# Optimise™

## Release Guide for Software Release 6.0

Document Version: 1.1

Date: May 24, 2013

*Abstract*

*This document provides information about changes related to the Optimise 6.0 release.*

# Table of Contents

# Tables

# 1. Introduction

This document provides information about changes related to the Optimise 6.0 release **scheduled for June 3, 2013**. This release implements functionality and performance enhancements. This release **is backwards compatible**, except as noted in Section 2. The **MT1** Member Simulation Environment will be available to members on **Monday, April 8, 2013** to test the new release.

This Release Guide includes:

- A release timeline.
- A list of functional changes.
- Connectivity information for the member simulation environment.
- Impact on members.
- Documentation changes.
- Where to find support for this release.

This release will follow these phases:

- Member Simulation testing begins in the MT1 environment on Monday, April 8, 2013.
- Version 6.0 will be implemented in production Monday, June 3, 2013.

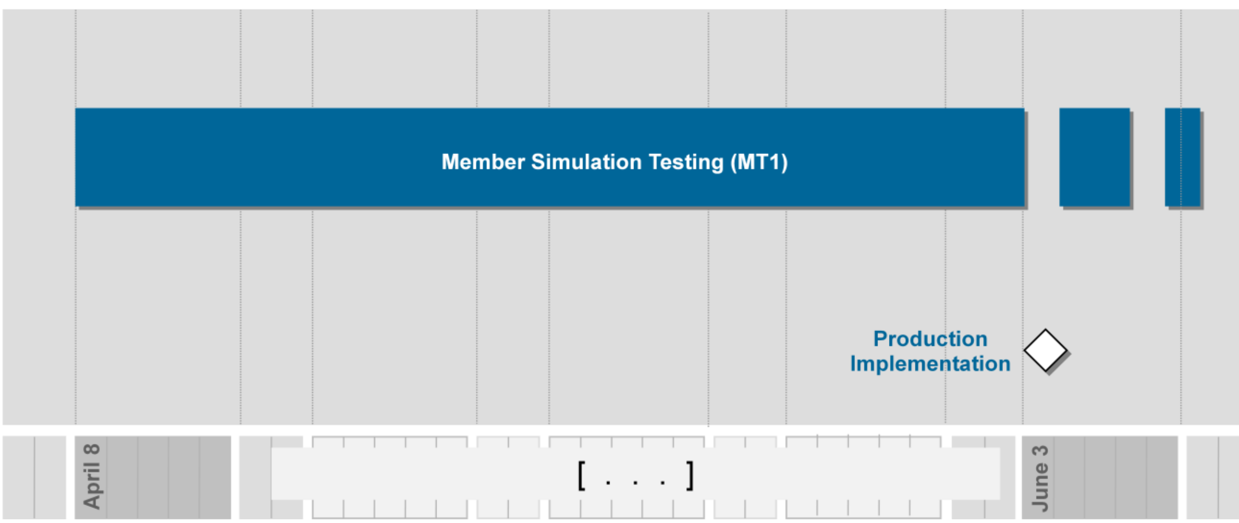


**Figure 1 – Timeline for Member Simulation and Production Implementation**

# 2. Functional Changes

This section describes the functional changes in this release.

## 2.1 New Functionality

New functionality included in this release.

### 2.1.1 DTI/IORS — New *SideTradeID* Field

**This change affects all members.**

In support of an industry initiative to facilitate tracking of trades from execution to clearing, a new string field, *SideTradeID* (1506), is added to the ***Trade Item Broadcast*** (DTI) and **Execution Report** (IORS) messages. The data in this field are also reported to OCC in the OCC Trade Capture Report, TrdID field, and provide a direct link between the trade reported by the ISE and the cleared trade reported by OCC.

The *SideTradeID* is guaranteed to be unique across the exchange for the day and is a compound string comprised of the letter "B" (Bought) or "S" (Sold), followed by the internal underlying product ID converted to hex, followed by the internal trade ID. For example, a Buy in AMZN (internal product ID 2244) with internal trade ID 1234 would be formatted as "B000008C40000001234"

**Table 1: DTI/IORS *SideTradeID* Field**

| Tag | Field Name | Type | Req | Value(s) | Comments |
|---|---|---|---|---|---|
| 1506 | SideTradeID | String | N | Ex: "B000008C40000001234" | Carried to OCC TrdID field |

### 2.1.2 DTI/IORS — New Liquidity (Maker/Taker) Indicators

**This change affects all members.**

A liquidity code (or, Maker/Taker code) is provided on a member's trade broadcast, and can be used to help calculate the fees associated with the trade.

