



Confidential

The ISE Market Operations Survival Guide for Representatives

International Securities Exchange
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This document is confirmed to be the most recent and accurate version of the Market Operations Survival Guide as of 1/2013.

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About this document

This document will attempt to provide a high level/ quick guide to performing the Market Operations function. Market Operations is the front lines to the marketplace. Changes in applications, processes, and methods are always in taking place.

[ISE Firm Link](#)

Common Terms/ Acronyms

Back-up PMM	PMM are responsible for maintaining the integrity of their Bins. In the event of a technical issue, the ISE developed a back-up PMM to take over the responsibilities of the PMM until they are back in the market.
Broker Dealer	A firm that buys/sells securities for itself, as dealer, or on behalf of others as broker. BD's must register and are regulated by the SEC.
CIRF	It's used as a time line of events on the exchange during code reds. Cause, impact, resolution, follow-up.
Clearing House	Firms associated with exchanges that handle the deliver and settlement of trades.
Computer Operations	The Computer Operations team maintains all the back end systems for all applications market ops uses. They monitor ISE traffic. They track connections to the ISE and inform us of disconnects or any computer/technical issues that may be arising on the ISE. They help provide information during all code red situations for us to pass along to members. Maintain gateways and connections to the ISE
Depth of Market Feed	A real-time data feed that provides transparency at the top five price levels for options listed on the ISE, allowing traders insight into size availability beyond the BBO.
EAM	These are our customers. They pay fees to place and execute orders on the exchange. They can trade for their own firms, or for customers that they represent. We have special order types, such as PIMs, solicitations, facilitations, directed orders and preferenced orders that were designed to help EAMs provide better execution services for their end customers.
ERS	ERS is our enterprise request system It is used to request things like fix logs or software for our machines You can send trouble shooting tickets to the appropriate departments for issues such as linkage, OM issues, precise issues, server issues, IORS issues, member connectivity issues. You can send requests for application builds, or look into issues with member connections, gateways and request CDB changes.
Expiration Cycle	The sequence of dates when options, excluding leaps, expire. There are 3 cycles Jan cycle: Jan, April, Jul, Oct Feb cycle: Feb, May, Aug, Nov March cycle: March, June, Sept, Dec
Fix Connection	A fix connection is a direct connection to the ISE for firms to use in order to send orders to us. Fix has its own coded language, and everything is maintained in electronic logs
Flash Orders	Flash allows for customer orders to potentially receive price improvement while avoiding linkage delays, saving market makers linkage fees and offering the entire ISE community the opportunity to trade with these orders. With this functionality, marketable customer orders arriving at the ISE when the away markets are better are flashed to all the members through a 1 second auction. Fees are waived for participants who respond. At the conclusion of the auction, the customer order trades with the responses that are better or equal to the NBBO. Should any portion of the order remain, it then follows standard linkage procedures.
Holddback Timers	If market makers have crossed quotes, it's a predetermined amount of time, that doesn't allow trades to go off in that series, and allows them to either fix their quotes or get out of the way.

Index Option	An index option is a derivative security that has an index as its underlying. If exercised, settlement is made in cash, since there is nothing to physically deliver.
IORS2	The ISE Order Routing System 2 connects ISE members using FIX connections to the ISE exchanges interface. The new internally developed routing system leverages technology developed for other ISE applications such as PrecISE to significantly decrease latency of this critical application in ISE's exchange architecture.
LEAPs	Long Term Anticipation Notes. Leaps are options that expire more than a year out. Leaps convert into regular options with January expiration in the final year of the contract.
Linkage	Linkage is a system that links all 6 options exchanges. It is a way to ensure that customers get the best price available to them on any exchange regardless of where the order is entered.
Locked Orders	Orders lock when away markets are better, and market maker is going to send linkage. It will not lock if the ISE is the best market and the order will trade here.
OPRA	Options price reporting Authority. It's a committee of participating exchanges that disseminate price and quote information on options.
PMM	<p>The main market maker responsible for maintaining the orderly conduct and trading in their bin. This includes, but is not limited to:</p> <ul style="list-style-type: none"> Must conduct opening rotations, unless specified circumstances prevent this Provide price improvements when appropriate. Make reasonable quotes in all names their bin Be willing to buy or sell all the options at all times in their bins. They must provide customers with linkage to take advantage of better prices in away markets. Must address public customer orders. Must act as back up PMMs in bins they're not assigned to, in specific and appropriate situation.
PIM	Price Improvement Mechanism
Pro Rata	The method used to define and allocate the % of option contracts MM's and customers are entitled to when trading on the ISE if there is more than one party on the trade causing them no to get 100% of contracts bid for or offered.
Series	All options of the same class (puts or calls) same strike price, and same expiration date. Ex: THE 7 OCT 30.0 P/ THE 8 FEB 17.5 C
SIFMA	Securities Industry and financial markets association. They are the global markets watchdog, trying to give investors confidence in world markets, educating investors and member firms, and creating a global member network
Spread	An options position made up of more than one option, called legs. Usually buying one and selling one in the same underlying with different strikes or expiration date. A spread is usually used to reduce risk or profit from increased volatility or sideways price movement in the underlying. Different types of spreads would be used based on different trading strategies and market sentiment.
STP limit order	A stop order that becomes a limit order after stop price is elected. A buy stop limit becomes elected when the option trades or is quoted at or above the stop price. A buy stop is usually used to protect a short position. A sell stop limit becomes elected when the option is traded or quoted at or below the stop price. Usually used to protect a long position.
Strike Price	The strike price of an option is the price at which you're betting the price of the underlying will either rise above or decrease below depending on whether you're trading calls or puts.
Technology Member Services	They deal with the technical side of testing with members before they can connect to the ISE, and help maintain their connections and deal with any technical issues. They help prepare members for new releases on the ISE. They are responsible for helping members do business on the ISE and try to keep them from causing any issues for their systems or for ours.
Trade Processing	<p>An order is entered on entering party's front end system and is sent to the ISE</p> <p>ISE receives the order and checks for certain parameters</p> <p>under some circumstances order will rest on book</p> <p>Other circumstances, immediately executed</p> <p>The order may be automatically canceled by the ISE if certain situations exist, such as priced to far through the NBBO in the case of spreads, or if order can't be filled within auction time in the case of special orders</p>

	Some orders will be locked and sent out for linkage by the MM After one of these events takes place the ISE will generate an order confirmation and send it back to the entering party through their connection to the ISE.
Trying Orders	Orders at the opening that can't trade due to: -order imbalances -crossed market maker quotes -orders to buy/sell too far through NBBO
Assign	To cause the writer of an option to fulfill his obligation.
At-the-money	The underlying price is equal to the strike price.
At-the-Money	An option is said to be at the money, when the underlying is trading at the strike price. For example, the SPY 7 OCT 82 C would be considered at the money, when the underlying stock, SPY is trading at 82 dollars.
Bear Spread	Buy the highest strike price, sell lowest strike price With calls - net credit transaction; max loss= difference between the strike prices less credit; max gain= credit; requires margin. With puts – net debit transaction; max loss = debit; max gain = difference between the strike price less the debit, no margin.
Bull Spread	Buy the lowest strike price, sell highest strike price With calls - net debit transaction; max loss= debit; max profit = difference between strike prices less the debit; no margin. With puts – net credit transaction; max loss= difference between strike price less credit; maximum gain = credit; requires margin.
Cabinet Trading	This involves selling an options contract at an options exchange for \$0.01 per share, netting the seller of the option \$1.00
Calls	A bet on the upward price movement of the underlying. It is the right, but not the obligation to buy an underlying at a stated price (strike price) before expiration. You would buy a call option if you expect the price of the underlying to rise through the strike before expiration. Standard options contracts are made up of 100 shares of the underlying security, but can vary in specific instances
Conversion/Reverse Conversion	A convertible security is a security that can be changed into a fixed number of shares of a common stock, such as convertible bonds and preferred stock. If you exercise an option, you will be receiving shares of stock in return, and thus converting an option into stock.
Covered Option	An option written (sold) against an underlying stock position.
Delta	A measure of volatility. The relationship of a price change in the option based on the price change of the underlying. The delta is based on the underlying price movement in \$1 increments.
Delta Neutral	An option position where sufficient shares of stock have either been bought or sold to theoretically mitigate the impact from the next \$1 move in the stock price.
Derivative Security	A security whose make up of and value is dependent upon another security known as the underlying. For example, an option in IBM is reliant on the price movement of IBM stock.
Determinates of an Option Price	Underlying Security Price, the strike price, the time remaining until the expiration of the option (as time decreases, premium decreases), the volatility of the underlying, (if volatility increases, premium increases; if volatility decreases, premium decreases, dividends, Interest rates).
Equity Option	An equity option is a derivative security that has stock as its underlying security. If exercised stock would be required for delivery.
European Style Option	An option that can only be exercised on the expiration date.
Exercise	To demand the right granted under the terms of the contract.
FRO	Fixed Rate Option is a binary option on an underlying security or ETF that pays an investor a fixed amount of \$100 if it settles in-the-money or expires worthless if it finishes out-of-the-money. There are two types of FROs: Finish High (Over) FROs and Finish Low (Under) FROs. A Finish High (Over) FRO is similar to a standard call option, and is considered in-the-money if the price settles above the strike price at expiration. Likewise, a Finish Low (Under) FRO is similar to a standard put option, and is considered in-the-money if the price settles below the strike price at expiration. FROs have expiration months available for trading that are the same as the standard listed option for the same underlying security.
Implied Volatility	The volatility of the underlying implied by the option's market price
In-the-money	When the stock price is greater than the exercise price for calls or when the underlying

	price is less than the exercise price for the puts.
Intrinsic Value	Calls= underlying –strike price. Puts=strike price-underlying. Zero if negative
Iron Condor	An advanced options strategy that involves buying and holding four different options with different strike prices. The iron condor is constructed by holding a long and short position in two different strangle strategies. A strangle is created by buying or selling a call option and a put option with different strike prices, but the same expiration date. The potential for profit or loss is limited in this strategy because an offsetting strangle is positioned around the two options that make up the strangle at the middle strike prices. This strategy is mainly used when a trader has a neutral outlook on the movement of the underlying security from which the options are derived. An iron condor is very similar in structure to an iron butterfly, but the two options located in the center of the pattern do not have the same strike prices. Having a strangle at the two middle strike prices widens the area for profit, but also lowers the profit potential.
Long Plays	Purchase Option, own rights afforded (buy straddle, strangles, no margin)
Naked Option	An option written (sold) without an underlying stock position.
NBBO	National best bid and offer.
Option Wrap	This term is often used to describe “overflow” symbols, commonly used when an underlying experiences a large move in one direction, creating a need for more strikes than can be represented by a standard root symbol. Or, you might be referring to an options strategy that “wraps” around the underlying security. This is also referred to as a “collar” or a “fence” strategy.
Out-of-the-money	When the underlying price is less than the exercise price for the calls or the underlying price is greater than the exercise price for the puts.
Percentages	While the percentages can vary from month to month, the rule of thumb is 60% (expire worthless or are closed out prior to expiration), 30% (indicates that the contracts are of little or no value are closed out prior to expiration) and 10% (are exercised).
Premium	The total price of the option = intrinsic value + time premium
Puts	A bet on the downward price movement of the underlying security. You would buy a put option if you expect the price of the underlying security to go down through the strike before expiration. It is the right, but not the obligation to sell an underlying security at the strike price before expiration
Short Play	Writing or selling options assuming the obligation to perform the rights afforded (sell out-of-the-money spreads, margin required).
Straddles	Done with puts and calls with the same strike price and when the stock is near the strike price.
Strangles	Done one with puts and calls that are out-of-the money and when the stock is midway between strike prices
Strike Price (exercise price)	The price in the contract at which the underlying will be bought or sold.
Synthetic Positions	Useful in evaluating positions that involve options and stocks Long call = long put + long stock Short call = short put + short stock Long put = long call + short stock Short put= short call + long stock Long stock = short put + long call Short Stock= short call + long put
Time Decay	A term used to describe how the theoretical value of an option erodes or reduces with the passage of time.
Time Premium (risk premium)	The additional value of the option due to the volatility of the market and the time remaining until expiration. Premium minus intrinsic value.
Time Spreads (calendar)	Sell the nearby month, buy the faraway month; margin may be required. With calls <ul style="list-style-type: none">• If bullish= go with strike prices out-of-the money.• If neutral = go with strike price at-the-money.• If bearish = go with the strike prices in-the-money With puts <ul style="list-style-type: none">• If bullish= go with the strike prices in-the-money• If neutral= go with strike price at-the-money.

	<ul style="list-style-type: none"> If bearish= go with strike prices out-of-the money.
Volatility	A measure of the market's or the underlying's fluctuation
Writer	The seller of an options contract. Someone who owns stock can sell (write) a covered call to bring in income, or decide to lock in a profit if the stock gets above strike price and the buyer decided to exercise. You can also write naked options, which means you are selling options in an underlying that you do not own.
MDC	Market Data Cache
LVC	Last Value Cache
UI	User Interface
BU	Business Unit
IBBO	ISE BBO, specific to an ISE market.
ABBO	Away BBO, calculated for each ISE market, based on inclusion/exclusion of Away exchanges in the calculation.
ABBO DS	ABBO Data Service, calculates ABBO based on OPRA Data and MOPs input
MDS	Market Data Service, consumes MDD data
NBCS	Equity National BBO Consolidation Service
ODS	OPRA Data Service, consumes OPRA data, such as each away exchange BBO, last trade, open interest
EDS	Equity Data Service
IDS	Index Data Service
OFI	Outbound Feed Interface/Internal Gateway
WLLM	WebSphere® Low Latency Messaging
JMS	Java Messaging Service
RCMS	Reliable and Consistent Message Streaming
RDCX	External Reference Data Cache
COPs	Computer Operations
WCF	Windows Communication Foundation
WPF	Windows Presentation Foundation
MDCX	External Market Data Cache – the source of market data for ISE front-end applications

Section I: ISE and Market Operations Overview



Chapter 1. ISE Core Values

Customer Service

- We feel a sense of urgency about our customers' interest. We own problems, and we are available and responsive.
- We consider the long-term and short-term needs of customers.
- We make and deliver on our commitments to customers.
- We take personal responsibility and work as a team to improve customer service.

Entrepreneurship

- We accept and reward the pursuit of innovative opportunities that will benefit ISE.
- We are agents of change. We encourage innovative thought and action.
- We capitalize on opportunities created by changes in the marketplace.
- We take tremendous pride in our company and our behavior is consistent with the ownership mindset.
- We effectively and efficiently use and protect company assets and demonstrate a prudent approach in our expenditure of company resources.

Valuing People

- We foster a climate that promotes and rewards individual, team and organizational excellence.
- We motivate and challenge ourselves and others to seek additional responsibilities and learn new skills.
- We attract, retain and motivate an expert staff who will drive our business success.
- We build strong and positive working relationships through a culture of inclusion.
- We collaborate in our activities and decisions.
- We recruit the best talent for all positions using a broad and inclusive recruiting/ interviewing process.

Integrity

- We are committed to the highest standards of ethics and integrity.
- We manage work activities in a standard, formal, repeatable manner.
- We continuously strive to improve work processes, products and services.
- We exhibit a sense of pride and humility in our accomplishments.
- We stand up for our beliefs, act resolutely and stand behind our convictions.

Chapter 2. The ISE Philosophy for Top Level Customer Service

External Customer Service:

- Know, Own, and Energize the Credo. High quality CS is our highest priority and every employee's job. Employees understand the need to anticipate and meet customer needs and the crucial importance of MOPS' many interactions with customers.
- Understand the work area and the ISE's goals as established in its strategic plan.
- Know the needs of both internal and external customers so that products and services can be delivered as expected.
- Continuously identify defects and problems throughout MOPS operation. Take action where possible. Escalate where appropriate.
- Take ownership of any customer issue or complaint until closed. Follow-up with the customer if needed.
- MOPS Staff is expected to do everything possible to resolve issues
- Be the ISE's ambassador and always talk positively of it, using phrases such as "how can I help," "certainly," I'll be happy to," and "my pleasure."
- Know general information about the ISE to be able to answer customer inquiries.
- Answer the phone quickly and do so with a positive attitude, ask permission before putting a caller on hold, and to resolve the call without transferring the customer if at all possible.
- Know your role intimately in Code Red situations. This is where we add real value.
- Escalate immediately any situation that you believe to be "out of the ordinary."
- Protect the ISE's assets.

Chapter 3. The ISE Market Structure

There are 5 different participants on the ISE Options exchange:

Primary Market Makers (PMMs)

There are 10 trading bins in our first market and six in our second market. One PMM is assigned to each trading bin. A PMM post two-sided continuous quotations in all of the options classes to which it is appointed and undertakes special responsibilities for maintaining fair and orderly markets. A PMM must purchase or lease the PMM trading rights assigned to the particular trading bin in order to act as a PMM in that bin. An important advantage of having a PMM assigned to each option is that members have a point of contact that is responsible for maintaining orderly markets and is available to answer market questions and resolve trading related issues

Competitive Market Makers (CMMs)

There are 16 CMMs assigned to each trading bin in our first market. The second market is structured so that there is no limitation of the number of CMMs assigned to any trading bin. In the first market, a CMM posts two-sided continuous quotations in at least 60% of the options classes in the assigned trading bin, whichever is less. There is no minimum quoting requirements in the second market. A CMM in the first market must purchase or lease CMM trading rights assigned to the particular trading bin in order to act as a CMM in that bin. To act as a CMM in the second market, members must either process trading rights in the first market or pay a monthly CMM access fee.

Electronic Access Members (EAMs)

An EAM enters orders in all trading bins in the options market on the Exchange's trading system, and may clear trades executed on the Exchange. To act as an EAM, it is not necessary to purchase or lease trading rights. Rather, EAMs pay a monthly EAM access fee.

FX Primary Market Makers (FXPMMs)

FXPMMs are market makers that have very similar responsibilities to PMMs for equity and index options. The most significant difference between the two types is that the responsibilities of an FXPMM are limited to ISE's FX Options. A FXPMM must purchase a Trading License directly from the exchange via an auction for each currency pair. The auction process promotes competition because it requires prospective FXPMMs to provide market quality commitments as part of its bid. One FXPMM is assigned to each currency pair traded on the Exchange. A FXPMM Trading License does not confer the right to trade equity and index options. Similarly, A PMM in the equity and index options markets must purchase a Trading License in order to make markets in FX Options

FX Competitive Market Makers (FXCMMs)

FXCMMs are market makers that have very similar responsibilities to CMMs for equity and index options. FXCMMs are only permitted to make markets in FX Options. A FXCMM must purchase a Trading License directly from the Exchange via a "Dutch" auction process. A trading License entitles the member to make markets in one currency pair. Up to 10 FXCMMs are appointed to each currency pair traded on the Exchange.

Members

http://www.ise.com/WebForm/options_membership_iseMembers.aspx?categoryId=193&header0=true&menu6=true&link1=true&list=none

ISE CRM link for phone numbers and email (PW required): <http://crm/loader.aspx>

Chapter 4. Rules

Below is the link to our website rule-book:

<http://www.ise.com/WebForm/viewPage.aspx?categoryId=150&header0=true&menu9=true>

Approved Rule Changes:

http://www.ise.com/WebForm/options_product_notices.aspx?type=regarc&categoryID=360&header5=true&menu2=true&link2=true

Proposed Rule Changes:

[http://www.ise.com/assets/documents/OptionsExchange/legal/proposed_rule_changes/2009/SR-ISE-2009-47\\$Proposed_Rule_Change_Relating_to_Professional_Order_Fees\\$20090701.pdf](http://www.ise.com/assets/documents/OptionsExchange/legal/proposed_rule_changes/2009/SR-ISE-2009-47$Proposed_Rule_Change_Relating_to_Professional_Order_Fees$20090701.pdf)

http://www.ise.com/WebForm/options_product_notices.aspx?type=regprc&categoryID=359&header5=true&menu2=true&link1=true

Regulatory Information Circulars:

http://www.ise.com/WebForm/options_product_notices.aspx?type=regric&categoryID=208&header5=true&menu2=true&link3=true

Chapter 5. Products We Trade

This is a link to the Equity, Index, ETF, Quarterly and FX Options we trade.
http://www.ise.com/WebForm/options_products_traded.aspx?categoryId=88

The majority of names traded on the ISE Options exchange close at 4:00. The exceptions that trade until 4:15 are: <J:\mkt operations\415names.xlsx>

We are constantly making alterations to the products we trade. Updates are sent by email and via the ISE website. Notices are posted here:

<http://www.ise.com/WebForm/viewPage.aspx?categoryId=188>

ISE Listed Options <http://www.ise.com/WebForm/viewPage.aspx?categoryId=191>

ISEE Index

The ISE Sentiment Index is a unique put/call value that only uses opening long customer transactions to calculate bullish/bearish market direction. Opening long transactions are thought to best represent market sentiment because investors often buy call and put options to express their actual market view of a particular stock. Market maker and firm trades, which are excluded, are not considered representative of true market sentiment due to their specialized nature. As such, the ISEE calculation method allows for a more accurate measure of true investor sentiment than traditional put/call ratios.

Below is the link for more information:

<http://www.ise.com/WebForm/viewPage.aspx?categoryId=126&header3=true&menu0=true>

Market Data Products ISE is a leading provider of enhanced market data products for sophisticated investors. Investors have access to the ISE Sentiment Index® (ISEE®), ISEE Select XML Feed, ISE Depth of Market Feed, ISE Spread Book Feed, ISE Historical Options Tick Data™ (ISE HOT Data™) and ISE Open/Close Trade Profile. <http://www.ise.com/WebForm/viewPage.aspx?categoryId=125>

Chapter 6. ISE Order Types

Auction Orders

An auction order is designed to solicit price improvement for (the agency side of) the order. The arrival of an auction order at the exchange triggers a message informing exchange participants of the details of the order and initiating a configurable period during which participants can submit auction responses to improve the price. At the conclusion of the auction, the order is executed against responses received during the auction and against orders and quotes received during the auction period or resting on the order book. Unexecuted responses are cancelled.

Both simple and complex instruments are eligible to participate in auctions.

Auction orders are exposed to the market with the intent of getting price improvement before they trade. The auction period during which the exposure occurs and the order waits to trade is configurable in the OptimISE system, and is currently set (for most) at one second.

Auction orders are either single-sided or double-sided, depending on the order type. The following list of auction order types indicates for each type whether it is single or double-sided:

<u>Order Type</u>	<u>Single or Double-sided</u>
Block	Single
Directed	Single
Flash	Single
Exposure	Single
Facilitation	Double
Solicitation	Double
PIM	Double



Auction Orders (continued...)

Single-Sided Auction Orders

Single-sided auction orders are regular orders that are exposed in an auction for price improvement. The order submitter is not interested in taking the contra-side of the order. Block, directed, Flash and exposure orders are all single-sided.

Double-Sided Auction Orders

Double-sided auction orders combine crossing order features with auction functionality. The order submitter of a double-sided order desires to, or is at least willing to, take the contra-side of the order to the extent necessary to execute the entire order.

ISE supports three double-sided auction orders:

- Facilitation order
- PIM order
- Solicitation order



Facilitation

The Facilitation Order is an auction facility that allows an EAM to facilitate a block-size order it represents as agent, and/or a transaction wherein the EAM solicited interest to execute against a block-size order it represents as agent.

Agency Order:

Customer, B/D, Professional Customer, FarMM

A facilitation order is entered as a two-sided auction order, the originating or agency order, and the contra (initial auction response) order.

Contra Order:

Customer, B/D, Professional Customer, Proprietary, FarMM

EAM must be willing to execute the entire size of order

Responses:

Customer, B/D, Professional Customer, Proprietary, FarMM, ISE MM

The facilitating EAM will execute at least forty percent (40%) of the original size of the facilitation order, but only after better-priced Responses, orders and quotes, as well as Priority Customer Orders at the facilitation price, are executed in full.

Min Order Size: 50 contracts

Exposure Period: 1 second

Price Increment:

Penny	1c
Non-Penny	2.5c/5c
Spread	1c

The EAM will also receive any balance remaining after all responses, orders and quotes are allocated.

Allocation: 40%

Instrument Type:

Simple
Complex
Complex w/stock

Market participants can respond to the auction during the exposure period. The responses are hidden. Market participants can submit multiple responses, however there can only be one response per price level.



Facilitation (continued...)

Participants can cancel their responses at any time during the response period. Responses can be modified by submitting a new response at the same price level (which replaces the existing response at that price level). The submitting EAM cannot alter the exposed order, but it can be canceled prior to the termination of the auction.

The order is executed at the end of the exposure period according to the following rules:

The facilitation price is calculated as the better of

- the price that can fully execute the order, and
- the limit price on the customer order being exposed.

All responses, orders, and quotes at a better price than the facilitation price are executed first.

Customer orders trade at the facilitation price. Non-customer orders trade at the price on their response, order or quote.

The submitting EAM receives 40 % of the original size of the facilitation order, or the remainder of the order if more than 40 % is already executed. The EAM can specify that they are requesting less than 40% allocation of the order.

Non-customer orders, quotes, and the remaining responses are executed according to pro-rata sharing.

The submitting EAM is assigned any remaining balance.



Facilitation (continued...)

Facilitation			
Order Entry	IBBO Check	Same Side	The entry price must be at or better than ISE BBO on the same side. If there is a customer must be better than ISE BBO.
		Opposite Side	The entry price can be outside the IBBO on opposite side even if there is a customer present. Resting interest on the book will participate in the allocation.
Execution	IBBO Check	Same Side	Execution price must be at or within the ISE BBO. If there is a customer, execution price(s) must be better than ISE BBO.
		Opposite Side	The opposite side orders participate in the allocation. Hence trade will never happen outside ISE BBO.
Execution	ABBO Check	Same Side	No ABBO check is required at execution.
		Opposite Side	No ABBO check is required at execution.



Solicitation

The Solicitation order reflects an EAM's effort to find contra-side interest from other market participants, with the intent of matching the buy side against the sell side.

Agency Order:

Customer, B/D, Professional Customer, FarMM

A solicitation order is a two sided auction order composed of an unsolicited order (agency side) and a solicited contra order (initial auction response).

Contra Order:

Customer, B/D, Professional Customer, FarMM

Solicitation order is always considered AON.

Responses:

Customer, B/D, Professional Customer, Proprietary, FarMM, ISE MM

Market participants can respond to the auction during the exposure period. The responses are hidden. Market participants can submit multiple responses, however there can only be one response per price level.

Min Order Size: 500 contracts

Exposure Period: 1 second

Price Increment:

Penny	1c
Non-Penny	2.5c/5c

Spread

1c

Allocation: 100%

Participants can cancel their responses at any time during the response period. Responses can be modified by submitting a new response at the same price level (which replaces the existing response).

Instrument Type:

Simple
Complex
Complex w/stock

The submitting EAM cannot alter the exposed order, but the order can be canceled prior to the termination of the auction.



Solicitation (continued...)

Order Entry	IBBO Check	Same Side	The entry price must be at or better than ISE BBO on the same side. If there is a customer must be better than ISE BBO.
		Opposite Side	The entry price must be at or better than ISE BBO on the opposite side. (Regardless of whether or not there is customer on the book at that price. It must go to completion to determine if it will execute against the book or cancel.)
	ABBO Check	Same Side	Entry Price must be at or better than ABBO on the same side.
		Opposite Side	Entry Price must be at or better than ABBO on the opposite side.
Execution	IBBO Check	Same Side	The execution price(s) must be at or better than ISE BBO on the same side. If there is a customer must be better than ISE BBO.
		Opposite Side	The execution price(s) must be at or better than ISE BBO on the opposite side. If at the point of execution, there is customer volume on the opposite side and in the aggregate (including all quotes, customer orders and non-customer orders), there is enough volume to execute the unsolicited side of the order, continue with the execution. Break up the solicitation order, trading the unsolicited side against the book and responses. If at the point of execution, there is customer volume on the opposite side but there is not sufficient volume to execute the unsolicited order, cancel the solicitation. If during the auction, IBBO improves on the opposite side making solicitation price outside IBBO, and total size at IBBO is not sufficient for cross, the execution must not happen. In summary execution cannot happen outside IBBO.
	ABBO Check	Same Side	No ABBO check is required at execution.
	Opposite Side	No ABBO check is required at execution.	

Price Improvement Mechanism (PIM)

The Price Improvement Mechanism is a process by which an EAM can provide price improvement opportunities for a transaction wherein the EAM seeks to facilitate an order it represents as agent, and/or a transaction wherein the EAM solicited interest to execute against an order it represents as agent.

Agency Order:

Customer, B/D, Professional Customer,
FarMM

Contra Order:

Customer, B/D, Professional Customer,
Proprietary, FarMM, ISE MM

Responses:

Customer, Professional Customer,
Proprietary, ISE MM

Min Order Size: 1 contract

Exposure Period: 1 second

Price Increment:

Penny 1c
Non-Penny 1c

Spread 1c

Allocation: 40%

Instrument Type:

Simple
Complex
Complex w/stock

A PIM order is entered as a two-sided order, the originating or agency and the contra or response, also known as the initial auction response. The price must be better than the current ISE BBO and at least match the NBBO and can be specified in one-cent increments.

Market participants can respond to the PIM order within the response period.

During a PIM auction, broadcasts are sent to inform market participants of the best price and aggregate quantity from the responses.

The EAM cannot delete a PIM order, but can enter responses that improve the initial price and must be for the full quantity. Market participants cannot delete a PIM response. A PIM response can be replaced by a subsequent response that increases the quantity or improves the price.



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Price Improvement Mechanism (PIM) (continued...)

The auction is terminated after the response period. It can terminate prematurely when unrelated orders are received in the same series that can cause the PIM order to lose priority.

If a PIM is entered at or through the ISE BBO it will trade out the better-priced interest on the ISE order-book before the start of the PIM auction for the balance.

The EAM receives 40 % of the original size of the PIM order, or the remainder of the order if more than 40 % is already executed

The EAM can specify that they are requesting less than 40% allocation of the order.

Non-customer orders, quotes and the remaining responses are executed according to the pro-rata sharing.

The EAM is assigned any remaining balance



Price Improvement Mechanism (PIM) (continued...)

Single Leg PIM			
Order Entry	IBBO Check	Same Side	The entry price must be better than ISE BBO on the same side.
		Opposite Side	The entry price can be outside the IBBO on opposite side even if there is a customer present. Resting interest on the book will execute first and then the balance will enter as a PIM better than the IBBO.
	ABBO Check	Same Side	Entry Price must be at or better than ABBO on the same side.
		Opposite Side	Entry Price must be at or better than ABBO on the opposite side.
Execution	IBBO Check	Same Side	The execution price (s) must be better than ISE BBO on the same side.
		Opposite Side	The opposite side orders participate in the allocation. Hence trade will never happen outside ISE BBO.
	ABBO Check	Same Side	No ABBO check is required at execution.
		Opposite Side	No ABBO check is required at execution.



Qualified Contingent Cross

An EAM can cross two priority customer orders against each other without exposing them to other market participants in an auction. Under Reg NMS an option cross is permitted if it is "tied to stock".

Agency Order:

Customer, B/D, Professional Customer, Proprietary, FarMM, ISE MM

Contra Order:

Customer, B/D, Professional Customer, Proprietary, FarMM, ISE MM

Responses:

None. Order not exposed.

A QCC Order is entered by an EAM priced at or between the NBBO; if there is a customer at the IBBO the cross must be priced better than the IBBO. The order must be entered with a time in force setting of FOK.

A QCC order is executed immediately upon arrival (or rejected), and will never rest on the book. Any client category is allowed.

Min Order Size: 1000 contracts

Exposure Period: 0 seconds

Price Increment:

Penny	1c
Non-Penny	5c/10c
Spread	1c

Allocation: 100%

Instrument Type:

Simple
Complex



Customer -to- Customer Match

An EAM can cross two priority customer orders against each other without exposing them to other market participants in an auction.

Agency Order:

Customer

Contra Order:

Customer

Responses:

None. Order not exposed.

The order must be entered with a time in force setting of FOK. The price must be at or between the IBBO, but it must be better than the IBBO if there is already a customer resting at the ISE top of book, and it must not be priced outside the NBBO.

Min Order Size: 1 contract

Exposure Period: 0 seconds

Price Increment:

Penny 1c

Non-Penny 5c/10c

Spread 1c

Allocation: 100%

Instrument Type:

Simple

Complex

Complex w/stock

Note that the order is allowed to execute outside the NBBO if the entering member marked the order as "stopped" and the NBBO moved after the order was agreed to by the customer. The intent is to protect the customer's agreed price if the same side NBBO moved higher (for a buy order) or lower (for a sell order) than the NBBO after the order was agreed to by the customer.

This order executes the two sides against each other or not at all.



Block Orders

EAMs, CMMs and PMMs can use the block auction to anonymously solicit liquidity for a customer or a firm order.

Initiating Order:

Customer, B/D, Professional Customer, Proprietary, FarMM, ISE MM

At the expiration of the exposure period, the order is executed against the responses and the order book. Any responses that are not executed are canceled.

Responses:

Customer, B/D, Professional Customer, Proprietary, FarMM, ISE MM

At termination, the execution price is determined as the better of:

- The price at which the whole order can be filled
- The limit price

Min Order Size: 50 contracts

All responses that are better than the execution price are executed first in price/time priority; then customer orders at the execution price, then responses and other non-customer interest is executed at the execution price according to the pro-rata algorithm.

Exposure Period: 1 second

The participant can delete an active block order before the block timer expires.

Price Increment:

Penny 1c

Non-Penny 5c/10c

Instrument Type:

Simple



Directed Orders

The Directed Order allows an EAM to deliver an order directly to a market maker, referred to as the Directed Market Maker (DMM), for handling.

Initiating Order:

Customer, B/D, Professional Customer, Proprietary, FarMM

If a market maker elects to be a DMM, it must accept Directed Orders from all EAMs and cannot reject a Directed Order. The identity of the EAM that entered the Directed Order will be made available to the DMM.

Responses:

Customer, B/D, Professional Customer, Proprietary, FarMM, ISE MM

A directed order received prior to the exchange opening will not be directed.

Min Order Size: 1 contract

Upon receipt of a directed order, the DMM can either initiate a PIM (guaranteeing price improvement over the ISE BBO and at least matching the NBBO) or release the order to the ISE order book for processing.

Exposure Period: 1 second

It is possible for an EAM to alter or delete a directed order if the DMM has not yet acted on the order. If the DMM releases the order to the order book, any portion of the order that is not immediately executed may also be altered or deleted.

Price Increment:

Penny	1c
Non-Penny	5c/10c

It is not possible to alter or delete a directed order once the DMM enters the order into a PIM.

Instrument Type:

Simple



Exposure Orders

The exposure order allows market participants to expose their complex orders for up to one second to obtain price improvement.

Initiating Order:

Customer, B/D, Professional Customer, Proprietary, FarMM, ISE MM

Market participants can respond with better prices. After one second, the exposure order can trade with opposite side complex quotes and orders, complex responses, and quotes and orders on individual legs.

Responses:

Customer, B/D, Professional Customer, Proprietary, FarMM, ISE MM

The responses are exposed, showing the aggregate quantity at the best price. There can be multiple simultaneous auctions in the same instrument.

Min Order Size: 1 contract

If an exposure order cannot be filled or can only be partially filled at the end of the exposure, the remaining quantity is added to complex order book.

Exposure Period: 1 second

Price Increment:

Spread 1c

Instrument Type:

Complex
Complex w/stock



Flash Orders

A “Flash” order is a system-generated one sided auction that occurs if an incoming customer order has a price that would lock or cross the ABBO.

Initiating Order:

Customer, Professional Customer

Responses:

Customer, B/D, Professional Customer, Proprietary, FarMM, ISE MM

Min Order Size: 1 contract

Exposure Period: 150 milliseconds

Price Increment:

Penny	1c
Non-Penny	5c/10c

Instrument Type:

Simple

An order cannot trade through an away market BBO unless marked ISO or Ignore Away Market (IAM). If a marketable customer order can receive a better execution price at a competing exchange, and the order is not marked ISO or IAM, the ISE will expose that order to the market in an attempt to obtain a price that matches the away market.

If a better price is not obtained during the flash auction, the order is locked to the linkage handler to manually process the order.

Market participants can respond to the auction during the exposure period. Responses are hidden. Market participants can submit multiple responses, however there can only be one response per price level.



Flash Orders (continued...)

Market participants can cancel their responses at any time during the response period.

Responses can be modified by submitting a new response at the same price level (which replaces the existing response).

If, at the end of the exposure period, the order is executable at the then current NBBO, and the ISE is not at the then current NBBO, responses will be canceled. However, if the ISE is at the NBBO, then the Flashed order trades with responses in Price priority at the stated price of the responses.

Any remaining unexecuted quantity on the customer order is routed to the linkage handler for subsequent processing.



Section II. Market Operations Tools



Chapter 7. Market Place Tool-MPT

MPT is an ISE developed tool that allows Market Operations to monitor trading system alerts, view, manage and research member orders and trades, make clearing changes, manage away market interaction and research issues for members. Mkt Ops can access the application if permissioned by logging onto CITRIX. Once access to CITRIX has been granted, Mkt Ops selects MPT Client. The main MPT window is below.



The Market Place Tool application provides a suite of Mkt Ops tools that support the following functions:

- Monitor and handle trading system alerts
- View and manage orders and quotes
- View and manage deals and trades
- Manage ABBO components
- Link to audit trail data

These functions are provided by a set of function-specific windows that are accessed through MPT's main toolbar.

The primary driver of Mkt Ops activity is member requests, with market monitoring as a second source of activity.

Member requests arrive by phone, email and instant message, and are handled using a variety of tools, including especially MPT. Typically member requests relate to the following issues:

- Mistakes in entering orders – wrong quantity, wrong limit price, wrong series
- Order priority issues (e.g., an order did not trade at the price because another order took priority)
- PreISe questions and issues
- Late responses/confirmations to the member

MPT provides MOPS staff the tools to handle these issues, including the capability to modify or bust trades and deal items, and to delete market maker orders and quotes. MPT also provides a direct link into the audit trail (Query Viewer) for researching the reasons for late responses, price issues and other member questions.

Market Operations performs continuous market monitoring to be prepared to take action when possibly disruptive market events, such as major news, volume spikes, or problems at other exchanges occur. Monitoring is performed using several tools besides MPT (e.g., Market Watch, OBE), but one MPT function used for monitoring is the Alerts window, which issues a visual and audible alarm when it detects certain alert conditions, provides a detailed display of the alert, and includes a logging screen used to report by whom and how the alert was resolved.

The MPT desktop consists of a stand-alone main toolbar used to launch specific work sessions, and separate windows for each of the specific MPT functions.

Order Status- allows Mkt Ops the ability to view all member order(s) and current status. This tool is constantly referenced. The current state of on order and the need to have accurate information is crucial.

Mkt Ops sets up Preferred columns that offer over 90 columns of available sort criteria such as: BU, Product, Instrument, Side, Price, Clearing account (Give-up), Quantity Traded, Quantity Open, Deleted Quantity, Instrument Status, Time of Entry, Time of Event, Position, Order Category, Information is presented in Columns and summarized in the bottom window.

The basic search requires a date and a product and the default is for Active Status. The search will return all trades with this basic criterion. A product with large volume will return a large quantity of orders. Each column heading is sortable and can help locating specific orders. Ideally Mkt Ops should narrow down the search if more information is known; this should produce quicker results on searches.

A configurable window that provides detailed information about the order by product or series, limit price, originating quantity, traded quantity, deleted quantity, time-stamps, time in force, exchange id, member id, clearing information. Market Operations can view the history of the order, view it in a detailed audit trail and cancel the order upon a customer request.

Market Operations can status for orders from this window same or prior day. This tool is heavily used. It has multiple search criteria and such as date, time specific, Business Unit, bin, order type, product, series, and free text. There are advanced search features if needed to query for block, block response, combo facilitation, combo PIM, combo preferred, combo qualified contingent cross (QCC), combo regular, combo reserve cross, combo solicitation, customer to customer, directed, directed PIM, exposure, facilitations, flash, PIM, preferred, preferred stop, QCC, reserve cross, solicitation Stop, trade report, various client category, order status, order types, side type and time in force.

In the search criteria information can be typed in or selected from the drop down menu. Market Operations need to populate either a product or series to retrieve any information. All columns are sortable and based on user preference and can be added or removed at any time. Important information can be viewed from two different attributes seen below. All information can be cut and pasted into excel to be sent to members if needed. Orders can be cancelled, a history of the order can be viewed and access to the audit trail can be accessed here. Below is an order status view of CSCO.

Users can access Cancel Orders from here and access Query Viewer as well as copy and paste functionality to Excel.

Users can look at timestamps in seconds, Milliseconds and Micro seconds.

Order Status

Search Criteria
 Date: 3/14/2012 Bus Unit: Market: ISE Bin: All Exch Ord Id:
 Time Frame: From: 15:22:23 To: 23:59:59 ALL AMR Product Series
 Time Disp: Milli w/ Stock Free Text: CSCO

Order Status

Bus Unit	Product	Instrument	Side	Limit	Bin	Orig Qty	Trd Qty	Open Qty	Del Qty	Inst Status	Crg Type	Curr Status	Order Cat	Client Cat	Time
LIM03E	CSCO	72065625626772519	Sell	\$1.01	9	249	0	249	0	Regular	Customer	New	Combo Regular	Customer Professional	10:57:54
LIM03E	CSCO	72065625626796213	Sell	\$4.01	9	237	0	237	0	Regular	Customer	New	Combo Regular	Customer Professional	10:00:40
PFS19E	CSCO	72065625626789863	Sell	\$1.01	9	1980	0	1980	0	Regular	Customer	New	Combo Regular	Customer Professional	11:26:26
MG514E	CSCO	CSCO3JAN15.0P	Buy	\$0.56	9	2	2	0	0	Regular	Customer	Filled	Normal	Customer	09:30:10
HUL01M	CSCO	CSCO3JAN25.0C	Sell	\$0.39	9	225	225	0	0	Regular	Market Maker	Filled	Normal	ISE MM	10:20:53
HUL01M	CSCO	144123219664701658	Buy	\$19.66	9	7	7	0	0	Customer	Filled	Combo Regular	ISE MM	09:59:08	
HUL01M	CSCO	72065625626797358	Buy	\$0.04	9	250	250	0	0	Regular	Customer	Filled	Combo Regular	ISE MM	11:03:34
OPX01E	CSCO	CSCO2APR19.0P	Buy	\$0.15	9	12	12	0	0	Regular	Customer	Filled	Normal	Customer	09:39:25
HUL01M	CSCO	72065625626787306	Buy	\$0.28	9	5	5	0	0	Regular	Customer	Filled	Combo Regular	ISE MM	11:01:28
NIT06E	CSCO	72065625626787225	Sell	\$0.10	9	10	10	0	0	Regular	Customer	Filled	Combo Regular	Customer	10:14:19
MG512E	CSCO	CSCO20CT21.0C	Sell	\$1.16	9	9	9	0	0	Regular	Customer	Filled	Preferred	Customer	10:53:11
EXA01E	CSCO	CSCO2JUN22.0C	Sell	\$0.28	9	1000	1000	0	0	Regular	Customer	Filled	Normal	Customer	09:37:05
HUL01M	CSCO	CSCO2APR21.0P	Buy	\$1.01	9	6	6	0	0	Regular	Market Maker	Filled	Normal	ISE MM	11:24:45
GLD10E	CSCO	CSCO2APR20.0C	Sell	\$0.61	9	31	31	0	0	Regular	Firm	Filled	Preferred	Proprietary	10:06:44
GLD08E	CSCO	CSCO2MAR20.0P	Buy	\$0.07	9	2615	2615	0	0	Regular	Firm	Filled	Preferred	Proprietary	11:32:59
GLD08E	CSCO	CSCO2MAR20.0P	Buy	\$0.07	9	477	477	0	0	Regular	Firm	Filled	Preferred	Proprietary	11:35:51
GLD09E	CSCO	CSCO2APR19.0P	Buy	\$0.15	9	49	49	0	0	Regular	Firm	Filled	Preferred	Proprietary	09:46:03
HUL01M	CSCO	CSCO2APR21.0P	Buy	\$1.01	9	3	3	0	0	Regular	Market Maker	Filled	Normal	ISE MM	11:24:45
HUL01M	CSCO	CSCO2APR18.0C	Sell	\$2.26	9	11	11	0	0	Regular	Market Maker	Filled	Normal	ISE MM	11:24:45
HUL01M	CSCO	CSCO2JUN22.0C	Sell	\$0.30	9	793	793	0	0	Regular	Market Maker	Filled	Flash Response	ISE MM	09:51:02
HUL01M	CSCO	CSCO2JUN22.0C	Buy	\$0.28	9	16	16	0	0	Regular	Market Maker	Filled	Flash Response	ISE MM	09:34:29
HUL01M	CSCO	CSCO2MAR20.0P	Sell	\$0.05	9	2	2	0	0	Regular	Market Maker	Filled	Normal	ISE MM	09:32:34
GLD09E	CSCO	CSCO2APR19.0P	Buy	\$0.15	9	1	1	0	0	Regular	Firm	Filled	Normal	Proprietary	09:46:32
EXA01E	CSCO	CSCO2JUN22.0C	Buy	\$0.30	9	1710	1710	0	0	Regular	Customer	Filled	Flash	Customer	09:51:02
HUL01M	CSCO	CSCO3JAN25.0C	Sell	\$0.39	9	14	14	0	0	Regular	Market Maker	Filled	Normal	ISE MM	10:20:56
OPX01E	CSCO	CSCO2APR19.0P	Buy	\$0.15	9	20	20	0	0	Regular	Customer	Filled	Normal	Customer	09:34:05
CDL01M	CSCO	CSCO2APR22.0P	Sell	\$1.88	9	10	10	0	0	Regular	Market Maker	Filled	Normal	ISE MM	09:39:55
OPX02E	CSCO	CSCO2APR19.0P	Buy	\$0.15	9	52	52	0	0	Regular	Customer	Filled	Normal	Customer	09:31:37
OPX02E	CSCO	CSCO2APR19.0P	Buy	\$0.15	9	23	23	0	0	Regular	Customer	Filled	Normal	Customer	09:32:54
ATD01E	CSCO	CSCO2MAR20.0P	Sell	\$0.04	9	200	200	0	0	Regular	Customer	Filled	Preferred	Customer	10:22:42
ATD01E	CSCO	CSCO2MAR20.0P	Buy	\$0.04	9	142	142	0	0	Regular	Customer	Filled	Preferred	Customer	11:16:18
BAM43E	CSCO	CSCO2MAR20.0C	Sell	\$0.29	9	37	37	0	0	Regular	Customer	Filled	Preferred	Customer	11:20:53
<hr/>															
Instrument	CSCO3JAN25.0C	Exch Order Id	1331723296087628503	Limit	\$0.39	Orig Qty	225	Side	Sell						
Open Qty	0	Trd Qty	225	Del Qty	0	Seq No	2	Time Of Entry	10:20:53						
ABBD0D	4437638768	IBB0D	4437820663	Username	HUL01M	Client Id	OU0000000000E20000A0								
Time Of Event	10:20:53	Bus Unit		Clrg Type	Market Maker	Clrg Acct No		Order Type	Regular Order						
Broker Id		PX Cond	Limit	Qty Cond	IOC	Lock Type	None	Curr Status	Filled						
CMTA		TIF		Lock Type		Not Locked	Lock To	Client Cat	ISE MM						
Order Cat	Normal	Ext Free Text		O/C	Open	ISO		Exp Date	01/01/0001						
Free Text		Stop Price	\$0.00	Recv BU				CMTA Account	No						
Lock Qty	0	Acct No		General Account	No	Disp Method		Disp Low Qty	0						
Br Seq Num		Directed	No												
Pref	No			Flashed Once	No										
Exch RefId	00000000:00000000	Clear Acct	No												
Init Qty	0	Disp When													

of Rows: 2345 Total Selected: 1

Advanced Filter- There is the ability to perform advanced searches that can narrow down information by Free Text, User, Price Condition, and External User. In addition to over 40 Order Categories, Client Categories, Order Types, Side Types and Time in Force.

Advanced Filter

Ext Text	User	Price Cond	External User	Search	Cancel
Order Category	Client Category	Order Status	Order Type	Side Type	Time In Force
Block Block Response Combo Customer to Customer Combo Exposure Combo Exposure Response Combo Facilitation Combo Facilitation Response Combo PIM Combo PIM Response Combo Preferred Combo Qualified Contingent Cros Combo Quote Combo Regular Combo Reserve Cross Combo Solicitation Combo Solicitation Response Customer to Customer Directed Directed PIM Directed Response Exposure Exposure Response Facilitation Facilitation Response Flash Flash Response Normal PIM PIM Response Preferred Prefrenced Stop Qualified Contingent Cross Quote Reserve Cross Solicitation Solicitation Response Stop Trade Report Trade Report ISO Trade Report No Opra Report	Customer Customer Professional Broker Proprietary FARMM ISE MM	New Partially filled Filled Cancelled Changed Pending Cancel	Regular Order Stop Order Auction Order Auction Response Quote Execute Order Cross Order GDO (Guaranteed Directed C	***ALL*** Buy Sell	Day GTC OPG IOC FOK GTD

Trade History- Once a trade is located, by right clicking, users can view the history of the order. User can view counterparties bids and offers, size, IBBO and ABBO and the timestamp.

The screenshot shows two windows side-by-side. The top window is titled 'Order History CSC02APR19.0P / SGA19E /' and displays a grid of trade history data. The bottom window is a detailed view of a specific trade record, showing various fields like Instrument, Open Qty, and Order Details.

Record Type	Instrument	Bid Firm	Ask Firm	Bid Qty@Price	Ask Qty@Price	IBBO(Bid)	IBBO(Ask)	ABBO(Bid)	ABBO(Ask)	InstStatus	CurStatus	MktDate	TimeOfEvent
ORDER	CSC02APR19.0P		SGA19E	A 1054 @ \$0.22	B 1054 @ \$0.22	A 559 @ 0.23	B 0 @ 0.22	A 0 @ 0.23	Regular	New	03/15/2012	12:21:52.4580860	
CON-QUOTE	CSC02APR19.0P	HUL01M			B 1054 @ \$0.22	A 559 @ 0.23	B 0 @ 0.22	A 0 @ 0.23	Regular	Filled	03/15/2012	12:21:52.4580860	
CON-QUOTE	CSC02APR19.0P	MGS01M			B 1054 @ \$0.22	A 559 @ 0.23	B 0 @ 0.22	A 0 @ 0.23	Regular	Filled	03/15/2012	12:21:52.4580860	
CON-QUOTE	CSC02APR19.0P	CDL01M			B 1054 @ \$0.22	A 559 @ 0.23	B 0 @ 0.22	A 0 @ 0.23	Regular	Filled	03/15/2012	12:21:52.4580860	
CON-QUOTE	CSC02APR19.0P	RDN01M			B 1054 @ \$0.22	A 559 @ 0.23	B 0 @ 0.22	A 0 @ 0.23	Regular	Filled	03/15/2012	12:21:52.4580860	
CON-QUOTE	CSC02APR19.0P	SIG01M			B 1054 @ \$0.22	A 559 @ 0.23	B 0 @ 0.22	A 0 @ 0.23	Regular	Filled	03/15/2012	12:21:52.4580860	
TRADE 1	CSC02APR19.0P	HUL01M	SGA19E	B 360 @ \$0.22	A 360 @ \$0.22	B 1054 @ 0.22	A 559 @ 0.23	B 0 @ 0.22	A 0 @ 0.23	Regular	Filled	03/15/2012	12:21:52.4580860
TRADE 2	CSC02APR19.0P	MGS01M	SGA19E	B 274 @ \$0.22	A 274 @ \$0.22	B 1054 @ 0.22	A 559 @ 0.23	B 0 @ 0.22	A 0 @ 0.23	Regular	Filled	03/15/2012	12:21:52.4580860
TRADE 3	CSC02APR19.0P	CDL01M	SGA19E	B 249 @ \$0.22	A 249 @ \$0.22	B 1054 @ 0.22	A 559 @ 0.23	B 0 @ 0.22	A 0 @ 0.23	Regular	Filled	03/15/2012	12:21:52.4580860
TRADE 4	CSC02APR19.0P	RDN01M	SGA19E	B 99 @ \$0.22	A 99 @ \$0.22	B 1054 @ 0.22	A 559 @ 0.23	B 0 @ 0.22	A 0 @ 0.23	Regular	Filled	03/15/2012	12:21:52.4580860
TRADE 5	CSC02APR19.0P	SIG01M	SGA19E	B 72 @ \$0.22	A 72 @ \$0.22	B 1054 @ 0.22	A 559 @ 0.23	B 0 @ 0.22	A 0 @ 0.23	Regular	Filled	03/15/2012	12:21:52.4580860
ORDER	CSC02APR19.0P		SGA19E	A 0 @ \$0.22	B 1054 @ 0.22	A 559 @ 0.23	B 0 @ 0.22	A 0 @ 0.23	Regular	Filled	03/15/2012	12:21:52.4580860	

Instrument	CSC02APR19.0P	Exch Order Id	1331821216748455109	Limit	\$0.22	Orig Qty	1054
Open Qty	1054	Trd Qty	0	Side	Sell	Time Of Entry	1/1/0001 12:21:52 PM
ABBOID	4472142969	IBBOID	4473592320	Seq No	1	Client Id	IHE2012031500312
Time Of Event	12:21:52.4580860	Bus Unit	SGA19E	Username		Sub Acct	
Broker Id		Clrg Type	Firm	Clrg Acct No		Regular Order	
CMTA		PX Cond	Limit	Order Type		Curr Status	New
Order Cat	Normal	TIF	Day	Qty Cond	None	Client Cat	Proprietary
Free Text		Ext Free Text	671	Lock Type	Not Locked	Lock To	0
Lock Qty	0	Stop Price	\$0.00	Recv BU		ISO	
Br Seq Num		Acct No	O/C	Close		Stopped Auction	
Pref	No	Directed	No	Flashed Once	No	Exp Date	01/01/0001
Exch RefId	00000000:00000000	Clear Acct	No	General Account	No	CMTA Account	
Init Qty	0	Disp When		Disp Method		Disp Low Qty	0
DispHighQty	0	DispQty	0	Mkt		Bin	9

Alerts- Notifies Market Operations of specific issues with member's orders, quotes and trades.

- Obvious Error alerts occur when the price of a trade is greater or less than the projected “theoretical price” for the instrument by an amount specified in ISE rule 720. The calculation of the theoretical price is detailed in Appendix D, “Obvious Error Determination”.
- PMM Change alerts occur when the matching engine detects that there is no active quoting and no acting PMM for an instrument and a BPMM cannot be found for the product. In this case MOPS receives a broadcast message that triggers the alert.
- Business Event alert occurs when MPT detects certain trade manager errors in the audit trail. Refer to Appendix A, “Business Event Alerts” for a list of the error conditions that trigger a Business Event alert.
- Locked Order alert occurs when the matching engine determines that an order has been locked for longer than specified in the locked Order Alert Time matching engine parameter, and issues a broadcast message to that effect. This alert will generate an audible alarm. MOPS can release the entire order (without specifying a price), or it can delete the order by issuing a deletion request [via the order status delete order function] and then releasing the order.
- The ME Complex Order tab provides access to four matching engine alerts:
- Number of Complex Instruments Create Alert generated when the maximum number of complex instruments that can be created per BU per product per business day is reached.
- Number of Complex Instruments Create Alert generated when the maximum number of complex instruments that can be created for a product per business day is reached.

- Spread Price Protection Alert when a sell market order on a vertical spread trades at a negative price, the trade must be prevented. If a sell market order trades two price levels, where the second tions. price level results in a negative net price, then the second trade must be prevented and a private market operations broadcast is sent to MOPs.
- No Reply from Smart Order Router Alert If the matching engine does not receive a reply from the SOR to a stock request within the specified time, it sets all stock combination instruments of the product to Halt and generates a corresponding Private Market Operations Broadcast to MOps. MOps needs to contact the stock venue or COPs to resolve the issue.
- The size deviation alert occurs when an order size exceeds a number of contracts per order that is specified by the business unit and maintained by MOps in MPT (i.e., NOT in reference data). [This functionality may not be available when Optimise first goes live.]
- Market Maker Protection occurs when a business unit's trades exceed a maximum number of contracts per unit time that is specified by the business unit.
- Not-Matched Complex Instruments occurs when a complex order locks or crosses the market without trading.

Puller- All Market Operations Representatives have the ability to de-activate or pull market-maker quotes and orders. This can be done for all quoted symbols, by instrument type (regular orders, combos and with-stock) by bin, by partition and by individual products(s). There is a 4 step process that must be followed to remove market makers quotes.

The screenshot shows a window titled "MPT for OptimISE: Quote/Order Puller Filter". It is divided into three main sections: Step 1, Step 2, and Step 3.

- Step 1:** Contains options for "Action" (radio buttons for "Pull Orders/Quotes", "Pull Orders Only", "Pull Quotes Only", and "Deactivate Quotes"), "Instrument Type" (radio buttons for "Regular", "Combo", "With Stock", and "All"), and a list of instrument codes under "Multiple BU" (e.g., ARC01M, BCA01M, BLU01M, CDO1M, CSB01M, CTC01M, EWT01M, HUL01M, JPM01M, NTO1M, PRO01M, MGS01M, OPV01M, RON01M, SIG01M, THI01M, UBS01M, EYE01M, WLV01M, HTH01M, CDM01M, ISE01M).
- Step 2:** Contains "Market Maker/User" settings (radio buttons for "Market Maker" - "View All" or "View Active Only", and dropdowns for "Users" and "Multiple BU").
- Step 3:** Contains "Product Select" and "Product Entry" tabs. The "Product Select" tab is active, showing a "Bin/Partition" section with "View Bins" (radio button selected) and a list of bins (0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 51, 52, 53, 54, 55, 56, 58, 81) and a "View Partitions" section with a list of partitions (1, 14, 7, 10, 5, 8, 6, 3, 4, 13, 9, 11, 2, 12, 15). The "Product Entry" tab is also present. On the right, there is a "Products" list box containing a large number of symbols (e.g., AA, AMRQ, AAPL, AAU, AAV, AAWW, AB, ABB, ABC, ABFS, ABG, ABMD, ABT, ABV, ABX, ACAD, ACAS, ACC, ACE, ACGL, ACH, ADHN, ADI, ADIW, ADM, ACN, ACDM).

Pull History -- After quotes are pulled or de-activated, Market Operations can view the detailed summary of any action taken by any Market Operations Representative, by user, time, member, or product. The window can be expanded to view information in greater detail.

Removed Orders/Quotes

PullQuote[]: 49217 Items

	RemovalTime	Analyst	BusinessUnit	User	Product	Type	Status	Message	NumProcOffer	NumProcBid	NumPendingItem	NumPendingInstr
BusinessUnit: ARCO1M - 2671 Items	1 analysts.	1 BUS.	446 products.						0 offers.	0 bids.	0 items.	0 instrs.
Analyst: amardan - 2671 Items	1 analysts.	1 BUS.	446 products.						0 offers.	0 bids.	0 items.	0 instrs.
+ RemovalTime: 8/9/2011 9:42:47 AM - 1335 Items	1 analysts.	1 BUS.	446 products.						0 offers.	0 bids.	0 items.	0 instrs.
+ RemovalTime: 8/9/2011 9:43:42 AM - 1336 Items	1 analysts.	1 BUS.	446 products.						0 offers.	0 bids.	0 items.	0 instrs.
BusinessUnit: CDO1M - 2226 Items	1 analysts.	1 BUS.	545 products.						0 offers.	0 bids.	0 items.	0 instrs.
Analyst: berochr - 2226 Items	1 analysts.	1 BUS.	545 products.						0 offers.	0 bids.	0 items.	0 instrs.
+ RemovalTime: 8/9/2011 9:31:18 AM - 703 Items	1 analysts.	1 BUS.	242 products.						0 offers.	0 bids.	0 items.	0 instrs.
+ RemovalTime: 8/9/2011 9:32:33 AM - 488 Items	1 analysts.	1 BUS.	242 products.						0 offers.	0 bids.	0 items.	0 instrs.
+ RemovalTime: 8/9/2011 9:33:18 AM - 21 Items	1 analysts.	1 BUS.	6 products.						0 offers.	0 bids.	0 items.	0 instrs.
+ RemovalTime: 8/9/2011 9:34:30 AM - 148 Items	1 analysts.	1 BUS.	52 products.						0 offers.	0 bids.	0 items.	0 instrs.
+ RemovalTime: 8/9/2011 9:34:52 AM - 120 Items	1 analysts.	1 BUS.	58 products.						0 offers.	0 bids.	0 items.	0 instrs.
+ RemovalTime: 8/9/2011 9:35:03 AM - 105 Items	1 analysts.	1 BUS.	79 products.						0 offers.	0 bids.	0 items.	0 instrs.
+ RemovalTime: 8/9/2011 9:35:15 AM - 244 Items	1 analysts.	1 BUS.	103 products.						0 offers.	0 bids.	0 items.	0 instrs.
+ RemovalTime: 8/9/2011 9:36:06 AM - 206 Items	1 analysts.	1 BUS.	88 products.						0 offers.	0 bids.	0 items.	0 instrs.
+ RemovalTime: 8/9/2011 9:36:27 AM - 191 Items	1 analysts.	1 BUS.	87 products.						0 offers.	0 bids.	0 items.	0 instrs.
BusinessUnit: HUL01M - 41898 Items	3 analysts.	1 BUS.	1026 products.						8658 offers.	7360 bids.	0 items.	0 instrs.
Analyst: berochr - 35547 Items	1 analysts.	1 BUS.	1026 products.						4127 offers.	3457 bids.	0 items.	0 instrs.
+ RemovalTime: 8/9/2011 9:44:23 AM - 5723 Items	1 analysts.	1 BUS.	1026 products.						127 offers.	99 bids.	0 items.	0 instrs.
+ RemovalTime: 8/9/2011 10:00:36 AM - 5843 Items	1 analysts.	1 BUS.	1026 products.						3984 offers.	3356 bids.	0 items.	0 instrs.
+ RemovalTime: 8/9/2011 10:01:09 AM - 5841 Items	1 analysts.	1 BUS.	1026 products.						0 offers.	0 bids.	0 items.	0 instrs.
+ RemovalTime: 8/9/2011 10:02:27 AM - 5845 Items	1 analysts.	1 BUS.	1026 products.						0 offers.	0 bids.	0 items.	0 instrs.
+ RemovalTime: 8/9/2011 10:04:11 AM - 465 Items	1 analysts.	1 BUS.	81 products.						0 offers.	0 bids.	0 items.	0 instrs.
+ RemovalTime: 8/9/2011 10:04:57 AM - 125 Items	1 analysts.	1 BUS.	22 products.						0 offers.	0 bids.	0 items.	0 instrs.

Deal Items- A configurable window that provides deal item information about an order. Market Operations can bust a deal, perform maintenance on the deal for clearing and rectify the deal for price or by counterparty.

The Deal Items window provides access to deal item data, and supports deal item maintenance and rectification functions, including busting and splitting trades, changing clearing information, and modifying deal price and quantity. Click on the “Deal Items” button to display the Deal Items window. The following regular filtering criteria are available: Match Event Date (type or select from calendar), Deal Item Business Date (type or select from calendar), System Date/Time range (type or select from calendar), Market (select from dropdown), Status (select radio button), Product or Series (select radio button, then type product or series name), Firm (Business Unit – type or select from dropdown), User (type or select from dropdown). The following advanced filtering criteria are available: Client Category (type or select from dropdown), Position Effect (type or select from dropdown), Deal Instrument ID (type), CMTA Account (type), Clearing Account (type), Clearing Sub Account (type), Free Text (type), Ext[ended] Free Text (type).

