

S&P Capital IQ Real-Time Solutions

QuantFEED® Developer's Notice

NASDAQ TOTALVIEW – Feed Update

Reference n°: 20140709 – 17826 – 21453

Effective as of: 28 July 2014*

Action required from users: MANDATORY ACTION



* This is the proposed day for the update of the standard version of the feed handler. For dedicated feed handlers, this date may differ. For the actual day when the changes to your custom feed handler take effect, please contact your QuantFEED® project manager.

S&P Capital IQ Real-Time Solutions (QuantHouse®) – QuantFEED®
QuantFEED® Developer's Notice
Reference 20140709 – 17826 – 21453
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UPDATE OF THE NASDAQ TOTALVIEW MARKET DATA STREAM

To reflect the changes caused by the dissemination of new values on the NASDAQ TOTALVIEW market data stream, S&P Capital IQ Real-Time Solutions has decided to enhance the content of QuantFEED®.

This developer's notice contains late-breaking information about the implementation of this modification in your applications, which may not be included otherwise in the published documentation. The topics this notice covers include:

- [1. Update Summary](#)
- [2. QuantFEED® Technical Implementation](#)
- [3. Finding the Latest Information.](#)

1. Update Summary

Table 1 Current update summary

Notice Reference	20140709 – 17826 – 21453
Exchanges	NASDAQ TOTALVIEW
Concerned MICs	XNAS
Internal Source ID	63
Effective Date	2014-07-28*
Impact	<ul style="list-style-type: none">• Update of the Referential Tags• Update of the Quotation Tags
Action required	MANDATORY ACTION – see sections 2.1.1. SecurityType and 2.1.2. CFICode .

2. QuantFEED® Technical Implementation

Effective Monday, **July 28^{*}, 2014**, S&P Capital IQ Real-Time Solutions enhances the content of the referential data, market news and Last Price Kinematics to accommodate the new information disseminated on the NASDAQ TOTALVIEW market data stream, as described below:

- [2.1. Changes to the Referential Data](#)

* This is the proposed day for the update of the standard version of the feed handler. For dedicated feed handlers, this date may differ. For the actual day when the changes to your custom feed handler take effect, please contact your QuantFEED® project manager.

- [2.2. Changes to the Market News – Market Wide Circuit Breaker](#)
- [2.3. Changes to the Level1 Market Data Kinematics – Last Price Update Mechanism.](#)

2.1. Changes to the Referential Data

S&P Capital IQ Real-Time Solutions **introduces** the referential tags below to accommodate the information disseminated on the NASDAQ TOTALVIEW market data stream:

Table 2 Referential tags added on the NASDAQ TOTALVIEW market data stream

Tag Name	Numeric ID	Type
MinTradeVol	562	Float64
IPO_Indicator	9406	Bool

Moreover, S&P Capital IQ Real-Time Solutions **updates** the values of the referential tags below:

Table 3 Referential tags disseminating updated content on the NASDAQ TOTALVIEW market data stream

Tag Name	Numeric ID	Type
SecurityType	167	String
CFICode	461	String

2.1.1. SecurityType

The values of the referential tag **Security Type** conveyed on the NASDAQ TOTALVIEW market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the type of security.

QuantFEED® implementation of the tag `SecurityType` is described in the table below (existing values are in black, newly added values are in **green**, and removed values are in ~~crossed-out-red~~):

Table 4 SecurityType – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	SecurityType	QuantFEED® tag name.
Numeric ID	167	QuantFEED® unique ID disseminated on the S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	String	String data type.
Format	<i>[Exchange specific value]</i>	An exchange specific value , detailing the type of security.
Possible Values	NONE	Unknown Security Type
	COP	Certificate of Participation
	CS	Common Stock
	GO	General Obligation Bonds
	MF	Mutual Fund (Exchangeable Traded Fund)
	PS	Preferred Stock
	WAR	Warrant

2.1.2. CFICode

The values of the referential tag **CFI Code** conveyed on the NASDAQ TOTALVIEW market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the standardized identification code of an instrument.

