UTP

UNLISTED TRADING PRIVILEGES

UTP SYSTEMS NEW EXPANDED MESSAGE HEADER
FREQUENTLY ASKED QUESTIONS (FAQs)

The UTP SIP is making modifications to the Message Header protocols to support Participant Timestamp information in the outbound multicast data feeds.

NEW REVISED MESSAGE HEADER

1. **Why are new Revised Message Headers being introduced?**
   - UTP will introduce new Revised Message Headers to support Participant Timestamp information in the UTP Data Feeds (UQDF/UTDF and OMDF).
     i. The Timestamp definitions are being determined and will be provided as soon as they become available.

2. **Does my organization have to make system changes to handle the new Revised Message Headers?**
   - **Yes.** As the Message Header can represent an entire message or appears before the Message Text segment in each UTP message transmitted. The new Revised Message Header contains a total **43** bytes versus the existing (current) Message Header which contains **24** bytes. While Data Recipients can elect to process or ignore the new fields introduced in the new Revised Message Header to the extent that it does not impact their normal data processing, modifications are required to support:
     i. new Revised Message Header total length
     ii. new Message Header Identifier values
     iii. new multicast timestamp representation (microseconds since midnight)

3. **What are the differences between the existing outbound Message Header and the new Revised Message Header?**
   The following table details the changes between the old (existing) and new data feed Revised Message Header fields:

MULTICAST OUTBOUND UTP TIMESTAMP CHANGE			
EXISTING OUTBOUND		**PROPOSED OUTBOUND**	
MESSAGE HEADER FORMAT		**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	Timestamp 1	6
(Not Applicable)	N/A	Timestamp 2	6
(Not Applicable)	N/A	Transaction ID	7
Total Length	**24**	**Total Length**	**43**

FAQs (continued)

<mark>OLD MESSAGE HEADER AND NEW REVISED MESSAGE HEADER PROCESSING</mark>

4. **Are Data Recipients expected to process both the existing (current) Message Header and the Revised Message Header after the implementation of the Revised Message Headers?**
    - **Yes.** UTP will support both the new Revised Message Header formats and the existing (current) Message Header formats for a transitional period allowing for a rapid fall back as such Data Recipients should be prepared to process both the new Revised Message Header formats and the existing (current) Message Header format.
    - Data Recipients that are unable to process both old and new Message Header formats **may cease to receive multicast data in the event of a fall back**.

5. **Will we receive a System Status notification stating that a fall back from the new Revised Message Header to the old Message Header has taken place?**
    - **Yes.** A System Status notification will be provided subsequent to the fall back event. If a system(s) issue occurs necessitating a fall back the system will revert to the old Message Header immediately and Data Recipients will begin to receive the old Message Header and cease to receive the new Revised Message Header.

6. **Will UTP disseminate both the old Message Header and the new Revised Message Header concurrently during the trading day?**
    - **No.** UTP will not disseminate the old Message Header and the new Revised Message Header concurrently during the trading day. However, as previously stated, in the event of a fall back UTP will revert to the old Message Header immediately and Data Recipients will begin to receive the old Message Header and cease to receive the new Revised Message Header until further notification.

7. **If a fall back occurs, will the new Revised Message Header be re-implemented the next day?**
    - Data Recipients will be notified what Message Header format will be used the following trading day.

8. **Will I see a gap in messages when the fall back from the old Message Header to the new Revised Message Header occurs?**
    - **No**. It is not expected that a gap in messages will be experienced.

TIMESTAMP AND UTP SIP TIMESTAMP

9. **Why is the representation of the Timestamp format in microseconds since midnight?**

    - To allow for finer time granularity representation while optimizing on bandwidth (in terms of the bytes required to represent time).

10. **Why is the representation of the UTP SIP Timestamp format being changed to microseconds since midnight?**

    - The UTP SIP Timestamp format is being changed to maintain consistency with the Participant Timestamp representation.

11. **How will time fields within existing message formats be changed?**

    - Within the **Price Band Message's (category 'A', type 'P')** 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.
    - 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)

12. **What are the definitions for the two new timestamp fields and how will these be used by participants?**
    As requested by the Policy/Technical Committees and in agreement with the Securities Exchange Commission (SEC), the SIPs will make modifications to the Message Header formats to support new Timestamp information. The purpose of the new Timestamp information is to allow Data Recipients to identify the differences between the current Multicast Output Timestamp the Matching Engine timestamp of the Participant Exchange when an order or trade occurs or the time of execution that a FINRA member reports to a FINRA Trade Reporting Facility.

