

**S&P Capital IQ Real-Time Solutions**

## **FeedOS™ Developer's Notice**

---

### **ORION DERIVATIVES – Feed Migration from IDC to DMA**

Reference n°: 20141120 – 18312 – 23138

**Effective as of: 15 December 2014\***

**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: ORION DERIVATIVES – Feed Migration from IDC to DMA  
Reference 20141120 – 18312 – 23138  
November 24, 2014

**France Offices**

52 Rue de la Victoire  
75009 Paris  
France  
Tel: +33 (0) 1 73 02 32 11

**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.capitaliq.com](http://www.capitaliq.com)

Copyright © 2014 by Standard & Poor's Financial Services LLC, a part of McGraw Hill Financial.

All rights reserved. S&P CAPITAL IQ is a trademark of Standard & Poor's Financial Services LLC. STANDARD & POOR'S, S&P, GLOBAL CREDIT PORTAL and RATINGSDIRECT are registered trademarks of Standard & Poor's Financial Services LLC.

No content (including ratings, credit-related analyses and data, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of Standard & Poor's Financial Services LLC or its affiliates (collectively, S&P). The Content shall not be used for any unlawful or unauthorized purposes. S&P and any third-party providers, as well as their directors, officers, shareholders, employees or agents (collectively S&P Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Parties are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, for the results obtained from the use of the Content, or for the security or maintenance of any data input by the user. The Content is provided on an "as is" basis. S&P PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related and other analyses, including ratings, and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact or recommendations to purchase, hold, or sell any securities or to make any investment decisions. S&P assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P's opinions and analyses do not address the suitability of any security. S&P does not act as a fiduciary or an investment advisor except where registered as such. While S&P has obtained information from sources it believes to be reliable, S&P does not perform an audit and undertakes no duty of due diligence or independent verification of any information it receives.

S&P keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P may have information that is not available to other S&P business units. S&P has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.



# MIGRATION OF THE ORION DERIVATIVES MARKET DATA STREAM FROM IDC TO DMA

To reflect the changes caused by the migration of the ORION DERIVATIVES market data stream from IDC to DMA protocol, 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	20141120 – 18312 – 23138
Exchanges	ORION DERIVATIVES
Concerned MICs	XHKF
Internal Source ID	54, 136, 139, 206, 215, 218
Effective Date	2014-12-15*
Impact	<ul style="list-style-type: none"><li>• Update of the Referential Tags</li><li>• Update of the Quotation Tags</li><li>• Update of the Quotation Context Tags</li><li>• Addition of the Multi-session Kinematics</li><li>• Update of the MBL Book Depth</li></ul>
Action required	<b>MANDATORY ACTION</b> - see sections: <ul style="list-style-type: none"><li>• <a href="#">2.1.1. CFICode</a>,</li><li>• <a href="#">2.2.2. TradingStatus</a></li><li>• <a href="#">2.4. Addition of the Multi-session Kinematics</a></li><li>• <a href="#">2.5. Changes to the MBL Book Depth.</a></li></ul>

## 2. FeedOS Technical Implementation

Effective Monday, **December 15\*** 2014, S&P Capital IQ Real-Time Solutions enhances the referential, quotation and quotation context data, introduces multi-session kinematics and updates the MBL book depth to accommodate the new information disseminated on the ORION DERIVATIVES market data stream, as described below:

- [2.1. Changes to the Referential Data](#)
- [2.2. Changes to the Quotation Data](#)
- [2.3. Changes to the Quotation Context Data](#)
- [2.4. Addition of the Multi-session Kinematics](#)
- [2.5. Changes to the MBL Book Depth.](#)

### 2.1. Changes to the Referential Data

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

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

Tag Name	Numeric ID	Type
<a href="#">CFICode</a>	461	String

#### 2.1.1. CFICode

The values of the referential tag **CFI Code** conveyed on the ORION DERIVATIVES 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 3** 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	<i>[Exchange specific value]</i>	An <b>exchange specific value</b> , detailing the standardized identification code of an instrument.