Beginning in R6.0, the current list of codes will be expanded in order to provide more detailed information about a member's position in the trade. In the future, additional codes may be dynamically added to the list (new codes will be announced before they are implemented).

#### 2.1.2.1 DTI Liquidity Codes

Liquidity codes are provided in the *SideLiquidityInd* field on the ***Trade Item Broadcast***. The following table details the expanded list of codes:

**Table 2: DTI *SideLiquidityInd* Field Codes**

| Tag | Field Name | Type | Req | Value(s) |
|---|---|---|---|---|
| 1444 | SideLiquidityInd | Int | N | CURRENT CODES: |
| | | | | 1=Maker<br>2=Taker<br>4=Response |

| Tag | Field Name | Type | Req | Value(s) |
|---|---|---|---|---|
| | | | | 5=Hidden<br>6=Opening<br>7=Cross |
| | | | | ADDITIONAL CODES (R6.0): |
| | | | | 8=Flashed Order<br>9=Flashed Response<br>10=Routed Out<br>11=Trade Report<br>12=Combo Maker Against Combo<br>13=Combo Taker Against Combo<br>14=Combo Response Against Combo<br>15=Combo Hidden Against Combo<br>16=Combo Opening Rotation<br>17=Combo Cross<br>18=Combo Taker Against Regular<br>19=Regular Maker Against Combo<br>20=Combo Taker Against IO<br>21=Regular (incl. PIM) Taker Against IO<br>22=IO Maker Against Combo<br>23=IO Maker Against Regular<br>24=Regular Maker Against IO Participant<br>25= IO Participant Taker Against Regular |

**NOTE:** Given the ability to dynamically add new liquidity codes, these codes can no longer be enumerated in the DTI isefix.xml template file. Beginning with R6.0, all liquidity codes are defined only in the *DTI Programming Manual.*

#### 2.1.2.2 IORS Liquidity Codes

Liquidity codes are provided in the ISE-custom *LiquidityIndicator* (9730) field on the **Execution Report**. The following table details the expanded list of codes:

**Table 3: IORS *LiquidityIndicator* Field Codes**

| Tag | Field Name | Type | Req | Value(s) |
|---|---|---|---|---|
| 9730 | LiquidityIndicator | String | N | CURRENT CODES: |
| | | | | “X”=Undefined<br>“M”=Maker<br>“T”=Taker<br>“R”=Response<br>“H”=Hidden<br>“O”=Opening<br>“C”=Cross |
| | | | | ADDITIONAL CODES (R6.0): |
| | | | | “8”=Flashed Order<br>“9”=Flashed Response<br>“10”=Routed Out<br>“11”=Trade Report |

| Tag | Field Name | Type | Req | Value(s) |
|---|---|---|---|---|
| | | | | "12"=Combo Maker Against Combo<br>"13"=Combo Taker Against Combo<br>"14"=Combo Response Against Combo<br>"15"=Combo Hidden Against Combo<br>"16"=Combo Opening Rotation<br>"17"=Combo Cross<br>"18"=Combo Taker Against Regular<br>"19"=Regular Maker Against Combo<br>"20"=Combo Taker Against IO<br>"21"=Regular (incl. PIM) Taker Against IO<br>"22"=IO Maker Against Combo<br>"23"=IO Maker Against Regular<br>"24"=Regular Maker Against IO Participant<br>"25"= IO Participant Taker Against Regular |

## 2.2 Modified Functionality

Modified functionality included in this release.

### 2.2.1 DTI — Market Maker Curtailment Parameters

**This change affects Market Makers, only.**

Currently, the setting of curtailment (speed bump) parameters is optional. Existing parameters can also be disabled by explicitly setting counter parameters or *ExposureDuration* equal to zero (0).

In R6.0 ***all*** **curtailment parameters** must be set to non-zero values in order to quote. In addition, existing parameters cannot be disabled by setting the parameters equal to zero.

If curtailment parameters are not set for a product and instrument type (regular or complex), quote transactions for that product and instrument type will be rejected. An attempt to set parameters equal to zero will also be rejected, leaving the existing parameters in place.

For example, a Market Maker (MM) is interested in using only the *CumQty* counter for curtailment. The MM sets the *CumQty* and *ExposureDuration* fields to meaningful values and sets the other counters to a very large value (2,147,483,647 [MAX_INT32]). This will have the intended effect of curtailment occurring based only on the interested counter —the other counters will never trigger curtailment within the specified timeframe because of the large value.

This change affects curtailment parameters, only. All other MM parameters — tick-worse, short-sale indicator, and auto-rotate (Primary MMs only) — are unaffected and remain optional.