    The 'Timestamp 1' field in the new Participant Expanded Message Header will be used by the Participants to provide the Timestamp in terms of the number of microseconds since midnight Eastern Time (ET).

    The 'Timestamp 2' field in the new Participant Expanded Message Header will be used by the FINRA ADF and/or a FINRA TRF to provide the Timestamp in terms of the number of microseconds since midnight Eastern Time (ET).

Trade Feed Proposed Definitions

Timestamp 1:
- **If from an Exchange:** denotes the Exchange Matching Engine Publication timestamp for a transaction. 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) and/or a FINRA Trade Reporting Facility (TRF):** denotes the time of execution that a FINRA member reports to the FINRA ADF or a FINRA TRF. 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).

Timestamp 2:
- **If from an Exchange:** Timestamp 2 will be blank.
- **If from the FINRA Alternative Display Facility (ADF) or a FINRA Trade Reporting Facility (TRF):**
  - **If the FINRA ADF or a FINRA TRF provides a proprietary feed of trades reported by the facility, then the FINRA facility will publish the time of the transmission as also published on the facility's proprietary trade feed.** The TRF or ADF shall convert times that it reports trades on its proprietary trade 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 or the FINRA TRF facility does not have a proprietary trade feed then Timestamp 2 will be blank.**

Quote Feed Proposed Definitions

Timestamp 1:
- **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).

Timestamp 2:
- **If from an Exchange:** Timestamp 2 will be blank.
- **If from the FINRA Alternative Display Facility (ADF):**
  - **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.**

FAQs (continued)

13. **When are the new Revised Message Headers being implemented?**
    - As announced in UTP Vendor Alert #2015-06 , to ensure that direct data feed subscribers are ready to handle the new Message Header Formats, the UTP SIP will offer nightly and Saturday testing opportunities. The UTP SIP, working closely with the UTP Operating Committee and industry representatives, has established the following testing schedule:

Type of Testing	Scheduled Dates	Description
Evening Test Transmissions	Continues nightly through Friday, July 24, 2015	A test file will be recorded to be replayed in the evenings from 9:00 p.m. to 10:30 p.m., ET, to all UTP data feed subscribers. No registration is required to participate in evening testing. Vendor evening format testing continues for the message header changes (including Timestamp 1 and Timestamp 2) and the new sale condition modifier changes (Contingent Trades ".V" and Qualified Contingent Trade ".7") on all outbound SIP feeds (UQDF; UTDF and OMDF).
Saturday User Acceptance Test (UAT)	Saturday, May 30, 2015; June 20, 2015*; Saturday, July 11, 2015; and Saturday July 25, 2015 (Confidence Test)	UTP participants will be invited to enter data to test the new Participant Input Expanded Message Header functionality. As it is generated, the UTP SIP will disseminate the new Expanded Message Header test data via the UTP data feeds. Advance registration is requested for the UATs.
Production Launch	Monday, July 27, 2015	Production implementation of the Expanded Message Header functionality and revised Sale Condition Modifier changes. This will be implemented as a "Hot Cut" release, vendors **must** be prepared to process the new expanded message header format or **risk the loss of data**.

*Note: As part of the combined SIAC/UTP SIP Hot/Warm Quarterly Failover tests scheduled for June 20, 2015, UTP will support testing of the new Expanded Message Headers at the primary and backup data center facilities. The new Multicast Output Expanded Message Header will be disseminated over the UTP Data Feeds.

FAQs (continued)

TESTING SUPPORT

14. **Will testing be supported prior to implementation?**
    - **Yes.** Replay files with test data including the new Revised Message Headers are available beginning. Test data will be disseminated via Evening test transmissions.
    - For evening testing opportunities, the UTP SIP will create sample messages in the new formats to be broadcast on select weeknights from 21:00 to 22:30.

15. **Am I required to certify my testing?**
    - **Yes.** To coordinate testing, and to provide written confirmation of testing, which is required of all Direct Data Recipients, please register as follows:
        - Send an E-mail with your name, organization name, phone number, and date of test request(s) to products@utpplan.com.

ADDITIONAL INFORMATION

16. **Where can I access the latest Multicast Output Specifications?**
    - Refer to the UQDF, UTDF and/or OMDF specification documents.

17. **Who do I contact for additional information?**
    If you have any questions, please send an email to products@utpplan.com.