Deal Items

Search Criteria		Market/Identifier		Status		Firm		Preferences						
Date/Time	Match Event Date: 03/14/2012	Max Num Rec: 4000C	Market: ISE	Product: CSCO	Search	Advanced Filter								
Deal Business Date	03/14/2012	Time Disp: Milli	Series: CSC0											
System Date Time	From: 03/13/2012 00:00:00	To: 03/14/2012 23:59:59	Active	All	User:									
Deal Items														
Own BU ID	Cigr Account	Cigr CMTA Acct	Deal Item Side	Deal Item Qty	Deal Qty	Deal Price	Instrument	Product	ME Txn Timestamp	Pos Effect	Enrich Cnt Cat	Cigr Type	Cigr Sub Acct	
BAM32E	00792	00792	BUY	10	10	.58	CSCO2JUN21.0C	CSCO	03/14/2012 09:30:06	OPEN	CUSTOMER	CUSTOMER		
HUL01M	00009		SELL	4	10	.58	CSCO2JUN21.0C	CSCO	03/14/2012 09:30:06	OPEN	ISEM	MM	QIA	
TH01M	00549		SELL	6	10	.58	CSCO2JUN21.0C	CSCO	03/14/2012 09:30:06	OPEN	ISEM	MM	QTH	
WL01M	00105		SELL	2	2	.79	CSCO2MAY20.0P	CSCO	03/14/2012 09:30:06	CLOSE	CUSTOMER	CUSTOMER		
HUL01M	00009		BUY	2	2	.79	CSCO2MAY20.0P	CSCO	03/14/2012 09:30:06	OPEN	ISEM	MM	QIA	
MGS12E	00500	00777	BUY	15	15	.01	CSCO2MAR21.0C	CSCO	03/14/2012 09:30:06	CLOSE	CUSTOMER	CUSTOMER		
HUL01M	00009		SELL	9	15	.01	CSCO2MAR21.0C	CSCO	03/14/2012 09:30:06	OPEN	ISEM	MM	QIA	
SIG01M	00551		SELL	4	15	.01	CSCO2MAR21.0C	CSCO	03/14/2012 09:30:06	OPEN	ISEM	MM	ISS	
CDL01M	00551		SELL	2	15	.01	CSCO2MAR21.0C	CSCO	03/14/2012 09:30:06	OPEN	ISEM	MM	CIT	
MGS12E	00500	00777	BUY	2	2	.55	CSCO2APR20.0C	CSCO	03/14/2012 09:30:06	CLOSE	CUSTOMER	CUSTOMER		
MGS10M	00500		SELL	1	2	.55	CSCO2APR20.0C	CSCO	03/14/2012 09:30:06	OPEN	ISEM	MM	MGS	
WL01M	00501		SELL	1	2	.55	CSCO2APR20.0C	CSCO	03/14/2012 09:30:06	OPEN	ISEM	MM	ISE	
HUL01M	00009		SELL	2	2	.05	CSCO2MAR20.0P	CSCO	03/14/2012 09:32:34	OPEN	ISEM	MM	QIA	
MGS12E	00500	00777	BUY	2	2	.05	CSCO2MAR20.0P	CSCO	03/14/2012 09:32:34	CLOSE	CUSTOMER	CUSTOMER		
EXA01E	0722		SELL	884	884	.28	CSCO2JUN22.0C	CSCO	03/14/2012 09:34:26	OPEN	CUSTOMER	CUSTOMER		
HUL01M	00009		BUY	217	884	.28	CSCO2JUN22.0C	CSCO	03/14/2012 09:34:26	OPEN	ISEM	MM	QIA	
EYE01M	05001		BUY	331	884	.28	CSCO2JUN22.0C	CSCO	03/14/2012 09:34:26	OPEN	ISEM	MM	WEY	
JPM01M	00352		BUY	129	884	.28	CSCO2JUN22.0C	CSCO	03/14/2012 09:34:26	OPEN	ISEM	MM	JPM	
SIG01M	00551		BUY	109	884	.28	CSCO2JUN22.0C	CSCO	03/14/2012 09:34:26	OPEN	ISEM	MM	ISS	
TH01M	00549		BUY	75	884	.28	CSCO2JUN22.0C	CSCO	03/14/2012 09:34:26	OPEN	ISEM	MM	QTH	
CDL01M	00551		BUY	12	884	.28	CSCO2JUN22.0C	CSCO	03/14/2012 09:34:26	OPEN	ISEM	MM	CIT	
UBS01M	00642		BUY	11	884	.28	CSCO2JUN22.0C	CSCO	03/14/2012 09:34:26	OPEN	ISEM	MM	UBS	
EXA01E	0722		SELL	16	16	.28	CSCO2JUN22.0C	CSCO	03/14/2012 09:34:27	OPEN	CUSTOMER	CUSTOMER		
HUL01M	00009		BUY	16	16	.28	CSCO2JUN22.0C	CSCO	03/14/2012 09:34:27	OPEN	ISEM	MM	QIA	
SIG01M	00551		SELL	95	95	.15	CSCO2APR19.0P	CSCO	03/14/2012 09:34:31	OPEN	ISEM	MM	ISS	
DXPOZE	00338		BUY	52	95	.15	CSCO2APR19.0P	CSCO	03/14/2012 09:34:31	CLOSE	CUSTOMER	CUSTOMER		
DXPOZE	00338		BUY	23	95	.15	CSCO2APR19.0P	CSCO	03/14/2012 09:34:31	CLOSE	CUSTOMER	CUSTOMER		
DXPOZE	00338		BUY	20	95	.15	CSCO2APR19.0P	CSCO	03/14/2012 09:34:31	CLOSE	CUSTOMER	CUSTOMER		
SLK02E	00501		SELL	12	12	.28	CSCO2MAR20.0C	CSCO	03/14/2012 09:34:38	CLOSE	CUSTOMER	CUSTOMER		
CDL01M	00551		BUY	12	12	.28	CSCO2MAR20.0C	CSCO	03/14/2012 09:34:38	OPEN	ISEM	MM	CIT	
HUL01M	00009		SELL	21	21	.05	CSCO2MAR20.0P	CSCO	03/14/2012 09:36:01	OPEN	ISEM	MM	QIA	

of Rows: 501 Total Selected: Average Price: Total Qty:

This is a window to view the maintenance of an order in TBT. Clearing changes can be made here.

DIMI

	Instrument	Buy	Sell	DealItemID	Qty	TradePx	ClearingAcct	ClearingType	SubAcc	CMTA	FreeText	Account	t
	TBT3JAN60.0C	BUY	8		11	8.00	00009	CUSTOMER					
	TBT3JAN60.0C	SELL	7		11	8.00	00009	CUSTOMER					
	TBT3JAN60.0C	BUY	6		11	8.00	00009	CUSTOMER					
	TBT3JAN60.0C	SELL	5		11	8.00	00009	CUSTOMER					
	TBT3JAN60.0C	BUY	4		11	8.00	00009	CUSTOMER					
	TBT3JAN60.0C	SELL	3		11	8.00	00009	CUSTOMER					
	TBT3JAN60.0C	BUY	2		11	8.00	00009	CUSTOMER					
	TBT3JAN60.0C	SELL	1		11	8.00	00009	CUSTOMER					

Delete | 1 | Split | Reset | Submit | Cancel |

From the above screen you will notice a split screen. Market Operations if requested can change clearing on a partial order.

	Instrument	Buy	Sell	DealItemID	Qty	TradePx	ClearingAcct	ClearingType	SubAcc	CMTA	FreeText	Account	Bran
-	TBT3JAN60.0C		SELL	1	4	8.00	00009	CUSTOMER					
	TBT3JAN60.0C			*1	4		00009	CUSTOMER		00655			
	TBT3JAN60.0C			*1	3		00009	CUSTOMER		00924			

Below is a deal between two members, if parties agree contracts can be busted, reduced and prices changed.

Deal Instrument: TBT3JAN55.0C	New Deal Price: <input type="text"/>	Original Deal Price: \$9.05				
Deal Id: 1	Buy Qty: 31	Sell Qty: 31				
Original Deal Qty: 31						
DealItemID	BusinessUnit	User	_BuyQty	_SellQty	FreeText	ExtendedText
17	ETD01E	1	17	14		
16	ABN01E	1	14	14		
15	ABN01E	1	31	31		

Buttons: Bust Deal, Reset, Submit, Cancel

Trades - This is a configurable window that allows Market Operations the ability to view the trades of all counter-parties and allows the ability to bust a trade, add a new trade, and rectify a trade if needed. This is a buyer seller on the same line one-to-one view.

The following regular filtering criteria are available: Match Event Date (type or select from calendar), Trade Business Date (type or select from calendar), System Date/Time range (type or select from calendar), Market (select from dropdown), Product or Series (select radio button, then type product or series name), Firm (Business Unit – type or select from dropdown), User (type or select from dropdown).

Below is a list of trades in CSCO

If a new trade needs to be created and all parties agree the below window if where Market Operations would enter it. All pertinent fields should be populated with the proper information.

Busting a trade would be done here.

Trade Bust

TRADE Identifier		Price/Qty	Date/Time			
Market	ISE	Deal Price	12	Business Date	2/4/2011	
Product	X	Trade Qty	22	Creation Timestamp	2/4/2011 11:42:38 AM	
Instrument	X1APR40C					
BUYER		SELLER				
Owning Bus Unit	ABN01E	Owning Bus Unit	UBS01M			
Client Category	CUSTOMER	Client Category	ISEM			
Free Text				Free Text		
Ext Free Text				Ext Free Text		
Comments						
Deal Revision Reason						
Deal Revision Mops Comment			User/BusUnit			
			ISE Bus Unit			
			ISE Analyst MPT			

Trades by BU- This is a configurable window that allows a user to view trades by a specific member or business unit. This window is important for trade status purposes and for any recap a member may need. Below is an example of NYX, without a BU entered. If a BU was selected the query would be more specific. In addition Trade Statistics was added to this window and the information is broken down into puts and calls.

Trades by BU

Search Criteria

Market: ISE	Max Num Rec: 200000	Time Disp: Milli	
<input checked="" type="checkbox"/> Match Event Date: 03/14/2012	Firm:	User:	
<input type="checkbox"/> Trade Business: 03/14/2012	<input type="checkbox"/> Instr Type Equity	Bins:	
<input type="checkbox"/> System Date/Time	From: 03/13/2012 00:00:00	Status: Active	Identifier: Product
To: 03/14/2012 23:59:59	<input type="radio"/> InActive	All	<input type="radio"/> Series: CSCO

Trade Statistics

Date: 03/14/2012	Advanced Filter
Product: **All**	Preferences
Quantity:	Call Qty
Put Qty:	Excel Pref

Trades

Bin	Buy Own BU	Buy Clrg Acct	Sell Own BU	Sell Clrg Acct	Product	Instrument	Trd Qty	Trade Price	ME Txn Time Stamp	Trd Type	Trd Stat	Opra Trade Condition	TM Txn Type
9	HUL01M	00009	EXA01E	00722	CSCO	CSCO2JUN22.0C	217	.28	09:34:29.807	New	Active	Standard Trade	New MatchEvent by ME
9	MGS12E	00050	HUL01M	00009	CSCO	CSCO2MAR21.0C	9	.01	09:30:06.947	New	Active	Standard Trade	New MatchEvent by ME
9	MGS12E	00050	HUL01M	00009	CSCO	CSCO2MAR20.0P	2	.05	09:32:34.400	New	Active	Standard Trade	New MatchEvent by ME
9	BAM32E	00792	HUL01M	00009	CSCO	CSCO2JUN21.0C	4	.58	09:30:00.630	New	Active	ISO Trade	New MatchEvent by ME
9	UBS01M	00642	EXA01E	00722	CSCO	CSCO2JUN22.0C	8	.28	09:37:05.880	New	Active	Standard Trade	New MatchEvent by ME
9	JPM01M	00352	CDL01M	00551	CSCO	CSCO2JUN20.0C	5	.06	09:39:55.767	New	Active	Standard Trade	New MatchEvent by ME
9	CTRLCRPTY	ATD01E	SB5H	CSCO	CSCO	1800	20.25	09:50:40.833	New	Active	Buy Write	New MatchEvent by ME	
9	HUL01M	00009	MGS12E	00050	CSCO	CSCO2MAR20.0C	2	.26	09:43:48.597	New	Active	Standard Trade	New MatchEvent by ME
9	MGS13E	00050	JPM01M	00352	CSCO	CSCO2MAY18.0P	4	.24	09:44:12.133	New	Active	Spread	New MatchEvent by ME
9	DXPO2E	00338	SIG01M	00551	CSCO	CSCO2APR19.0P	7	.15	09:46:02.297	New	Active	Standard Trade	New MatchEvent by ME
9	ARC01M	ARCL	ATD01E	SB5H	CSCO	CSCO	1500	20.245	09:50:15.147	New	Active	Buy Write	New MatchEvent by ME
9	EXA01E	00722	UBS01M	00642	CSCO	CSCO2JUN22.0C	11	.30	09:51:02.617	New	Active	Standard Trade	New MatchEvent by ME
9	EXA01E	00722	HUL01M	00009	CSCO	CSCO2JUN22.0C	793	.30	09:51:02.767	New	Active	Standard Trade	New MatchEvent by ME
9	SIG01M	00551	EXA01E	00722	CSCO	CSCO2JUN22.0C	109	.28	09:34:29.807	New	Active	Standard Trade	New MatchEvent by ME
9	MGS12E	00050	MG501M	00050	CSCO	CSCO2APR20.0C	1	.55	09:30:06.947	New	Active	Standard Trade	New MatchEvent by ME
9	HUL01M	00009	EXA01E	00722	CSCO	CSCO2JUN22.0C	272	.28	09:37:05.880	New	Active	Standard Trade	New MatchEvent by ME
9	DXPO2E	00338	SIG01M	00551	CSCO	CSCO2APR19.0P	52	.15	09:34:34.120	New	Active	Standard Trade	New MatchEvent by ME
9	GLD09E	00005	HUL01M	00009	CSCO	CSCO2APR19.0P	20	.15	09:46:03.203	New	Active	Standard Trade	New MatchEvent by ME
9	CDL01M	CDG0	ATD01E	SB5H	CSCO	CSCO	1000	20.26	09:58:48.210	New	Active	Buy Write	New MatchEvent by ME
9	CDL01M	CDG0	ATD01E	SB5H	CSCO	CSCO	1000	20.26	09:59:08.067	New	Active	Buy Write	New MatchEvent by ME
9	HUL01M	00009	GEB02E	00552	CSCO	CSCO2MAY18.0C	1	.157	09:40:49.760	New	Active	Standard Trade	New MatchEvent by ME
9	MGS13E	00050	CDL01M	00551	CSCO	CSCO2MAY18.0P	1	.24	09:44:12.133	New	Active	Spread	New MatchEvent by ME
9	EXA01E	00722	MG501M	00050	CSCO	CSCO2JUN22.0C	243	.30	09:51:02.617	New	Active	Standard Trade	New MatchEvent by ME
9	ATD01E	00411	CDL01M	00551	CSCO	CSCO2APR20.0C	10	.59	09:51:17.890	New	Active	Buy Write	New MatchEvent by ME
9	ATD01E	00411	CDL01M	00551	CSCO	CSCO2APR20.0C	10	.59	09:51:25.570	New	Active	Buy Write	New MatchEvent by ME
9	ARC01M	ARCL	ATD01E	SB5H	CSCO	CSCO	1500	20.255	09:51:44.807	New	Active	Buy Write	New MatchEvent by ME
9	THI01M	00549	EXA01E	00722	CSCO	CSCO2JUN22.0C	75	.28	09:34:29.807	New	Active	Standard Trade	New MatchEvent by ME
9	MGS12E	00050	WLV01M	00501	CSCO	CSCO2APR20.0C	1	.55	09:30:06.947	New	Active	Standard Trade	New MatchEvent by ME
9	EYF01M	00501	EXA01E	00722	CSCO	CSCO2JUN22.0C	369	.28	09:37:05.880	New	Active	Standard Trade	New MatchEvent by ME
9	DXPO2E	00338	SIG01M	00551	CSCO	CSCO2APR19.0P	23	.15	09:34:34.120	New	Active	Standard Trade	New MatchEvent by ME
9	GLD09E	00005	SIG01M	00551	CSCO	CSCO2APR19.0P	16	.15	09:46:03.203	New	Active	Standard Trade	New MatchEvent by ME
9	GLD09E	00005	THI01M	00549	CSCO	CSCO2APR19.0P	13	.15	09:46:03.203	New	Active	Standard Trade	New MatchEvent by ME

of Rows: 320 Total Selected: 1 Average Price: 00.280 Total Qty: 217

Away Best Bid Offer (ABBO) Management - This window gives Allows Market Operations the ability if needed to remove an away exchange(s) from the NBBO calculation MPT allows you to change the exchanges and products that are used to calculate the ABBO as follows: Add all products for an entire exchange, Remove all products for an entire exchange, Add one or multiple products within an exchange, Remove one or multiple products within an exchange, The ABBO Management window contains a set of columns and rows that specify which products will be included in the ABBO display for each market that is included in the ABBO calculations.

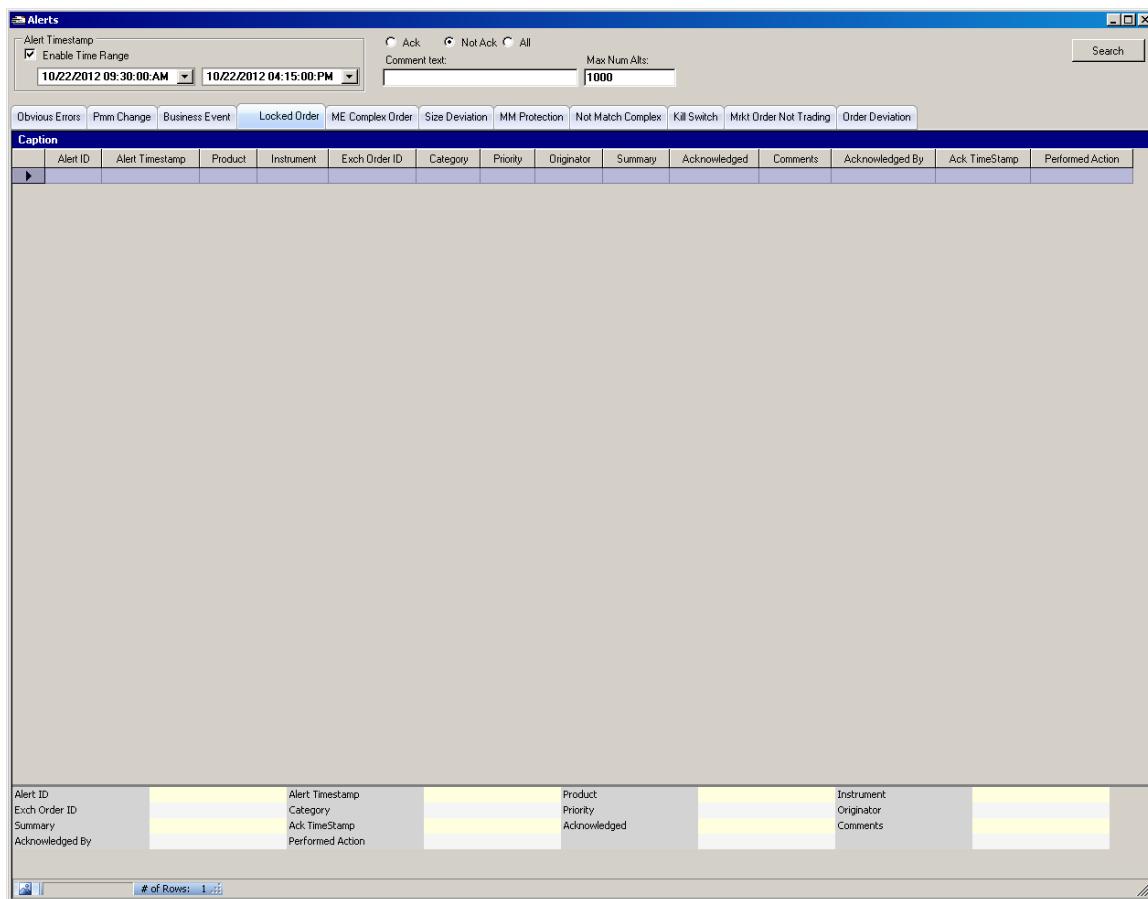
The name of each market is listed as a table heading across the top of the display area of the ABBO Management window. A check box is displayed just to the left of each market name. All available product symbols are listed in the leftmost column of the display. Each cell in the grid created by the product and market lists also contains a checkbox.

When the user checks a market box in the heading area all the product cells in the column beneath the market name are automatically checked. When a market box that is checked is unchecked by a user all the product cells in the column are automatically unchecked. When a user un-checks one or more cells in a column that has the market name checked, the checkbox for that market name is cleared. All other cells in the column that were already checked remain checked.

When a user manually checks all the unchecked product cells in a column, the market box for that column is automatically checked. Since the market name checkbox is a toggle that checks and un-checks all the product cells in its column, it is up to the user to determine if product level customization for a market is best accomplished by checking the market and then un-checking unwanted product cells, or by un-checking the market and then checking the cells of the specific products to be included.

Exegy Hosts	AMEX	BOX	CBOE	ISE	ARCA	NASDAQ	PHLX	BATS	C2	MAX	BXOptions
11.3.254.246	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
11.3.254.245	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				

Alerts- Market Operations vigilantly monitors the marketplace. MPT Alerts notifies Market Operations of specific issues with member's orders, quotes and/or execution. Each will be discussed in detail in later chapters.



Chapter 8. MPT Alerts – Obvious Error

Alerts

Alert Timestamp: Enable Time Range: Ack Not Ack All
 Comment text: Max Num Alts: 1000

OE ID	Alert Timestamp	Trade Time	Instrument	Bid Firm	Trade Price	Trade Quantity	Sell Firm	Condition	Action	NBBO Bid	NBBO Ask	NBBO Bid Exchange
27809	10/22/2012 09:31:03 AM	10/22/2012 9:30:02 AM	A2NOV35.0C	1.6300	1			Normal	Created	0.0000	0.0000	BATS
27808	10/22/2012 09:31:03 AM	10/22/2012 9:30:02 AM	A2NOV35.0C	1.6300	4			Normal	Created	0.0000	0.0000	BATS
27811	10/22/2012 09:31:03 AM	10/22/2012 9:30:02 AM	A2NOV35.0P	0.9500	1			Normal	Created	0.0000	0.0000	BATS
27810	10/22/2012 09:31:03 AM	10/22/2012 9:30:02 AM	A2NOV35.0P	0.9500	4			Normal	Created	0.0000	0.0000	BATS
27814	10/22/2012 12:14:09 PM	10/22/2012 12:13:30 PM	A2NOV42.0C	0.0200	1			Zero Bid One Price Level	Created	0.0000	0.0200	BATS
27936	10/22/2012 10:14:17 AM	10/22/2012 10:13:38 AM	A2NOV43.0C	0.0100	4			Zero Bid One Price Level	Created	0.0000	0.0100	BATS
27934	10/22/2012 10:12:46 AM	10/22/2012 10:12:07 AM	A2NOV43.0C	0.0100	4			Zero Bid One Price Level	Created	0.0000	0.0100	BATS
27933	10/22/2012 10:11:20 AM	10/22/2012 10:10:40 AM	A2NOV43.0C	0.0100	4			Zero Bid One Price Level	Created	0.0000	0.0100	BATS
28081	10/22/2012 11:49:41 AM	10/22/2012 11:49:01 AM	AAPL2NOV295.0P	0.0300	4			Zero Bid One Price Level	Created	0.0000	0.0300	BATS
28239	10/22/2012 09:13:05 PM	10/22/2012 3:12:25 PM	AAPL2NOV365.0P	0.0700	6			Zero Bid One Price Level	Created	0.0700	0.0800	CBOE
28238	10/22/2012 09:13:05 PM	10/22/2012 3:12:25 PM	AAPL2NOV365.0P	0.0700	4			Zero Bid One Price Level	Created	0.0700	0.0800	CBOE
28052	10/22/2012 09:26:31 PM	10/22/2012 3:27:52 PM	AAPL2NOV905.0C	0.2400	1			Zero Bid One Price Level	Created	0.1000	0.1800	BATS
28236	10/22/2012 09:10:46 PM	10/22/2012 3:10:07 PM	AAPL2NOV905.0C	0.0700	1			Zero Bid One Price Level	Created	0.1400	0.1800	BATS
28138	10/22/2012 12:25:21 PM	10/22/2012 12:51:31 PM	AAPL2NOV985.0C	0.1400	2			Zero Bid One Price Level	Created	0.0000	0.1400	BATS
28137	10/22/2012 12:25:21 PM	10/22/2012 12:51:31 PM	AAPL2NOV985.0C	0.1400	2			Zero Bid One Price Level	Created	0.0000	0.1400	BATS
28136	10/22/2012 12:25:21 PM	10/22/2012 12:51:31 PM	AAPL2NOV985.0C	0.1400	2			Zero Bid One Price Level	Created	0.0000	0.1400	BATS
28135	10/22/2012 12:25:21 PM	10/22/2012 12:51:31 PM	AAPL2NOV985.0C	0.1400	2			Zero Bid One Price Level	Created	0.0000	0.1400	BATS
28102	10/22/2012 12:05:55 PM	10/22/2012 12:05:16 PM	AAPL3JAN170.0P	0.0100	2			Zero Bid One Price Level	Created	0.0000	0.0200	BATS
28101	10/22/2012 12:05:55 PM	10/22/2012 12:05:16 PM	AAPL3JAN170.0P	0.0100	1			Zero Bid One Price Level	Created	0.0000	0.0200	BATS
28100	10/22/2012 12:05:55 PM	10/22/2012 12:05:16 PM	AAPL3JAN170.0P	0.0100	50			Zero Bid One Price Level	Created	0.0000	0.0200	BATS
28099	10/22/2012 12:05:52 PM	10/22/2012 12:05:12 PM	AAPL3JAN170.0P	0.0100	2			Zero Bid One Price Level	Created	0.0000	0.0200	BATS
28098	10/22/2012 12:05:52 PM	10/22/2012 12:05:12 PM	AAPL3JAN170.0P	0.0100	1			Zero Bid One Price Level	Created	0.0000	0.0200	BATS
28097	10/22/2012 12:05:41 PM	10/22/2012 12:05:02 PM	AAPL3JAN170.0P	0.0100	22			Zero Bid One Price Level	Created	0.0000	0.0100	BATS
28096	10/22/2012 12:05:41 PM	10/22/2012 12:05:02 PM	AAPL3JAN170.0P	0.0100	15			Zero Bid One Price Level	Created	0.0100	0.0200	NASD
28095	10/22/2012 12:05:41 PM	10/22/2012 12:05:02 PM	AAPL3JAN170.0P	0.0100	1			Zero Bid One Price Level	Created	0.0100	0.0200	NASD
28094	10/22/2012 12:04:56 PM	10/22/2012 12:04:16 PM	AAPL3JAN170.0P	0.0100	1			Zero Bid One Price Level	Created	0.0100	0.0200	NASD
28093	10/22/2012 12:04:53 PM	10/22/2012 12:04:13 PM	AAPL3JAN170.0P	0.0100	1			Zero Bid One Price Level	Created	0.0100	0.0200	NASD
28092	10/22/2012 12:04:41 PM	10/22/2012 12:04:01 PM	AAPL3JAN170.0P	0.0100	16			Zero Bid One Price Level	Created	0.0100	0.0400	NASD
27939	10/22/2012 09:33:51 AM	10/22/2012 9:33:12 AM	AAPL3JAN195.0P	0.0100	4			Zero Bid One Price Level	Created	0.0100	0.0700	ARCA
27938	10/22/2012 09:33:51 AM	10/22/2012 9:33:12 AM	AAPL3JAN195.0P	0.0100	4			Zero Bid One Price Level	Created	0.0100	0.0700	ARCA
27937	10/22/2012 09:33:51 AM	10/22/2012 9:33:12 AM	AAPL3JAN195.0P	0.0200	1			Zero Bid One Price Level	Created	0.0100	0.0700	ARCA
27936	10/22/2012 09:33:51 AM	10/22/2012 9:33:12 AM	AAPL3JAN195.0P	0.0200	1			Zero Bid One Price Level	Created	0.0100	0.0700	ARCA
27934	10/22/2012 09:33:06 AM	10/22/2012 9:32:00 AM	AAPL3JAN250.0P	0.1000	29			Zero Bid One Price Level	Created	0.1000	0.1500	NASD
27933	10/22/2012 09:33:05 AM	10/22/2012 9:32:00 AM	AAPL3JAN250.0P	0.1100	1			Zero Bid One Price Level	Created	0.1000	0.1500	NASD
27842	10/22/2012 09:31:08 AM	10/22/2012 9:30:08 AM	ABT2NOV65.0P	0.9700	11			Normal	Created	0.0000	0.0000	BATS
27839	10/22/2012 09:31:08 AM	10/22/2012 9:30:08 AM	ABT2NOV65.0P	1.0200	1			Normal	Created	0.0000	0.0000	BATS
27840	10/22/2012 09:31:08 AM	10/22/2012 9:30:08 AM	ABT2NOV70.0P	4.4000	1			Normal	Created	0.0000	0.0000	BATS
27841	10/22/2012 09:31:08 AM	10/22/2012 9:30:08 AM	ABT3JAN60.0P	0.6500	10			Normal	Created	0.0000	0.0000	BATS
27932	10/22/2012 09:32:57 AM	10/22/2012 9:31:53 AM	ABT3JAN50.0P	0.1600	10			Zero Bid One Price Level	Created	0.0000	0.0500	BATS

OE ID: 27811 Alert Timestamp: 10/22/2012 9:31:03 AM Trade Time: 10/22/2012 9:30:02 AM Instrument: A2NOV35.0P
 Bid Firm: Normal Condition: Action: Created
 NBBO Bid Exchange: BATS NBBO Offer Exchange: BATS
 AckTimeStamp: 2169148 Performed Action: Bid Exchange OrderId: 1350907509887382000
 Comments: Offer Exchange OrderId: 1350907509887382000
 Market Date: 10/22/2012 12:00:00 AM AcknowledgedBy: AcknowledgedBy

of Rows: 702

- Obvious Error alerts occur when the price of a trade is greater or less than the projected “theoretical price” for the instrument by an amount specified in ISE rule 720. The calculation of the theoretical price is detailed in Appendix D, “Obvious Error Determination”.

Chapter 9. MPT Alerts – PMM Change

Alerts

Alert Timestamp: Ack Not Ack All
 Enable Time Range Comment text: Max Num Alts:
 10/22/2012 09:30:00 AM 10/22/2012 04:15:00 PM 1000

Caption											
Alert ID	Alert Timestamp	Product	Instrument	Exchange Order ID	Category	Type	Priority	Originator			
2168779	10/22/2012 07:30:00 AM	BRB	BRB3JAN196.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
2149566	10/19/2012 07:30:00 AM	NDO	MN2NODV295.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
2135692	10/18/2012 07:30:00 AM	GBP	GBP2NOV156.0P	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
2114793	10/17/2012 07:30:00 AM	PZO	PZD3MAR131.0P	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
2093406	10/16/2012 09:19:45 AM	PZO	PZD3MAR148.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
2072527	10/15/2012 07:56:12 AM	BRB	BRB2DEC179.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
2050573	10/12/2012 07:30:00 AM	BRB	BRB3MAR206.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
2029536	10/11/2012 07:30:00 AM	BRB	BRB3MAR206.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
2010693	10/10/2012 07:30:00 AM	BRB	BRB3MAR206.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1988850	10/09/2012 07:30:00 AM	BRB	BRB3MAR206.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1969478	10/08/2012 07:30:00 AM	BRB	BRB3MAR206.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1946515	10/05/2012 07:30:00 AM	GBP	GBP2NOV156.0P	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1924641	10/04/2012 07:30:00 AM	BRB	BRB3MAR206.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1905687	10/03/2012 07:30:00 AM	BRB	BRB3MAR206.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1886489	10/02/2012 07:32:38 AM	SKA	SKA3MAR68.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1868384	10/01/2012 08:17:45 AM	BRB	BRB2DEC179.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1867938	09/29/2012 09:27:00 AM	UYG	UYG2NOV156.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1847022	09/28/2012 07:30:00 AM	PZO	PZD3MAR131.0P	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1828239	09/27/2012 07:30:00 AM	CDD	CDD2DEC100.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1807610	09/26/2012 07:30:04 AM	EUI	EUI3SEP70.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1788234	09/25/2012 07:58:34 AM	PZO	PZD2NOV137.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1789758	09/24/2012 07:30:00 AM	EUU	EUU3SEP123.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1769648	09/22/2012 08:25:27 AM	IVV	IVV3FEB89.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1747018	09/21/2012 07:30:00 AM	BRB	BRB2DEC207.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1726226	09/20/2012 07:30:00 AM	AUM	AUM2NOV156.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1709435	09/19/2012 07:30:00 AM	GBP	GBP2NOV156.0P	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1693299	09/18/2012 07:30:00 AM	BRB	BRB2DEC207.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1676071	09/17/2012 07:30:00 AM	BRB	BRB2DEC207.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1647131	09/14/2012 07:30:00 AM	BRB	BRB2DEC207.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1623814	09/13/2012 07:30:00 AM	EUU	EUU2NOV156.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1604540	09/12/2012 07:30:00 AM	BRB	BRB2DEC207.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1586690	09/11/2012 07:30:00 AM	BRB	BRB2DEC207.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1565538	09/10/2012 07:30:00 AM	BRB	BRB2DEC207.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1541388	09/07/2012 07:30:00 AM	BRB	BRB2DEC207.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			
1519159	09/06/2012 07:30:00 AM	BRB	BRB2DEC207.0C	18446744073709551615	FAILURE_TO_FIND_ACTING_PMM	FAILURE_TO_FIND_ACTING_PMM	2	FAILURE_TO_FIND_ACTING_PMM			

Alert ID	Alert Timestamp	Product	Instrument	Category	Type	Priority	Originator
2168779	10/22/2012 09:30:00 AM	BRB	BRB3JAN196.0C	FAILURE_TO_FIND_ACTING_PMM	Type	2	
Originator	Summary			FAILURE_TO_FIND_ACTING_PMM	TriggerId		TriggerType
Ack TimeStamp	Acknowledged				Comments		Acknowledged By

- PMM Change alerts trigger when the matching engine detects that there is no active quoting and “no acting PMM” for an instrument and a BPMM cannot be found for the product. In this case MOPS receives a broadcast message that triggers the alert.

Chapter 10. MPT Alerts – Business Event

Alerts

Alert Timestamp: Enable Time Range Ack Not Ack All Comment text: Max Num Alts:

Search

Obvious Errors	Pmn Change	Business Event	Locked Order	ME Complex Order	Size Deviation	MM Protection	Not Match Complex	Kill Switch	Mrkt Order Not Trading	Order Deviation
Caption										
Alert ID	Alert Timestamp	Category	Type	Priority	Originator					
2174279	10/22/2012 01:01:19 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Mon, 2012-10-22 13:01:19: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2174278	10/22/2012 01:01:16 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Mon, 2012-10-22 13:01:16: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2174277	10/22/2012 01:01:13 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Mon, 2012-10-22 13:01:13: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2174276	10/22/2012 01:01:12 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Mon, 2012-10-22 13:01:12: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2174275	10/22/2012 01:01:11 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Mon, 2012-10-22 13:01:11: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2174274	10/22/2012 01:01:10 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Mon, 2012-10-22 13:01:10: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2174273	10/22/2012 01:01:09 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Mon, 2012-10-22 13:01:09: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2174272	10/22/2012 01:01:08 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Mon, 2012-10-22 13:01:08: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2174270	10/22/2012 01:01:05 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Mon, 2012-10-22 13:01:05: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2174269	10/22/2012 01:01:04 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Mon, 2012-10-22 13:01:04: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2145930	10/18/2012 03:21:06 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Thu, 2012-10-18 15:21:06: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2132765	10/17/2012 04:07:48 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Wed, 2012-10-17 16:07:48: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2132764	10/17/2012 04:07:43 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Wed, 2012-10-17 16:07:43: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2132602	10/17/2012 04:02:03 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Wed, 2012-10-17 16:02:03: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2132601	10/17/2012 04:02:00 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Wed, 2012-10-17 16:02:02: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2040590	10/11/2012 01:35:59 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Thu, 2012-10-11 13:35:59: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2040415	10/11/2012 01:35:25 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Thu, 2012-10-11 13:35:25: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2038542	10/11/2012 12:48:04 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Thu, 2012-10-11 12:48:04: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2038141	10/11/2012 12:38:57 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Thu, 2012-10-11 12:38:57: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2038138	10/11/2012 12:38:24 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Thu, 2012-10-11 12:38:24: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2028236	10/10/2012 05:08:59 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Wed, 2012-10-10 17:08:59: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2028235	10/10/2012 05:08:58 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Wed, 2012-10-10 17:08:58: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2028234	10/10/2012 05:08:11 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Wed, 2012-10-10 17:08:11: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2028233	10/10/2012 05:08:10 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Wed, 2012-10-10 17:08:10: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2027512	10/10/2012 04:44:47 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Wed, 2012-10-10 16:44:47: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2027511	10/10/2012 04:44:46 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Wed, 2012-10-10 16:44:46: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				
2027510	10/10/2012 04:44:45 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	3		On Wed, 2012-10-10 16:44:45: Failure at SPTA module or SEV when processing TM_DIMI_ADJUST_REQUEST				

Alert ID	Alert Timestamp	Category	Type	Comments
2174279	10/22/2012 1:01:19 PM	BCTMBusinessEvent	SPTA_SEV_PROCESSING_FAILURE	
Priority	3	Originator	TriggerId	52
Trigger Type	Business Event Alert	AckTimeStamp		
Acknowledged By		Performed Action	Acknowledged	

of Rows: 1000

- Business Event alert occurs when MPT detects certain trade manager errors in the audit trail. Refer to Appendix A, “Business Event Alerts” for a list of the error conditions that trigger a Business Event alert.

Chapter 11. MPT Alerts – Locked Order

The screenshot shows two windows of the MPT Alerts application.

Top Window (Alerts List):

Alerts																																																																																																																																																																									
Alert Timestamp			<input checked="" type="radio"/> Ack <input type="radio"/> Not Ack <input type="checkbox"/> All		Comment text:			Max Num Alts: 1000																																																																																																																																																																	
10/22/2012 09:30:00 AM -> 10/22/2012 04:15:00 PM									Search																																																																																																																																																																
Obvious Errors Pmn Change Business Event Locked Order ME Complex Order Size Deviation MM Protection Not Match Complex Kill Switch Mrkt Order Not Trading Order Deviation																																																																																																																																																																									
Caption <table border="1"> <thead> <tr> <th>Alert ID</th> <th>Alert Timestamp</th> <th>Product</th> <th>Instrument</th> <th>Exch Order ID</th> <th>Category</th> <th>Priority</th> <th>Originator</th> <th colspan="2">Summary</th> </tr> </thead> <tbody> <tr> <td>2174737</td> <td>10/22/2012 01:28:38 PM</td> <td>UPS</td> <td>UPS3JAN72.5C</td> <td>1350922545106185877</td> <td>LOCKED_ORDER</td> <td>2</td> <td></td> <td colspan="2">1350926318897081000: Order's Business Unit: [BAM42E]: 1@162000000 - Locked To [THI01]</td> </tr> <tr> <td>2173530</td> <td>10/22/2012 12:27:52 PM</td> <td>AAPL</td> <td>AAPL20CT620.0P-26</td> <td>1350923132650590309</td> <td>LOCKED_ORDER</td> <td>2</td> <td></td> <td colspan="2">135092327260090000: Order's Business Unit: [ABN21E]: 2@91720000000 - Locked To [UBS]</td> </tr> <tr> <td>2171883</td> <td>10/22/2012 11:04:01 AM</td> <td>TLT</td> <td>TLT20CT124.0C-26</td> <td>1350916042161369848</td> <td>LOCKED_ORDER</td> <td>2</td> <td></td> <td colspan="2">135091824112700000: Order's Business Unit: [LBD02E]: 5@17000000 - Locked To [CDM01]</td> </tr> <tr> <td>2171862</td> <td>10/22/2012 11:03:35 AM</td> <td>SDS</td> <td>SDS2NOV60.0C</td> <td>1350914226595652571</td> <td>LOCKED_ORDER</td> <td>2</td> <td></td> <td colspan="2">1350916215820061000: Order's Business Unit: [BAM32E]: 102@950000000 - Locked To [UBS]</td> </tr> <tr> <td>2171975</td> <td>10/22/2012 11:03:14 AM</td> <td>SDS</td> <td>SDS2NOV60.0C</td> <td>1350914226595652571</td> <td>LOCKED_ORDER</td> <td>2</td> <td></td> <td colspan="2">1350918194972079000: Order's Business Unit: [BAM32E]: 215@950000000 - Locked To [UBS]</td> </tr> <tr> <td>2171657</td> <td>10/22/2012 10:56:22 AM</td> <td>VLO</td> <td>VLO20EC24.0P</td> <td>1350906398134963989</td> <td>LOCKED_ORDER</td> <td>2</td> <td></td> <td colspan="2">1350917782550062000: Order's Business Unit: [EXA01E]: 30@29000000 - Locked To [THI01]</td> </tr> <tr> <td>2171149</td> <td>10/22/2012 10:32:48 AM</td> <td>EEM</td> <td>EEM2NOV40.0P</td> <td>1350912961972533521</td> <td>LOCKED_ORDER</td> <td>2</td> <td></td> <td colspan="2">1350916363410091000: Order's Business Unit: [PC03E]: 10@0@30000000 - Locked To [THI01]</td> </tr> <tr> <td>2170984</td> <td>10/22/2012 10:30:09 AM</td> <td>EEM</td> <td>EEM2NOV44.0C</td> <td>1350912961972484375</td> <td>LOCKED_ORDER</td> <td>2</td> <td></td> <td colspan="2">1350916209024072000: Order's Business Unit: [PC03E]: 30@1@30000000 - Locked To [THI01]</td> </tr> <tr> <td>2170944</td> <td>10/22/2012 10:27:12 AM</td> <td>AAPL</td> <td>AAPL20CT610.0C-26</td> <td>1350915945643215127</td> <td>LOCKED_ORDER</td> <td>2</td> <td></td> <td colspan="2">1350916032547147000: Order's Business Unit: [ABN21E]: 4@2580000000 - Locked To [UBS]</td> </tr> <tr> <td>2170545</td> <td>10/22/2012 10:10:45 AM</td> <td>AAPL</td> <td>AAPL2NOV645.0C</td> <td>1350914983140131656</td> <td>LOCKED_ORDER</td> <td>2</td> <td></td> <td colspan="2">1350915045373032000: Order's Business Unit: [INE07E]: 4@1640000000 - Locked To [UBS]</td> </tr> <tr> <td>2170527</td> <td>10/22/2012 10:09:44 AM</td> <td>XOM</td> <td>XOM2NOV95.0C</td> <td>1350906955203781889</td> <td>LOCKED_ORDER</td> <td>2</td> <td></td> <td colspan="2">1350914984527128000: Order's Business Unit: [GEB02E]: 10@0 - Locked To [CDM01]</td> </tr> <tr> <td>2170414</td> <td>10/22/2012 10:03:44 AM</td> <td>BIDU</td> <td>BIDU20CT115.0C-26</td> <td>1350906301043897737</td> <td>LOCKED_ORDER</td> <td>2</td> <td></td> <td colspan="2">13509146241983094000: Order's Business Unit: [GEB02E]: 7@170000000 - Locked To [THI01]</td> </tr> <tr> <td>2169776</td> <td>10/22/2012 09:44:52 AM</td> <td>CLF</td> <td>CLF3JAN65.0C</td> <td>1350913300118134983</td> <td>LOCKED_ORDER</td> <td>2</td> <td></td> <td colspan="2">1350912492549510000: Order's Business Unit: [ENG05E]: 33@100000000 - Locked To [THI01]</td> </tr> <tr> <td>2169740</td> <td>10/22/2012 09:43:26 AM</td> <td>AAPL</td> <td>AAPL3JAN645.0C</td> <td>1350913172184960798</td> <td>LOCKED_ORDER</td> <td>2</td> <td></td> <td colspan="2">1350913406272130000: Order's Business Unit: [DBK10E]: 9@3250000000 - Locked To [UBS01M]</td> </tr> <tr> <td>2169530</td> <td>10/22/2012 09:34:08 AM</td> <td>AAPL</td> <td>AAPL20CT610.0C-26</td> <td>135091279262935483</td> <td>LOCKED_ORDER</td> <td>2</td> <td></td> <td colspan="2">1350912840980780000: Order's Business Unit: [GEB02E]: 38@0 - Locked To [UBS01M]</td> </tr> </tbody> </table>										Alert ID	Alert Timestamp	Product	Instrument	Exch Order ID	Category	Priority	Originator	Summary		2174737	10/22/2012 01:28:38 PM	UPS	UPS3JAN72.5C	1350922545106185877	LOCKED_ORDER	2		1350926318897081000: Order's Business Unit: [BAM42E]: 1@162000000 - Locked To [THI01]		2173530	10/22/2012 12:27:52 PM	AAPL	AAPL20CT620.0P-26	1350923132650590309	LOCKED_ORDER	2		135092327260090000: Order's Business Unit: [ABN21E]: 2@91720000000 - Locked To [UBS]		2171883	10/22/2012 11:04:01 AM	TLT	TLT20CT124.0C-26	1350916042161369848	LOCKED_ORDER	2		135091824112700000: Order's Business Unit: [LBD02E]: 5@17000000 - Locked To [CDM01]		2171862	10/22/2012 11:03:35 AM	SDS	SDS2NOV60.0C	1350914226595652571	LOCKED_ORDER	2		1350916215820061000: Order's Business Unit: [BAM32E]: 102@950000000 - Locked To [UBS]		2171975	10/22/2012 11:03:14 AM	SDS	SDS2NOV60.0C	1350914226595652571	LOCKED_ORDER	2		1350918194972079000: Order's Business Unit: [BAM32E]: 215@950000000 - Locked To [UBS]		2171657	10/22/2012 10:56:22 AM	VLO	VLO20EC24.0P	1350906398134963989	LOCKED_ORDER	2		1350917782550062000: Order's Business Unit: [EXA01E]: 30@29000000 - Locked To [THI01]		2171149	10/22/2012 10:32:48 AM	EEM	EEM2NOV40.0P	1350912961972533521	LOCKED_ORDER	2		1350916363410091000: Order's Business Unit: [PC03E]: 10@0@30000000 - Locked To [THI01]		2170984	10/22/2012 10:30:09 AM	EEM	EEM2NOV44.0C	1350912961972484375	LOCKED_ORDER	2		1350916209024072000: Order's Business Unit: [PC03E]: 30@1@30000000 - Locked To [THI01]		2170944	10/22/2012 10:27:12 AM	AAPL	AAPL20CT610.0C-26	1350915945643215127	LOCKED_ORDER	2		1350916032547147000: Order's Business Unit: [ABN21E]: 4@2580000000 - Locked To [UBS]		2170545	10/22/2012 10:10:45 AM	AAPL	AAPL2NOV645.0C	1350914983140131656	LOCKED_ORDER	2		1350915045373032000: Order's Business Unit: [INE07E]: 4@1640000000 - Locked To [UBS]		2170527	10/22/2012 10:09:44 AM	XOM	XOM2NOV95.0C	1350906955203781889	LOCKED_ORDER	2		1350914984527128000: Order's Business Unit: [GEB02E]: 10@0 - Locked To [CDM01]		2170414	10/22/2012 10:03:44 AM	BIDU	BIDU20CT115.0C-26	1350906301043897737	LOCKED_ORDER	2		13509146241983094000: Order's Business Unit: [GEB02E]: 7@170000000 - 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Alert ID	Alert Timestamp	Product	Instrument	Exch Order ID	Category	Priority	Originator	Summary																																																																																																																																																																	
2174737	10/22/2012 01:28:38 PM	UPS	UPS3JAN72.5C	1350922545106185877	LOCKED_ORDER	2		1350926318897081000: Order's Business Unit: [BAM42E]: 1@162000000 - Locked To [THI01]																																																																																																																																																																	
2173530	10/22/2012 12:27:52 PM	AAPL	AAPL20CT620.0P-26	1350923132650590309	LOCKED_ORDER	2		135092327260090000: Order's Business Unit: [ABN21E]: 2@91720000000 - Locked To [UBS]																																																																																																																																																																	
2171883	10/22/2012 11:04:01 AM	TLT	TLT20CT124.0C-26	1350916042161369848	LOCKED_ORDER	2		135091824112700000: Order's Business Unit: [LBD02E]: 5@17000000 - Locked To [CDM01]																																																																																																																																																																	
2171862	10/22/2012 11:03:35 AM	SDS	SDS2NOV60.0C	1350914226595652571	LOCKED_ORDER	2		1350916215820061000: Order's Business Unit: [BAM32E]: 102@950000000 - Locked To [UBS]																																																																																																																																																																	
2171975	10/22/2012 11:03:14 AM	SDS	SDS2NOV60.0C	1350914226595652571	LOCKED_ORDER	2		1350918194972079000: Order's Business Unit: [BAM32E]: 215@950000000 - Locked To [UBS]																																																																																																																																																																	
2171657	10/22/2012 10:56:22 AM	VLO	VLO20EC24.0P	1350906398134963989	LOCKED_ORDER	2		1350917782550062000: Order's Business Unit: [EXA01E]: 30@29000000 - Locked To [THI01]																																																																																																																																																																	
2171149	10/22/2012 10:32:48 AM	EEM	EEM2NOV40.0P	1350912961972533521	LOCKED_ORDER	2		1350916363410091000: Order's Business Unit: [PC03E]: 10@0@30000000 - Locked To [THI01]																																																																																																																																																																	
2170984	10/22/2012 10:30:09 AM	EEM	EEM2NOV44.0C	1350912961972484375	LOCKED_ORDER	2		1350916209024072000: Order's Business Unit: [PC03E]: 30@1@30000000 - Locked To [THI01]																																																																																																																																																																	
2170944	10/22/2012 10:27:12 AM	AAPL	AAPL20CT610.0C-26	1350915945643215127	LOCKED_ORDER	2		1350916032547147000: Order's Business Unit: [ABN21E]: 4@2580000000 - Locked To [UBS]																																																																																																																																																																	
2170545	10/22/2012 10:10:45 AM	AAPL	AAPL2NOV645.0C	1350914983140131656	LOCKED_ORDER	2		1350915045373032000: Order's Business Unit: [INE07E]: 4@1640000000 - Locked To [UBS]																																																																																																																																																																	
2170527	10/22/2012 10:09:44 AM	XOM	XOM2NOV95.0C	1350906955203781889	LOCKED_ORDER	2		1350914984527128000: Order's Business Unit: [GEB02E]: 10@0 - Locked To [CDM01]																																																																																																																																																																	
2170414	10/22/2012 10:03:44 AM	BIDU	BIDU20CT115.0C-26	1350906301043897737	LOCKED_ORDER	2		13509146241983094000: Order's Business Unit: [GEB02E]: 7@170000000 - Locked To [THI01]																																																																																																																																																																	
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2169530	10/22/2012 09:34:08 AM	AAPL	AAPL20CT610.0C-26	135091279262935483	LOCKED_ORDER	2		1350912840980780000: Order's Business Unit: [GEB02E]: 38@0 - Locked To [UBS01M]																																																																																																																																																																	

Bottom Window (Detailed Alert View):

Alert ID	2174737	Alert Timestamp	10/22/2012 1:28:38 PM	Product	UPS	Instrument	UPS3JAN72.5C
Exch Order ID	1350922545106185877	Category	LOCKED_ORDER	Priority	2	Originator	
Summary	1350926318897081000: Order's Business Unit: [BAM42E]: 1@162000000 - Locked To [THI01M] anasjam	Ack TimeStamp	10/22/2012 1:29:43 PM	Acknowledged	YES	Comments	nd
Acknowledged By		Performed Action	Nothing Done				

- Locked Order alert occurs when the matching engine determines that an order has been locked for longer than specified in the locked Order Alert Time matching engine parameter, and issues a broadcast message to that effect. This alert will generate an audible alarm. MOPS can release the entire order (without specifying a price), or it can delete the order by issuing a deletion request [via the order status delete order function] and then releasing the order.

Chapter 12. MPT Alerts - ME Complex Order

Alerts

Alert ID	Alert Timestamp	Product	Instrument	Exch Order ID	Category	Priority	Originator
2168766	10/20/2012 06:11:32 AM	SPY	-9223372036854775908	18446744073709551615	NUMBER_OF_COMPLEX_INSTRUMENTS_CREATED_1	2	NUMBER OF COMPLEX INSTRUMENTS CR
2168748	10/20/2012 06:06:22 AM	MSFT	72061755861306088	1350646449007010006	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168747	10/20/2012 06:06:21 AM	MSFT	72061755861306088	1350646449007010006	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168746	10/20/2012 06:06:21 AM	MSFT	72061755861306088	1350646449007010006	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168745	10/20/2012 06:06:21 AM	MSFT	72061755861306088	1350646449007010006	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168744	10/20/2012 06:06:21 AM	MSFT	72061755861306088	1350646449007010006	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168743	10/20/2012 06:06:21 AM	MSFT	72061755861306088	1350646449007010006	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168742	10/20/2012 06:06:21 AM	MSFT	72061755861306088	1350646449007010006	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168741	10/20/2012 06:06:21 AM	MSFT	72061755861306088	1350646449007010006	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168740	10/20/2012 06:06:21 AM	MSFT	72061755861306088	1350646449007010006	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168739	10/20/2012 06:06:21 AM	MSFT	72061755861306088	1350646449007010006	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168738	10/20/2012 06:06:21 AM	MSFT	72061755861306088	1350646449007010006	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168737	10/20/2012 06:06:21 AM	MSFT	72061755861306088	1350646449007010006	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168736	10/20/2012 06:06:21 AM	MSFT	72061755861306088	1350646449007010006	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168735	10/20/2012 06:06:21 AM	MSFT	72061755861306088	1350646449007010006	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168734	10/20/2012 06:06:21 AM	MSFT	72061755861306088	1350646449007010006	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168733	10/20/2012 06:06:21 AM	MSFT	72061755861306088	1350646449007010006	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168732	10/20/2012 06:06:21 AM	MSFT	72061755861306088	1350646449007010006	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168731	10/20/2012 06:06:20 AM	MSFT	72061755861306088	1350646449007010006	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168730	10/20/2012 06:06:20 AM	MSFT	72061755861306088	1350646449007010006	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168730	10/20/2012 06:06:21 AM	VLO	7205826405263082	1350647735365344000	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168703	10/20/2012 06:01:33 AM	VLO	7205826405263082	1350647735365344000	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168702	10/20/2012 06:01:33 AM	VLO	7205826405263082	1350647735365344000	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168701	10/20/2012 06:01:33 AM	VLO	7205826405263082	1350647735365344000	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168700	10/20/2012 06:01:33 AM	VLO	7205826405263082	1350647735365344000	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168699	10/20/2012 06:01:33 AM	VLO	7205826405263082	1350647735365344000	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168698	10/20/2012 06:01:33 AM	VLO	7205826405263082	1350647735365344000	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168697	10/20/2012 06:01:33 AM	VLO	7205826405263082	1350647735365344000	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168696	10/20/2012 06:01:33 AM	VLO	7205826405263082	1350647735365344000	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168695	10/20/2012 06:01:33 AM	VLO	7205826405263082	1350647735365344000	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13
2168694	10/20/2012 06:01:33 AM	VLO	7205826405263082	1350647735365344000	SPREAD_PRICE_PROTECTION	2	SPREAD PRICE PROTECTION for EchD:13

Alert ID 2168766 **Alert Timestamp** 10/20/2012 06:11:32 AM **Product** SPY **Instrument** -9223372036854775908
Exch Order ID 18446744073709551615 **Category** NUMBER_OF_COMPLEX_INSTRUMENTS_CREATED_1 **Priority** 2 **Originator** NUMBER OF COMPLEX INSTRUMENTS CR

Summary NUMBER OF COMPLEX INSTRUMENTS CREATED 1. for EdnD:18446744073709551615 Instr Id: 615 Instr Id: 9223372036854775908 Instr Type: NO_VALUE Prod Id: 416

Acknowledged By AckTimeStamp Acknowledged Comments

of Rows: 1000

- The ME Complex Order tab provides access to four matching engine alerts:
- Number of Complex Instruments Create Alert generated when the maximum number of complex instruments that can be created for a product per business day is reached.

Chapter 13. MPT Alerts – Size Deviation

Alerts

Alert Timestamp: Enable Time Range Ack Not Ack All Comment text: Max Num Alts: 1000

10/22/2012 09:30:00 AM ▾ 10/22/2012 04:15:00 PM ▾

Obvious Errors Prm Change Business Event Locked Order ME Complex Order Size Deviation MM Protection Not Match Complex Kill Switch Mrkt Order Not Trading Order Deviation

Caption																
Alert ID	Alert Timestamp	Market Date	Order Time	User	TIF	Series	Buy/Sell	Quantity	Price	TriggerType	Ack.TimeStamp	Acknowledged	Comments			
2168778	10/22/2012 07:04:42 AM	10/22/2012 12:00:00 AM	10/22/2012 07:04:15 AM	ISE01E	DAY	AAPL2NOV1295.0C	Buy	1	0.01			NO				
2149555	10/19/2012 07:04:11 AM	10/19/2012 12:00:00 AM	10/19/2012 07:03:32 AM	ISE01E	DAY	AUM2OCT197.0C	Buy	1	0.01			NO				
2135891	10/18/2012 06:57:52 AM	10/18/2012 12:00:00 AM	10/18/2012 06:57:13 AM	ISE01E	DAY	AAPL2OCT195.0C	Buy	1	0.01			NO				
2156890	10/18/2012 06:57:36 AM	10/18/2012 12:00:00 AM	10/18/2012 06:56:57 AM	ISE01E	DAY	EU12OCT116.0C	Buy	1	0.01			NO				
2114798	10/17/2012 07:05:12 AM	10/17/2012 12:00:00 AM	10/17/2012 07:04:33 AM	ISE01E	DAY	EU13SEP84.0C	Buy	1	0.01			NO				
2093404	10/16/2012 07:03:36 AM	10/16/2012 12:00:00 AM	10/16/2012 07:02:57 AM	ISE01E	DAY	SPY4DEC240.0C	Buy	1	0.01			NO				
2093403	10/16/2012 07:02:53 AM	10/16/2012 12:00:00 AM	10/16/2012 07:02:14 AM	ISE01E	DAY	CDD3UN95.0C	Buy	1	0.01			NO				
2072526	10/15/2012 07:25:13 AM	10/15/2012 12:00:00 AM	10/15/2012 07:24:34 AM	ISE01E	DAY	CDD3SEP95.0C	Buy	1	0.01			NO				
2072525	10/15/2012 07:17:42 AM	10/15/2012 12:00:00 AM	10/15/2012 07:17:30 AM	ISE01E	DAY	SPY4DEC35.0C	Buy	1	0.01			NO				
2050572	10/12/2012 07:04:58 AM	10/12/2012 12:00:00 AM	10/12/2012 07:04:19 AM	ISE01E	DAY	AUM2OCT197.0C	Buy	1	0.01			NO				
2029535	10/11/2012 07:06:11 AM	10/11/2012 12:00:00 AM	10/11/2012 07:05:32 AM	ISE01E	DAY	AAPL2OCT195.0C	Buy	1	0.01			NO				
2029534	10/11/2012 07:05:36 AM	10/11/2012 12:00:00 AM	10/11/2012 07:04:57 AM	ISE01E	DAY	EU12OCT116.0C	Buy	1	0.01			NO				
2010697	10/10/2012 07:08:39 AM	10/10/2012 12:00:00 AM	10/10/2012 07:08:00 AM	ISE01E	DAY	EU13SEP84.0C	Buy	1	0.01			NO				
1968849	10/09/2012 07:09:18 AM	10/09/2012 12:00:00 AM	10/09/2012 07:08:39 AM	ISE01E	DAY	EU13SEP84.0C	Buy	1	0.01			NO				
1968818	10/09/2012 07:06:11 AM	10/09/2012 12:00:00 AM	10/09/2012 07:05:32 AM	ISE01E	DAY	EU13SEP84.0C	Buy	1	0.01			NO				
1969477	10/08/2012 07:18:54 AM	10/08/2012 12:00:00 AM	10/08/2012 07:18:15 AM	ISE01E	DAY	SPY4DEC30.0C	Buy	1	0.01			NO				
1969476	10/08/2012 07:18:18 AM	10/08/2012 12:00:00 AM	10/08/2012 07:17:24 AM	ISE01E	DAY	CDD3SEP95.0C	Buy	1	0.01			NO				
1946514	10/05/2012 07:26:20 AM	10/05/2012 12:00:00 AM	10/05/2012 07:25:40 AM	ISE01E	DAY	SPY4DEC50.0C	Buy	1	0.01			NO				
1946513	10/05/2012 07:25:56 AM	10/05/2012 12:00:00 AM	10/05/2012 07:25:16 AM	ISE01E	DAY	CDD3SEP95.0C	Buy	1	0.01			NO				
1924640	10/04/2012 06:57:19 AM	10/04/2012 12:00:00 AM	10/04/2012 06:56:40 AM	ISE01E	DAY	AAPL2OCT195.0C	Buy	1	0.01			NO				
1924639	10/04/2012 06:57:05 AM	10/04/2012 12:00:00 AM	10/04/2012 06:56:26 AM	ISE01E	DAY	EU12OCT116.0C	Buy	1	0.01			NO				
1905986	10/03/2012 07:10:20 AM	10/03/2012 12:00:00 AM	10/03/2012 07:09:40 AM	ISE01E	DAY	EU13SEP84.0C	Buy	1	0.01			NO				
1866491	10/02/2012 07:42:11 AM	10/02/2012 12:00:00 AM	10/02/2012 07:41:32 AM	ISE01E	DAY	IVM4JAN53.0C	Buy	1	0.01			NO				
1866490	10/02/2012 07:41:42 AM	10/02/2012 12:00:00 AM	10/02/2012 07:41:03 AM	ISE01E	DAY	SPY4DEC50.0C	Buy	1	0.01			NO				
1868383	10/01/2012 07:34:39 AM	10/01/2012 12:00:00 AM	10/01/2012 07:34:00 AM	ISE01E	DAY	AUM2OCT197.0C	Buy	1	0.01			NO				
1868382	10/01/2012 07:03:39 AM	10/01/2012 12:00:00 AM	10/01/2012 07:03:00 AM	ISE01E	DAY	AUM2OCT197.0C	Buy	1	0.01			NO				
1847021	09/28/2012 07:07:58 AM	09/28/2012 12:00:00 AM	09/28/2012 07:07:18 AM	ISE01E	DAY	SPY4DEC45.0C	Buy	1	0.01			NO				
1847020	09/28/2012 07:07:26 AM	09/28/2012 12:00:00 AM	09/28/2012 07:06:47 AM	ISE01E	DAY	CDD3SEP95.0C	Buy	1	0.01			NO				
1828238	09/27/2012 06:58:42 AM	09/27/2012 12:00:00 AM	09/27/2012 06:58:03 AM	ISE01E	DAY	AAPL2OCT195.0C	Buy	1	0.01			NO				
1828237	09/27/2012 06:58:23 AM	09/27/2012 12:00:00 AM	09/27/2012 06:57:44 AM	ISE01E	DAY	EU12OCT116.0C	Buy	1	0.01			NO				
1807809	09/26/2012 07:11:18 AM	09/26/2012 12:00:00 AM	09/26/2012 07:10:39 AM	ISE01E	DAY	EU13SEP84.0C	Buy	1	0.01			NO				
1788283	09/25/2012 07:09:24 AM	09/25/2012 12:00:00 AM	09/25/2012 07:08:45 AM	ISE01E	DAY	SPY4DEC50.0C	Buy	1	0.01			NO				
1788282	09/25/2012 07:08:55 AM	09/25/2012 12:00:00 AM	09/25/2012 07:08:16 AM	ISE01E	DAY	CDD3SEP97.0C	Buy	1	0.01			NO				
1769757	09/24/2012 07:09:07 AM	09/24/2012 12:00:00 AM	09/24/2012 07:08:29 AM	ISE01E	DAY	EU12NOV76.0C	Buy	1	0.01			NO				
1747017	09/21/2012 07:05:25 AM	09/21/2012 12:00:00 AM	09/21/2012 07:04:46 AM	ISE01E	DAY	AUM2SEP88.0C	Buy	1	0.01			NO				
1726225	09/20/2012 07:12:58 AM	09/20/2012 12:00:00 AM	09/20/2012 07:12:19 AM	ISE01E	DAY	SPY4DEC45.0C	Buy	1	0.01			NO				
1726224	09/20/2012 07:12:33 AM	09/20/2012 12:00:00 AM	09/20/2012 07:11:54 AM	ISE01E	DAY	CDD3UN99.0C	Buy	1	0.01			NO				
1719434	09/19/2012 07:15:14 AM	09/19/2012 12:00:00 AM	09/19/2012 07:14:35 AM	ISE01F	DAY	FII13IINR8.0C	Buy	1	0.01			NO				

of Rows: 296

- The size deviation alert occurs when an order size exceeds a number of contracts per order that is specified by the business unit and maintained by MOPS in MPT (i.e., NOT in reference data). [This functionality may not be available when Optimise first goes live.]

