S&P Capital IQ Real-Time Solutions

QuantFEED® Developer's Notice

BATS EUROPE – Feed Update

Reference n°: 20140321

Effective as of: 28 March 2014

Action required from users: MANDATORY ACTION

S&P CAPITAL IQ
McGRAW HILL FINANCIAL

S&P Capital IQ Real-Time Solutions (QuantHouse®) – QuantFEED®
QuantFEED® Developer's Notice
Reference 20140321
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UPDATE OF THE BATS EUROPE MARKET DATA STREAM

To reflect the changes caused by the dissemination of new values on the BATS EUROPE 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. Functional Description
- 3. QuantFEED® Technical Implementation
- 4. Finding the Latest Information.

1. Update Summary

Table 1 Current update summary

Notice Reference	20140321
Exchanges	BATS EUROPE
Concerned MICs	BATE
Internal Source ID	20
Effective Date	**2014-03-28**
Impact	• Update of the Quotation Tags • Update of the Quotation Context Tags
Action required	**MANDATORY ACTION**

2. Functional Description

Effective Friday, March **28, 2014**, S&P Capital IQ Real-Time Solutions enhances the content of the quotation and quotation context data to accommodate the new information disseminated on the BATS EUROPE market data stream, as described below:

- 2.1. Changes to Quotation Data
- 2.2. Changes to Quotation Context Data.

2.1. Changes to Quotation Data

S&P Capital IQ Real-Time Solutions **introduces** the quotation tag below to accommodate the information broadcast on the BATS EUROPE market data stream:

Table 2 Quotation tags added on the BATS EUROPE market data stream

Tag Name	Numeric ID	Type
InternalDailyClosingPriceType	9155	Char

Below is an example of the new quotation tags implementation (in green):

```
InstrumentStatusL1
-- 448/750005
        BID: 1.999      4146    @1
        ASK: 2.107      6399    @1
        LastPrice                       float64{2.053}
        LastTradeQty                    float64{1033}
        DailyTotalVolumeTraded          float64{0}
        DailyTotalAssetTraded           float64{0}
        LastTradePrice                  float64{2.053}
        LastTradeTimestamp              Timestamp{2014-04-07 15:45:17:254}
        InternalDailyOpenTimestamp      Timestamp{2014-04-11 08:00:00:005}
        InternalDailyCloseTimestamp     Timestamp{2014-04-10 16:30:00:001}
        InternalDailyHighTimestamp      Timestamp{2014-04-07 11:18:36:233}
        InternalDailyLowTimestamp       Timestamp{2014-04-07 15:45:17:255}
        InternalPriceActivityTimestamp  Timestamp{2014-04-11 14:43:10:134}
        TradingStatus                   17=ReadyToTrade
        LastOffBookTradePrice           float64{1.9835}
        LastOffBookTradeQty             float64{295}
        LastOffBookTradeTimestamp       Timestamp{2014-03-03 15:59:57:639}
        PreviousDailyTotalVolumeTraded  float64{0}
        PreviousDailyTotalAssetTraded   float64{0}
        PreviousDailyClosingPrice       float64{2.053}
        PreviousBusinessDay             Timestamp{2014-04-10}
        CurrentBusinessDay              Timestamp{2014-04-11}
        InternalDailyClosingPriceType   char{a}
        DailyTotalOffBookVolumeTraded   float64{0}
        DailyTotalOffBookAssetTraded    float64{0}
```

2.2. Changes to Quotation Context Data

S&P Capital IQ Real-Time Solutions no longer disseminates the quotation context tag below on Off Order Book Trades, but only on On Order Book Trades to accommodate the information broadcast on the BATS EUROPE market data stream:

Table 3 Quotation context tags removed from the BATS EUROPE market data stream – Off Book Trades

Tag Name	Numeric ID	Type
MARKET_BATS_ExecutionType	16150	String

Below is an example showing the removed quotation context tags (in ~~crossed out red~~):

```
"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  08:00:07:613.131 940274480  1372.865        2       *       *       *       *       f
TradeID=26272069743051,MARKET_BATS_ExecutionType=9
TE  08:00:07:616.085 940275573  *       *        6.265   100@1   *       *
TE  08:00:07:618.582 940274825  *       *        480.2   244@1   *       *
TE  08:00:07:621.218 940274825  *       *        480.3   257@1   *       *
TE  08:00:07:625.399 940276806  *       *        215.6   248@1   *       *
TE  08:00:07:627.032 940274446  *       *        *       *       96.95   31@1
```

3. QuantFEED® Technical Implementation

The following sections describe the technical implementation of the new or updated tags:

- 3.1. InternalDailyClosingPriceType
- 3.2. MARKET_BATS_ExecutionType.

3.1. InternalDailyClosingPriceType

The values of the quotation tag **Internal Daily Closing Price Type** conveyed on the BATS EUROPE market data stream are disseminated via QuantFEED® data stream in *Other Values* to indicate the type of the internal daily closing price:

- in the callback carrying the Level1 event `notif_TradeEventExt()`, for C++
- in the event handler `TradeEventExtEventHandler`, for C#
- in the callback carrying the Level1 event `quotNotifTradeEventExt`, for Java.

QuantFEED® implementation of the values currently available for the tag `InternalDailyClosingPriceType` is described in the table below (currently disseminated values are in `green`):

Table 4 InternalDailyClosingPriceType – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`InternalDailyClosingPriceType`	QuantFEED® tag name.
Numeric ID	`9155`	QuantFEED® unique ID disseminated on S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	`Char`	Char data type.
Format	*`[Internal Specific Value]`*	An ***internal specific value***, detailing the type of daily closing price.

Table 4 InternalDailyClosingPriceType – technical implementation in QuantFEED® (Continued)

Component	Value	Description
Possible Values	0	**Undefined**
	a	**Official Close** – Explicit closing price value calculated and distributed by an exchange for the main trading session of a given trading day.
	b	**Official Indicative** – Exchange has provided an indicative price and marked it as indicative, however no trading activity is observed.
	c	**Official Carry Over** – Explicit Closing price value from a previous trading day carried forward by the exchange to the given trading day.
	d	**Last Price** – Final price disseminated by the exchange for the main trading session or dissemination period of a given trading day (for indices).
	e	**Last Eligible Price** – Execution price of the final trade (subject to trade qualifiers) accepted by the exchange for the main trading session of a given trading day.
	z	**Manual** – Price disseminated manually (in case of production correction).

3.2. MARKET_BATS_ExecutionType

Each time an execution occurs, the values of the quotation tag **MARKET BATS Execution Type** conveyed on the BATS EUROPE market data stream are disseminated via QuantFEED® data stream in *Context*, for On Book Trades only:

- in the callback carrying the Level1 event `notif_TradeEventExt()`, for C++
- in the event handler `TradeEventExtEventHandler`, for C#
- in the callback carrying the Level1 event `quotNotifTradeEventExt`, for Java.

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

Table 5 MARKET_BATS_ExecutionType – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`MARKET_BATS_ExecutionType`	QuantFEED® tag name.
Numeric ID	`16150`	QuantFEED® unique ID broadcast on S&P Capital IQ Real-Time Solutions data stream. It is the numeric equivalent of the tag name.
Type	`String`	String data type.
Format	*`[Exchange Specific Value]`*	An ***exchange specific value***, as described below, specifying the characteristics of the execution type.
Possible Values	0 (Default value not sent)	BATS Integrated Book
	`D`	D BATS Dark Pool
	`C`	BATS Closing Cross or Trading at Last
	`R`	Negotiated Transaction

4. 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.