\* 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 FeedOS™ project manager.

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

Component	Value	Description
Possible Values	FCECSO	Futures - Commodities - Extraction Resources - Cash - Standardized - Outright
	FFCCSO	Futures - Financial Futures - Currencies - Cash - Standardized - Outright
	FFDPSO	Futures - Financial Futures - Debt Instruments - Physical - Standardized - Outright
	FFICSO	Futures - Financial Futures - Indices - Cash - Standardized - Outright
	FFNCSO	Futures - Financial Futures - Interest Rates - Cash - Standardized - Outright
	FFSCSM	Futures - Financial Futures - Stock Equities - Cash - Standardized - Others
	<del>FXXXXX</del>	Futures
	<del>MRXXXX</del>	Other - Referential Instruments
	OCASCS	Options - Call Options - American - Stock Equities - Cash - Standardized
	OCEICS	Options - Call Options - European - Indices - Cash - Standardized
	<del>OCXXXX</del>	Options - Call Options
	OPASCS	Options - Put Options - American - Stock Equities - Cash - Standardized
	OPEICS	Options - Put Options - European - Indices - Cash - Standardized
	<del>OPXXXX</del>	Options - Put Options
	<del>OXXXXX</del>	Options
	SOXXXX	Structured Products - Structured Products without Capital Protection
	SWSXXX	Structured Products - Structured Products with Capital Protection - Stock-Equities
	SXXXXX	Structured Products

The list below shows the possible combinations of FOSMarketIds, SecurityTypes and CFICodes, before and after the migration day:

BEFORE 2014-12-15	AFTER 2014-12-15
{ XHKF FUT FXXXXX }	{ XHKF FUT FCECSO }
{ XHKF MLEG MRXXXX }	{ XHKF FUT FFCCSO }
{ XHKF OPT OCXXXX }	{ XHKF FUT FFDPSO }
{ XHKF OPT OPXXXX }	{ XHKF FUT FFICSO }
{ XHKF OPT OXXXXX }	{ XHKF FUT FFNCSO }
	{ XHKF FUT FFSCSM }
	{ XHKF MLEG SOXXXX }
	{ XHKF MLEG SWSXXX }
	{ XHKF MLEG SXXXXX }
	{ XHKF OPT OCASCS }
	{ XHKF OPT OCEICS }
	{ XHKF OPT OPASCS }
	{ XHKF OPT OPEICS }

## Referential Data Sample

Below is an example of the referential tags implementation before and after the upgrade (tags disseminating updated values are in [blue](#)):

### Referential Data before 2014-12-15

```
instr # 109/20739 = 228610307
  PriceCurrency      string{HKD}
  Symbol             string{HSIV4}
  Description         string{HANG SENG INDEX HSIV4}
  SecurityType       string{FUT}
  StdMaturity        string{20141030}
  FOSMarketId        XHKF
  Factor             float64{50}
  ContractMultiplier float64{1}
  CFICode           string{FXXXXX}
  MarketSegmentID    string{Hang Seng Index Futures / Options}
  InternalCreationDate Timestamp{2014-10-29 02:36:00:695}
  InternalModificationDate Timestamp{2014-10-29 08:05:31:003}
  InternalEntitlementId int32{1039}
  LocalCodeStr       string{HSIV4}
  ForeignFOSMarketId XHKF
  ForeignMarketId     string{XHKF}
  PriceIncrement_static float64{1}
  MaturityYear         uint16{2014}
  MaturityMonth        uint8{10}
  MaturityDay          uint8{30}
  OperatingMIC         string{XHKF}
```

