribution via UTP Quotation Data Feed (UQDF).

As of **Monday, November 18, 2013**, the UTP SIP will no longer populate the FINRA ADF BBO Appendage indicator field in the Short Form (Category Q - Type M) and Long Form (Category Q – Type N) on OMDF. The field will be space filled.

Code	Value
<space>	**No FINRA BBO Appendage exists**
0	**No FINRA BBO Change** – Current MP quote does not affect the FINRA BBO. No appendage required.
1	**No FINRA BBO Exists** – FINRA is unable to calculate a BBO. Vendors should show the FINRA BBO fields as blank. No appendage is required.
2	**FINRA BBO Short Form Appendage Attached** –FINRA BBO was generated and the information is contained in the attached short form appendage.
3	**FINRA BBO Long Form Appendage Attached** – A new FINRA BBO was generated and the new information is contained in the attached long form appendage.

4.1.4 Short Form FINRA ADF BBO Appendage

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

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

Quote Condition	Best Bid Price Denominator	Best Bid Price	Best Bid Size	Best Ask Price Denominator
1	1	6	2	1

Best Ask Price	Best Ask Size
6	2

19 BYTES

4.1.5 Long Form FINRA ADF BBO Appendage

If the criteria for a short form appendage are not met, the SIP will use the long form appendage format. This Long Form FINRA BBO appendage can contain either a one-sided or a two-sided quote.

Quote Condition	Best Bid Price Denominator	Best Bid Price	Best Bid Size	Best Ask Price Denominator
1	1	10	7	1

Best Ask Price	Best Ask Size	Currency
10	7	3

40 BYTES

4.2 Administrative Messages

The following message formats are used to disseminate administrative data for NASDAQ Listed issues. 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	Action	Action Date/Time*	Reason Code
11	1	7	6

25 BYTES

*Action Date/Time will continue to follow the existing Date/Time translation as defined in section 6 Field Descriptions

4.2.3 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

*Action Date/Time will continue to follow the existing Date/Time translation as defined in section 6 Field Descriptions

4.2.4 Issue Symbol Directory Message

Category A – Type B

The Issue Symbol Directory message provides basic company and trading information for NASDAQ-listed securities.

At the request of the UTP Operating Committee, The UTP SIP will be adding a new Issue Sub-Type field to the directory message format in the 4th Quarter 2015. The new two-byte field will be added to the end of the existing Issue Symbol Directory message format.

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	Issue Sub-Type (To be added in 4th Quarter 2015)
1	1	5	1	2

62 Bytes – Current; 64 Bytes - Future

4.2.5 Regulation SHO Short Sale Price Test Restricted Indicator

Category A – Type V

In November 2010, the Securities and Exchange Commission (SEC) will implement 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

4.2.6 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

*** LULD Price Band Effective Time field will be modified to contain a "wall time" time value precise to the microsecond level for the new message format (i.e. Message Header Format/Session Identifier = '1') in the format "HMSnnnnnn"**

4.2.7 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.

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

46 Bytes

4.2.8 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.

5.0 Field Occurrences Within Messages

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

SF = Short Form FINRA BBO Appendage
LF = Long Form FINRA BBO Appendage

Field Name	Message Category	Message Type
A		
Action	A	H, K
Action Date/Time	A	H, K
Ask Price Denominator	Q	M, N
Ask Price (Short Form)	Q	M
Ask Price (Long Form)	Q	N
Ask Size (Short Form)	Q	M
Ask Size (Long Form)	Q	N
Authenticity	A	B
B		
Best Ask Price Denominator	Q Q	M (SF & LF) N (SF & LF)
Best Ask Price (Short Form)	Q Q	M (SF) N (SF)
Best Ask Price (Long Form)	Q Q	M (LF) N (LF)
Best Ask Size (Short Form)	Q Q	M (SF) N (SF)
Best Ask Size (Long Form)	Q Q	M (LF) N (LF)
Best Bid Price Denominator	Q Q	M (SF & LF) B (SF & LF)
Best Bid Price (Short Form)	Q Q	M (SF) N (SF)
Best Bid Price (Long Form)	Q Q	M (LF) N (LF)
Best Bid Size (Short Form)	Q Q	M (SF) N (SF)
Best Bid Size (Long Form)	Q Q	M (LF) N (LF)
Bid Price Denominator	Q	M, N
Bid Price (Short Form)	Q	M
Bid Price (Long Form)	Q	N

Field Occurrences

Field Name	Message Category	Message Type
Bid Size (Short Form)	Q	M
Bid Size (Long Form)	Q	N
C		
Currency	Q Q Q	M (LF) N N (LF)
F		
Financial Status Indicator	A	B
I		
Issue Name	A	B
Issue Sub Type	A	B
Issue Symbol	Q A	M, N H, K, V, P
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
M		
Market Tier (formerly known as Market Category)	A	B
Market Center (MC) ID	A	K
Market Participant ID (MPID)	Q	M, N
MP Location ID	Q	M, N
Market Wide Circuit Breaker (MWCB) Level 1, 2 or 3	A	C
MWCB Status Indicator	A	D
MWCB Denominator	A	C
N		
FINRA BBO Appendage Indicator	Q	M, N
O		
Old Issue Symbol	A	B
P		
Price Denominator	A	P
Q		

Field Occurrences

Field Name	Message Category	Message Type
Quote Condition	Q Q Q Q	M M (SF & LF) N N (SF & LF)
R		
Reason Code	A	H
Reg SHO Action	A	V
Reserved	Q A	M, N C, D
Round Lot Size	A	B
S		
Short Sale Threshold Indicator	A	B
T		
Text	A	A

6.0 Field Descriptions

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.
The associated values are as follows:

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.

