S&P Capital IQ Real-Time Solutions

QuantFEED® Developer's Notice

BATS EUROPE – Feed Update

Reference n°: 20140908 – 21501 – 22740 (UPDATE 01 TO 20140908 – 21501 – 21503)

Effective as of: 26 September 2014*

Action required from users: Attention Required

S&P CAPITAL IQ
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* 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 20140908 – 21501 – 22740
September 12, 2014

Corporate Headquarters
S&P Capital IQ Real-Time Solutions (QuantHouse®)
52 Rue de la Victoire
75009 Paris
France
Tel: +33 (0) 1 73 02 32 11
Fax: +33 (0) 1 73 02 32 12

US Offices
55 Water Street, 44th floor
New York, NY 10041
United States of America
Tel: +1-(212)-438-4346

130 East Randolph
One Prudential Plaza, Suite 2900
Chicago, IL 60601
United States of America
Tel: +1-(312)-233-7129

UK Office
20 Canada Square
Canary Wharf
London E14 5LH
United Kingdom
Tel: +44 (0) 203 107 1676

Singapore Office
12 Marina Boulevard
#23-01 Marina Bay
Financial Centre Tower 3
Singapore 018982
Tel: +65 6530 6546

www.quanthouse.com

UPDATE OF THE QUOTATION CONTEXT DATA ON 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

Table 1 Current update summary

Notice Reference	20140908 – 21501 – 22740 (UPDATE 01 TO 20140908 – 21501 – 21503)
Exchanges	BATS EUROPE
Concerned MICs	BATE
Internal Source ID	20
Effective Date	**2014-09-26***[*]
Impact	• Update of the Quotation Context Tags
Action required	**Attention Required**

2. QuantFEED® Technical Implementation

Effective Friday, **September 26[*], 2014**, S&P Capital IQ Real-Time Solutions enhances the quotation context data to accommodate the new information disseminated on the BATS EUROPE market data stream, as described below:

- 2.1. Changes to the Quotation Context Data.

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2.1. Changes to the Quotation Context Data

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

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

Tag Name	Numeric ID	Type
`OriginFOSMarketIdOf_LastPrice`	9350	UInt16
`MMTFlagsV2`	9901	String
`MARKET_BATS_TradeReportFlags`	16151	UInt16

S&P Capital IQ Real-Time Solutions **removes** the quotation context tags below:

Table 3 Quotation context tags no longer disseminated on the BATS EUROPE market data stream

Tag Name	Numeric ID	Type
`MARKET_BATS_ExecutionType`	16150	String

2.1.1. OriginFOSMarketIdOf_LastPrice

The values of the quotation tag **OriginFOSMarketIdOf_LastPrice** conveyed on the BATS EUROPE market data stream are disseminated via QuantFEED® data stream in *Context* to identify the market from which the last price originates, if this market is recorded in the normalized inventory of S&P Capital IQ Real-Time Solutions:

- 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 tag `OriginFOSMarketIdOf_LastPrice` is described in the table below:

Table 4 OriginFOSMarketIdOf_LastPrice – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`OriginFOSMarketIdOf_LastPrice`	QuantFEED® tag name.
Numeric ID	`9350`	QuantFEED® unique ID disseminated on S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	`UInt16`	UInt16 data type.
Format / Possible Values	*`[Exchange Specific Value]`*	An ***exchange specific value***, identifying the market from which the last price originates, if this market is recorded in the normalized inventory of S&P Capital IQ Real-Time Solutions.

