

## **FeedOS™ Developer's Notice**

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### **SWX – Feed Update**

Reference n°: 20150313 – 24441 – 25605

**Effective as of: 30 March 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: SWX – Feed Update  
Reference 20150313 – 24441 – 25605  
March 17, 2015

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# UPDATE OF THE SWX MARKET DATA STREAM

To reflect the changes caused by the dissemination of new values on the SWX 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	20150313 – 24441 – 25605
Exchanges	SWX
Concerned MICs	XSWX, XVTX, LIQU, XQMH
Internal Source ID	29
Effective Date	2015-03-30*
Impact	<ul style="list-style-type: none"><li>• Update of the Referential Tags</li><li>• Changes to the Level 1 Market Data Kinematics – LastAuctionPrice Reset</li><li>• Microsecond Timestamp Precision on the Level1 Market Data</li></ul>
Action required	<b>MANDATORY ACTION</b> - see sections: <ul style="list-style-type: none"><li>• <a href="#">2.1.1. SecurityType</a></li><li>• <a href="#">2.1.2. CFICode</a></li><li>• <a href="#">2.2. Changes to the Level1 Market Data Kinematics – LastAuctionPrice Reset.</a></li></ul>

## 2. FeedOS Technical Implementation

Effective Monday, **March 30<sup>\*</sup> 2015**, S&P Capital IQ Real-Time Solutions enhances the referential data and the Level1 Market Data Kinematics, to accommodate the information disseminated on the SWX market data stream, as described below:

- [2.1. Changes to the Referential Data](#)
- [2.2. Changes to the Level1 Market Data Kinematics – LastAuctionPrice Reset](#)
- [2.3. Microsecond Timestamp Precision on the Level1 Market Data.](#)

### 2.1. Changes to the Referential Data

S&P Capital IQ Real-Time Solutions **updates** the referential tags below to accommodate the information disseminated on the SWX market data stream:

**Table 2** Referential tags disseminating updated values on the SWX market data stream

Tag Name	Numeric ID	Type
<a href="#">SecurityType</a>	167	String
<a href="#">CFICode</a>	461	String
<a href="#">MarketSegmentID and MarketSegmentDesc</a>	1300 and 1396	String
<a href="#">OperatingMIC</a>	9533	String

#### 2.1.1. SecurityType

The values of the referential tag **Security Type** conveyed on the SWX market data stream are disseminated via FeedOS data stream in *Referential* to specify the type of security.

FeedOS implementation of the tag **SecurityType** is described in the table below (existing values are in black, newly added values are in green):

**Table 3** SecurityType – technical implementation in FeedOS

Component	Value	Description
<b>Tag Name</b>	SecurityType	FeedOS tag name.
<b>Numeric ID</b>	167	FeedOS unique ID disseminated on the S&P Capital IQ Real-Time Solutions data stream. This is the numeric equivalent of the tag name.
<b>Type</b>	String	String data type.
<b>Format</b>	<i>[Exchange Specific Value]</i>	An <b>exchange specific value</b> , detailing the type of security.
<b>Possible Values</b>	COFP	Certificate of Participation
	CS	Common Stock
	GO	General Obligation

\* 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.

**Table 3** SecurityType – technical implementation in FeedOS (Continued)

Component	Value	Description
Possible Values	MF	Mutual Fund
	NONE	None
	PS	Preferred Stock
	WAR	Warrant

### 2.1.2. CFICode

The values of the referential tag **CFI Code** conveyed on the SWX market data stream are disseminated via FeedOS data stream in *Referential* to specify the standardized identification code of an instrument.