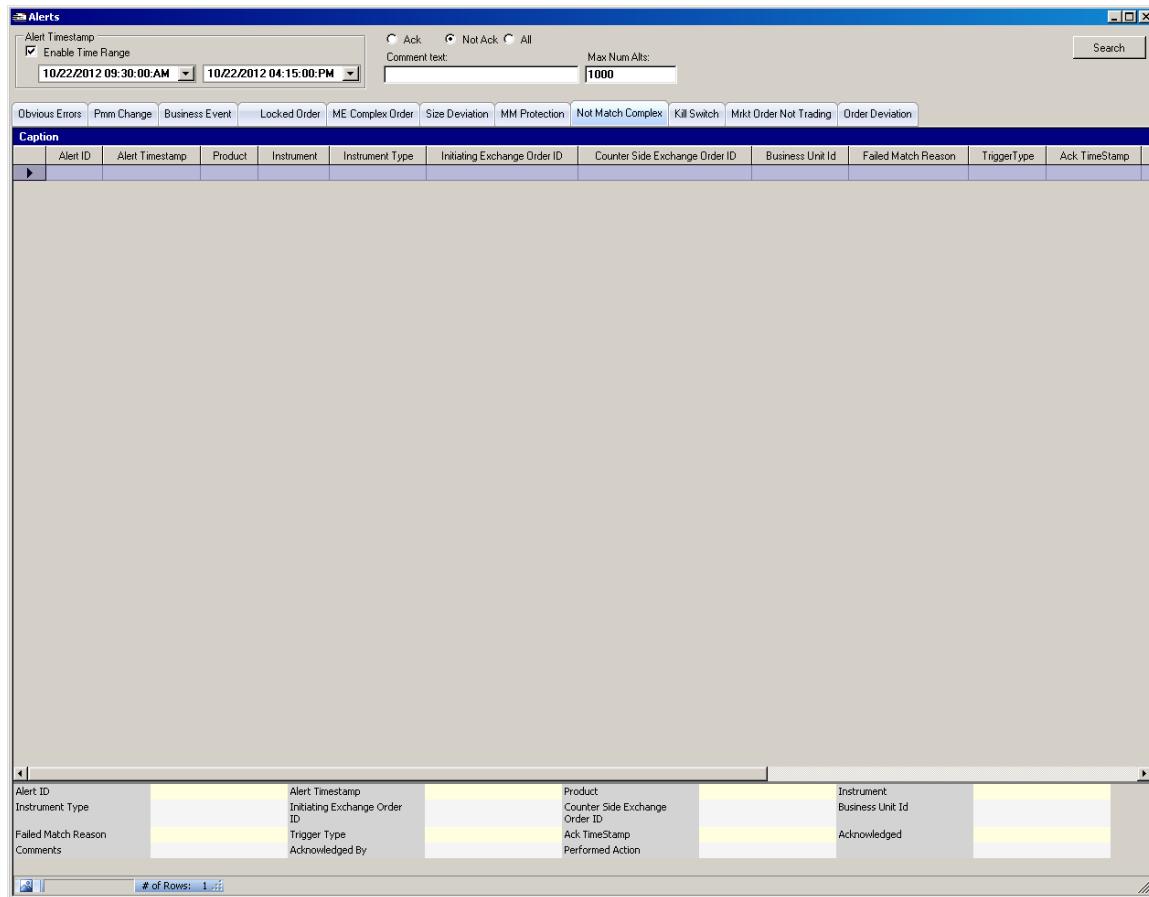
Chapter 14. MPT Alerts - MM Protection

Alerts														
Alert Timestamp			<input type="radio"/> Ack <input checked="" type="radio"/> Not Ack <input type="checkbox"/> All		Comment text:		Max Num Alts:		Search					
10/22/2012 09:30:00 AM							1000							
Obvious Errors	Prm Change	Business Event	Locked Order	ME Complex Order	Size Deviation	MM Protection	Not Match Complex	Kill Switch	Mrkt Order Not Trading	Order Deviation				
Caption	Alert ID	Alert Timestamp	Log Reason	LogTimeStamp	Business Unit Id	Product	Instrument Type	Volume Counter	Volume Limit	Percent Counter	Percent Limit			
▶	2177254	10/22/2012 03:36:21 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:35:40 PM	NIT01M	AAPL	1	2	20	200	120	0		
	2177253	10/22/2012 03:36:20 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:35:40 PM	MGS01M	GLD	1	34	200	179	99	-3		
	2177252	10/22/2012 03:36:13 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:35:34 PM	PRO01M	AAAPL	1	5	100	100	99	5		
	2177251	10/22/2012 03:35:56 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:35:17 PM	MGS01M	V2	1	19	200	100	99	15		
	2177250	10/22/2012 03:35:56 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:35:17 PM	CDL01M	V2	1	40	25	100	0	4C		
	2177249	10/22/2012 03:35:54 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:35:15 PM	MGS01M	GE	1	11	640	100	99	-1		
	2177247	10/22/2012 03:35:09 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:34:20 PM	MGS01M	SPY	1	59	383	104	99	-1!		
	2177246	10/22/2012 03:35:09 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:34:30 PM	HUL01M	SPY	1	87	86	104	0	45		
	2177245	10/22/2012 03:35:09 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:34:30 PM	CDL01M	SPY	1	193	125	314	0	-3		
	2177244	10/22/2012 03:35:08 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:34:29 PM	MGS01M	MMM	1	11	60	100	99	11		
	2177243	10/22/2012 03:34:57 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:34:16 PM	NIT01M	AAAPL	1	2	20	200	120	2		
	2177242	10/22/2012 03:34:57 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:34:16 PM	MGS01M	AAAPL	1	1	11	100	99	1		
	2177241	10/22/2012 03:34:39 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:34:57 PM	NIT01M	AAAPL	1	2	20	200	120	-2		
	2177240	10/22/2012 03:34:17 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:33:38 PM	MGS01M	MDT	1	52	11	100	99	52		
	2177239	10/22/2012 03:34:17 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:33:38 PM	NIT01M	MDT	1	89	20	100	120	83		
	2177238	10/22/2012 03:34:17 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:33:38 PM	ARC01M	MDT	1	45	48	100	0	45		
	2177237	10/22/2012 03:34:17 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:33:38 PM	HUL01M	COH	1	60	123	100	0	-61		
	2177236	10/22/2012 03:34:17 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:33:38 PM	CDL01M	COH	1	64	30	100	0	-65		
	2177235	10/22/2012 03:34:09 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:33:30 PM	MGS01M	XLB	1	72	606	100	99	-7		
	2177234	10/22/2012 03:34:09 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:33:30 PM	HUL01M	XLB	1	122	153	100	0	-1		
	2177233	10/22/2012 03:33:55 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:32:16 PM	MGS01M	CXO	1	11	200	100	99	-1		
	2177232	10/22/2012 03:33:41 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:32:02 PM	CDL01M	XLF	1	49	50	35	0	45		
	2177231	10/22/2012 03:33:02 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:32:23 PM	HUL01M	VXX	1	48	153	100	0	45		
	2177230	10/22/2012 03:32:40 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:32:01 PM	CDL01M	XOM	1	82	30	98	0	82		
	2177229	10/22/2012 03:32:36 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:31:57 PM	MGS01M	WMB	1	11	74	100	99	-1		
	2177228	10/22/2012 03:32:23 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:31:43 PM	CDL01M	CJES	1	29	21	100	0	-2		
	2177227	10/22/2012 03:32:16 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:31:37 PM	CDL01M	VECO	1	21	30	200	0	-2		
	2177226	10/22/2012 03:32:13 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:31:34 PM	MGS01M	MNST	1	11	11	100	99	11		
	2177225	10/22/2012 03:32:03 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:31:24 PM	HUL01M	RIG	1	41	142	100	0	-4		
	2177224	10/22/2012 03:31:47 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:31:09 PM	ARC01M	WFT	1	134	35	90	0	-1		
	2177223	10/22/2012 03:31:41 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:31:02 PM	MGS01M	VECO	1	11	100	100	99	11		
	2177222	10/22/2012 03:31:28 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:30:49 PM	MGS01M	VXX	1	19	606	100	99	15		
	2177221	10/22/2012 03:31:26 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:30:47 PM	MGS01M	WFT	1	115	109	100	99	-1		
	2177220	10/22/2012 03:31:26 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:30:47 PM	CDL01M	WFT	1	55	10	98	0	-50		
	2177219	10/22/2012 03:31:19 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:30:35 PM	NIT01M	AAPL	1	4	20	214	120	4		
	2177218	10/22/2012 03:31:15 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:30:35 PM	MGS01M	XME	1	11	150	100	99	11		
	2177217	10/22/2012 03:31:07 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:30:28 PM	HUL01M	VALE	1	39	123	77	0	-3		
	2177216	10/22/2012 03:31:00 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:30:21 PM	MGS01M	GLNG	1	11	606	100	99	-1		
	2177215	10/22/2012 03:31:00 PM	MARKET_MAKER_PROTECTION	10/22/2012 03:30:20 PM	MGS01M	SPY	1	48	383	121	99	-9		

of Rows: 1000

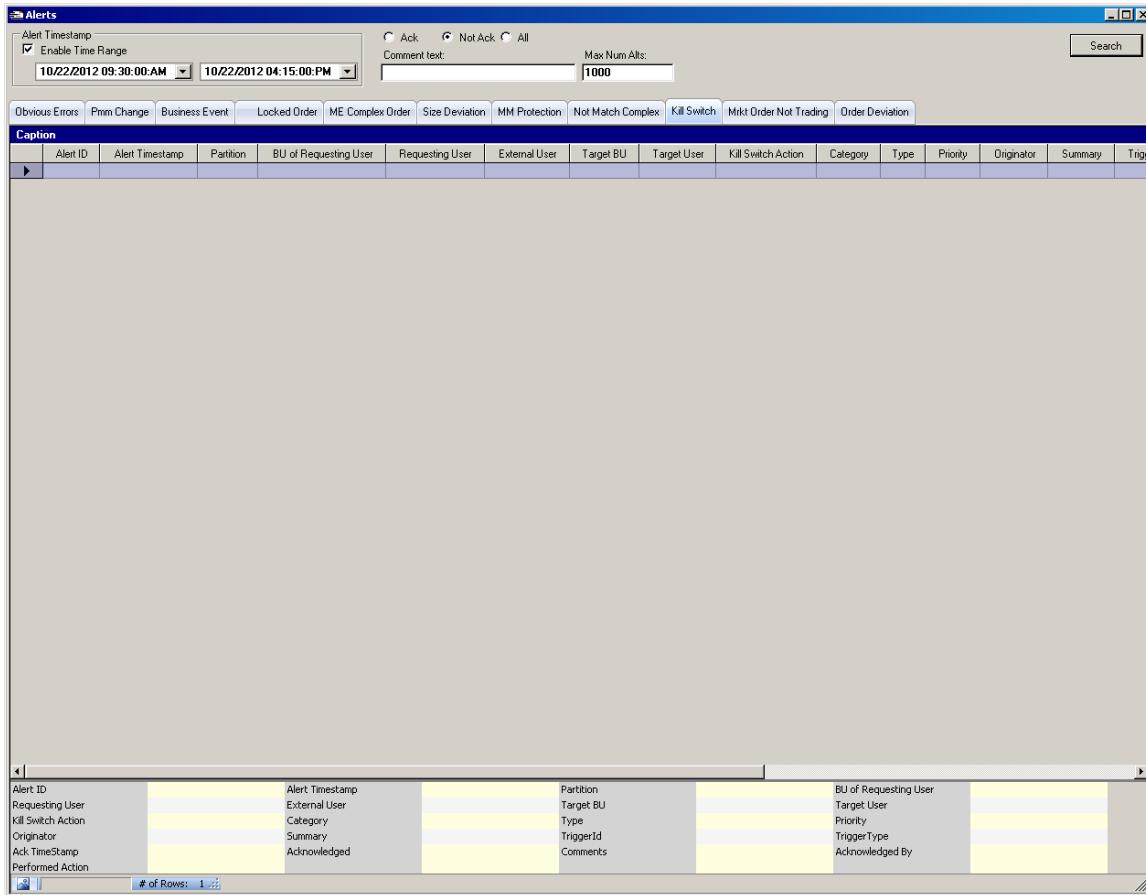
- Market Maker Protection occurs when a business unit's trades exceed a maximum number of contracts per unit time that is specified by the business unit.

Chapter 15. MPT Alerts – No Match Complex



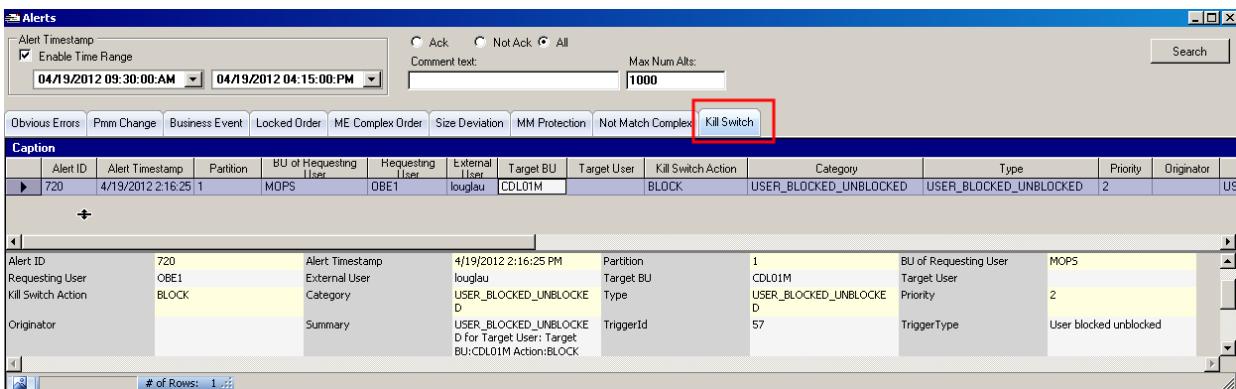
- Not-Matched Complex Instruments occurs when a complex order locks or crosses the market without trading.

Chapter 16. MPT Alerts – Kill Switch



“Kill Switch” alerts are to be delivered in MPT within a new tab labeled “Kill Switch “Alerts”. Alerts will be generated **one per partition** for:

- Block requests submitted by members
- Block/unblock requests submitted by MktOps (only MktOps can issue an unblock request)



The description field of the Market Operations Alert contains a comma-separated list comprised of the following fields:

- Partition sending the alert
- Business unit name of the requesting user
- User name of the requesting user
- External user if supplied in the app header of the *Member Kill Switch Request*; if not supplied the separating comma will be in the message immediately following the previous comma
- Target business unit name specified in the *Member Kill Switch Request*
- Target user name if supplied in the *Member Kill Switch Request*; if not supplied the separating comma will be in the message immediately following the previous comma
- Member kill switch action specified in the *Member Kill Switch Request*

MPT expects this list to be provided in the order as described in the DFS3810 Production Matcher (presented above). MPT will parse this string and format the contents into columns to display the alert.

Kill Switch Alert Format

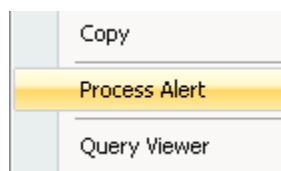
In MPT, each alert will display the following columns per row:

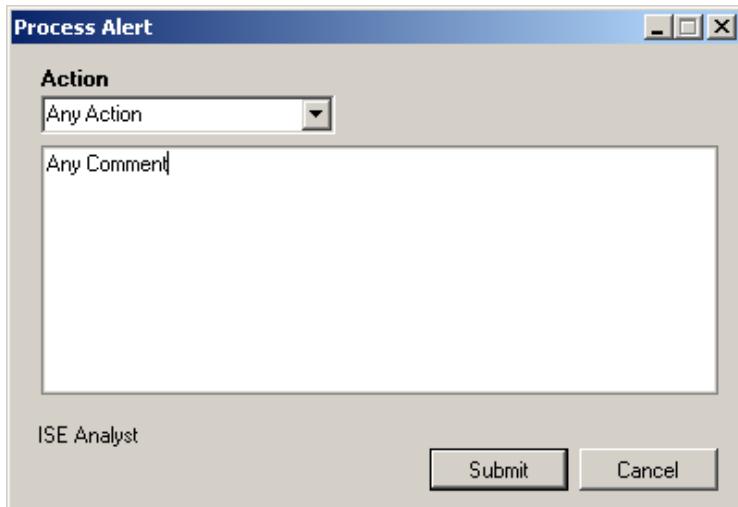
1. Alert ID Unique alert ID – 5 numeric characters
2. Alert Timestamp
3. Partition
4. Business unit name of the requesting user
5. User name of the requesting user
6. External user if supplied in the app header of the *Member Kill Switch Request*
7. Target business unit name specified in the *Member Kill Switch Request*
8. Target user name if supplied in the *Member Kill Switch Request*
9. Member kill switch action specified in the *Member Kill Switch Request*
10. Acknowledgement TimeStamp
11. Acknowledged
12. Comments
13. Acknowledged By
14. Performed Action

No Alert aggregation takes place. MPT displays as many alerts as it receives.

Processing the Alert

Right-clicking on the Alert row launches a dropdown menu as is done with other alert categories.





All alerts allow MOPs to acknowledge the alert and to add comments.

The standard fields will be included:

- Acknowledged
- Acknowledged by
- Comments
- Ack Timestamp
- Performed Action

Chapter 17. MPT Alerts – Market Order Not Trading

Alerts														
Alert Timestamp			Ack		Not Ack		All		Comment text:				Max Num Alts:	Search
10/22/2012 09:30:00 AM			10/22/2012 04:15:00 PM						1000					
Obvious Errors	Prm Change	Business Event	Locked Order	ME Complex Order	Size Deviation	MM Protection	Not Match Complex	Kill Switch	Mrkt Order Not Trading	Order Deviation				
Caption	Alert ID	Alert Timestamp	Product	Instrument	Exch Order ID	Business Unit Id	Order Price	Order Qty	Order Time	IBBO Bid Price	IBBO Bid Qty	IBBO Offer Price	IBBO Offer Qty	
▶	2169616	10/22/2012 09:37:54 AM	VRNG	UUP2DEC25.0C	1350907803529001000	GEBO2E	0	1	10/22/2012 09:37:14 AM	3.08	3	3.17		
	1868417	10/01/2012 09:30:49 AM	UUP	UUP3JAN29.0C	1349091906067000000	IA803E	0.01	10	10/01/2012 09:30:05 AM	0	-2147483648	0.07		
	2169615	10/22/2012 09:37:54 AM	VRNG	UUP3JAN29.0C	1350907803529000002	NI706E	0	3	10/22/2012 09:37:14 AM	2.97	2	3.02		
	1868416	10/01/2012 09:30:49 AM	UUP	UUP3JAN29.0C	1349091906067002000	IA803E	0.01	10	10/01/2012 09:30:05 AM	0	-2147483648	0.07		
	2169502	10/22/2012 09:33:17 AM	CSX		1350906300026148000	GEBO2E	0	1	10/22/2012 09:32:37 AM	0	-2147483648	0		
	1868415	10/01/2012 09:30:49 AM	UUP	UUP3JAN26.0C	1349091906067001000	IA803E	0.01	10	10/01/2012 09:30:05 AM	0	-2147483648	0.07		
	2169493	10/22/2012 09:32:57 AM	ACOM	ACDM2NOV15.0P	1350907622984014002	ITG02E	0.05	50	10/22/2012 09:32:18 AM	0	-2147483648	0.1		
	1868410	10/01/2012 09:30:48 AM	NFLX	NFLX2OCT11.0C	13490919060661002000	IA802E	0.01	9	10/01/2012 09:30:00 AM	0	-2147483648	0.09		
	2169492	10/22/2012 09:32:57 AM	ACOM	ACDM2NOV15.0P	1350907622984014001	GLD02E	0.05	100	10/22/2012 09:32:18 AM	0	-2147483648	0.1		
	1867077	09/28/2012 05:25:55 PM	TXT	TXT2DEC25.0C	1349835030467083031	DXP01E	0	8	09/28/2012 05:25:15 PM	0	-2147483648	3.7		
	2169460	10/22/2012 09:32:08 AM	COCO		1350907823627104000	DXP01E	0	6	10/22/2012 09:31:28 AM	0	-2147483648	0		
	1867076	09/28/2012 05:25:55 PM	APRN	APRN2OCT20.0C	1349833365621036002	DXP01E	0	2	09/28/2012 05:25:15 PM	0	-2147483648	0		
	2169414	10/22/2012 09:31:40 AM	TPX	TPX2DEC60.0C	1350906301037001000	IA803E	0.05	10	10/22/2012 09:31:00 AM	0	-2147483648	0.05		
	1867075	09/28/2012 05:25:55 PM	LLY	LLY2OCT43.0P	13498327012901002	DXP01E	0	12	09/28/2012 05:25:15 PM	0	-2147483648	0		
	2169407	10/22/2012 09:31:38 AM	ANR		1350907847262307000	DXP01E	0	7	10/22/2012 09:30:35 AM	0	-2147483648	0		
	1867074	09/28/2012 05:25:55 PM	SQNM	SQNM4JAN2.0C	1348835004976001001	DXP01E	0	1	09/28/2012 05:25:15 PM	0	-2147483648	0		
	2169399	10/22/2012 09:31:37 AM	ACOM	ACDM2NOV932.5C	1350907622984019002	ITG02E	0.05	5	10/22/2012 09:30:48 AM	0	-2147483648	0.1		
	1867073	09/28/2012 05:25:55 PM	SQNM	SQNM4JAN2.0C	1348835004976001000	DXP01E	0	2	09/28/2012 05:25:15 PM	0	-2147483648	0		
	2169389	10/22/2012 09:31:32 AM	AAPL		135090775562721000	GEBO2E	0	1	10/22/2012 09:30:10 AM	0	-2147483648	59.79		
	1867072	09/28/2012 05:25:55 PM	DGX1	OGY1OCT12.5C	1349831824962000000	CDL06E	0	1	09/28/2012 05:25:15 PM	0	-2147483648	0		
	2169387	10/22/2012 09:31:31 AM	HPQ		1350906819315407000	GEBO2E	0	1	10/22/2012 09:30:34 AM	0	-2147483648	0		
	1867071	09/28/2012 05:25:55 PM	GASL	GASL2OCT29.0C	1349831825120000000	CDL06E	0	5	09/28/2012 05:25:15 PM	0	-2147483648	0		
	2169351	10/22/2012 09:31:20 AM	KMx		1350906700866195000	DXP02E	0	6	10/22/2012 09:30:05 AM	0	-2147483648	33.02		
	1867070	09/28/2012 05:25:55 PM	CTAS	CTAS3FEB40.0C	1349835030486051004	DXP01E	0	2	09/28/2012 05:25:15 PM	0	-2147483648	3.8		
	2169349	10/22/2012 09:31:20 AM	AAPL		1350907755629810000	DXP01E	0	1	10/22/2012 09:30:05 AM	0	-2147483648	0		
	1867063	09/28/2012 05:25:55 PM	MNIX	MLNX2NOV10.0P	1349832703490050001	DXP01E	0	1	09/28/2012 05:25:15 PM	0	-2147483648	20		
	2169278	10/22/2012 09:31:12 AM	INTC		1350906300053234000	CDL06E	0	2	10/22/2012 09:30:05 AM	0	-2147483648	22.02		
	1867068	09/28/2012 05:25:55 PM	CRM	CRM2NOV15.0C	1349832702033012000	GEBO2E	0	1	09/28/2012 05:25:15 PM	0	-2147483648	17.15		
	2169276	10/22/2012 09:31:12 AM	PSEC	PSEC3FEB15.0C	1350906301110000000	IA803E	0.05	16	10/22/2012 09:30:05 AM	0	-2147483648	0.1		
	1867067	09/28/2012 05:25:55 PM	FAST	FAST3JAN42.0C	134983342606141032	DXP01E	0	2	09/28/2012 05:25:15 PM	0	-2147483648	0		
	2169247	10/22/2012 09:31:09 AM	SIL		1350908701867168000	DXP01E	0	3	10/22/2012 09:30:05 AM	0	-2147483648	24.02		
	1867066	09/28/2012 05:25:55 PM	FAST	FAST3JAN41.0C	134983342606128165	DXP02E	0	2	09/28/2012 05:25:15 PM	3.7	2	6		
	2169245	10/22/2012 09:31:08 AM	MAS		1350906805772201000	CDL04E	0	1	10/22/2012 09:30:06 AM	0	-2147483648	16.03		
	1867065	09/28/2012 05:25:55 PM	FAST	FAST3JAN41.0C	134983342606128054	DXP01E	0	2	09/28/2012 05:25:15 PM	3.7	2	6		
	2169255	10/22/2012 09:31:07 AM	GLD	GLD3JAN100.0P	1350905722638006013	IA802E	0.01	2	10/22/2012 09:30:04 AM	0	-2147483648	0.01		
	2169224	10/22/2012 09:31:07 AM	GLD	GLD3JAN100.0P	1350905722638006013	IA802E	0.01	5	10/22/2012 09:30:04 AM	0	-2147483648	0.01		
	2169223	10/22/2012 09:31:07 AM	GLD	GLD3JAN100.0P	1350905722638006011	IA802E	0.01	1	10/22/2012 09:30:04 AM	0	-2147483648	0.01		
	2169221	10/22/2012 09:31:07 AM	GLD	GLD3JAN100.0P	1350905722638006011	IA802F	0.01	2	10/22/2012 09:30:04 AM	0	-2147483648	0.01		

- This alerts MktOps the ability to see any market order on the book that does not trade within one second (configurable).

Chapter 18. MPT Alerts – Order Deviation

Alerts

Alert ID	Alert Timestamp	Average # of Orders	Actual # of Orders	Business Unit Id	Instrument Type	Ack TimeStamp	Acknowledged	Comments	Acknowledged By	Performed Action
2177214	10/22/2012 03:30:51 PM	1901	3126	OCT02E	Complex					
2177213	10/22/2012 03:30:51 PM	2	7	TJM03E	Complex					
2177212	10/22/2012 03:30:51 PM	2	4	WDN01E	Complex					
2177211	10/22/2012 03:30:51 PM	513	169	QED01E	Complex					
2177210	10/22/2012 03:30:51 PM	2	9	PTR03E	Complex					
2177209	10/22/2012 03:30:51 PM	4	1	CRT01E	Complex					
2177208	10/22/2012 03:30:51 PM	5	8	STN01E	Complex					
2177207	10/22/2012 03:30:51 PM	10	4	NTX01E	Complex					
2177206	10/22/2012 03:30:51 PM	32	60	IMM01E	Complex					
2177205	10/22/2012 03:30:51 PM	2968	43	ALT01M	Complex					
2177204	10/22/2012 03:30:51 PM	4	1	VLD01E	Complex					
2177203	10/22/2012 03:30:51 PM	3	5	GEB14E	Complex					
2177202	10/22/2012 03:30:51 PM	161	31	CSB02M	Complex					
2177201	10/22/2012 03:30:51 PM	2176	1059	IMC01E	Complex					
2177200	10/22/2012 03:30:51 PM	11382	18981	ITG03E	Complex					
2177199	10/22/2012 03:30:51 PM	28	65	FMT07E	Complex					
2177198	10/22/2012 03:30:51 PM	51	112	BKA21E	Complex					
2177197	10/22/2012 03:30:51 PM	890	2447	BNP10E	Complex					
2177196	10/22/2012 03:30:51 PM	46	77	MPS02E	Complex					
2177195	10/22/2012 03:30:51 PM	1662	6384	GEB02E	Complex					
2177194	10/22/2012 03:30:51 PM	4686	10979	ATD01E	Complex					
2177193	10/22/2012 03:30:51 PM	33652	15994	WLW01M	Complex					
2177192	10/22/2012 03:30:51 PM	7	1	WLW05E	Complex					
2177191	10/22/2012 03:30:51 PM	5	1	WLW01E	Complex					
2177190	10/22/2012 03:30:51 PM	14	23	WDR01E	Complex					
2177189	10/22/2012 03:30:51 PM	3	1	WEB03E	Complex					
2177188	10/22/2012 03:30:51 PM	233	366	UBS01E	Complex					
2177187	10/22/2012 03:30:51 PM	22	39	PRE01E	Complex					
2177186	10/22/2012 03:30:51 PM	5	8	TJM01E	Complex					
2177185	10/22/2012 03:30:51 PM	16	7	TFS01E	Complex					
2177184	10/22/2012 03:30:51 PM	9	1	PTR01E	Complex					
2177183	10/22/2012 03:30:51 PM	9	19	PNX01E	Complex					
2177182	10/22/2012 03:30:51 PM	12	2	PFS02E	Complex					
2177181	10/22/2012 03:30:51 PM	3	1	DTA03E	Complex					
2177180	10/22/2012 03:30:51 PM	2	4	ONP02E	Complex					
2177179	10/22/2012 03:30:51 PM	179	391	FMT06E	Complex					
2177178	10/22/2012 03:30:51 PM	12	2	LCM02E	Complex					
2177177	10/22/2012 03:30:51 PM	73	191	LIO01E	Complex					
2177176	10/22/2012 03:30:50 PM	99	161	LEK02E	Complex					
2177175	10/22/2012 03:30:50 PM	74	155	IECM01	Complex					

Alert ID: 2177214 Alert Timestamp: 10/22/2012 3:30:51 PM Business Unit Id: OCT02E Average # of Orders: 1901
 Actual # of Orders: 3126 Instrument Type: Complex Acknowledged By: Acknowledged
 Comments: Acknowledged

- Grants MktOps the ability to track the progress of Business Unit(s) order flow to the ISE. Should the order flow for a BU be below expectations, these alerts will allow MOPS to be able to see which BU may not be sending their normal amount of order flow to the ISE.

Chapter 19. Order Book Explorer-OBE

Provides real-time views of the ISE market, the away markets, orders, quotes and trades and enables users to cancel open orders and quotes if needed. OBE supports multiple simultaneous views into the order, quote and trade data, using separated tabbed windows for multiple views.

The window below displays the main view into OBE. The top ribbon has several selections the user can select to view the ISE Option Marketplace. The Order Book Explorer desktop provides interactive visual elements that allow the user to specify which data to display. On initial launch the data display area of the OBE desktop is blank. The tabbed data selection ribbon provides controls for selecting the data types and the specific products and instruments to be displayed. The selected data is displayed in tabbed data display windows in the data display area below the data selection ribbon. Relevant controls for filtering and other search criteria are contained inside the tabbed display windows, as described in the following sections.

At the Top of the application is the quick access toolbar lets you customize which data selection controls will be displayed and where the controls will be located on the desktop. The search and filter controls appear at the top of each tabbed area in the data display pane, and include drop-down selections for relevant data selection parameters, such as product ID (symbol), instrument ID, and expiration date. Use these controls to specify the exact data set you want to display. All windows can be floating, dock-able or tabbed for easy access for the user. All data is displayed in tabular format. Click on any column heading to sort by the values in that column; click again to reverse the sort order.

Order Book Explorer provides different levels of filtering depending on the specific data display tab. Some tabs have no filtering, one tab (Open Orders/Product) provides server-level filtering, and some have only column-level results filtering. Server-level filtering allows the user to specify the desired filter before OBE queries the server to retrieve the desired data. The specified filtering parameter values are then applied by the server as it retrieves the data. This type of filtering is most efficient, since it narrows down the data before it is displayed in the OBE data display pane. OBE then displays the server filter dialogue with the following parameters: Instrument ID, Instrument Type, Owning BU ID, Owning User ID, Client Category, Order Type, Time In Force, Clearing Sub-Account, Clearing Account, Clearing CMTA Account. Fields with the default setting “No Value” are drop-down lists that allow you to select a value for the specified parameter. Fields that are blank by default are alphanumeric data entry fields.

Column-level result filtering is applied after the complete set of available data for the selected parameter (e.g., product, instrument, etc.) is retrieved. The user can apply the filtering by selecting column filters one column at a time. The following tabs have column-level filtering: Open Orders/Product-ISE, Deal Item, Trade Ticker. The column filter icons indicate whether column-level filtering is available for a display tab, and allows the user to clear any column-level filters that are set. The icon above appears on the far left of the display pane just below the column headings, and indicates that column-level filtering is available for this tab, but has not yet been set. The icon above appears on the far left of the display pane just below the column headings, and indicates that column-level filtering has been set for at least one column; click on the icon to clear all the column-level filters in this tab. The icon above appears just to the right of the column filter drop-down just below the column heading, and indicates that column-level filtering is set for this column. Click on the icon to clear this column-level filter only.

The following pages will show each of the windows in the OBE application and our uses for them.

Regular Market-ISE – This is one of the main windows to view ISE Option Market for a particular product and series. A user can either type or choose any ISE product. Once the search is selected the quote

information populates in the “calls” on left “puts” on right format and displays in an open-book format. Users can narrow down the search by selecting the expiry (Exp.) drop down. Quote activity for both the ISE and NBBO can be viewed by product and series. Bid and offers prices and the options and underlying product, market states (halt rotation, regular, fast, imbalance, closed), open prices, high, low and last prices, total volume, and open interest can be viewed here as well. Users seeking more or less information can select the column field chooser located on the left side of this window. This window is dynamic and will update as the markets update.

By right clicking on any series, Market Operations can view the depth of the market with market maker quotes and customer orders. This view is only for straight orders. Users can select a series and right click to select the Order/Quote Depth. From this static view, users see all ISE bid and offers. Individual Business Units (BU) are specifically mapped to firms and specific users within those firms. The BU's indicate to Market Operations who is quote. Market Operation can view all quotes or narrow the view by active or inactive. By selection any quote(s) in this view Market Operations can cancel any member requested order or quote. Market Operations can also release any locked orders that may occur when a Market Maker has issues addressing a linkage order.

Regular Price Info-ISE

This window is similar to the Regular Market-ISE but formatted horizontally by calls then puts. Determining which view to use is determined by Market Operations. The presented information is the same.

Order Book Explorer

ISE

Regular Market-ISE Market Depth-ISE
Regular Price Info-ISE Order/Quote Depth-ISE
Complex Price Info-ISE Deal Items-ISE
Market Info Order Statistics

Regular Market-ISE Regular Price Info-ISE

Search & Filter Product: CSCO Search Exp: ALL

CSCO ALL

Instrument	Instrument Id	Status	PMM	ISE BBO				Trade Information				ABBO													
				MBQty	BCustQty	BQty	Bid	Ask	AQty	MAQty	Last	LCQty	Time	Open	Low	High	TlVol	O/I	BidEx	BQty	Bid	Ask	AQty	AskEx	
CSCO	Open			\$20.21	\$20.22			\$20.22	312																
CSCO2MAR8.0C	Regular	HUL01M		244	\$12.20	\$12.25	214				332	NASDAQ	1219	\$12.25	\$12.25	1099	BATS								
CSCO2MAR9.0P	Regular	HUL01M				\$0.02	518				230	NONE			\$0.02	2606	PHLX								
CSCO2MAR9.0C	Regular	HUL01M		101	\$11.15	\$11.30	132				44	NASDAQ	467	\$11.15	\$11.25	139	ARCA								
CSCO2MAR9.0P	Regular	HUL01M				\$0.02	627				86	NONE			\$0.02	4314	ARCA								
CSCO2MAR10.0C	Regular	HUL01M		249	\$10.15	\$10.30	101				5	NASDAQ	1772	\$10.15	\$10.25	139	ARCA								
CSCO2MAR10.0P	Regular	HUL01M				\$0.02	518					NONE			\$0.02	2542	PHLX								
CSCO2MAR11.0C	Regular	HUL01M		242	\$9.15	\$9.30	101				12	NASDAQ	1868	\$9.15	\$9.25	139	ARCA								
CSCO2MAR11.0P	Regular	HUL01M				\$0.02	443					NONE			\$0.02	1526	PHLX								
CSCO2MAR12.0C	Regular	HUL01M		224	\$8.20	\$8.25	121				335	NASDAQ	1421	\$8.20	\$8.25	480	ARCA								
CSCO2MAR12.0P	Regular	HUL01M				\$0.02	624				30	NONE			\$0.02	4283	PHLX								
CSCO2MAR13.0C	Regular	HUL01M		110	\$6.80	\$7.65	76				10	ARCA	63	\$7.10	\$7.40	82	CBOE								
CSCO2MAR13.0P	Regular	HUL01M				\$0.02	652				14578	NONE			\$0.02	4754	ARCA								
CSCO2MAR14.0C	Regular	HUL01M		242	\$6.15	\$6.30	101				30	NASDAQ	1816	\$6.15	\$6.25	226	NASDAQ								
CSCO2MAR14.0P	Regular	HUL01M				\$0.02	613				900	NONE			\$0.02	4531	ARCA								
CSCO2MAR15.0C	Regular	HUL01M		568	\$5.20	\$5.25	207				374	NASDAQ	2182	\$5.20	\$5.25	1227	NASDAQ								
CSCO2MAR15.0P	Regular	HUL01M				\$0.01	453				963	NONE			\$0.01	2796	NASDAQ								
CSCO2MAR16.0C	Regular	HUL01M		464	\$4.20	\$4.25	634				856	NASDAQ	2260	\$4.20	\$4.25	1482	NASDAQ								
CSCO2MAR16.0P	Regular	HUL01M				\$0.01	441				7402	NONE			\$0.01	2778	NASDAQ								
CSCO2MAR17.0C	Regular	HUL01M		731	\$3.20	\$3.25	1285				2068	NASDAQ	2569	\$3.20	\$3.25	3486	NASDAQ								
CSCO2MAR17.0P	Regular	HUL01M				\$0.01	940				11474	NONE			\$0.01	3898	NASDAQ								
CSCO2MAR18.0C	Regular	HUL01M		40	\$2.21	\$2.23	148				10738	NASDAQ	335	\$2.21	\$2.23	694	CBOE								
CSCO2MAR18.0P	Regular	HUL01M				\$0.01	432				25369	NONE			\$0.01	2502	NASDAQ								
CSCO2MAR19.0C	Regular	HUL01M		53	\$1.21	\$1.23	155				15520	CBOE_C2	532	\$1.21	\$1.23	1044	BATS								
CSCO2MAR19.0P	Regular	HUL01M				\$0.01	732				16473	NONE			\$0.01	3274	PHLX								
CSCO2MAR20.0C	Regular	HUL01M		289	\$0.27	\$0.29	1860				61175	ARCA	109	\$0.27	\$0.29	838	CBOE_C2								
CSCO2MAR20.0P	Regular	HUL01M		3413	\$0.05	\$0.07	2569				607	477	03/14/2012 12:26:46 PM	\$0.28	\$0.23	\$0.35	220	61175	CBOE_C2						
CSCO2MAR21.0C	Regular	HUL01M				\$0.01	335				5001	15	03/14/2012 9:30:06 AM	\$0.05	\$0.04	\$0.07	5598	26262	BSE	14869	\$0.05	\$0.07	11159	CBOE_C2	
CSCO2MAR21.0P	Regular	HUL01M				\$0.01	335				73241	NONE			\$0.01	3758	PHLX								
CSCO2MAR21.0C	Regular	HUL01M		1311	\$0.77	\$0.80	208				0.86	74	03/14/2012 12:21:24 PM	\$0.78	\$0.78	\$0.86	256	9483	CBOE	6427	\$0.77	\$0.80	1459	NASDAQ	
CSCO2MAR22.0C	Regular	HUL01M				\$0.01	505				30518	NONE			\$0.01	3722	PHLX								
CSCO2MAR22.0P	Regular	HUL01M				\$0.01	505				2623	CBOE	2136	\$1.77	\$1.79	264	AMEX								
CSCO2MAR22.0C	Regular	HUL01M		486	\$1.77	\$1.79	33				6346	NONE			\$0.01	2095	PHLX								
CSCO2MAR22.0P	Regular	HUL01M				\$0.01	340				53	BATS	188	\$2.76	\$2.80	40	BATS								
CSCO2MAR23.0C	Regular	HUL01M		232	\$2.76	\$2.80	81				1216	NONE			\$0.01	2433	NASDAQ								
CSCO2MAR24.0C	Regular	HUL01M				\$0.01	436				19	BATS	188	\$3.75	\$3.80	39	PHLX								
CSCO2MAR24.0P	Regular	HUL01M		245	\$3.75	\$3.80	74				581	NONE			\$0.01	2323	PHLX								

PMH: HUL01M BIN: 9 Partition: 10 Primary Exchange: NASDAQ ProductId: 1870 Desc: CISCO SYSTEMS INC

Version: 2.0.200.0

Complex Price Info-ISE- All complex orders, with-stock or without can be viewed in this window. Complex orders can be viewed or cancelled here if needed. Complex orders are quoted and traded as if they are single leg orders. Each time a member sends a unique complex order, an Instrument ID number is generated. The unique instrument ID in the window below displays each leg of the spread, the ratio, the status of each leg, the quantity, ISE prices, last trade price, last trade quantity and last trade date and time. If no price or quantity is displayed then that indicates the complex instrument was created but there are no open orders at this time. Market Operations can narrow down the query by leg to make the search easier. Mass Delete of orders by product is possible in this window as well.

Once a complex order is selected, Market Operations can right click to view the Complex Order/ Quote Depth. A window opens and the members order displays on the bid and ask. Market Operations can status or cancel the order if requested.

Order Book Explorer

ISE

Regular Market-ISE Market Depth-ISE
Regular Price Info-ISE Order/Quote Depth-ISE Deal Items-ISE Market Statistics-ISE
Complex Price Info-ISE Open Orders/BU Open Orders/Product-ISE
Market Info Order Trade Statistics

Regular Market-ISE Regular Price Info-ISE Complex Price Info-ISE

Search & Filter Product: CSCO Search Mass Delete CSCO

Complex Instrument		ISE BBO						Trade Information					
Instrument Id	Legs	Ratio	Side	Status	BCustQty	BQty	Bid	Ask	AQty	ACustQty	Last	LQty	Time
144123219664701653	CSCO	100	Buy	Regular			\$20.40		20	20			
7206562562626797259	CSCO23N12.0C	1	Sell	Regular	10	10	-\$0.25						
7206562562626797259	CSCO23N120.0C	1	Buy	Regular									
7206562562626797259	CSCO2MAY18.0P	1	Sell	Regular									
7206562562626797259	CSCO2OCCT18.0P	1	Buy	Regular									
7206562562626797259	CSCO2APR17.0C	1	Sell	Regular			\$1.01		2233				
7206562562626797259	CSCO2MAR16.0C	1	Sell	Regular			\$0.50		35	35			
7206562562626797259	CSCO2OCCT16.0C	1	Buy	Regular									
7206562562626797259	CSCO2APR15.0C	1	Sell	Regular	2300		-\$0.01						
7206562562626797259	CSCO23N12.0P	1	Buy	Regular									
7206562562626797259	CSCO2APR13.0C	1	Sell	Regular			\$5.01		605				
7206562562626797259	CSCO2APR12.0C	1	Buy	Regular			\$8.01		411				
7206562562626797259	CSCO2MAR13.0C	1	Sell	Regular			\$5.01		604				
7206562562626797259	CSCO2APR13.0C	1	Buy	Regular									
7206562562626797259	CSCO2MAR23.0P	1	Sell	Regular	2308		-\$0.01						
7206562562626797259	CSCO2APR23.0P	1	Buy	Regular			\$1.01		2254				
7206562562626797259	CSCO2MAR23.0P	1	Sell	Regular			\$2.01		1239				
7206562562626797259	CSCO2APR23.0P	1	Buy	Regular			\$3.01		886				
7206562562626797262	CSCO2MAR27.0P	1	Sell	Regular			\$4.01		701				
7206562562626797262	CSCO2APR23.0P	1	Buy	Regular			\$1.01		2119				
7206562562626797262	CSCO2APR27.0P	1	Sell	Regular			\$2.01		1126				
7206562562626797262	CSCO2APR23.0P	1	Buy	Regular			\$3.01		788				
7206562562626797262	CSCO2APR26.0P	1	Sell	Regular			\$2.01		1142				
7206562562626797262	CSCO2APR26.0P	1	Buy	Regular			\$3.01		803				
7206562562626797262	CSCO2APR26.0P	1	Sell	Regular			\$4.01		629				
7206562562626797262	CSCO2APR30.0P	1	Buy	Regular									
7206562562626797262	CSCO2MAY20.0P	1	Sell	Regular									
7206562562626797270	CSCO23N20.0P	1	Buy	Regular									
7206562562626797271	CSCO2MAY19.0P	1	Sell	Regular			\$1.10		1818				
7206562562626797272	CSCO2MAY20.0C	1	Buy	Regular									
7206562562626797272	CSCO2JL20.0C	1	Sell	Regular									
7206562562626797272	CSCO2MAY21.0C	1	Buy	Regular									
7206562562626797272	CSCO2APR21.0C	1	Sell	Regular									
7206562562626797272	CSCO2MAY20.0C	1	Buy	Regular									
7206562562626797274	CSCO2MAY20.0P	1	Sell	Regular									
7206562562626797274	CSCO2MAY20.0C	1	Buy	Regular									
Count = 174													
PMM: HUL01M BIN: 9 Partition: 10 Primary Exchange: NASDAQ ProductId: 1870 Desc: CISCO SYSTEMS INC													
Version: 2.0.200.0													

Order/Quote Depth-ISE

As described above. This window is displayed on the main OBE screen to allow Market Operations to quickly search a specific Instrument.

Order/Quote Depth-ISE

Search & Filter Product: CSCO Instrument: CSCO2APR15.0C Show Quotes ALL Search Cancel Order(s)/Quote(s) Release Order(s)

Bid														Ask													
BOlOrdID	OrdStatus	LockedTofid	LockType	PrcCond	BQty	BDisQty	Order Type	Client Category	BU	BOpenQty	Bid	Ask	AOpenQty	BU	Client Category	Order Type	ADisQty	AQty	PrcCond	LockType	Lock						
C000000000000DC3E8473	NEW		LIMIT	111	111	QUOTE	ISEM	HUL01M	111	\$5.20	\$5.30		66	HUL01M	ISEMM	QUOTE	66	66	LIMIT								
2121644	NEW		LIMIT	200	200	QUOTE	ISEM	PRO01M	200	\$5.20	\$5.30	50	PRO01M	ISEMM	QUOTE	50	50	LIMIT									
MQU/CSCO/214151011	NEW		LIMIT	235	235	QUOTE	ISEM	BCA01M	235	\$5.20	\$5.30	40	BCA01M	ISEMM	QUOTE	40	40	LIMIT									
295460	NEW		LIMIT	11	11	QUOTE	ISEM	MGS01M	11	\$5.20	\$5.30	11	MGS01M	ISEMM	QUOTE	11	11	LIMIT									
1870 02113906339	NEW		LIMIT	40	40	QUOTE	ISEM	WLV01M	40	\$5.15	\$5.35	40	WLV01M	ISEMM	QUOTE	40	40	LIMIT									
23454401Q00000001420	NEW		LIMIT	10	10	QUOTE	ISEM	ARC01M	10	\$5.10	\$5.40	10	ARC01M	ISEMM	QUOTE	10	10	LIMIT									
160315	NEW		LIMIT	15	15	QUOTE	ISEM	HRD01M	15	\$4.80	\$5.65	15	HRD01M	ISEMM	QUOTE	15	15	LIMIT									
276482436	NEW		LIMIT	12	12	QUOTE	ISEM	CDL01M	12	\$4.00	\$6.45	12	CDL01M	ISEMM	QUOTE	12	12	LIMIT									
346908031423512	NEW		LIMIT	10	10	QUOTE	ISEM	THD10M	10	\$3.65	\$6.85	10	THD10M	ISEMM	QUOTE	10	10	LIMIT									
1897504	NEW		LIMIT	10	10	QUOTE	ISEM	RON01M	10	\$2.75	\$7.65	10	CSB01M	ISEMM	QUOTE	10	10	LIMIT									
57884225	NEW		LIMIT	10	10	QUOTE	ISEM	EYE01M	10	\$2.75	\$7.65	10	SIG01M	ISEMM	QUOTE	10	10	LIMIT									
1139	NEW		LIMIT	10	10	QUOTE	ISEM	CDM01M	10	\$2.73	\$7.65	10	UBS01M	ISEMM	QUOTE	10	10	LIMIT									
122890	NEW		LIMIT	10	10	QUOTE	ISEM	JPM01M	10	\$2.71	\$7.65	10	IMC01M	ISEMM	QUOTE	10	10	LIMIT									
602479	NEW		LIMIT	10	10	QUOTE	ISEM	NTO10M	10	\$2.70	\$7.70	10	JPM01M	ISEMM	QUOTE	10	10	LIMIT									
40346	NEW		LIMIT	10	10	QUOTE	ISEM	IMC01M	10	\$2.64	\$7.70	10	NTO10M	ISEMM	QUOTE	10	10	LIMIT									
5645	NEW		LIMIT	10	10	QUOTE	ISEM	CSB01M	10	\$2.65	\$7.70	10	CDM01M	ISEMM	QUOTE	10	10	LIMIT									
672628	NEW		LIMIT	10	10	QUOTE	ISEM	SIG01M	10	\$2.65	\$7.75	10	RON01M	ISEMM	QUOTE	10	10	LIMIT									
158088	NEW		LIMIT	10	10	QUOTE	ISEM	UBS01M	10	\$2.65	\$7.75	10	EYE01M	ISEMM	QUOTE	10	10	LIMIT									

Qty:

PMM: HUL01M BIN: 9 Partition: 10 Primary Exchange: NASDAQ ProductId: 1870 Desc: CISCO SYSTEMS INC

Open Orders/BU- Market Operations can view all open orders by a specific product across all member connections in straight or complex orders. There is filtering to be more specific in the search such as by instrument type, client category, order-type, time-in-force, sub-account, clearing account and clearing CMTA account.

Market Operations can cancel or release orders from here. All pertinent information about the orders are displayed in the window such as order category, order type, instrument, open quantity, side, limit price, BU, entry timestamp and any locked order.

The screenshot shows the 'Order Book Explorer' window for the ISE market. The top navigation bar includes tabs for Regular Market-ISE, Market Depth-ISE, Order/Quote Depth-ISE, Deal Items-ISE, and Market Statistics-ISE. Below the tabs, there are sub-tabs for Regular Price Info-ISE, Complex Price Info-ISE, Market Info, Order, Trade, and Statistics. The main content area displays a grid of open orders for the client code 'BAM33E'. The columns include Client Category, ClOrdID, Order Type, ProdID, Instrument, Qty, Side, LimitPrice, TimeInForce, QtyCondition, InDlqQty, StopPrc, CrType, SubAcct, ClAcct, CMTA, Info, BU, User, and EntryTS. A search and filter bar at the top allows users to search by BU and filter by various criteria. The bottom right corner of the window indicates the version: Version: 2.0.200.0.

Client Category	ClOrdID	Order Type	ProdID	Instrument	Qty	Side	LimitPrice	TimeInForce	QtyCondition	InDlqQty	StopPrc	CrType	SubAcct	ClAcct	CMTA	Info	BU	User	EntryTS
CUSTOMER	20120308-D0B862	REGULAR	DECK	DECK2MAR11.0C	20	SELL	\$0.05	GTC	NONE			CUSTOMER	00792	00551	DOB3100034	BAM33E	1	3/8/2012 9:25 AM	
CUSTOMER	20120308-D0B668	REGULAR	P	P2MAR17.0C	20	SELL	\$0.05	GTC	NONE			CUSTOMER	00792	00551	DOB310002L	BAM33E	1	3/8/2012 9:13 AM	
CUSTOMER	20120312-D024679	REGULAR	IDCC	IDCC2MAR7.0C	20	SELL	\$0.05	GTC	NONE			CUSTOMER	00792	00551	DO2314051X	BAM33E	1	3/12/2012 3:21 PM	
CUSTOMER	20120312-D024685	REGULAR	IDCC	IDCC2MAR7.5C	20	SELL	\$0.05	GTC	NONE			CUSTOMER	00792	00551	DO23140522	BAM33E	1	3/12/2012 3:22 PM	
CUSTOMER	20120312-D0B3986	REGULAR	IDCC	IDCC2MAR45.0C	20	SELL	\$0.05	GTC	NONE			CUSTOMER	00792	00551	DOB314049L	BAM33E	1	3/12/2012 3:21 PM	
CUSTOMER	20120301-D0B123	REGULAR	SPLS	SPLS2MAR19.0C	20	SELL	\$0.05	GTC	NONE			CUSTOMER	00792	00551	DOB3050042	BAM33E	1	3/1/2012 9:26 AM	
CUSTOMER	20120308-D0B864	REGULAR	GNK	GNK2MAR10.0C	20	SELL	\$0.05	GTC	NONE			CUSTOMER	00792	00551	DOB3100035	BAM33E	1	3/8/2012 9:26 AM	
CUSTOMER	20120312-D023889	REGULAR	NSC	NSC2MAR75.0C	20	SELL	\$0.05	GTC	NONE			CUSTOMER	00792	00551	DO23150408	BAM33E	1	3/13/2012 1:38 PM	
CUSTOMER	20120308-D0B472	REGULAR	NSC	NSC2MAR85.0C	20	SELL	\$0.05	GTC	NONE			CUSTOMER	00792	00551	DOB31000KM	BAM33E	1	3/8/2012 9:46 AM	
CUSTOMER	20120305-D0B6198	REGULAR	ZNGA	ZNGA2MAR23.0C	20	SELL	\$0.05	GTC	NONE			CUSTOMER	00792	00551	DOB3050076	BAM33E	1	3/5/2012 9:33 AM	
CUSTOMER	20120308-D0B2317	REGULAR	BAC	BAC2APR4.5P	150	SELL	\$0.02	GTC	NONE			CUSTOMER	00792	00551	DOB31002XK	BAM33E	1	3/8/2012 12:08 PM	
CUSTOMER	20120224-D022195	REGULAR	BAC	BAC2MAR4.5P	2000	SELL	\$0.01	GTC	NONE			CUSTOMER	00792	00795	DOB30J02G3	BAM33E	1	2/24/2012 11:22 AM	
CUSTOMER	20120216-D022914	REGULAR	BAC	BAC2MAR11.0C	241	SELL	\$0.02	GTC	NONE			CUSTOMER	00792	00792	DOB30B03CB	BAM33E	1	2/16/2012 12:02 PM	
CUSTOMER	20120223-D0B9493	REGULAR	BAC	BAC2MAR4.0P	1001	SELL	\$0.01	GTC	NONE			CUSTOMER	00792	00792	DOB30K0C8Z	BAM33E	1	2/23/2012 3:40 PM	
CUSTOMER	20120221-D0B1759	REGULAR	BAC	BAC2MAR3.0P	1000	SELL	\$0.01	GTC	NONE			CUSTOMER	00792	00792	DOB30H02H	BAM33E	1	2/21/2012 11:12 AM	
CUSTOMER	20120222-D0B698	REGULAR	BAC	BAC2MAR10.0C	315	SELL	\$0.02	GTC	NONE			CUSTOMER	00792	00792	DOB30P002P	BAM33E	1	2/27/2012 8:51 AM	
CUSTOMER	20120307-D0B1193	REGULAR	BAC	BAC2APR9.0C	299	SELL	\$0.03	GTC	NONE			CUSTOMER	00792	00792	DOB30Z01J8	BAM33E	1	3/7/2012 10:50 AM	
CUSTOMER	20120222-D025749	REGULAR	BAC	BAC2MAR3.5P	2000	SELL	\$0.01	GTC	NONE			CUSTOMER	00792	00792	DOB30J05XB	BAM33E	1	2/22/2012 2:19 PM	
CUSTOMER	20120305-D021107	REGULAR	BAC	BAC2APR6.0P	2000	BUY	\$0.01	GTC	NONE			CUSTOMER	00792	00792	DOB30X017N	BAM33E	1	3/5/2012 10:16 AM	
CUSTOMER	20120312-D0B3333	REGULAR	BAC	BAC2APR5.5P	499	SELL	\$0.03	GTC	NONE			CUSTOMER	00792	00792	DOB31400GZ	BAM33E	1	3/12/2012 9:46 AM	
CUSTOMER	20120312-D0B3913	REGULAR	BAC	BAC2APR5.5P	1000	SELL	\$0.03	GTC	NONE			CUSTOMER	00792	00792	DOB31404M2	BAM33E	1	3/12/2012 3:12 PM	
CUSTOMER	20120224-D0B1112	REGULAR	BAC	BAC2MAR5.5P	499	SELL	\$0.02	GTC	NONE			CUSTOMER	00792	00792	DOB30L0048	BAM33E	1	2/24/2012 9:24 AM	
CUSTOMER	20120216-D024091	REGULAR	BAC	BAC2MAR6.0P	500	SELL	\$0.04	GTC	NONE			CUSTOMER	00792	00792	DOB30B04M2	BAM33E	1	2/16/2012 1:23 PM	
CUSTOMER	20120227-D0B6468	REGULAR	BAC	BAC2MAR6.0P	300	SELL	\$0.02	GTC	NONE			CUSTOMER	00792	00792	DOB30P065T	BAM33E	1	2/27/2012 3:40 PM	
CUSTOMER	20120228-D027367	REGULAR	BAC	BAC2MAR5.0P	1000	SELL	\$0.01	GTC	NONE			CUSTOMER	00792	00792	DOB30Q05DW	BAM33E	1	2/28/2012 12:00 PM	
CUSTOMER	20120302-D0B281	REGULAR	TIE	TIE2MAR18.0C	20	SELL	\$0.05	GTC	NONE			CUSTOMER	00792	00551	DOB30T00Z2	BAM33E	1	3/2/2012 9:24 AM	
CUSTOMER	20120302-D02729	REGULAR	IAG	IAG2MAR19.0C	20	SELL	\$0.05	GTC	NONE			CUSTOMER	00792	00551	DOB30T00Z2X	BAM33E	1	3/2/2012 9:22 AM	
CUSTOMER	20120307-D0B108	REGULAR	SVM	SM2MAR11.0C	20	SELL	\$0.05	GTC	NONE			CUSTOMER	00792	00551	DOB302004B	BAM33E	1	3/7/2012 9:25 AM	
CUSTOMER	20120301-D0B1122	REGULAR	CEDC	CEDC2MAR13.0C	20	SELL	\$0.05	GTC	NONE			CUSTOMER	00792	00551	DOB3050040	BAM33E	1	3/1/2012 9:25 AM	
CUSTOMER_PROF	20120306-D1C193	REGULAR	UAJ	UAL2MAR17.0P	2	SELL	\$0.10	GTC	NONE			CUSTOMER	00792	00792	20120305-D0466215	BAM33E	1	3/6/2012 9:27 AM	
CUSTOMER	20120307-D0264	REGULAR	NTRI	NTRI2MAR15.0C	20	SELL	\$0.05	GTC	NONE			CUSTOMER	00792	00551	DOB302002F	BAM33E	1	3/7/2012 9:08 AM	
CUSTOMER	20120307-D0263	REGULAR	NTRI	NTRI2MAR14.0C	20	SELL	\$0.05	GTC	NONE			CUSTOMER	00792	00551	DOB302002D	BAM33E	1	3/7/2012 9:08 AM	
CUSTOMER	20120308-D02735	REGULAR	CY	CY2MAR20.0C	20	SELL	\$0.05	GTC	NONE			CUSTOMER	00792	00551	DOB310002F	BAM33E	1	3/8/2012 9:22 AM	
CUSTOMER	20120307-D0B881	REGULAR	ONTY	ONTY2MAR15.0C	20	SELL	\$0.05	GTC	NONE			CUSTOMER	00792	00551	DOB3020039	BAM33E	1	3/7/2012 9:10 AM	
CUSTOMER	20120312-D024557	REGULAR	CDE	CDE2MAR31.0C	20	SELL	\$0.05	GTC	NONE			CUSTOMER	00792	00551	DOB31404XQ	BAM33E	1	3/12/2012 3:08 PM	
CUSTOMER	20120308-D0268	REGULAR	CDE	CDE2MAR33.0C	20	SELL	\$0.05	GTC	NONE			CUSTOMER	00792	00551	DOB3100028	BAM33E	1	3/8/2012 9:18 AM	

Open Orders/Product-ISE- Market Operations can view and cancel a members business unit orders. As discussed previously a BU or business unit is an acronym for each particular firm. BUs that end in an “M” are market makers and Bus that end in an “E” are electronic access members or EAM (aka customers). Some firms have one BU other firms have several dozen. Multiple lines are built and are based on member request and need to organize their business. This window allows us to view and delete an order or mass delete the entire BU upon member request.

BU	Info	Instrument	Side	OpenQty	Qty	DirQty	LimitPrice	TtTndQty	TimeInForce	LockType	LockedTid	LockedQty	EntryTS	Client Category	Order Type
M0512E	DO111600RR	CSC02APR22.0C	BUY	402	402	402	\$0.02		DAY	NOT_LOCKED			03/14/2012 9:43:37 AM	CUSTOMER	REGULAR
M0512E		CSC03JAN30.0C	BUY	100	100	100	\$0.05		DAY	NOT_LOCKED			03/14/2012 9:30:07 AM	CUSTOMER	REGULAR
M0512E		CSC03JAN25.0C	SELL	4	4	4	\$3.00		DAY	NOT_LOCKED			03/14/2012 9:30:05 AM	CUSTOMER	REGULAR
M0514E		CSC03JAN25.0C	SELL	10	10	10	\$1.00		DAY	NOT_LOCKED			03/14/2012 9:30:08 AM	CUSTOMER	REGULAR
M0512E		CSC03JAN25.0C	SELL	2	2	2	\$1.25		DAY	NOT_LOCKED			03/14/2012 9:30:11 AM	CUSTOMER	REGULAR
IAB01E		CSC03JAN25.0C	SELL	5	5	5	\$0.55		DAY	NOT_LOCKED			03/14/2012 9:30:01 AM	CUSTOMER	REGULAR
M0513E		CSC03JAN25.0C	SELL	1	1	1	\$1.90		DAY	NOT_LOCKED			03/14/2012 9:30:02 AM	CUSTOMER	REGULAR
M0513E		CSC03JAN25.0C	SELL	2	2	2	\$1.05		DAY	NOT_LOCKED			03/14/2012 9:30:02 AM	CUSTOMER	REGULAR
M0514E		CSC03JAN20.0P	SELL	10	10	10	\$5.00		DAY	NOT_LOCKED			03/14/2012 9:30:13 AM	CUSTOMER	REGULAR
M0513E		CSC03JAN20.0P	SELL	10	10	10	\$3.60		DAY	NOT_LOCKED			03/14/2012 9:30:03 AM	CUSTOMER	REGULAR
M0512E		CSC03JAN20.0C	SELL	1	1	1	\$10.00		DAY	NOT_LOCKED			03/14/2012 9:30:06 AM	CUSTOMER	REGULAR
M0514E		CSC03JAN20.0C	SELL	50	50	50	\$2.50		DAY	NOT_LOCKED			03/14/2012 9:30:10 AM	CUSTOMER	REGULAR
M0514E		CSC03JAN20.0C	SELL	5	5	5	\$7.20		DAY	NOT_LOCKED			03/14/2012 9:30:10 AM	CUSTOMER	REGULAR
M0514E		CSC03JAN20.0C	SELL	1	1	1	\$6.80		DAY	NOT_LOCKED			03/14/2012 9:30:12 AM	CUSTOMER	REGULAR
M0513E		CSC03JAN20.0C	SELL	9	9	9	\$3.70		DAY	NOT_LOCKED			03/14/2012 9:30:02 AM	CUSTOMER	REGULAR
M0513E		CSC03JAN20.0C	BUY	17	17	17	\$1.15		DAY	NOT_LOCKED			03/14/2012 9:30:02 AM	CUSTOMER	REGULAR
M0513E		CSC03JAN20.0C	SELL	5	5	5	\$4.00		DAY	NOT_LOCKED			03/14/2012 9:30:03 AM	CUSTOMER	REGULAR
M0512E		CSC03JAN17.5P	SELL	2	2	2	\$2.25		DAY	NOT_LOCKED			03/14/2012 9:30:02 AM	CUSTOMER	REGULAR
M0513E		CSC03JAN17.5P	SELL	20	20	20	\$1.85		DAY	NOT_LOCKED			03/14/2012 9:30:03 AM	CUSTOMER	REGULAR
M0512E		CSC03JAN17.5P	BUY	1	1	1	\$0.90		DAY	NOT_LOCKED			03/14/2012 9:30:08 AM	CUSTOMER	REGULAR
M0513E		CSC03JAN17.5C	SELL	2	2	2	\$9.50		DAY	NOT_LOCKED			03/14/2012 9:30:02 AM	CUSTOMER	REGULAR
M0513E		CSC03JAN17.5C	SELL	5	5	5	\$6.50		DAY	NOT_LOCKED			03/14/2012 9:30:03 AM	CUSTOMER	REGULAR
M0513E		CSC03JAN17.5C	SELL	1	1	1	\$6.50		DAY	NOT_LOCKED			03/14/2012 9:30:03 AM	CUSTOMER	REGULAR
M0513E		CSC03JAN17.5C	SELL	2	2	2	\$6.00		DAY	NOT_LOCKED			03/14/2012 9:30:03 AM	CUSTOMER	REGULAR
M0512E		CSC03JAN17.5C	SELL	40	40	40	\$5.10		DAY	NOT_LOCKED			03/14/2012 9:30:06 AM	CUSTOMER	REGULAR
M0512E		CSC03JAN17.5C	SELL	3	3	3	\$10.00		DAY	NOT_LOCKED			03/14/2012 9:30:06 AM	CUSTOMER	REGULAR
M0512E		CSC03JAN17.5C	SELL	50	50	50	\$4.05		DAY	NOT_LOCKED			03/14/2012 9:30:06 AM	CUSTOMER	REGULAR
M0512E		CSC03JAN17.5C	SELL	5	5	5	\$4.50		DAY	NOT_LOCKED			03/14/2012 9:30:06 AM	CUSTOMER	REGULAR
M0512E		CSC03JAN17.5C	SELL	4	4	4	\$7.50		DAY	NOT_LOCKED			03/14/2012 9:30:08 AM	CUSTOMER	REGULAR
M0514E		CSC03JAN17.5C	SELL	6	6	6	\$6.00		DAY	NOT_LOCKED			03/14/2012 9:30:09 AM	CUSTOMER	REGULAR
M0514E		CSC03JAN17.5C	SELL	2	2	2	\$5.00		DAY	NOT_LOCKED			03/14/2012 9:30:09 AM	CUSTOMER	REGULAR
M0514E		CSC03JAN17.5C	SELL	4	4	4	\$5.50		DAY	NOT_LOCKED			03/14/2012 9:30:10 AM	CUSTOMER	REGULAR
M0514E		CSC03JAN17.5C	SELL	1	1	1	\$4.50		DAY	NOT_LOCKED			03/14/2012 9:30:10 AM	CUSTOMER	REGULAR
M0514E		CSC03JAN17.5C	SELL	2	2	2	\$5.00		DAY	NOT_LOCKED			03/14/2012 9:30:11 AM	CUSTOMER	REGULAR
M0514E		CSC03JAN17.5C	SELL	3	3	3	\$4.50		DAY	NOT_LOCKED			03/14/2012 9:30:12 AM	CUSTOMER	REGULAR
M0513E		CSC03JAN15.0P	SELL	8	8	8	\$1.10		DAY	NOT_LOCKED			03/14/2012 9:30:02 AM	CUSTOMER	REGULAR
M0513E		CSC03JAN15.0P	BUY	2	2	2	\$0.15		DAY	NOT_LOCKED			03/14/2012 9:30:03 AM	CUSTOMER	REGULAR

Count = 381

Version: 2.0.200.0

Deal Item-ISE- Provides the user with a quick recap of trades in a particular product. There are configurable columns that provide a static look back at what traded. It provides the BU, enriched clearing category, clearing account, CMTA, Instrument, Dell item side, buy and sell quantities, price, remaining quantity, deal item quantity, Transaction timestamp, event type, transaction type, CL Order ID.