### Referential Data after 2014-12-15

```
instr # 109/1617 = 228591185
  PriceCurrency      string{HKD}
  Symbol             string{HSIH5}
  Description         string{HANG SENG INDEX HSIH5}
  SecurityType       string{FUT}
  StdMaturity        string{20150330}
  FOSMarketId        XHKF
  Factor             float64{50}
  ContractMultiplier float64{1}
  CFICode           string{FFICS0}
  MarketSegmentID    string{Hang Seng Index Futures / Options}
  InternalCreationDate Timestamp{2014-11-03 15:17:53:926}
  InternalModificationDate Timestamp{2014-11-04 16:01:12:593}
  InternalSourceId    uint16{73}
  InternalEntitlementId int32{1039}
  LocalCodeStr       string{HSIH5}
  ForeignFOSMarketId XHKF
  ForeignMarketId     string{XHKF}
  PriceIncrement_static float64{1}
  MaturityYear         uint16{2015}
  MaturityMonth        uint8{3}
  MaturityDay          uint8{30}
  OperatingMIC         string{XHKF}
```

## 2.2. Changes to the Quotation Data

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

**Table 4** Quotation tags added on the ORION DERIVATIVES market data stream

Tag Name	Numeric ID	Type
MARKET_HK_TradingState	15010	String

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

**Table 5** Quotation tags disseminating updated values on the ORION DERIVATIVES market data stream

Tag Name	Numeric ID	Type
TradingStatus	9100	Enum

### 2.2.1. MARKET\_HK\_TradingState

The values of the quotation tag **MARKET\_HK\_TradingState** conveyed on the ORION DERIVATIVES market data stream are disseminated via FeedOS data stream in *Other Values* to indicate the original trading state value sent by the exchange:

- 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 **MARKET\_HK\_TradingState** is described in the following table:

**Table 6** MARKET\_HK\_TradingState – technical implementation in QuantFEED®

Component	Value	Description
Tag Name	MARKET_HK_TradingState	FeedOS tag name.
Numeric ID	15010	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	Timestamp data type.
Format	<i>[Exchange Specific value]</i>	An <b>exchange specific value</b> , indicating the original trading state value sent by the exchange.
Possible Values	OPENALLOC	Open Allocation Session – Markets with Pre-market Opening Period
	CLOSE	Market Closed – Markets not tradable in T+1 Session
	OPEN	Market Open – All markets
	PREOPEN	PreOpen Session – Markets with Pre-market Opening Period
	PREOPENALLOC	PreOpen Allocation Session – Markets with Pre-market Opening Period
	PAUSE	Market Pause – All markets
	PRE_MKT_ACT	PreMarket Activities – Markets without Pre-market Opening Period
	CL_START	Clearing Session Start – Markets tradable in T+1 Session
	CL_CLOSE	Clearing Session Close – All markets
	AHT_CLOSE	AHFT Market Closed – Markets tradable in T+1 Session
	AHT_CLR_INFO	AHFT Reset Price Information – Markets tradable in T+1 Session

**Table 6** MARKET\_HK\_TradingState – technical implementation in QuantFEED® (Continued)

Component	Value	Description
Possible Values	AHT_INACT_T_ ORDER	AHFT Inactive Non T+1 Order – Markets tradable in T+1 Session
	AHT_NEXT_DA Y	AHFT Reset Price Information for the Next Business Day – Markets tradable in T+1 Session
	AHT_OPEN	AHFT Market Open – Markets tradable in T+1 Session
	AHT_OPEN_PL	AHFT Market Open – Markets tradable in T+1 Session with price limit control enabled
	AHT_PRE_MKT_ACT	AHFT PreMarket Activities – Markets tradable in T+1 Session
	OPEN_PL	Market Open – Markets enabled with price limit control
	CLOSE_TODAY	Market Closed for Today Trading – Markets tradable in T+1 Session
	OPEN_DPL	Market Open – Markets enabled with dynamic price banding mechanism
	FAILOVER	Site Failover – All markets

### 2.2.2. TradingStatus

Each time a modification of the trading status occurs, the values of the quotation tag **TradingStatus** conveyed on the ORION DERIVATIVES market data stream are disseminated via FeedOS data stream in *Other Values*:

- 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 TradingStatus is described in the following table (newly added values are in green):