MM parameters are set using the ***MM Parameter Definition Request***. The table below details the changes to the curtailment parameters, only. For a complete description of the transaction, please refer to the *DTI Programming Manual, vers. 6.0.0* (or higher).

**Table 4: MM Curtailment Parameter Fields**

| Tag | Field | Value(s) | Comment |
|---|---|---|---|
| 14 | CumQty | 1 ≤ *n* ≤ 2,147,483,647 | |
| 8615 | PctCount | 99 ≤ *n* ≤ 2,147,483,647 | Integer. E.g. 100% = 100 |
| 7966 | Delta | 1 ≤ *n* ≤ 2,147,483,647 | |
| 7968 | Vega | 1 ≤ *n* ≤ 2,147,483,647 | |
| 1629 | ExposureDuration | 1000 ≤ *n* ≤ 30000 | milliseconds |

### 2.2.2 IORS — *LastMkt* Field on Drop Copy Execution Reports

**This change affects IORS Members, only.**

ISE will reinstate the *LastMkt* (30) field on all drop copy (Trade-drop, Order-drop, and AMR-drop) sessions.

*LastMkt* (30) is used to identify the venue where the stock leg of a stock-combo order was executed.

**Table 5: IORS *LastMkt* Field**

| Tag | Field | Req'd | Comment |
|---|---|---|---|
| 30 | LastMkt | N | Market that executed the order. Stock trades only.<br>1=BYN ConvergEx U.S. Transaction Services<br>3=BNY ConvergEx Millennium ATS<br>4=Knight Match<br>5=Knight Link<br>6=Instinet CBX (US)<br>7=Deutsche Bank ATS |

## 2.3 Discontinued Functionality

There is no discontinued functionality included in this release.

# 3. Technical Changes

Technical changes are described below.

## 3.1 Interfaces

### 3.1.1 DTI

The **isefix.xml** file has these changes:

- New model version: 6.0.1 (subject to change).
- New optional field added to ***Deal Item Broadcast*** and ***Trade Item Broadcast***:
  - *SideTradeID* (String)

### 3.1.2 MDI

There are **no** changes to the **FastMDMTemplates.xml** file.

New version: 6.0.0

## 3.2 Market Data Feeds

### 3.2.1 Binary Reference Data Feed

There are no changes to the MDI for this release; however, the binary market data channels in MT1, only, have been reallocated. Please see Table 7: MT1 MDI Multicast IP Addresses & Ports, below for complete information.

Production IP addresses and ports are already defined. Please see the *MDI Programming Manual, vers. 6.0.0,* or higher for details.

## 3.3 Data Centers/Connectivity

No changes.

# 4. Member Test Environment Connectivity

There are no connectivity-related changes required for this release. The connectivity tables below are provided as a courtesy.

The ***Member Simulation Guide*** includes these connectivity tables as well as detailed information about the environment and connecting to it with different interfaces. The guide is available on the Members Area site at https://members.ise.com.

## 4.1 DTI Access

**Table 6: DTI IP Addresses & Ports**

| Connection to DTI IP Address / Netmask | | |
|---|---|---|
| System MT1 (New R6.0) | System MT2 (Current R5.1) | Ports |
| 207.231.198.1 / 255.255.255.0 | 207.231.198.2 / 255.255.255.0 | 20040, 20041 |

## 4.2 Member Test – MT1 (New R6.0)

**Table 7: MT1 MDI Multicast IP Addresses & Ports**

| Feed Name | | Ports | GRE VPN or Direct | |
|---|---|---|---|---|
| | | | A Feed | B feed |
| | | | Source: 207.231.198.65 or 66 or 67 | |
| FAST Feeds | | | | |
| Reference Data Feed | Snapshot | 53150 | 224.0.75.1 | 224.0.75.7 |
| | Incremental | 53151 | | |
| Depth of Market Feed | | 53150<br>53250<br>53350 | 224.0.75.2 | 224.0.75.8 |
| Top Quote Feed | | 53150<br>53250<br>53350 | 224.0.75.3 | 224.0.75.9 |
| Trade Feed | | 53151<br>53251<br>53351 | | |
| Pre-Open Feed | | 53150<br>53250<br>53350 | 224.0.75.4 | 224.0.75.10 |
| Order Feed | | 53150<br>53250<br>53350 | 224.0.75.5 | 224.0.75.11 |