BU	EnrichedClCat	ClAcct	CMTA	Instrument	DealItemSide	Buy Qty	Sell Qty	Price	Remaining Qty	DealItemQty	TransTimestamp	EventType	TransType	OQMatchInd	OrgOrdID
CDL01M	ISEMM	00551	CSCO2MAR19.0C	SELL		12	\$1.22		7	5	03/14/2012 12:35:02 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	PARTIALLY_FILLED	276835705
THD01M	ISEMM	00549	CSCO2MAR19.0C	SELL		150	\$1.22		76	74	03/14/2012 12:35:02 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	PARTIALLY_FILLED	3467160314123500
HUL01M	ISEMM	00009	CSCO2MAR19.0C	SELL		11	\$1.22			11	03/14/2012 12:35:02 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	CQ0000000000DC3F
IMC01E	ISEMM	00501	CSCO2MAR19.0C	BUY		90		\$1.22		90	03/14/2012 12:35:02 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	6080937
CDM01M	ISEMM	00501	CSCO2MAR19.0C	SELL		94	\$0.47		11	6	03/14/2012 12:32:24 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	PARTIALLY_FILLED	1360
HUL01M	ISEMM	00009	CSCO2MAR19.0C	BUY		6	\$0.47			6	03/14/2012 12:32:24 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	000000000000E20C
CDM01M	ISEMM	00501	CSCO2MAR19.0C	SELL		94	\$0.47		17	77	03/14/2012 12:32:24 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	PARTIALLY_FILLED	1360
HUL01M	ISEMM	00009	CSCO2MAR19.0C	BUY		77	\$0.47			77	03/14/2012 12:32:24 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	000000000000E20C
CDL01M	ISEMM	00551	CSCO2MAR19.0C	SELL		12	\$1.18			12	03/14/2012 12:32:08 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	276820129
IMC01E	ISEMM	00501	CSCO2MAR19.0C	BUY		54	\$1.18		42	12	03/14/2012 12:32:08 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	PARTIALLY_FILLED	6080939R
JPM01M	ISEMM	00352	CSCO2APR20.0C	BUY		51	\$0.55		50	1	03/14/2012 12:26:55 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	PARTIALLY_FILLED	152715
CDL01M	ISEMM	00551	CSCO2APR20.0C	BUY		72	\$0.55		70	2	03/14/2012 12:26:55 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	PARTIALLY_FILLED	276793596
BA432E	CUSTOMER	00792	00792	CSCO2APR20.0C	SELL		3	\$0.55		3	03/14/2012 12:26:55 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	0CSWB3J
JPM01M	ISEMM	00352	CSCO2APR20.0C	BUY		10	\$0.23		2	8	03/14/2012 12:26:46 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	PARTIALLY_FILLED	151038
CDL01M	ISEMM	00551	CSCO2APR20.0C	BUY		29	\$0.23		2	27	03/14/2012 12:26:46 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	PARTIALLY_FILLED	276793227
BA432E	CUSTOMER	00792	00792	CSCO2APR20.0C	SELL		35	\$0.23		35	03/14/2012 12:26:46 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	20120314-D013675
CDL01M	ISEMM	00551	CSCO2APT13.0P	SELL		12	\$0.19			12	03/14/2012 12:24:24 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	27682417
NIT01M	ISEMM	00295	CSCO2APT13.0P	SELL		30	\$0.19			30	03/14/2012 12:24:24 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	602043
PRO01M	ISEMM	00551	CSCO2APT13.0P	SELL		50	\$0.19			50	03/14/2012 12:24:24 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	2050262
SIG01M	ISEMM	00551	CSCO2APT13.0P	SELL		56	\$0.19			56	03/14/2012 12:24:24 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	233516
HUL01M	ISEMM	00009	CSCO2APT13.0P	SELL		87	\$0.19			87	03/14/2012 12:24:24 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	CQ0000000000DC3
IAB01E	CUSTOMER_PROF	00017	00050	CSCO2APT13.0P	BUY		235	\$0.19		235	03/14/2012 12:24:24 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	144850314122424
SIG01M	ISEMM	00551	CSCO2APT16.0P	SELL		18	\$0.46			18	03/14/2012 12:24:14 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	80928
HUL01M	ISEMM	00009	CSCO2APT16.0P	SELL		41	\$0.46			41	03/14/2012 12:24:14 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	000000000000DC3
IAB01E	CUSTOMER_PROF	00017	00050	CSCO2APT16.0P	BUY		59	\$0.46		59	03/14/2012 12:23:14 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	158200314122314
CDL01M	ISEMM	00551	CSCO2APT19.0P	SELL		12	\$1.18			12	03/14/2012 12:23:06 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	27677734
NIT01M	ISEMM	00295	CSCO2APT19.0P	SELL		13	\$1.18			13	03/14/2012 12:23:06 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	2736249
MGS01M	ISEMM	00050	CSCO2APT19.0P	SELL		27	\$1.18			27	03/14/2012 12:23:06 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	279479
HUL01M	ISEMM	00009	CSCO2APT19.0P	SELL		41	\$1.18			41	03/14/2012 12:23:06 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	CQ0000000000DC3
IAB01E	CUSTOMER_PROF	00017	00050	CSCO2APT19.0P	BUY		93	\$1.18		93	03/14/2012 12:23:06 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	158120314122306
CDL01M	ISEMM	00551	CSCO2MAR19.0C	SELL		12	\$1.17			12	03/14/2012 12:23:06 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	27677447
HUL01M	ISEMM	00009	CSCO2MAR19.0C	SELL		11	\$1.17			11	03/14/2012 12:23:06 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	CQ0000000000DC3
IMC01E	ISEMM	00501	CSCO2MAR19.0C	BUY		24	\$1.17		1	23	03/14/2012 12:23:06 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	PARTIALLY_FILLED	6080939G
CDL01M	ISEMM	00551	CSCO2MAR19.0C	SELL		17	\$1.15			17	03/14/2012 12:21:57 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	27677258
HUL01M	ISEMM	00009	CSCO2MAR19.0C	SELL		17	\$1.15			17	03/14/2012 12:21:57 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	CQ0000000000DC3
IMC01E	ISEMM	00501	CSCO2MAR19.0C	BUY		84	\$1.15		50	34	03/14/2012 12:21:57 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	PARTIALLY_FILLED	6080939S
HUL01M	ISEMM	00009	CSCO2MAR21.0P	SELL		74	\$0.86			74	03/14/2012 12:21:24 PM	INCOMING_ORDER	TM_NEW_TRADE_REQUEST	FILLED	CQ0000000000DC3

Trade Ticker- This is a configurable window that provides scrolling trade activity by size, marketplace and product.

ISE Order Book Explorer

Regular Market-ISE Market Depth-ISE Order/Quote Depth-ISE Deal Items-ISE Market Statistics-ISE

Regular Price Info-ISE Open Orders/BU Open Orders/Product-ISE Order Trade Statistics

Complex Price Info-ISE Market Info

Regular Market-ISE / Trade Ticker

Instrument	Qty	Price	Trade Time	Exchange	DealSource
TLT2MAR110.0P	> 1000	\$0.15	03/14/2012 12:41:08 PM	AMEX	NormalTrading
GLD2MAY169.0C	2000	\$1.79	03/14/2012 12:38:46 PM	ISE	ComboOrderTradeTypeM
GLD2MAY168.0P	2000	\$10.11	03/14/2012 12:38:46 PM	ISE	ComboOrderTradeTypeM
XOP2MAY80.0P	3283	\$0.86	03/14/2012 12:37:31 PM	ISE	NormalTrading
ILMN2APR45.0P	2500	\$0.35	03/14/2012 12:36:29 PM	PHLX	NormalTrading

Avg Qty = 2216.6 Avg Price = \$2.50 Trades Count = 5
Total Qty = 11083

Version: 2.0.200.0

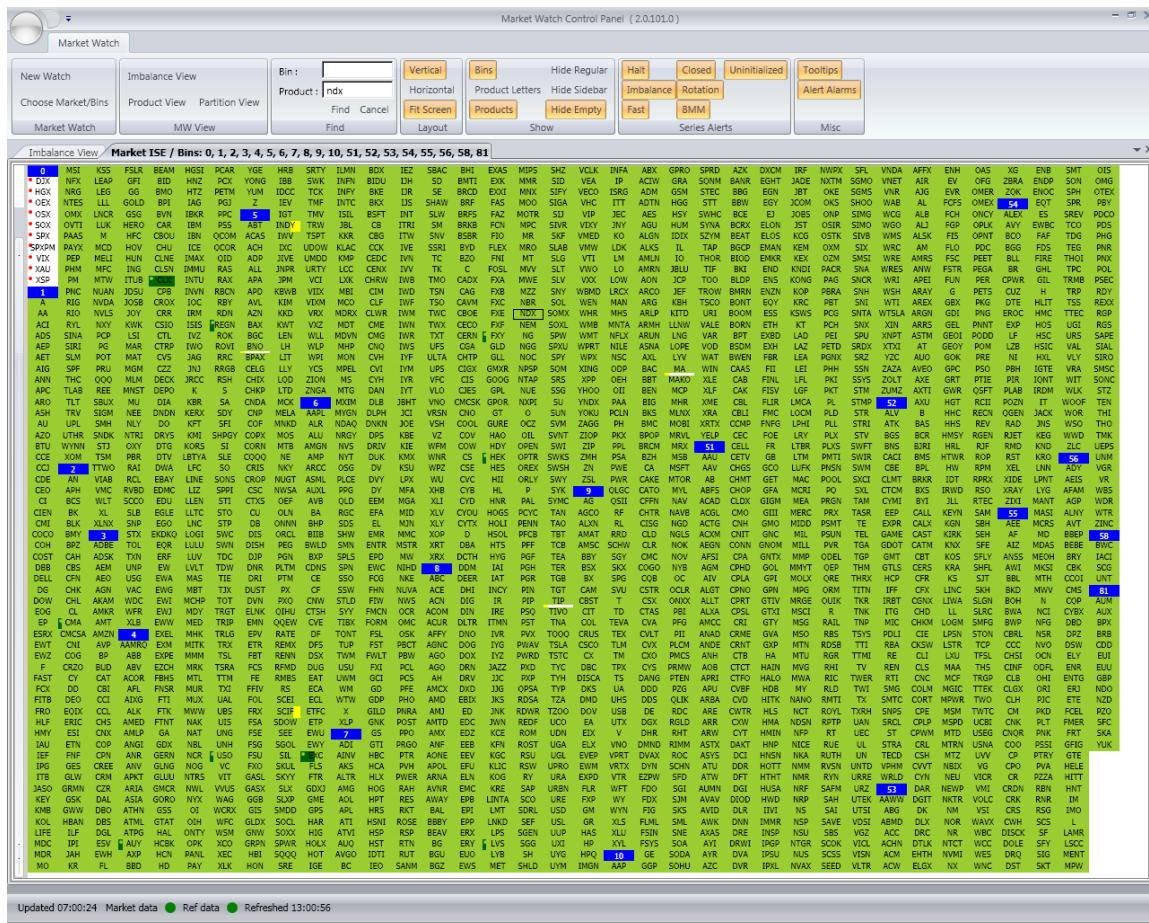
Chapter 20. Market Watch-MW

The Market Watch application provides Mkt Ops users with current and same-day historical information on product states and instrument statuses. The application also allows users to control product states and instrument statuses and manage acting PMM assignments.

Shows all products in color-coded rectangles indicating product and instrument states, Bins can be displayed in rows or in columns, Indicates changes in product and instrument states. Provides product and instrument history, Set product and instrument states, Change acting PMM by product or instrument, Shows price dependencies (deliverables and delivery components) by product and instrument. A Product view and Partition view are available.

Each product is organized by Bin. Each PMM is responsible for products in their bin. On the technical side products are organized by partition which is determined by the trading volume. By having both views Mkt Ops can see if either a PMM or a specific partition(s) are having issues.

The green indicates the Product and Series are in regular market state. The white boxes indicate products that do not trade on the ISE but are available to PreI^{SE} users to route to.



The Market Watch Ribbon - provides user access to market watch functionality including data display selection and settings. The ribbon is described in detail in section 2.1, “Market Watch Ribbon”.

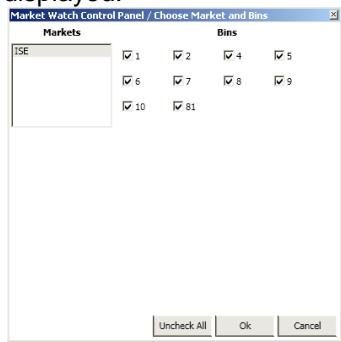
Bin/Product Data Pane - is the primary data area in the Market Watch display. Access to a variety of other data as well as specific product and instrument control commands is supported from this display.

Detailed data about a product that is selected in this pane is displayed in the Series/History/Dependencies pane. The Bin/Product pane is described in detail in section 2.2.1, “Bin/Product pane”.

Series/History/Dependencies Pane - contains tabbed lists showing the current state of each instrument in the (selected) product, the historical states for each instrument during the day, and all (non-standard) deliverables associated with the product. The Series/History/Dependencies pane is described in detail in section 2.2.2, “Series/History/Dependencies pane”.

Market Watch Status Bar - is located at the bottom of the Market Watch desktop, and indicates the status of the connections to the market data and reference data services, as well as the last time market data and reference data were refreshed. The status of the connections to the market and reference data services is indicated by the colored dots.

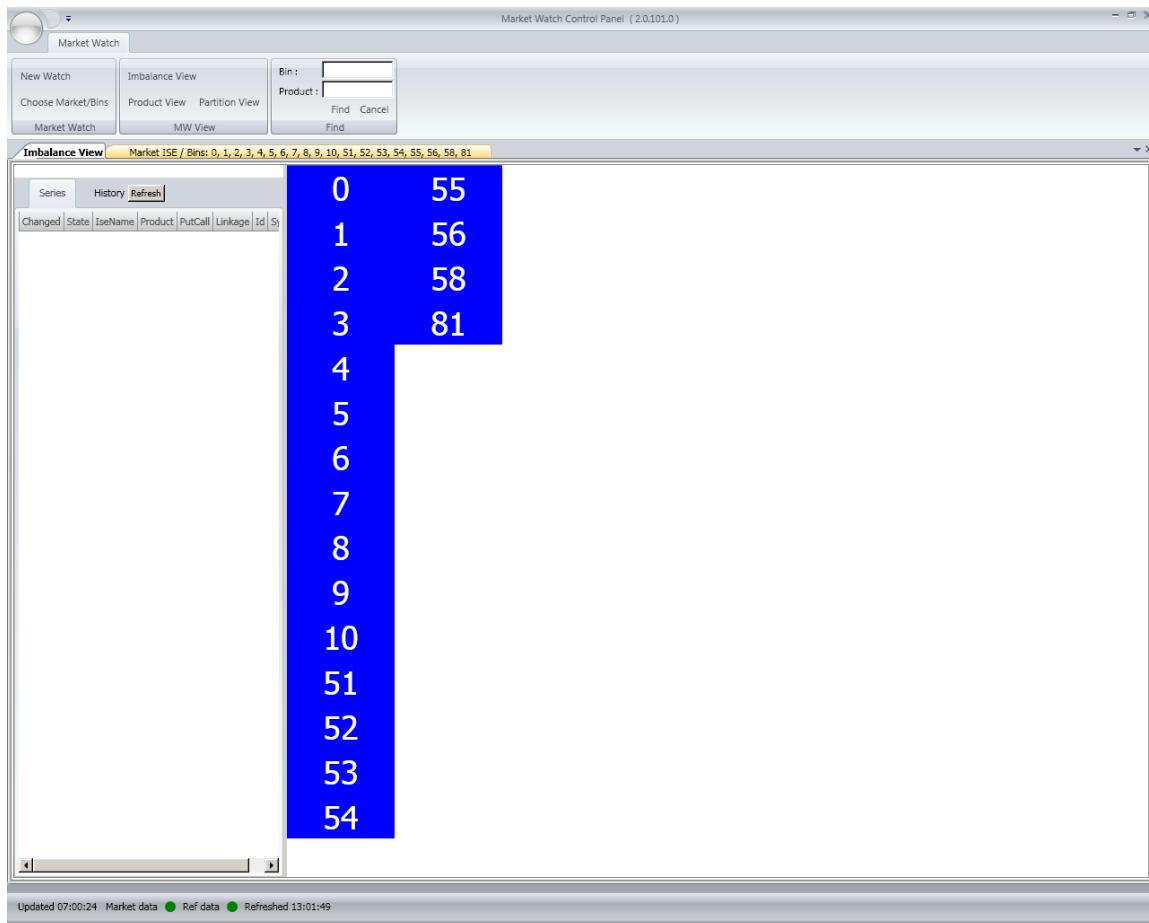
Create and Define Views- New Watch: allows MOPs to launch one or more customized views by market. This selection creates a window with the name of the market and the number of bins to be displayed.



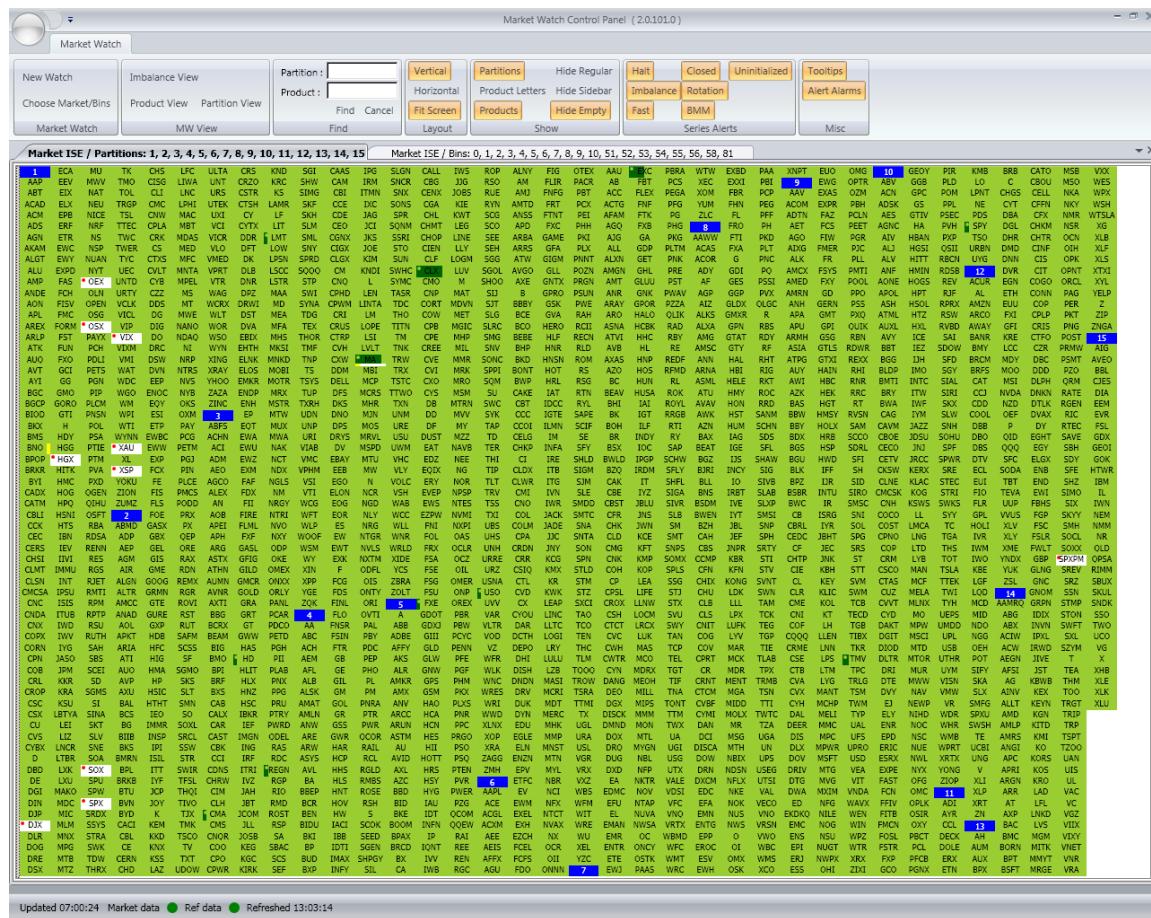
Series Status – provides a color coded view of each status in the marketplace.

Series Statuses	
●	BMM Regular
●	BMM Fast
●	Closed
●	Imbalance
●	Regular
●	Halt
●	Fast
●	Rotation
●	Unknown
Uninitialized	
***	A bar to either side of a symbol indicates a portion of its series are in a state other than Regular. The color of the bar will reflect series status.
***	A bar across the bottom of a symbol indicates PMM coverage. If it is yellow, there is no PMM coverage. The amount of yellow is approximate % of series without a PMM.

Imbalance View – This screen is especially important to Mkt Ops. The opening the ISE Market and resolving imbalances quickly and effectively are key tasks and are time sensitive. When there is an imbalance, the bin number will change color indicating that action must be taken either by Mkt Ops, the customer or the market maker. Mkt Ops selects the bin number and the instrument(s) populates on the left screen. By using OBE/ Order/Quote Depth, Mkt Ops determines you are the counter parties and what needs to be done.



Partition View- Behind the scenes, products are organized by partition. The ISE Capacity Team determines this based on market activity. Mkt Ops is constantly monitoring for issues. If a technical issue occurs in a partition(s), we can quickly determine the symbol involved.



Updated 07:00:24 Market data ● Ref data ● Refreshed 13:03:14

Chapter 21. Reference Data Front End - RDFE



In order to operate the trading system for the ISE, Data needs to be maintained and stored. The storage will be done in one physical database. The maintenance of this database is divided by two different partitions. Each are maintained by:

Product Operations (PrOps) -> Reference Data (Market/Product/Participant Data)
Market Operations (MOps) -> Functional Market Parameters

The Market Ops team uses the Scheduler to effectively control the exchange. Events are scheduled to execute throughout the day to enable and disable the trading of certain products, open and close the market, and to perform daily maintenance of the exchange.

Maintenance for Schedules and Calendars is currently done by using the multiple views of the Schedule Explorer in RDDE. MOPS users are not always aware of the relationships between various entities in the RDS database, therefore if a change is being made to an existing scheduler or calendar attribute, users may not know all of the areas that will be impacted by the change they are making.

The new Scheduler Wizard basically “compiles” nine explorer views into a single screen for convenience. It enables MOPS users to create new scheduler items by prompting them to enter all required information.

A customized screen will help provide:

- a better overview of existing market Schedules and Calendars, their assignments, and attributes
- easier maintenance of RefData in that area

Additionally, the user will be prompted to make any required associations (e.g. Calendar and Weekday Rule) and have the ability to make any optional connections between allowable relationships (e.g. TypeofDay and ScheduleAssignment).

The MOSG will focus on the Mkt Ops portion of this tool. Select the specific explorer you want to work in when you launch the explorer from the Main Toolbar by selecting the explorer you want from the drop-down list:

The top level reference data categories each have their own explorer. In general each explorer refers to a specific set of related tables. For example, the participant explorer includes participants (members), business units, users, and other related tables. The Entitlements explorer includes a number of tables related to resources (allowed user activities), roles, and assignments.

Once you are in the explorer desktop you can use the Explorer menu bar to select and work on any number of categories (sequentially) without returning to the Main Toolbar.

The Scheduler Wizard basically “compiles” nine explorer views into a single screen for convenience. It enables MOPS users to create new scheduler items by prompting them to enter all required information.

A customized screen will help provide:

- a better overview of existing market Schedules and Calendars, their assignments, and attributes
- easier maintenance of RefData in that area

The Scheduler is launched from the main toolbar, unloaded with data. It displays the scheduler entities that are available through this application in the left-hand column.

Use of the filters restricts the scope of data displayed. The user selects an entity filter from the dropdown list and then selects an instance for that entity from a second menu. To activate, the Load button is clicked.

Using the filter and the Load button, the user has several options for how to load the existing Scheduler data into available grids.

Filtering Type = ALL (default)

All instances are loaded from Reference data for all Scheduler entities listed. The sum of the number of instances for each entity is then displayed next to the entity name.

The grid displays the data for whatever entity is currently selected in the left-hand panel. The following screenshot shows all the instances (four) available for the Schedule entity.

Use of the filters restricts the scope of data displayed. The user selects an entity filter from the dropdown list and then selects an instance for that entity from a second menu. To activate, the Load button is clicked.

The Schedule entity in this example has four instances in total. When the user selects the “Type of Day” filter and then selects “Fullday”, RDDE then only displays Schedule entities that are associated with a Type of Day entity that is equal to “Fullday”. “Broadcast Schedule” is no longer displayed because it is associated with a Type of Day (through the ScheduleAssignment entity) that is not equal to “Fullday”.

Six of the nine entities are available in the filter: Calendar, Explicit Calendar Day, Schedule, Schedule Selector, Type of Day, and Week Day Rule.

Entering New Entity Data and Taking Action on Existing Data

New entity data can be entered at any time. The grid does not have to be loaded to enter new data.

New entity data can be entered by:

1. Clicking on a row and typing in one of the required text boxes

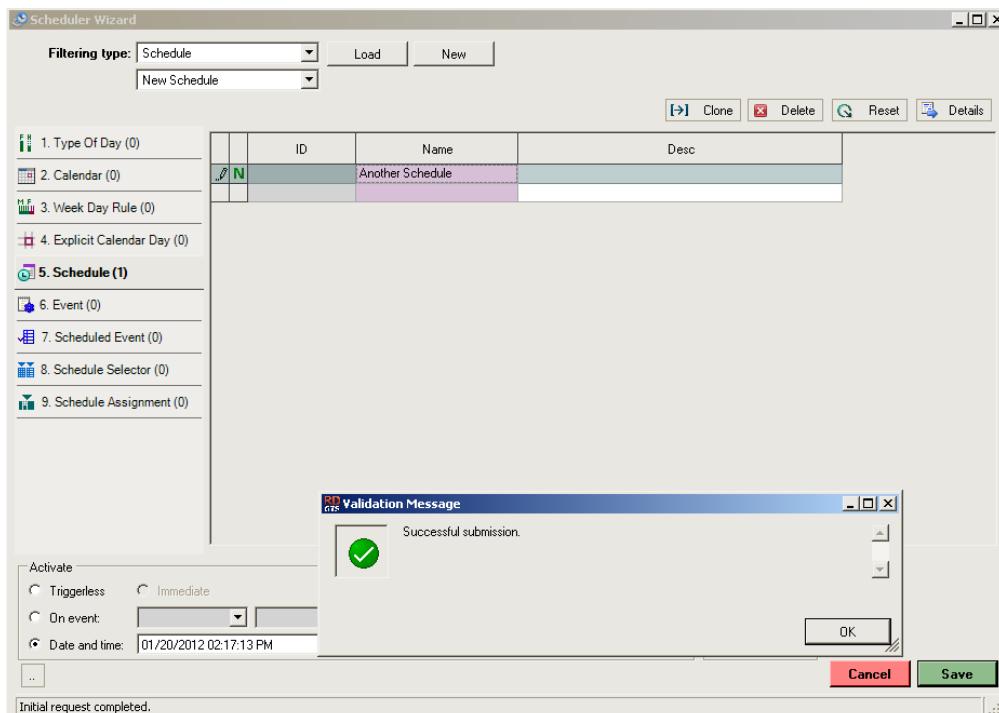
- Clicking on a row containing data and selecting the Clone button to add an identical row below the selected line

Entity data can be deleted by clicking on the row and selecting the Delete button.

Any changes entered can be reset to their previous value by clicking the Reset button.

All changes are saved through the “Save” button.

Note: Clicking “Load” or “New” will cause all uncommitted changes to be lost.



Successful Addition of an Instance to the Schedule Entity

Users can see more information for a selected row by clicking on the Details button.

The Details window can display the following for the entity of the selected row depending upon what is loaded in the main grid.

- Associations for that entity (if they are already loaded in the main grid)
- Attributes for the selected entity instance
- Audit Trail for the selected entity instance

Scheduler - The Market Ops team uses the Scheduler to effectively control the exchange. Events are scheduled to execute throughout the day to enable and disable the trading of certain products, open and close the market, and to perform daily maintenance of the exchange.

Type of Day

ID	Name	Length Of Day	Desc	Daylight Saving Switch Day
1	Fullday	86400	Fullday	
2	HalfDay	43200	HalfDay	

Initial request completed.

Required Data Elements:

1. Name – Required, Must be Unique
2. Length of Day (In Seconds) – Required with a minimum value of 1000

Optional Data Elements

1. Description
2. Day light savings switch

Optional Relationships

1. Schedule Assignments
2. Explicit Calendar Day
3. Weekday Rule
4. Calendar

The Schedule entity in this example has four instances in total. When the user selects the “Type of Day” filter and then selects “Fullday”, RDDE then only displays Schedule entities that are associated with a Type of Day entity that is equal to “Fullday”. “Broadcast Schedule” is no longer displayed because it is associated with a Type of Day (through the ScheduleAssignment entity) that is not equal to “Fullday”.

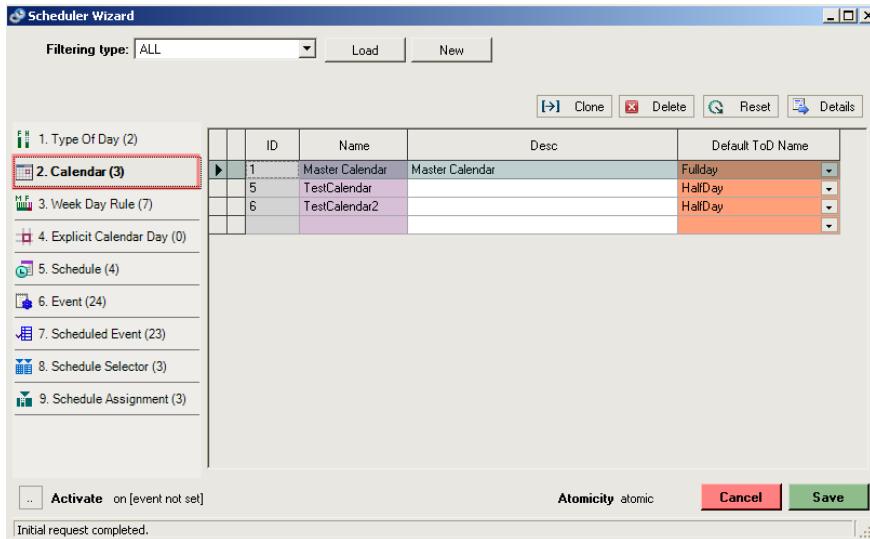
New entity data can be entered at any time. The grid does not have to be loaded to enter new data.

New entity data can be entered by:

- Clicking on a row and typing in one of the required text boxes
- Clicking on a row containing data and selecting the Clone button to add an identical row below the selected line

Entity data can be deleted by clicking on the row and selecting the Delete button. Any changes entered can be reset to their previous value by clicking the Reset button. All changes are saved through the “Save” button. Additionally, the user will be prompted to make any required associations.

Calendar



Required Data Elements:

1. Name – Input by User, Must be Unique

Optional Data Elements

1. Description

Required Relationships

1. TypeOfDay - A Calendar must have a TypeOfDay attached, this will be the default TypeOfDay for this calendar.

Optional Relationships

1. WeekDayRules - A calendar can have multiple WeekDayRules
2. ScheduleSelector – A calendar can have multiple ScheduleSelectors
3. ExplicitCalendarDay – A calendar can have multiple ExplicitCalendarDays

Week Day Rule

Scheduler Wizard

Filtering type: ALL Load New

[Clone] [Delete] [Reset] [Details]

ID	Name	Weekday	Desc	Calendar Name	Type Of Day Name
1	Monday	MONDAY		Master Calendar	Fullday
2	Tuesday	TUESDAY		Master Calendar	Fullday
3	Wednesday	WEDNESDAY		Master Calendar	Fullday
4	Thursday	THURSDAY		Master Calendar	Fullday
5	Friday	FRIDAY		Master Calendar	Fullday
6	Saturday	SATURDAY		Master Calendar	Fullday
7	Sunday	SUNDAY		Master Calendar	Fullday

Activate on [event not set] Atomicity atomic Cancel Save

Initial request completed.

Required Data Elements:

1. Name – Input by User, Must be Unique
2. Weekday – User must be able to select the weekday for this rule.

Required Relationships

1. Calendar - A WeekDayRule must have one calendar assigned to it.
2. Type of Day – A WeekDayRule must have one TypeOfDay assigned to it.

Explicit Calendar Day

Scheduler Wizard

Filtering type: ALL Load New

[Clone] [Delete] [Reset] [Details]

ID	Name	Date	Desc	Calendar Name	Type Of Day Name
27	DST Begins	03/12/2011		ISE Production Mast	DST Start
28	Good Friday	04/22/2011		ISE Production Mast	System Down
29	Memorial Day	05/30/2011		ISE Production Mast	System Down
30	Independence D	07/04/2011		ISE Production Mast	System Down
31	Labor Day	09/05/2011		ISE Production Mast	System Down
32	Thanksgiving D	11/24/2011		ISE Production Mast	System Down
33	Friday after Tha	11/25/2011		ISE Production Mast	HalfDay
34	Christmas Day	12/26/2011		ISE Production Mast	System Down
35	DST Ends	11/05/2011		ISE Production Mast	DST End

Activate on [event not set] Atomicity atomic Cancel Save

Initial request completed.

Required Data Elements:

1. Name – Input by user, must be unique
2. Date – Input by user, specific date

Optional Data Elements

1. Description

Required relationships

1. Calendar – A calendar must be assigned to an explicit calendar day
2. TypeOfDay – An explicit calendar day must have a type of day

Schedule

The Scheduler Wizard window displays the 'Schedule' entity. On the left, a tree view shows categories: 1. Type Of Day (2), 2. Calendar (3), 3. Week Day Rule (7), 4. Explicit Calendar Day (0), 5. Schedule (4) (which is highlighted with a red border), 6. Event (24), 7. Scheduled Event (23), 8. Schedule Selector (3), and 9. Schedule Assignment (3). The main area shows a table with four rows:

ID	Name	Desc
1	Trading Schedule	Trading Schedule
2	PTF Schedule	PTF Schedule
3	RDD Schedule	RDD Schedule
4	Broadcast Schedule	Broadcast Schedule

At the bottom, there are buttons for 'Activate' (unchecked), 'Atomicity' (atomic), 'Cancel', and 'Save'.

Required Data Elements:

1. Name – Input by user, unique identifier by which object is known.

Optional Data elements

1. Description

Optional Relationships

1. ScheduledEvent – A schedule can have many scheduled events.

Event

Scheduler Wizard

Filtering type: ALL Load New

[Clone] [Delete] [Reset] [Details]

ID	Name	Type	Desc	State	State Literal
1	Scheduler - Instantiate	SCHEDULER	The event triggers the s	1	INSTANTIATE
2	Trading - Start of day	TRADING	Initiates Start of Day pro	0	START_OF_DAY
3	Trading - Closed Non-M	TRADING	Non-Mops users cannot	1	CLOSED
4	Trading - Pre-Open	TRADING	Initiates Pre-Open for tr	2	PRE_OPEN
5	Trading - Open	TRADING	Initiates Open for tradin	3	OPEN
6	Trading - Post-Open	TRADING	Initiates Post-Open sess	4	POST_OPEN
7	Trading - End of day	TRADING	Initiates End-of-Day pro	5	END_OF_DAY
8	Trading - Post End of da	TRADING	Initiates Post End-of-Da	6	POST_END_OF_DAY
9	Trading - Last Trading T	EXPIRY	Check for instruments w	7	LAST_TRADING_TIME
10	TM - OpenAll	TMACCESS	Trade Manager is acces	1	OPEN_ALL
11	TM - OpenMopsOnly	TMACCESS	Trade Manager is only a	2	OPEN_MOPS_ONLY
12	TM - Closed	TMACCESS	Trade Manager is not ac	3	CLOSED
13	RDD - Open	RDD	Reference Data Dissemi	1	OPEN
14	RDD - Close	RDD	Reference data feed is c	2	CLOSE
15	RDS - Housekeeping	HOUSEKEEPING	The Housekeeping Eve	1	HOUSEKEEPING

Activate on [event not set] Atomicity atomic Cancel Save

Initial request completed.

Required Data Elements

1. Name – Input by user, unique identifier by which object is known.
2. Type – Type of event, valid values: 1=Other, 2 = Scheduler, 3= Trading, 4= TM Access, 5= RDD

Optional Data Elements

1. Description
2. stateLiteral
3. state

Optional Relationships

1. ScheduledEvent – an Event can have multiple scheduled events
2. CreatedEvent – an Event can have multiple created events

Scheduled Event

Scheduler Wizard

Filtering type: ALL Load New

[Clone] [Delete] [Reset] [Details]

ID	Trigger Time	Event Name	Schedule Name
1	14400	Trading - Start of day	Trading Schedule
2	18000	Trading - Closed Non-Mops	Trading Schedule
3	21600	Trading - Pre-Open	Trading Schedule
4	25200	Trading - Open	Trading Schedule
5	28800	Synthetic Stock Trading-Close	Trading Schedule
6	43200	Trading - Last Trading Time	Trading Schedule
7	72000	RDS - UoW Execution	Trading Schedule
8	79200	Trading - Post-Open	Trading Schedule
9	82800	Trading - Closed Non-Mops	Trading Schedule
10	84600	Trading - End of day	Trading Schedule
11	86100	Trading - Post End of day	Trading Schedule
12	85000	Scheduler - Instantiate	Trading Schedule
13	14400	TM - OpenAll	PTF Schedule
14	79200	TM - OpenMopsOnly	PTF Schedule
15	86100	TM - Closed	PTF Schedule

Activate on [event not set] Atomicity atomic Cancel Save

Initial request completed.

Required Data Elements

1. Trigger Time – Input by user, time the scheduled event commences relative to the start of the schedule, in milliseconds before or after UTC.

Required Relationships

1. Schedule – A scheduled event must have one schedule
2. Event – A scheduled event must have one event

Schedule Selector

The top grid displays each defined schedule selector.
The bottom grid lists the instances that are associated with each Schedule Selector.

The Scheduler Wizard interface displays two grids of schedule selectors:

- Top Grid (Schedule Selector):**

ID	Name	First Start Of Schedule	First Calendar Date	Creation Window In Days	Desc	Calendar Name
1	Trading Schedule Selector	01/04/2012 06:00:00 PM	01/05/2012	5	Trading Schedule Selector	Master C
2	PTF Schedule Selector	01/04/2012 06:00:00 PM	01/05/2012	5	PTF Schedule Selector	Master C
3	RDD Schedule Selector	01/04/2012 06:00:00 PM	01/05/2012	5	RDD Schedule Selector	Master C
- Bottom Grid (Schedule Assignment):**

ID	Name	Symbol	Specialist Segment Bin	CL Prod. Symbol
3	DELL	DELL	1599	DELL
33	ACUR	ACUR	2859	ACUR
1	MCD	MCD	1515	MCD
68	DDD	DDD	4329	DDD
71	IJENS	IJENS	4455	IJENS
57	DJA	DJA	3867	DJA

Required Data Elements:

1. Name – Input by user, unique
2. firstStartOfSchedule – Input by user, this is the time that a schedule will start
3. firstCalendarDate – Input by user
4. creationWindowInDays – Default value of 5, can be changed by user.

Optional Data Elements

1. Description

Required Relationships

1. Calendar - A Schedule Selector must have a single schedule

Optional Relationships

1. Scheduling Assignment - A Schedule Selector can have many Scheduling Assignments
2. Product – A Schedule Selector can have many products

Schedule Assignment

Scheduler Wizard

Filtering type: ALL

ID	Schedule Name	Schedule Selector Name	Type Of Day Name
1	Trading Schedule	Trading Schedule Selector	Fullday
2	PTF Schedule	PTF Schedule Selector	Fullday
3	RDD Schedule	RDD Schedule Selector	Fullday

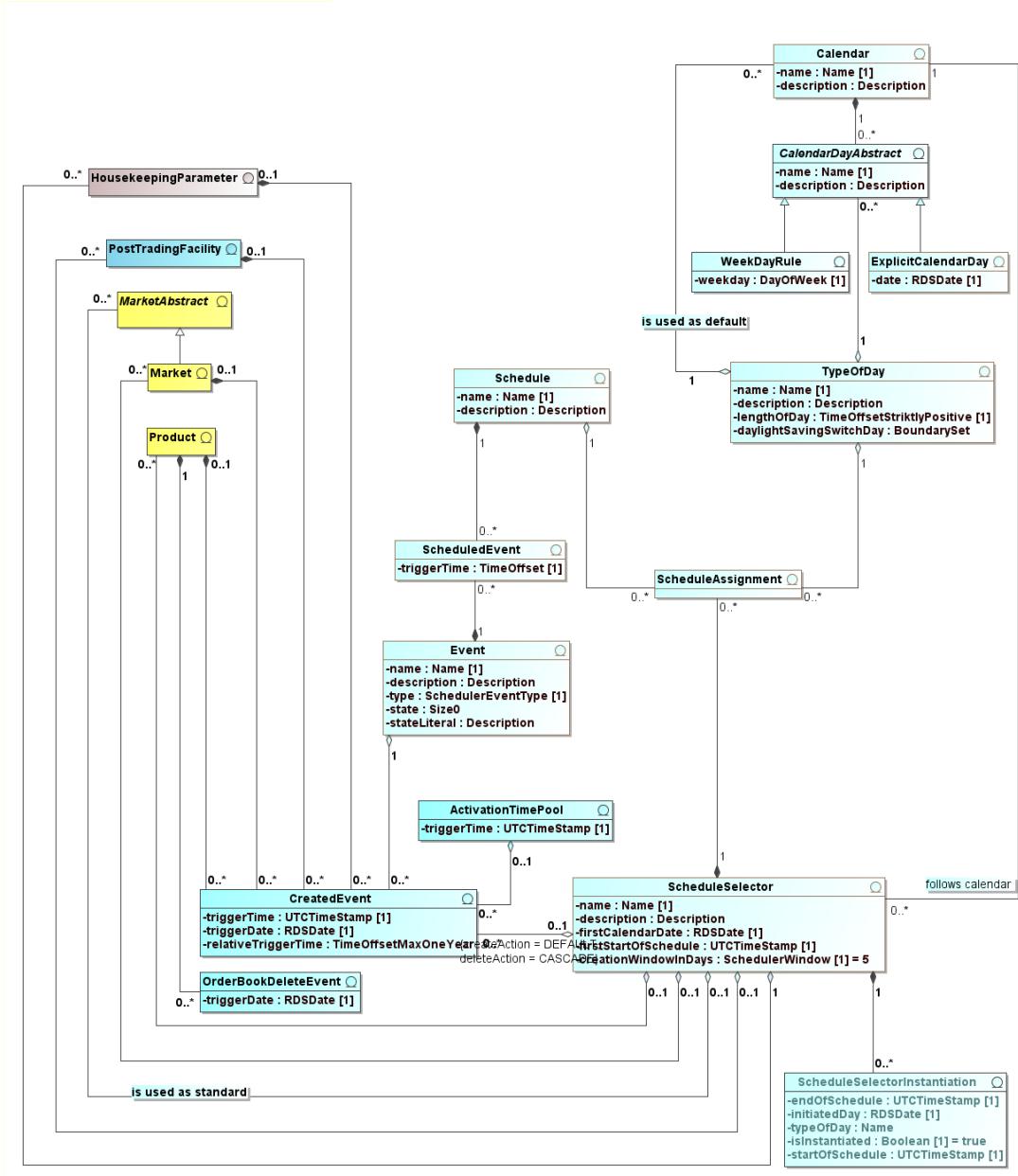
1. Type Of Day (2)
 2. Calendar (3)
 3. Week Day Rule (7)
 4. Explicit Calendar Day (0)
 5. Schedule (4)
 6. Event (24)
 7. Scheduled Event (23)
 8. Schedule Selector (3)
9. Schedule Assignment (3)

Activate on [event not set] **Atomicity** atomic

Initial request completed.

Scheduler Data Model

package gts[055 - RDS Maintenance Domain - Scheduler]



Chapter 22. Query Viewer

The screenshot shows the Query Viewer application interface. At the top, there's a toolbar with 'File' and 'Help' menus, and buttons for 'Investigation' and 'Re-Connect'. A search bar displays 'Option.Connected' and 'Option.Ready!'. Below the toolbar are buttons for 'Print', 'Preview', 'Print Detail', and 'Detail Preview'. The main area has a title 'Option - CSC02JUN22.0C' and a 'Search Criteria' section with fields for 'Product' (dropdown), 'Market Date' (3/14/2012), 'Time From' (9:33:34 AM), 'BU' (dropdown), 'PMM' (dropdown), 'Bin' (dropdown), 'Instrument' (CSC02JUN22.0C), 'Msg Types' (Multiple...), 'Time To' (9:40:34 AM), 'Exch Order Id' (dropdown), and 'Search' and 'Clear' buttons.

The 'Result' section contains a large grid of transaction data. The columns include: Time Stamp, Instrument, Message, ExchOrderID, Bid BU, Bid Price, Bid Qty, Bid U, Ask BU, Ask Price, Ask Qty, Ask U, Order Type, Client Category, Log Reason, Inactive, Activity Type, Trade Price, and a timestamp column at the bottom. The data rows show various trade events like quote updates, order requests, and fills.

A 'Details' pane on the right side shows a table with columns: Field Name, Value, Field Name 2, Value 2, Field Name 3, Value 3, Field Name 4, Value 4, Field Name 5, and Value 5. It lists numerous fields such as OrderLegActivity, System, ProductID, UnderlyingPrice, MinimumExecute, VolumeDisclose, TickeredWorse, etc. An 'Alert Received' message box is visible in the bottom right corner of the details pane.

The Query Viewer provides MOPs and Surveillance staff the ability to request, view, and print real-time Matching Engine transaction data, enriched trade data via the Exchange Trade Broadcast from the Trade Manager, and OPRA data. Query Viewer is made up of a front end for users and two Web Services. This document provides the technical design specifications for all Query Viewer components.

Abbreviations used in this document are:

DMS	Data Manager Service
ME	Matching Engine
MPT	Market Place Tool
OPRA	Options Price Reporting Authority
MQS	Market Query Service
PIMgr	RTP Plug-in Manager
QVFE	Query Viewer Front End

The Query Viewer provides MOPs and Surveillance staff the ability to request, view, and print real-time Matching Engine transaction data, enriched trade data via the Exchange Trade Broadcast from the Trade Manager, and OPRA data. Query Viewer is made up of a front end for users and two Web Services. This document provides the technical design specifications for all Query Viewer components.

Query Viewer Front End (QVFE) Provides a GUI for users to search for transactions using a variety of search filters to retrieve specific transactions, view search results, and print results.

ISE Data Manager Service (DMS) Runs on the RTP PIMgr, handles QVFE requests, routes them to the MQS, receives return messages from the MQS, and sends messages back to the QVFE.

MdrQueryService (MQS) Web Service that receives queries from DMS, retrieves data from archive files, and returns data to DMS for delivery to the QVFE.

There will be a single Query Viewer front-end for OptimISE. The user can select the exchange they want to target and enter the search criteria. The web services of the corresponding exchange will be contacted to get the data. The following figure will give a further understanding of this behaviour.

The goals for are:

- Ability to retrieve and display current and historical Audit Trail, Exchange Trade Status, and OPRA messages
- Ability to retrieve specific messages based on search filter parameters.
- Ability to print displayed messages

The QVFE provides the following functionality.

1. Search for messages based on product
2. Search for messages based on instrument
3. Filter search for products and/or instruments by the following:
 - Market Date – returns messages for the specified date or date range (i.e. ability to request current or historical messages)
 - Time Interval – returns messages whose timestamps fall within a specified start and end time
 - Business Unit
 - Message Type – for message type, provides the ability to request specific messages types – one, many or all messages. Message types include those message supported in Matching Engine, Trade Manager Exchange Trade Broadcast, and ODS. See Section **Error! Reference source not found.**, **Error! Reference source not found.**, for a listing of messages to be supported.
 - Exchange Order Id
4. View PMM and Bin for the specified Product/Instrument
5. View returned messages in a scrollable summary list.
6. Select a summary message and view detailed message information in a separate, scrollable window.
7. Print individual or multiple selected messages from either the summary or detail window
8. Background Frame color will reflect which market is being queried (ISE/ Topaz). Colors will be similar to what are being used for Market Ops Tools.
9. When loading from MPT, Query Viewer will open to the correct market (ISE/Topaz) based on the information that is being passed from MPT.

The following message types are supported:

1. OrderRecord
2. QuoteSideRecord
3. IBBORecord
4. ChangeInstrumentStateRecord
5. ChangeProductStateRecord

6. MatchEventRecord
7. MatchEventLegInfoRecord
8. MatchStepRecord
9. DealRecord
10. DealItemRecord
11. TradeRecord
12. TradeItemRecord
13. MMPParametersRecord
14. OrderLockingRecord
15. ProductParametersRecord
16. InstrumentParametersRecord
17. IDNumberInfoRecord
18. ProdWideInstrStateChgSummaryRecord
19. ComplexInstrumentRecord
20. StaticProductInstrumentTypeParametersRecord
21. AwayBBOUpdateRecord
22. PMMControlRecord
23. Opra Quote With Size
24. Opra Last Sale
25. Exchange Trade Status
26. Product State Parameters Record
27. Triggered Event Parameters Record
28. Product State Info Record
29. Quote Activation Record
30. Underlying BBO Update Record
31. Complex Instrument Event Record
32. Market Operations Alert Record
33. Failed Match Attempt Record
34. Product Maintenance Activity Record
35. Auction Record
36. Dynamic Product Instrument Type Parameters Record

Chapter 23. Thomson One

This is a third party vendor we use it to verify quotes in the market place. This tool is extremely useful for verifying outside data, trades, prices and volume activity.

User Guides:



Thomson ONE - Equity Sales Trading > Flex Monitor Customer Support: 1-877-814-3571 or [Online Support](#)

File Edit View Favorites Tools Window Help

Flex Monitor Co. News Chart 4 in 1 DeMark AutEx Time & Sales Trades & Quotes Level 2 Quote Montage Options Futures

Last & Change ▼

Symbol	Last	Chg	Symbol	Last	Chg	Symbol	Last	Chg	Symbol	Last	Chg	Symbol	Last	Chg	Symbol	Last	Chg
INDICES			BROAD MARKET ETFs			FINANCIALS & BANKS			CONGLOMERATES			TECHNOLOGY			UNITED STATES		
VIX-UT ↑	15.15	-0.43	SPY ↑	140.38	-0.06	XLF ↓	20.07	-0.07	GE ↓	20.18	+0.11	XLK ↑	30.21	+0.14	DJIA ↑	13140.10	-0.09
DBOEF ↑	67.12	+1.86	QQQ ↓	58.09	+0.05	MS ↓	20.07	-0.34	SI ↑	103.64	-0.31	MSFT ↑	31.99	--	S&P-UT ↓	1404.91	-0.61
NYX ↓ N	30.28	-0.02	IJO ↓	67.39	+0.29	GS ↓	125.85	-0.17	BA ↑	75.22	+0.08	CSCO ↑	20.61	+0.04	NDX-O ↑	2748.56	+10.93
CME ↓ N	300.29	+5.90	IWN ↓	73.31	+0.10	C ↑	37.71	-0.37	MMM ↓	89.77	-0.38	AAPL ↑	608.72	+2.76	Europe		
ICE ↑ N	139.76	-0.11	VT ↓	48.32	-0.07	BAC ↓	9.83	+0.02	L ↓	39.38	-0.32	IBM ↑	204.93	+0.68	UXK-UT Y	5891.41	-69.70
NDaq ↓ N	26.84	+0.12	VTI ↓	72.49	+0.01	WFC ↓	45.19	-0.23	UPS ↓	80.40	+0.01	ADBE ↑	33.55	+0.39	CAC40 D	3527.37	-3.46
CBOE ↓ N	28.92	+0.32	VEU ↓	44.33	-0.18	BK ↓	24.04	-0.32	WMT ↓	60.64	+0.04	GOOG ↑	645.00	+11.51	IB-MC D	8490.90	-76.60
OIL & GAS			PFF ↓	39.04	+0.06	A ↓	44.80	-0.03	GT ↓	12.09	-0.08	ORCL ↓	29.66	-0.44	FTSEMB D	16734.75	-218.87
CL/1 D	107.56	+1.49	PGX ↓	14.39	+0.01	DFS ↓	31.69	-0.17	KBR ↑	36.98	+0.26	DELL ↑	17.20	+0.04	AEX-AE D	330.78	-1.27
USO ↑ N	40.79	+0.36	DGT ↓ N	56.27	-0.14	HCBK ↓	7.39	-0.14	CAT ↓	109.22	-1.54	EMC ↓	29.30	+0.44	Asia Pacific		
XLE ↓ N	73.10	-0.91	EMERGING MKTS ETFs			BSBR ↑	9.78	-0.21	NUE ↓	43.58	-0.25	HPQ ↑	23.58	-0.40	NK225 ↓	10086.49	-55.50
DIH ↑ N	42.11	-0.89	FXI ↑	37.41	+0.14	BLK ↓	201.08	-0.22	AAU ↑	10.30	-0.14	QCOM ↑	66.47	-0.28	US Treasury Market		
COP ↑ N	77.16	-0.41	IDV ↓	32.76	-0.08	BX ↓	15.60	+0.22	UTILITIES			AMAT ↓	12.73	+0.02	US30PX	95-062	+1-046
XOM ↓ N	85.90	-0.70	PEY ↓	9.40	-0.02	BR'K' ↓	81.02	-0.43	XLU ↓	34.57	-0.01	RIMM ↓	14.02	-0.09	US10PX	97-126	+0-172
HES ↓ N	60.92	-0.77	FXP ↓	25.16	-0.19	KBE ↓	124.24	-0.16	ED ↓	57.39	-0.06	AMD ↓	8.10	+0.04	TYX-UT ↑	33.81	-0.76
TOT ↓ N	54.86	-0.46	IIF ↑	16.81	+0.27	MKL ↓	419.58	-0.92	ED ↓	10.30	-0.14	SWKS ↑	28.58	+0.31	VOLUMES		
CHK ↑ N	25.20	-0.38	EEM ↓	43.22	+0.06	BH ↓	413.99	+2.85	VZ ↓	39.84	+0.21	AMZN ↓	19.42	+0.09	VOICIS ↑	1149201	
DVN ↑ N	72.78	-1.12	EFA ↓	54.78	-0.36	DB ↓	50.89	-0.55	S ↓	2.76	+0.01	SXI ↓	36.95	+0.06	VOIDS ↑	2123622	
APA ↓ N	103.36	-2.25	EFU ↓	20.67	+0.21	SHLD ↓	77.08	-2.92	EXC ↓	38.65	-0.18	EBAY ↓	37.58	+0.19	VOIPIS ↑	97421	
APC ↑ N	80.99	-1.04	EWJ ↑	9.97	-0.06	AFI ↓	46.68	-0.81	T ↓	31.90	+0.11	YHOO ↓	15.56	+0.15	VOODE ↑	4263864	
BP ↑ N	45.91	-0.31	NUE ↓	43.58	-0.25	KCG ↓	13.24	+0.04	PHARMACEUTICALS			AMCI ↓	20.21	+0.09	VOOD ↑	2057383	
CVX ↓ N	107.82	-1.26	EVF ↑	25.64	-0.05	DBC ↓	29.14	-0.03	COMMODITY NAMES			YHOO ↓	22.71	+0.02	VOOK ↑	300249	
DXV ↓ N	97.62	-0.34	ADRE ↑	42.73	+0.25	XBX ↓	78.48	+0.70	USCI ↓	62.21	-0.03	RIMM ↓	14.02	-0.09	VOOLI ↑	400035424	
SLB ↑ N	74.15	-1.56	VBK ↑	86.95	+0.35	EI ↓	6.02	+0.10	GLD ↓	160.54	+0.41	MEDIA			VOODA ↑	1752755	
HAL ↑ N	34.04	-0.72	AGRICULTURE			EWZ ↓	66.56	-0.01	IAU ↑	16.11	+0.05	DIS ↓	43.42	+0.18	VOOB ↑	465974	
ECA ↑ N	21.00	+0.29	MOO ↓	52.79	-0.08	IBB ↓	121.47	+0.79	DZ ↑	4.69	-0.02	NWS ↓	20.21	+0.09	VOOP ↑	1206629	
IMD ↓ N	45.55	-0.49	DBA ↓	28.40	-0.06	PFE ↓	21.82	+0.02	GDX J ↓	49.91	+0.05	TIWX ↓	35.85	+0.17	VOOD ↑	631144	
CLR ↑ N	87.98	+1.81	POT ↓	46.50	-0.38	MRK ↑	37.76	--	AUY ↓	15.68	+0.11	CBS ↓	31.62	-0.08	VOOK ↑		
OIS ↓ N	81.66	-0.41	MOS ↓	57.49	-0.56	JNJ ↓	64.78	-0.18	AEM ↑	33.34	-0.24	AUTO			VOLI ↑		
FOOD & BEVERAGE			ADM ↓	31.94	+0.07	BMY ↓	33.03	-0.05	USCI ↓	52.68	-0.03	GM ↓	25.33	+0.24	Indicators		
XLP ↓ N	33.65	+0.05	MON ↑	79.14	+0.05	DNDN ↓	10.28	+0.35	FCX ↓	39.91	+0.76	F ↓	12.58	+0.04	GLD ↓	160.54	+0.41
PBJ ↑ N	19.70	+0.02	BG ↑	67.94	-0.18	AMGN ↓	67.20	-0.38	AA ↑	10.30	-0.14	TM ↓	84.03	-0.63	GLL ↑	17.18	-0.10
MO ↓ N	30.18	+0.05	RJA ↑	9.01	-0.01	CELG ↓	75.75	+0.22	NUE ↓	43.58	-0.25	FSYS ↓	27.91	+0.62	SMH ↑	35.67	+0.25
PM ↓ N	86.21	-0.33	RJI ↓	9.04	+0.01	BIIB ↓	120.34	+1.06	S ↑	2.76	+0.01	CLNS ↓	23.97	+1.39	IVT ↑	95.01	+0.62
BII ↓ N	102.28	+0.85	IOJ ↑	45.34	+0.32	ART ↓	60.44	+0.04	X ↓	31.35	-0.02	WPRT ↓	47.71	-1.00	VXO-UT ↑	14.28	+0.01
KFT ↑ N	38.31	-0.03	UNN ↓	64.08	-0.44	INTEREST RATE SENSITIVE			TIE ↑	14.04	-0.01	CURRENCIES			ISRG ↑	535.19	+3.56
KO ↓ N	71.16	+0.57	CORN ↓	40.03	-0.27	TLT ↓	111.73	+1.19	BAL ↓	53.61	+0.23	FXE ↑	131.40	-0.23	AIG ↑	29.58	+0.26
PEP ↑ N	65.49	+0.21	OF ↓	185.89	+1.90	IPD ↓	117.45	+0.27	DIVIDEND ETFs			EU ↑	20.70	pc	V ↓	116.88	+0.36

Watchlists ▾ Main Arbs Watchlist

SLB L 74.15 Chg -1.56 B 74.14 P 74.15 N 74.15 Size 2x7 Vlm 10931591

LTMkt P Open 75.17 %Chg -2.06 PE 20.15 EPS 3.68 VWAP 74.2249 LTV 100

T 1:45:31 Hi 75.17 AH 95.53 FPE 15.03 Q1EPS 1.03 Div 1.100 BTC 24

Cur USD Lo 73.67 AL 54.79 P/B EOD 3.23 AnnDt 04/20/12 AF A Yld 1.483 Ex 02/17/12

FSI 0 YC 75.71 CUSIP 806957108 YTD%c 10.833 ShortInt 11474 Bta 1.27 MktCap 101045.97

AdvSender GSECI AdvTV 390 AdvSide I FC Rtr 13:20 TRMV IOINat Dow 9:36

IOISender IOIShrs IOISide IOIPrice SCHLUMBERGER LTD

14:52 PNW March 22 is International Water Day: U.S. Can Achieve Sustainability in 10 Years 09/28/11 10/21/11 11/14/11 12/07/11 12/30/11 01/25/12 02/18/12 03/12/12

Equity Sales Flex Monitor No Alerts SLB-US,USD,NORM

Thomson ONE - Main Trading > Quote Montage

File Edit View Favorites Tools Window Help Market Overview Trading Prospecting Company Info Tools

Flex Monitor Co. News Chart 4 in 1 Time & Sales Trades & Quotes Level 2 Quote Montage Options Futures Futures Options

Symbol: JPM

Symbol	Last	Chg
D.JIA	8,125.43	+95.81
S.PX-E	865.79	+13.73
NASDQ-D	1,667.06	+40.26
FTSE-T	3,924.82	+76.71
IPO-MX	22,153.70	+272.34
IBOV-BR	45,806.43	+633.78

Exchange Name	L	Chg	B	A	Size	Vlm	TIme	
New York	N	+1.04	33.61	33.62	2x3	1311500	15:06	
ISE	8	+0.90	33.61	33.63	9x5	2310722	15:06	
AMEX	A	0.00	pc	0.00	0x0	0		
National	C	-0.96	33.60	33.40	33.67	17x3	1096901	15:06
NASD ADF	D	+0.93	33.61	33.50	33.70	31x10	30253328	15:06
CBQE	E	+2.50	33.75	33.31	33.71	11x9	10100	15:01
BATS	I	+0.96	33.60	33.62	33.63	2x20	10900302	15:06
Nasdaq BX	J	+0.93	33.60	33.61	33.64	2x1	836908	15:06
Chicago	M	+0.44	33.32	0.00	0.00	0x0	88900	13:21
NASDAQ	O	+0.94	33.62	33.63	26x28	24385941	15:06	
NYSE Arca	P	+0.93	33.61	33.61	33.63	32x30	22130745	15:06
Philadelphia	X	39.95	pc	0.00	0.00	0x0	0	10/15/08

Symbol	Last	Chg
Americas		
S.PX-E	865.79	+13.73
NASDQ-D	1,667.06	+40.26
FTSE-T	3,924.82	+76.71
IPO-MX	22,153.70	+272.34
IBOV-BR	45,806.43	+633.78
Europe		
SXSE-STX	2,300.51	+37.55
IRX-LN	3,968.40	-20.59
CAC40-FR	3,038.18	+52.44
DAX-XE	4,609.460	+59.670
IB-MC	8,874.50	+162.60
MIB30-MI	18,770.000	+328.000
AEX-AE	238.49	+2.59
SMI-CH	5,163.950	+98.520
RTSI-ES	819.5700	+13.7200
Asia-Pacific		
HKEX-HK	8,755.26	+12.30
SGX-HK	15,582.99	-86.63
SGHDX	2,534.13	-1.92
US Treasury Market		
US-30-PX	96.06	-0.28
US-10-PX	99.10	-0.16
TYX-E	37.12	+0.65
TNX-E	28.30	+0.71
Futures		
SP/1	854.10	+5.60
ND/1	1,228.00	+11.00
GE/1	98.96	-0.01
US/1	127.95	+0.085
CL/1	52.63	+0.86
GO/1	889.9	-3.6
HG/1	2,223.0	+0.0140
NG/1	3.709	+0.016

Listed by Exchange Sorted by Price

Symbol	Chg	PE	EPS	VWAP	Div	Yld	Ex	Mkt Cap	Dow
JPM	+1.06	33.62	0.12	33.62	0.200	0.59%	04/16/09	122357.91	14:56
LMkt I	0.00	34.01	0.29	34.01	0.200	0.59%	04/16/09	105127647	14:56
T 15:06	Hi 34.01	AH 34.01	PE 30.02	EPS 1.12	VWAP 33.1672	Div 0.200	Ex 04/02/09		
FSI	0	32.36	AH 32.36	PE 23.58	CE 0.32	0.200		160	14:56
Cur USD	YC 32.56	AdvLTV ent	PTB 0.907	AnnDt 04/16/09	AF A	Yld 0.59%	Ex 04/02/09		
AdvSender	IOISender	IOIShrs	YTD% 3.267	ShortInt 70473352	Rta 1.47			Mkt Cap 122357.91	
AdvlTV ent	IOIShds	IOISide	FC 8.51	Rtr 14:58	TRMV 14:51			Dow 14:56	
IOISender	IOIShers	IOISide	IOIPrice	IOINat				JPMORGAN CHASE & CO.	

