



**MIAX Interface Specifications**  
**Summary of Upcoming Enhancements**  
**Planned for 2<sup>nd</sup> Quarter 2016**

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## 1 Overview

This document provides information about updates to the MIAX Interface Specifications to support Complex Orders functionality. The following updated Interface Specifications are now available on the MIAX Options web site:

- FIX Order Interface (FOI)
- MIAX Express Interface (MEI)
- Clearing Trade Drop (CTD)
- MIAX FIX Drop Copy Port (FXD)
- Administrative Information Subscriber Feed (AIS)
- MIAX Order Feed (MOR)
- Top of Market Feed (ToM)
- Complex Top of Market Feed (cToM)

The activation of the Complex Orders functionality is scheduled for Q2 2016, pending SEC approval. The production rollout schedule will be announced via future MIAX Regulatory Circular.

## 2 Interface Changes

### 2.1 FIX Order Interface (FOI) v2.0

Firms must update to the MIAX FIX Order Interface (FOI) v2.0 specifications if they plan to implement Complex Orders.

Firms not intending to implement Complex Orders can continue to utilize prior interface versions.

For Firms upgrading to the latest version, there are required changes that must be supported (see below).

Note: all future supported functionality will be built upon the latest specifications. Therefore, Firms are strongly encouraged to upgrade to the latest specification even if they are not planning to implement Complex Orders.

#### **Summary of Changes:**

##### **New Messages:**

**New Order - Multileg Message Type “AB”:** New Order – Multileg enables firms to enter Complex Orders. This is a Fix 4.3 Message supported over the existing MIAX FIX 4.2 session.

This is an *optional* message and not required by existing customers submitting simple orders only to MIAX.

**Order Cancel/Replace - Multileg Message Type “AC”:** Order Cancel/Replace - Multileg enables firms to enter Complex Cancel/Replace Orders. This is a Fix 4.3 Message supported over the existing MIAX FIX 4.2 session.

This is an *optional* message and not required by existing customers submitting simple orders only to MIAX.

**Modified Messages:**

**Order Cancel Request – Single or Multileg Message Type “F”:** Now supports the ability to specify mass cancels of orders for both Complex and/or Simple Orders.

This change is *optional* and not required by existing customers utilizing mass cancels for Simple orders only.

**Execution Report – Single or Multileg Message Type “8”:** Added new fields and updated the notes section.

The changes to this message are *required* for Firms using the latest specification (even for Firms not implementing Complex Orders).

**Order Status Request – Single or Multileg Message Type “H”:** Added note that the Side field is not required for Complex Orders related Order Status Requests.

This change is *optional* and not required by existing customers utilizing Order Status messages for Simple orders only.

**Updated Appendixes:**

**Appendix D:** Added new billing fields for StrategyAuctionType, StrategyTimerRole and ContraStrategyTimerRole.

**Miscellaneous:**

Updated the following FOI interface specification section:

“Configuration Section” - to communicate related Complex Order protections.

**Production Implementation Target Dates:**

Specific production implementation dates will be published via a MIAX Alert. MIAX is anticipating a 2<sup>nd</sup> quarter 2016 implementation pending SEC approval.

**Certification:**

Certification is *required* for Firms planning to utilize the latest interface specification.

## 2.2 MIAX Express Interface (MEI) v2.0

Firms must update to the MIAX Express Interface (MEI) v2.0 specifications if they plan to implement Complex Orders.

Firms not intending to implement Complex Orders can continue to utilize prior interface versions.

For Firms upgrading to the latest version, there are required MIAX configuration changes that must be implemented otherwise new notification messages must be supported (see below).

Note: all future supported functionality will be built upon the latest specifications. Therefore, Firms are strongly encouraged to upgrade to the latest specification even if they are not planning to implement Complex Orders.

### Summary of Changes:

#### New Messages:

**Complex Enhanced Quote (eQuote) Message:** The Complex eQuote Message supports interaction with Complex liquidities on the MIAX Book and responses to Complex Order related Auctions.

This is an *optional* message and only required by Firms planning to interact with Complex liquidities.

**Complex Enhanced Quote (eQuote) Response:** The Complex eQuote Response provides an acknowledgment (ACK) or negative acknowledgment (NAK) upon processing a submitted Complex eQuote Message.

This is an *optional* change except for Firms that submit Complex eQuotes.

**Mass Liquidity Cancel Request – Simple and Complex Message:** Complex liquidities can be mass canceled atomically similarly to Simple liquidities. This new message allows clients to submit a single request for the purposes of specifying a Simple and/or Complex mass cancel.

This is an *optional* message and only required by Firms planning to interact with Complex liquidities.

