S&P Capital IQ Real-Time Solutions

FeedOS™ Developer's Notice

CHIX AUSTRALIA – Feed Update

Reference n°: 20150722 – 26804 – 27147 – 27984

Standard FH, effective as of: 31 August 2015[*]

Action required from users: MANDATORY ACTION

[*]For the actual day when the changes to your custom feed handler take effect, please contact your FeedOS project manager.

S&P Capital IQ Real-Time Solutions
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Reference 20150722 – 26804 – 27147 – 27984
August 17, 2015

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UPDATE OF THE CHIX AUSTRALIA MARKET DATA STREAM

To reflect the changes caused by the addition of a new trading phase on the CHIX AUSTRALIA market data stream, S&P Capital IQ Real-Time Solutions has decided to enhance the content of FeedOS.

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. FeedOS Technical Implementation
- 3. Finding the Latest Information.

1. Update Summary

Table 1   Current update summary

Notice Reference	20150722 – 26804 – 27147 – 27984
Exchanges	CHIX AUSTRALIA
Concerned MICs	CHIA
Internal Source ID	243
Effective Date	**2015-08-31**[*]
Impact	• Update of the Quotation Tags • Update of the Level1 Market Data Kinematics
Action required	**MANDATORY ACTION** - see sections: • 2.2. Update of the Level1 Market Data Kinematics – @Last Trading Phase.

2. FeedOS Technical Implementation

Effective Monday, **August 31**[*] **2015,** S&P Capital IQ Real-Time Solutions enhances the quotation data and updates the Level1 Market Data Kinematics to accommodate the information disseminated on the CHIX AUSTRALIA market data stream, as described below:

- 2.1. Changes to the Quotation Context Data
- 2.2. Update of the Level1 Market Data Kinematics – @Last Trading Phase.

2.1. Changes to the Quotation Context Data

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

Table 2   Quotation context tags added on the CHIX AUSTRALIA market data stream

Tag Name	Numeric ID	Type
TradeCondition	277	String

2.1.1. TradeCondition

Each time a trade occurs, the values of the quotation context tag **TradeCondition** conveyed on the CHIX AUSTRALIA market data stream are disseminated via FeedOS data stream in *Context*:

- 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.

FeedOS implementation of the tag `TradeCondition` is described in the table below:

Table 3   TradeCondition – technical implementation in FeedOS

Component	Value	Description
Tag Name	TradeCondition	FeedOS tag name.
Numeric ID	277	FeedOS unique ID broadcast 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]*	An **exchange specific value**, detailing the conditions of a trade.
Possible Values	AJ	Official Closing Price **Note:** This value also applies to MOC trades.

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[*]   This is the proposed day for the update of the standard version of the feed handler. For dedicated feed handlers, the date and Source IDs may differ. For the actual day when the changes to your custom feed handler will take effect, please contact your FeedOS™ project manager.

Quotation Context Data Sample

Below is an example showing the current implementation of the updated (in blue) quotation context tags:

```
TE    03:50:41:918.048    1003190424    3.79    291    *    *    *    *    L
TradeCondition=AJ=official_closing_price, TradeID=130000170
TE    06:10:33:257.166    1003189059    86.53    400    *    *    *    *    H
TradeCondition=AJ=official_closing_price, TradeID=130000119
TE    06:10:33:258.799    1003189059    86.53    600    *    *    *    *
TradeCondition=AJ=official_closing_price, TradeID=130000122
TE    06:13:06:432.525    1003189059    86.53    1231    *    *    *    *
TradeCondition=AJ=official_closing_price, TradeID=130003492
```

2.2. Update of the Level1 Market Data Kinematics – @Last Trading Phase

In the Level1 Market Data Kinematics **before 2015-08-31**, the Chi-X market has a Post Close MOC trading phase that runs from 16:13:00 to 16:20:00 and during which participants may only enter hidden MOC orders, 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"