Your firm's customized quote data is not available.

15:06 NEW S&P CUTS MARRIOTT <MOT> RATING TO 'BBB-' FROM 'BBB', CUTS STARWOOD <HOT.A> TO 'BB' FROM 'BB+'.

15:05 WI Quadra Projects Enters Into Negotiation to Acquire Quadra Marketing Corp.

15:06 NEW QUADRA PROJECTS ENTERS INTO

Daily JPM C:33.63 Chg:1.07 [JPM-V-105128M]

Equity Sales Quote Montage Online

TSA Valid End User ID: 674925 JPM

The figure shows the Thomson ONE - Main Trading interface. The top menu bar includes File, Edit, View, Favorites, Tools, Window, Help, Market Overview, Trading, Prospecting, Company Info, Tools, and several icons for different modules like Flex Monitor, Co. News, Chart, 4 in 1, Time & Sales, Trades & Quotes, Level 2, Quote Montage, Options, Futures, and Futures Options.

The main workspace displays a 'Trades and Quotes' section with a search bar for 'Symbol' (set to 'VPA'), time filters ('Time' and 'To'), and a dropdown for 'View' (set to 'Trades & Quotes'). It also includes buttons for 'GO', 'Save', 'Reset', and 'Filters'.

A large table below lists trade details for 'VPA' from 04/16 at 15:07:45 to 04/16 at 15:07:43. The columns include Date, Time, Ex, Size, Price, Best, Bid, Best, Ask, B/A Size, and Condition. The table shows multiple bids and asks, with some entries having a 'P' or 'S' suffix.

To the right of the table is a vertical sidebar with tabs for 'Americas', 'Europe', 'Asia Pacific', 'US Treasury Market', 'Futures', and 'Equity Sales'. The 'Americas' tab is selected, displaying a list of stocks with their latest price, change, and volume.

At the bottom left, there's a summary table for 'VIP A1' with columns for T, L, Chg, and various financial metrics like P/L, R, CH, E, Size, Vlm, and 20. It also shows 'LTMkt' data for JPMorgan Chase & Co.

At the bottom center, a news feed box shows two headlines: '15:07 NEW US HOUSE PANEL SETS APRIL 23 HEARING ON MORTGAGE REFORM AND ANTI-PREDATORY LENDING BILL' and '15:07 RTR US HOUSE PANEL SETS APRIL 23 HEARING ON MORTGAGE REFORM AND ANTI-PREDATORY LENDING BILL'.

At the very bottom, there are tabs for 'Equity Sales', 'Trades and Quotes', and 'Online'.

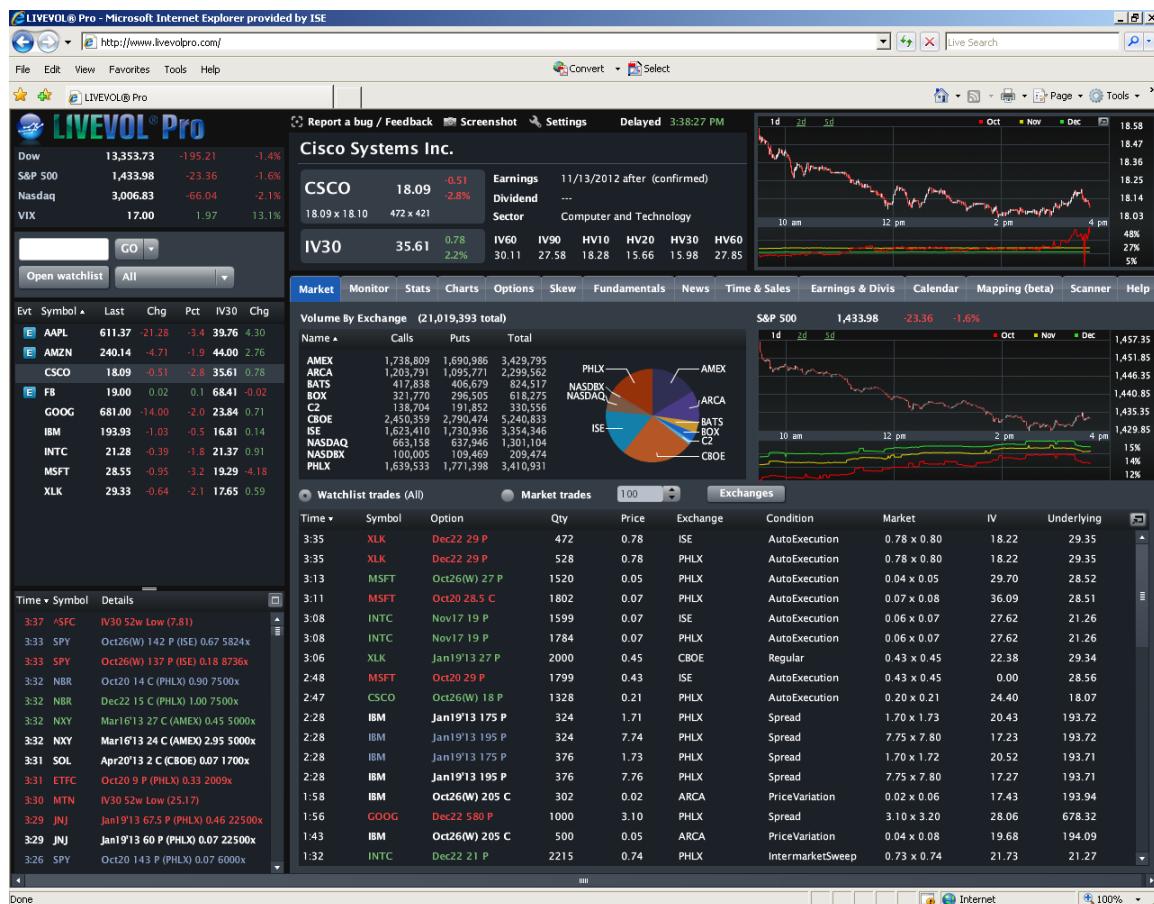
Chapter 24. LiveVol Pro

LiveVol is a competing tool to Thomsen One. Market Operation is currently investigating possible using the application in the future. Internal testing is on-going.

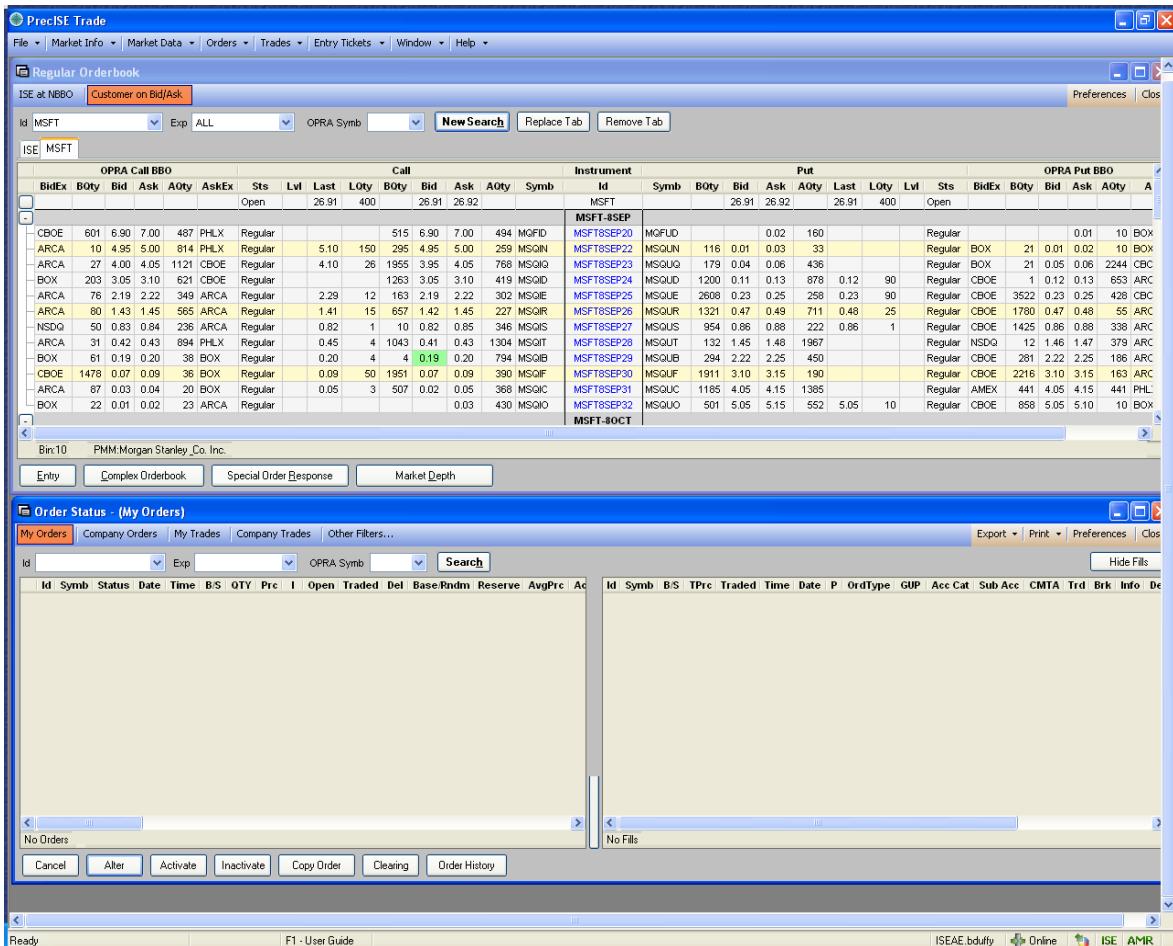
url: <http://www.livevolpro.com>

username:

password: 1234



Chapter 25. PrecISE



This is an ISE designed, developed and maintained front-end system for members to trade on our exchange.

We are always improving this application. The exchange has a rollout process in place for every new release. Market Operations is involved though-out and are required to assist members in getting connected, answering questions and notifying development of any defects. While we do not actively use this tool, we are required to understand how it works to be able to explain it.

This link explains in details all functionality of PrecISE. It is extensive and detailed.
J:\Mercury\Help Files\Help Files

Below is a highlight of some of the functionality:

Members download this application from our website:

<http://www.ise.com/WebForm/virtualPage.aspx?categoryId=366&header0=true&menu8=true&link0=true>

They enter the user name and password “PrecISE” and make sure their host settings are populated properly. Once connected, the member sets their desktop that way they would like.

There are 8 tabs across the top of the screen:

File -

Load Desktop – The windows the member chooses to open

- Load Original ISE Desktop
- Load Latest Saved Desktop

Save Desktop - A member can save the set-up they choose

Preferences - This is not being used at this time.

Transaction Log – Lists all of the incoming and outgoing messages for the current trading day and can be used to trouble shoot trading problems.

Transaction Stats – Is a recap of a PrecISE user's activity in particular transaction types on a particular day.

Transaction Type	Count	Rate
Single Orders		
Regular		
Block		
CAB		
Stop		
Crossing Orders		
Facilitation		
Solicitation		
Customer Match		
PIM		
Spread Orders		
Regular		
Facilitation		
Solicitation		
With Stock Orders		
Regular		
Facilitation		
Solicitation		
Block&Crossing Order Responses		
Directed		
Block		
Facilitation	119	
Solicitation	32	
PIM		
Block&Crossing Order Broadcasts	151	
Directed		
Block		
Facilitation		
Solicitation		
PIM		
BBO Updates		
ISE	147177	31.67
OPRA	111747	23.00
Underlying	33685	8.33
AMEX	1745	0.33
BOX	476	0.33
CBOE	9961	3.00
ARCA	14520	2.00
PHLX	16676	5.33
NSDQ	6732	
	1658	0.67

Event Log Support

- Send PrecISE Trade logs to ISE – Members will have some issues that need closer examination. This functionality gives them the opportunity to view the trade diagnostics files and it allows us to diagnose the issue quickly.
- Request PrecISE Training – This opens an email to precise_tech@ise.com to schedule an appointment.
- Ask a question – If a member has any question they can ask it from PrecISE and it will generate an email.
- Exit – The closes the application

Market Info –

Regular Order Book – Traders view of underlying(s) and the call/ put prices, strikes, away markets. They can right clip on a symbol to enter an order.

Market Depth – A feature that allows participants to see a particular option stings depth and size on the ISE and away. There is a fee to this access.

Complex Orderbook – Shows open spreads and the spread order book.
Complex Depth – This action is not yet supported.
Special Order Response – allows a customer to quickly respond to any special orders on the book

Market Data –

Ticker – This is a dynamic scrolling recap of executions. It can be filtered size, price and time.
Market Statistics- Provides a recap of trading activity by market, overall and by individual underlyings
Market Messages – Provides customers important trade, market data and linkage related information.
Alerts – Create alerts to pop-up when a strike nears your trading levels.

Orders –

Order Status – This is a status (filled, open) of a customer's orders, trades, company orders and company trades
Order History – This is a recap of orders same day and prior if needed.
Cancel Orders for Customer – mass cancel screen for all orders

Trades –

Trades and Statistics - This is a recap of orders same day and prior if needed

Entry Tickets – These are all the various order types that can be entered. Refer to Chapter 6 for description.

- *Regular Order*
- *Block Order*
- *Crossing Order*
 - Facilitation
 - Solicitation
 - Customer Match
 - PIM
- *Spread*
 - Regular Spread
 - Facilitation Spread
 - Solicitation Spread
 - Customer Match Spread
- *With Stock*
 - Buy-Write
 - Facilitation with Stock
 - Solicitation with Stock
 - Customer Match with Stock
 - Stop Order
 - CAB order

Window – This allows for how you would like the screen to be presented.

- *Tile Horizontally*
- *Tile Vertically*
- *Cascade*
- *Close all Windows*

Help -

What's New – highlights the last releases new functionality.
PrecISE Trade User Guide – This user guide is much more detailed than what is here.
About – This is the current version in use.

Away Market Routing

- *AMR* – AMR stands for Away Market Routing. It is the process by which the ISE allows users of our front end, PrecISE Trade, to access markets on other options exchanges. For

example, the market in an option on the ISE could be priced \$1 bid and offered at \$1.25. An away exchange, the CBOE for example, could have a market of \$1 bid and offer of \$1.20. One of our customers could access that better \$1.20 offer on the CBOE using AMR.

- *How It Works* – We employ the services of what is called an IRD (Intermediary Routing Destination) to do this. Currently, the only IRD we use is Citigroup. This means that the order to buy for \$1.20 referenced above would go to Citigroup. Citigroup would then represent the order on the floor of the CBOE and send the ISE back its response. To accomplish you would have to double click on the option you would like to trade in PrecISE. The regular order ticket will appear. On the right hand side of the ticket you will see the Exchange drop down. Using the drop down a singular exchange can be accessed or all exchanges at that price by selecting Sweep. Sweep will “take out” all of the market centers that are reflecting the price of the options, \$1.20, that you are attempting to buy.

Fees will be as follows:

- 0.7 cents on executions, it used to be .10 cents.
- 0.5 cents on post trade allocations, it used to be .10 cents as well.
- Any month that we trade 250K contracts via AMR, excluding Citi's own desk's trades, the following month will be reduced to .5 on executions
- *Why Do we Have it* – AMR was developed as a competitive response to other front end trading systems having this ability. The fight for screen space on the trader's computer is very important. One system having the ability to take out away markets and another not having it could be a deciding factor on whether or not that program stays on the traders screen. One of our largest competitors in the front end trading system space had AMR ability and we did not. Hence, we developed our own AMR capabilities. Along with this, our customers wanted to have this ability.
- *Common Problems/Calls* – The most frequent calls MOPS receives have to do with clearing issues. Trades must be entered with clearing information or it must have PTA in the CMTA field. PTA stands for Post Trade Allocation. PTA means the customer wants to do the trade and enter the clearing information after the fact. If there is no CMTA or PTA is not in that field and a change needs to be made it becomes a manual process. The customer will call MOPS and request the CMTA be added. The MOPS rep must then call Citigroup and speak with one of their reps to have the CMTA added to the trade. You must know all of details of the trade when speaking with Citibank; what time, what exchanges, how many contracts and what CMTA needs to be added. Any portion of the trade that happened on the ISE can be changed by you. Using the log-in “KEXBE”, you should be able to locate the contracts.

The second most common calls would involve the mechanism not working correctly. This could have signs ranging from market data being incorrect, the customer feeling they should have traded something when they did not, or general system issues. These issues typically require additional resources from the ISE technology departments. An ERS Ticket with a high priority should be entered to inform the appropriate groups of your issue. See ERS Tickets in the manual for aid in doing this.

The third and final most common issue would be next day clearing adjustments. This will again require the help of Citigroup since they are the Give-up on the trade. You would contact their clearing department and give them the CMTA instructions that need to be added to the trade.

Chapter 26. MagniFIX

MagniFIX is a third party application that provides a user friendly view into the inbound and outbound FIX messaging between members and the ISE FIX interface. It provides real time and historical data and offers functionality to alert on various scenarios. Market Operations can utilize this tool to research and answer FIX related enquiries.

The screenshot shows the MagniFIX application window. On the left, there is a tree view of 'Administration Servers' containing nodes like BAML14, BAR, BAR2, etc. Below this is a 'Message Agents' section with 'Session Groups' and 'User-Defined Views'. The main area has two large tables: 'Outbound' at the top and 'Inbound' below it. Both tables have columns for 'Message Time', '49 - SenderCompID', '34 - MsgSeqNum', '35 - MsgType', '11 - ClOrdID', '54 - Side', '55 - Symbol', '38 - OrderQty', and '44 - Price'. The 'Outbound' table contains approximately 50 rows of data, mostly 'Heartbeat' messages. The 'Inbound' table contains approximately 20 rows of data, also mostly 'Heartbeat' messages. At the bottom of the main pane, a message states 'Results of the Search against BAML14 with the following conditions: >= 20120314-09:40:00.000 and <= 20120314-11:42:00.000 , analyzing All Messages' followed by '486 messages arrived'. A small 'Alert Received' dialog box is visible in the bottom right corner, stating 'Received: 1 Alerts' and 'Alert : 1 MM_PROTECTION'.

Chapter 27. BSI Spec

BSI Spec is an internally developed application that provides the BSI level organization and configurations of FIX and PrecISE member connections. It provides the BSI distribution of adapters, or member connections, and the specific configurations applied to each adapter. The ability to search and filter enables Market Operations to reference technical information necessary for a variety of tasks.

The screenshot displays a software application window titled "BSISpec_1.0 - IORS". The main interface is a grid-based configuration tool for various BSI adapters. At the top, there are search and filter options: "SEARCH ALL ADAPTERS", "SEARCH BY FILTER", and "SELECTED ADAPTERS". Below these are buttons for "SEARCH", "SEARCH", and "LIST". The grid itself has columns for "Service Groups" (with values 01 through 15) and "Adapter Count" (with a value of 409). The rows represent different adapter types, each with its own configuration details. Some adapter entries include links to external documentation or configuration files. The bottom of the screen shows a status bar with "Received 1 Alerts" and "Alerts 1 PROTECTION".

All Adapters															
Service Groups	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
ALT01M_21008	B0C0E_21002	DBKG1C_21054	SIG01M-GEBDC_22051	GEB13E-GEBDC_22051	GEB14E-GEBDC_22061	GLD01C_21063	GLD04C_21062	JPMG2C_21022							
See Grps: IORS.BSI.DCA_01 File Port: 21008 Comp: IORSC	See Grps: IORS.BSI.DCA_01 File Port: 21008 Comp: IORSC	See Grps: IORS.BSI.DCA_01 File Port: 21054 Comp: IORSC	See Grps: IORS.BSI.DCA_01 File Port: 22051 Comp: IORSC	See Grps: IORS.BSI.DCA_01 File Port: 22051 Comp: IORSC	See Grps: IORS.BSI.DCA_01 File Port: 22061 Comp: IORSC	See Grps: IORS.BSI.DCA_01 File Port: 21063 Comp: IORSC	See Grps: IORS.BSI.DCA_01 File Port: 21062 Comp: IORSC	See Grps: IORS.BSI.DCA_01 File Port: 21022 Comp: IORSC							
Core Logics: IORSC Core Obj Ports: pc-rgnrg140107															
LE091C_21291	NBG02E_21092	OTAD0E_21331	PF003C_21011	PRF10E_21272	PRF12E_21273	WB030E_21241	ABNGSC_21372	ABNGSC_21401							
See Grps: IORS.BSI.DCA_01 File Port: 21291 Comp: IORSC	See Grps: IORS.BSI.DCA_01 File Port: 21092 Comp: IORSC	See Grps: IORS.BSI.DCA_01 File Port: 21331 Comp: IORSC	See Grps: IORS.BSI.DCA_01 File Port: 21011 Comp: IORSC	See Grps: IORS.BSI.DCA_01 File Port: 21272 Comp: IORSC	See Grps: IORS.BSI.DCA_01 File Port: 21273 Comp: IORSC	See Grps: IORS.BSI.DCA_01 File Port: 21241 Comp: IORSC	See Grps: IORS.BSI.DCA_02 File Port: 21372 Comp: IORSC	See Grps: IORS.BSI.DCA_02 File Port: 21401 Comp: IORSC							
Core Logics: IORSC Core Obj Ports: pc-rgnrg140107															
AF091C_21802	DBKG2E_21091	FID01C_21823	FID01C_21832	JPM01C_21641	LBD02E_21471	MW020E_21181	NIT01M_21504								
See Grps: IORS.BSI.DCA_02 File Port: 21802 Comp: IORSC	See Grps: IORS.BSI.DCA_02 File Port: 21091 Comp: IORSC	See Grps: IORS.BSI.DCA_02 File Port: 21823 Comp: IORSC	See Grps: IORS.BSI.DCA_02 File Port: 21832 Comp: IORSC	See Grps: IORS.BSI.DCA_02 File Port: 21641 Comp: IORSC	See Grps: IORS.BSI.DCA_02 File Port: 21471 Comp: IORSC	See Grps: IORS.BSI.DCA_02 File Port: 21501 Comp: IORSC	See Grps: IORS.BSI.DCA_03 File Port: 21504 Comp: IORSC								
Core Logics: IORSC Core Obj Ports: pc-rgnrg140107															
CNP02E_21801	REN01E_21293	ABNG02E_21861	BCA00E_22113	BCA16E_22111	BCA16E_22112	CSM01C_22011	MG01C_22011	PER01C_21911							
See Grps: IORS.BSI.DCA_02 File Port: 21801 Comp: IORSC	See Grps: IORS.BSI.DCA_02 File Port: 21293 Comp: IORSC	See Grps: IORS.BSI.DCA_03 File Port: 21861 Comp: IORSC	See Grps: IORS.BSI.DCA_03 File Port: 22113 Comp: IORSC	See Grps: IORS.BSI.DCA_03 File Port: 22111 Comp: IORSC	See Grps: IORS.BSI.DCA_03 File Port: 22112 Comp: IORSC	See Grps: IORS.BSI.DCA_03 File Port: 22011 Comp: IORSC	See Grps: IORS.BSI.DCA_03 File Port: 22011 Comp: IORSC	See Grps: IORS.BSI.DCA_03 File Port: 21911 Comp: IORSC							
Core Logics: IORSC Core Obj Ports: pc-rgnrg140107															
PF151E_22141	PRO04C_21032	PRO04C_22061	RBC04E_22051	WCM02E_22251	BER01E_22641	BLT01E_22641	BNP03E_21904	BNP04E_21906							
See Grps: IORS.BSI.DCA_03 File Port: 22141 Comp: IORSC	See Grps: IORS.BSI.DCA_03 File Port: 21032 Comp: IORSC	See Grps: IORS.BSI.DCA_03 File Port: 22061 Comp: IORSC	See Grps: IORS.BSI.DCA_03 File Port: 22051 Comp: IORSC	See Grps: IORS.BSI.DCA_03 File Port: 22251 Comp: IORSC	See Grps: IORS.BSI.DCA_04 File Port: 22641 Comp: IORSC	See Grps: IORS.BSI.DCA_04 File Port: 21641 Comp: IORSC	See Grps: IORS.BSI.DCA_04 File Port: 21904 Comp: IORSC	See Grps: IORS.BSI.DCA_04 File Port: 21906 Comp: IORSC							
Core Logics: IORSC Core Obj Ports: pc-rgnrg140107															
BT04E_22241	CWNG02E_22091	OCT01M-GETDC_21606	OCT01E-GETDC_21606	GLD04C_22261	GN020E_22761	MG01M_21611	MG01M_21612	MP020E-IM0DC_21607							
See Grps: IORS.BSI.DCA_04 File Port: 22241 Comp: IORSC	See Grps: IORS.BSI.DCA_04 File Port: 22091 Comp: IORSC	See Grps: IORS.BSI.DCA_04 File Port: 21606 Comp: IORSC	See Grps: IORS.BSI.DCA_04 File Port: 21606 Comp: IORSC	See Grps: IORS.BSI.DCA_04 File Port: 22261 Comp: IORSC	See Grps: IORS.BSI.DCA_04 File Port: 22761 Comp: IORSC	See Grps: IORS.BSI.DCA_04 File Port: 21611 Comp: IORSC	See Grps: IORS.BSI.DCA_04 File Port: 21612 Comp: IORSC	See Grps: IORS.BSI.DCA_04 File Port: 21607 Comp: IORSC							
Core Logics: IORSC Core Obj Ports: pc-rgnrg140107															
NIT02E_22261	PRE01E-PREDC_22947	PRO04C_22771	RCB05E_22924	RBC05E_22925	RBC05E_22926	MG020E_22761	MG021M_21611	PER01C_21911							
See Grps: IORS.BSI.DCA_04 File Port: 22261 Comp: IORSC	See Grps: IORS.BSI.DCA_04 File Port: 22071 Comp: IORSC	See Grps: IORS.BSI.DCA_04 File Port: 22771 Comp: IORSC	See Grps: IORS.BSI.DCA_04 File Port: 22924 Comp: IORSC	See Grps: IORS.BSI.DCA_04 File Port: 22924 Comp: IORSC	See Grps: IORS.BSI.DCA_04 File Port: 22761 Comp: IORSC	See Grps: IORS.BSI.DCA_04 File Port: 21611 Comp: IORSC	See Grps: IORS.BSI.DCA_04 File Port: 21612 Comp: IORSC	See Grps: IORS.BSI.DCA_04 File Port: 21607 Comp: IORSC							
Core Logics: IORSC Core Obj Ports: pc-rgnrg140107															
CDL08E-CITDC_22531	CDL08E-CITDC_22531	CDL08E-CITDC_22531	DBK02E-BKORD_21396	DBK02E-BKORD_21396	DBK02E-BKORD_21396	DBK12E-BKORD_21396	DBK12E-BKORD_21396	CDL07E-CITDC_22531							
See Grps: IORS.BSI.DCA_05 File Port: 22531 Comp: IORSC	See Grps: IORS.BSI.DCA_05 File Port: 22531 Comp: IORSC	See Grps: IORS.BSI.DCA_05 File Port: 22531 Comp: IORSC	See Grps: IORS.BSI.DCA_05 File Port: 21396 Comp: IORSC												
Core Logics: IORSC Core Obj Ports: pc-rgnrg140107															
NW09G-FMTDC_21271	NEW06G-FMTDC_21278	NEW06G-FMTDC_21278	INEG01E-INACD_21781	INEG01E-INACD_21781	INEG01E-INACD_21781	INEG01E-INACD_21781	LBD02E-LNK_22943	MOS01E_21913							
See Grps: IORS.BSI.DCA_05 File Port: 21271 Comp: IORSC	See Grps: IORS.BSI.DCA_05 File Port: 21278 Comp: IORSC	See Grps: IORS.BSI.DCA_05 File Port: 21278 Comp: IORSC	See Grps: IORS.BSI.DCA_05 File Port: 21781 Comp: IORSC	See Grps: IORS.BSI.DCA_05 File Port: 21781 Comp: IORSC	See Grps: IORS.BSI.DCA_05 File Port: 22043 Comp: IORSC	See Grps: IORS.BSI.DCA_05 File Port: 22043 Comp: IORSC	See Grps: IORS.BSI.DCA_05 File Port: 21611 Comp: IORSC	See Grps: IORS.BSI.DCA_05 File Port: 21611 Comp: IORSC							
Core Logics: IORSC Core Obj Ports: pc-rgnrg140107															
CWN01E-FNC3_21301	CWN02E-FNC3_21301	FID01E-FNC3_21301	FID02E-FNC3_21301	FID02E-FNC3_21301	FID04E-FNC3_21301	FID04E-FNC3_21301	FID05E-FNC3_21301	FID07E-FNC3_21301							
See Grps: IORS.BSI.DCA_05 File Port: 21301 Comp: IORSC															
Core Logics: IORSC Core Obj Ports: pc-rgnrg140107															
FID08E-NFDC_21301	FID09E-NFDC_21301	FID11E-NFDC_21301	FID10E-NFDC_21301	FID10E-NFDC_21301	FID10E-NFDC_21301	FID02E-NFDC_21301	FID01E-NFDC_21301	FID01E-NFDC_21301							
See Grps: IORS.BSI.DCA_05 File Port: 21301 Comp: IORSC															
Core Logics: IORSC Core Obj Ports: pc-rgnrg140107															
ONE04E-ONEDC_21301	ONE04E-ONEDC_21301	ONE02E-ONEDC_21301	ONE02E-ONEDC_21301												
See Grps: IORS.BSI.DCA_05 File Port: 21301 Comp: IORSC															
Core Logics: IORSC Core Obj Ports: pc-rgnrg140107															
PF19E-SIMDC_21741	PF19E-SIMDC_21741	PF19E-TORC_21221	PF19E-WTC_22942	WBC01E-WBC_22942	WBC02E-WBC_22942	PRO04C-MPT_21481	PRO04C-MPT_21481	PRO07C-MPT_21481							
See Grps: IORS.BSI.DCA_05 File Port: 21741 Comp: IORSC	See Grps: IORS.BSI.DCA_05 File Port: 21741 Comp: IORSC	See Grps: IORS.BSI.DCA_05 File Port: 21221 Comp: IORSC	See Grps: IORS.BSI.DCA_05 File Port: 22942 Comp: IORSC	See Grps: IORS.BSI.DCA_05 File Port: 22942 Comp: IORSC	See Grps: IORS.BSI.DCA_05 File Port: 22945 Comp: IORSC	See Grps: IORS.BSI.DCA_05 File Port: 21481 Comp: IORSC	See Grps: IORS.BSI.DCA_05 File Port: 21481 Comp: IORSC	See Grps: IORS.BSI.DCA_05 File Port: 21481 Comp: IORSC							
Core Logics: IORSC Core Obj Ports: pc-rgnrg140107															
PRO04C_21361	PRO04C_21361														
See Grps: IORS.BSI.DCA_05 File Port: 21361 Comp: IORSC															
Core Logics: IORSC Core Obj Ports: pc-rgnrg140107	Core Logics: IORSC Core Obj Ports: pc-rgnrg140107	Core Logics: IORSC Core Obj Ports: pc-rgnrg140107	Core Logics: IORSC Core Obj Ports: pc-rgnrg140107</												

Chapter 28. Spread Crawler

ISE has partnered with MEB Options to introduce Spread Crawler, a tool that provides powerful insight into actionable spread orders. Spread Crawler is a unique product developed by MEB Options that aggregates exchanges and transmits individual 'attractive' spread orders to subscribers via existing Instant Messaging. It simplifies monitoring of the live spread book feeds – it is fully customizable and only displays spreads that parameters.

The many benefits of Spread Crawler include:

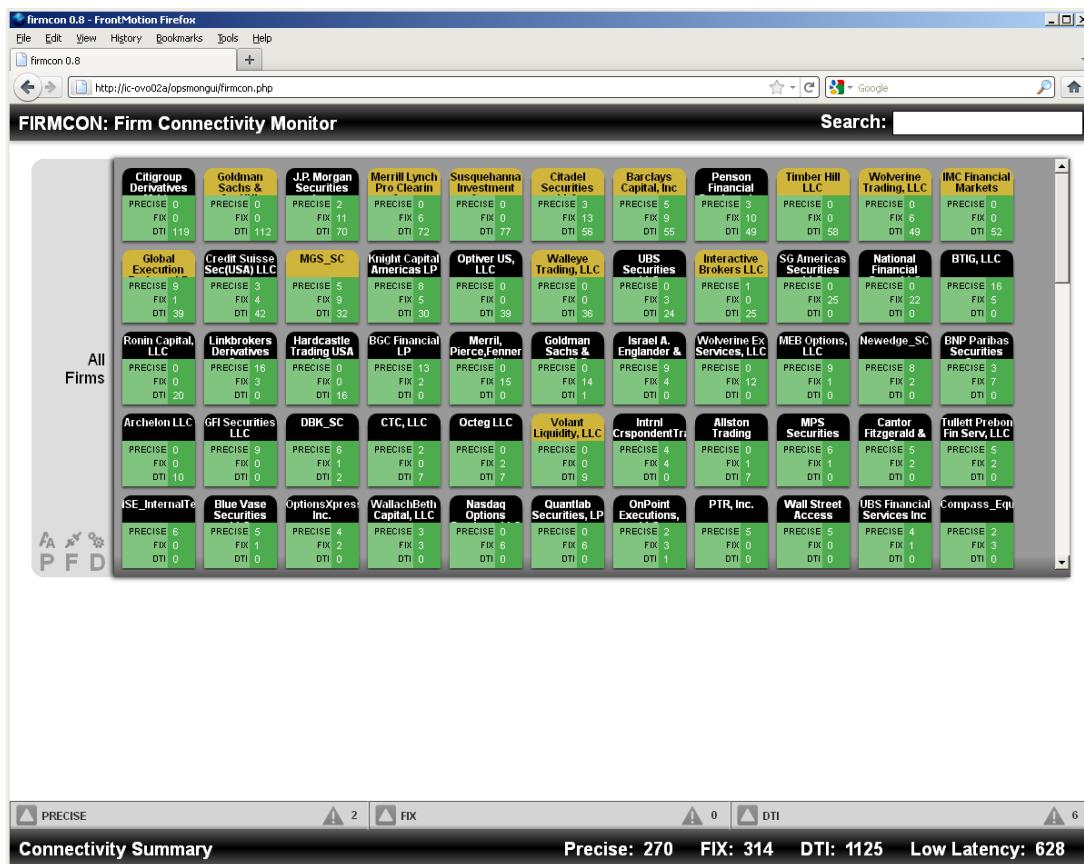
- Manages the complexity of analyzing real-time spread book data from multiple exchanges with high efficiency
- Delivers actionable trading opportunities
- Provides market color for more informed trading decisions
- Offers specific parameters and filters to eliminate noise and maximize access to relevant spread opportunities
 - Specific symbols or industry sector groupings
 - Type of strategy (over 25 available)
 - Strike price and/or expiration date
 - Edge
- Customizable views either by strategy or leg-by-leg detail
- Compatible with all industry standard XMPP compliant messaging platforms including AIM(AOL), ICQ messenger, TRILLIAN and PIDGIN
- No need to install any software – just use existing IM Applications

Chapter 29. Firm Connectivity - FirmCon

This is an internally developed tool to monitor specific member connections. This tool allows users to view Precise, FIX and DTI connections. By double clicking on each of the specific member headers, MktOps can drill down to individual members and the time the connected or disconnected to the exchange.

We can see the Business Units, the specific users, sessions, nodes and gateways. The tool also provides a global number of connections and the latencies.

MktOps opens this tool everyday and refers to it whenever a member explains that they are discussing connectivity.



FIRMCON: Firm Connectivity Monitor - Userview

Type	User Login	BU	Current Connectivity	Session	Node	Process
FIX	JPM16E_21024	JPM16E	Connected at 7:00:52 AM	--	pc-bsl02d	IORS.BSI.ORA_09
FIX	JPM17E_21114	JPM17E	Connected at 7:00:55 AM	--	pc-bsl02d	IORS.BSI.ORA_09
FIX	JPM27E_22373	JPM27E	No Connections	--	--	--
DTI	JPM01M-1	JPM01M	Connected at 7:46:09 AM	2042480	pc-mgw20	Gateway-20-1_001
DTI	JPM01M-10	JPM01M	Connected at 7:50:41 AM	2042589	pc-mgw18	Gateway-18-2_001
DTI	JPM01M-11	JPM01M	Connected at 7:45:32 AM	2042473	pc-mgw17	Gateway-17-1_001
DTI	JPM01M-12	JPM01M	Connected at 7:46:12 AM	2042484	pc-mgw21	Gateway-21-1_001
DTI	JPM01M-13	JPM01M	Connected at 7:46:38 AM	2042491	pc-mgw21	Gateway-21-1_001
DTI	JPM01M-14	JPM01M	Connected at 7:47:10 AM	2042513	pc-mgw17	Gateway-17-1_001
DTI	JPM01M-15	JPM01M	Connected at 7:47:38 AM	2042520	pc-mgw17	Gateway-17-1_001
DTI	JPM01M-16	JPM01M	Connected at 7:48:03 AM	2042526	pc-mgw19	Gateway-19-1_001
DTI	JPM01M-17	JPM01M	Connected at 7:48:36 AM	2042533	pc-mgw18	Gateway-18-1_001
DTI	JPM01M-18	JPM01M	Connected at 7:49:05 AM	2042545	pc-mgw23	Gateway-23-1_001
DTI	JPM01M-19	JPM01M	Connected at 7:49:33 AM	2042582	pc-mgw21	Gateway-21-1_001
DTI	JPM01M-2	JPM01M	Connected at 7:46:35 AM	2042489	pc-mgw19	Gateway-19-1_001
DTI	JPM01M-20	JPM01M	Connected at 7:50:02 AM	2042588	pc-mgw17	Gateway-17-1_001
DTI	JPM01M-21	JPM01M	Connected at 7:50:45 AM	2042595	pc-mgw21	Gateway-21-1_001
DTI	JPM01M-22	JPM01M	Connected at 7:46:09 AM	2042481	pc-mgw20	Gateway-20-1_001
DTI	JPM01M-23	JPM01M	Connected at 7:47:45 AM	2042490	pc-mgw20	Gateway-20-1_001

Displaying JPM connectivity

Connectivity Summary **Precise: 242** **FIX: 308** **DTI: 1069** **Low Latency: 653**

Chapter 30. SDA Console Precise

This is an internally developed to monitor member connections. Each member is assigned an instance through which order information can be obtained by right-clicking on that instance. Logs for audit, errors and trace can be accessed here along with transactions. By selecting transactions, a window pops up and a representative can query within a time frame or by CLOrderID associated with a particular order. Once 'Refresh' is selected, the window splits into 3 panels – the top panel lists all the activity that occurred within the search criteria, the lower left panel lists the tag numbers, the tag name, the value in the tag, and the description of the value, and the right lower panel contains the raw FIX message.

The statistics box at the bottom of the window will populate with the cumulative number of Orders, Trades, and Rejects for all Members on that BSI. By clicking on a member's BSI, the information displayed pertains to that Member only.

Reps can scroll through the upper panel to find a message and by left clicking on one of the lines the bottom panels populate with the details of that line.

ise.bsi.dca.1		DCA.AAA	DCA.ARD	DCA.BERN	DCA.BOA
0	0	0	0	0	0
DCA.BSC	0	0	0	0	0
DCA,DBKWE	0	0	0	0	0
DCA,FDD	0	0	0	0	0
DCA,LAB	0	0	0	0	0
DCA,ONE	0	0	0	0	0
DCA,PRO	0	0	0	0	0
ise.bsi.dca.2	0	0	0	0	0
DCA,RBC	0	0	0	0	0
ise.bsi.lnk.1	0	0	0	0	0
ise.bsi.ora.1	25090	16973	29	0	0
BOATE	16	10	0	0	0
CLSB	1	4	0	0	0
ise.bsi.ora.11	1987	725	7	0	0

ise.bsi.lnk.1 Statistics		Total Orders: 0	Total Trades: 0	Total Rejections: 0	User Sessions: 0	Total Post Trade Allocations: 0
		Total Stop Orders: 0	Total Special Order Responses: 0	Total Block Orders: 0	Total Directed Orders: 0	Total Crossing Orders: 0
		Total Cab Orders: 0	Total Regular Orders: 0	Total Combo Orders: 0		

Adapter Legend	
█	Running
█	Stopping
█	Stopped
█	Initializing
█	Initialized
█	Failed
<input type="button" value="Default Colors"/>	
<input type="button" value="More..."/>	

Search for adapter	
BSI adapter:	<input type="text"/>
<input type="button" value="Search"/>	

Section III. Market Operations Common Practices



Chapter 31. Applying The Obvious Error Rule

Below is the link to the ISE Obvious Error Rule 720:

<https://www.ise.com/assets/documents/OptionsExchange/legal/rules/rules.pdf>

Rule 720. Obvious and Catastrophic Errors

The Exchange shall either bust a transaction or adjust the execution price of a transaction that results from an Obvious Error or Catastrophic Error (collectively "Errors") as provided in this Rule. In limited circumstances, the Exchange may nullify transactions, pursuant to Supplementary Material .08 below.

(a) Definitions

(1) **Obvious Error.** For purposes of this Rule only, an Obvious Error will be deemed to have occurred when the execution price of a transaction is higher or lower than the Theoretical Price for the series by an amount equal to at least the amount shown below:

Theoretical Price	Minimum Amount
Below \$2	.25
\$2 to \$5	.40
Above \$5 to \$10	.50
Above \$10 to \$20	.80
Above \$20	1.00

(2) **Catastrophic Error.** For purposes of this Rule only, a Catastrophic Error will be deemed to have occurred when the execution price of a transaction is higher or lower than the Theoretical Price for the series by an amount equal to at least the amount shown below:

Below \$2	\$1
\$2 to \$5	\$2
Above \$5 to \$10	\$5
Above \$10 to \$50	\$10
Above \$50 to \$100	\$20
Above \$100	\$30

(3) **Theoretical Price.** For purposes of this Rule only, the Theoretical Price of an options series is:

- (i) if the series is traded on at least one other options exchange, the National Best Bid price with respect to an erroneous sell transaction, and the National Best Offer price with respect to an erroneous buy transaction, just prior to the trade in question; or
- (ii) if there are no quotes for comparison purposes, as determined by designated personnel in the Exchange's market control center ("Market Control").

(b) Obvious Error Procedure. Market Control shall administer the application of this Rule as follows.

(1) **Notification.** If a market maker on the Exchange believes that it participated in a transaction that was the result of an Obvious Error, it must notify Market Control within five (5) minutes of the execution. If an Electronic Access Member believes an order it executed on the Exchange was the result of an Obvious Error, it must notify Market Control within twenty (20) minutes of the execution. Absent unusual circumstances, Market Control will not grant relief under this Rule unless notification is made within the prescribed time periods.

(2) **Adjust or Bust.** Market Control will determine whether there was an Obvious Error as defined above. If it is determined that an Obvious Error has occurred, Market Control shall take one of the actions listed below. Upon taking final action, Market Control shall promptly notify both parties to the trade.

(i) Where each party to the transaction is a market maker on the Exchange, the execution price of the transaction will be adjusted by Market Control to the prices provided in paragraphs (A) and (B) below unless both parties agree to adjust the transaction to a different price or agree to bust the trade within ten (10) minutes of being notified by Market Control of the Obvious Error.

(A) Erroneous buy transactions will be adjusted to their Theoretical Price (1) plus \$.15 if the Theoretical Price is under \$3, and (2) plus \$.30 if the Theoretical Price is at or above \$3.

ISE Rules as of 02/22/2012

(B) Erroneous sell transactions will be adjusted to their Theoretical Price (1) minus \$.15 if the Theoretical Price is under \$3, and (2) minus \$.30 if the Theoretical Price is at or above \$3.

(ii) Where at least one party to the Obvious Error is not a market maker on the Exchange, the trade will be busted by Market Control unless both parties agree to an adjustment price for the transaction within thirty (30) minutes of being notified by Market Control of the Obvious Error.

(c) Obvious Error Panel.

(1) Composition. An Obvious Error Panel will be comprised of representatives from four (4) Members. Two (2) of the representatives must be directly engaged in market making activity and two (2) of the representatives must be employed by an Electronic Access Member.

(2) Scope of Panel's Review. If a party affected by a determination made under this Rule so requests within the time permitted in (3) below, the Obvious Error Panel will review decisions made by Market Control under this Rule, including whether an Obvious Error occurred, whether the correct Theoretical Price was used, and whether an adjustment was made at the correct price. A party may also request that the Obvious Error Panel provide relief as provided in this Rule in cases where the party failed to provide the notification required in paragraph (c)(1) and Market Control declined to grant an extension, but unusual circumstances must merit special consideration.

(3) Procedure for Requesting Review. A request for review must be made in writing within thirty (30) minutes after a party receives verbal notification of a final determination by Market Control under this Rule, except that if notification is made after 3:30 p.m. Eastern Time, either party has until 9:30 a.m. Eastern Time the next trading day to request review. The Obvious Error Panel shall review the facts and render a decision on the day of the transaction, or the next trade day in the case where a request is properly made after 3:30 on the day of the transaction or where the request is properly made the next trade day.

(4) Panel Decision. The Obvious Error Panel may overturn or modify an action taken by Market Control under this Rule upon agreement by a majority of the Panel representatives. All determinations by the Obvious Error Panel shall constitute final Exchange action on the matter at issue.

(d) Catastrophic Error Procedure. Market Control shall administer the application of this Rule as follows.

(1) Notification. If a Member believes that it participated in a transaction that qualifies as a Catastrophic Error pursuant to paragraph (a)(2) ISE Rules as of 02/22/2012 above, it must notify Market Control by 8:30 am Eastern Time on the first trading day following the date the Catastrophic Error occurred. For transactions in an expiring options series that take place on expiration Friday, a Member must notify Market Control by 5:00 pm Eastern Time that same day. Relief will not be granted under this paragraph:

(i) unless notification is made within the prescribed time period; and (ii) if an Obvious Error Panel has previously rendered a decision with respect to the transaction(s) in question.

(2) Catastrophic Error Determination. A Catastrophic Error Tribunal, comprised of two (2) representatives of Members directly engaged in market making activity and two (2) representatives employed by Electronic Access Members, will determine whether the transaction(s) qualifies as a Catastrophic Error. If it is determined that a Catastrophic Error has occurred, the Tribunal will instruct Market Control to adjust the execution price of the transaction(s) according to subparagraph (3) below. If it is determined that a Catastrophic Error has not occurred, the Member will be subject to a charge of \$5,000. All determinations by the Catastrophic Error Tribunal shall constitute final Exchange action on the matter at issue.

(3) Adjustment. If it is determined that a Catastrophic Error has occurred, unless both parties agree to adjust the transaction(s) to a different price, the execution price of the transaction(s) will be adjusted to the theoretical price (i) plus the adjustment value provided below for erroneous buy transactions, and (ii) minus the adjustment value provided below for erroneous sell transactions:

Below \$2	\$1
\$2 to \$5	\$2
Above \$5 to \$10	\$3
Above \$10 to \$50	\$5
Above \$50 to \$100	\$7
Above \$100	\$10

Supplementary Material to Rule 720

.01 When Market Control determines that an Error has occurred and action is warranted under paragraphs (b) or (d) above, the identity of the parties to the trade will be disclosed to each other in order to encourage conflict resolution.

.02 To qualify as a representative of an Electronic Access Member on an Obvious Error Panel or Catastrophic Error Tribunal, a person must (i) be employed by a Member whose revenues from options market making activity do not exceed ten percent (10%) of its total revenues; or (ii) have as his or her primary responsibility the
ISE Rules as of 02/22/2012

handling of Public Customer orders or supervisory responsibility over persons with such responsibility, and not have any responsibilities with respect to market making activities.

.03 The Exchange shall designate at least ten (10) market maker representatives and at least ten (10) Electronic Access representatives to be called upon to serve on Obvious Error Panels and Catastrophic Error Tribunals as needed. In no case shall an Obvious Error Panel or Catastrophic Error Tribunal include a person related to a party to the trade in question. To the extent reasonably possible, the Exchange shall call upon the designated representatives to participate on an Obvious Error Panel on an equally frequent basis.

.04 All determinations made by the Exchange, Market Control, an Obvious Error Panel or Catastrophic Error Tribunal under this Rule shall be rendered without prejudice as to the rights of the parties to the transaction to submit a dispute to arbitration.

.05 Buyers of options with a zero bid may request that their execution be busted if at least the two strikes below (for calls) or above (for puts) in the same options class were quoted with a zero bid at the time of the execution. Such buyers must follow the procedures of paragraph (b)(1) above.

.06 Reserved.

.07 For purposes of Rule 720, an “erroneous sell transaction” is one in which the price received by the person selling the option is erroneously low, and an “erroneous buy transaction” is one in which the price paid by the person purchasing the option is erroneously high.

.08 Unless all parties to a trade agree otherwise, Market Control may nullify a trade if all parties to a trade fail to receive a trade execution report due to a verifiable system outage.

[Adopted June 1, 2001 (SR-ISE-2000-19); amended June 27, 2002 (SR-ISE-2001-34); amended November 14, 2002 (SR-ISE-2002-23); amended June 26, 2003 (SR-ISE-2003-10); amended July 27, 2006 (SR-ISE-2006-14); amended February 28, 2008 (SR-ISE-2007-112); amended March 25, 2009 (SR-ISE-2009-10); amended February 22, 2012 (SR-ISE-2012-10).]

Chapter 32. MPT- Verifying an Execution

Regular Order

Using **PrecISE** select an underlying/ product and enter a marketable order.

You may also verify the product status by viewing **Market Watch** (MW). Locate the symbol and determine status (green is good) other status need to be investigated.

After entering the marketable order use to tools below to view the execution.

Open an Optimise **Market Place Tool** (MPT) the will be a main menu bar that will open. Keep this maximized.

In MPT select *Order Status*, when the screen opens, verify the proper date. Depending on how narrow you want your search, choose the *Series* or the *Product* (FYI wildcard* search do not work at this time) and enter the order details.

To further narrow down the search you may enter the *Business Unit*. Check the bottom right part of PrecISE to see which Bus Unit you are in. You may enter the first three letters and select the drop down see select the proper one.

Be aware that you are in *ALL*. If *Combo* is selected you will only see combos.

On the top right screen there is a preferences button. This will list all of the many column selections that are available. They are sort-able. (FYI: not save-able at this time).

Determine the *Current Status* shows filled and use the toggle bar to scroll to the right to verify other details about the execution.

You may use Advanced Search to narrow search by deal quantity, position effect, deal instrument ID, CMTA account, clearing account clearing sub account, free text, ext free text.

When you locate the order, you may right click and choose *History*. You will then get the snapshot of what took place it that time of entry. (FYI: there are display issues being worked on to improve the information that populates).

When the PrecISE order(s) execute you may view them in 3 different tabs off the main menu bar.

Trade Items- This view displays a summary of the execution in one row. By right clicking the selected line you can:

- Add a trade
- Bust a trade
- Bust a deal (if multiple counterparties)

Deal Items- This view displays a summary of the execution in two separate lines Buy and Sell.

- Bust
- Deal Maintenance- (DIMI) split, give change, clearing type (customer, firm, mm), sub account, cmta, free text, account number, position effect (open, closed) etc.
- Deal Rectification- change deal quantity, change deal price, remove a counterparty or bust.

Trades by BU- Trades by a particular member can be found by entering the Firm/User you can view all the particular information about the execution.

Using **Orderbook Explorer** (OBE) select *Deal Items*-ISE to get a “clearing trades type view” of the execution(s)

Spread Order

Enter a marketable spread order into PrecISE.

Use **MPT Order Status** to view the execution, use Combo to narrow down the search.

You may view all trades a BU makes by looking at Trades by BU.

All ISE Order Types

- 1) Block
- 2) Crossing Orders:
 - Facilitation
 - Solicitation
 - Customer Match

- PIM
 - Sweep & Cross
 - Qualified contingent Cross
 - Reserve Cross
 - Matched Orders
 - Crossing Orders:
 - Crossing Orders:
- 3) Spread Orders:
- Regular Spread (above)
 - Facilitation
 - Solicitation Spread
 - Customer Match Spread
 - PIM Spread
 - Qualified Contingent Cross Spread
 - Matched Order Spread
 - Reserve Cross Spread
- 1) With Stock:
- Buy-write
 - Delta-Neutral
 - Facilitation with Stock
 - Solicitation with Stock
 - Customer Match with stock
 - PIM with Stock
 - Matched Order with Stock
 - Reserve Cross with Stock
- 2) Stop Orders
- 3) CAB Orders

Validity

- 1) IOC
- 2) IOC MinQty
- 3) FoK
- 4) Day
- 5) Day AoN
- 6) Day MinQty
- 7) GTC
- 8) GTC AON
- 9) GTC MinQty
- 10) GTD
- 11) GTD AoN
- 12) GTD MinQty
- 13) Opening Only

Chapter 33. MPT/ Trade Clearing Changes (Prior Day)

The screenshot shows the 'Trade Enter' application window. The 'TRADE Identifier' section includes fields for Market (ISE), Instrument (CSCO2JUL20.0C), Product (CSCO), TM txn Date Time (03/12/2012 14:15:19), Update Mrkt Stat (NO), Price/Qty (Deal Price 1.02, Trade Qty 1), and Event Business Date (03/12/2012). The 'BUYER' section includes fields for Owning Bus Unit (HUL01M), Client Category (ISEMM), Free Text, Ext Free Text, and various clearing account dropdowns (Broker 108, Clrg Type MM, Clrg Account 00009, Clrg Sub Account QIA, Clrg CMTA Account OPEN). The 'SELLER' section includes fields for Owning Bus Unit (FMT06E), Client Category (CUSTOMER_PROF), Free Text, Ext Free Text, and clearing account dropdowns (Broker 1, Clrg Type CUSTOMER, Clrg Account 00608, Clrg Sub Account TSDS, Clrg CMTA Account 00722). The 'Comments' section contains Deal Revision Reason and Deal Revision Mops Comment fields. A 'User/BusUnit' section shows ISE Bus Unit and ISE Analyst (duffri).

When a Market Operations Representative (MktOps) arrives each morning they are to open all applicable tools that are required to perform the MktOps job function.

These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

MktOps selects Applications and then chooses Market Place Tool (**MPT Client**).

When a new customer build is created each customer has a specific default give/up number. This number signifies the relationship between the clearing firm and the customer. Some customers have multiple relationships with many clearing firms. Often the member is uncertain about the clearing until after the trade is executed.

If the member uses a PrecISE front-end, clearing changes can be made by the member in the Orders Status window.

Members simply highlight the trade(s) they want to change and then select "Clearing." Another window opens with drop downs on the field they are looking to move. Fields such as give-up, CMTA, open/close. They may also select to split part of an execution.

Members may change a firm or FARMM order to a customer. They are not permitted to change clearing from customer to firm and FARMM.

If the member executes a trade through their own front-end and cannot make clearing changes they may contact Market Operations through Outlook email at helpdesk@ise.com or through our toll free number at 877-473-9989.

When a clearing change is called MktOps needs to know the specific details about the trade(s), underlying/product, month, strike, strike price, execution price, term, time, buy/ sell side, the business unit and finally what is the nature of the change. The more information MktOps has the quicker and more accurately a change can be made.

Mkt Ops will have MPT client and the specific windows, Deal Items, Trades and Trades by BU already opened.

Almost all clearing changes are made on trade date or trade date + 1. Occasionally there might be an older trade. Members and clearing firms are more efficient at finding trade "breaks" than they were in the past. If the trade is from a prior date, Mkt Ops can make the clearing change using the "**Trades**" window.

Deal Items should **not** be selected at this time. While the clearing action works here, any change made

produces a broadcast message to all sides of the trade instead of the specific customers requesting the change. Trades will only send the change to the one customer. In the Trades window, change the Match Event Date on the top left section of the screen to the date needed. Under the Market Identifier section, users can populate the Product or Series for a security they are looking for. At this time there is no wildcard search (**Matching engine issues) users must enter either the symbol for product.

To further narrow down the search users can populate the Firm ID with a 6 character Business Unit (BU) acronym.

Advanced filters can also reduce the search. Users can look for trades using the position effect (open/close), Client Category (customer, customer/Prof, broker, proprietary, FARMM, ISEMM), Deal instrument ID, Trade ID, Clearing Account, Clearing sub-account, free text, ext free text.

Users may also search by time and in future versions by price.

The default status is Active, meaning it is an existing execution. Inactive is for any altered execution and all display both.

Mkt Ops users have the ability to set up their own defaulted user preference columns at this there are over ninety of them. Each column can be added or moved anyway in the display field. The minimum required fields are Buy Own BU, Sell Own BU, Product, Instrument, Trade Quantity, Deal Price, ME Txn Timestamp.

When the user finds the specific trade they are looking to change, they highlight it, an arrow appears on the far left and the selection highlights and shades color.

The User selects "Add Trade." The "Trade Enter" window appears with all the pertinent information on the trade. Product, Instrument, TM Txn Date Time. (This is very important for clearing and audit trail), Trade Qty, Deal Price and the buy and sell side information. At this time there is no adjust feature so users must add the trade, meaning reverse the side that is wrong and adjust the proper clearing to the correct side.

The most common prior day change is clearing account (aka give-up). Each business acronym is built by Product Operations and is assigned a clearing account. This build follows the ISE Member Processing Procedure that is maintained by Legal and it becomes the firms default account. Many customers have numerous clearing relationships and frequently clear trades through firms that are not their default.

When the Trades/ Trade Enter window appears all the existing trade details are already on the trade. To make the change, users need to reverse the old trade details and add the new. This is achieved by using only the firm requesting a change.

Ideally, MktOps should only make give up changes and not specific CMTA, sub-account, account number or open/close changes. Now, if a member requests a give up change and in addition: a CMTA, sub account, account number or open/close change. Mkt Ops can assist them. The reason this for avoiding this to prevent the change from being duplicated by the ISE and the clearing firm and having the members trade break for a second day while incurring unnecessary fees.

If Buy side member ABC01E (give up 00123) cleared a trade vs. DEF01E (give up 00456) and ABC requested a change to (give up 00789), then all the trade information on the buy side should be manually entered to the sell side and the buy side changed to (00789). This flattens out the wrong information and adds the correct. The original sell side counter party is unaffected. This is the link to the OCC to locate valid CMTA clearing numbers:

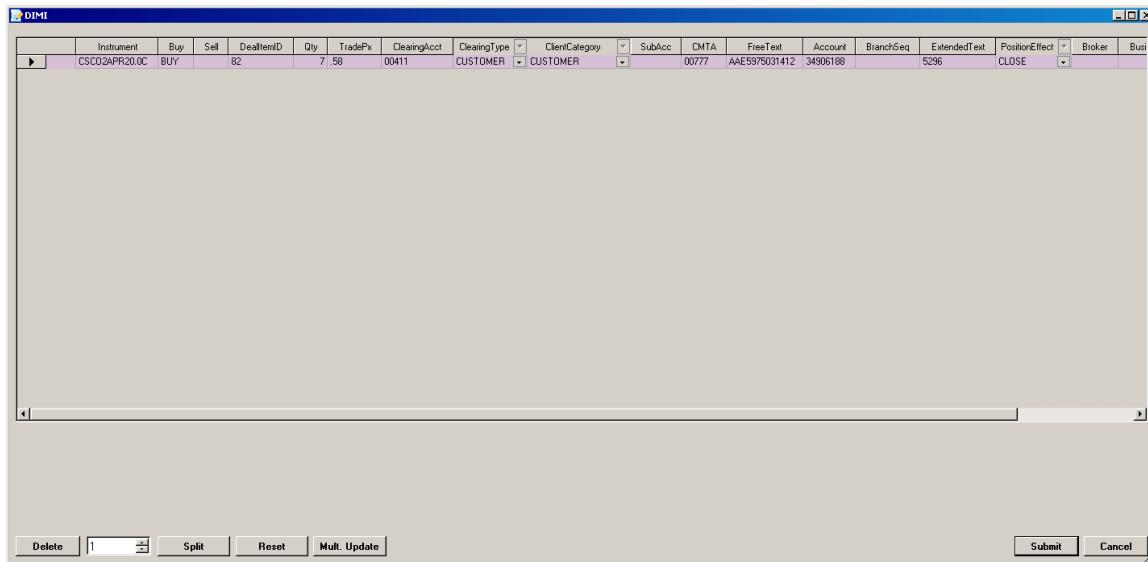
<http://www.theocc.com/clearing/clearing-services/default.jsp>

Once the proper information is entered and the work is checked, MktOps should enter the Deal Revision Reason and the Comment field to explain the change being made and then submit it

Work should be double checked by refreshing the search in MPT Trades, Deal or trades by BU and verifying it is correct. If the submitted trade is incorrect, Mkt Ops can bust it and re-enter. Ideally if should be correct when entered the first time to avoid any confusion.

Mkt Ops should then log the clearing change in the Avaya Phone system with the proper notes further explaining what was done and following the proper management notification for trades \$250,000 and up. Within 30 minutes the change is reflected at the Option Clearing Corporation (OCC). Please refer to the OCC procedure for more details.

Chapter 34. MPT/ Trade Clearing Changes (Same Day)



When a Market Operations Representative (MktOps) arrives each morning they are to open all applicable tools that are required to perform the MktOps job function.

These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

MktOps selects Applications and then chooses Market Place Tool (**MPT Client**).

When a new customer build is created each customer has a specific default give/up number. This number signifies the relationship between the clearing firm and the customer. Some customers have multiple relationships with many clearing firms. Often the member is uncertain about the clearing until after the trade is executed.

If the member uses a PrecISE front-end, clearing changes can be made by the member in the Orders Status window.

Members simply highlight the trade(s) they want to change and then select "Clearing." Another window opens with drop downs on the field they are looking to move. Fields such as give-up, CMTA, open/close. They may also select to split part of an execution.

Members may change a firm or FARMM order to a customer. They are not permitted to change clearing from customer to firm and FARMM.

If the member executes a trade through their own front-end and cannot make clearing changes they may contact Market Operations through Outlook email at helpdesk@ise.com or through our toll free number at 877-473-9989.

When a clearing change is called MktOps needs to know the specific details about the trade(s), underlying/product, month, strike, strike price, execution price, term, time, buy/ sell side, the business unit and finally what is the nature of the change. The more information MktOps has the quicker and more accurately a change can be made.

Mkt Ops will have MPT client and the specific windows, Deal Items, Trades and Trades by BU already opened.

Under the Market Identifier section, users can populate the Product or Series for a security they are looking for. At this time there is no wildcard search (**Matching engine issues) users must enter either the symbol for product.

To further narrow down the search users can populate the Firm ID with a 6 character Business Unit (BU) acronym.

In the Trades window, change the Match Event Date on the top left section of the screen to the date needed.

Advanced filters can also reduce the search. Users can look for trades using the position effect (open/close), Client Category (customer, customer/Prof, broker, proprietary, FARMM, ISEMM), Deal instrument ID, Trade ID, Clearing Account, Clearing sub-account, free text, ext free text.

Users may also search by time, price and size.

The default status is Active, meaning it is an existing execution. Inactive is for any altered execution and all display both.

Mkt Ops users have the ability to set up their own defaulted user preference columns at this there are over ninety of them. Each column can be added or moved anyway in the display field. The minimum required fields are Buy Own BU, Sell Own BU, Product, Instrument, Trade Quantity, Deal Price, ME Txn Timestamp.

When the user finds the specific trade the member is looking to change, they highlight it, an arrow appears on the far left and the selection highlights and shades color.

For same day Give up changes, CMTA changes, CMTA add or removal, Clearing Type changes (Customer, MM or Firm), Client Category changes (ISE MM, Customer, Customer Professional, Broker, Proprietary, FARMM, ISEMM), Sub Account adds or removal, Free Text add or removal, Account add or removal, and Position Effect (Open or Close) Mkt Ops should use **Deal Items – Deal Maintenance or DIMI**

The window open and across the screen Mkt Ops can make the necessary changes to either one trade or several depending on what is needed.

If changing clearing to several highlighted trades, Mkt Ops can use **Multiple Update** located at the bottom of the window. When selected all fields that can be changed appear. Here users populate the needed change and then select update all. User will see the change made but still need to select submit for the change to go through.

User can also highlight a field, enter the information and then copy the information to the other selected fields by using Control C + Control V.

Mkt Ops should verify any change made by searching the trade again to verify it is done correctly.

The most common prior day change is clearing account (aka give-up). Each business acronym is built by Product Operations and is assigned a clearing account. This build follows the ISE Member Processing Procedure that is maintained by Legal and it becomes the firms default account. Many customers have numerous clearing relationships and frequently clear trades through firms that are not their default.

