S&P Capital IQ Real-Time Solutions

QuantFEED® Developer's Notice

CTA – Feed Update

Reference n°: 20140307

Effective as of: 17 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 20140307
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UPDATE OF THE CTA MARKET DATA STREAM

To reflect the changes caused by the dissemination of new values on the CTA 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	20140307
Exchanges	CTA
Concerned MICs	ARCX, BATS, BATY, CBSX, EDGA, EDGX, XADF, XASE, XBOS, XCHI, XCIS, Xcta, XISX, XNAS, XNYS, XPHL
Internal Source ID	119, 121, 122
Effective Date	**2014-03-17**
Impact	• Update of the Referential Tags • Update of the Quotation Tags • Update of the CLOSE Kinematics
Action required	**Mandatory Action**

2. Functional Description

Effective Monday, March **17, 2014**, S&P Capital IQ Real-Time Solutions enhances the content of the referential, quotation data and the CLOSE Kinematics to accommodate the new information disseminated on the CTA market data stream, as described below:

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

2.1. Changes to Referential Data

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

Table 2 Referential tags added on the CTA market data stream

Tag Name	Numeric ID	Type
`InternalEntitlementId`	9405	int32

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

```
instr # 336/1111 = 704644183
    PriceCurrency                string{USD}
    Symbol                       string{RBS}
    Description                  string{The Royal Bank of Scotland Group plc American
Depositary Shares, (Each representing 2 ordinary shares)}
    SecurityType                 string{NONE}
    FOSMarketId                  XNYS
    CFICode                      string{EXXXXX}
    RoundLot                     float64{100}
    InternalCreationDate         Timestamp{2013-12-09 16:26:37:268}
    InternalModificationDate     Timestamp{2014-02-27 07:10:02:655}
    InternalSourceId             uint16{119}
    InternalEntitlementId        int32{1029}
    LocalCodeStr                 string{RBS}
    ForeignFOSMarketId           XNYS
    CUSIP                        string{780097689}
    OperatingMIC                 string{XNYS}
```

2.2. Changes to Quotation Data

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

Table 3 Quotation tags added on the CTA market data stream

Tag Name	Numeric ID	Type
`InternalDailyClosingPriceType`	9155	Char

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

```
InstrumentStatusL1
-- 336/1111
        BID: 10.77      1
        ASK: 10.78      31
        LastPrice                       float64{10.78}
        LastTradeQty                    float64{100}
        DailyHighPrice                  float64{10.93}
        DailyLowPrice                   float64{10.756}
        DailyTotalVolumeTraded          float64{153115}
        DailyTotalAssetTraded           float64{1664211.04}
        LastTradePrice                  float64{10.78}
        LastTradeTimestamp              Timestamp{2014-03-27 15:26:19:613}
        InternalDailyOpenTimestamp      Timestamp{2014-03-27 14:30:00:496}
        InternalDailyCloseTimestamp     Timestamp{2014-03-26 21:00:00:027}
        InternalDailyHighTimestamp      Timestamp{2014-03-27 14:35:27:227}
        InternalDailyLowTimestamp       Timestamp{2014-03-27 15:23:53:599}
        InternalPriceActivityTimestamp  Timestamp{2014-03-27 15:26:35:482}
        TradingStatus                   17=ReadyToTrade
        DailyOpeningPrice               float64{10.87}
        PreviousDailyTotalVolumeTraded  float64{172355}
        PreviousDailyTotalAssetTraded   float64{2031125.43}
        PreviousDailyClosingPrice       float64{11.73}
        PreviousBusinessDay             Timestamp{2014-03-26}
        CurrentBusinessDay              Timestamp{2014-03-27}
        InternalDailyClosingPriceType   {a}
        LimitUpLimitDownIndicator       char{ }
        PriceActivityMarketTimestamp    Timestamp{2014-03-27 15:26:35:482}
```

3. QuantFEED® Technical Implementation

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

- 3.1. Internal Entitlement ID
- 3.2. Internal Daily Closing Price Type
- 3.3. CTA CLOSE Kinematics Update.

3.1. Internal Entitlement ID

The values of the referential tag **Internal Entitlement ID** conveyed on the CTA market data stream are disseminated via QuantFEED® data stream in *Referential* to internally identify specific use permissions.

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

Table 4 InternalEntitlementId – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	`InternalEntitlementId`	QuantFEED® tag name.
Numeric ID	`9405`	QuantFEED® unique ID disseminated on S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Type	`Int32`	Int32 data type.
Format	*[Internal Specific Value]*	An ***internal specific value***, identifying particular use permissions on CTA.
Possible Values	`1029`	CTA - CTA Group A - NYSE
	`1030`	CTB - CTA Group B - AMEX

3.2. Internal Daily Closing Price Type

The values of the quotation tag **Internal Daily Closing Price Type** conveyed on the CTA 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 5 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 5 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).

3.3. CTA CLOSE Kinematics Update

In the CLOSE kinematics before 2014-03-17, each exchange was sending the CLOSE signal at a different hour, between 16:00 and 20:15 (New York Time). Afterwards, the instruments were no longer traded, 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  20:54:49:671 73402754   *       *       19.67   1       *       *
TE  20:54:49:672 73402754   *       *       *       *       20.59   1
TE  20:54:49:672 73402754   *       *       20.01   2       *       *
TE  20:54:49:672 73402754   *       *       *       *       20.27   2
TE  20:55:03:590 73402754   *       *       19.68   1       *       *
TE  20:55:03:590 73402754   *       *       *       *       20.58   1
TE  20:58:34:449 73402754   *       *       19.67   1       20.59   1
TE  20:59:59:225 73402754   *       *       18.88   1       21.31   1
TE  21:00:06:171 73402754   *       *       !       0       *       *
TE  21:00:06:171 73402754   *       *       !       0       !       0
SI  21:15:05:494 73402754   CLOSE   19.83
TE  21:15:05:494 73402754   19.83   *       *       *       *       *       C
TE  21:45:00:576 73402754   *       *       !       0       !       0
VU  22:45:00:390 73402754   TradingStatus=18
VU  23:40:05:231 73402754   DailyOpeningPrice=19.83
```

In the CLOSE kinematics after 2014-03-17, the CLOSE signal is sent for all the markets no later than 16:01 (New York Time). However, the instruments continue to trade until the closing time of each 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  20:54:49:671 73402754   *       *       19.67   1       *       *
TE  20:54:49:672 73402754   *       *       *       *       20.59   1
TE  20:54:49:672 73402754   *       *       20.01   2       *       *
TE  20:54:49:672 73402754   *       *       *       *       20.27   2
TE  20:55:03:590 73402754   *       *       19.68   1       *       *
TE  20:55:03:590 73402754   *       *       *       *       20.58   1
TE  20:58:34:449 73402754   *       *       19.67   1       20.59   1
TE  20:59:42:222 73402754   *       *       19.63   1       20.57   1
TE  21:00:06:171 73402754   *       *       !       0       21.31   1
TE  21:00:06:171 73402754   *       *       !       0       !       0
SI  21:01:00:265 73402754   CLOSE   19.83
TE  21:01:00:265 73402754   19.83   *       *       *       *       *       C
VU  21:01:00:265 73402754   InternalDailyClosingPriceType=e
VU  21:15:05:494 73402754   InternalDailyClosingPriceType=a  DailyOpeningPrice=19.83
TE  21:45:00:576 73402754   *       *       !       0       !       0
VU  22:45:00:004 73402754   TradingStatus=18
```

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.