FeedOS implementation of the tag CFICode is described in the table below (existing values are in black, newly added values are in green):

**Table 4** CFICode – technical implementation in FeedOS

Component	Value	Description
Tag Name	CFICode	FeedOS tag name.
Numeric ID	461	FeedOS 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]	An <b>exchange specific value</b> , detailing the standardized identification code of an instrument.
Possible Values	DBXXXX	Debts - Bonds
	DCXXXX	Debts - Convertible Bonds
	DXXXXX	Debts
	EMXXXX	Equities - Others
	EPXXXX	Equities - Preferred Shares
	ESXXRX	Equities - Shares - Registered
	ESXXXX	Equities - Shares
	EUXXXX	Equities - Units
	EXXXXB	Equities - Bearer
	EXXXXX	Equities
	MRXXXX	Other - Interest Rates
	RWCXCX	Rights - Warrants - Currencies - Call
	RWCXPX	Rights - Warrants - Currencies - Put
	RWTXCX	Rights - Warrants - Commodities - Call
	RWTXPX	Rights - Warrants - Commodities - Put
	RWXXCX	Rights - Warrants - Call
	RWXXPX	Rights - Warrants - Put
	RXXXCX	Rights - Call
	XXXXXX	Undefined

The example below shows the possible combinations of SecurityTypes and CFICodes, before and after the migration day (please note that additional combinations may be available, as the exchange could introduce new instruments):

BEFORE 2015-03-30	AFTER 2015-03-30
{ XSWX COFP EMXXXX }	{ XSWX COFP EMXXXX }
{ XSWX CS ESXXXX }	{ XSWX CS ESXXXX }
{ XSWX CS EXXXXX }	{ XSWX CS EXXXXX }
{ XSWX GO DBXXXX }	{ XSWX CS EXXXXX }
{ XSWX GO DCXXXX }	{ XSWX GO DBXXXX }
{ XSWX MF EUXXXX }	{ XSWX GO DCXXXX }
{ XSWX NONE DBXXXX }	{ XSWX MF EUXXXX }
{ XSWX NONE DXXXXX }	{ XSWX NONE DBXXXX }
{ XSWX NONE EXXXXXB }	{ XSWX NONE DXXXXX }
{ XSWX NONE EXXXXX }	{ XSWX NONE EXXXXXB }
{ XSWX NONE RXXXCX }	{ XSWX NONE EXXXXX }
{ XSWX NONE XXXXXX }	{ XSWX NONE MRXXXX }
{ XVTX COFP EMXXXX }	{ XSWX NONE RXXXCX }
{ XVTX CS ESXXXX }	{ XSWX NONE XXXXXX }
{ XVTX NONE EMXXXX }	{ XVTX COFP EMXXXX }
{ XVTX NONE EXXXXXB }	{ XVTX CS ESXXXX }
{ LIQU NONE XXXXXX }	{ XVTX NONE EMXXXX }
{ XQMH NONE MRXXXX }	{ XVTX NONE EXXXXXB }
{ XQMH WAR RWCXCX }	{ LIQU CS ESXXXX }
{ XQMH WAR RWCXPX }	{ LIQU NONE XXXXXX }
{ XQMH WAR RWTXCX }	{ LIQU PS EPXXXX }
{ XQMH WAR RWTXPX }	{ XQMH NONE MRXXXX }
{ XQMH WAR RWXXCX }	{ XQMH WAR RWCXCX }
{ XQMH WAR RWXXPX }	{ XQMH WAR RWCXPX }
	{ XQMH WAR RWTXCX }
	{ XQMH WAR RWTXPX }
	{ XQMH WAR RWXXCX }
	{ XQMH WAR RWXXPX }

### 2.1.3. MarketSegmentID and MarketSegmentDesc

The values of the referential tags **MarketSegmentID** and **MarketSegmentDesc** conveyed on the SWX market data stream are disseminated via FeedOS data stream in *Referential* to detail the ID of the market segment and its description.

FeedOS implementation of the tags MarketSegmentID and MarketSegmentDesc is described below (existing values are in black, removed values are in ~~crossed-out-red~~, newly added values are in green):

**Table 5 MarketSegmentID and MarketSegmentDesc – technical implementation in QuantFEED®**

Component	Value		Description
Tag Name	MarketSegmentID	MarketSegmentDesc	FeedOS tag name.
Numeric ID	1300	1396	FeedOS 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	String data type.
Format	<i>[Exchange Specific value]</i>	<i>[Exchange Specific value]</i>	An <i>exchange specific value</i> , detailing the ID of the market segment and its description.
Possible Values	<del>EMPTY</del>	<del>EMPTY</del>	
	<del>AF</del>	<del>Funds and ETF</del>	
	<del>HS</del>	<del>Main Market</del>	