Mkt Ops is contacted via the phone and email so there is an audit trail if needed.

In addition, there will be an alert mail that will recap and change made that is more than \$250,000 in principal.

Work should be double checked by refreshing the search in MPT Trades, Deal or trades by BU and verifying it is correct. If the submitted trade is incorrect, Mkt Ops can bust it and re-enter. Ideally if should be correct when entered the first time to avoid any confusion.

Mkt Ops should then log the clearing change in the Avaya Phone system with the proper notes further explaining what was done and following the proper management notification for trades \$250,000 and up. Within 30 minutes the change is reflected at the Option Clearing Corporation (OCC). Please refer to the OCC procedure for more details.

Chapter 35. MPT/ Contract Adjustment (Prior Day)

When a Market Operations Representative (MktOps) arrives each morning they are to open all applicable tools that are required to perform the MktOps job function.

These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

MktOps selects Applications and then chooses Market Place Tool (**MPT Client**).

Only MktOps can make a price adjustment. Member cannot. MktOps can only make a price adjustment only if both sides agree to this change.

Members contact Market Operations by calling our toll free number at 877-473-9989.

Periodically members will not notice a price execution/ discrepancy until the next day. Customers have the best chance to get price adjustments as soon after the trade as possible. An overnight request opens up the possibility of a member getting a free look on the execution. It is not Mkt Ops place to determine this, only to relay the facts to the counterparty.

When requesting a price change, MktOps needs to know the specific details about the trade(s), underlying/product, month, strike, strike price, execution price, term, time, buy/ sell side, the business unit. The more information MktOps has the quicker and more accurately a change can be made.

Mkt Ops will have MPT client and the specific windows, Deal Items, Trades and Trades by BU already opened.

Under the Market Identifier section, users can populate the Product or Series for a security they are looking for. At this time there is no wildcard search (**Matching engine issues) users must enter either the symbol for product.

To further narrow down the search users can populate the Firm ID with a 6 character Business Unit (BU) acronym.

In the Trades window, change the Match Event Date on the top left section of the screen to the date needed.

Advanced filters can also reduce the search. Users can look for trades using the position effect (open/ close), Client Category (customer, customer/Prof, broker, proprietary, FARMM, ISEMM), Deal instrument ID, Trade ID, Clearing Account, Clearing sub-account, free text, ext free text.

Users may also search by time, price and size.

The default status is Active, meaning it is an existing execution. Inactive is for any altered execution and all display both.

Mkt Ops users have the ability to set up their own defaulted user preference columns at this there are over ninety of them. Each column can be added or moved anyway in the display field. The minimum required fields are Buy Own BU, Sell Own BU, Product, Instrument, Trade Quantity, Deal Price, ME Txn Timestamp.

When the user finds the specific trade the member is looking to change MktOps should ask what the customer is seeing or why they believe the price is incorrect.

The first thing MktOps must determine is if this is an Obvious Error. MktOps can ask but must still verify if the trade(s) qualify. Please refer the Obvious Error Procedure.

By asking questions Mkt Ops can determine the proper course of action quickly. Was this a: market or limit order, large order in a wide market, in a light volume series and it moved the market, was it a straight order, combo, combo with stock, which market are you looking at, was this entered properly, properly priced, what price were you expecting, was this a technical issue on his side or the ISE, did this violate a limit price, did the ISE handle it properly?

Mkt Ops should be locating the Trade in MPT. Seeing who the counter-party is, looking for the current market using Order book Explorer (OBE), locating the trade on the tape using Thomson One, opening Query Viewer to see what was happening before and after the trade.

Once an action plan is established, MktOps quickly takes action. If the customer made an error they need to be informed promptly so they can take action on their side.

Trade(s) can occur with one or multiple counterparties. Each counterparty will be called as needed.

Mkt Ops will see both sides of the trade in MPT. Once a plan is determined, Mkt Ops, contacts the firms or market makers on the trade. Unless the trade qualifies as an Obvious Error, customer counterparty

trades will not be busted. MktOps will have all the necessary information at hand to allow them to make the proper determination.

MktOps stance is to always do what is right and proper for all parties. Mkt Ops will plead the situation accordingly using their professional expertise. If a print is allowable by ISE rule, Mkt Ops can only relay the situation and escalate if necessary.

If an agreement on price between both is made, Mkt Ops can proceed.

Using **Trades** select the trade to be changed, highlight it, an arrow appears on the far left and the selection highlights and shades color.

Select **Deal Rectification or DMI**, the window appears and all the important information about the trades appears for the user to verify what they are changing. Instrument, Buy and Sell Quantity, Original Price and the breakdown below. Mkt Ops enters the proper agreed upon price in the **New Deal Price** free form field and submits. Both counterparties receive broadcast messages of the change the change can be seen on the tape.

Similar price changes can be made in **Deal Items** but there might be several counterparties. If all parties agree to the same price than a change can be made.

Mkt Ops should verify any change made by searching the trade again to verify it is done correctly.

In addition, there will be an alert mail that will recap and change made that is more than \$250,000 in principal.

Work should be double checked by refreshing the search in MPT Trades, Deal or trades by BU and verifying it is correct. If the submitted trade is incorrect, Mkt Ops can bust it and re-enter. Ideally it should be correct when entered the first time to avoid any confusion.

Mkt Ops should then log the price change in the Avaya Phone system with the proper notes further explaining what was done and following the proper management notification for trades \$250,000 and up.

Chapter 36. MPT/ Contract Adjustment (Same Day)

When a Market Operations Representative (MktOps) arrives each morning they are to open all applicable tools that are required to perform the MktOps job function.

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MktOps selects Applications and then chooses Market Place Tool (**MPT Client**).

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Periodically members will not notice a price execution/ discrepancy until the next day. Customers have the best chance to get price adjustments as soon after the trade as possible. An overnight request opens up the possibility of a member getting a free look on the execution. It is not Mkt Ops place to determine this, only to relay the facts to the counterparty.

When requesting a price change, MktOps needs to know the specific details about the trade(s), underlying/product, month, strike, strike price, execution price, term, time, buy/ sell side, the business unit. The more information MktOps has the quicker and more accurately a change can be made.

Mkt Ops will have MPT client and the specific windows, Deal Items, Trades and Trades by BU already opened.

Under the Market Identifier section, users can populate the Product or Series for a security they are looking for. At this time there is no wildcard search (**Matching engine issues) users must enter either the symbol for product.

To further narrow down the search users can populate the Firm ID with a 6 character Business Unit (BU) acronym.

In the Trades window, change the Match Event Date on the top left section of the screen to the date needed.

Advanced filters can also reduce the search. Users can look for trades using the position effect (open/ close), Client Category (customer, customer/Prof, broker, proprietary, FARMM, ISEMM), Deal instrument ID, Trade ID, Clearing Account, Clearing sub-account, free text, ext free text.

Users may also search by time, price and size.

The default status is Active, meaning it is an existing execution. Inactive is for any altered execution and all display both.

Mkt Ops users have the ability to set up their own defaulted user preference columns at this there are over ninety of them. Each column can be added or moved anyway in the display field. The minimum required fields are Buy Own BU, Sell Own BU, Product, Instrument, Trade Quantity, Deal Price, ME Txn Timestamp.

When the user finds the specific trade the member is looking to change MktOps should ask what the customer is seeing or why they believe the price is incorrect.

The first thing MktOps must determine is if this is an Obvious Error. MktOps can ask but must still verify if the trade(s) qualify. Please refer the Obvious Error Procedure.

By asking questions Mkt Ops can determine the proper course of action quickly. Was this a: market or limit order, large order in a wide market, in a light volume series and it moved the market, was it a straight order, combo, combo with stock, which market are you looking at, was this entered properly, properly priced, what price were you expecting, was this a technical issue on his side or the ISE, did this violate a limit price, did the ISE handle it properly?

Mkt Ops should be locating the Trade in MPT. Seeing who the counter-party is, looking for the current market using Order book Explorer (OBE), locating the trade on the tape using Thomson One, opening Query Viewer to see what was happening before and after the trade.

Once an action plan is established, MktOps quickly takes action. If the customer made an error they need to be informed promptly so they can take action on their side.

Trade(s) can occur with one or multiple counterparties. Each counterparty will be called as needed.

Mkt Ops will see both sides of the trade in MPT. Once a plan is determined, Mkt Ops, contacts the firms or market makers on the trade. Unless the trade qualifies as an Obvious Error, customer counterparty

trades will not be busted. MktOps will have all the necessary information at hand to allow them to make the proper determination.

MktOps stance is to always do what is right and proper for all parties. Mkt Ops will plead the situation accordingly using their professional expertise. If a print is allowable by ISE rule, Mkt Ops can only relay the situation and escalate if necessary.

If an agreement on price between both is made, Mkt Ops can proceed.

Using **Trades** select the trade to be changed, highlight it, an arrow appears on the far left and the selection highlights and shades color.

Select **Deal Rectification or DMI**, the window appears and all the important information about the trades appears for the user to verify what they are changing. Instrument, Buy and Sell Quantity, Original Price and the breakdown below. Mkt Ops enters the proper agreed upon price in the **New Deal Price** free form field and submits. Both counterparties receive broadcast messages of the change the change can be seen on the tape.

Similar price changes can be made in **Deal Items** but there might be several counterparties. If all parties agree to the same price than a change can be made.

Mkt Ops should verify any change made by searching the trade again to verify it is done correctly.

In addition, there will be an alert mail that will recap and change made that is more than \$250,000 in principal.

Work should be double checked by refreshing the search in MPT Trades, Deal or trades by BU and verifying it is correct. If the submitted trade is incorrect, Mkt Ops can bust it and re-enter. Ideally if should be correct when entered the first time to avoid any confusion.

Mkt Ops should then log the price change in the Avaya Phone system with the proper notes further explaining what was done and following the proper management notification for trades \$250,000 and up.

Chapter 37. MPT/ Price Adjustment (Prior Day)

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When requesting a price change, MktOps needs to know the specific details about the trade(s), underlying/product, month, strike, strike price, execution price, term, time, buy/ sell side, the business unit. The more information MktOps has the quicker and more accurately a change can be made.

Mkt Ops will have MPT client and the specific windows, Deal Items, Trades and Trades by BU already opened.

Under the Market Identifier section, users can populate the Product or Series for a security they are looking for. At this time there is no wildcard search (**Matching engine issues) users must enter either the symbol for product.

To further narrow down the search users can populate the Firm ID with a 6 character Business Unit (BU) acronym.

In the Trades window, change the Match Event Date on the top left section of the screen to the date needed.

Advanced filters can also reduce the search. Users can look for trades using the position effect (open/ close), Client Category (customer, customer/Prof, broker, proprietary, FARMM, ISEM), Deal instrument ID, Trade ID, Clearing Account, Clearing sub-account, free text, ext free text.

Users may also search by time, price and size.

The default status is Active, meaning it is an existing execution. Inactive is for any altered execution and all display both.

Mkt Ops users have the ability to set up their own defaulted user preference columns at this there are over ninety of them. Each column can be added or moved anyway in the display field. The minimum required fields are Buy Own BU, Sell Own BU, Product, Instrument, Trade Quantity, Deal Price, ME Txn Timestamp.

When the user finds the specific trade the member is looking to change MktOps should ask what the customer is seeing or why they believe the price is incorrect.

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Mkt Ops should be locating the Trade in MPT. Seeing who the counter-party is, looking for the current market using Order book Explorer (OBE), locating the trade on the tape using Thomson One, opening Query Viewer to see what was happening before and after the trade.

Once an action plan is established, MktOps quickly takes action. If the customer made an error they need to be informed promptly so they can take action on their side.

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If an agreement on price between both is made, Mkt Ops can proceed.

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Select **Deal Rectification or DMI**, the window appears and all the important information about the trades appears for the user to verify what they are changing. Instrument, Buy and Sell Quantity, Original Price and the breakdown below. Mkt Ops enters the proper agreed upon price in the **New Deal Price** free form field and submits. Both counterparties receive broadcast messages of the change the change can be seen on the tape.

Similar price changes can be made in **Deal Items** but there might be several counterparties. If all parties agree to the same price than a change can be made.

Mkt Ops should verify any change made by searching the trade again to verify it is done correctly.

In addition, there will be an alert mail that will recap and change made that is more than \$250,000 in principal.

Work should be double checked by refreshing the search in MPT Trades, Deal or trades by BU and verifying it is correct. If the submitted trade is incorrect, Mkt Ops can bust it and re-enter. Ideally it should be correct when entered the first time to avoid any confusion.

Mkt Ops should then log the price change in the Avaya Phone system with the proper notes further explaining what was done and following the proper management notification for trades \$250,000 and up.

Within 30 minutes the change is reflected at the Option Clearing Corporation (OCC). Please refer to the OCC procedure for more details.

Chapter 38. MPT/ Price Adjustment (Same Day)

The screenshot shows a Windows application window titled "DMI". At the top, there are fields for "Deal Instrument: CSC02APR20.0C", "New Deal Price: [empty input field]", and "Original Deal Price: \$0.58". Below these are fields for "Deal Id: 1", "Buy Qty: 1", "Sell Qty: 1", and "Original Deal Qty: 1". A main table displays two rows of deal items:

DealItemID	BusinessUnit	User	_BuyQty	_SellQty	FreeText	ExtendedText
167	THI01M	10	1		20053	
166	ATD01E	1		1	AAF0405031412	5940

At the bottom of the window are buttons for "Bust Deal", "Reset", "Submit", and "Cancel".

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Mkt Ops will have MPT client and the specific windows, Deal Items, Trades and Trades by BU already opened.

Under the Market Identifier section, users can populate the Product or Series for a security they are looking for. At this time there is no wildcard search (**Matching engine issues) users must enter either the symbol for product.

To further narrow down the search users can populate the Firm ID with a 6 character Business Unit (BU) acronym.

In the Trades window, change the Match Event Date on the top left section of the screen to the date needed.

Advanced filters can also reduce the search. Users can look for trades using the position effect (open/ close), Client Category (customer, customer/Prof, broker, proprietary, FARMM, ISEM), Deal instrument ID, Trade ID, Clearing Account, Clearing sub-account, free text, ext free text.

Users may also search by time, price and size.

The default status is Active, meaning it is an existing execution. Inactive is for any altered execution and all display both.

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priced, what price were you expecting, was this a technical issue on his side or the ISE, did this violate a limit price, did the ISE handle it properly?

Mkt Ops should be locating the Trade in MPT. Seeing who the counter-party is, looking for the current market using Order book Explorer (OBE), locating the trade on the tape using Thomson One, opening Query Viewer to see what was happening before and after the trade.

Once an action plan is established, MktOps quickly takes action. If the customer made an error they need to be informed promptly so they can take action on their side.

Trade(s) can occur with one or multiple counterparties. Each counterparty will be called as needed.

Mkt Ops will see both sides of the trade in MPT. Once a plan is determined, Mkt Ops, contacts the firms or market makers on the trade. Unless the trade qualifies as an Obvious Error, customer counterparty trades will not be busted. MktOps will have all the necessary information at hand to allow them to make the proper determination.

MktOps stance is to always do what is right and proper for all parties. Mkt Ops will plead the situation accordingly using their professional expertise. If a print is allowable by ISE rule, Mkt Ops can only relay the situation and escalate if necessary.

If an agreement on price between both is made, Mkt Ops can proceed.

Using **Trades** select the trade to be changed, highlight it, an arrow appears on the far left and the selection highlights and shades color.

Select **Deal Rectification or DMI**, the window appears and all the important information about the trades appears for the user to verify what they are changing. Instrument, Buy and Sell Quantity, Original Price and the breakdown below. Mkt Ops enters the proper agreed upon price in the **New Deal Price** free form field and submits. Both counterparties receive broadcast messages of the change the change can be seen on the tape.

Similar price changes can be made in **Deal Items** but there might be several counterparties. If all parties agree to the same price than a change can be made.

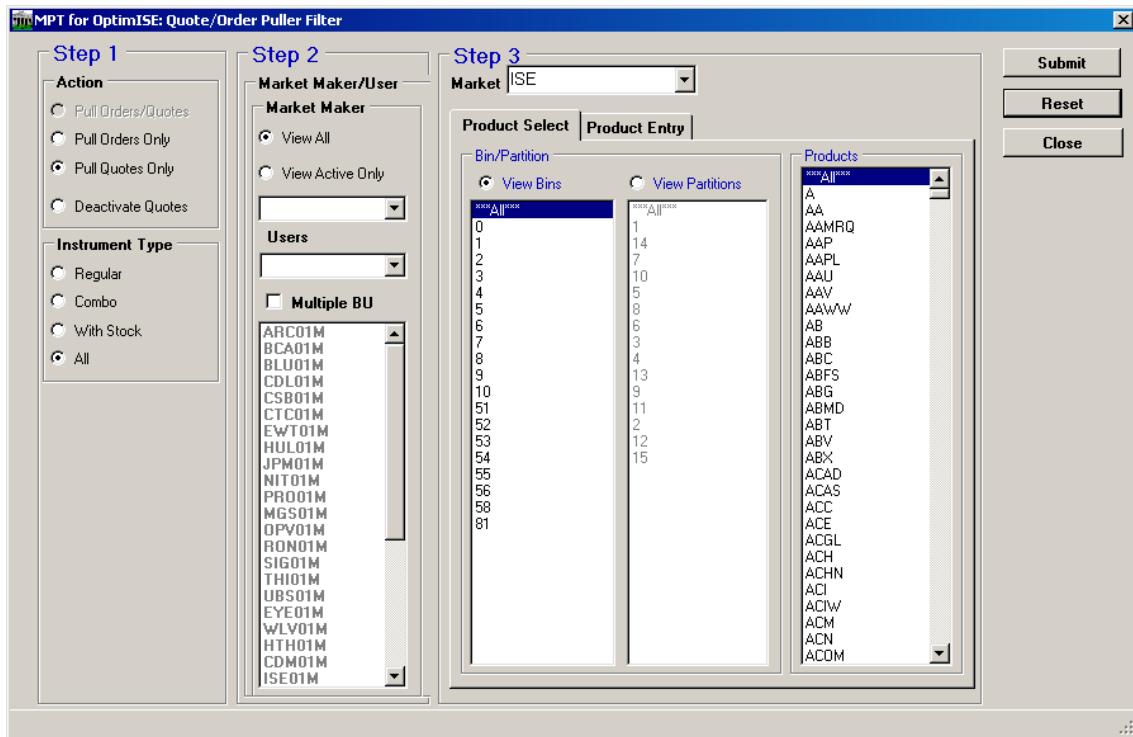
Mkt Ops should verify any change made by searching the trade again to verify it is done correctly.

In addition, there will be an alert mail that will recap and change made that is more than \$250,000 in principal.

Work should be double checked by refreshing the search in MPT Trades, Deal or trades by BU and verifying it is correct. If the submitted trade is incorrect, Mkt Ops can bust it and re-enter. Ideally it should be correct when entered the first time to avoid any confusion.

Mkt Ops should then log the price change in the Avaya Phone system with the proper notes further explaining what was done and following the proper management notification for trades \$250,000 and up. Within 30 minutes the change is reflected at the Option Clearing Corporation (OCC). Please refer to the OCC procedure for more details.

Chapter 39. MPT/ Removing a Members Quotes



When a Market Operations Representative (MktOps) arrives each morning they are to open all applicable tools that are required to perform the MktOps job function.

These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

To perform this task, MktOps will need to open the main **Market Place Tool (MPT)** window and select "**Puller**".

Market Makers contact the ISE when they are experiencing any abnormalities either technically or in the marketplace. Best practice for the member is to remove quotes on their side first. The call to the ISE should be a double check to make sure their quotes are out of the market.

Speed and accuracy are important, MktOps must be clear with the member to make sure that they understand what needs to be done.

MktOps should declare what they are doing to the rest of the room (whom the member is, what they want specifically and why.)

There are other purposes for announcing this to the room:

- To announce a member is experiencing an issue.
- To alert the group to investigate the issue while you are removing quotes.
- To avoid duplication of pulling quotes that may cause performance delays.
- To signal there may be a bigger problem occurring.

The Puller provides the following filtering parameters that allow MktOps to narrow the search to the specific entities to be deleted:

Step 1: Orders or Quotes Pulled/ Deactivate Quotes/ Instrument type (Regular, Combo, With-stock, All). It will default as Pull Quotes only and All.

Step 2: MM business Unit and user listed alphabetically.

Step 3: Market (currently only the ISE is available and it is the default).

Product selection by bin(s), partition(s) and symbol(s) in Product select tab. MktOps can select "all" bins or a specific bin in the bin column. MktOps can enter the first letter of the symbol in Products and it will automatically scroll to the correct alphabetic section.

Free form product entry using comma-separated symbols in Product entry tab.

Using the reset button at any time will clear all selections.

Step 4: After you submit the request the “Active Market Makers” confirmation dialogue displays. It lists the market makers that are quoting in the selected products or bins, with a separate line for each separate MM user (unique login ID).

The image below shows the confirmation dialogue for a request to pull quotes for all bins for a Market Maker. MktOps then checks the applicable boxes or selects all and then submits.

There is a dialog box that displays to inform MktOps the pull/ deactivate was complete.

MktOps should then refer to the **Pull History**. Once selected a configurable window opens that displays all activity for the entire desk for that day for all market makers.

The default display is that it includes pulling or deactivating even if there were zeros and nothing was out there.

If there were any quotes, they would be displayed by Business Unit, Analyst and the Removal time. It will default display in collapsed format and can be expanded if needed to display greater details for research purposes.

The Market Maker will then need to decide if the pulling/ deactivation of quotes were performed sufficiently.

Some members will request their last trades. You can do this verbally or by sending an email spreadsheet of trades from MPT.

Log the call in the Avaya/ ready for call screen.

Chapter 40. MPT/ Locked Order Handling Alert

The screenshot shows the 'Alerts' tab in the MPT application. The window has several filters at the top: 'Alert Timestamp' (03/14/2012 09:30:00 AM to 03/14/2012 04:15:00 PM), 'Enable Time Range' (checked), 'Ack' (radio button selected), 'Not Ack' (radio button selected), and 'All' (radio button selected). Below these are fields for 'Comment text:' (Max Num Alts: 1000) and a 'Search' button.

The main area displays a table of alerts. The columns are: Caption, Alert ID, Alert Timestamp, Product, Instrument, Category, Priority, Summary, Comments, and Acknowledged By. The table lists numerous entries, each detailing a specific locked order with its details like timestamp, product, instrument, category, priority, and a summary of the locking condition.

At the bottom of the alert table, there is a summary row:

Alert ID	39260	Alert Timestamp	3/14/2012 3:02:27 PM	Product	CNX	Instrument	CNK3JAN35.0C
Exch Order ID	1331738839510849880	Category	LOCKED_ORDER	Priority	2	Originator	
Summary	133175174713906300: Order's Business Unit: [CDL04E]: 1@330000000 - Locked To [CDM01M]	Ack TimeStamp	3/14/2012 3:03:02 PM	Acknowledged	YES	Comments	r
Acknowledged By	zielho	Performed Action	Released				

Below the summary table, it says '# of Rows: 62'.

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These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

MktOps selects Applications then **MPT Client**

To address Alerts, Market Operations needs to select the Alerts tab from the main MPT window.

MktOps should have **Order Book Explorer** (OBE) opened and the Order/Quote Depth-ISE window opened.

Important criteria in this window should already default when opened. The following steps should be verified.

MktOps needs to verify the Enabled Time Range box is checked. If not, you will see prior day activity. New alerts will populate but there will be a lot of older activity MktOps no longer needs to see unless they are researching something.

MktOps needs to verify the time range selected is the 7:30:00AM ET open to 4:15:00PM ET.

MktOps needs to verify the maximum number of Alerts is set to 5000

MktOps needs to verify the "Not Ack" button is selected if you want the exceptions only view of that days open alerts.

If the "Ack" button is selected throughout the trading day you will only see the alerts that have already been addressed, who addressed them, what time, comments and what action was taken.

If the "All" button is selected you will see both.

Enhancements to this tool are currently underway to add the following

There will be an audible noise for locked orders to MktOps can quickly take action.

A flaming envelope will also appear on each tab that has an alert.

Automatic refresh should occur when an alert is addressed.

After processing and submitting, information will populate automatically and not require MktOps to refresh the screen. It should do so automatically.

Required information that is needed is PMM that the order is locked to Quantity.Price

Descriptive information about the type of Alert.
The member or BU that sent the order
The Buy or Sell order that is locked.
The BU name that has the locked order.
In the process alert window there are 4 choices, Busted, Adjusted, Create, Nothing Done – We will have Released to the dropped down as well.
Have the ability to highlight and have the user acknowledge all multiple alerts at the same time.
We should be able to right click and access the history of the order.
We should be able to right click and access query viewer with the proper time frame.
Save-able Column Preferences. Some of the info is more important than other info.
Bin information
Partition information
The bottom window should be able to be re-sized and should have pertinent information regarding the highlighted order displayed.
The timestamp sort not working at this time.
MktOps will be able to cut and paste into Excel if needed.
When an alert appears it is a time-sensitive. Immediate action is required by either the Primary Market Maker (PMM) and failing that by MktOps.
At the current time there are some PMMs that are handling these locked orders better than others. We are constantly following up with the PMMs when we believe the alerts are excessive and may be indicating a technical problem that needs to be resolved.
A locked order alert is triggered after an order of locked to a PMM for longer than 20 seconds. This number is configurable.
MktOps should then go to OBE and enter the instrument information in the Order/Quote Depth-ISE window. First you need to manually type the product but you can then cut and paste the instrument into the field, select the drop down or manually type instrument.
After selecting search, the locked order(s) will be highlighted in black.
MktOps then needs to click on the order(s) and choose the Release Order(s) button.
A second window appears to either confirm the release and Ok is selected.

Chapter 41. MPT/ Trade Bust Request Procedures

The image contains two screenshots of software windows for 'Trade Bust' and 'Deal Bust' requests.

Trade Bust Window:

- TRADE Identifier:**
 - Market: ISE
 - Instrument: CSC02DEC17.0C
 - Product: CSCO
 - TM txn Date Time: 10/22/2012 09:30:00
 - Event Business Date: 10/22/2012
- Date/Time:**
 - Business Date: 10/22/2012
 - Creation Timestamp: 10/22/2012 9:30:00 AM
- Price/Qty:**
 - Deal Price: 1.58
 - Trade Qty: 6
- BUYER:**
 - Owning Bus Unit: CDL01M
 - Client Category: ISEMM
 - Free Text: (empty)
 - Ext Free Text: (empty)
- SELLER:**
 - Owning Bus Unit: GEB02E
 - Client Category: CUSTOMER
 - Free Text: 51973-6137-2488-0-10
 - Ext Free Text: 1719
- Comments:**
 - Deal Revision Reason: (empty)
 - Deal Revision Mops Comment: (empty)
- User/BusUnit:**
 - ISE Bus Unit: (empty)
 - ISE Analyst: duffbri

Deal Bust Window:

- DEAL Identifier:**
 - Product: CSCO
 - Instrument: CSC02DEC17.0C
- Price/Qty:**
 - Deal Price: 1.58
 - Deal Qty: 6
- Date/RevNumber:**
 - Event Business Date: 10/22/2012
 - Deal Rev Number: 1
- Comments:**
 - Deal Revision Reason: (empty)
 - Deal Revision Mops Comment: (empty)
- User/BusUnit:**
 - ISE Bus Unit: (empty)
 - ISE Analyst: duffbri

When a Market Operations Representative (MktOps) arrives each morning they are to open all applicable tools that are required to perform the MktOps job function.

These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

MktOps selects Applications and then chooses Market Place Tool (**MPT Client**).

Customers can call at anytime to request a bust on any execution they receive. This can be for same-day or prior day trades.

If the bust qualifies under the obvious error rule (See Obvious Error and Trade Review procedures) then Mkt Ops proceeds accordingly.

The member provides the date and trade details and the reason for the request. The better the reason, the higher the probability of getting a bust.

If the request is voluntary, the sooner the bust request is made, the higher the probability is of getting the trade busted. Counter-parties are not required and approval is voluntary.

Trade information should be verified by repeating it back to the member. This information and the member's intentions should be clear to all parties on the call before the call is finished.

While the member is on the phone you should follow the below procedures.

Enter the product or series in Market Place Tool, OBE and Thomson One, trades and quotes. Have all applications open and ready to be referenced if needed.

Locate the trade(s) in MPT and determine the counter-party. No action can be taken without discussing the trade details and the situation with the other side.

Each member build when created is given a business unit acronym. This is the firm that will need to be contacted.

Mkt Ops can refer to CRM or the Official Market Operations Contact list on the Mkt Ops Drive. Firm names, number and acronym are all listed there. In addition heavy used numbers are already programmed into the Avaya phone speed dials.

In MPT trades, users enter either the underlying product or the series.

If the series is known it is better to search with it performance-wise.

All columns in the MPT grid are sort-able. User should sort by firm or can narrow the search down by entering the business unit to narrow the results down.

Once the search request comes up, locate the trade(s) in question. Sometimes the trade is obvious to locate, often it is not.

Sometimes it executes in different pieces and different times. Be sure you both agree with the trade details before repeating and verifying the details (i.e. times, order numbers, account numbers, CMTA's or Give up's).

Once the trade(s) are located and Mkt ops has all information needed including the name and number of the person making the request, tell the member they will called back with the results.

Mkt Ops now needs to be prepared to explain the trade issue in a clear succinct, easy to understand manner to the counter-party.

All pertinent information should be revealed for the counter-party to make an informed decision.

If the counter-party says "no" to a bust, Mkt Ops should ask if there is a price adjustment that can be made and if not is there an out-price they would be willing to offer the firm to cover the trade.

If the answer is still "no," then Mkt Ops will go back to the firm making the request and explain the determination.

If the counter-party agrees to bust, Select the trade, right click to "Trade Bust." (At this time MPT supports only one trade at a time).

When the "trade bust" opens, users will see: the ISE Market, Product, Instrument, Business Date, Timestamp, Date, Time, Event Business Date, Deal Price, Trade Quantity, Buyer BU, Client Category, Seller BU, Client Category, the Analyst, Comments field that has free-form area to explain the reason for the bust.

There is a confirming message the user sees. In addition, both of the firms on the trade will electronically receive notification of the bust as well.

If there are several trades agreed to be busted the Mkt Ops should then proceed to the rest on the firms on the trades.

If the trade(s) being requested Mkt Ops should note if the trade(s) were executed through Linkage. If they were then a bust request needs to stop. The Market Maker executed the trade on another exchange.

If the trade(s) being requested are a spread and the counterparties are different, Mkt Ops should explain that the likelihood of having the trade busted evenly is remote. Are they prepared for the bust to "uneven."

Note: The ISE will generally not ask a customer to bust a trade for another customer.

If the member calling is a customer and the counter-party is a market maker you need to call each market maker on the specific execution(s).

Although the ISE is an anonymous exchange, if a member requests a bust, the full disclose is made to the market maker(s) on the trade.

Some common reasons for a bust are: Buy vs. Sell, Call vs. Put, wrong symbol, wrong strike, wrong month, wrong year, sent in error, a GTC that should have been canceled, system issues, bad limit, wrong amount, I traded with myself, I overbought/ sold and need a partial bust. These are just a few examples.

Sometimes (most times) the answer is “No.” The market maker(s) is comfortable with how the execution occurred and doesn’t feel a bust is justified.

Determining factors a market maker may consider on a bust request:

What is the market on this option strike?

Is their explanation plausible?

Did something out of the ordinary occur and there is an acknowledgement that maybe the member deserves a bust?

Is the trade so large that it would be in their best interest to bust?

Is the trade so small that it is insignificant to them?

Did the market maker have technical issues that caused their markets to widen and this fill to occur?

Is the market maker a PMM and should be looking to maintain orderly prices.

Some market makers have customer desks that send order flow.

Some have special relationships with the particular customers.

Always verify what you do in MPT Trades.

If a mistake is made it will be known immediately because both sides and Mkt Ops will be looking at the bust. If it is done wrong it needs to be fixed in MPT Trades. Make sure all parties are aware a mistake was made. Market Operations prides itself on doing everything the proper way. Mistakes if any should be kept to a minimum.

Make sure the market maker is aware this will be done manually (not electronically) and they need to fix their position and/or contact their back office to make them aware.

If a mistake is made manually MPT Trades, it may or may not be known immediately. If the firm’s back office checks the OCC/ Encore, they will know about it when transmitted. Some firms do not check this so the trade will “break.” They will contact us next day to make the necessary adjustment.

Certain firms like Citadel ask that we send them an email stating what we are doing. Their email address is OptionsTradeAdjusts@citadelgroup.com.

Log all calls in the Avaya/ ready for call screen.

For large trades, Market Operations representatives are required to calculate the net total cost of the trade(s) that are manually changed. Management signature notification messages are generated where applicable once the trade cost of the execution is higher than \$250,000, \$500,000 and \$1,000,000. See Trade Adjustment Process, of the Survival Guide.

Chapter 42. MPT – Using the Order Status Function

The screenshot shows the Order Status application window. At the top, there is a search criteria section with fields for Date (10/22/2012), Bus Unit (ISE), Market (ISE), Bin (All), Partition (All), Exch Ord Id, Time Frame (From 09:30:00 To 23:59:59), and a dropdown for Time Disp. (Milli). Below this is an Advanced Filter section with options for Single Leg, ALL, AMR, and Combo, and a Free Text field containing 'CSCO'. On the right side of the header are buttons for Search, Advanced Filter, and Preferences.

The main area is a grid titled 'Order Status' with columns: Bus Unit, Side, Product, Instrument, Limit, Orig Qty, Open Qty, Trd Qty, Clrg Acct No, CMTA, Curr Status, Order Cat, Time Of Event, Time Of Entry, Partition, Bin, and UAc. The grid contains numerous rows of order data, such as ATD01E Buy CSCO CSC03APR19.0C \$0.93 271 0 271 00443 Filled PIM 09:51:28.564 09:51:27.564 10 9 No, followed by many other entries for various members like LIQ01E, UBS02E, etc.

At the bottom of the grid, there is a summary table with columns: Instrument, Exch Order Id, Limit, Orig Qty, Side, Time of Entry, Client Id, Sub Acct, Curr Status, Client Cat, Lock Type, ISO, O/C, and Close. An 'Alert Received' message box is visible in the bottom right corner of the grid area.

When a Market Operations Representative (MktOps) arrives each morning they are to open all applicable tools that are required to perform the MktOps job function.

These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

MktOps selects Applications then **Market Place Tool (MPT) Client**

Using **MPT** select the Order Status, verify the search criteria for the product or series you are looking for. There is a date drop down and calendar to make this selection or it can be typed manually.

For Business Unit each member is given a unique six-letter acronym to identify the connection to the ISE. Most members have multiple connections MktOps may either enter one or multiple by entering the first three letters followed by (*) will allow for multiple.

Market defaults ISE.

There is a Bin search if needed.

Specify a time frame to narrow down the query if needed.

Time display allows a query to display seconds, milli-seconds, micro-seconds.

There is a free text search field that MktOps can manually enter to locate an order.

There is a Product or Series field that MktOps can use and can narrow it down to query either All, AMR or Combo.

The grid columns once a search is made are configurable by MktOps. There are over 70 selections to choose from. For a basic set-up users may select Business Unit, Product, Instrument, Side Type, Limit Price, Bin, Original Quantity, Trade Quantity, Open Quantity, Deleted Quantity, Instrument Status, Clearing Type, Current Status, Order Category, Client Category, Time of Entry, Time of Event, Order Type, Time in Force.

Once search is selected the order status details will populate the screen.

If the information is still not sufficient there is an advanced search filter with all the ISE Order Categories, Client Categories, Order Status fields, Order Types, Side types, and Time in Force orders.

Each column is sort-able so the user may be able to view the information as they need.

If the order in question is a complex order there is a unique eighteen character instrument ID and a window in the middle of the screen the will open that displays the option and stock legs and the sides. ISE and Away BBO prices, along with clearing details.

At the bottom of the window are the standard, non-configurable details about each order sorted by side.

Verify that it is on the book in Precise in Order status.

Open an Optimise **Market Place Tool** (MPT) the will be a main menu bar that will open. Keep this maximized.

In MPT select *Order Status*, when the screen opens, verify the proper date. Depending on how narrow you want your search, choose the *Series* or the *Product* (FYI wildcard* search do not work at this time) and enter the order details.

To further narrow down the search you may enter the *Business Unit*. Check the bottom right part of PrecISE to see which Bus Unit you are in. You may enter the first three letters and select the drop down to select the proper one.

Be aware that you are in *ALL*. If *Combo* is selected you will only see combos.

On the top right screen there is a preferences button. This will list all of the many column selections that are available. They are sort-able. (FYI: not save-able at this time).

When you locate the order, you may right click and choose *History*. You will then get the snapshot of what took place it that time of entry. (FYI: there are display issues being worked on to improve the information that populates)

Using **Orderbook Explorer** (OBE) select a view either *Regular Market-ISE* (calls left –puts right) or *Regular Price Info-ISE* (calls on top of puts). There is a default column preference. To change it select the field chooser on the extreme left of the window. You may click on/off the columns you want.

Enter the *Product* to getting all the series or select *Exp* drop-down menu to narrow the search.

Right click on the strike for the *Order/Quote Depth* and view the order on the book.

You may delete this order either from the OBE *Cancel Order(s)* *Quotes* button or *MPT Order Status*, right click *Cancel Order* drop down.

Investigate activity by using **Query Viewer** (QV)

Spread Order

Enter a spread order into PrecISE that is away from the market.

In this environment there may be some delays

Open **MPT Order Status** and Select *Product*: ex. YHOO. You will see a number of different executions. You may also enter the Spread Series to narrow it down even more.

You may narrow it by choosing *Bus Unit*, *Free Text* or by selecting *Combo* (FYI: Instrument is populating a number. The other random info in the columns is being addressed).

You may right click to view the structure, *History*, *Net Price History*, **QV** or *Cancel Order* from here. (FYI: Much of the info is currently unavailable).

In the middle of the *Order Status* screen is the Series snapshot of the option legs.

In **OBE**, select the *Complex Price Info-ISE* view. Enter the Product you wish to view.

There is an *Instrument* section with a drop down to narrow down the spread by one leg.

There is a default view of the spread orders, status, prices, ISE BBOs the Last trade Information. (FYI: This screen will be enhanced eventually).

All ISE Order Types

3) Block

4) Crossing Orders:

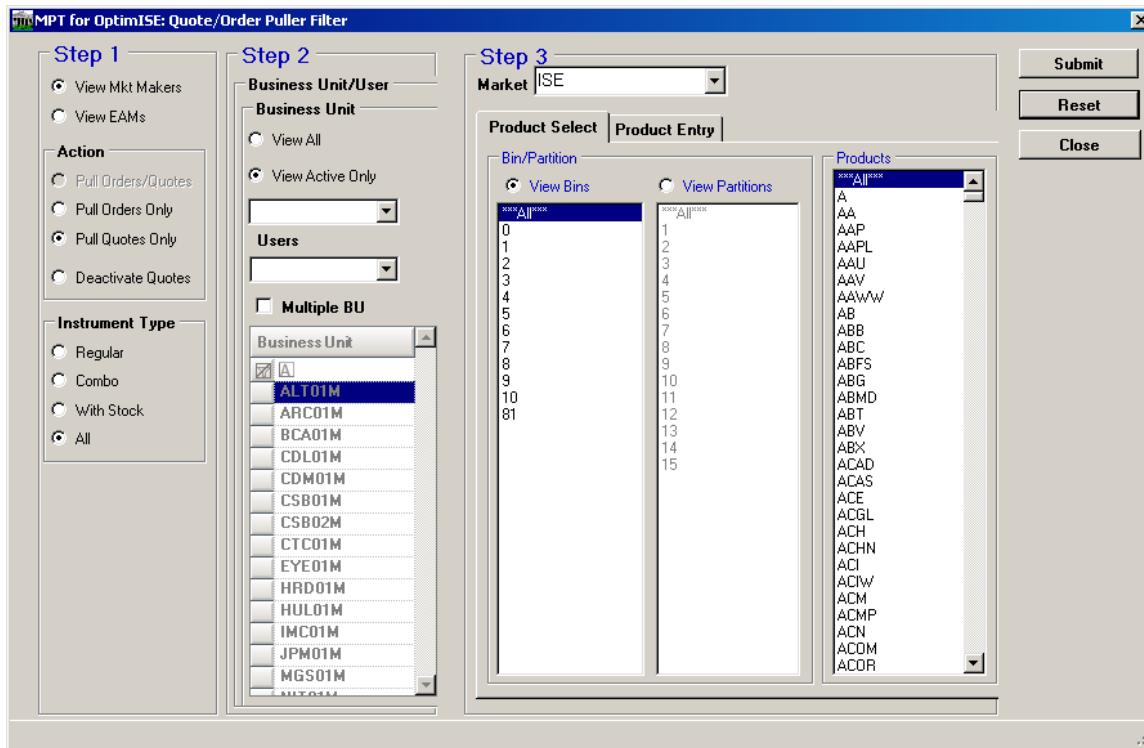
- Facilitation
- Solicitation
- Customer Match
- PIM
- Sweep & Cross
- Qualified contingent Cross

- Reserve Cross
 - Matched Orders
 - Crossing Orders:
 - Crossing Orders:
- 4) Spread Orders:
- Regular Spread (above)
 - Facilitation
 - Solicitation Spread
 - Customer Match Spread
 - PIM Spread
 - Qualified Contingent Cross Spread
 - Matched Order Spread
 - Reserve Cross Spread
- 4) With Stock:
- Buy-write
 - Delta-Neutral
 - Facilitation with Stock
 - Solicitation with Stock
 - Customer Match with stock
 - PIM with Stock
 - Matched Order with Stock
 - Reserve Cross with Stock
- 5) Stop Orders
- 6) CAB Orders

Validity

- 14) IOC
- 15) IOC MinQty
- 16) FoK
- 17) Day
- 18) Day AoN
- 19) Day MinQty
- 20) GTC
- 21) GTC AON
- 22) GTC MinQty
- 23) GTD
- 24) GTD AoN
- 25) GTD MinQty
- 26) Opening Only

Chapter 43. MPT/ Removing a Market Maker Quote



When a Market Operations Representative (MktOps) arrives each morning they are to open all applicable tools that are required to perform the MktOps job function.

These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

To perform this task, MktOps will need to open the main **Market Place Tool (MPT)** window and select “**Puller**”

Market Makers contact the ISE when they are experiencing any abnormalities either technically or in the marketplace. Best practice for the member is to remove quotes on their side first. The call to the ISE should be a double check to make sure their quotes are out of the market.

Speed and accuracy are important, MktOps must be clear with the member to make sure that they understand what needs to be done.

MktOps should declare what they are doing to the rest of the room (whom the member is, what they want specifically and why.)

There are other purposes for announcing this to the room:

To announce a member is experiencing an issue.

To alert the group to investigate the issue while you are removing quotes.

To avoid duplication of pulling quotes that may cause performance delays.

To signal there may be a bigger problem occurring.

The Puller provides the following filtering parameters that allow MktOps to narrow the search to the specific entities to be deleted:

Step 1: Orders or Quotes Pulled/ Deactivate Quotes/ Instrument type (Regular, Combo, With-stock, All). It will default as Pull Quotes only and All.

Step 2: MM business Unit and user listed alphabetically.

Step 3: Market (currently only the ISE is available and it is the default).

Product selection by bin(s), partition(s) and symbol(s) in Product select tab. MktOps can select “all” bins or a specific bin in the bin column. MktOps can enter the first letter of the symbol in Products and it will automatically scroll to the correct alphabetic section.

Free form product entry using comma-separated symbols in Product entry tab.

Using the reset button at any time will clear all selections.

Step 4: After you submit the request the “Active Market Makers” confirmation dialogue displays. It lists the market makers that are quoting in the selected products or bins, with a separate line for each separate MM user (unique login ID).

The image below shows the confirmation dialogue for a request to pull quotes for all bins for a Market Maker. MktOps then checks the applicable boxes or selects all and then submits.

There is a dialog box that displays to inform MktOps the pull/ deactivate was complete.

MktOps should then refer to the **Pull History**. Once selected a configurable window opens that displays all activity for the entire desk for that day for all market makers.

The default display is that it includes pulling or deactivating even if there were zeros and nothing was out there.

If there were any quotes, they would be displayed by Business Unit, Analyst and the Removal time.

It will default display in collapsed format and can be expanded if needed to display greater details for research purposes.

The Market Maker will then need to decide if the pulling/ deactivation of quotes were performed sufficiently.

Some members will request their last trades. You can do this verbally or by sending an email spreadsheet of trades from MPT.

Log the call in the Avaya/ ready for call screen.

Chapter 44. MPT – Member Kill Switch – MktOps View

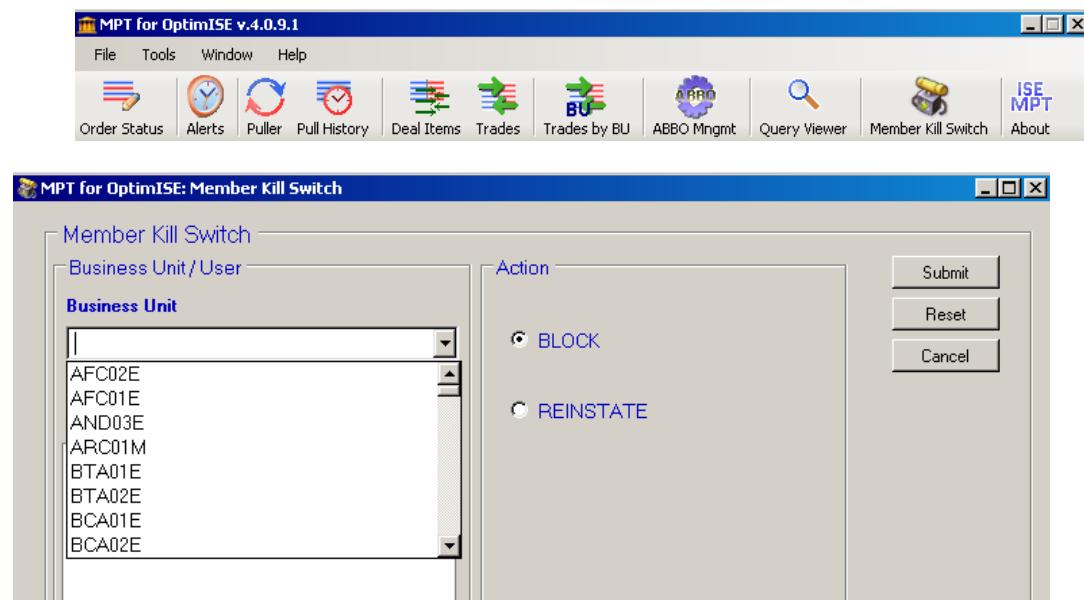
When a Market Operations Representative (MktOps) arrives each morning they are to open all applicable tools that are required to perform the MktOps job function.

These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

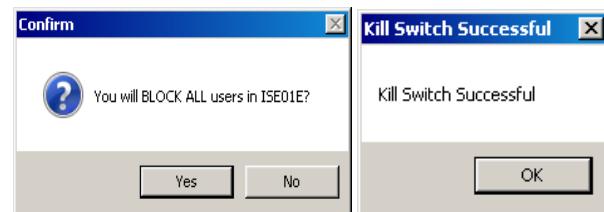
MktOps selects Applications and then chooses Market Place Tool (**MPT Client**).

In the main MPT window there is a tab for Member Kill Switch. Selecting this will open a window that will allow MktOps the ability to ‘Block’ or “Reinstate” members from sending orders.

MktOps selects the specific Business Unit(s) and selects “Block”



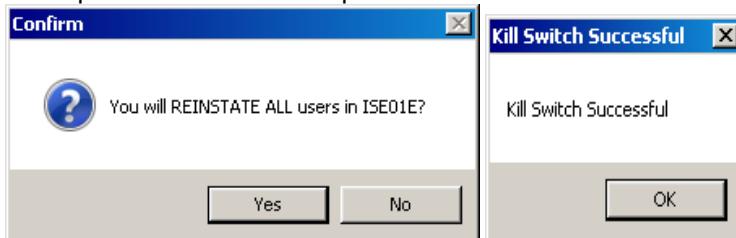
MktOps will receive the pop up and should select yes.



Once complete, if the member were to enter an order they would receive this pop up.



If the specific user at a Business Unit were to contact MktOps to "Reinstate" order entry, MktOps would perform the similar steps make sure to select reinstate.



Prior to this taking place members contact the Market Access group to inform them the BU and member name responsible for initiating the Kill Switch.

These are the RFFE settings- this will be set for DTI, FIX and PrecISE users.

The KILLER entitlement is mapped to both the RFFE BU and User requesting the functionality.

Participant Explorer: User

Leaving ▾ Contact Details ▾ Corporate Actions ▾ Entitlements ▾ M-2-M ▾ Market ▾ Market Groups ▾ ME & MM Parameter ▾ Participant ▾ Schedule ▾ Trade Manager ▾ Unit of Work ▾

Searches: default

Clone Open Inspect Refresh Inspect Add Edt Delete Reset Copy Refresh Other Actions ▾

BU Name	Login Name	Name	Category	Capacity Type Name	Description	Password	Business Status	Effective Status
BGC0SE	BGC0SE-1	1	PrecISE Session	201PS		[unknown]	ACTIVE	ACTIVE
BGC0SE	BGC0SE-2	2	PrecISE Sub Session	201PS		[unknown]	ACTIVE	ACTIVE

Legend: █ Editable █ Mandatory █ Mandatory Relation
█ Relation Assigner █ Read Only █ Reset to Default Colors

BU Roles (4) | User Properties (0) | User (Negative) Roles (0)

Ent BU Asgn Name	BU Name	BU Role Name	Mkt Group Name	Object Status	ID	Effective	Marked For	Ent BU Asgn ID	BU ID	Mkt Group ID
BGC0SE-StockCombo-MKT1	BGC0SE	StockCombo	MKT1	Active	9626	<input type="checkbox"/>	<input type="checkbox"/>	2539	2003	20
BGC0SE-FAM-MKT1	BGC0SE	FAM	MKT1	Active	9627	<input type="checkbox"/>	<input type="checkbox"/>	2537	2003	20

This is the RSA entitlement. RSA screenshot just showing the resource being mapped to the User Group for memberKillSwitch

Each PrecISE member that requests kill Switch will be mapped to the memberKillSwitch user group in RSA.

The ISE announced the implementation of its electronic “Kill Switch” functionality in PrecISE. The Kill Switch has already been available for exchange members that are connected to ISE via a DTI or FIX connection.

By extending this functionality to PrecISE, this segment of ISE’s membership now has the ability to utilize the Kill Switch to cancel all orders and prevent new order submissions for more comprehensive risk management.

In addition if a DTI or FIX user is unable to access their system during a session, PrecISE serves as an alternative means of enabling the Kill Switch.

Adding this to PrecISE further equips our member firms with a real-time risk management tool and gives them additional control over their ISE order activity.

It offers another safeguard as we look to provide member firms with a complete set of risk management tools so that they have the utmost confidence when providing liquidity or sending order flow to our exchange.

The kill switch can be configured to affect an entire member firm, specific trading desks within a member firm or specific sessions within a trading desk.

It can also be triggered manually by ISE’s MktOps group.

PrecISE users need to be enabled first by our Member Access Representative.

A list of users that are enabled will be kept by MktOps on the member Contact List as well as by Business Development by ERS Ticket, Mkt Access, in Ref Data and in Clear Trust.

The Kill Switch Member listed by name will be the only person with the permissioning ability and they should be the person notifying ISE.

Once enabled, PrecISE users will see the “Kill Switch” on the top right portion of their PrecISE terminal.

If elected there is a “pop up screen” that displays the collapsed view of the various business units.

If they prefer to change the BU format to a desk name they can do this in the Preferences/ trading Tab window.

If the BU(s) are selected, existing orders are cancelled.

New orders will be rejected with the message “GTS User Blocked”.

Members will be calling MktOps to ensure there are no orders on the book. Mkt Ops should use OBE/ Open Orders/BU to verify.

Once Kill Switch is in place no orders can be sent until MktOps reinstates it. They could be the case even if it is next day.

MktOps will go into MPT/ Member Kill Switch and in the pop up window select the Business Unit(s) and if needed the Users.

MktOps should then select “Reinstate” and then “submit”

PrecISE members should then be able to send orders for execution to the ISE.

Chapter 45. Enabling the Kill Switch from PrecISE (Member view)

When a Market Operations Representative (MktOps) arrives each morning they are to open all applicable tools that are required to perform the MktOps job function.

These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

MktOps selects Applications and then chooses Market Place Tool (**MPT Client**).

In the main MPT window there is a tab for Member Kill Switch.

The ISE announced the implementation of its electronic “Kill Switch” functionality in PrecISE.

The Kill Switch has already been available for exchange members that are connected to ISE via a DTI or FIX connection.

By extending this functionality to PrecISE, this segment of ISE’s membership now has the ability to utilize the Kill Switch to cancel all orders and prevent new order submissions for more comprehensive risk management.

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It offers another safeguard as we look to provide member firms with a complete set of risk management tools so that they have the utmost confidence when providing liquidity or sending order flow to our exchange.

The kill switch can be configured to affect an entire member firm, specific trading desks within a member firm or specific sessions within a trading desk.

It can also be triggered manually by ISE’s MktOps group.

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A list of users that are enabled will be kept by MktOps on the member Contact List as well as by Business Development by ERS Ticket, Mkt Access, in Ref Data and in Clear Trust.

The Kill Switch Member listed by name will be the only person with the permissioning ability and they should be the person notifying ISE.

Once enabled, PrecISE users will see the “Kill Switch” on the top right portion of their PrecISE terminal.

If elected there is a “pop up screen” that displays the collapsed view of the various business units.

If they prefer to change the BU format to a desk name they can do this in the Preferences/ trading Tab window.

If the BU(s) are selected, existing orders are cancelled.

New orders will be rejected with the message “GTS User Blocked”.

Members will be calling MktOps to ensure there are no orders on the book. Mkt Ops should use OBE/ Open Orders/BU to verify.

Once Kill Switch is in place no orders can be sent until MktOps reinstates it. They could be the case even if it is next day.

MktOps will go into MPT/ Member Kill Switch and in the pop up window select the Business Unit(s) and if needed the Users.

MktOps should then select “Reinstate” and then “submit”

PrecISE members should then be able to send orders for execution to the ISE.

Chapter 46. OBE- View Regular Orders on the Book

The screenshot shows the Order Book Explorer (OBE) interface. At the top, there's a navigation bar with tabs: 'Regular Market-ISE', 'Market Depth-ISE', 'Order/Quote Depth-ISE', 'Deal Items-ISE', and 'Functional Stats/History-ISE'. Below the tabs are sub-tabs: 'Regular Price Info-ISE', 'Complex Price Info-ISE', 'Market Info', 'Open Orders/BU', 'Open Orders/Product-ISE', 'Order', 'Trade', and 'Hist Statistics'. The main area is titled 'Complex Price Info-ISE' and displays a search bar with 'Product: CSCO' and buttons for 'Search', 'Cancel Order(s)', and 'Release Order(s)'. A 'Filter' button is also present. The central part of the screen is a large grid table showing order details. The columns include: BU, ClOrdID, Client Category, ProdID, InstrID, Order Type, Instrument, Qty, Side, LimitPrice, TimeInForce, ClrType, LockType, TntTrdQty, LockedTold, LockedQty, and EntryTS. The grid contains numerous rows of order data, with some entries highlighted in yellow.

When a Market Operations Representative (MktOps) arrives each morning they are to open all applicable tools that are required to perform the MktOps job function.

These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

MktOps selects Applications and then chooses Order Book Explorer (**OBE**) and Market Place Tool (**MPT Client**).

Members contact Market Operations by calling our toll free number at 877-473-9989.

Being able to accurately status a members order quickly and accurately is a very important task that Mkt Ops performs each day.

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MktOps vigilantly oversees all the trading that takes place. We look for anomalies in the markets, member orders, tool alerts and issues brought to our attention by our technology partners at the ISE and the members themselves.

Members contact MktOps and ask us to assist them by going through each of their orders in question.

This may also occur if the ISE has technical issues, Drop copy issues or when there is a market data related change corporate actions, de-listings, stock splits, reverse stock splits and dividend announcements.

Using **Orderbook Explorer** (OBE) select a view either **Regular Market-ISE** (calls left –puts right) or **Regular Price Info-ISE** (calls on top of puts). There is a default column preference. To change it select the field chooser on the extreme left of the window. You may click on/off the columns you want.

Enter the *Product* to getting all the series or select **Expiry (Exp)** drop-down menu to narrow the search.

Right click on the strike for the **Order/Quote Depth** and view the order on the book.

You may delete this order either from the OBE *Cancel Order(s)* Quotes button or *MPT Order Status*, right click *Cancel Order* drop down.

On the main grid MktOps can delete multiple instruments at the same time.

MktOps may receive a call from a member to view all there order down their particular Business Unit (BU). Wildcard BU searches are not supported here. Users need the specific BU.

Selecting this tab will provide all open orders dynamically. MktOps can delete one or all orders whether it is a Single leg and/ or Spread orders from here.

Lastly there's **Open Orders/Product-ISE**. Here MktOps can view all orders in i.e. AAPL. This is a static view that can be filtered with the BU, client category, Order Type, time in force, clearing sub account, clearing account and clearing CMTA.

This view also displays where Implied Orders are in place

This view has BU, CL Order ID, Instrument, Side, Quantity, Limit, Time-in-Force, clearing info, client category.

Chapter 47. OBE- Viewing Complex Orders

The screenshot shows the Order Book Explorer (OBE) application window. The title bar reads "Order Book Explorer". The menu bar includes "File", "Edit", "View", "Insert", "Format", "Tools", and "Help". The toolbar has icons for "New", "Open", "Save", "Print", "Copy", "Paste", "Delete", "Search", "Find", "Replace", "Select All", "Clear", "Zoom In", "Zoom Out", and "Exit". The main menu items are "File", "Edit", "View", "Insert", "Format", "Tools", and "Help". The sub-menu "File" contains "New", "Open", "Save", "Print", "Copy", "Paste", "Delete", "Search", "Find", "Replace", "Select All", "Clear", "Zoom In", "Zoom Out", and "Exit". The sub-menu "Edit" contains "Cut", "Copy", "Paste", "Delete", "Search", "Find", "Replace", "Select All", "Clear", "Zoom In", "Zoom Out", and "Exit". The sub-menu "View" contains "New", "Open", "Save", "Print", "Copy", "Paste", "Delete", "Search", "Find", "Replace", "Select All", "Clear", "Zoom In", "Zoom Out", and "Exit". The sub-menu "Insert" contains "New", "Open", "Save", "Print", "Copy", "Paste", "Delete", "Search", "Find", "Replace", "Select All", "Clear", "Zoom In", "Zoom Out", and "Exit". The sub-menu "Format" contains "New", "Open", "Save", "Print", "Copy", "Paste", "Delete", "Search", "Find", "Replace", "Select All", "Clear", "Zoom In", "Zoom Out", and "Exit". The sub-menu "Tools" contains "New", "Open", "Save", "Print", "Copy", "Paste", "Delete", "Search", "Find", "Replace", "Select All", "Clear", "Zoom In", "Zoom Out", and "Exit". The sub-menu "Help" contains "New", "Open", "Save", "Print", "Copy", "Paste", "Delete", "Search", "Find", "Replace", "Select All", "Clear", "Zoom In", "Zoom Out", and "Exit". The "Complex Price Info-ISE" tab is selected. The search bar shows "Product: CSCO" and a "Search" button. The main grid displays trade information for CSCO, including columns for Instrument Id, Legs, Ratio, Side, Status, BNTTQty, BCustQty, BQty, Bid, Ask, AQty, ACustQty, ANTTQty, Time, Last, and LQty. The grid shows numerous entries for different instrument IDs and legs, with various trade details like regular, limit, or stop orders.

When a Market Operations Representative (MktOps) arrives each morning they are to open all applicable tools that are required to perform the MktOps job function.

These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

MktOps selects Applications and then chooses Order Book Explorer (**OBE**) and Market Place Tool (**MPT Client**).

Members contact Market Operations by calling our toll free number at 877-473-9989.

Being able to accurately status a members order quickly and accurately is a very important task that Mkt Ops performs each day.

MktOps vigilantly oversees all the trading that takes place. We look for anomalies in the markets, member orders, tool alerts and issues brought to our attention by our technology partners at the ISE and the members themselves.

Complex Orders or Spreads are vital to the success of the ISE. Members trade here because of the advance technologies in place.

To view open spread orders that are on the book we use: **Orderbook Explorer (OBE)**.

OBE is a MktOps view into the options market. Instrument series, Calls, Puts, Status, ISE and Away market Bids and Offers are all displayed here.

Use the **Complex Price Info-ISE** tab in OBE, you are required to enter the product you are investigating and then search.

The grid will populate with all the open complex orders working. The view is static but will update when the search button is selected.

The column headings are sort-able to the user's preference.

Some of the key information required would be the Instrument ID, Legs, Ratio, Side, Status, buy customer quantity, bid quantity, bid, ask, ask quantity, ask customer quantity, last, last quantity and time.

Other useful information is the complex order count and the PMM, Bin, Partition, Primary Exchange, Product ID and Description.

User can also double click the columns to sort and narrow the search by entering leg info, instrument id and time.

Once the complex order has been located users can Right click to view the Order Quote depth or to delete the instrument of the book.

The depth shows the user the order book and the business unit(s) that have orders on the book and what they are doing (buying or selling the spread).

MktOps can give the status to the member and can delete or cancel the order(s) from this view.

MktOps will generally only delete an instrument if the product is close to exceeding its allowable instrument total.

If this level is exceeded, members will receive a rejection that says "maximum complex level has been met" even for a marketable spread.

To prevent this from happening MktOps will delete instruments that have no orders or executions to allow for more headroom.

On the main grid MktOps can delete multiple instruments at the same time.

Spread orders can also be viewed in the **Open Orders/ BU** tab in OBE.

MktOps may receive a call from a member to view all their orders down their particular Business Unit (BU). Wildcard BU searches are not supported here. Users need the specific BU.

Selecting this tab will provide all open orders dynamically. MktOps can delete one or all orders whether it is a Single leg and/or Spread order from here.

Lastly there's **Open Orders/Product-ISE**. Here MktOps can view all orders in i.e. AAPL. This is a static view that can be filtered with the BU, client category, Order Type, time in force, clearing sub account, clearing account and clearing CMTA.

This view also displays where Implied Orders are in place

This view has BU, CL Order ID, Instrument, Side, Quantity, Limit, Time-in-Force, clearing info, client category.

Chapter 48. OBE Viewing Implied Orders on the Book

The screenshot shows the Order Book Explorer (OBE) application window. The top menu bar has tabs for 'ISE' and 'Order Book'. Below the menu is a navigation bar with several tabs: 'Regular Market-ISE', 'Market Depth-ISE', 'Order/Quote Depth-ISE', 'Open Orders/BU', 'Deal Items-ISE', 'Functional Stats/History-ISE', 'Regular Price Info-ISE', 'Complex Price Info-ISE', 'Market Info', 'Order', 'Trade', and 'Hist Statistics'. The 'Order/Quote Depth-ISE' tab is currently selected. The main area displays a grid of order data for product 'CSCO'. The columns include BU, ClOrdID, Client Category, ProdID, InstrID, Order Type, Instrument, Qty, Side, LimitPrice, TimeInForce, CrlType, LockType, TtlTrdQty, LockedToId, LockedQty, and EntryTS. A search bar at the top allows filtering by product code ('CSCO') and provides buttons for 'Search', 'Cancel Order(s)', and 'Release Order(s)'. A 'Filter' button is also present.

Orders placed on option only strategies (standard combination complex instruments) represent the intent to execute multiple option orders at the same time in a specific ratio at the specified net price.

Currently, the untraded portion of such a complex order can get displayed only on its own BBO. The technique of making such a complex order available on its component legs is called implied pricing. The simple instrument order created from a complex instrument order is called an implied order.

The availability of an implied order on one leg of a complex instrument is contingent upon the successful execution of each of the other legs of the complex order. We create a readily available implied order by guaranteeing the execution of each of the other legs at prices and quantities that are available at the ISE BBO. The complex order and the other legs that trade at the ISE Best Bid or Offer are the known data points and are called participants (participating complex instrument, participating leg). The unknown data point or the leg on which the implied order is produced is called the implied leg.

A simple instrument price that is extrapolated from its participants is called an implied price. The quantity available at the implied price is called implied quantity.

Since an implied order is produced from an existing complex order and existing simple book volume, it makes visible to the market an existing simple book price.

For example:

IBBO (S1):	10@1	10@2
IBBO (S2):	05@1	05@2

CI: (Buy 1 S1, Buy 1 S2). The complex book is currently empty.

Incoming Complex Order to Buy 6@3.05

The counter side synthetic is 5@4. Hence, the complex order cannot leg in and will get written to the complex book without a match attempt, thereby updating the BBO of C1 to 6@3.05.

This order (6@3.05) can buy 6 of S1@2 and hence make a price of 6@1.05 available on the bid of S2. Similarly, it can buy 5 of S2@2 and hence make a price of 5@1.05 available on the bid of S1. S1 5@1.05 and S2 6@1.05 are implied orders.