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 Price (Short Form)
Category Q – Type M

6 bytes, Numeric. Right justified, zero filled. The Ask price is the price at which the market participant is willing to sell (offer) the 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 Price (Long-Form)
Category Q – Type N

10 bytes, Numeric. Right justified, zero filled. The Ask Price is the price at which the market participant is willing to sell (offer) the 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 Price Denominator
Category Q – Type M; Category Q – Type N

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 Size (Short Form)
Category Q – Type M

2 bytes, Numeric. Right justified, zero filled. The Ask Size represents the amount of shares available at the market participant's Ask Price in the given security. It will be stated in round lots.

Ask Size (Long Form)
Category Q – Type N

7 bytes, Numeric. Right justified, zero filled. The Ask Size represents the amount of shares available at the market participant's Ask Price in the given security. It will be stated in round lots.

Authenticity

Category A – Type B

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

Best Ask Price (Short Form)

Short Form Appendage to Category Q – Types M, N

6 bytes, Numeric. Right justified, zero filled. This field reflects the lowest offer price available in the FINRA Alternative Display Facility for the issue. The Best Ask Price is represented in a combination of whole dollar and decimal digits. The Best Ask Price Denominator field should be used to determine how to process this field.

Best Ask Price (Long Form)

Long Form Appendage to Category Q – Types M, N

10 bytes, Numeric. Right justified, zero filled. This field reflects the lowest offer price available in the FINRA Alternative Display Facility for the issue. The Best Ask Price is represented in a combination of whole dollar and decimal digits. The Best Ask Price Denominator field should be used to determine how to process this field.

Best Ask Price Denominator

Short and Long Form Appendages to Category – Types M, N

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

Best Ask Size (Short Form)

Short Form Appendage to Category Q – Types M, N

2 bytes, Numeric. Right justified, zero filled. The Best Ask Size is the largest amount of shares shown by a FINRA market participant at the Best Ask Price. It will be stated in round lots.

Best Ask Size (Long Form)

Long Form Appendage to Category Q – Types M, N

7 bytes, Numeric. Right justified, zero filled. The Best Ask Size is the largest amount of shares shown by a FINRA market participant at the Best Ask Price. It will be stated in round lots.

Best Bid Price (Short Form)

Short Form Appendage to Category Q – Types M, N

6 bytes, Numeric. Right justified, zero filled. This field reflects the highest bid price available in the FINRA Alternative Display Facility. The Best Bid Price is represented in a combination of whole dollar and decimal digits. The Best Bid Price Denominator field should be used to determine how to process this field.

Best Bid Price (Long Form)

Long Form Appendage to Category Q – Types M, N

10 bytes, Numeric. Right justified, zero filled. This field reflects the highest bid price available in the FINRA Alternative Display Facility. The Best Bid Price is represented in a combination of whole dollar and decimal digits. The Best Bid Price Denominator field should be used to determine how to process this field.

Best Bid Price Denominator

Short and Long Form Appendages to Category – Types M, N

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

Best Bid Size (Short Form)

Short Form Appendage to Category Q – Types M, N

2 bytes, Numeric. Right justified, zero filled. The Best Bid Size is the largest amount of shares shown by a FINRA market participant at the Best Bid Price. It will be stated in round lots.

Best Bid Size (Long Form)

Long Form Appendage to Category Q – Types M, N

7 bytes, Numeric. Right justified, zero filled. The Best Bid Size is the largest amount of shares shown by a FINRA market participant at the Best Bid Price. It will be stated in round lots.

Bid Price (Short Form)

Category Q – Type M

6 bytes, Numeric. Right justified, zero filled. The Bid Price is the price at which the FINRA market participant is willing to buy the security for at a 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 N

10 bytes, Numeric. Right justified, zero filled. The Bid Price is the price at which the FINRA market participant is willing to buy the security for at a 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 Denominator

Category Q – Type M; Category Q – Type N

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 Size (Short Form)

Category Q – Type M

2 bytes, Numeric. Right justified, zero filled. The Bid Size represents the amount of shares available at the market participant's Bid Price in the given security. It will be stated in round lots.

Bid Size (Long-Form)

Category Q – Type N

7 bytes, Numeric. Right justified, zero filled. The Bid Size represents the amount of shares available at the market participant's Bid Price in the given security. It will be stated in round lots.

C

Currency

Category Q – Type N; Long Form Appendage to Category Q – Types M, N

3 bytes, Alphanumeric. Left justified, space filled. This field defines the currency of an issue in ISO currency codes. The current value is:

Code	Value
USD	US Dollars

F

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 issues 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.

