S&P Capital IQ Real-Time Solutions

FeedOS™ Developer's Notice

MICEX FAST - Feed Update

Reference n°: 20150330 - 24620 - 25970

Effective as of: 20 April 2015*

Action required from users: MANDATORY ACTION



* 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 FeedOS™ Developer's Notice: MICEX FAST – Feed Update Reference 20150330 – 24620 – 25970 April 02, 2015

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To reflect the changes caused by the new version 4.0 of the FAST UDP Multicast Marketdata service for the MOSCOW EXCHANGE Equity and FX markets, 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	20150330 – 24620 – 25970	
Exchanges	MICEX FAST	
Concerned MICs	MISX	
Internal Source ID	248	
Effective Date	2015-04-20 [*]	
Impact	Update of the Quotation Tags Changes to the Level 1 Market Data Kinematics	
Action required	MANDATORY ACTION - see sections: • 2.2. Update of the Level1 Market Data Kinematics – Opening Auctions.	

2. FeedOS Technical Implementation

Effective Monday, **April 20*** **2015**, S&P Capital IQ Real-Time Solutions enhances the referential, quotation and quotation context data, and updates the Level1Market Data Kinematics to accommodate the information disseminated on the MICEX FAST market data stream, as described below:

- 2.1. Changes to the Quotation Data
- 2.2. Update of the Level1 Market Data Kinematics Opening Auctions.

2.1. Changes to the Quotation Data

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

Table 2 Quotation tags added on the MICEX FAST market data stream

Tag Name	Numeric ID	Туре
MARKET_MICEX_SecurityTradingStatus	15070	UInt16

2.1.1. MARKET_MICEX_SecurityTradingStatus

The values of the quotation tag **MARKET_MICEX_SecurityTradingStatus** conveyed on the MICEX FAST market data stream are disseminated via FeedOS data stream in *Other Values* to indicate the trading status of a MICEX Security:

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

FeedOS implementation of the tag MARKET_MICEX_SecurityTradingStatus is described in the table below:

Table 3 MARKET_MICEX_SecurityTradingStatus – technical implementation in FeedOS

Component	Value	Description
Tag Name	MARKET_MICEX_SecurityTradingStatus	FeedOS tag name.
Numeric ID	15070	FeedOS unique ID broadcast on the S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
Туре	UInt16	UInt16 data type.
Format	[Exchange Specific Value]	An exchange specific value , indicating the trading status of a MICEX Security.
Possible Values	2	Break in trading
	17	Normal trading
	18	Not available for trading / Trading closed
	102	Closing auction
	103	Closing period

^{*} 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.

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Table 3 MARKET_MICEX_SecurityTradingStatus – technical implementation in FeedOS (Continued)

Component	Value	Description
Possible Values	106	Dark pool auction
	107	Discrete auction
	118	Opening period
	119	Opening auction period
	120	Trading at Closing auction price

Quotation Data Sample

Below is an example showing the current implementation of the newly added (in green) quotation tags:

```
InstrumentStatusL1
-- 486/1013625
                        56
                                @3
        BID: 1198.7
        ASK: 1198.8
                        51
                                @3
        LastPrice
                                        float64{1198.9}
        LastTradeQty
                                        float64{10}
        DailyHighPrice
                                        float64{1199}
        DailyLowPrice
                                        float64{1198.6}
        DailyTotalVolumeTraded
                                        float64{1848}
        DailyTotalAssetTraded
                                        float64{2184220.2}
        LastTradePrice
                                        float64{1198.9}
        LastTradeTimestamp
                                        Timestamp{2015-03-30 12:38:09}
        InternalDailyOpenTimestamp
                                        Timestamp{2015-03-30 06:48:20:984}
                                        Timestamp{2015-03-30 05:23:28:712}
        InternalDailyCloseTimestamp
        InternalDailyHighTimestamp
                                        Timestamp{2015-03-30 06:48:50:900}
        InternalDailyLowTimestamp
                                        Timestamp{2015-03-30 06:48:47:899}
        InternalPriceActivityTimestamp
                                        Timestamp{2015-03-30 12:41:03:326}
        TradingStatus
                                        17=ReadyToTrade
        SessionVWAPPrice
                                        float64{1198.8}
        DailyOpeningPrice
                                        float64{1198.8}
        PreviousDailyTotalVolumeTraded float64{0}
        PreviousDailyTotalAssetTraded
                                        float64{0}
        PreviousDailyClosingPrice
                                        float64{1201}
        PreviousBusinessDay
                                        Timestamp{2015-03-30}
                                        Timestamp{2015-03-30}
        CurrentBusinessDay
        InternalDailyClosingPriceType
                                        char{a}
        DailyHighBidPrice
                                        float64{1198.8}
        DailyLowAskPrice
                                        float64{1198.8}
                                        Timestamp{2015-03-30 12:41:03:325}
        PriceActivityMarketTimestamp
        MARKET_MICEX_SecurityTradingStatus
                                                uint16{17}
```

2.2. Update of the Level1 Market Data Kinematics – Opening Auctions

In the Level1 Market Data Kinematics **before 2015-04-20**, the Trading Phase is preceded by a Pre-Trading Phase, 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"
    06:45:00:086
VU
                1020227610 TradingStatus=21 [Pre-Trade]
    VU
VU
    06:59:59:710 1020227610 DailyHighBidPrice=5.31 DailyLowAskPrice=5.68
SI
    07:00:00:444 1020227610 OPEN *
    VU
    07:00:00:444 1020227610 TradingStatus=17
    TE
    07:00:00:732
                1020227610 * * 5.31 10@1 5.68 1@1
TF
    07:02:00:210
                1020227610 * * * * * 5.67 1@1
TE
```

In the Level1 Market Data Kinematics **after 2015-04-20**, Opening Auctions will be held for some securities on the T+ main trading mode instead of the Opening (Pre-Trade) period (Opening Auctions will also be indicated by the tag MARKET_MICEX_SecurityTradingStatus). Opening Auction technology is similar to the Closing Auction technology. The auction consists of three phases:

- · Order entry
- Random Auction End the duration is selected randomly for every security within 0-30 seconds.
- Opening Auction Price calculation and Trade Conclusion (after the random auction end):

```
"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"
                          MARKET_MICEX_SecurityTradingStatus=119 TradingStatus=21
VU
    06:45:00:141
                1020227610
[Pre-Open]
    06:45:10:648
                          DailyHighBidPrice=5.48
VII
                1020227610
    06:45:10:649
                1020227610
                          * * 5.48 19@1 * *
TF
    06:45:10:742 1020227610
                          LastAuctionPrice=5.48 LastAuctionImbalanceVolume=178700
LastAuctionImbalanceSide=S
    LastAuctionImbalanceVolume=177800
TF
                          * * * * 5.48 1853@4
VU
    06:49:28:988 1020227610 LastAuctionImbalanceVolume=178700
    TE
VU
    TE
    VU
    06:55:01:071 1020227610 MARKET_MICEX_SecurityTradingStatus=18 TradingStatus=18
ST
    06:55:01:071 1020227610 OPEN 5.48
    06:55:01:071 1020227610 5.48 * * * * * OHL
ΤE
    06:55:01:071 1020227610 DailyTotalVolumeTraded=63 SessionVWAPPrice=5.48
VU
    06:55:01:073
TE
                1020227610
                          * * ! 0 5.48 1825@5
    06:55:01:000 1020227610 5.48 19 * * * * TradeID=245678179
ΤE
```

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: https://support.quanthouse.com.