QuantFEED® implementation of the tag CFICode is described in the table below (existing values are in black, newly added values are in green, and removed values are in ~~crossed-out-red~~):

Table 5 CFICode – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	CFICode	QuantFEED® tag name.
Numeric ID	461	QuantFEED® unique ID disseminated on the S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	String	String data type.
Format	<i>[Exchange specific value]</i>	An exchange specific value , detailing the standardized identification code of an instrument.
Possible Values	DBXXXX	Debts - Bonds
	DCXXXX	Debts - Convertible Bonds
	EPXXXX	Equities - Preferable Shares
	ESNXXX	Equities - Shares - Non-Voting
	ESVXXX	Equities - Shares - Voting
	ESXXXA	Equities - Shares - Registered Depository Receipt
	ESXXXX	Equities - Shares
	EUXXXX	Equities - Units
	EXXXXX	Equities
	RWXXXX	Rights - Warrants
	RXXXXX	Rights
	XXXXXX	Undefined

The example below shows the list SecurityTypes and CFICodes, before and after 2014-07-28:

BEFORE 2014-07-28	AFTER 2014-07-28
{ XNAS COFP XXXXXX }	{ XNAS CS ESXXXA }
{ XNAS CS ESNXXX }	{ XNAS CS ESXXXX }
{ XNAS CS ESVXXX }	{ XNAS CS EXXXXX }
{ XNAS CS ESXXXA }	{ XNAS GO DBXXXX }
{ XNAS CS ESXXXX }	{ XNAS MF EUXXXX }
{ XNAS MF EUXXXX }	{ XNAS NONE XXXXXX }
{ XNAS NONE DCXXXX }	{ XNAS PS EPXXXX }
{ XNAS NONE EUXXXX }	{ XNAS WAR RWXXXX }
{ XNAS NONE EXXXXX }	
{ XNAS NONE RXXXXX }	
{ XNAS NONE XXXXXX }	
{ XNAS PS EPXXXX }	
{ XNAS WAR RWXXXX }	

2.1.3. MinTradeVol

The values of the referential tag **MinTradeVol** conveyed on the NASDAQ TOTALVIEW market data stream are disseminated via QuantFEED® data stream in *Referential* to specify the lot size value.

QuantFEED® implementation of the values currently available for the tag `MinTradeVol` is described in the table below:

Table 6 MinTradeVol – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	MinTradeVol	QuantFEED® tag name.
Numeric ID	562	QuantFEED® unique ID disseminated on the S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	Float64	Float64 data type.
Format	<i>[Exchange specific value]</i>	An exchange specific value , specifying the lot size value.
Possible Values	1	Round Lots Only
	<other_value>	Round Lot Size

2.1.4. IPO_Indicator

The values of the referential tag **IPO_Indicator** conveyed on the NASDAQ TOTALVIEW market data stream are disseminated via QuantFEED® data stream in *Referential* to specify whether a security is in an Initial Public Offering or not.

QuantFEED® implementation of the values currently available for the tag `IPO_Indicator` is described in the table below:

Table 7 IPO_Indicator – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	IPO_Indicator	QuantFEED® tag name.
Numeric ID	9406	QuantFEED® unique ID disseminated on the S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	Bool	Boolean data type.
Format	<i>[Exchange specific value]</i>	An exchange specific value , specifying whether a security is in an Initial Public Offering or not.
Possible Values	True	The security is in an IPO.
	False	The security is not in an IPO.

Referential Data Sample

Below is an example of the current implementation of the newly added (in green) and updated (in blue) referential tags:

```
instr # 330/9074 = 692069234
  PriceCurrency      string{USD}
  Symbol            string{MCLB}
  Description        string{Microlin Bio, Inc. - Common Stock}
  SecurityType      string{CS}
  FOSMarketId       XNAS
  CFICode           string{ESXXX}
  RoundLot          float64{100}
  MinTradeVol       float64{1}
  InternalCreationDate Timestamp{2014-07-11 15:31:48:300}
  InternalModificationDate Timestamp{2014-07-11 15:31:58:785}
  InternalSourceId   uint16{63}
  InternalEntitlementId NAS
  IPO_Indicator      bool{True}
  LocalCodeStr       string{MCLB}
  PriceIncrement_dynamic_TableId uint32{4587620}
  OperatingMIC       string{XNAS}
  SegmentMIC         string{XNCM}
```