I

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 M

5 bytes, Alphanumeric. Left justified, space filled. This field identifies the issue symbol for the message.

Issue Symbol (Long Form)

Category Q – Type N, Category A – Type B; Category A – Type H; Category A – Type K; Category A – Type V

11 bytes, Alphanumeric. Left justified, space filled. Identifies the issue symbol for the message.

Issue Sub-Type

Category A – Type B

1 byte, alphanumeric. This field will be added to the Issue Symbol Directory message format in the 4th Quarter 2015. Once added, this field will identify the security sub-type for the issue as assigned by Nasdaq.

The allowable values are:

Code	Value
A	Trust Preferred
AI	Alpha Index ETNs
B	Index Linked Note
C	Common Shares
CB	Commodity Based Trust Shares
CF	Commodity Futures Trust Shares
CL	Commodity-Linked Securities
CM	Commodity Index Trust Shares
CO	Collateralized Mortgage Obligation
CT	Currency Trust Shares
CU	Commodity-Currency-Linked Securities
CW	Currency Warrants
D	Global Depositary Shares
E	ETF-Unit Investment Trust
EG	Equity Gold Shares
EI	ETN-Equity Index-Linked Securities
EM	Exchange Traded Managed Fund (ETMF)
EN	Exchange Traded Note
EU	Equity Units
F	HOLDRS
FI	ETN-Fixed Income-Linked Securities
FL	ETN-Futures-Linked Securities
G	Exchange Traded Debt
I	ETF-Management Investment Company
IR	Interest Rate
IW	Index Warrant
IX	Index-Linked Exchangeable Notes
J	Corporate Backed Trust Security
L	Contingent Litigation Right/Warrant
LL	Limited Liability Company

Code	Value
M	Equity Linked Note
MF	Managed Fund Shares
ML	ETN-Multi-Factor Index-Linked Securities
MT	Managed Trust Securities
N	NY Registry Shares
O	Income Depositary Shares
P	Third Party Trust Certificate
PP	Poison Pill
PU	Partnership Units
Q	Closed End Funds
R	Reg-S
RC	Commodity-Redeemable Commodity-Linked Securities
RF	ETN-Redeemable Futures-Linked Securities
RT	REIT
RU	Commodity-Redeemable Currency-Linked Securities
S	SEED
SC	Spot Rate Closing
SI	Spot Rate Intraday
T	Tracking Stock
TC	Trust Certificates
TU	Trust Units
U	Portal
V	Contingent Value Right
W	Trust Issued Receipts
WC	World Currency Option
X	Trust
Y	Other
Z	N/A

(Note: The list above reflects the allowable values in the Nasdaq security master database. Only a subset of these values are currently in use.)

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 Depository Receipt
B	Bond
C	Common Stock
F	Depository Receipt
I	144A
L	Limited Partnership
N	Note
O	Ordinary Shares

Code	Value
P	Preferred Stock
Q	Other Securities
R	Rights
S	Shares of Beneficial Interest
T	Convertible Debenture
U	Unit
V	Units of Beneficial Interest
W	Warrant

(Note: The list above reflects the allowable values in the Nasdaq security master database. Only a subset of these values are currently in use.)

L

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

LULD Price Band Effective Time (Existing Message Header)

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 HHMMSSCCC.

LULD Price Band Effective Time (New Message Header-effective July 27, 2015)

Category A – Type P

9 bytes, alphanumeric field (including special characters). LULD Price Band Effective Time field will be modified to contain a "wall time" time value precise to the microsecond level for the new message format (i.e. Message Header/Session Identifier = '1') in the format "HMSnnnnnn", where:

- H: an ASCII-displayable character representing the hours portion of the timestamp; values are defined in Appendix F
- M: an ASCII-displayable character representing the minutes portion of the timestamp; values are defined in Appendix F
- S: an ASCII-displayable character representing the seconds portion of the timestamp; values are defined in Appendix F
- nnnnnn: microsecond portion of timestamp (numeric)

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:

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

Market Center (MC) ID

Category A – Type K

1 byte, Alphanumeric. Left justified, space filled. Indicates the market center requesting the 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
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 Participant Identifier (MPID)

Category Q – Type M; Category Q – Type N

4 bytes, Alphanumeric. This field indicates the unique four-character identifier assigned by FINRA to the market participant. FINRA will provide its market participant identifier and firm name information to market data vendors via the following Internet site: http://www.finra.org/RegulatorySystems/ADF/Participants/index.htm.

Market Participant (MP) Location ID

Category Q – Type M; Category Q – Type N

1 byte, Alphanumeric (including special characters). This field indicates the office location or trading desk of market participant quoting the issue. If no location is defined for the market participant, this field will be space filled.

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.**

N

FINRA BBO Appendage Indicator

Category Q – Type M; Category Q – Type N

1 byte, Alphanumeric. As of **Monday, November 18, 2013**, the UTP SIP will no longer populate the FINRA ADF BBO Appendage indicator field in the Short Form (Category Q - Type M) and Long Form (Category Q – Type N) on OMDF. The field will be space filled.