<table>
<tr><th colspan="2" rowspan="3">Feed Name</th><th rowspan="3">Ports</th><th colspan="2">GRE VPN or Direct</th></tr>
<tr><th>A Feed</th><th>B feed</th></tr>
<tr><th colspan="2">Source: 207.231.198.65 or 66 or 67</th></tr>
<tr><td rowspan="5">Spread Feed</td><td>Depth</td><td>53150<br>53250<br>53350</td><td rowspan="5">224.0.75.6</td><td rowspan="5">224.0.75.12</td></tr>
<tr><td>Top Quote</td><td>53151<br>53251<br>53351</td></tr>
<tr><td>Order</td><td>53152<br>53252<br>53352</td></tr>
<tr><td>Trade</td><td>53153<br>53253<br>53353</td></tr>
<tr><td>Pre open</td><td>53154<br>53254<br>53354</td></tr>
<tr><td colspan="5">Binary Feeds</td></tr>
<tr><td rowspan="2">Reference Data Feed</td><td>Snapshot</td><td>53150</td><td rowspan="2">224.0.75.13</td><td rowspan="2">224.0.75.19</td></tr>
<tr><td>Incremental</td><td>53151</td></tr>
<tr><td colspan="2">Depth of Market (NOT ACTIVE)</td><td>53150<br>53250<br>53350</td><td>224.0.75.14</td><td>224.0.75.20</td></tr>
<tr><td colspan="2">Top Quote Feed</td><td>53150<br>53250<br>53350</td><td rowspan="2">224.0.75.15</td><td rowspan="2">224.0.75.21</td></tr>
<tr><td colspan="2">Trade Feed</td><td>53151<br>53251<br>53351</td></tr>
<tr><td colspan="2">Pre-Open Feed</td><td>53150<br>53250<br>53350</td><td>224.0.75.16</td><td>224.0.75.22</td></tr>
<tr><td colspan="2">Order Feed (NOT ACTIVE)</td><td>53150<br>53250<br>53350</td><td>224.0.75.17</td><td>224.0.75.23</td></tr>
<tr><td rowspan="4">Spread Feed</td><td>Depth (NOT ACTIVE)</td><td>53150<br>53250<br>53350</td><td rowspan="4">224.0.75.18</td><td rowspan="4">224.0.75.24</td></tr>
<tr><td>Top Quote</td><td>53151<br>53251<br>53351</td></tr>
<tr><td>Order (NOT ACTIVE)</td><td>53152<br>53252<br>53352</td></tr>
<tr><td>Trade</td><td>53153<br>53253<br>53353</td></tr>
</table>

| Feed Name | | Ports | GRE VPN or Direct A Feed | GRE VPN or Direct B feed |
|---|---|---|---|---|
| | | | Source: 207.231.198.65 or 66 or 67 | |
| | Pre-Open | 53154<br>53254<br>53354 | | |

**NOTE:** Shaded channels are not currently active.

## 4.3 Member Test – MT2 (Current R5.1)

**Table 8: MT2 MDI Multicast IP Addresses & Ports**

| Feed Name | | Ports | GRE VPN or Direct Primary (A Feed) | GRE VPN or Direct Secondary (B feed) |
|---|---|---|---|---|
| | | | Source: 207.231.198.75 or 76 or 77 | |
| FAST Feeds | | | | |
| Reference Data Feed | Snapshot | 53150 | 224.0.75.65 | 224.0.75.71 |
| | Incremental | 53151 | | |
| Depth of Market Feed | | 53150<br>53250<br>53350 | 224.0.75.66 | 224.0.75.72 |
| Top Quote Feed | | 53150<br>53250<br>53350 | 224.0.75.67 | 224.0.75.73 |
| Trade Feed | | 53151<br>53251<br>53351 | | |
| Pre-Open Feed | | 53150<br>53250<br>53350 | 224.0.75.68 | 224.0.75.74 |
| Order Feed | | 53150<br>53250<br>53350 | 224.0.75.69 | 224.0.75.75 |
| Spread Feed | Depth | 53150<br>53250<br>53350 | 224.0.75.70 | 224.0.75.76 |
| | Top Quote | 53151<br>53251<br>53351 | | |
| | Order | 53152<br>53252<br>53352 | | |