2.2. Changes to the Market News – Market Wide Circuit Breaker

Each time an extraordinary market volatility occurs, the values of the **Level 1, Level 2 and Level 3 Halts of the Market-Wide Circuit Breakers**, which halt the trading in all exchange listed securities throughout the U.S. markets, as well as the **breached level** conveyed on the NASDAQ TOTALVIEW market data stream are disseminated via QuantFEED®'s data stream in *Market News*:

- in the callback carrying the Level1 event `notif_MarketNews()`, for C++
- in the event handler `MarketNewsEventHandler`, for C#
- in the callback carrying the Level1 event `quotNotifMarketNewsEvent`, for Java.

The format of the **Market-Wide Content Breaker Decline Level Message**, which conveys the values of the three level halts in the market news, follows the template described below:

```
Market-wide circuit breaker indicator
MarketId=<market ID>
Level1=<level1>
Level2=<level2>
Level3=<level3>
```

Example:

```
MN      null      null      XNAS      Normal      Market-wide circuit breaker level status
MarketId=Q; Level1=144.45; Level2=135.13; Level3=124.26      related_instruments:
```

The format of the **Market-Wide Content Breaker Status Message**, which conveys the breached level in the market news, follows the template described below:

```
Market-wide circuit breaker indicator
MarketId=<market_id >
LevelBreached=<Level>
```

2.3. Changes to the Level1 Market Data Kinematics – Last Price Update Mechanism

In the Level1 Market Data Kinematics before 2014-07-28, the Last Price of IPO securities was not sent, as shown below:

```
"TE (TradeEvent) : MARKET_TIME INSTRUMENT LAST_PRICE TRADE_QTY BID_PRICE BID_QTY ASK_PRICE
ASK_QTY *CONTENT_MASK* *FLAGS*"
"VU (ValuesUpdate) : SERVER_TIME INSTRUMENT VALUES..."
"SI (TradeEvent) *SIGNAL* : SERVER_TIME INSTRUMENT SIGNAL LAST_PRICE"

TE 11:51:02:583.815 692069333 *      *      10.23  100@1  *      *
TE 12:05:19:624.662 692069333 *      *      12    1495@2 *      *
TE 12:07:17:919.936 692069333 *      *      10.27  100@1  *      *
TE 12:36:06:876.842 692069333 *      *      10.27  200@2  *      *
TE 12:50:00:809.175 692069333 *      *      *      *      *      *      HL
TE 13:27:25:442.795 692069333 *      *      12.59  100@1  *      *
```

In the Level1 Market Data Kinematics after 2014-07-28, the Last Price of IPO securities is sent, when provided by the market, as shown in the example below:

```
"TE (TradeEvent) : MARKET_TIME INSTRUMENT LAST_PRICE TRADE_QTY BID_PRICE BID_QTY ASK_PRICE
ASK_QTY *CONTENT_MASK* *FLAGS*"
"VU (ValuesUpdate) : SERVER_TIME INSTRUMENT VALUES..."
"SI (TradeEvent) *SIGNAL* : SERVER_TIME INSTRUMENT SIGNAL LAST_PRICE"

TE 11:51:02:583.815 692069333 *      *      10.23  100@1  *      *
TE 12:05:19:624.662 692069333 *      *      12    1495@2 *      *
TE 12:07:17:919.936 692069333 *      *      10.27  100@1  *      *
TE 12:36:06:876.842 692069333 *      *      10.27  200@2  *      *
TE 12:50:00:809.175 692069333 10      *      *      *      *      *      *      HL
TE 13:27:25:442.795 692069333 *      *      12.59  100@1  *      *
```

3. Finding the Latest Information

For the latest documentation and product updates, additional support and training, please contact our support services:

- E-mail: rts-support@spcapitaliq.com
- Web: <http://support.quanthouse.com>.