Within the Quotation message, the FINRA ADF BBO Indicator will denote the type of appendage to be included. This field will always be space filled:

Code	Value
<space>	**No FINRA BBO Appendage exists**
0	**No FINRA BBO Change** – Current MP quote does not affect the FINRA BBO. Vendors should continue to show the existing FINRA BBO. No appendage required.
1	**No FINRA BBO Exists** – There is no calculation of the FINRA BBO. Vendors should show the FINRA BBO fields as blank. No appendage is required.
2	**FINRA BBO Short Form Appendage Attached** – A new FINRA BBO was generated and the new information is contained in the attached short form appendage.
3	**FINRA BBO Long Form Appendage Attached** – A new FINRA BBO was generated and the new information is contained in the attached long form appendage.

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 – Types C, D

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

Q

Quote Condition

Category Q – Type M; Category Q – Type N; Both Long and Short Form Appendages to Category Q – Types M, N

1 byte, Alphanumeric. This field defines the condition applicable to the quote message. For descriptions of these conditions, refer to Appendix B – Glossary of Terms. The allowable values are as follows:

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

Note: Only conditions with an asterisk "" should be included in the FINRA BBO calculation.*

R

Reason Code

Category A – Type H

6 bytes, Alphanumeric. . This alphanumeric field indicates the reason for the current trading action status. 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
LUDP	Volatility Trading Pause
LUDS	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, 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 Q – Type M; Category Q – Type N; Category A – Types C, D

1 byte, Alphanumeric. Space filled for initial release. This field, within the FINRA ADF Quotation message formats, is reserved for future use.

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

T

Text

Category A – Type A

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

7.0 Quotation Message Processing Guidelines

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

7.1 Hours of Operation

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 OMDF 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.

7.2 Scope of Data

Under the SEC rules, the Financial Industry Regulatory Authority (FINRA) must provide the individual market participant quotes in its Alternative Display Facility (ADF) to the SIP. FINRA will provide its market participant identifier and firm name information to market data vendors via the following Internet site:
http://www.finra.org/RegulatorySystems/ADF/Participants/index.htm

Please note that market data vendors cannot use OMDF data feed by itself to satisfy the US Securities and Exchange Commission (SEC) Vendor display rule.(Rule 11Ac1-2, 17 CFR 240.11 Ac1-2). Market Data Vendors must subscribe to the UQDF data feed to obtain the national best bid and offer information as well as the UTDF data feed to obtain the consolidated trade data outlined in the SEC rule.

Under the UTP Plan, the SIP will process quotation and trade data from registered UTP participants for securities listed on the NASDAQ Global Select and Global Market 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. OMDF 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)

7.3 Opening Process

The FINRA ADF is required to refresh its quotations for NASDAQ Listed issues at the beginning of each business day. FINRA may submit its full spin of quotation positions to the SIP between 04:00 and 09:30.

7.4 Intra-Day Quote Processing

The U.S. market session runs from 09:30 to 16:00. During the US Session, the FINRA ADF is expected to submit quotation and trade data to the SIP. The FINRA ADF 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).

7.4.1 Market Center Originator ID

In the OMDF 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. For the FINRA ADF market center, the Originator Ids is as follows:

Originator Market Center ID	UTP Participant Name
D	FINRA ADF

In addition, the OMDF message header may contain the following Market Center Originator Ids for administrative and control messages, but not for quotation message formats:

Market Center Originator ID	UTP Participant Name
A	NYSE MKT
B	NASDAQ OMX BX
C	National Stock Exchange
E	Market Independent (SIP Generated)
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
	BATS Y-Exchange, Inc
Z	BATS Exchange Inc

7.4.2 Market Participant Quotes

OMDF disseminates Bid and Ask quotation data for FINRA member firms that use its Alternative Display Facility to transact business in NASDAQ Listed issues. Please note that FINRA is the regulator for the over-the-counter (OTC) market in the United States.

Through the FINRA ADF, registered market participants may enter quotation and trade data for NASDAQ Listed issues. The FINRA ADF submits intra-day quotation updates for its system to the SIP for downstream dissemination.

FINRA is responsible for establishing the marketplace rules for its member firms. FINRA is also responsible for ensuring the data quality of its market participant and BBO quotations prior to submission to the SIP.

7.4.3 Price

FINRA ADF submits quotations and trades to the SIP 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 short form message formats, the SIP may remove any leading or trailing zeros from the bid and ask price fields for outbound dissemination. The SIP will not, however, round or materially alter the bid or ask price itself. Market data vendors should, therefore, be prepared to process all the Price Denominator codes outlined in Appendix A of this document.

7.4.4 Quote Condition

FINRA ADF is required to enter a Quote Condition as part of its inbound message to the SIP. The SIP supports the following Quote Conditions for NASDAQ Listed 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

In the table above, only those Quote Conditions marked with an asterisk (*) will be included in the NBBO calculation. For a definition of these values, please refer to Appendix B – The Glossary of Terms.

7.4.5 Closing Process

During a normal business day, FINRA ADF may close their market participant and BBO quotes anytime, when a market participant closes its quote, FINRA will send a quote update with the Quote Condition value of “L” to be disseminated via OMDF.