2.1.2. MMTFlagsV2

The values of the quotation tag **MMTFlagsV2** conveyed on the BATS EUROPE market data stream are disseminated via QuantFEED® data stream in *Context* to detail the Market Model Typology (version 2) applicable to the trade:

- 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 tag `MMTFlagsV2` is described in the table below:

Table 5 MMTFlagsV2 – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`MMTFlagsV2`	QuantFEED® tag name.
Numeric ID	9901	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	*[Exchange Specific Value] 10-character long*	An ***exchange specific value***, detailing the Market Model Typology (version 2) applicable to the trade.
Possible Values	**MMT Level 1 - MARKET MECHANISM – OFFSET 1**	
	1	Central Limit Order Book
	2	Quote Driven Market
	3	Dark Order Book
	4	Off Book
	MMT Level 2 - TRADING MODE – OFFSET 2	
	1	Undefined Auction
	2	Continuous Trading
	3	At Market Close Trading
	4	Out of Main Session Trading
	5	Trade Reporting (On Exchange)
	6	Trade Reporting (Off Exchange)
	7	Trade Reporting (Systematic Internaliser)
	O	Scheduled Opening Auction
	K	Scheduled Closing Auction
	I	Scheduled Intraday Auction
	U	Unscheduled Auction
	MMT Level 3 - TRANSACTION TYPE	
	3.1. TRANSACTION CATEGORY – OFFSET 3	
	P	Plain-Vanilla Trade
	D	Dark Trade
	T	Technical Trade
	G	Give-up/Give-In Trade
	F	Trade with Conditions
	3.2. NEGOTIATED TRANSACTION INDICATOR – OFFSET 4	
	N	Negotiated Trade
	-	No Negotiated Trade
	3.3. CROSSING TRADE INDICATOR – OFFSET 5	
	X	Crossing Trade
	-	No Crossing Trade
	3.4. MODIFICATION INDICATOR – OFFSET 6	
	C	Trade Cancellation
	A	Trade Amendment
	-	New Trade

Table 5 MMTFlagsV2 – technical implementation in QuantFEED® (Continued)

Component	Value	Description
Possible Values	***3.5. BENCHMARK INDICATOR – OFFSET 7***	
	`B`	Benchmark Trade
	`–`	No Benchmark Trade
	3.6. EX/CUM DIVIDEND INDICATOR – OFFSET 8	
	`E`	Ex/cum dividend Trade
	`–`	No Ex/Cum Dividend Trade
	MMT Level 4 - PUBLICATION MODE – OFFSET 9	
	`–`	Immediate Publication
	`1`	Non Immediate Publication
	3.7. OFF BOOK AUTOMATED INDICATOR – OFFSET 10	
	`Q`	Automated
	`M`	Manual
	`–`	Not Specified

2.1.3. MARKET_BATS_TradeReportFlags

The values of the quotation tag **MARKET_BATS_TradeReportFlags** conveyed on the BATS EUROPE market data stream are disseminated via QuantFEED® data stream in *Context* to identify the trade timing indicator and BATS Transaction Sub-Category:

- 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 tag `MARKET_BATS_TradeReportFlags` is described in the table below:

Table 6 MARKET_BATS_TradeReportFlags – technical implementation in QuantFEED®

Component	Value	Description	
Tag Name	`MARKET_BATS_TradeReportFlags`	QuantFEED® tag name.	
Numeric ID	`16151`	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	`UInt16`	UInt16 data type.	
Format	*`[Exchange Specific Value]`*	**BATS Trade Timing Indicator**	An ***exchange specific value***, indicating the trade timing indicator.
Possible Values	`45`	`–`	Otherwise
	`49`	`1`	Traded reported as "late"
	`50`	`2`	Traded reported as "out of the Main Session"

Quotation Context Data Sample

Below is an example showing the quotation context tags implementation before and after the upgrade (newly added tags are in `green` and removed tags are in ~~`crossed out red`~~):

Quotation Context Data before 2014-09-26

```
"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  07:41:10:428.128  940276563  74.575  23  *  *  *  *  f  TradeID=37164688553549,
MARKET_BATS_ExecutionType=D
```

Quotation Context Data after 2014-09-26

```
"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  09:13:36:284.531  940274856  2.45  866  *  *  *  *  f  TradeID=23294231515172,
OriginFOSMarketIdOf_LastPrice=BATE, MMTFlagsV2=45PN-----Q,
MARKET_BATS_TradeReportFlags=uint16{45}
```

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.