**Table 7** Trading Status of the ORION DERIVATIVES market data stream – technical implementation in FeedOS

Component	Value	Description
Tag Name	TradingStatus	FeedOS tag name.
Numeric ID	9100	FeedOS unique ID broadcast on the S&P Capital IQ Real-Time Solutions data stream. It is the numeric equivalent of the tag name.
Type	Enum	Enumeration data type.
Format	<i>[Exchange specific value]</i>	An <b>exchange specific value</b> , as described below, concerning the characteristics of the trading status.
Possible Values	2	Trading Halt
	16	Trade Dissemination Time
	17	Ready to Trade
	18	Not Available for Trading
	21	Pre-Open



## Quotation Data Sample

Below is an example of the quotation tags implementation before and after the upgrade (newly added tags are in **green**, tags disseminating updated values are in **blue**):

### Quotation Data before 2014-12-15

```
InstrumentStatusL1
-- 109/20739
    BID: 24590      1      @1
    ASK: 24630      1      @1
    LastPrice                float64{24592}
    LastTradeQty             float64{1}
    DailyHighPrice           float64{24621}
    DailyLowPrice            float64{24590}
    DailyTotalVolumeTraded   float64{340}
    DailyTotalAssetTraded    float64{516719}
    LastTradePrice           float64{24592}
    LastTradeTimestamp       Timestamp{2014-09-11 14:59:01}
    InternalDailyOpenTimestamp Timestamp{2014-10-29 09:32:36:494}
    InternalDailyCloseTimestamp Timestamp{2014-10-29 09:26:58:859}
    InternalDailyHighTimestamp Timestamp{2014-10-29 09:32:37:021}
    InternalDailyLowTimestamp Timestamp{2014-10-29 09:59:58:970}
    InternalPriceActivityTimestamp Timestamp{2014-10-29 10:17:37:609}
    TradingStatus            18=NotAvailableForTrading
    TradingSessionId         int8{1}
    LastOffBookTradePrice    float64{24600}
    LastOffBookTradeQty      float64{200}
    LastOffBookTradeTimestamp Timestamp{2014-09-11 05:45:27}
    SessionTotalOffBookAssetTraded float64{0}
    SessionTotalOffBookVolumeTraded float64{0}
    SessionTotalVolumeTraded float64{21}
    SessionOpeningPrice      float64{24676}
    PreviousSessionClosingPrice float64{24630}
    SessionHighPrice         float64{24621}
    SessionLowPrice          float64{24590}
    SessionTotalAssetTraded  float64{516719}
    SessionClosingPrice      float64{24592}
    DailyOpeningPrice        float64{24619}
    DailySettlementPrice     float64{24630}
    PreviousDailyTotalVolumeTraded float64{319}
    PreviousDailyTotalAssetTraded float64{8377708}
    PreviousDailyClosingPrice float64{24630}
    PreviousBusinessDay      Timestamp{2014-10-29}
    CurrentBusinessDay       Timestamp{2014-10-29}
    PreviousDailySettlementPrice float64{24547}
    DailyTotalOffBookVolumeTraded float64{0}
    DailyTotalOffBookAssetTraded float64{0}
    OpenInterest             float64{4198}
    PriceActivityMarketTimestamp Timestamp{2014-09-11 15:00:00:050}
    SettlementPriceDate      Timestamp{2014-10-29}
    OpenInterestDate         Timestamp{2014-10-29}
    SettlementPriceType      char{a}
```