7.4.6 FINRA ADF Best Bid and Offer (BBO) Quotations

OMDF provides data for over-the-counter brokers that quote securities listed on the NASDAQ Stock Market via the FINRA Alternative Display Facility (FINRA ADF).

With the recent Regulation NMS and Limit Up / Limit Down regulatory changes that have been implemented, FINRA requested the UTP SIP to implement a processing change to stop the FINRA ADF BBO Appendage to the Short Form (Category Q - Type M) and Long Form (Category Q – Type N) FINRA ADF Market Participant Quotation Messages on OMDF. The UTP Operating Committee (UTPOC) approved the OMDF change request.

The FINRA ADF will calculate and provide its best bid and offer quote to the SIP for downstream dissemination via the UTP Participant BBO Quotation message format on the UTP Quotation Data Feed (UQDF) product.

The FINRA BBO Quotation should reflect the highest bid price and lowest ask price available in the ADF system. Under the SEC Quote Rule, the FINRA BBO should reflect the largest size shown by a single market participant at the best prices.

7.4.7 FINRA BBO Appendage Indicator

As of **Monday, November 18, 2013**, the UTP SIP will no longer populate the FINRA ADF BBO Appendage indicator field in the Short Form (Category Q - Type M) and Long Form (Category Q – Type N) on OMDF. The field will be space filled.

Code	Value
<space>	**No FINRA BBO Appendage exists**
0	**No FINRA BBO Change** – Current MP quote does not affect the FINRA BBO. No appendage required.
1	**No FINRA BBO Exists** – FINRA is unable to calculate a BBO. Vendors should show the FINRA BBO fields as blank. No appendage is required.
2	**FINRA BBO Short Form Appendage Attached** –FINRA BBO was generated and the information is contained in the attached short form appendage.
3	**FINRA BBO Long Form Appendage Attached** – A new FINRA BBO was generated and the new information is contained in the attached long form appendage.

8.0 Administrative Message Processing Guidelines

OMDF will use administrative messages to communicate intra-day trading halt information for individual issues. In addition, OMDF will support 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 OMDF 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 the FINRA 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

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

UTP Participants have requested the ability to implement a market center specific trading action message, the SIP will disseminate the Market Center Trading Action message (Category A - Type K) whenever a halt / pause and resume condition was enforced by a specific market center.

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 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 Issue Symbol Directory

Since February 2007, NASDAQ has had the capability to accept and distribute NASDAQ-listed issues with 4-characters or less. In July 2007, the Securities and Exchange Commission (SEC) approved NASDAQ's filing to allow companies with three-letter stock symbols to keep their existing ticker symbols after switching to The NASDAQ Stock Market.

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.

- **Issue Type / Issue Sub-Type:** These fields are intended to describe the Nasdaq instrument attributes. Please note that Exchange Traded Managed Fund (ETMF) shares, which will be disseminated with the Issue Sub-Type of "EM", are quoted in proxy price format only. Please refer to the ETMF product page on the Nasdaq Trader website for details on this asset class.

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.

8.5 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.

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".

8.6 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.

* Exchange Traded Mutual Funds (ETMFs) – Proxy prices will be used as the basis for calculation and publication of Price Bands.

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 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 “LULDP” reason code.

8.7 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.

8.7.1 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.

8.7.2 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.

9.0 Control Message Processing Guidelines

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 OMDF Message Header.

Control messages are used to notify OMDF subscribers of certain system events. The SIP supports the following control messages on the OMDF 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	K	End of Retransmission Requests
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, Emergency Market Halt, and Emergency Market Resume. 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.

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 End of Day message will be sent three times, at one minute intervals, and will contain a Message Sequence Number of one greater than the highest Message Sequence Number previously transmitted. The Message Sequence Number will not be incremented when the message is sent three times in the normal message transmission sequence.

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. The FINRA may elect to provide its own 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. The FINRA may elect to provide its own Market Session Close control message.

9.2.5 End Of Retransmission Requests

Category C – Type K

This message signals that the SIP may not honor any additional retransmission requests; however, it will continue to process any messages in queue. 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 of one greater than the highest Message Sequence Number previously transmitted. The Message Sequence Number in the subsequent two control messages will not be incremented.

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 OMDF 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 first End of Transmissions will contain a Message Sequence Number of one greater than the highest Message Sequence Number previously transmitted. The Message Sequence Numbers in the subsequent two control messages 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 will be set ahead 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: If the UTP participant requesting a quote wipeout is the FINRA ADF, the FINRA BBO Appendage Indicator value will be set to "1" (No BBO exists) as part of the wipe-out message. Additionally, for the FINRA ADF, the SIP will disseminate zero/no quotes for the market participant positions on OMDF.

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 dataproducts@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 must 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.

Release Type	When Used	Description
Phase-In Period	New data element or data processing change is driven by either: New regulatory rule OR New NASDAQ trading platform	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. If there is an associated data format change, firms will only see the new data elements for those phased-in securities.

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.

10.4 Identification of test data

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

Test Retransmission Requester: In Section 3.4 of this document, the 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/symboldirectory/symbol.stm.

During non-market hours, the 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.