IBBO (S1):	05@1.05	10@2
IBBO (S2):	06@1.05	05@2

A well priced complex order can thus improve the BBO (price, size) available on the simple book.

Life Cycle of an Implied Price

Implied orders are created automatically by the matching engine under certain special conditions, without an explicit request from any user. They are available for trading unless explicitly deleted.

Like regular orders, the creation, modification and deletion of an implied order is audit trailed by the matching engine using the *ImpliedOrderRecord*. (This is the record to select in QV to see the details.)

Since the detection, creation and maintenance of implied orders is performance intensive and complicated, implied prices are produced for a sub-set of the simple instruments at ISE. In the same way, a sub-set of the complex instruments active at ISE participate in implied price generation.

They are not persisted by the order book server. Private Order Broadcasts are produced for the participating complex order, not the implied order.

ISE BBO

Implied orders are created only if they are at or better than ISE's displayed BBO.

The best displayed price in the *IBBORecord* generated by the matching engine will be inclusive of implied price and implied quantity hereafter.. Additionally, implied quantity out of the total quantity at the best displayed price will also be indicated.

Hence the creation, modification or deletion of an implied order results in the creation, modification or deletion of an implied price and/or implied quantity. This change is audit trailed using the *IBBORecord*.

ISE's Best Bid Offer and the National Best Bid Offer as referred to in this document indicate the ISE BBO and the NBBO inclusive of implied orders hereafter. IBBO as used in the other parts of the matching engine specification also refers to the implied IBBO hereafter. Any case, where the implied ISE BBO is to be ignored and non-implied ISE BBO is to be considered, must be explicitly stated as such.

Market Data Representation

Implied orders are disseminated on the "top of book feed" and the "depth feed" just like other simple book orders without any additional discriminator. They are included in displayed non-customer quantity at the best price from the point of view of market data dissemination.

Creation of an Implied Price

The number of implied orders created in a product is limited to the value configured in the *maxNoOfImpliedOrders* parameter in the Matcher Product parameters. Each product can thus be configured to have a different number of maximum implied orders.

The matcher produces a maximum of one implied price per simple instrument side. Furthermore, exactly one implied order contributes to an implied price in this iteration of implied pricing. An implied price is synonymous with an implied order during this iteration.

If both sides of a simple instrument have an implied order each, the number of implied orders that exist in the product is counted up by two.

The creation of an implied order might add size to the existing IBBO or improve the existing IBBO.

Eligibility

For performance and complexity reasons not all instruments (complex and simple) and not all order types in these instruments, participate in implied pricing.

Instrument Eligibility

The participating complex instrument

- must be in a continuous trading state (Regular/Fast)
- must have the simple instrument being evaluated as its leg
- must have exactly two legs and both legs must be option legs i.e. stock combo instruments are not eligible for implied pricing
- must have option legs with a ratio of one to one
- must not have a crossed book

Both, the implied leg and the participating leg:

- must be in continuous trading states (Regular/Fast)
- must not have any auction running on them
- must not have the t-cross timer running on them. Note that the T-cross timer has been decommissioned in R3.0.
- must not have any market orders on them
- must not be frozen

An IO cannot be created on a simple instrument if the implied leg or its participant leg is not leggable. Hence, synthetic match considerations as specified in Part B-I of the matching engine specification should be honored at all times during the life of an implied order, else the implied order is deleted.

Additionally, the price on the participant leg side must be at the extended NBBO for it to be tradable and therefore eligible to create a tradable price on the implied leg. Since complex orders can trade through the away market, the extended NBBO consists of the non-implied ISE BBO and the Away market price extended by the OPRA buffer.

Instruments with more than two legs and with ratios that are not equal to one can create implied prices. However, this is out of scope for the current iteration.

Simple Instrument Sort

Since each product can have only a configurable maximum number of implied orders, only some simple instruments have implied orders on them.

For each simple instrument, the matching engine maintains a count of the number of deals produced for the simple instrument on the current business day. Deals at the opening are also included. The deals that contribute to this number must have a deal quantity greater than the value configured in `minDealEligibilityQty` (Matcher Gen ME Parameters).

Starting with the simple instrument that has the highest number of deals, the matcher evaluates simple instruments for pricing in the order of decreasing number of deals. This process continues until we create `maxNoOfImpliedOrders` for the product or until we exhaust all the simple instruments of the product, which ever happens first.

Thus at a certain point in time, the simple instruments that trade the most will have priority for pricing. This sorted list of simple instruments changes with a change in trading activity during the course of the business day.

In the event of a matching engine crash and its subsequent recovery, the number of deals per simple instrument will be reset to zero and all existing implied orders will be lost. In this case, trading activity in the instrument post recovery will contribute to simple instrument selection and sort.

Order Type Eligibility

On the participating complex instrument side:

- Complex quotes do not trade synthetically. MEQ orders, UPC orders and the hidden quantity of reserve orders are contingent. Auction orders are not available for execution until auction termination. Hence all of them do not act as participating complex orders.
- Market orders, limit orders, displayed quantity of reserve orders and converted auction orders can act as participating complex orders.

Of the eligible complex order types, the oldest one at the best price is selected as the *participating complex order*.

The participating complex order might thus be worse priced than a quote or MEQ or UPC etc on the same side of the complex book. Hence, a worse-priced complex order that creates an implied order can trade ahead of an MEQ, quote, or UPC order at a better price, even if the MEQ had sufficient quantity to trade with the incoming synthetic quantity. A market order is considered to be at the best price level. If such a market complex order exists and is unable to produce an implied order then, all limit orders on the same side as the market order become in-eligible for implied pricing. Orders on other complex instruments can still participate in implied pricing. In general, if a complex order is not at the best order only price, it is not eligible to produce implied orders.

Each order at this best price could potentially produce an implied order and thereby add more implied volume to an implied price. However this is out of scope for the current iteration.

On the participating leg side:

- Displayed non-implied volume on the ISE BBO is eligible for pricing. This includes orders, quotes, displayed quantity of reserve orders and converted auction orders. They are called participating leg orders.
- Even if some part of the eligible quantity has already been used for the generation of an existing implied order, the same quantity can be re-used to create another implied order.
- Auction orders, MEQ orders and the hidden quantity of reserve orders are not eligible for pricing. Locked orders are also ineligible for pricing.
- Note: by virtue of the eligibility criteria for the participating leg instrument, market orders and hidden quotes on the participating leg are automatically excluded from pricing.

If the participating complex instrument side has zero eligible volume, then that side of the complex instrument is in-eligible for pricing during the current evaluation.

If a participating leg side has zero eligible size, then all the complex instrument sides that use this simple instrument side as a participating leg side are in-eligible for pricing during the current evaluation.

In this iteration of implied pricing, we do not use depth available on the participating leg. We only use displayed non-implied volume at the IBBO, both during the calculation of implied prices and during the trading of implied prices.

Implied Order Characteristics

An implied order is a non-persistent, non-customer, day, limit order with an order type of "*Implied Order*". An implied order inherits the clearing information specified on the corresponding leg of the participating complex order.

By virtue of the existence of only one implied order per simple instrument side, the limit price and order quantity of an implied order also form the implied price and implied quantity on a simple instrument side respectively.

Instrument ID

This is the instrument id of the simple instrument on which it is created.

Order Type

The order type is "Implied Order".

Side

If a participating complex order is effectively buying a leg, then it produces an implied order on the buy side of the leg. If a participating complex order is effectively selling a leg, then it produces an implied order on the sell side of the leg.

"Leg side" as used is the effective side of the leg.

Order Quantity

Order Quantity of an Implied Order =

Minimum of (Open order quantity of the participating complex order,

Counter side non-implied display quantity on the ISE BBO of each of the other legs)

"Counter side" as used is the side counter to the effective side of that leg.

Assume that a complex instrument is effectively buying leg 1 and selling leg 2. A buy implied order is being created on leg 1. The implied quantity on leg 1 is the minimum of: the open quantity of the complex order and the displayed quantity on the buy side of the IBBO of leg 2.

Price Condition

An implied order is always a limit order.

Limit Price Determination

The limit price of an implied order is calculated by using one of the two methods described below. If the limit price thus calculated is worse than the best display price on the same side of the simple instrument on which it is being produced, then the implied order is discarded.

Method 1:

This method is used if the participating complex order is a limit order.

Buy Complex Order's Price = Sum of prices of all Buy Legs
 Less
 Sum of prices of all Sell Legs

Sell Complex Order's Price = Sum of prices of all Sell Legs
 Less
 Sum of prices of all Buy Legs

In the above formula, the price of a leg is as follows:

For the implied leg, it is the limit price of the implied order

For the participant leg, it is the non-implied counter side price on the ISE BBO

Hence the formula can be expanded as follows:

Buy Complex Order's Price =
 Sum of (Limit Price of Buy IO and Offer Price of Buy Participant Legs)
 Less
 Sum of (Limit Price of Sell IO and Bid Price of Sell Participant Legs)

Sell Complex Order's Price =
 Sum of (Limit Price of Sell IO and Bid Price of Sell Participant Legs)
 Less
 Sum of (Limit Price of Buy IO and Offer Price of Buy Participant Legs)

Note: In the above expansion, although Buy IO and Sell IO co-exist, at a time we are either evaluating the Buy IO or the Sell IO, not both. Hence when evaluating the Buy IO's limit price, exclude the Sell IO from the formula. Likewise, when substituting the participant leg prices, if a complex instrument does not have a Buy Participant, exclude it from the formula.

The buy and sell prices used in the above formula are the displayed prices on the simple book for those legs. The side of a leg as used in the above formula is the effective action of buying/selling that leg by the participating complex order. If a complex order is effectively buying a leg, then it is counted as a buy leg/buy leg side and if a complex order is effectively selling a leg, then it is counted as a sell leg/sell leg side.

The limit price thus obtained is worsened such that it is on a valid tick boundary. The price step table of the implied leg is used. The limit price of the implied order is further worsened to uncross with the following prices on the implied leg (*if such a price exists*):

- Counter side best MEQ price (since we do not want implied orders to trade with MEQs in this iteration)
- Counter side best away price (since we do not want to flash/lock implied orders)

Method 2:

If the participating complex order is market then, the IO's limit price is obtained by ticking in from the counter side prices on the implied leg as described below. The price step table of the implied leg is used:

- If both, the counter side best MEQ price and the counter side best away price are available, then
Limit Price of an IO=
 Price obtained by ticking in by one tick from the better of
 (Counter side best MEQ price, Counter side best away price)
- If the counter side best away price is not available, then
Limit Price of an IO=
 Price obtained by ticking in by one tick from the counter side best MEQ price
- If the counter side best MEQ price is not available, then

Limit Price of an IO=

Price obtained by ticking in by one tick from the counter side best away price

- If neither the counter side best away price nor the counter side best MEQ price is available then:
 - o A buy IO is discarded
 - o A sell IO is priced at one tick above zero.

The limit price of an implied order must be greater than zero and on a valid tick.

When computing the limit price of an IO, the participant legs' prices used, are always, the best bid or best offer prices, excluding implied orders that might exist on the participant. This ensures that an implied order's limit price is not derived from another implied order's limit price.

Refer to the Appendix to Part B-III for examples of limit price calculation.

Client Category

Although implied orders are treated as non-customer orders on the simple book, they carry the client category specified on their participating complex order.

Exchange Order ID

The matching engine will assign each implied order an exchange order id for tracking and maintenance purposes. When an implied order is deleted and re-created, the matching engine assigns it a new exchange order id.

Exchange Reference Order ID

This is the exchange order ID of the participating complex order.

Priority Timestamp

An IO is stamped with the time priority of its participating complex order.

Modification of an Implied Price

When the participants of an implied order change size or price, the matching engine re-evaluates an implied order. This might result in a modification of the limit price or order quantity of the implied order.

Modification of an implied order might change the implied price and/or implied quantity that it contributes to.

During such a modification, the total traded quantity of the implied order is retained. The open quantity of an IO is re-calculated if its order quantity is modified or if it trades.

Deletion of an Implied Price

BBO updates and new events on a simple instrument like a simple instrument auction, a new t-cross timer, a resting implied order that cannot trade with an incoming MEQ order that crosses it and cannot be uncrossed with it, will cause the matching engine to delete a resting implied order. All implied orders are deleted by the matching engine during end of day processing.

Deletion of an implied order might cause deletion of an implied price and/or quantity.

Enable/Disable Implied Pricing

Implied Pricing is disabled in the matching engine upon start up, by default.

It is enabled in the matching engine a configurable amount of time after the market open time for the product. Along the same lines, implied pricing is disabled in the matching engine a configurable amount of time before the close of business day for the product.

Triggered event updates are received per product from the reference data system by the matching engine in order to enable or disable implied pricing. When implied pricing is disabled for a product, existing implied orders in the product will be deleted.

Pricing Triggers

Often creation of an implied order is prevented by blocking conditions like a well priced counter side MEQ order, or the counter side away market, or another implied order that already exists at the same price on the simple instrument. When such blocking conditions disappear, it might be possible to create many new implied orders.

Changes in the simple market and changes in the complex market might create implied pricing opportunities called triggering events. Such events are detected and evaluated by the matching engine.

When processing such a trigger the matching engine executes the Implied Pricing Algorithm.

Potential Pricing Opportunities

The creation, modification and deletion of implied orders is contingent upon many events. The occurrence of one such event might open up the possibility to create a new implied order or to delete an existing implied order or to modify it. Each such event is called an implied pricing trigger.

The following events can result in a potential pricing opportunity:

- Instrument State change from non-continuous to continuous trading on an eligible complex or simple instrument (will allow newer complex/simple instruments to participate in pricing)
- Instrument State change from continuous to non-continuous trading on an eligible complex or simple instrument (might allow implied orders produced by/on the instrument to get deleted, thereby creating opportunities for other instruments to participate in pricing)
- Unfreeze of a simple instrument might make it eligible for implied pricing
- Auction Timer Start (might make an existing IO invalid thereby allowing creation of a new IO on a different instrument)
- Auction Timer Expiry (might cause a simple instrument to become eligible for pricing)
- T-Cross Timer Start (might make an existing IO invalid thereby allowing creation of a new IO on a different instrument)
- T-Cross Timer Expiry (might cause a simple instrument to become eligible for pricing)
- Trade in an eligible simple or complex instrument (might change the list of sorted simple instruments)
- ABBO price update (might create a new IO or make an existing IO invalid)
- MEQ best price update (might create a new IO or make an existing IO invalid)
- Change in an eligible complex instrument from having a crossed BBO to an uncrossed BBO or vice versa
- Creation or deletion of an eligible complex instrument
- Addition of a new simple instrument
- Removal of a market order on a simple instrument might make it eligible for pricing
- Change in the order only BBO of an eligible complex instrument.
- Change in the BBO of a simple instrument
- Enabling implied pricing for a product

All of these events are queued regardless if there are implied orders on these instruments or not. A triggering event does not necessarily create an implied order but just indicates a possibility.

Processing Pricing Opportunities

Selection of the Triggering Event

Triggering events are queued and processed in the order of their arrival (FIFO). Here, multiple triggering events can be consolidated into one event to minimise the number of passes over the instruments.

Order quote maintenance transactions are processed before processing pricing triggers. Matching triggers (for standard and stock combo instruments) are processed before pricing triggers.

A triggering event might affect one or more simple or complex instruments. The matching engine executes the implied pricing algorithm when it processes a pricing trigger.

Implied Pricing Algorithm

This procedure is executed to determine the valid set of implied orders for a product. It might result in the creation of a new implied order or modification of an existing implied order or deletion of an invalid implied order.

The implied orders that are affected and the participants that affect it are selected best effort. The selected implied orders are then evaluated in real time and an appropriate action is performed. It might happen that a modification of an implied order is suggested, but re-evaluation in real time results in deletion of the implied order.

The matching engine executes the following procedure for each product where implied pricing is done:

1. Sort all the simple instruments of a product that are eligible for implied pricing in the sequence in which they must be evaluated.
2. For a simple instrument, evaluate the buy side followed by the sell side
3. For a simple side, list all the complex instrument sides that are eligible for implied pricing
4. For a complex instrument side select the participating complex order and create the resulting IO
5. For each side of the simple instrument, select the IO with the most aggressive limit price**¹. If two IOs have the most aggressive limit price, select the IO created by an older complex order. The time priority of the implied order is the same as the time priority of its participating complex order.

Repeat steps 1 to 5 to list the implied orders that might exist at a certain point in time for a product. Thereby also determine if existing implied orders need to be modified or deleted. Process these suggestions in real time taking into account the current market conditions.

6. Existing IOs might get modified or deleted when processing this list.
7. New IOs might get added to the book.
8. If an IO is executable upon entry, it indicates that the complex book is crossed with the synthetic book. The IO is not created. Eventually best effort might suggest an uncrossing of the participating complex instrument when it detects this match opportunity.
9. When multiple IOs are to be re-evaluated at the same time, the IO with higher time priority is re-evaluated first. This is because; multiple complex orders might be eligible to create implied orders on the same simple instrument side, although only one will be selected to create the implied order. We want to give the complex order with higher time priority the opportunity.
10. The addition of an IO might cause stop order triggering. In general, the addition of an IO triggers other events, just like the addition of regular orders.
11. If an IO is not at or better than the IBBO anymore, it is deleted.

**1. Although, this is an unknown at this point, but in the event that we face performance issues, the matching engine might be optimized as follows:

While evaluating a simple instrument, once the matching engine finds an implied order, it will look for a better priced implied order only for 'N' additional complex instruments before creating the best one it has found so far. 'N' would be a technical matcher configuration parameter and does not exist currently. An implied order with larger size than the one in hand does not qualify as better. It must improve the implied price.

Mechanics

Maintenance of an implied order is performed jointly by the matching engine and MDD.

Currently, a complex order is available for trading on its own (complex) order book upon entry. The generation of an implied order is an additional feature that the matcher may provide to a complex order, in order to give it a better chance of execution, by displaying it, on the order book of its legs.

However, the detection of an opportunity to create an implied order on an appropriate simple instrument using an appropriate complex order is a performance intensive task. Hence, implied order generation is done by the matching engine on a best effort basis i.e. the matching engine attempts to detect and then create a new implied order quickly but not immediately. It may therefore happen that, an implied order creation opportunity arises and goes away before the matching engine is able to react to such an opportunity.

Once created, the matching engine informs MDD about a new implied order. MDD can now disseminate the top of book and depth feeds using the new implied order.

A change in the participants of an implied order can make an implied order invalid. For example, once a participating complex order is deleted, its implied orders become invalid. If a participating simple instrument side is traded out, all implied orders dependant on it become invalid.

The detection of invalid implied orders that must be deleted can be a performance intensive task. Hence, the matching engine will evaluate and delete implied orders as and when required. In some cases, the matcher will delete implied orders in *real-time*. In some other cases, the matching engine will delete implied orders on a best effort basis. The period during which invalid implied orders exist in the matching engine is called the *out-of-sync period*. If during this period the matching engine attempts to use an implied order (for trading, price checks etc.) and finds it to be invalid, it will delete the implied order. This mechanism is called an *on-demand delete*. An on-demand delete will result in lingering invalid implied orders on the matcher order book. However, since the matching engine always has access to all its order books, it can re-synchronize itself when ever required.

We must display the correct state of our markets in real time. Hence the removal of an implied order from the top of book and depth feeds cannot be best effort or on-demand. It has to be in real time. This brings forth the need to have an alternate mechanism to detect and remove invalid implied orders from the top of book and depth feeds in cases when the matching engine does not delete them in real time. This task will be performed by MDD.

Based on information available in the matching engine audit trail, MDD will deactivate existing implied orders. During the out-of-sync period, if the invalidating event now corrects itself and MDD has not received any update for such implied orders from the matching engine, MDD will restore the inactive implied orders to their original state. In some cases, MDD might update implied orders instead of inactivating them during the out-of-sync period. However once the matching engine syncs itself, an

update from the matching engine will always over-write an existing active or inactive implied order in MDD with an active implied order.

Timely inactivation of an implied order by MDD ensures that the exchange does not promise a price or size to members that it does not have. Just like regular trading, the matching engine might trade an incoming order at a better price if it finds one.

ME-MDD Protocol

The following section describes how the matching engine and MDD jointly maintain existing implied orders.

Auction Timer

Both the implied leg and the participant leg must not have any auctions running on them.

When a new auction on a simple instrument begins, the matching engine will delete all implied orders that exist on the instrument.

MDD will inactivate all implied orders where this instrument is a participant leg. Once the auction terminates, MDD automatically activates the implied orders that it had deactivated.

During this period, the matching engine might have these invalid implied orders on its book. New transactions might cause re-evaluation and deletion of some of these invalid orders. Each such delete will be written to the audit trail and processed as a delete by MDD. Once the auction terminates, MDD will activate all the remaining inactive orders that were not deleted by the matching engine.

If multiple events cause inactivation of an implied order, MDD will wait for each such event to undo itself before it activates the corresponding IOs.

For example, if a simple instrument has a new auction timer and a new t-cross timer, MDD will wait for both the auction to end and the t-cross period to end before activating the affected implied orders.

ABBO Update

The participant leg must be at the NBBO for it to be eligible for pricing.

When the extended away market price (extended by the OPRA buffer) is better than ISE's best bid or offer on a simple instrument, MDD will inactivate all implied orders where this simple instrument is a participant leg. The matching engine will create an *ImpliedOrderEventRecord* (event type = *Away Market Better*) in the audit trail to inform MDD that the extended away market price is better and such an action is required.

Once the Extended Away BBO corrects itself, MDD will be informed again and it will activate all the orders that were inactivated due to this event.

Note: If the counter side (non-extended) away market price on an implied leg crosses a resting implied order, the implied order is neither deleted nor ticked back.

Non-implied IBBO size decrease

If the non-implied quantity available on the participant leg reduces, implied orders that depend on that quantity might have to be reduced in size too.

When the non-implied best bid or offer of a simple instrument loses size, MDD re-computes the order quantity and open order quantity of each of the dependant implied orders to reflect the change.

If the size on the participating leg now increases (after an original decrease), MDD re-computes and increases the size of the corresponding implied orders too. MDD restores the size of an implied order only up to a maximum of the size as last communicated by the matching engine.

Once the matching engine detects this size down or size up, it will decrease and/or increase the quantity of the implied orders as required and inform MDD.

Until then, the matching engine supports the new quantity as computed by MDD on each of the implied orders and hence, a size down or up on them by MDD still reflects what we can actually trade.

Non-implied IBBO price worsening

If the non-implied best price on a participant leg worsens, implied orders that depend on that price must be ticked back to worsen too, so that the limit price of the participating complex order continues to be honored.

When the participating leg's best price worsens, MDD ticks back the limit price of each of the dependant implied orders in accordance with the price step table of the simple instrument concerned. If the resultant limit price of the implied order is worse than the best price at ISE, then, the implied order is inactivated until the participant leg's best price improves and makes the original limit price valid again, or until the matching engine updates the implied order explicitly.

Now, if the best price on a participating leg improves (after worsening) such that it might improve the limit price of an implied order, MDD only improves the limit price of this order until its original limit price as last communicated by the matching engine is restored.

Note, market complex orders that produce limit implied orders do not require to be ticked back in price.

New MEQ Order

An incoming MEQ order might trade with a resting implied order. If an incoming MEQ order crosses a resting implied order but does not trade with it, the implied order is ticked back such that its limit price uncrosses with the limit price of the MEQ order. If the implied order is now priced worse than the ISE best price on the same side, it is deleted. The matching engine performs such a tick back or delete in real time since the impact is local to a single implied order.

Instrument State Change

When a simple instrument moves from continuous to non-continuous trading, all implied orders on the simple instrument and all dependant implied orders (where this simple instrument is a participant) should be deleted.

Once MDD receives such an instrument state change, it inactivates the affected implied orders. If the simple instrument now moves back into continuous trading MDD activates these orders again. An update from the matching engine eventually over-writes MDD's self generated state.

BBO Changes

Resultant impact of some triggers is summarized below for understanding:

Item/Event	Size increases	Size Decreases	Price Improves	Price Worsens
1. Participating Leg Side non-implied IBBO	IO size increase	IO size decrease	IO deletion New IO creation	IO deletion New IO creation
2. Participating Complex Order	IO size increase	IO size decrease	IO deletion New IO creation	IO deletion New IO creation
3. Implied Leg Side non-	Do nothing	Do nothing	IO deletion New IO creation	Do nothing

implied IBBO				
4. Participating Complex Instrument's order only BBO	Do nothing	Do nothing	IO deletion New IO creation	Do nothing
5. Unrelated Simple IBBO	Do nothing	Do nothing	New IO creation IO deletion	Do nothing
6. Unrelated Complex IBBO	Do nothing	Do nothing	New IO creation IO deletion	Do nothing

Cases 2, 3 and 4 are performed by the matching engine in real time. The remaining events involve inactivation and/or re-activation by MDD along with best effort evaluation by the matching engine.

The creation of an IO can be accompanied by the deletion of an existing IO since we only create a certain maximum number of implied orders per product.

Disabling Implied Pricing

When implied pricing is disabled for a product, the matching engine will delete all the implied orders for the product in real time.

Simple Instrument Freeze

The participant leg of an implied order must not be frozen.

When a simple instrument is frozen, MDD will deactivate all implied orders where this leg is a participant. The matching engine will create an *ImpliedOrderEventRecord* (event type = *Simple Instrument Frozen*) to inform MDD that the instrument is frozen and such an action is required.

Once the instrument is unfrozen, MDD will be informed again and it will activate all the implied orders that were deactivated due to this event.

Matching

Implied orders are uncrossed with the simple book and join or create the ISE Best Bid or Offer. They do not trade upon entry.

An incoming simple order/quote can match a resting implied order in a procedure called synthetic matching or simple legging.

An initiating complex order/quote can match with resting implied orders on one or more of its legs during synthetic matching. This is called combo to combo legging.

Since orders from a crossed complex book do not produce implied orders, synthetic matching specifically does not refer to the matching of a complex order with resting implied orders produced from another order of the same complex instrument.

In this iteration of implied pricing, stock combination order types will not trade with implied orders. If any leg of a stock combo has a resting implied order, then an attempt to leg in will fail and a failed match attempt will be written to the audit trail. Removal of an implied order will be a matching trigger for stock combination orders.

Hence hereafter, complex orders refer only to standard combo complex instruments in the context of this document.

Synthetic Matching

This procedure is currently used to match an initiating complex order/quote against orders/quotes in the simple instrument book. Hereafter, synthetic matching will refer to each of the below mentioned procedures:

- the matching of initiating complex orders/quotes with orders (implied and non-implied) and quotes in the simple instrument book
- the matching of incoming simple orders/quotes with implied orders (i.e. complex orders)

When trading an implied order we must always

- Honor the limit price of the participating complex order
- Honor the ratio proportions between the legs of the participating complex instrument
- Honor the quantity of the participating complex order
- Honor the price and size available on the participating leg

Simple Legging

Currently a complex order is not visible on its legs. Hence an incoming simple order or quote that is marketable with the complex book gets written to the simple book without a match attempt. The matching engine then detects this match opportunity on a best effort basis and legs the complex order into the simple book.

Implied orders will allow incoming simple orders/quotes to leg into the complex book upon entry. For the simple order this is a synthetic match step. A positive side effect of simple legging is that simple IOC orders that currently never trade with the complex book can now do so, upon entry.

Since an implied order is one leg of a multi-legged complex order, execution of an implied order is always accompanied by an execution of each of the other legs of the complex order in ratio proportion. When trading a participant leg, if the complex order encounters an implied order at a better price, then the implied order is deleted first and the complex order is executed with the non-implied simple book quantity after that. Thus trade of an implied order on an implied leg does not cause trade of an implied order on its participant legs.

Trade of an implied order reduces the quantity available on the participating complex order by the trade quantity. This might affect the quantity available on the other implied orders where this complex order is a participant.

Combo to Combo Legging

Currently a complex order is not visible on its legs. It is also not used to generate a synthetic price for another complex instrument. Hence a complex order from one complex instrument does not trade with an order from another complex instrument.

Implied orders are available on the simple BBO. Hence initiating standard combination complex orders can trade synthetically with them. Since complex orders trade multiple simple instruments at the same time, it is possible that they might trade with multiple implied orders at a time, one on each leg.

Extended Synthetic Match Procedure for Complex Orders

The synthetic match procedure as defined in Part B-I of the matching engine specification does not extend to the trading of implied orders. Hereafter, when implied pricing is enabled, and implied orders exist in an instrument during synthetic matching of a complex order, the following procedure (Extended Synthetic Match Procedure) is executed instead of the Synthetic Match Procedure:

1. Execute the Synthetic Match Procedure as described in Part B-I of the matching engine specification. Consider only available non-implied quantity on all legs of the complex instrument.

2. For each leg with zero non-implied quantity and non-zero implied quantity, consider implied quantity. For all legs that have non-zero non-implied quantity consider non-implied quantity only. Determine the available quantity on each implied order as follows. Note: If re-calculation of an implied order results in an improved limit price or greater quantity for the implied order, then a new IBBO with the improved prices/quantities must be published before executing the trade. If re-calculation of an implied order results in a worse limit price or worse quantity than currently known to the matcher, then an update must be published. Additionally, if the new price is not at the IBBO anymore, the implied order must be deleted.
 - a. If the participating leg side of the implied order is different from the participating leg side of each of the other implied orders and different from the leg sides that the initiating complex order will trade with, then, the implied orders do not have common participants and hence, Available Qty of IO = Open quantity of IO
 - b. If a participating complex order produces an implied order each on both its legs (IO1 on S1 and IO2 on S2) and if both implied orders have been included, then;
 - i. Ensure that unit contracts of the participating complex instrument are executed. This is ensured as described below.
 - ii. If the ratio of S1 and S2 in the participating complex instrument (1:1) is equal to their ratio in the initiating complex order's instrument, then;
 1. The participant legs of IO1 and IO2 do not trade. (See Appendix to Part B-III for Example)
 2. Trading IO1 and IO2 is equivalent to trading the two legs of the participating complex instrument in ratio proportion.
 3. Available Qty of IO = Open Qty of IO
 4. Note: if ratio of S1 and S2 in the initiating complex order's instrument is 2:2, then their ratio relative to each other is 1:1 and therefore equal to their ratio in the participating complex instrument.
 - iii. Else if the ratio of S1 and S2 in the participating complex instrument (1:1) is not equal to their ratio in the initiating complex order's instrument, then;
 1. Use Open Qty of IO1 and IO2 to determine the MatchQty for the incoming complex order. (Synthetic Match Procedure Part B-I)
 2. Determine Executable Qty for IO1 and IO2.

$$\text{Executable Qty of IO1} = \text{MatchQty} * \text{LegRatio1}$$

$$\text{Executable Qty of IO2} = \text{MatchQty} * \text{LegRatio2}$$

LegRatio is the ratio of the implied leg in the signature of the incoming order's instrument.
 3. One IO will have smaller Executable Qty than the other IO. Assume IO1 has smaller Executable Qty.
 4. Then,

$$\text{Available Qty of IO1} = \text{Executable Qty of IO1}$$
 5. Since IO2 has more Executable Qty than IO1, it must trade its participating leg (S1) for the excess Executable Qty to ensure that the participating complex order trades its legs in ratio proportion.
 6. Further, Step (c) is executed if required. Step (c) might have to be performed to determine how much of the excess Executable Qty of IO2 is actually available for trading.
 7. If Step (c) needs to be executed then;
 - a. For the purpose of Step (c), reduce the open qty of the participating complex order by the Available Qty of IO1
 - b. Available Qty of IO2 =

- Available Qty of IO1 +
Available Qty of IO2 as will be calculated in Step (c)
8. Else,

$$\text{Available Qty of IO2} = \frac{\text{Executable Qty of IO2}}{\text{Executable Qty of IO2}}$$
 - c. If the participating leg side of any implied order is the same as another implied order or the same as the leg side that the initiating complex order will trade with, then, for each such common leg side, determine the quantity of the corresponding implied orders available for trading as follows:
 - i. Identify the common leg side
 - ii. Determine the sum of the ratios for the common leg side using the signature of each of the participating complex instrument and/or the initiating complex instrument that share this leg.
 - iii. Common Leg Qty = Truncated Quotient of (

$$\text{Non-implied quantity available on the common leg side}$$

$$\text{Division}$$

$$(\text{Sum of common leg side ratios}))$$
 - iv. Available Qty of IO =

$$\text{Minimum of } (\text{Open Qty of Participating Complex Order}, \text{Common Leg Qty})$$
 3. If all legs now have non-zero available quantity, then, execute the Synthetic Match Procedure as described in Part B-I of the matching engine specification. Consider only non-implied quantity on the legs that have non-zero implied quantity (i.e. exclude the implied quantity) and consider available implied order quantity on the legs that have zero non-implied quantity (as calculated in Step 2).
 4. Repeat steps 2 and 3 until all no further synthetic matching is possible
 5. Execute each of the participating legs such that the corresponding participating complex order trades its legs in ratio proportion.

$$\text{Executable Participating Leg Qty} = \text{Difference between the number of contracts of the two legs of the participating complex order that have been traded.}$$

Refer to the Appendix to Part B-III for examples of synthetic matching.

Allocation

Implied orders are traded last at a price level on the simple book i.e. all displayed and hidden or contingent quantity is tried for trading before an implied order at that price level is traded.

Hence an incoming simple order will attempt to trade all quantity available at a price level in an outright match step before it trades available implied orders in a synthetic match step.

When a complex order trades synthetically, each leg is matched against the simple instrument book using the standard ISE allocation algorithm as configured for the simple instruments of the product.

Order Execution

In each of the above cases, execution of an implied order translates into execution of the participating complex order. Hence, order records for partial/full execution, modification, etc. are written for the participating complex order, not the implied order.

At the end of a match event, the resultant state of all the implied orders that were modified or deleted (could be an explicit deletion or a trade out) due to the match cascade will be written to the audit trail.

Market Maker Protection

Multiple simple and complex instruments might trade in a match event. Speed bump will continue to be checked at the end of a match event.

Price Improvement

A complex order that produces an IO automatically receives price improvement if its implied order is ticked back as described in the limit price calculation section for implied orders.

Thereafter, if an incoming simple order/quote or an initiating complex order trades with an implied order, then, the implied order trades at its own displayed price. Price improvement is given to the incoming/initiating order/quote.

Trade Reporting

The possibility of a trade between an incoming simple order and a resting complex order upon entry or the possibility of a trade between orders of different complex instruments requires changes to the match event to accurately reflect the new matching behaviour.

Match Event

A match event will continue to carry the event instrument id of the incoming/initiating order/quote. So, in the case of an incoming simple order/quote that trades with an implied order upon entry, the event instrument id is the instrument id of the incoming simple order/quote.

Match Step

An incoming simple order/quote will trade with resting simple orders/quotes on its own book in an outright match step. An incoming simple order/quote will trade with a resting implied order on its book in a synthetic match step.

An initiating complex order will trade with other complex orders on its book in an outright match step. An initiating complex order/quote will trade with resting orders/quotes and resting implied orders on each of its legs in a synthetic match step.

In addition to the existing distinctions between two match steps, the matching engine will create a new match step every time the synthetic trade of a certain quantity of the incoming/initiating order/quote changes the number of complex instruments executed in the match step.

For example:

When an incoming simple order/quote trades a resting implied order, a synthetic match step with *numberOfCIExecuted* = 1 is created.

Incoming complex order (Buy 1 S1, Buy 1 S2) to Sell 10 trades as follows:

- 5 of its quantity with the non-implied quantity available on its legs. A synthetic match step with *numberOfCIExecuted* = 1 is created.
- 3 of its quantity with non-implied quantity on S1 and implied quantity on S2. A synthetic match step with *numberOfCIExecuted* = 2 is created.
- 2 of its quantity with implied quantity on S1 and implied quantity on S2. A synthetic match step with *numberOfCIExecuted* = 3 is created.
- Thus 3 match steps with the same step price and the same step type (synthetic) will be created.

numberOfCIExecuted is the number of complex instruments executed in the current match step. It will count the incoming order/quote's instrument id if the incoming is complex.

numberOfCIExecuted is unused for the "Outright" match step type.

The price at which the incoming simple order/quote trades or the price at which the initiating complex order/quote trades is the step price. The quantity of the incoming executed in the current match step is the step quantity. The step type is outright or synthetic. Since implied orders are treated as non-customer orders on the simple book, they do not participate in the synthetic customer match step of a complex order/quote.

A net price is calculated for each complex order executed in a match step and stored in the *OrderNetPrices* array. If a complex order trades at multiple net prices, then each such net price is added to the *OrderNetPrices* array. The net price of the initiating complex order/quote is not included in this array.

Refer to the Appendix to Part B-III for examples of the generation of the new match step.

Trade

The Trade record will carry a *impliedTradeType* attribute to identify the components of an implied match for ease of understanding.

When a simple order/quote trades an implied order, the *impliedTradeType* for the implied leg will be *Simple Legging* while the *impliedTradeType* for the participant leg will be *Simple Legging Participant*.

When a complex order/quote trades with an implied order, the *impliedTradeType* will be *Combo to Combo Legging* for the implied leg while the *impliedTradeType* for the participant leg will be *Combo to Combo Legging Participant*.

The *impliedTradeType* attribute is unused for non-implied matches.

Deal Item/Trade Item

During simple legging or combo to combo legging, execution of an implied order means execution of the participating complex order.

Hence, the deal item/trade item for an implied order will carry the exchange order id of the participating complex order, not the implied order in the *exchangeOrderID* field.

Maker Taker

Maker Taker values for implied matching will be configurable.

Chapter 49. OBE- Mass Deleting Complex Orders

Complex Instrument														ISE BBO			Trade Information		
Instrument Id	Legs	Ratio	Side	Status	BNTTQty	BCustQty	BQty	Bid	Ask	AQty	ACustQty	ANTTQty	Time	Last	LQty				
72065625626817737	CSCO3JAN10.0P		1	Sell	Regular				\$1.50	1	1								
	CSCO3JAN17.5P		1	Buy	Regular														
72065625626822212	CSCO3APR21.0C		1	Buy	Regular				\$1.85	1	1								
	CSCO3APR21.0C		1	Sell	Regular														
72065625626823771	CSCO3JAN13.5C		1	Buy	Regular				\$6.25	2	2								
	CSCO3JAN13.5C		1	Sell	Regular														
72065625626824695	CSCO4JAN13.0C		1	Buy	Regular				\$5.85	25	25								
	CSCO4APR19.0P		1	Sell	Regular				\$2.75	1	1								
72065625626824840	CSCO3APR19.0P		1	Buy	Regular														
	CSCO3APR19.0P		1	Sell	Regular														
72065625626826798	CSCO4JAN17.0P		1	Buy	Regular				\$1.00	19	19								
	CSCO4JAN17.0P		1	Sell	Regular														
72065625626827169	CSCO4JAN13.0C		1	Buy	Regular				\$4.00	7	7								
	CSCO4JAN18.0C		1	Sell	Regular														
72065625626828607	CSCO3JAN20.0C		1	Sell	Regular	10	10	\$2.90											
	CSCO3JAN17.0C		1	Buy	Regular														
72065625626830285	CSCO2NOV18.0P		1	Sell	Regular				\$0.70	12	12								
	CSCO2DEC18.0P		1	Buy	Regular														
72065625626830503	CSCO4JAN18.0C		1	Buy	Regular	10	10	-\$0.01											
	CSCO3JAN20.0C		1	Sell	Regular														
144123216664705719	CSCO3APR18.0C	100	Buy	Regular															
	CSCO2NOV18.0C	1	Sell	Regular															
72065625626830523	CSCO2NOV18.0P	7	Buy	Regular															
	CSCO3JAN22.0C	4	Sell	Regular															
72065625626830524	CSCO3APR22.0C		1	Buy	Regular		1	1	-\$0.69										
	CSCO3APR22.0C		3	Sell	Regular														
72065625626830525	CSCO3JAN15.0P		1	Sell	Regular														
	CSCO3JAN15.0P		1	Buy	Regular														
72065625626830526	CSCO2NOV15.0P		1	Sell	Regular														
	CSCO2NOV15.0P		1	Buy	Regular	200		-\$0.01	\$0.24	5	5								
72065625626830527	CSCO2NOV19.0C		1	Sell	Regular				\$0.58	10	10								
	CSCO2NOV19.0C		1	Buy	Regular														
72065625626830528	CSCO2DEC18.0C		1	Sell	Regular				\$0.26	5	5								
	CSCO2DEC18.0C		1	Buy	Regular														
72065625626830529	CSCO2OCT18.5P-26		2	Sell	Regular														
	CSCO2OCT19.0P-26		2	Buy	Regular														
72065625626830529	CSCO2NOV17.0P		1	Buy	Regular														
	CSCO2NOV18.0P		1	Sell	Regular														

When a Market Operations Representative (MktOps) arrives each morning they are to open all applicable tools that are required to perform the MktOps job function.

These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

MktOps selects Applications and then chooses Order Book Explorer (**OBE**) and Market Place Tool (**MPT Client**).

Members contact Market Operations by calling our toll free number at 877-473-9989.

Being able to accurately status a members order quickly and accurately is a very important task that Mkt Ops performs each day.

MktOps vigilantly oversees all the trading that takes place. We look for anomalies in the markets, member orders, tool alerts and issues brought to our attention by our technology partners at the ISE and the members themselves.

Complex Orders or Spreads are vital to the success of the ISE. Members trade here because of the advance technologies in place.

To view open spread orders that are on the book we use: **Orderbook Explorer (OBE)**.

OBE is a MktOps view into the options market. Instrument series, Calls, Puts, Status, ISE and Away market Bids and Offers are all displayed here.

Use the **Complex Price Info-ISE** tab in OBE, you are required to enter the product you are investigating and then search.

The grid will populate with all the open complex orders working. The view is static but will update when the search button is selected.

The column headings are sort-able to the user's preference.

Some of the key information required would be the Instrument ID, Legs, Ratio, Side, Status, buy customer quantity, bid quantity, bid, ask, ask quantity, ask customer quantity, last, last quantity and time.

Other useful information is the complex order count and the PMM, Bin, Partition, Primary Exchange, Product ID and Description.

User can also double click the columns to sort and narrow the search by entering leg info, instrument id and time.

At the bottom left of the complex grid there is a count. MktOps monitors that this number does not exceed the maximum level set in **Ref Data** (RDFE).

AAPL is set at maximum number of complex instruments = 4,000

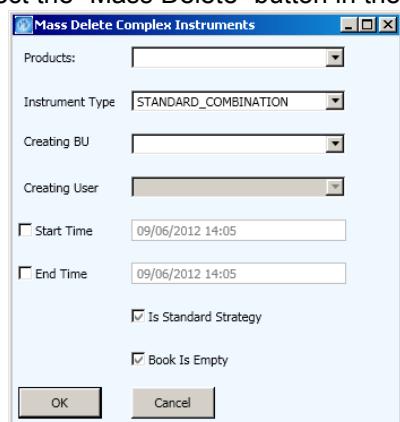
SPY is set at maximum number of complex instruments = 3,000

All other symbols are 2,000.

The reason this is important is that if MktOps allows this number to exceed the thresholds set, everyone that enters a complex order in AAPL or SPY will receive a "*maximum number of complex instruments exceeded*" reject.

MktOps can prevent this from happening by deleting instruments created but without orders in them.

Select the "Mass Delete" button in the OBE/ Complex Price Info-ISE tab.

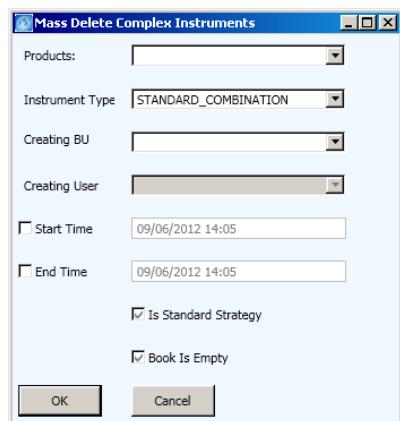


Default View 'Greyed out' boxes.

Mkt Ops enters the Product.

Verify it is standard combination.

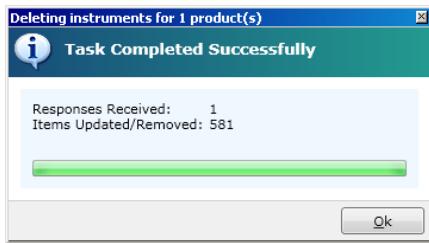
MktOps **MUST** double-click the "The Book is Empty" check box. Then select once more. And the Dark black check appears.



Users will receive an "are you sure you want to delete complex instruments pop up".

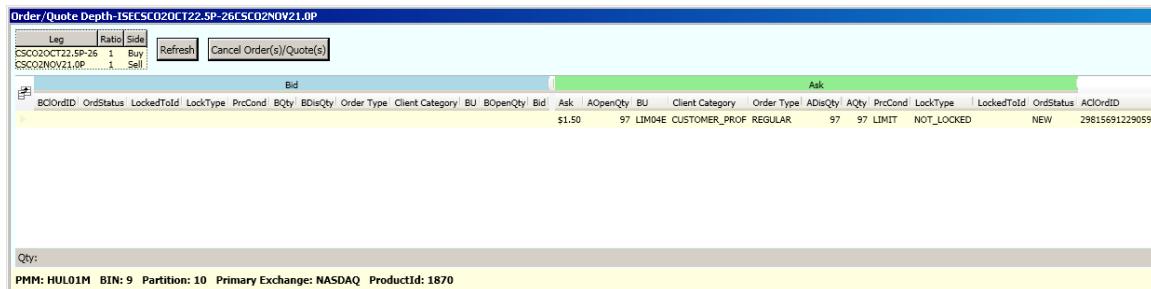
Select OK.

Users will receive a task successfully completed window.



ATD01E is set at maximum number of complex instruments allowed = 2000
All other firms are set at maximum number of complex instruments allowed = 1000
There is no action MktOps can take when a firm exceeds its level it is worth noting if they receive the unfamiliar message.

Chapter 50. OBE- Deleting Single Complex Orders



When a Market Operations Representative (MktOps) arrives each morning they are to open all applicable tools that are required to perform the MktOps job function.

These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

MktOps selects Applications and then chooses Order Book Explorer (**OBE**) and Market Place Tool (**MPT Client**).

Members contact Market Operations by calling our toll free number at 877-473-9989.

Being able to cancel a members order quickly and accurately if needed is a very important task that Mkt Ops performs each day.

MktOps vigilantly oversees all the trading that takes place. We look for anomalies in the markets, member orders, tool alerts and issues brought to our attention by our technology partners at the ISE and the members themselves.

Complex Orders or Spreads are vital to the success of the ISE. Members trade here because of the advance technologies in place.

To view open spread orders that are on the book we use: **Orderbook Explorer (OBE)**.

OBE is a MktOps view into the options market. Instrument series, Calls, Puts, Status, ISE and Away market Bids and Offers are all displayed here.

Use the **Complex Price Info-ISE** tab in OBE, you are required to enter the product you are investigating and then search.

The grid will populate with all the open complex orders working. The view is static but will update when the search button is selected.

The column headings are sort-able to the user's preference.

Some of the key information required would be the Instrument ID, Legs, Ratio, Side, Status, buy customer quantity, bid quantity, bid, ask, ask quantity, ask customer quantity, last, last quantity and time.

Other useful information is the complex order count and the PMM, Bin, Partition, Primary Exchange, Product ID and Description.

User can also double click the columns to sort and narrow the search by entering leg info, instrument id and time.

On the main grid MktOps verifies they have the proper spread

MktOps looks to the Bid quantity and or Ask quantity to see if it populated

Right click and select the order quote depth.

A separate window will appear and will display the orders currently working.

Users will receive an "are you sure you want to delete complex instruments pop up".

Select OK.

Chapter 51. OBE- Viewing Trade History

The screenshot shows the Order Book Explorer (OBE) application window. The title bar says "Order Book Explorer". The menu bar has "File", "Edit", "View", "Insert", "Format", "Tools", and "Help". The toolbar has buttons for "New", "Open", "Save", "Print", "Copy", "Paste", "Delete", "Search", "Filter", "Sort", and "Help". The main menu has "File", "Edit", "View", "Insert", "Format", "Tools", and "Help". The status bar says "Version: 3.0.3.0".

The application has several tabs in the top navigation bar: "Regular Market-ISE", "Market Depth-ISE", "Order/Quote Depth-ISE", "Open Orders/BU", "Open Orders/Product-ISE", "Deal Items-ISE", "Functional Stats/History-ISE", "Complex Price Info-ISE", "Market Info", "Order", "Trade", and "Hist Statistics". The "OPRA Trades History" tab is currently selected.

The main area contains a search and filter panel with fields for "Match Event Date" (set to 04/12/2012), "Instrument" (empty), "Min Qty" (500), "Min Price" (0.00), "Enable Time Range Filter" (checkbox checked), "From" (09:30:00 AM), "To" (04:30:00 PM), "Exchange" (ALL), "Max # of Rows" (1000), and "Deal Source" (ALL). Below this is a large grid table with columns: Instrument, Price, Qty, Trade Time, Exchange, and Deal Src. The grid lists numerous trades from various instruments and exchanges, such as XOMAY29.OC, HAL2JUL34.0C, HAL2APR34.0C, ORCL3JAN30.0C, ORCL3JAN45.0P, ORCL3JAN45.0C, ORCL3JAN45.0C, NPF2JUN40.0P, NPF2APR40.0P, QQQ2APR67.0C-13, ADBE2APR33.0P, QQQ2QAY67.0P, SPY2APR13.0C, INT2CMAY30.0C, XLB2JUN33.0P, PG2APR67.5C, SPY2APR139.0P, INT2CJUL31.0C, AU2MAY28.0C, AU2MAY28.0C, AU2MAY28.0C, INT2CJUL31.0C, MDT3JAN45.0C, IBM2APR195.0P, IBM2APR200.0P, SPY2MAY129.0P, IWM2JUN80.0C-29, IWM2JUN90.0C-29, IWM2JUN90.0C-29, ESR2QJUN57.5C, IWM2AU075.0P, JPM2APR36.0P, ESR2QJUN75.0C, ESR2QJUN70.0C, ESR2QJUN57.5C, and CINV2MAY132.0P. The grid also shows summary statistics at the bottom: Avg Price = \$1.30, Avg Qty = 1523.25, Total Qty = 1523247, and Trades Count = 1000.

When a Market Operations Representative (MktOps) arrives each morning they are to open all applicable tools that are required to perform the MktOps job function.

These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

MktOps should open OBE along with Market Watch, RDPE and MPT

Management may sometimes contact MktOps to inquire about specific print that have traded.

Trade Ticker is an attempt to view these orders but it need to be opened at the beginning of the trading day to accurately capture all the requested trades

This is a dynamic view and if opened without filtering would provide every single execution across exchanges from the largest to the smallest one lot.

Searching this way would require resources and probably have an impact on the performance of the tools.

MktOps would filter for large orders to do the needed research. Filtering can be done by simple populating the row directly beneath the column headers.

Once selected MktOps will see the Instrument Qty traded Price, Trade Time, Exchange and Deal Source.

At the bottom of the screen is a total Quantity traded, Average Qty Avg Price and trade count.

Development has provided a better tool than Trade Ticker it is the OPRA Trade History and it has replaced the Ticker as the go to source for trade research

Chapter 52. OBE- Viewing Trade Ticker

Instrument	Qty	Price	Trade Time	Exchange	DealSource
AAPL2NOV710.0C	82	\$2.44	10/22/2012 1:43:30 PM	NASDAQ	NormalTrading
QQQ2OCT66.5P-26	12	\$1.21	10/22/2012 1:43:29 PM	NASDAQ	NormalTrading
TD2NOV82.5P	38	\$1.10	10/22/2012 1:43:27 PM	CBOE	NormalTrading
TD2NOV82.5P	11	\$1.10	10/22/2012 1:43:27 PM	PHLX	NormalTrading
DD2NOV50.0C	50	\$0.60	10/22/2012 1:43:23 PM	NASDAQ	NormalTrading
AAPL3JAN1650.0C	20	\$2.97	10/22/2012 1:43:20 PM	ISE	ComboOrderTradeTypeL
MNST3JAN50.0PX	15	\$5.00	10/22/2012 1:43:15 PM	ARCA	NormalTrading
MNST3JAN50.0PX	15	\$5.00	10/22/2012 1:43:15 PM	BSE	NormalTrading
MNST3JAN50.0PX	15	\$5.00	10/22/2012 1:43:15 PM	BATS	NormalTrading
MNST3JAN50.0PX	15	\$5.00	10/22/2012 1:43:15 PM	NASDAQ	NormalTrading
MNST2NOV45.0P	20	\$1.65	10/22/2012 1:43:13 PM	NASDAQ	NormalTrading
MNST2NOV40.0P	12	\$1.00	10/22/2012 1:43:12 PM	CBOE	NormalTrading
MNST2NOV45.0P	14	\$1.65	10/22/2012 1:43:12 PM	NASDAQ	NormalTrading
MNST2NOV40.0P	11	\$1.00	10/22/2012 1:43:12 PM	ISE	NormalTrading
MNST2NOV40.0P	14	\$1.00	10/22/2012 1:43:12 PM	PHLX	NormalTrading
MNST2NOV40.0P	105	\$0.95	10/22/2012 1:43:12 PM	CBOE	NormalTrading
MNST2NOV40.0P	21	\$0.95	10/22/2012 1:43:12 PM	AMEX	NormalTrading
MNST2NOV40.0P	31	\$0.95	10/22/2012 1:43:12 PM	AMEX	NormalTrading
MNST2NOV40.0P	54	\$0.95	10/22/2012 1:43:12 PM	ISE	NormalTrading
MNST2NOV40.0P	151	\$0.95	10/22/2012 1:43:12 PM	PHLX	NormalTrading
QQCOM2NOV57.5C	20	\$2.21	10/22/2012 1:43:12 PM	PHLX	NormalTrading
GLD2NOV151.0P	17	\$0.53	10/22/2012 1:43:10 PM	ISE	NormalTrading
GLD3MAR150.0P	15	\$1.29	10/22/2012 1:43:10 PM	BSE	NormalTrading
MNST2NOV45.0P	13	\$1.60	10/22/2012 1:43:09 PM	NASDAQ	NormalTrading
MNST2NOV42.5P	15	\$1.10	10/22/2012 1:43:07 PM	NASDAQ	NormalTrading
MNST2DE45.0P	14	\$2.55	10/22/2012 1:43:07 PM	PHLX	NormalTrading
MNST2NOV52.5P	15	\$4.80	10/22/2012 1:43:06 PM	BSE	NormalTrading
MNST2NOV52.5P	25	\$4.80	10/22/2012 1:43:06 PM	PHLX	NormalTrading
MNST2NOV45.0P	42	\$1.60	10/22/2012 1:43:04 PM	NASDAQ	NormalTrading
GLW2NOV13.0P	15	\$0.31	10/22/2012 1:43:04 PM	CBOE	NormalTrading
GLW2NOV13.0P	34	\$0.31	10/22/2012 1:43:04 PM	NASDAQ	NormalTrading
MNST2DE40.0P	15	\$1.30	10/22/2012 1:43:01 PM	CBOE	NormalTrading
OIL2DEC23.0P	15	\$2.05	10/22/2012 1:43:00 PM	BATS	NormalTrading
GLW2DEC13.0P	11	\$0.50	10/22/2012 1:42:59 PM	AMEX	NormalTrading
XLY3MAR35.0P	302	\$0.37	10/22/2012 1:42:58 PM	ISE	ComboOrderTradeTypeP
SPY2NOV14B.0C	12	\$0.32	10/22/2012 1:42:58 PM	ISE	ComboOrderTradeTypeL
SPY2NOV143.0C	12	\$1.95	10/22/2012 1:42:58 PM	ISE	ComboOrderTradeTypeL
SPY2NOV14B.0C	12	\$0.32	10/22/2012 1:42:58 PM	ISE	ComboOrderTradeTypeL
SPY2NOV143.0C	12	\$1.95	10/22/2012 1:42:58 PM	ISE	ComboOrderTradeTypeL
SPY3MAR137.0P	12	\$4.62	10/22/2012 1:42:58 PM	AMEX	NormalTrading

Avg Qty = 44.21 Avg Price = \$0.00 Trades Count = 85
Total Qty = 3758 Version: 4.0.0.0

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MktOps should open OBE along with Market Watch, RDFE and MPT

Management may sometimes contact MktOps to inquire about specific print that have traded.

Trade Ticker is an attempt to view these orders but it need to be opened at the beginning of the trading day to accurately capture all the requested trades

This is a dynamic view and if opened without filtering would provide every single execution across exchanges from the largest to the smallest one lot.

Searching this way would require resources and probably have an impact on the performance of the tools.

MktOps would filter for large orders to do the needed research. Filtering can be done by simple populating the row directly beneath the column headers.

Once selected MktOps will see the Instrument Qty traded Price, Trade Time, Exchange and Deal Source. At the bottom of the screen is a total Quantity traded, Average Qty Avg Price and trade count.

Development has provided a better tool than Trade Ticker it is the OPRA Trade History and it has replaced the Ticker as the go to source for trade research.

Chapter 53. OBE- Viewing Stats/ Functional and Technical

When a Market Operations Representative (MktOps) arrives each morning they are to open all applicable tools that are required to perform the MktOps job function.

These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

MktOps should open OBE along with Market Watch, RDPE and MPT.

The **Technical Statistics** view will be the same as the Functional section. Additionally, the user will have ability to see “Business Unit” view. By selecting the BU view, they will be able to see a list of all BU’s with associated statistics. Users will also be able to expand a BU to show the products and statistics associated.

The following functionality is desired in both Statistics views.

View will be set to update in intervals of 1 minute

All columns will support sorting

Exporting to Excel will be supported

High level Market and Marketplace figures needs to be shown at all times. User will need to be able to select Partition/Bin/Product view. Once selected, aggregated information will be shown (Partition/Bin only). Users will have the ability to expand aggregated information to see Product based information.

Historical Statistics are grouped and launched from the **Hist Statistics** heading on the main toolbar.

Functional Stats History

Technical Stats History

The following functionality is provided for all Statistics views, both Current and Historic.

- View is refreshed whenever MOPs users press the Enter key
- All columns support sorting
- Exporting to Excel is supported
- Both a Bin View and a Partition View will be available in Functional Current/History Statistics and Technical Current/History Statistics
- Users can switch between Bin and Partition views by dragging either the Partition column to the grouping header or dragging the Bin column to the grouping header
- Only one Market and one Marketplace is implemented for Release 3.0 and is assumed for all Statistics windows:
 - Marketplace = NYC, US,
 - Market = ISE

For Market Segment/Bin, all Bins will be shown with Totals for each bin. The user will be able to expand individual Bins to show the Products and statistics for that Bin.

If the user selects Market Segment/Partition, all Partitions will be shown with Totals for each Partition. The user will be able to expand individual Partitions to show the Products and statistics for that Partition.

If the user selects the Product view, all products will be shown from A to Z.

Functional Statistics will display Volume information for each product broken by:

- Calls Qty

- Puts Qty

- Total Qty

- # of Trades

- # of Deals

Average Daily Volume for the last 5 days (#of days will be configurable on the server)

Product	Calls	Puts	Total Qty	# of Trades	# of Deals	ADV (Average Daily Volume)	Bin	Partition	Market Segment
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Market Segment Bin/View

The screenshot shows a web-based application interface for market segment analysis. At the top, there are tabs for 'Open Orders/Product-ISE', 'Regular Price Info-ISE', and 'Functional Stats/History-ISE'. Below the tabs, a date selector shows 'Market Date 01/11/2012' and a 'Get Statistics' button. The main area is titled 'MarketSegment' and contains a grid of data. The grid has columns for Product, Calls, Puts, Total Qty, # of Trades, # of Deals, ADV (Average Daily Volume), Bin, Partition, and Market Segment. Above the grid, summary statistics are displayed: Calls Total = 2988, Puts Total = 0, Total Qty = 2988, # of Trades Total = 39, # of Deals Total = 0. The grid itself shows data for several products, including AUX, RUT, EWZ, A, TLT, AAPL, and AA, grouped under 'BIN1 (7 items)'. The 'Market Segment' column for all rows in BIN1 is labeled 'BIN1'. Other collapsed sections include 'BIN2 (196 items)', 'BIN4 (109 items)', 'BIN5 (1 item)', 'BIN6 (2 items)', 'BIN7 (5 items)', 'BIN8 (11 items)', and 'BIN81 (1 item)'.

- Data can be sorted and filtered by any of the columns.
- Filters and sorting orders can be persisted by making current grid layout a default one.
- After the filter is applied, the aggregated stats reflect the visible rows only.

Market Segment Partition view - Data can be also optionally grouped by Partition within Market Segment by dragging the Partition column to the grouping header. The Grouping area indicates the grouping order.



Open Orders/Product-ISE Regular Price Info-ISE Functional Stats/History-ISE

Market Date: 01/11/2012 Get Statistics

MarketSegment > Partition

Calls Total = 2988		Puts Total = 0		Total Qty = 2988		# of Trades Total = 39		# of Deals Total = 0	
		Volume							
Product	Calls	Puts	Total	# of Trades	# of Deals	ADV	Bin	Partition	MarketSeg
AUX	0	0	0	0	0	0	0 1	1	BIN1
RUT	0	0	0	0	0	0	0 1	1	BIN1
EWZ	0	0	0	0	0	0	0 1	1	BIN1
A	0	0	0	0	0	0	0 1	1	BIN1
TLT	0	0	0	0	0	0	0 1	1	BIN1
AAPL	1052	0	1052	17	0	23	23 1	1	BIN1
AA	1936	0	1936	22	0	78	78 1	1	BIN1

+ BIN2 (196 items)

MarketSegment > Partition

Calls Total = 2988		Puts Total = 0		Total Qty = 2988		# of Trades Total = 39		# of Deals Total = 0	
		Volume							
Product	Calls	Puts	Total	# of Trades	# of Deals	ADV	Bin	Partition	MarketSeg
AUX	0	0	0	0	0	0	0 1	1	BIN1
RUT	0	0	0	0	0	0	0 1	1	BIN1
EWZ	0	0	0	0	0	0	0 1	1	BIN1
A	0	0	0	0	0	0	0 1	1	BIN1
TLT	0	0	0	0	0	0	0 1	1	BIN1
AAPL	1052	0	1052	17	0	23	23 1	1	BIN1
AA	1936	0	1936	22	0	78	78 1	1	BIN1

+ BIN2 (1 item)

Additional aggregation options are available by clicking on the grouping column header.

Product **Calls** **Puts**

Calls Total = 2988

AUX
RUT
EWZ
A
TLT
AAPL
AA

Volume

Average
Count
Maximum
Minimum
 Sum

1 1936

Technical Statistics:

- There will be 2 views available for Technical Statistics:
- BU/Product View: displays # of orders for different Order Categories grouped by Product within Business Unit
- Bin/Product View: displays # of orders for different order categories grouped by Product within Bin

Selecting the BU view will display a list of all BUs with totals by order category for each BU. Users will also be able to expand a BU to show the associated products per BU.

	A	B	C	D	E	F	G	H
1		Facilitation	Solicitation	Directed	Block	PIM	Regular	QCC
2	AA							
3	Simple							
4	Complex							
5	Complex W/ Stock							
6	AAPL							
7	Simple							
8	Complex							
9	Complex W/ Stock							

Order Type will not be included in the Technical Statistics view as originally requested in the BRD. Order Category will be displayed according to the updated table below from the updated BRD.

- Some of the OrderCategories will be mapped and aggregated into a single column

Business Mapping	Order Categories	View
Block	Block Block Response	Technical Stats – Product Technical Stats – BU
Directed	Directed Directed PIM	Technical Stats – BU Technical Stats – Product
Facilitation	Facilitation Facilitation Response Combo Facilitation Combo Facilitation Response	Technical Stats – Product Technical Stats – BU
Solicitation	Solicitation Solicitation Response Combo Solicitation Combo Solicitation Response	Technical Stats – Product Technical Stats – BU
Flash	Flash Flash Response	Technical Stats – Product Technical Stats – BU
Exposure	Exposure Exposure Response	Technical Stats – Product Technical Stats – BU
Regular	Normal Combo Regular	Technical Stats – Product Technical Stats – BU
Stop	Stop	Technical Stats – Product Technical Stats – BU
QCC	QCC Combo QCC	Technical Stats – Product Technical Stats – BU
Customer to Customer	Customer to Customer Combo Customer to Customer	Technical Stats – Product Technical Stats – BU
Reserved	Reserved Cross Combo Reserved Cross	Technical Stats – Product Technical Stats – BU
PIM	PIM Response Combo PIM Response Combo PIM	Technical Stats – Product Technical Stats – BU
No OPRA Trade Report	No OPRA Trade Report	Technical Stats – Product Technical Stats – BU
Preferred	Preferred	Technical Stats – Product

Selecting the Bin view will display a list of all Bins with totals by order category. Users will also be able to expand a Bin to show the associated products and the number of orders per order category by product. An Export-to-Excel option is available from all statistics windows through the context menu on the grid. Only visible rows will be exported.