**Quotation Data after 2014-12-15:**

```

InstrumentStatusL1
-- 109/20738
    BID: 24582      1      @1
    ASK: 24656      1      @1
    LastPrice              float64{24615}
    LastTradeQty           float64{1}
    DailyHighPrice         float64{24649}
    DailyLowPrice          float64{24586}
    DailyTotalVolumeTraded float64{44815}
    DailyTotalAssetTraded  float64{48475741}
    LastTradePrice         float64{24615}
    LastTradeTimestamp     Timestamp{2014-09-11 14:59:58}
    InternalDailyOpenTimestamp Timestamp{2014-10-29 03:45:10:293}
    InternalDailyCloseTimestamp Timestamp{2014-10-29 03:40:40:188}
    InternalDailyHighTimestamp Timestamp{2014-10-29 03:50:27:877}
    InternalDailyLowTimestamp Timestamp{2014-10-29 04:19:03:556}
    InternalPriceActivityTimestamp Timestamp{2014-10-29 05:34:01:647}
    TradingStatus          2=TradingHalt
    TradingSessionId       int8{1}
    LastOffBookTradePrice  float64{24625}
    LastOffBookTradeQty    float64{12}
    LastOffBookTradeTimestamp Timestamp{2014-09-11 08:10:37}
    SessionTotalOffBookAssetTraded float64{0}
    SessionTotalOffBookVolumeTraded float64{0}
    SessionTotalVolumeTraded float64{1969}
    SessionOpeningPrice    float64{24637}
    PreviousSessionClosingPrice float64{24648}
    SessionHighPrice       float64{24649}
    SessionLowPrice        float64{24586}
    SessionTotalAssetTraded float64{48475741}
    DailyOpeningPrice      float64{24637}
    DailySettlementPrice   float64{24648}
    PreviousDailyTotalVolumeTraded float64{42846}
    PreviousDailyTotalAssetTraded float64{1056144833}
    PreviousDailyClosingPrice float64{24648}
    PreviousBusinessDay    Timestamp{2014-10-29}
    CurrentBusinessDay     Timestamp{2014-10-29}
    DailyTotalOffBookVolumeTraded float64{0}
    DailyTotalOffBookAssetTraded float64{0}
    OpenInterest           float64{40980}
    InternalLastAuctionTimestamp Timestamp{2014-10-29 03:20:38:480}
    PriceActivityMarketTimestamp Timestamp{2014-09-11 21:04:47:741}
    SettlementPriceDate    Timestamp{2014-10-29}
    OpenInterestDate       Timestamp{2014-10-29}
    SettlementPriceType    char{a}
    MARKET_HK_TradingState string{CL_Start}

```

## 2.3. Changes to the Quotation Context Data

S&P Capital IQ Real-Time Solutions [updates](#) the values of the quotation context tags below:

**Table 8** Quotation context tags disseminating updated values on the ORION DERIVATIVES market data stream

Tag Name	Numeric ID	Type
TradeCondition	277	String

### 2.3.1. TradeCondition

Each time a trade occurs, the values of the quotation tag **TradeCondition** conveyed on the ORION DERIVATIVES market data stream are disseminated via FeedOS data stream in *Context* to identify the particular condition applicable to a 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.

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

**Table 9** 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	<i>[Exchange specific value]</i>	An <b>exchange specific value</b> , detailing the particular condition applicable to a trade.
Possible Values	X	Cross Trade

## Quotation Context Data Sample

Below is an example showing the newly added (in [green](#)) quotation context tags:

```
"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 06:39:59:114 228610522 TradingStatus=17
TE 06:39:59:114 228610522 0.99 1.04 0.99 10102@1 0.89 9616@1 L
TradeCondition=X
```