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

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

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 UTP SIP. The BBO also includes a condition field to denote the state of the quote (e.g., open or closed).
ECNs:	Electronic Communication Networks (ECNs) – Under the SEC Order Handling Rules, Electronic Communication Networks have the ability to participate directly with NASDAQ systems. An ECN quote is based on the customer orders in their system. Therefore ECN quotes may be one-sided, two-sided, or on neither side of the market (zero bid/zero ask). If an ECN only maintains a one-sided quote the other side will be displayed as zero.
Last Sale Price	The latest trade transaction, with an eligible sale condition modifier, received by the SIP by a UTP participant.
Level 1 Service:	NASDAQ data feed product that features real-time market maker and BBO quotes for OTC Bulletin Board (OTCBB) issues.
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 Best Bid and Offer (FINRA ADF BBO)	Abbreviation for National Association of Securities Dealers' Alternative Display Facility. The highest bid and lowest ask price shown by FINRA ADF members. The size should be the largest size of the FINRA member at the top price level.
FINRA ADF:	Abbreviation for National Association of Securities Dealers' 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. For more information on the ADF, please refer to the FINRA website at http://www.finra.org/.
NASDAQ Best Bid and Offer (NASDAQ BBO)	The highest bid and lowest ask price shown by NASDAQ exchange members. The size should be an aggregate of all the members' display quotes at the top price level.
National Best Bid and Offer (NBBO):	The highest bid price and lowest ask price shown by any market center quoting a NASDAQ issue. Calculation methodology of the size and market center at the bid and ask prices will be defined by the UTP plan.
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)
Order Imbalance	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.
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 requirements.
Manual Bid, automated Ask	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.
Manual Bid and Ask	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.
Manual Bid and Ask (non-firm)	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.
Quote Closed	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
Non-firm Quote	The UTP participant has suspended the firm quote obligation for the reported security.
Opening Quote	The first quote from a given UTP participant for a security.
Regular, Two Sided Open Quote	Indicates a normal trading environment where the UTP participant is showing interest on both sides of the market.

Regular, One Sided Open Quote	Indicates a normal trading environment where the UTP participant is showing interest on only one side of the market (Bid or Ask).
Order Influx	A halt condition used when there is a sudden order influx. To prevent a disorderly market, trading is temporarily suspended by the UTP participant.
No Open/No Resume	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.
Short Sale Bid Tick:	Under NASDAQ Marketplace Rules, its market participants are prohibited from effecting short sales by at or below the Inside Bid when the current Inside Bid is lower than the preceding Inside Bid. This "Bid Tick Test" currently applies to NASDAQ market participants in NASDAQ Global Select and NASDAQ Global Market issues.
SIP:	Abbreviation for Security Information Processor. The firm that collects quotation and trade information from all exchanges and markets in listed issues 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 exchanges to extend "unlisted trading privileges" on other exchange or markets.

Appendix C –Transmission Schedule

Note: All times referenced regarding OMDF are approximate and are stated in US Eastern Time. This schedule is based on a normal day. The UTP Plan reserves the right 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
	Administrative Messages (Free form text messages are generated by the SIP and market centers on an as-needed basis)	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 Various
04:00 to 20:00	**FINRA ADF Quotation Messages** (Possible pre-opening spin between 04:02 and 09:30; Live updates from 04:02 to 18:30)	Q	M, N	U	D
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 – Tentative** (To be provided at the discretion of the FINRA)	C	O	U	Various
16:00	**U.S. Session Close Message– Tentative** (To be provided at the discretion of the FINRA)	C	C	U	Various
20:10	**End of Day Message** (disseminated 3 times at approx 1 minute intervals)	C	J	A	E

Time	Transmission	Message Category	Message Type	Session ID	Market Center ID
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

Appendix D – Deleted

Intentionally left blank

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.