**Mass Liquidity Cancel Response:** The Mass Liquidity Cancel Response provides an acknowledgment (ACK) or negative acknowledgment (NAK) upon processing a submitted Mass Liquidity Cancel Request – Simple and Complex Message.

This is an *optional* change except for Firms that submit Mass Liquidity Cancel Request – Simple and Complex messages.

**Liquidity Protection Reset Request Message:** Once engaged, Simple and Complex protections can be reset by submitting a single Liquidity Protection Reset Request Message for the purposes of specifying a Simple and/or Complex Order reset.

This is an *optional* message and only required by Firms planning to interact with Complex liquidities.

**Liquidity Protection Response:** The Liquidity Protection Response provides an acknowledgment (ACK) or negative acknowledgment (NAK) upon processing a submitted Liquidity Protection Reset Request Message.

This is an *optional* change except for Firms that submit Liquidity Protection Reset Request messages.

#### **New Notification Messages:**

**Complex Liquidity Protection Trigger Notification:** This notification will notify clients if Complex liquidity protections are triggered.

This is an *optional* message and only required by Firms planning to interact with Complex liquidities.

**Complex Strategy Definition Notification:** This notification publishes the Strategies trading on MIAX.

This is an *optional* message based on the Firm specified notification entitlement configuration. It is *required* for firms planning to interact with Complex liquidities.

#### **Modified Messages:**

**Cancel Notification:** Added new field values for the Cancel Reason Field to support Complex Orders.

This is an *optional* change and only required by Firms planning to interact with Complex liquidities.

**Execution Notification:** Added new field values for the Liquidity Type Field to support Complex eQuote related executions.

This is an *optional* change and only required by Firms planning to interact with Complex liquidities.

#### **Miscellaneous:**

Updated the following interface specification sections:

“Overview Section” – includes Complex Order related features.

“Hot Topics Section” – covers various Complex Orders related features.

Renamed existing messages to clarify their scope being limited to Simple liquidities. All existing messages, although renamed, are backward compatible.

**Production Implementation Target Dates:**

Specific production implementation dates will be published via a MIAX Alert. MIAX is anticipating a 2<sup>nd</sup> quarter 2016 implementation pending SEC approval.

**Certification:**

Certification is *required* for Firms planning to utilize the Complex Order related interface functionality.

## 2.3 MIAX Clearing Trade Drop (CTD) v2.0

Firms must update to the MIAX Clearing Trade Drop (CTD) v2.0 specifications if they plan to implement Complex Orders.

Firms not intending to implement Complex Orders can continue to utilize prior interface versions.

For Firms upgrading to the latest version, there are required changes that must be supported (see below).

Note: all future supported functionality will be built upon the latest specifications. Therefore, Firms are strongly encouraged to upgrade to the latest specification even if they are not planning to implement Complex Orders.

**Summary of Changes:**

**Modified Messages:**

**Trade Message:** Added new fields and field values to support Complex Orders functionality.

This is a *required* change for Firms using the latest specification.

**Production Implementation Target Dates:**

Specific production implementation dates will be published via a MIAX Alert. MIAX is anticipating a 2<sup>nd</sup> quarter 2016 implementation pending SEC approval.

**Certification:**

Certification is *required* for Firms planning to utilize the latest interface specification.

## 2.4 FIX Drop Copy (FXD) v2.0

Firms must update to the MIAX FIX Drop Copy (FXD) v2.0 specifications if they plan to implement Complex Orders.

Firms not intending to implement Complex Orders can continue to utilize prior interface versions.

For Firms upgrading to the latest version, there are required changes that must be supported (see below).

Note: all future supported functionality will be built upon the latest specifications. Therefore, Firms are strongly encouraged to upgrade to the latest specification even if they are not planning to implement Complex Orders.

### Summary of Changes:

#### Modified Messages:

**Execution Report Message Type “8”:** Added new fields and new field values.

This is a *required* change for Firms using the latest specification.

**Trade Cancel/Correct Message Type “UCC”:** Added new fields.

This is a *required* change for Firms using the latest specification.

#### Updated Appendixes:

**Appendix A:** Added new billing fields for StrategyAuctionType, StrategyTimerRole and ContraStrategyTimerRole.

#### Production Implementation Target Dates:

Specific production implementation dates will be published via a MIAX Alert. MIAX is anticipating a 2<sup>nd</sup> quarter 2016 implementation pending SEC approval.

#### Certification:

Certification is *required* for Firms planning to utilize the latest interface specification.

## 2.5 Administrative Information Subscriber Feed (AIS) v2.0

Users of the MIAX Administrative Information Subscriber Feed (AIS) are required to upgrade to the MIAX Administrative Information Subscriber Feed (AIS) v2.0 Interface specifications.

### Summary of Changes:



**New Messages:**

**Complex Strategy Definition Update Message:** This notification publishes the Strategies trading on MIAX.

This is a *required* change.