| Feed Name | | Ports | GRE VPN or Direct | |
|---|---|---|---|---|
| | | | Primary (A Feed) | Secondary (B feed) |
| | | | Source: 207.231.198.75 or 76 or 77 | |
| | Trade | 53153<br>53253<br>53353 | | |
| | Pre-Open | 53154<br>53254<br>53354 | | |
| Binary Feeds | | | | |
| Reference Data Feed | Snapshot | 53150 | 224.0.75.77 | 224.0.75.83 |
| | Incremental | 53151 | | |
| Depth of Market (NOT ACTIVE) | | 53150<br>53250<br>53350 | 224.0.75.78 | 224.0.75.84 |
| Top Quote Feed | | 53150<br>53250<br>53350 | 224.0.75.79 | 224.0.75.85 |
| Trade Feed | | 53151<br>53251<br>53351 | | |
| Pre-Open Feed | | 53150<br>53250<br>53350 | 224.0.75.80 | 224.0.75.86 |
| Order Feed (NOT ACTIVE) | | 53150<br>53250<br>53350 | 224.0.75.81 | 224.0.75.87 |
| Spread Feed | Depth (NOT ACTIVE) | 53150<br>53250<br>53350 | 224.0.75.82 | 224.0.75.88 |
| | Top Quote | 53151<br>53251<br>53351 | | |
| | Order (NOT ACTIVE) | 53152<br>53252<br>53352 | | |
| | Trade | 53153<br>53253<br>53353 | | |
| | Pre-Open | 53154<br>53254<br>53354 | | |

**NOTE:** Shaded channels are not currently active.

## 4.4 FIX/IORS Access

**Table 9: FIX/IORS Member Simulation IP Address Connection**

| IP Address / Netmask |
|---|
| 207.231.198.19 / 255.255.255.0 |

## 4.5 PrecISE Access

**Table 10: PrecISE Member Simulation IP Address Connections**

| Member Test Environment | Direct Connection | Internet Connection | Port |
|---|---|---|---|
| MT1 (New R6.0) | 207.231.198.17 | 74.120.84.92 | 443 (HTTPS) |
| MT2 (Current R5.1) | 207.231.198.18 | 74.120.84.91 | 443 (HTTPS) |

# 5. Member Test Environment Setup

There are no setup-related changes required for this release.

The ***Member Simulation Guide*** includes detailed information about the environment and connecting to it with different interfaces. The guide is available on the Members Area site at https://members.ise.com.

# 6. Member Conformance Testing Requirements

## 6.1 Conformance Testing

### 6.1.1 DTI

Market Makers **must certify** changed MM Parameters requirements.

Changes related to the *SideLiquidityInd* field and new *SideTradeID* field are backwards compatible; however, conformance testing is **recommended** to ensure that member applications can handle the new values and field.

### 6.1.2 MDI

There are no requirements for this release.

## 6.2 Weekend Product Test

There are no requirements for this release.

## 6.3 FIX/IORS Certification

Conformance testing is **recommended** to ensure that member applications can handle the new *LiquidityIndicator* (9730) values and the new *SideTradeID* (1506) field on the **Execution Report**.

# 7. Impact for Members

This Optimise release has the following impact on members:

**Table 11: Member Impact by Interface**

| Impact | Interface | | | |
|---|---|---|---|---|
| | DTI | MDI | FIX/IORS | PrecISE |
| Members may need to modify their applications extensively | | | | |
| Members may need to conduct a full conformance test with ISE | | | | |
| Members may need to perform minor modifications to their applications (significant modifications are unlikely) | X | | X | |
| Members need to conduct an interoperability test with ISE | | | | |
| Members need not modify applications; modifications are covered by ISE | | | | |
| Members need to engage in the new functions provided if they want to use those functions. | | | | |

# 8. Support

ISE provides email and phone support through ISE's Technology Member Services (TMS) team. Members also can submit support requests on ISE's members area website at https://members.ise.com.

## 8.1 Release Documentation

This release has resulted in updates to these documents.

**Table 12: Release Documentation**

| Document | Description | Release Date |
|---|---|---|
| DTI Programming Manual | New version 6.0.3 | May 14, 2013 |
| FIX Order Routing Guide | New version 6.0.4 | May 14, 2013 |
| MDI Programming Manual | New version 6.0.1 | May 2, 2013 |
| Member Connectivity Guide | New version 2.2.4 | April 9, 2013 |
| Member Simulation Guide | New version 2.3.2 | May 2, 2013 |
| Conformance Test Scripts | Not applicable | |

## 8.2 Support Hours

Technical phone and email support is provided Monday to Friday 9:00 a.m. to 6:00 p.m. ET.

## 8.3 Contacts

For any questions or requests related to member simulation or technical support requests, please contact the ISE TMS team at (212) 897-0244 or email tms@ise.com.

## 8.4 Web Tickets

ISE's secure members site allows registered users to submit web tickets directly to the TMS team. To submit a ticket, please login at https://members.ise.com.

## 8.5 Training/Technical Member Forum

There is no forum scheduled for this release.

# 9. Revision History

These changes have been made to this document:

| Version | Date | Change | Section | Comments |
|---|---|---|---|---|
| 1.0 | April 9, 2013 | Original Version | | |
| 1.1 | May 24, 2013 | Corrected format of *SideTradeID*<br>Updated document versions | 2.1.1<br>8.1 | |