Appendix F –ASCII Conversion matrix

ASCII

From HwB

ASCII=American Standard Code for Information Interchange

ASCII Char	Dec	Hex	Description	base64 Time Digit	base95 Time Digit	ASCII Char	Dec	Hex	Description	base64 Time Digit	base95 Time Digit
				Date/Time LULD Price Band Effective Time	microseconds from midnight					Date/Time LULD Price Band Effective Time	microseconds from midnight
	32	20	Space		0	P	80	50	Uppercase P	32	48
!	33	21	Exclamation		1	Q	81	51	Uppercase Q	33	49
"	34	22	Double quotes		2	R	82	52	Uppercase R	34	50
#	35	23	Number		3	S	83	53	Uppercase S	35	51
$	36	24	Dollar		4	T	84	54	Uppercase T	36	52
%	37	25	Percent		5	U	85	55	Uppercase U	37	53
&	38	26	Ampersand		6	V	86	56	Uppercase V	38	54
'	39	27	Single Quote		7	W	87	57	Uppercase W	39	55
(	40	28	Open Parenthesis		8	X	88	58	Uppercase X	40	56
)	41	29	Close Parenthesis		9	Y	89	59	Uppercase Y	41	57
*	42	2A	Asterisk		10	Z	90	5A	Uppercase Z	42	58
+	43	2B	Plus		11	[	91	5B	Opening bracket	43	59
,	44	2C	Comma		12	\	92	5C	Backslash	44	60
-	45	2D	Hyphen		13	]	93	5D	Closing bracket	45	61
.	46	2E	Period		14	^	94	5E	Caret	46	62
/	47	2F	Slash or Divide		15	_	95	5F	Underscore	47	63
0	48	30	Zero	0	16	`	96	60	Grave accent	48	64
1	49	31	One	1	17	a	97	61	Lowercase a	49	65
2	50	32	Two	2	18	b	98	62	Lowercase b	50	66
3	51	33	Three	3	19	c	99	63	Lowercase c	51	67
4	52	34	Four	4	20	d	100	64	Lowercase d	52	68
5	53	35	Five	5	21	e	101	65	Lowercase e	53	69
6	54	36	Six	6	22	f	102	66	Lowercase f	54	70
7	55	37	Seven	7	23	g	103	67	Lowercase g	55	71
8	56	38	Eight	8	24	h	104	68	Lowercase h	56	72
9	57	39	Nine	9	25	i	105	69	Lowercase i	57	73
:	58	3A	Colon	10	26	j	106	6A	Lowercase j	58	74
;	59	3B	Semicolon	11	27	k	107	6B	Lowercase k	59	75
<	60	3C	Less than	12	28	l	108	6C	Lowercase l	60	76
=	61	3D	Equals	13	29	m	109	6D	Lowercase m	61	77
>	62	3E	Greater than	14	30	n	110	6E	Lowercase n	62	78
?	63	3F	Question mark	15	31	o	111	6F	Lowercase o	63	79
@	64	40	At symbol	16	32	p	112	70	Lowercase p		80
A	65	41	Uppercase A	17	33	q	113	71	Lowercase q		81
B	66	42	Uppercase B	18	34	r	114	72	Lowercase r		82
C	67	43	Uppercase C	19	35	s	115	73	Lowercase s		83
D	68	44	Uppercase D	20	36	t	116	74	Lowercase t		84
E	69	45	Uppercase E	21	37	u	117	75	Lowercase u		85
F	70	46	Uppercase F	22	38	v	118	76	Lowercase v		86
G	71	47	Uppercase G	23	39	w	119	77	Lowercase w		87
H	72	48	Uppercase H	24	40	x	120	78	Lowercase x		88
I	73	49	Uppercase I	25	41	y	121	79	Lowercase y		89
J	74	4A	Uppercase J	26	42	z	122	7A	Lowercase z		90
K	75	4B	Uppercase K	27	43	{	123	7B	Opening Brace		91
L	76	4C	Uppercase L	28	44	|	124	7C	Vertical Bar		92
M	77	4D	Uppercase M	29	45	}	125	7D	Closing Brace		93
N	78	4E	Uppercase N	30	46	~	126	7E	Equivalency Sign-Tilde		94
O	79	4F	Uppercase O	31	47						

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	• Changed WorldCom network to Market Data Network (MDN) from Enterprise IP-Multicast Network (EIN). • Changed IP sub-net addresses in Sections 3.2 and 3.5.1. • Added words “Market Center” to the “Originator ID” field name. • Added Appendix H – OMDF Test Cycle Messages to document. • Changed the Quote Condition value for Regular One-Sided Open Quotes to “Y”.
1.2	6/14/2002	• Added definition of IP Multicast protocol to section 3.2. • Added allowable Market Center ID values to section 4.6. Added note to show that certain values will only be found in administrative and control messages. • Revised the processing for Trading Actions in section 9.2. • Added Market Center ID column to Appendix C – Transmission Schedule • Added value to Appendix E – Symbol Suffixes: “S” Shares of Beneficial Interest (SBI).
1.2a	6/18/2002	• Added Section 11 – Format Release & Testing Guidelines to document.
1.2b	6/27/2002	• Changed the timing of the End of Day, End of Retransmission Requests, and End of Transmissions control messages in Appendix C.
2.0	5/30/2003	• 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. • Modified 8.2 to include link to NASD website for Market Participant information. • Removed Appendix D – Data Mapping from Legacy Services. • Added Appendix I – Data Quality Contacts to document.
4.0	10/10/2003	• Updated Section 1 to reflect the data feed enhancements planned for in the first quarter 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. • Added a new Quote Wipe-Out control message (Category C – Type P) to Sections 4.2 and 10.2. • Replaced Appendix H – Test Cycle Messages: Replaced all messages to conform to the new message header format.
4.0a	10/31/2003	• Modified Sections 2.1 & 3.2 to increase the number of logical data channels for UTDF to three (from two) and to reflect the new UTDF data channel alphabetic split.

Version	Date	Description of Documentation Change(s)
5.0	6/4/2004	• 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.
5.0a	7/23/2004	• Updated the Bandwidth call within the spec to reflect the correct MCI bandwith allocation. From 462,400 to 495,000.
5.1	12/01/2004	• Consolidated the Interface and Transmission Protocol sections. • Renumbered and repaginated document as necessary. • Updated section 1.3 (connectivity options) to reflect that Radianz and SAVVIS now support NASDAQ data feed products.
5.1a	12/20/2004	• Added link to website in section 1.3 for current list of Extranet Providers.
6.0	01/03/2005	• Added Section 1.2.1 detailing SIP 6.0 enhancements. • Added the new Market Center Identifiers for New York Stock Echange (“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	03/04/2005	• 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 8.4. • 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	06/01/2005	• 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	• Modified Section 1.2.1 to reflect SIP Enhancement Release 7.0 o 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.