## 2.4. Addition of the Multi-session Kinematics

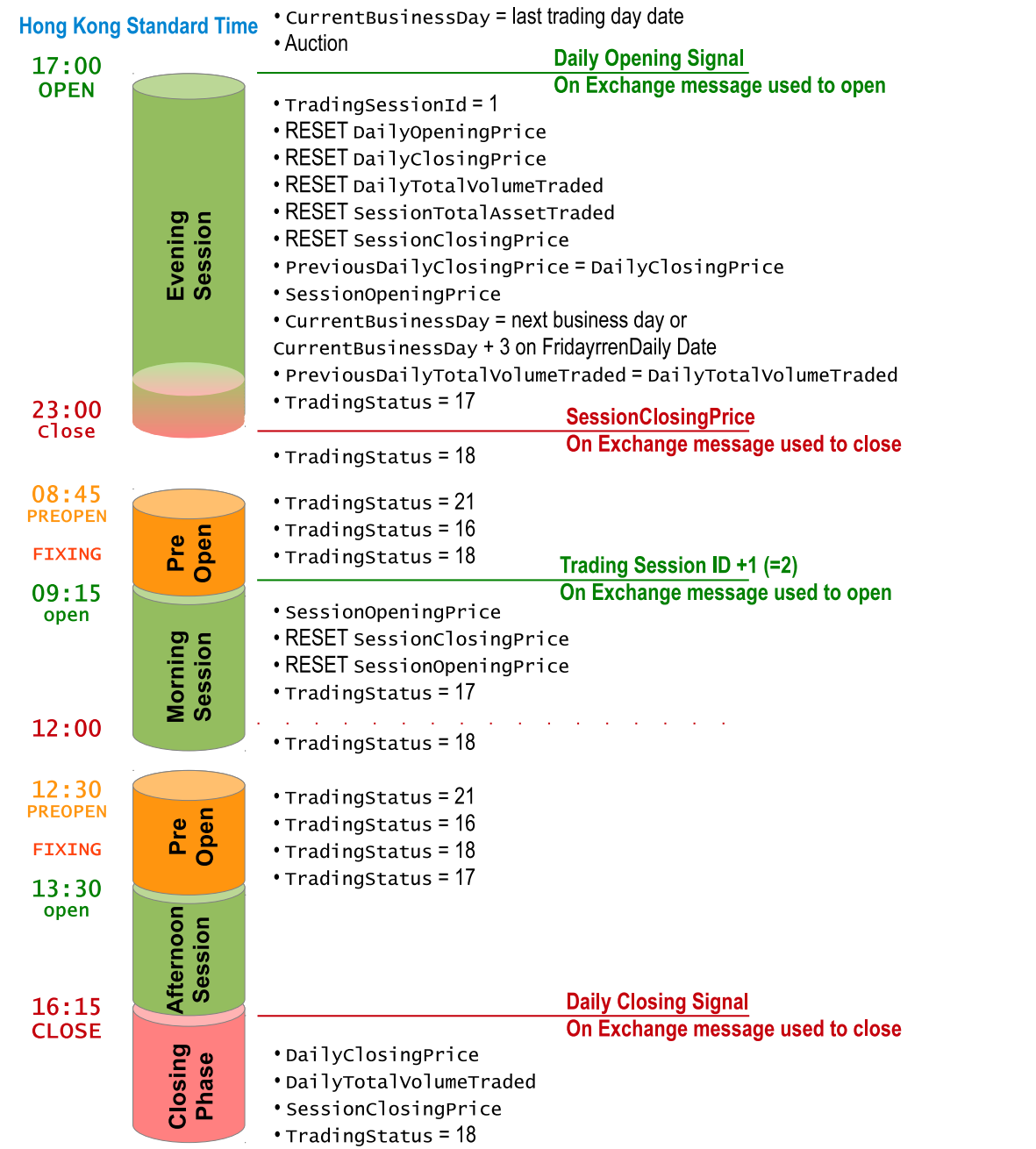
The following segments have now multi-session kinematics:

- HangSengIndexFuturesAndOptions
- HSharesIndexFuturesAndOptions

- MiniHangSengIndexFuturesAndOptions
- RenminbiCurrencyFutures
- AsiaCommoditiesFutures
- ThermalCoalFutures.

The diagram below describes the main trading phases and the update mechanism of the tags available for a HSI Future available on the ORION DERIVATIVES market data stream:

**Figure 9-1      Example of tags update mechanism for a HSI Future on the ORION DERIVATIVES market data stream in Hong Kong Standard Time**



## 2.5. Changes to the MBL Book Depth<sup>\*</sup>

Effective 2014-12-15, the **MBL Book** on the ORION DERIVATIVES market data stream has a **10-level depth**.

## 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](mailto:rts-support@spcapitaliq.com)
- Web: <http://support.quanthouse.com>.

---

<sup>\*</sup> The MBL data may not be included by default in your Level1 data subscription, but sold separately. Depending on your contract, additional terms, conditions and fees may apply. For more details about the subscription options, please contact S&P Capital IQ Real-Time Solutions.