Table 5 MarketSegmentID and MarketSegmentDesc – technical implementation in QuantFEED® (Continued)

Component	Value	Description
Possible Values	<del>IA</del>	<del>International Bonds</del>
	<del>IG</del>	<del>Real Estate</del>
	<del>IV</del>	<del>Investment Companies</del>
	<del>LC</del>	<del>Local Caps</del>
	<del>SP</del>	<del>SWX Sponsored Segment</del>
	26	Blue Chip Shares
	580	SIX Structured Products
	581	International Bonds
	582	International Bonds Min Denom
	583	International Bonds Convertible
	584	ETF
	585	ETF on Swiss Confederation Bonds
	588	ETP
	589	Swiss Confederation Bonds CHF
	590	Bonds CHF
	591	Mid-/Small-Cap Shares
	592	Secondary Listing Shares
	594	Investment Funds
	596	Convertible and Warrant Bonds CHF
	597	Separate Trading Lines
	612	Sponsored Funds
	613	Sponsored Foreign Shares

## 2.1.4. OperatingMIC

The values of the referential tag **OperatingMIC** conveyed on the SWX market data stream are disseminated via FeedOS data stream in *Referential* to specify the parent MIC.

FeedOS implementation of the tag **operatingMIC** is described in the table below (existing values are in black, newly added values are in green):

Table 6 OperatingMIC – technical implementation in FeedOS

Component	Value	Description
Tag Name	OperatingMIC	FeedOS tag name.
Numeric ID	9533	FeedOS 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	<i>[Exchange specific value]</i>	An <i>exchange specific value</i> , specifying the parent MIC.
Possible Values	LIQU	Liquidnet Systems
	XQMH	SIX Structured Products Exchange AG
	XSWX	Swiss Exchange

## Referential Data Sample

Below are several examples showing the current implementation of the updated (in [blue](#)) referential tags:

```
instr # 256/512845 = 537383757
  PriceCurrency      string{CHF}
  Symbol             string{ABBNE}
  Issuer             string{ABB Ltd}
  Description         string{ABB LTD N 2. LINIE}
  SecurityType       string{CS}
  FOSMarketId        XSWX
  PriceType          uint8{2}
  CFICode            string{ESXXXR}
  RoundLot           float64{1}
  MinTradeVol        float64{0}
  SecuritySubType    string{Registered Share}
  DatedDate          Timestamp{2014-09-16}
  SecurityGroup      string{2110}
  MarketSegmentID    string{597}
  MarketSegmentDesc  string{Separate Trading Lines}
  InternalCreationDate Timestamp{2014-09-15 00:00:05:405}
  InternalModificationDate Timestamp{2015-03-04 14:44:35:357}
  InternalSourceId    uint16{29}
  InternalEntitlementId SWX
  InternalMagic       string{Mid & Small Cap Shares}
  LocalCodeStr        string{CH0253301128_CHF}
  ISIN                string{CH0253301128}
  Telekurs_Value      string{25330112}
  PriceIncrement_dynamic_TableId uint32{3342436}
  SecurityTradingId    string{3232940}
  OperatingMIC         string{XSWX}
  CCP_Eligible         bool{False}
  MARKET_SWX_IssuerCountry string{CH}
  MARKET_SWX_TradingSessionID string{ABdI}
  MARKET_SWX_ListingStateCode string{LI}
  MARKET_SWX_ListingStateDesc string{Listed}

***

instr # 491/505383 = 1030207015
  PriceCurrency      string{GBX}
  Symbol             string{ERET_p.UKE}
  Issuer             string{London Stock Exchange}
  Description         string{Matrix European Real Estate In}
  SecurityType       string{PS}
  FOSMarketId        LIQU
  CFICode            string{EPXXXX}
  SecuritySubType    string{SLS Eligible}
  InternalCreationDate Timestamp{2014-07-14 00:00:05:551}
  InternalModificationDate Timestamp{2015-03-11 15:26:19:403}
  InternalSourceId    uint16{29}
  InternalEntitlementId int32{1093}
  LocalCodeStr        string{GG00BNJZV473_GBX}
  ForeignFOSMarketId  XLON
  ISIN                string{GG00BNJZV473}
  OperatingMIC        string{LIQU}
  MARKET_SWX_IssuerCountry string{United Kingdom}
```



