



Quote MTF

# Level 1 ITCH 3.0 Specification

17 March 2011  
Version 1.0



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## Revision History

Date	Revision	Author	Description of Change
17 March 2011	1.00	Andres Navarro	Created

## 1. Overview

Quote MTF level 1 ITCH is a direct data feed product offered by Quote MTF, which provides the exchange's best bid and offer. Market data distributors may use the level 1 data feed to feed dynamically updating stock tickers, portfolio trackers, trade alert programs, time and quote graphs, and other display systems. For market data administration purposes, Quote MTF level 1 data is part of the Quote MTF basic entitlement.

Quote MTF will provide its Best Bid and Offer Price as well as trading information using the standard ITCH format.

- 1) **Trade and Quotation messages:** To ensure that customers have complete information about Quote MTF Bids Bid and Offer Price, ITCH 3.0 supports a quotation message to reflect current level 1 information in the Quote MTF system. ITCH 3.0 also supports a trade report message and a trade cancel message to reflect Quote MTF trading activities.
- 2) **Administrative messages:** such trading actions and symbol directory messages:
  - a) **Trading action** messages are used to inform market participants when a security is halted or released for trading.
  - b) **Symbol Directory** messages provide basic security data such as the market tier and Financial Status Indicator.
  - c) **Event controls**, such as start of day, end of day and emergency market halt/resume.

## 1. Architecture

The Quote MTF level1 ITCH feed is made up of a series of sequenced messages. Each message is variable in length based on the message type and is composed of non-control ASCII bytes. The messages that make up the ITCH 3.0 protocol are typically delivered using a higher level protocol that takes care of sequencing and delivery guarantees.



Quote MTF offers the level 1 ITCH 3.0 data feed in SoupTCP through the separate session. Please refer to Quote MTF SoupTCP specification document and Quote MTF QTP specification document for the detail of protocol. ITCH is an outbound market data feed only.

## 2. Data Types

All numeric fields are composed of a string of ASCII coded digits, right justified and padding spaces appear on the left as necessary. All alpha fields are left justified and padded on the right with spaces. Prices are given in decimal format with 5 whole number places followed by 5 decimal digits. The whole number portion is padded on the left with spaces; the decimal portion is padded on the right with zeros. The decimal point is implied by position; it does not appear inside the price field.

## 3. Message Formats

The Quote MTF level 1 ITCH feed is composed of a series of messages that describe stock trading actions, stock quotation and stock directory information.

### 4.1 Time Messages

For bandwidth efficiency reasons, Quote MTF will use separate time stamp messages for the ITCH 3.0 product. The messages will be sequenced so that data feed recipients can apply the time stamps properly. The time stamp is broken into two separate messages: seconds and milliseconds. Please note that the timestamp for new seconds will always be immediately followed by a time stamp for new milliseconds.

#### Seconds Message

This message is sent every second for which at least one ITCH 3.0 message is being generated.

##### *Seconds Message*

Name	Offset	Length	Value	Notes
Message Type	0	1	"T"	Seconds Message.
Second	1	5	Numeric	Number of second since midnight.



## Milliseconds Messages

This message is sent every millisecond for which at least one ITCH 3.0 message is being generated.

### *Milliseconds Message*

Name	Offset	Length	Value	Notes
Message Type	0	1	"M"	Milliseconds Message.
Millisecond	1	3	Numeric	Number of milliseconds since last second.

## 4.2 System Event Message

The system event message type is used to signal a market or data feed handler event. The format is as follows:

### *System Event Message*

Name	Offset	Length	Value	Notes
Message Type	0	1	"S"	System Event Message.
Event Code	1	1	Alphanumeric	See System Event Codes below.

Quote MTF supports the following event codes on a daily basis:

### *System Event Codes – Daily*

Code	Explanation
"O"	<i>Start of Messages.</i> Outside of time stamp messages, the start of day message is the first message sent in any trading day.
"P"	<i>Start of Pre-Open.</i> This event message is intended to indicate pre-open market hours; orders are accepted but can only be executed after market open.
"Q"	<i>Start of Market hours.</i> This message is intended to indicate that Market Hours orders are available for execution.
"M"	<i>End of Market hours.</i> This message is intended to indicate that Market Hours orders are no longer available for execution.
"C"	<i>End of Messages.</i> This is always the last message sent in any trading day.