**Complex Liquidity Seeking Event Notification Message:** This notification informs Firms of a Complex Order Auction Event.

This is a *required* change.

**Updated Appendixes:**

Appendix C includes an additional table explaining how to interpret the Complex Liquidity Seeking Event Notification.

**Production Implementation Target Dates:**

Specific production implementation dates will be published via a MIAX Alert. MIAX is anticipating a 2<sup>nd</sup> quarter 2016 implementation pending SEC approval.

**Certification:**

Certification is *required* for all Firms.

## 2.6 MIAX Order Feed (MOR) v2.0

Users of the MIAX Order Feed (MOR) are required to upgrade to the MIAX Order Feed (MOR) v2.0 Interface specifications.

**Summary of Changes:**

**New Messages:**

**Complex Strategy Definition Update Message:** This notification publishes the Strategies trading on MIAX.

This is a *required* change.

**Complex Order Message:** This notification informs Firms of each actionable Complex Order.

This is a *required* change.

**Production Implementation Target Dates:**

Specific production implementation dates will be published via a MIAX Alert. MIAX is anticipating a 2<sup>nd</sup> quarter 2016 implementation pending SEC approval.

**Certification:**

Certification is *required* for all Firms.

## 2.7 MIAX Top of Market (ToM) v2.0

Users of the MIAX Top of Market (ToM) are required to upgrade to the MIAX Top of Market Feed (ToM) v2.0 Interface specifications.

**Summary of Changes:**

**Modified Messages:**

**Last Sale (Trade) Message:** Updates to the Trade Condition field values listed in Appendix A to accommodate Complex Order Leg trades.

This is a *required* change.

**Trade Cancel Message:** Updates to the Trade Condition field values listed in Appendix A to accommodate Complex Order Leg trade cancels.

This is a *required* change.

**Production Implementation Target Dates:**

Specific production implementation dates will be published via a MIAX Alert. MIAX is anticipating a 2<sup>nd</sup> quarter 2016 implementation pending SEC approval.

**Certification:**

Certification is *required* for all Firms.

## 2.8 MIAX Complex Top of Market (cToM) v1.0

The MIAX Complex Top of Market (cToM) v1.0 feed provides subscribers MIAX Complex Strategy Best Bid and Best Offer (cMBBO) quotations and Strategy Trades.

Modeled after the existing MIAX Top of Market (ToM) interface, it facilitates Firm adoption by leveraging the same messaging protocol and the customary retransmission and refresh services, as well as similar message formats.

This is an *optional* change. Firms planning to monitor the MIAX cMBBO and Strategy Trade data should subscribe to cToM.

**Summary of Changes:**

**Messages:**

**Simple Series Update Message:** Notifies Firms of individual Options Series traded at MIAX.

**Complex Strategy Definition Update Message:** This notification publishes the Strategies trading on MIAX.

**System State Message:** Informs subscribers of the session ID and the system operational hours.

**Complex Top of Market (Best Bid or Best Offer) Message - Compact Format:** Provides either best bid or best offer quote information in an optimized message format to accommodate quotes with small prices and sizes.

**Complex Top of Market (Best Bid or Best Offer) Message – Wide Format:** Provides either best bid or best offer quote information in a large message format to accommodate large price and/or size quotes.

**Complex Double-Sided Top of Market (Best Bid And Best Offer) Message - Compact Format:** Provides either best bid and best offer quote information in an optimized message format to accommodate quotes with small prices and sizes.

**Complex Double-Sided Top of Market (Best Bid And Best Offer) Message – Wide Format:** Provides either best bid and best offer quote information in a large message format to accommodate large price and/or size quotes.

**Strategy Last Sale (Trade) Message:** Provides the trade price for a given Complex strategy.

**Underlying Trading Status Message:** Notifies subscribers of the underlying trading status (e.g. Halted, Resumed, etc.).

**MIAX System Time Message:** Identifies the seconds part of each message's high precision nanosecond time.

#### **Production Implementation Target Dates:**

Specific production implementation dates will be published via a MIAX Alert. MIAX is anticipating a 2<sup>nd</sup> quarter 2016 implementation pending SEC approval.

#### **Certification:**

Certification is *required* for all Firms subscribing to the cToM feed.

## **3 MIAX Interface Specifications**

Updated specifications for all interfaces can be found on the MIAX website at <http://www.miaxoptions.com/interface-specifications>.

## 4 Firm Test Bed

The MIAX Firm Test Bed will be updated to support Firm Certification for the Complex Orders Functionality.

### **Firm Test Bed (FTB) Activation Date:**

The MIAX Firm Test Bed #2 (FTB2) environment will be available the week of February 22, 2016 to support firm testing.

## 5 MIAX Support Contacts

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