## 2.2. Changes to the Level1 Market Data Kinematics – LastAuctionPrice Reset

In the kinematics before 2015-03-30, the LastAuctionPrice and LastAuctionVolume were reset at the end of the Auction 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..."

VU 07:57:17:933 537371421 LastAuctionPrice=40.25 LastAuctionVolume=2815
VU 07:59:54:435 537371421 LastAuctionVolume=3077
VU 07:59:59:521 537371421 LastAuctionVolume=3148
SI 08:01:01:016 537371421 OPEN *
TE 08:01:01:016 537371421 * * * * * O
VU 08:01:01:016 537371421 MARKET_SWX_TradingSessionSubID=2 TradingStatus=17
TE 08:01:01:040 537371421 * * 40.25 554@1 40.3 150@1
VU 08:01:01:040 537371421 LastAuctionPrice=? LastAuctionVolume=?
TE 08:01:01:000 537371421 40.25 150 * * * * HL
MARKET_SWX_TradingPhase=2
VU 08:01:01:000 537371421 DailyOpeningPrice=40.25
TE 08:01:01:000 537371421 40.25 100 * * * *
MARKET_SWX_TradingPhase=2
TE 08:01:01:000 537371421 40.25 2 * * * *
MARKET_SWX_TradingPhase=2
TE 08:01:01:000 537371421 40.25 22 * * * *
MARKET_SWX_TradingPhase=2

```

In the kinematics after 2015-03-30, the LastAuctionPrice and LastAuctionVolume will be reset at the end of the Auction Phase. The LastAuctionPrice will be reset with a new value, when provided by the exchange. Moreover, the LastAuctionPrice will be available in the snapshot during the trading day, but the LastAuctionVolume will be empty, 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..."

VU 07:57:17:933.323 537371421 LastAuctionPrice=40.25 LastAuctionVolume=2815
VU 07:59:54:435.525 537371421 LastAuctionVolume=3077
VU 07:59:59:521.728 537371421 LastAuctionVolume=3148
SI 08:01:01:016.121 537371421 OPEN *
TE 08:01:01:016.123 537371421 * * * * * O
VU 08:01:01:016.180 537371421 MARKET_SWX_TradingSessionSubID=2 TradingStatus=17
TE 08:01:01:040.254 537371421 * * 40.25 554@1 40.3 150@1
VU 08:01:01:040.287 537371421 LastAuctionPrice=? LastAuctionVolume=?
TE 08:01:01:000.321 537371421 40.25 150 * * * * HL
MARKET_SWX_TradingPhase=2
VU 08:01:01:000.457 537371421 DailyOpeningPrice=40.25 LastAuctionPrice=40.25
TE 08:01:01:000.501 537371421 40.25 100 * * * *
MARKET_SWX_TradingPhase=2
TE 08:01:01:000.578 537371421 40.25 2 * * * *
MARKET_SWX_TradingPhase=2
TE 08:01:01:000.648 537371421 40.25 22 * * * *
MARKET_SWX_TradingPhase=2

```

## 2.3. Microsecond Timestamp Precision on the Level1 Market Data

Effective 2015-03-30, the server timestamps will display microsecond units on the Level1 Market Data, as shown in the example below (highlighted in **green**):

"TE (TradeEvent) : MARKET_TIME INSTRUMENT LAST_PRICE TRADE_QTY BID_PRICE BID_QTY ASK_PRICE ASK_QTY *CONTENT_MASK* *FLAGS*"								
TE	15:01:01:000.578	537371421	40.25	18	*	*	*	*
TE	15:02:06:028.392	537371421	40.25	52	*	*	*	*

## 3. Finding the Latest Information

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- Web: <http://support.quanthouse.com>.