### 4.3 Administrative Messages

#### Stock Directory

At the start of each trading day, Quote MTF disseminates stock directory messages for all active symbols. Market data redistributors should process this message to populate the Financial Status Indicator (required display field) and the Market Category (recommended display field) for Quote MTF-listed issues.

##### *Stock Directory*

Name	Offset	Length	Value	Notes
Message Type	0	1	"R"	Stock Directory Message
Stock	1	10	Alphanumeric	Denotes the security symbol used for Quote MTF in Uniform MTF Symbol format.
Reserve	11	2	Alphanumeric	Reserve
Round Lot Size	13	6	Numeric	Indicates the number of shares that represent a round lot for the issue
Round Lots Only	19	1	Alphanumeric	Indicates if Quote MTF system limits order entry for issue "Y" = only round lots are accepted in this stock "N" = odd/mixed lots are allowed
ISIN	20	12	Alphanumeric	Indicates the ISIN of the security
Internal symbol representation	32	6	Numeric	Indicates if Quote MTF internal symbol, the one used by to process orders
Currency	38	3	Alphabetic	Indicates currency for the symbol

#### Stock Trading Action

Quote MTF uses this administrative message to indicate the current trading status of a security to the trading community.

If a security is absent from the pre-opening Trading Action spin, firms should assume that the security is being treated as halted in the Quote MTF platform at the start of the system hours. Securities may be halted in the Quote MTF system for both regulatory and operational reasons.



After the start of system hours, Quote MTF will use the Trading Action message to relay changes in trading status for an individual security. Messages will be sent when a stock is halted, is released for quotation, or is released for trading.

*Stock Trading Action*

Name	Offset	Length	Value	Notes
Message Type	0	1	"H"	Stock Trading Action Message.
Stock	1	10	Alphanumeric	Denotes the security symbol used for Quote MTF in Uniform MTF Symbol format.
Trading State	11	1	Alphabetic	"H" = Halted "T" = Trading on Quote MTF

**4.4 L1 Quotation Message**

Quote MTF level 1 feed will broadcast a real-time update every time that the exchange's best bid and offer quote is updated during the trading day.

*L1 Quote Message*

Name	Offset	Length	Value	Notes
Message Type	0	1	"W"	L1 Quote message.
Stock	1	10	Alphanumeric	The security symbol (in Uniform MTF Symbol format) for which the order is being added.
Best Bid Price	11	10	Numeric	Denotes the Quote MTF best bid price – the highest price for market buy order(s) in the Quote MTF system.
Best Bid Shares	21	9	Numeric	Denotes the aggregated number of shares available for display within the Quote MTF market center system at the Quote MTF best bid Price.
Best Offer Price	30	10	Numeric	Denotes the Quote MTF exchange's best offer price – the lowest price for market sell order(s) in the Quote MTF system.
Best Offer Shares	40	9	Numeric	Denotes the aggregated number of shares available for display within the Quote MTF market center system at the Quote MTF Best Offer Price.



#### 4.5 Trade Report

This message is sent whenever a Trade is being matched.

##### *Trade Report Message*

Name	Offset	Length	Value	Notes
Message Type	0	1	"O"	Trade Report Message.
Stock	1	10	Alphanumeric	The security symbol (in Uniform MTF Symbol format) for which the stock is being traded.
Trade ID	11	9	Numeric	Quote MTF generated day-unique Match Number of this execution. The match number is also referenced in the Trade Cancel Message.
Price	20	10	Numeric	Execution price
Volume	30	9	Numeric	The number of shares executed.

#### 4.6 Trade Cancel Message

This message is sent whenever a Trade is being cancelled.

##### *Trade Cancel Message*

Name	Offset	Length	Value	Notes
Message Type	0	1	"N"	Trade Cancel Message.
Stock	1	10	Alphanumeric	The security symbol (in Uniform MTF Symbol format) for which the stock is being traded.
Trade ID	11	9	Numeric	Quote MTF generated day-unique Match Number of this Trade.
Price	20	10	Numeric	Original execution price of trade.
Volume	30	9	Numeric	Original traded volume.