SI  00:00:00:000  instr.    OPEN      *
TE  00:00:00:000  instr.    *    *    *    *    *    *    O
VU  00:00:00:000  instr.    TradingStatus=17
TE  00:08:58:637  instr.    *    *    *    *    27.11    488@1
TE  00:08:58:637  instr.    *    *    26.96    479@1    *    *
TE  00:08:58:638  instr.    *    *    27.05    168@1    *    *
TE  00:08:58:638  instr.    *    *    *    *    27.09    168@1
TE  00:08:59:744  instr.    27.05    168    26.96    479@1    *    *    HL  TradeID=150002748
VU  00:08:59:744  instr.    DailyOpeningPrice=27.05
TE  00:08:59:744  instr.    *    *    *    *    27.11    34@1
[...]
TE  06:00:01:860  instr.    *    *    *    *    27.11    90@1
TE  06:00:02:011  instr.    *    *    *    *        !    O
VU  06:12:59:000  instr.    TradingStatus=16
TE  06:13:01:751  instr.    27.06    1771  *    *    *    *    f    TradeID=120223187,
                            MARKET_CHIX_ExecutionType=76
SI  06:20:00:000  instr.    CLOSE    27.01
TE  06:20:00:000  instr.    27.01    *    *    *    *    *    C
VU  06:20:00:000  instr.    InternalDailyClosingPriceType=d    TradingStatus=18
```

In the Level1 Market Data Kinematics **after 2015-08-31**, Chi-X market will change this phase to an **@Last Trading Phase**, which will run from 16:12:00 and during which hidden and visible MOC orders may be submitted and matched. The reference price for hidden and visible MOC orders will remain the closing price of each equity market product as published by the ASX at the conclusion of its closing auction, and if no closing price results from the closing auction, the last traded price on that trading day, 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"


SI  00:00:00:000.000  instr.   OPEN      *
TE  00:00:00:000.000  instr.   *    *    *    *    *    *    O
VU  00:00:00:000.000  instr.   TradingStatus=17
TE  00:08:58:637.323  instr.   *    *    35.3 1000@1   *    *
TE  00:08:58:637.323  instr.   *    *    *    *    35.42    455@1
TE  00:08:59:421.857  instr.   35.35   1000   *    *    35.36   1000@1  HL TradeID=160000736
VU  00:08:59:421.857  instr.   DailyOpeningPrice=35.35
TE  00:08:59:421.857  instr.   35.36   1000   *    *    35.42   455@1   H  TradeID=160000737
[...]
TE  06:00:17:569.120  instr.   35.38   2500   35.38    400@1    *    *  TradeID=160001893
TE  06:10:26:910.813  instr.   35.4    225    *    *    *    *
                               TradeCondition=AJ=official_closing_price, TradeID=160000721
VU  06:11:26:910.813  instr.   DailyClosingPrice=35.4  InternalDailyClosingPriceType=a
TE  06:11:26:910.972  instr.   35.4    25     *    *    *    *
                               TradeCondition=AJ=official_closing_price, TradeID=160000744
TE  06:12:00:893.742  instr.   *    *    UNQUOTED    540@1    *    *
TE  06:12:00:934.220  instr.   35.4    420    *    *    *    *
                               TradeCondition=AJ=official_closing_price, TradeID=160001938
TE  06:12:00:934.220  instr.   *    *    UNQUOTED    120@1    *    *
TE  06:12:55:233.297  instr.   *    *    UNQUOTED    1320@2   *    *
TE  06:15:10:849.187  instr.   35.6    300    *    *    35.6    540@2    TradeID=160001942
TE  06:17:32:936.606  instr.   35.4    1200   *    *    *    *
                               TradeCondition=AJ=official_closing_price, TradeID=160001954
TE  06:18:31:556.289  instr.   35.39   10     *    *    *    *          TradeID=160001976
SI  06:20:00:000.000  instr.   CLOSE   35.4
TE  06:20:00:000.000  instr.   35.4    *    *    *    *    *    C
VU  06:20:00:000.000  instr.   InternalDailyClosingPriceType=a TradingStatus=18
```

The table below summarizes the trading hours and new market kinematics on the CHIX AUSTRALIA, including Market-On-Close (MOC) behavior, expressed in Australian Eastern Standard Time:

Table 4   CHIX Australia Trading Session's Kinematics (Australian Eastern Standard Time)

Phase	Time AEST	Supported Functions
Technical Connectivity	06:00	Commencement of technical connectivity to the CHIX market.
		Participants may login to the CHIX technical infrastructure.
Pre-Market	06:35 until 09:59	Participants may check connectivity and details concerning securities available for trading but will not be able to enter orders into the CHIX market.
		The CHIX trading system will not match orders.
		Participants may report trades under the rules by the time specified in the Market Integrity Rules (Competition in Exchange Markets).

Table 4   CHIX Australia Trading Session's Kinematics (Australian Eastern Standard Time) (Continued)

Phase	Time AEST	Supported Functions
Continuous Trading	10:00 until 16:12	Participants may enter orders into the CHIX market, **including hidden but not visible MOC orders**.
		Orders are matched in accordance with the rules.
		Trade reporting is supported in accordance with the rules.
@Last Trading	16:12 until 16:20	Participants may **only enter visible and hidden MOC orders** into the CHIX market in this phase.
		MOC orders are matched in accordance with the rules.
Post-Trading Administration	16:12 until 18:55	This phase initially operates in parallel with the @Last Trading phase and the following applies to non-MOC orders during this phase: • Participants cannot enter or amend orders but may cancel orders • The CHIX trading system does not match orders in this phase • Participants may report trades under the rules • All orders remaining in the CHIX market at the end of this phase will automatically be cancelled.
Technical Connectivity Ends	19:00	All participant connections to CHIX are closed.
		Intraday trade cancellations are no longer possible.

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.