Version	Date	Description of Documentation Change(s)
8.0	10/28/2005	• 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, 7.4.1 and 7.4.2.2. • Redefined the Quote Condition Values in section 6.0 and in Appendix B – Glossary of Terms. New definitions are as follows: o Manual Ask, automatic Bid (condition 'A'); o Manual Bid automatic Ask (condition 'B'); and o 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	2/06/2006	• 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: o Added IPO/Halt opening process to the upcoming initiatives. o 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. ▪ 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	03/17/2006	• Updated Section 1.2 – to reflect data feed changes to be implemented with SIP 9.0 enhancement release. o Modified Quote Condition tables to reflect the new value of Manual Bid and Offer (non-firm) "U". • Added Section 1.2.3 on New NASDAQ Listed Symbology to take affect January 31, 2007.
9.0a	4/01/2006	• 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. o Q = NASDAQ Global Select Market o G = NASDAQ Global Market o S = NASDAQ Capital Market
9.0b	6/09/2006	• 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	09/01/2006	• Modified Section 1.2 to reflect the 2006 initiatives.
10.1	03/16/2007	• Modified Section 1.2 – to reflect the 2007 Data Feed Enhancements. o 1.2.1 Bandwidth Allocation Changes • Modified document to reflect the increased bandwidth allocations to take effect June 2007.

Version	Date	Description of Documentation Change(s)
10.2	1/03/2008	• Updated Section 1.2 – Upcoming Initiatives section to reflect data feed changes to be implemented. o 1.2.2 Financial Industry Regulatory Authority (FINRA) name change request
10.3	04/10/2008	• Updated Section 1.2 – Upcoming Initiatives section to reflect data feed changes to be implemented. • Added new Emergency Market Condition control message. o 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.
10.3a	6/29/2008	• Modified section 2.6 – Retransmission Capability to reflect new email and phone contact information.
10.3b	08/19/2008	• Added the new Market Center Identifier for BATS Exchange Inc (“Z”) to sections 3.6, 6.0 and 7.4.1.
11.0	04/17/2009	• 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	• Added the new Market Center Identifiers to sections 3.6, 6.0 and 7.4.1.for: o BATS Y-Exchange Inc. (BATS), ("Y") o EDGA Exchange, Inc. (EDGA), (“J”) o EDGX Exchange, Inc. (EDGX), (“K”)
12.1	05/25/2010	• Added new allowable reason codes to support the new Single Stock trading pause functionality.
12.1a	07/02/2010	• 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	• 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	• Revised Appendix C to reflect the start time for Reg SHO messages from 6:45 to 6:00 AM

Version	Date	Description of Documentation Change(s)
13.0	06/12/2012	• Revised the Market Center Identifiers to sections 3.6, 6.0 and 7.4.1.for: o 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: o 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 o 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 o 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: o 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. o 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	• 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)
13.0b	08/27/2012	• Modified the Reason Code Values for LULD and MWCB. The following new codes will be supported: o LUDP o MWC1, MWC2, MWC3, MWCQ • New LULD/MWCB administrative messages will be implemented with the SEC release scheduled for February 2013.
13.0c	10/17/2012	• Modified document to reflect the increased bandwidth allocations to take effect January 2013.
13.0d	01/14/2013	• Added a new reason code for MWCB Halts to reflect when a Level 3 breach is being carried over to the next trading day. o MWC0

Version	Date	Description of Documentation Change(s)
13.0e	02/22/2013	• 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. o LUDS
13.0f	03/08/2013	• Updated the Transmission Schedule (Appendix C) to account for NASDAQ's Early Market Open: o Moved up the Start of Day message time by two minutes. o 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.
13.1	07/05/2013	• Added new Financial Status Indicator value of "C" Creation Suspended. • Modified document and removed reference of the legacy Emergency Market Condition Processing.
13.1a	08/19/2013	• Modified document to remove the FINRA ADF BBO appendage population.
13.2	04/14/2014	• Modified document to reflect the increased bandwidth allocations to take effect June 30, 2014.
14.0	10/13/2014	• Modified Document to reflect the message header change. o Modified the SIP TimeStamp from 9 bytes to 6 bytes ASCII base95 o Added TimeStamp1 in ASCII base95 o Added Transaction ID, reserved for SIP use only • Revised the LULD Price Band Effective Time
14.1	2/6/2015	• Modified Document to include second TimeStamp2 • Modified Bandwidth Allocations to accommodate increased Message Header Format
14.2	4/22/2015	• Modified Section 3 to reflect the new Timestamp 1 & 2 definitions • Modified document to reflect the increased bandwidth allocations to take effect June 30, 2015.
14.3	7/1/2015	• Updated Issue Symbol Directory (Category A – Type B) message format to support Issue Sub-Type field. • Added definition for Issue Sub-Type field. • Updated values for Issue Type field to match Nasdaq's currently supported codes.

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. Visit the participant's page on UTPPLAN.com