The screenshot shows a software interface for managing trading statistics. At the top, there is a header bar with 'Market Date' set to '01/11/2012' and a 'Get Statistics' button. Below this is a grid of data with the following columns: Product, Calls, Puts, Volume, # of Trades, and Total Qty. The grid displays two rows of data: one for AAPL and one for AA. A context menu is open over the grid, listing options: 'Make Grid Layout Default', 'Re-load Grid Layout', 'Reset Grid Layout', and 'Export to Excel'. The 'Export to Excel' option is highlighted with a blue background.

Product	Calls	Puts	Volume	# of Trades	Total Qty
AAPL	1052	0	1052	17	2988
AA	1936	0	1936	22	0

Chapter 54. OBE- Viewing Deal Items by Product

The screenshot shows the Order Book Explorer (OBE) interface. The top menu bar includes tabs for 'Regular Market-ISE', 'Market Depth-ISE', 'Order/Quote Depth-ISE', 'Open Orders/BU', 'Deal Items-ISE', and 'Functional Stats/History-ISE'. Below the menu is a search bar with 'Product: CSCC' and 'Search' and 'Freeze' buttons. The main area displays a grid of deal items with columns: BU, EnrichedCICat, ClrAcct, CMTA, Instrument, DealItemSide, Buy Qty, Sell Qty, Price, Remaining Qty, DealItemQty, TransTimestamp, EventType, TransType, OQMatchInd, and OrgClID. The grid contains numerous rows of data, with some cells highlighted in yellow. A status bar at the bottom indicates 'Count = 683'.

When a Market Operations Representative (MktOps) arrives each morning they are to open all applicable tools that are required to perform the MktOps job function.

These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

MktOps should open OBE along with Market Watch, RDPE and MPT

Members will frequently call asking about the orders they have executed.

MktOps can select Deal Items and enter the product or select the from drop down.

Once selected MktOps will need to populate the specific Product. Users can type this in or user the drop down.

After the search is complete, user will see a static view recently traded execution of the selected symbol. The grid MktOps will see all the pertinent information needed including: the BU, Enrichmed CICat, ClrAcct, CMTA, Instrument, DealSideItem, BuyQty, SellQty, Price, Remaining Qty, Deality, Qty, TransTimestamp, Event Type, TransType, OQMatchInd, OrgClOrdID, CustAcctNo, Match Event sub and Deal Src.

All columns in this view have user preferences and can be moved to suit the MktOps user.

MktOps can cancel a single order or several orders.

Mkt Ops can narrow down the search by filtering the leg details. The fields to do so are directly beneath the column headers.

In addition, column headings can be double clicked to allow for column heading sorting.

There is an order count on the bottom middle of the screen.

All fields can be copied and pasted into a spread sheet that can be sent to members.

Chapter 55. Completing a Trade Review

When a Market Operations Representative (MktOps) arrives each morning they are to open all applicable tools that are required to perform the MktOps job function.

These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

MktOps selects Applications then **MPT Client**

To address Alerts, Market Operations needs to select the Alerts tab from the main MPT window.

MktOps should have **Order Book Explorer** (OBE) opened and the Order/Quote Depth-ISE window opened

Properly verify the details of the trade(s) in question. Repeat the symbol(s) until all parties on the call are in agreement on what is being reviewed.

Verify the member and whether it is the market maker or customer.

Verify the time of the call and the time of the executions. Market Makers have 5 minutes to call in a trade review. EAMs have 20 minutes.

Customer market orders require research into the best execution price. The customer entered the order in good faith and for customer service purposes determine what the best price should be at the time of entry.

Declare the Trade Review and member out loud to the room.

Send a “trade under review message” through Marketplace Assistant/ Marketplace/ Market Messages/ New Message. The screen is populated with information ready to send except for the trade review details.

Members must also be notified via **IM Alerts**. Use the existing messages format and populate with the trade review details. Make sure the trade review notification group is selected.

Market Operations should review these trades carefully and quickly using MPT Trades and **Thomson Options** and **Thomson Trades and Quotes**. There are situations that may require an extended period of time for Market Operations to complete the review.

Market-maker to market-maker trades get adjusted to the most liquid exchanges bid or offer, plus or minus the penalty (pain).

Customer limit orders will be busted. The market never traded at their limit price.

If the trade review call comes in after the appropriate time frame, determine if the trades in question qualify as a catastrophic error. Over the timeframe stated in #8 but still significantly away from the BBO. See *ISE rule 720*.

Use Marketplace Tool/ Obvious Error tab and type in the symbol(s). This tool provides alerts and should be used as a guide to assist in determining if something is obvious. In addition, it provides the most liquid away exchange that is required to determine the markets at the time the trades occurred.

If a member asks for “everything!” to be reviewed, begin the review process but press them to be more specific. Try to get a time frame, symbol range or bin to help in narrowing down the search.

If there are an extensive amount of trades and/or symbols, The Market Operations Representative should ask for assistance. This can be determined on a case-by-case basis.

Using MPT trades, Organize by time or series whichever is appropriate for the unique situation.

Locate one or more of the option symbols being reviewed. The review of trades should occur for each and every execution.

If possible, you should take yourself out of the phone queue using the **Avaya phone** key “AUX Work” and the number 4.

Use Thomson One. Select the “Options” tab, on the top right. Enter the underlying symbol. Find the proper month and strike with the unique Thompson code. Right click and select “trades and quotes.” Enter the time frame to locate the execution on the tape and cross reference the execution. There will be numerous executions, symbols and strikes to look at. In MPT Trades and cross referencing with Thomson, locate the trade on the tape and determine the last BBO on the most liquid market using the criteria in the boxes below.

If the trades do not qualify as catastrophic and are over the time frame, notify the member that the rule does not apply but, for customer service purposes, you can contact the Market Maker counterparties and request a courtesy bust or adjustment.

Consider:

What was the timeframe of the call and the execution?

(5 minutes for Market Makers, 20 minutes for customers and if longer does it satisfy adjustment value in Exhibit 2)

Are there any quotes to consider or are these the first executions of the day?

(Apply the rule using the most liquid market. If it is the first quote of the day, Market Operations determines if this may qualify.)

Is the print outside of the spread? If so, by how much?

(If no, it does not qualify.)

If yes, does it meet the parameters in Exhibit 1?)

If buying, look to the offer. Is it equal to or more than the above in Exhibit 1?

(If no, it does not qualify. If yes, bust for customers, adjust if a customer, market order and if a market maker adjust with pain (0.15 below \$3 & 0.30 above \$3)

If selling, look to the bid. Is it equal to or less than the above in Exhibit 1?

(If no, it does not qualify. If yes, bust for customers, adjust if a customer, market order and if a market maker adjust with pain (0.15 below \$3 & 0.30 above \$3)

Buyers of options with a zero bid may request that their execution be busted if at least the two strikes below (for calls) or above (for puts) in the same option class were quoted with a zero bid at the time of execution. Previously, it was zero bid and five cent offer and three strikes (not two) were required.

Our rules state that members have the right to request an Obvious Error Panel on a Standard Obvious Error. Notify the Options Lead or Trading coordinator. If a panel is declared, make the necessary phone calls to market makers (2 required) and EAMs (2 required) in writing within 30 minute of the determination of the trade review. The panel determination can overturn/ modify actions taken by Market Operations. All determinations of the tribunal are considered final exchange action.

If the executions are deemed "Catastrophic" by the member, Market Operation must be notified by 8:30am on the first trading day following the date of the event. If on Expiration day it must be made by 5:00pm same day.

Members may request a panel for a catastrophic error. Rules for a Standard panel still apply except there is a \$5,000 charge if it is determined that an error did not occur. All determinations of the tribunal are considered final exchange action.

All members should be contacted before any busts/ adjustments can be made.

Call the party that asked for the review first to tell them what you found.

If nothing, end the review. Declare it to the room, Send message through Marketplace Assistant. Marketplace/ Market Messages "Trade Review in symbol(s) XXXX complete" and IM Alerts using canned message "Trades under review in the following symbol(s) XXXX complete"

If there are Obvious errors, come to terms with the rest of the affected members for the most efficient way to start busting or adjusting trades. Call one at a time, call when finished or send a spreadsheet if required.

Some customers prefer that we use order numbers. Prepare for them before you call.

Contact the member that called in the review to tell them you are finished and ask if there are any trades they may have question on.

Double check work.

Send the "Trade Review Completed" through IM Alerts.

Add any notes to the Avaya/ Rembridge phone pop-up screen. Be sure to follow all notification procedures listed in: *Cancelling Orders and Price Improvements*.

Using the Avaya phone, "Auto In" to start accepting calls again.

Notify the Market Operations person who is doing the "daily operational turnover."

Log the phone call in the Avaya/ Rembridge phone "pop-up."

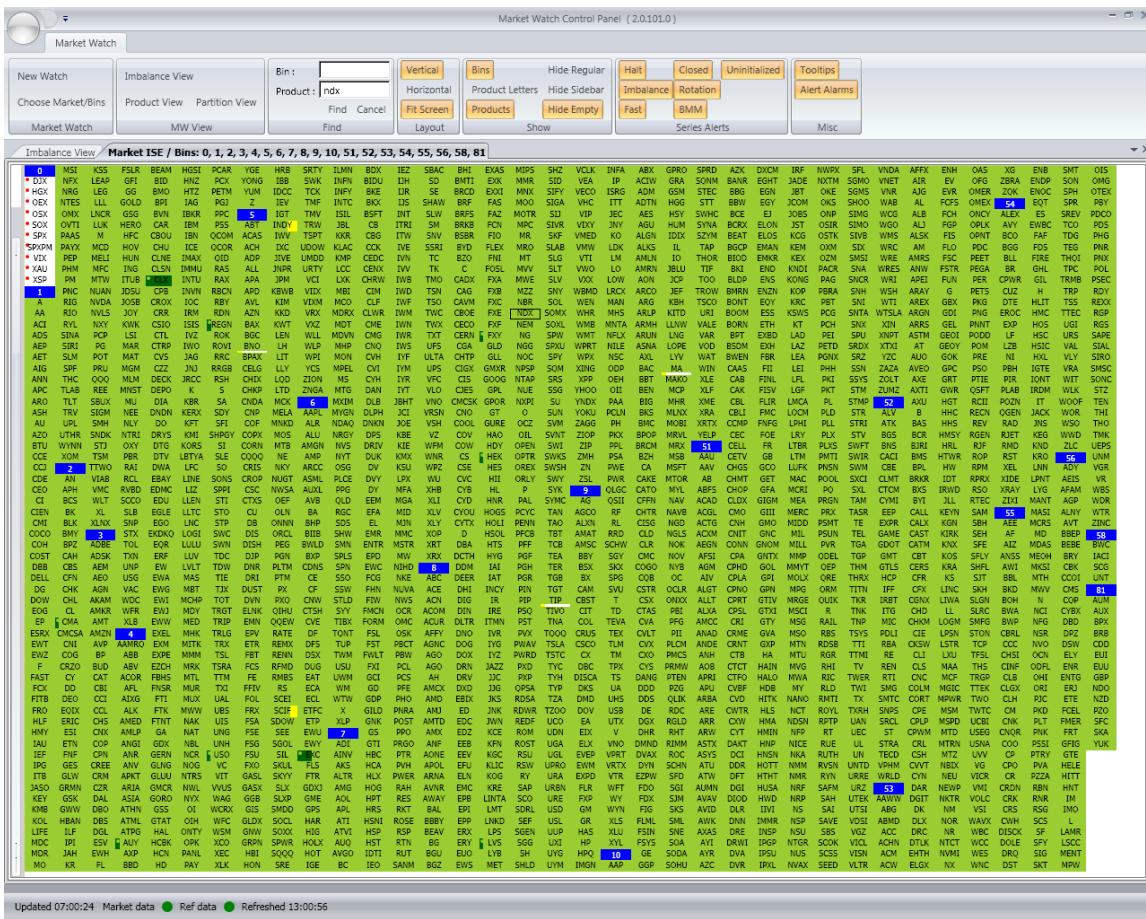
Exhibit 1: Price Deviation Away from Theoretical Price

Theoretical Price	Minimum Amount
Below \$2	.25
\$2 to \$5	.40
Above \$5 to \$10	.50
Above \$10 to \$20	.80
Above \$20	1.00

Exhibit 2: Price Deviation Away from Theoretical Price: Catastrophic Situation

Theoretical Price	Adjustment Value
Below \$2	\$1
\$2 to \$5	\$2
Above \$5 to \$10	\$3
Above \$10 to \$50	\$5
Above \$50 to \$100	\$7
Above \$100	\$10

Chapter 56. Market Watch Open and Monitoring



There will be certain times Market Operations will be asked to make specific product state changes to the symbols we trade.

This work will be done in **Market Watch** (MW). Market Watch provides current and historical information on product states and instruments. This is a color coded screen that provides an overview and the marketplace.

There are two views that are offered, a Product/Bin view and a Product/Partition view. Each Primary Market Maker (PMM) is responsible for a group of symbols called a bin.

PMMs are responsible for maintaining the proper quoting and trading of the instruments/ products in their particular bins. MktOps monitors all trading to ensure this is done properly. When needed MktOps assists the PMM and other market participants in the event of a trading related problem or technical issue.

For load balancing purposes the ISE maintains symbols in different partitions. A partition communicates with the Matching engine, the PoPE, Market Cache, Order Book Server, the Stream Capture, Trade

The MW tool allows MktOps to make changes to products/instrument when needed. Changes can be

The MW tool allows MKTops to make changes to products/instrument when needed. Changes can be made on a series, product, bin, partition, entire market basis. You may select any product and you will see a *tooltip* control button the lists all series states with the

The main MW screen displays the state of the market. Prior to 9:30AM ET, all symbols are in a "Halt" state.

The main MW screen displays the state of the market. Prior to 9:30AM ET, all symbols are in a Halt state (purple). The exceptions to this are the ISE currency products which open at 7:00 AM ET.

At the 9:30 open products move from Halt (purple) to Regular (green). Typically NASDAQ primary names go the regular right away and the NYSE primary names open when the specialist on the floor opens the underlying.

In the **Reference Data Front End** (RDFE) MktOps maintains Market Models that are the rules for all trading on the ISE and currently the series on the underlying product will open automatically after 5 seconds of the primaries open, assuming the PMM or the Backup PMM and CMMs are properly quoting the underlying.

Most symbol open properly, many require monitoring. The most important and time sensitive of these issues are "Imbalances." These are viewed from the MW Imbalances view which blinks when there is an imbalance to be addressed.

Mkt Ops right clicks on this view and selects "floating" to remove and to view it from the main window. All bins from the Primary Market (1-10 and Currency Market (81) are collapsed if there is an imbalance. The product symbol will appear and when the selected series(s) populates in the sidebar to the left.

There is also an Imbalance Tab that user can right click and select "floating" to move it to a separate screen to view imbalances.

There are several reason for imbalances ultimately it involves contacting the PMM or EAM to fix their quote or order price. MktOps sees approximately 20-30 imbalance alerts a day. Most clear up though PMM action. MktOps takes action on approximately 10-15 each day.

While imbalances are being address the rest of the market needs to be closely watched. Colors other than green (regular) indicate a specific situation taking place.

Dark Green indicates a Backup PMM is in black, Yellow means a series is still in Rotation and either the PMM or MktOps if needed need to change the status to regular.

Other states are (off green) for Fast and (purple) for Halt. Each of these states requires MktOps to investigate the primary market status.

If the primary is declaring their market is in a fast or a halt than the ISE's market must react accordingly. If the product is in unknown (grey) or uninitialized (white) then MktOps must follow up with Product Operations and Computer Operations to determine if the symbol(s) are set up properly in our database or to investigate a technical reason why it is a different state. All symbols must have the proper schedules attached to them.

When a product is underlined it indicated a Back Up PMM is in place. The bar is an indicator as to how many of the series are available for linkage. If the bar is white then the Back-up PMM cannot send linkage. For details about which series are available MktOps opens the sidebar and sorts the Linkage column. The series is false are unavailable for linkage at that time.

This sidebar contains series states information and history of the series on the particular day. It also provides the series six digit ID.

A blinking light blue on a product indicates a quote change on a series.

If the intention is to change the status of a series, then by selecting the product, the left the "sidebar" populates the all the series for that particular product. By double-clicking and sorting the state of that product MktOps can change what is needed.

MktOps has the ability to change states at the Product, Series or Security Level to: start of day, closed, pre-open, open post open, end-of-day, post-end of day. This would only be used in the rarest of circumstances and this view will actually be given its own separate tab to eliminate any chance of a status to be changed inadvertently.

MktOps as stated above has the ability to change all the instruments states for a product or bin. The locked command prevents the Matching engine from automatically changing the series out of the specified setting.

The states are as follows: Some are used more regularly than the others.

- Locked Closed
- Locked Halt
- Locked Opening
- Locked Imbalance
- Locked Fast
- Regular/Unlock
- Unlock Complex Instruments
- Unlock Complex Instruments with Stock

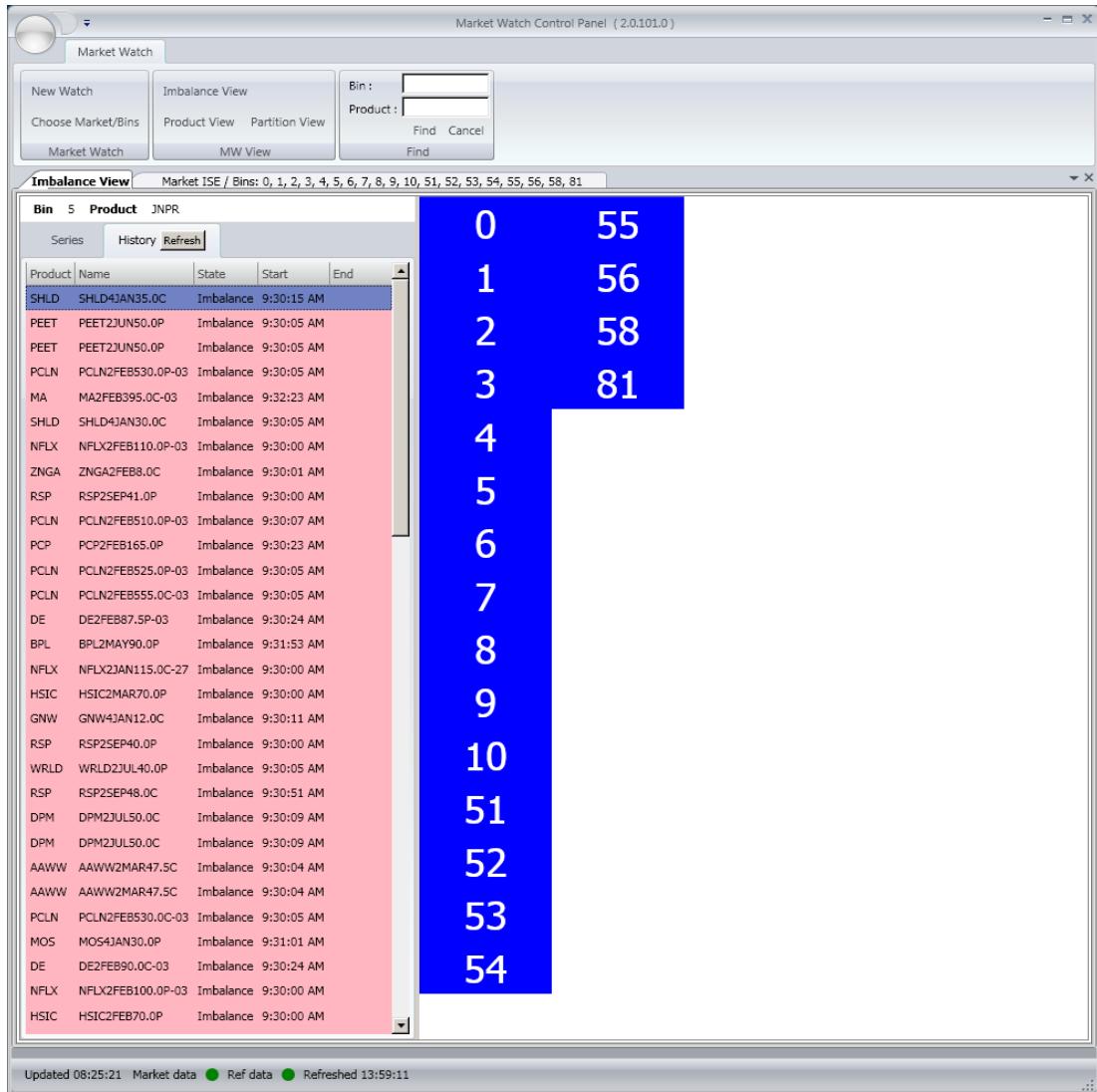
The most commonly used actions are moving a series to Regular and Locked Halt in the event a series on the primary is halted and the message from them primary is not disseminated properly. MktOps may halt a product or series if it was incorrectly added into trading system.

To change the state of an entire Bin, MktOps may select a Bin number in the main screen, the Bin/Product pane on the right. Series state sets the state of all the instruments for the products included in the bin number provided. Note that the product state must be "Open" before any of its instruments can be put in the "Regular" state. A confirmation dialogue is presented for each change request. The confirmation dialogue contains a cumulative record of all state change requests for the session.

Imbalance View

Partition View

Chapter 57. Market Watch Imbalance Handling



When a Market Operations Representative (MktOps) arrives each morning they are to open all applicable tools that are required to perform the MktOps job function.

These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

There will be certain times Market Operations will be asked to make specific product state changes to the symbols we trade.

This work will be done in **Market Watch** (MW). Market Watch provides current and historical information on product states and instruments. This is a color coded screen that provides an overview and the marketplace.

MktOps should also have **Orderbook Explorer** (OBE) opened and have the **Regular Market-ISE** and **Regular Price Info-ISE** tabs selected.

There are two views that are offered, a **Product/Bin view** and a **Product/Partition view**.

There is also an Imbalance Tab that user can right click and select "floating" to move it to a separate screen to view imbalances at the open.

The majority of the imbalances that occur take place at the open and immediate action is required. Each Primary Market Maker (PMM) is responsible for a group of symbols called a bin. PMMs are responsible for maintaining the proper quoting and trading of the instruments/ products in their particular bins.

MktOps vigilantly monitors all trading to ensure this is done properly. When needed MktOps assists the PMM and other market participants in the event of a trading related problem or technical issue.

For load balancing purposes the ISE maintains symbols in different partitions. A partition communicates with the Matching engine, the PoPE, Market Cache, Order Book Server, the Stream Capture, Trade Manager, Audit Trail and the Market Data Distributer.

The MW tool allows MktOps to make changes to products/instrument when needed. Changes can be made on a series, product, bin, partition, entire market basis.

You may select any product and you will see a *tooltip* control button the lists all series states with the number of series in each state.

In the **Reference Data Front End** (RDFE) MktOps maintains Market Models that are the rules for all trading on the ISE and currently the series on the underlying product will open automatically after 5 seconds of the primaries open, assuming the PMM or the Backup PMM and CMMs are properly quoting the underlying.

There are several reason for imbalances ultimately it involves contacting the PMM or EAM to fix their quote or order price. MktOps sees approximately 20-30 imbalance alerts a day.

Most clear up though PMM action.

MktOps takes action on approximately 4-5 each day.

As soon as the Imbalance appears in the Floating Imbalance View market open selects the symbol and the instrument(s) appears in the left hand side of the window.

In the meantime MktOps types the product and then scrolls to find the instrument with the imbalance and right clicks to see the depth.

Looking at the BUs and the quote/order prices MktOps determines what is needed.

Common imbalance reasons might be:

A market order not trading,

A large order at marketable prices and the PMM or other MMs are at the right price but not enough size. Customer has a bad limit and has hit the price protection (one dollar through) and that will prevent it from opening.

MM with crossed quotes

Mkt Ops quickly are on the phone to explain the situation to the members and what needs to be done to fix it.

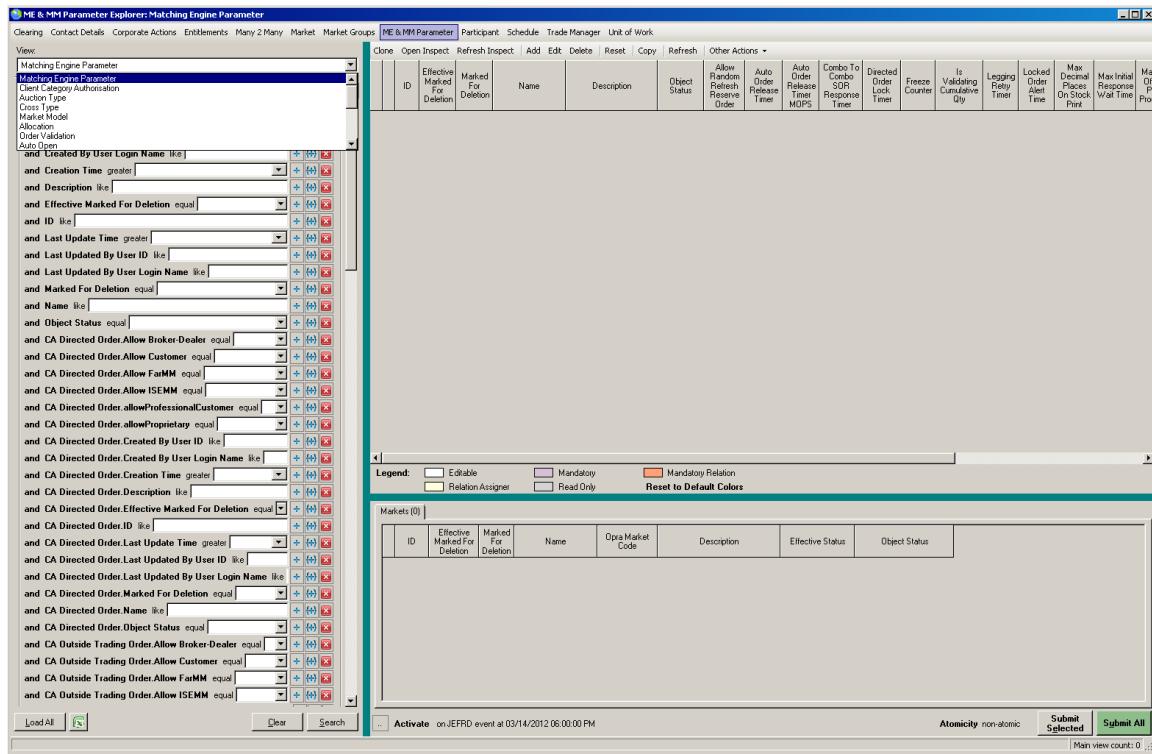
MktOps as stated above has the ability to change all the instruments states for a product or bin. The locked command prevents the Matching engine from automatically changing the series out of the specified setting.

When the prices are reasonably between the NBBO and it is MM to MM. MktOps selects the Product and can move it from Series State, Regular (Ignore Boundary). Taking this action will remove the imbalance. A confirmation dialogue is presented for each change request. The confirmation dialogue contains a cumulative record of all state change requests for the session.

Market Ops will then look for any Product Halts. If the primary market is not open, the ISE product should not be open. Typically the NASDAQ primary symbols are open right at 9:30. NYSE symbols open when the Specialist opens it.

If there is a large number of symbols not open, MktOps will call the exchange. While this is happening MktOps will work with Computer Operations (COPS) to determine if the ISE is functioning properly.

Chapter 58. RDFE- Market Model Overview



When a Market Operations Representative (MktOps) arrives each morning they are required to open all applicable tools that are required to perform the MktOps job function.

These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

This process has been automated but if it manually needs to be done follow these steps.

To perform this task if needed MktOps needs to open **Reference Data Front End (RDFE)**.

Matching Engine and Market Model Parameter this section of Reference Data contains all of the components that define the trading rules of each exchange product and instrument type. The parameters are configurable to allow for flexibility and ease of changes.

Matching Engine Parameter a set of basic trading parameters that are applied system wide. A change to these values impacts all products and currently all markets.

Market Model defines a set of trading rules which are applied to the trading of instruments. A Market Model is made up of several categories of parameters, including: Allocation, Order Validation, Price Step Table, Auction Type (optional), and Cross Type (optional). Multiple Market Models can be designed to allow various options of trading.

Market Model Assignment in the Market Model and the Market Model Discriminator are assigned to each Product, allowing flexibility at the Product level. This determines which trading rules apply to which instruments. It is possible to have as many Market Models as there are

Market Model Discriminators, but there can only be one Market Model assigned per individual Market Model Discriminator. Currently there is a maximum of 3 Market Models assigned to a product: one for each Market Model Discriminator.

In Market Model Discriminator, each instrument type is defined by parameters that distinguish trading rules for each instrument, such as: ratio limits, OPRA buffers, and t-cross timer. There are currently three instrument types: Simple Instrument (single option order), Standard Combination (combination orders with

option legs only), and Stock Combination (combination orders with option and equity legs). This instrument type is assigned at the Product level, in conjunction with the Market Model, and determines which order types are permitted in the Product. There cannot be more than one Market Model Discriminator with the same instrument type assigned to a Product.

Allocation is a set of parameters that determine the quantity distribution and priority of matching available orders and quotes for execution. More than one allocation model can be created, but only one is attached to the Market Model.

Auto Open dictates the parameters to allow a simple instrument to automatically rotate into a Regular state if the Primary Market Maker has not already rotated the series. This is assigned at the Product level.

Open sets the requirements for whether an instrument can be opened. It is assigned at the product level.

Order Validation sets the parameters to validate the price of incoming orders during regular trading. This is assigned to the Market Model.

Price Step contains the list of minimum price (tick) increments for each price range. A Price Step is attached to one Price Step Table, but it is possible to have more than one Price Step attached to the same Price Step Table.

The Price Step Table is made up of one or more Price Steps which are used to validate tick increments of orders and quotes. This is assigned to the Market Model.

Auction Type contains all of the possible Auction orders and their specific trading rules in the form of configurable parameters. The Auctions can be single or double sided. For an Auction to be available to use in trading, it needs to be attached to a Market Model. This is not a mandatory part of the Market Model.

Cross Type contains all of the possible Cross orders and their specific trading rules in the form of configurable parameters. The Cross orders are all double sided with no exposure time. For Cross to be available to use in trading, it needs to be attached to a Market Model. This is not a mandatory part of the Market Model.

Client Category Authorization contains the list of a variety of combinations of client category permissioning. A single client category authorization type is then applied to a relation within Reference Data to determine which client categories are permitted for a specific action. Client Category Authorizations are applied in Auction Type, Cross Type, Matching Engine Parameter, and Market Model.

Maker Taker Parameter contains the list of all match scenarios (not including Auction and Cross related) and the corresponding maker taker value.

Maker Taker Parameter in Auction contains the list of all potential Auction match scenarios and their corresponding maker taker values. An Auction Type may be associated with many scenarios.

Maker Taker Parameter in Cross contains the list of all potential Cross match scenarios and their correspondent maker taker values. A Cross Type may be associated with many scenarios.

There must be one Maker Taker Parameter Set associated to a Market. A Maker Taker Parameter Set may be associated with many Markets.

The link is located on the ISE shared drive:
J:\mkt operations\prod market models.xls

Chapter 59. RDFE/ Created Events Rollback

Query for “Active” products

In the Market explorer; choose the View:Product

The screenshot shows the Market Explorer: Product interface. The 'Market' tab is selected. In the search bar, 'Product' is chosen. The search criteria section contains the following filters:

- Business Status equal [dropdown]
- and Commodity Code like [dropdown]
- and Created By User like [dropdown]
- and Creation Time greater [dropdown]
- and Description like [dropdown]

On the right, there is a table header with columns: Commodity Code, Created By User, Creation Time, Description, and Eff. Below the header, there is a list of 60 entries, each consisting of a number, a value, and a status indicator (ACT).

In the “Effective Status” search criteria, right click on the delimiter choose -“equal”- , left click on the search criteria box and select “Active”.

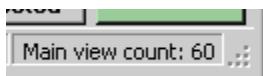
Then “Search”

The screenshot shows the Market Explorer: Product interface after applying the 'Effective Status' filter. The search criteria section now includes:

- Business Status equal [dropdown]
- and Commodity Code like [dropdown]
- and Created By User like [dropdown]
- and Creation Time greater [dropdown]
- and Description like [dropdown]
- and Effective Marked For Deletion equal [dropdown]
- and Effective Status equal ACTIVE [dropdown]
- and ID like [dropdown]
- and Last Trading Time greater [dropdown]
- and Last Update Time greater [dropdown]
- and Last Updated By User like [dropdown]
- and Marked For Deletion equal [dropdown]

On the right, the table displays 60 rows of product data, all of which have the 'ACT' status indicator.

- The result will give you the number of active products in the data base. The bottom right hand corner of the explorer will give you the result.



Verify that total with information from a Product Operations Analyst who is adding the products to verify the number is the total products to be listed as active in Optimise.

Calculate the total number of products for each “Schedule Selector” represented by “active products”. Record this number it will be used in future steps. (for all 2nd market products the “schedule Selector” is “Trading 9:30-4:00 Prod”).

ID	Schedule Selector Name	Specialist Segment Name
1	Trading 9:30-4:00 Prod	BIN56
2	Trading 9:30-4:00 Prod	BIN51
3	Trading 9:30-4:00 Prod	BIN51
4	Trading 9:30-4:00 Prod	BIN55
5	Trading 9:30-4:00 Prod	BIN51
6	Trading 9:30-4:00 Prod	BIN55
7	Trading 9:30-4:00 Prod	BIN51
8	Trading 9:30-4:00 Prod	BIN54

The list of trading “Schedule Selectors” are:

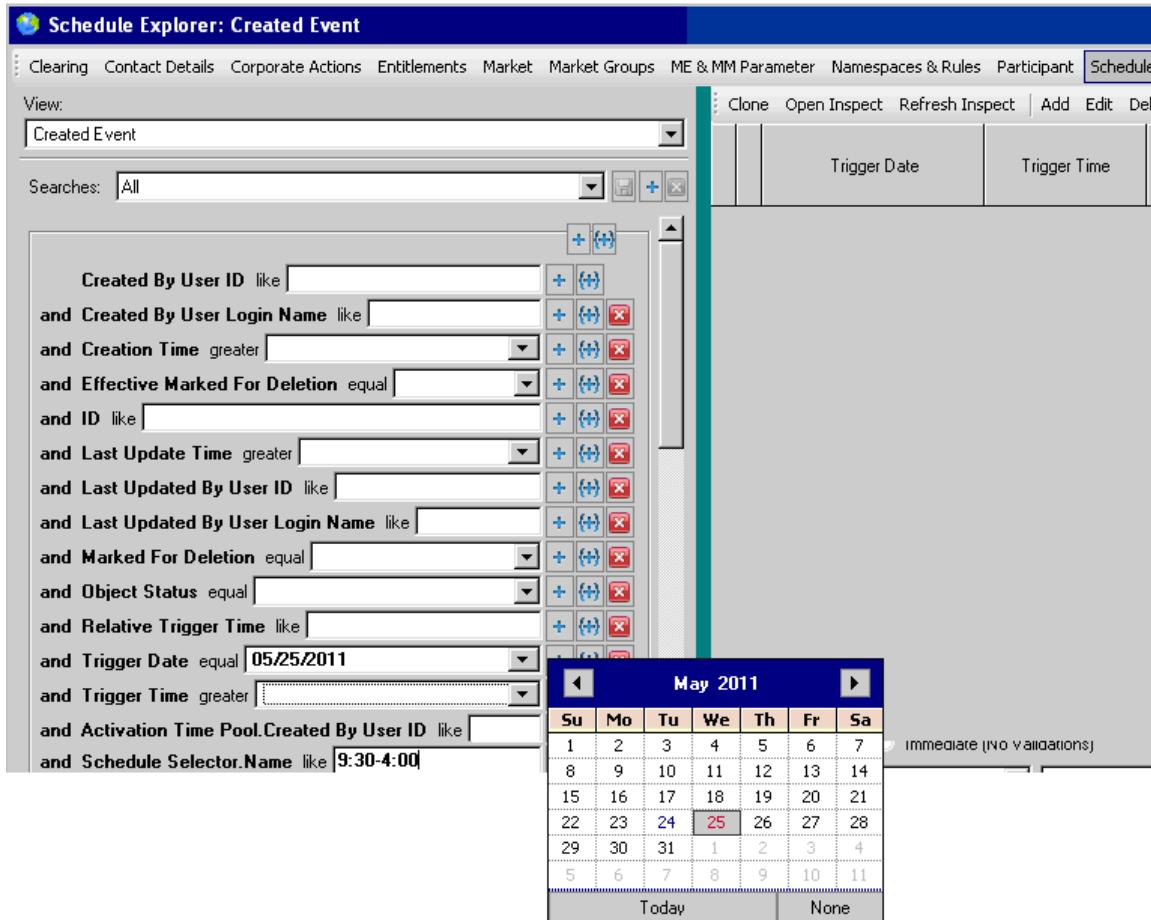
Name
Trading 9:30-4:00 Prod
Trading 9:30-4:15 Prod
Trading 9:32-4:00 Prod
Trading/FXearlierOpenProd

Query for the Proper Number of Created Events:

In the Schedule explorer, choose the view: “Created Event”

In the “Trigger Date” search criteria, right click on the delimiter choose -“equal”- left click on the search criteria box and select –next business day-(05/25/2011 in the below example)

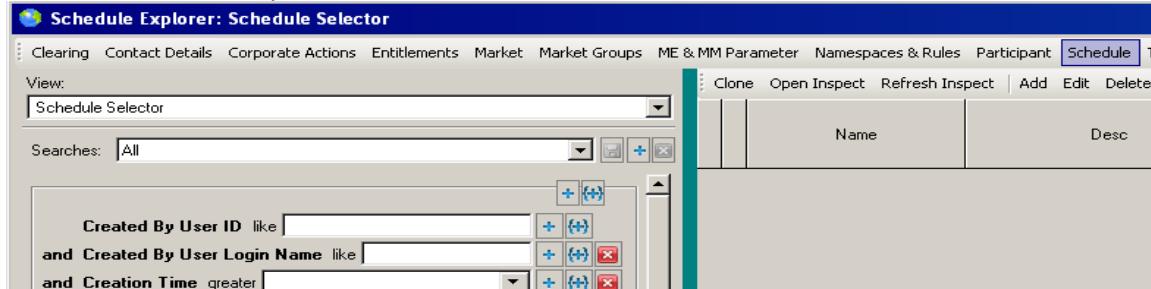
and in the “Schedule Selector Name” search criteria, right click on the delimiter choose –like- in the search criteria box -(schedule selector name)-



- The record the value displayed in the bottom right corner of the explorer. This is number represents the events for products that were active at start of day.
-for the "9:30-4:00" Schedule selector the number of created events is calculated by:
(Number of products X 9) +1 for any one day.

Applying Created events to the new products:

- In the Schedule explorer, choose the view: -“Schedule Selector”-

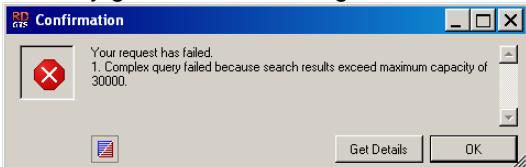


- “Load All”-

- Change the value with the column heading “Creation Window In Days” for the appropriate “Schedule Selector” (**Do this one Schedule Selector at a time!**) Alternate the number of days between 4 and 5.

Name	Desc	Creation Window In Days	First Calendar Date	First Start Of Schedule	Object Status
Trading/FXearlierOpenProd	Trading for FX options from 7:30 to 4:	5	02/16/2011	02/16/2011 12:00:00 AM	Active
Trading 9:32-4:00 Prod	Trading from the 9:32 open until the n	3	02/16/2011	02/16/2011 12:00:00 AM	Active
Trading 9:30-4:15 Prod	Trading from the normal 9:30 open u	5	02/16/2011	02/16/2011 12:00:00 AM	Active
Trading 9:30-4:00 Prod	Trading from the normal 9:30 open to	4	02/16/2011	02/16/2011 12:00:00 AM	Active

You may get an error message here that has to do with a display issue.



This will not affect the process. Click “ok”

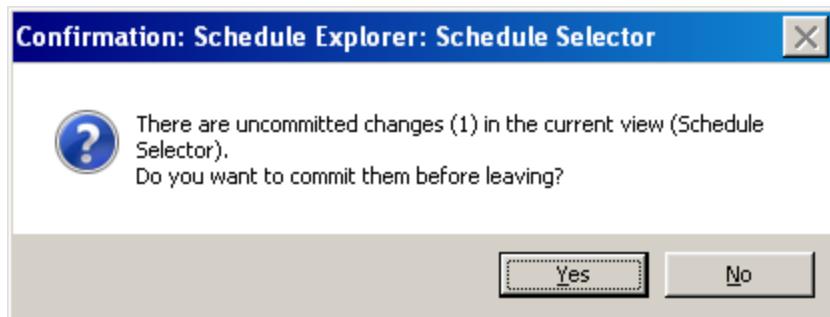
Once you make the change the screen will have this information

Name	Desc
Trading/FXearlierOpenProd	Trading for FX options from 7:30 to 4:15pm or 7:30 to 1:15pm
RDD / Tech Cycle Prod	Reference Data Dissemination as well as Tech Cycle Control
Trading 9:30-4:15 Prod	Trading from the normal 9:30 open until index mkt names are
Trading 9:32-4:00 Prod	Trading from the normal 9:30 open to 4:00pm. Broad-based in
Trading 9:32-4:00 Prod	Trading from the 9:32 open until the normal close.
Housekeeping Prod	Housekeeping Schedule Selector - for Entities
Unit of Work Prod	Unit of Work Schedule Selector - Stand alone
TM Prod	Trade Manager Schedule - Same for all days

- Submit the change: in the Activate box at the bottom of the explorer choose “Immediate (No Validations)”; click the “Submit All” button.

When the change is made the Successful box will show and click “OK”

The screen will not update. You need to refresh the screen by clicking “Load All”.
The following screen will appear:



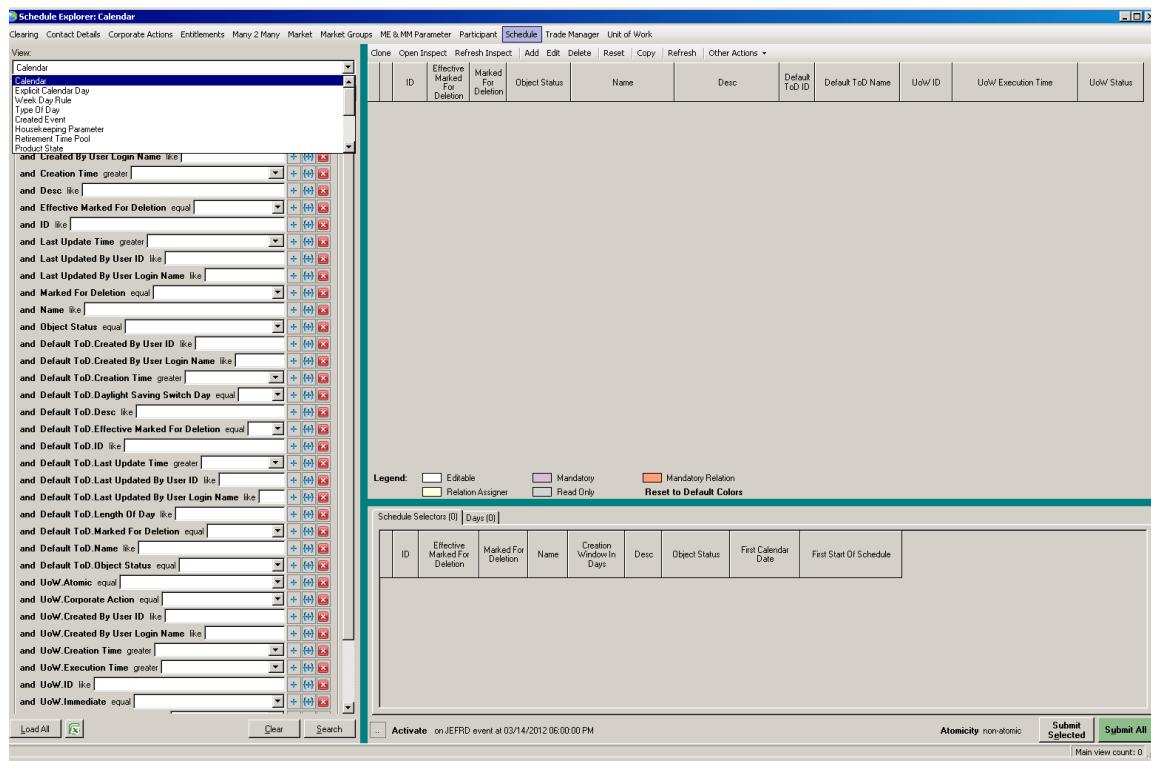
Choose “No”

Re-execute the Steps above.

This number represents the events for products that were active after the product activation.

There will be a new value of events in the end that represents the number of “active” products determined in step 1. for the “9:30-4:00” Schedule selector the number of created events is calculated by: (Number of products X 9) +1 for any one day.

Chapter 60. RDCE/ Applying Schedules Changes



Periodically throughout the trading year Market Operations (MktOps) will release new software to improve the trading on the ISE Exchange.

After months of rigorously developing, planning and testing if the ISE Senior management agrees that all is in place a new release will move forward.

One specific task that MktOps is responsible for is preparing the half day schedule on the Saturday before the release.

Verify that on RFC was entered.

Two evening prior to the Saturday MktOps will open **Reference Data (RDCE)**

Select Schedules/ Explicit calendar day.

On the lower left bottom of the screen they can select Load All.

Every explicit calendar day will then populate the grid.

In the grid on a blank line select the actual Saturday date that the test will occur on.

In the Name area spell out exactly the Release, day and the words check out.

Under calendar name select the drop down ISE Production Master Calendar.

Choose the length of the test, if half day and full day.

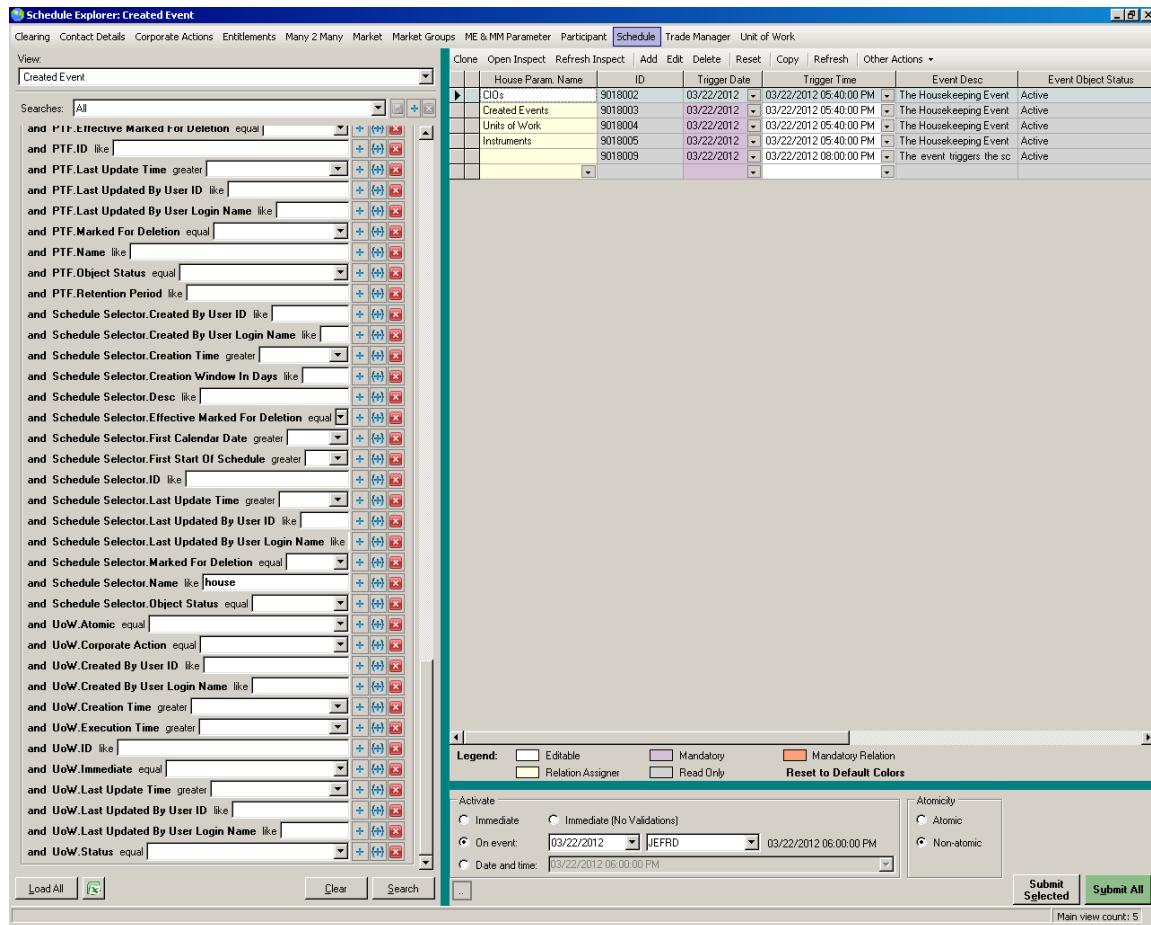
Then select Immediate (No validations)

Submit All

Wait for the pop up that says whether or not this was successful.

Sign off on the RFC that the action was completed.

Chapter 61. RDFE/ Deleting Created Events



When a Market Operations Representative (MktOps) arrives each morning they are required to open all applicable tools that are required to perform the MktOps job function.

These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

This process has been automated but if it manually needs to be done follow these steps.

To perform this task if needed MktOps needs to open **Reference Data Front End (RDFE)**.

In the Schedule explorer, choose the view “Created Event”.

In the “Trigger Time” search criteria, right click on the delimiter choose -“equal”-, left click on the search criteria box and select –“Date from the calendar”. Change the time criteria to the appropriate time for the event you want to isolate. This is done on the left side search area.

If the “Trading-Open” then the event that happens at 9:30:00 AM for MM/DD/YYYY.

If the “Trading Close” then the event that happens at 4:00:00 AM for MM/DD/YYYY.

Select “Search.”

The search will display all “Created Events” at the time specified.

Select the rows in the explorer view that need to be deleted. Achieve this by left clicking the further-most column to the left in the displayed view. Select a row further down the displayed view and, while holding down the “Ctrl” keyboard button select that row.

All the selected rows will be highlighted.

To delete the rows, left click the “Delete” tab on top of the displayed view. The second column from the left will contain a “D”

Submit the change: in the Activate box at the bottom of the explorer choose “Immediate (No Validations)”; click the “Submit All” button.

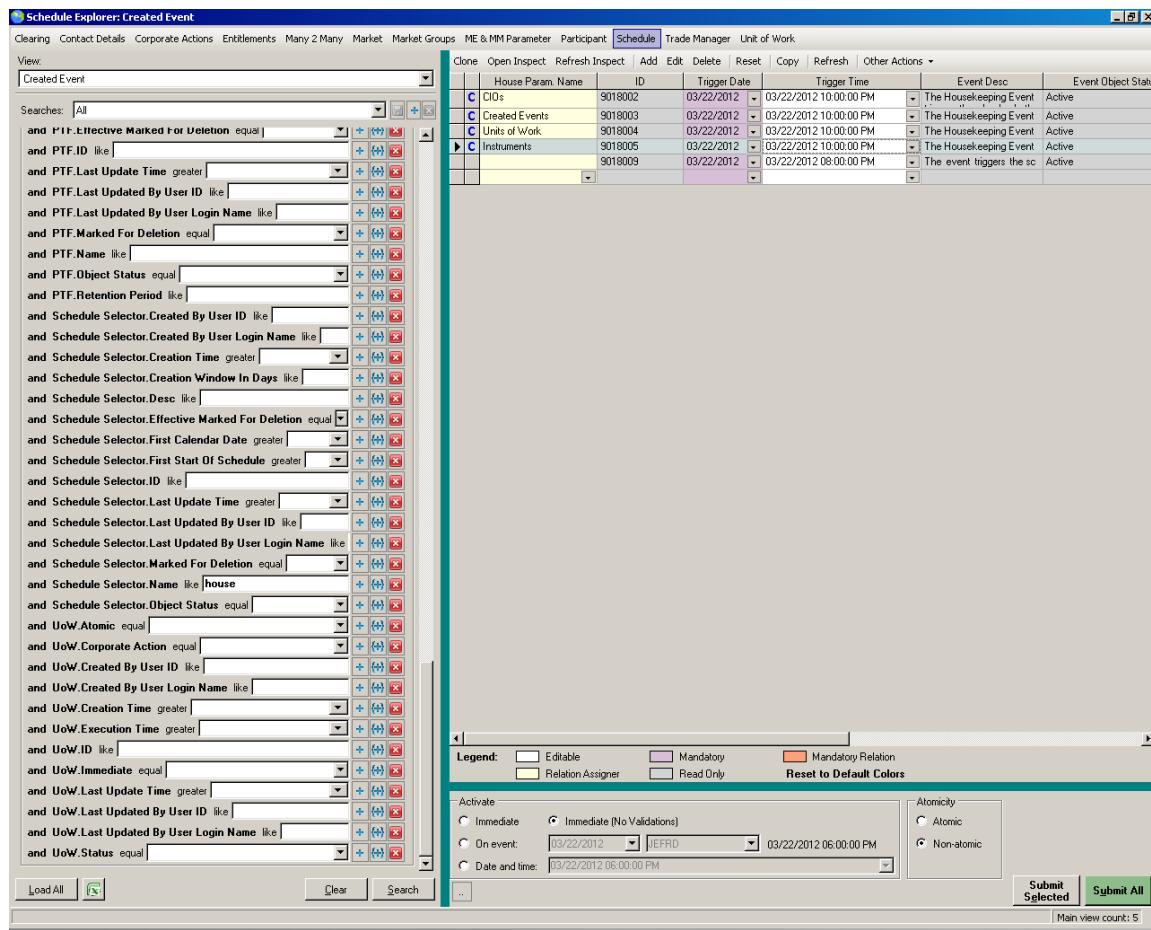
A new window will prompt you with information quantifying the number of events that will be deleted. Try to keep this number in the 500 to 600 range.

Processing will take time.

When the action is completed, a confirmation will be sent and you may click “OK”

Repeat steps as many times as necessary to delete all the created events in the displayed view.

Chapter 62. RDFE/ Created Events Housekeeping Time Change



When a Market Operations Representative (MktOps) arrives each morning they are required to open all applicable tools that are required to perform the MktOps job function.

These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

This process has been automated but if it manually needs to be done follow these steps.

To perform this task if needed MktOps needs to open **Reference Data Front End (RDDE)**.

In the Schedule explorer, choose the view “Created Event”.

In the “Trigger Time” search criteria, right click on the delimiter choose -“equal”-

Select the Drop Down and either select the day or chose “today.”

When date populates, narrow the search by entering the specific time of the created events housekeeping process which is 5:40:00 PM.

Select the search button.

To further narrow down the search, find the search box area named “Schedule Selector Name.” Leave the default delimiter as “equal”

Type in the free field the word “House”

Select the select button.

In the main grid you will only see the selected information you need.

By default, every column populates. To narrow down the search it is recommended to sort the columns.

To do this, right click the column headers in the main grid area.

Select the “Grid layout” from the drop down.

Choose column settings.

The Grid Column Configuration window will open an every possible column that can be displayed as either Selected Column “visible” or Available Column “not visible.”

Find the House Parameter name column and position it first on the list and “apply.”

The Housekeeping Parameter names that will be changed are: Created Events, Units of Work, Instruments and CIOs.

Change the “Trigger Time.” Currently we change it to 10:00:00 PM.

On the bottom in the Activate window, choose the “Immediate (No Validations)” radio button. No other window should be changed.

Select “Submit All” on the bottom right corner in green.

There is a Successfully Completed box that appears with a checkmark to inform you of the outcome.

As a double check it is advised to close the window and re-open it with the 10:00:00PM search criteria to verify it was done.

Notify the back-up on this process to prevent duplication of efforts.

Chapter 63. RDFE/ Adding a Stock Drop Copy to a Member BU

Per: Drop Copy Assignment													
Corporate Actions ▾ Entitlements ▾ M-2-M ▾ Market ▾ Market Groups ▾ ME & MM Parameter ▾ Participant ▾ Schedule ▾ Trade Manager ▾ Unit of Work ▾													
Clone Open Inspect Refresh Inspect Add Edit Delete Reset Copy Refresh Other Actions ▾													
ID	Effective Date	Marked For Deletion	Object Status	Is Deal Item Recipient	Is Option Item Recipient	Is Stock Item Recipient	Is Trade Item Recipient	Mkt Group ID	Mkt Group Name	Receiver BU ID	Receiver BU Name	Sender BU ID	Sender BU Name
1	<input type="checkbox"/>	<input type="checkbox"/>	Active	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	20	MKT1	799	ABN05C	2013	DRW01E
2	<input type="checkbox"/>	<input type="checkbox"/>	Active	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	20	MKT1	799	ABN05C	2004	IMM01E
3	<input type="checkbox"/>	<input type="checkbox"/>	Active	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	20	MKT1	516	NEW06C	520	FMT04E
N	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	20	MKT1	516	NEW06C	522	FMT05E
N	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	20	MKT1	516	NEW06C	525	FMT07E
N	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	20	MKT1	516	NEW06C	523	PRF01E
N	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	20	MKT1	516	NEW06C	524	PRF02E
N	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	20	MKT1	516	NEW06C	525	PRF03E
N	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	20	MKT1	516	NEW06C	526	PRF04E
N	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	20	MKT1	516	NEW06C	527	PRF05E
N	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	20	MKT1	516	NEW06C	530	PRF08E
N	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	20	MKT1	516	NEW06C	532	PRF10E

When a Market Operations Representative (MktOps) arrives each morning they are required to open all applicable tools that are required to perform the MktOps job function.

These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

This process has been automated but if it manually needs to be done follow these steps.

To perform this task if needed MktOps needs to open **Reference Data Front End (RDFE)**.

In the Schedule explorer, choose the view “Trade Manager.”

Select “Drop Copy Assignment.”

Select “Load All”

In the above example a member told us they were not receiving the Stock executions on their Drop Copy session.

SQM has confirmed that the correct way to enable a clearing BU to receive stock leg drop copy is by associating a clearing BU to the entering EAM BU.

This can be done via the Drop Copy Assignment feature in Trade Manager Explorer(in RDFE).

For example, entering BU DRW01E clears 00695, which maps to clearing BU ABN05C.

So to enable stock leg to be returned, in Drop Copy assignment of Trade Manager Explorer, ABN05C needs to be the Receiver BU Name, and DRW01E the Sender BU Name(show in screenshot below).

Also note that IsStockItemRecipient and IsTradeItemRecipient should both be checked.

At the bottom of the screen select Activate No Validations and the Submit All.

A window will display to inform you the change was made.

Chapter 64. RD/E/ Applying Clearing Rules for Members

Clearing Explorer: Clearing Segment

Views: Clearing Segment, Clearing Segment Security, Clearing Product, Clearing Settlement Option, Clearing Instrument Equity, Derivatives, Delivery Component, Clearing Instrument

Actions: Clone, Open, Inspect, Refresh, Inspect, Add, Edit, Delete, Reset, Copy, Refresh, Other Actions

ID	Effective Marked For Deletion	Marked For Deletion	Name	Description	Object Status	UoW ID	UoW Execution Time	UoW Status

Filter Criteria:

- and Created By User Login Name like []
- and Creation Time greater []
- and Description like []
- and Effective Marked For Deletion equal []
- and ID like []
- and Last Update Time greater []
- and Last Updated By User ID like []
- and Last Updated By User Login Name like []
- and Marked For Deletion equal []
- and Name like []
- and Object Status equal []
- and UoW Atomic equal []
- and UoW Corporate Action equal []
- and UoW Created By User ID like []
- and UoW Created By User Login Name like []
- and UoW Creation Time greater []
- and UoW Execution Time greater []
- and UoW ID like []
- and UoW Immediate equal []
- and UoW Last Update Time greater []
- and UoW Last Updated By User ID like []
- and UoW Last Updated By User Login Name like []
- and UoW Status equal []

Legend: ■ Editable ■ Mandatory ■ Mandatory Relation ■ Relation Assigner ■ Read Only ■ Read Only

Buttons: Load All, Clear, Search, Activate on IFRD event at 03/14/2012 06:00:00 PM, Atomicity non-atomic, Submit Selected, Submit All, Main view count: 0

Add Rule

Rule Name: ID:

Execution Order: Business Unit:

Expressions:

Assignments:

Expression Definition:

Buttons: Activate immediate validation, Atomicity atomic, Cancel, Save

Replacement Rules

	Load		Clear		Name:	Business Unit:							
	ID	Deleted	Name	Execution Order	Object Status	BU ID	BU Name	Market ID	Market Name	Expression Attribute	Expression Value	Assignment Attribute	Assignment Value
▶	23	<input type="checkbox"/>	THI1	1	Active	659	THI01M			Clearing Product Id [Leg] (53)	1126,	Clearing Account (101)	00611
	26	<input type="checkbox"/>	THI2	2	Active	659	THI01M			Clearing Product Id [Leg] (53)	QQQ, UYG,	Clearing Account (101)	00543
	27	<input type="checkbox"/>	OPV1	1	Active	595	OPV01M			Clearing Product Id [Leg] (53)	MND,	Clearing Account (101)	00813
	31	<input type="checkbox"/>	odlink	1	Active	110	CDL01M			Clearing Type [2]	Customer,	Clearing Subaccount (102)	
	33	<input type="checkbox"/>	WLV1	2	Active	740	WLV01M			Clearing Product Id [Leg] (53)	EBAY, GSS, FBT, CIN, PWER, CGA, WLP, 4032, 2916, QCOM, PM, GSK,	Clearing Account (101)	00551
	34	<input type="checkbox"/>	WLV2	3	Active	740	WLV01M			Clearing Product Id [Leg] (53)	BVN, MVV, PRU, F, 4032, 2952, OPEN, SWKS, VWD, CIT, SPG,	Clearing Subaccount (102)	J08
	36	<input type="checkbox"/>	WLV4	5	Active	740	WLV01M			Clearing Product Id [Leg] (53)	GLD, SLV,	Clearing Subaccount (102)	ISA
	38	<input type="checkbox"/>	WLV5	7	Active	740	WLV01M			Clearing Product Id [Leg] (53)	IWD, IWM, IWN, RIUT,	Clearing Subaccount (102)	ISI
	39	<input type="checkbox"/>	WLV7	8	Active	740	WLV01M			Clearing Product Id [Leg] (53)	BKX, 1894,	Clearing Subaccount (102)	ESI
	40	<input type="checkbox"/>	WLV8	9	Active	740	WLV01M			Clearing Product Id [Leg] (53)	MND, NDX, QQQ,	Clearing Subaccount (102)	ISF
	43	<input type="checkbox"/>	OPV2	2	Active	595	OPV01M			Clearing Product Id [Leg] (53)	DIA, DDC, MNK, NDX, QQQ, SPY,	Clearing Account (101)	00813
	44	<input type="checkbox"/>	OPV3	3	Active	595	OPV01M			Clearing Product Id [Leg] (53)	IWM, RIUT,	Clearing Subaccount (102)	OPT
	57	<input type="checkbox"/>	CTC9	2	Active	149	CTC01E			Clearing Product Id [Leg] (53)	EFA, XLI, XLY, EEM, F30, EWZ, GLD, SLV, USD, UNG, GOOG, AAPL,	Clearing Account (101)	00551
	58	<input type="checkbox"/>	CTC10	2	Active	1651	CTC11M			Clearing Product Id [Leg] (53)	EFA, XLI, XLY, EEM, F30, EWZ, GLD, SLV, USD, UNG, GOOG, AAPL,	Clearing Subaccount (102)	Q2M
	59	<input type="checkbox"/>	CTC11	2	Active	1653	CTC11E			Clearing Product Id [Leg] (53)	EFA, XLI, XLY, EEM, F30, EWZ, GLD, SLV, USD, UNG, GOOG, AAPL,	Clearing Account (101)	00551
	60	<input type="checkbox"/>	CTC12	2	Active	1650	CTC12M			Clearing Product Id [Leg] (53)	EFA, XLI, XLY, EEM, F30, EWZ, GLD, SLV, USD, UNG, GOOG, AAPL,	Clearing Subaccount (102)	Q2M
	61	<input type="checkbox"/>	CTC13	2	Active	1652	CTC12E			Clearing Product Id [Leg] (53)	EFA, XLI, XLY, EEM, F30, EWZ, GLD, SLV, USD, UNG, GOOG, AAPL,	Clearing Subaccount (102)	00551
	62	<input type="checkbox"/>	UBSLNK	1	Active	691	UBS01M			Clearing Type [2]	Customer,	Clearing Subaccount (102)	
	63	<input type="checkbox"/>	HULLNK	1	Active	230	HUL01M			Clearing Type [2]	Customer,	Clearing Subaccount (102)	
	68	<input type="checkbox"/>	CTCB	5	Active	160	CTB01E			Clearing Product Id [Leg] (53)	DIA, SPY, MNK, SURV, RHM	Clearing Account (101)	00598

View... Add... Delete Definition: eq[53,1126]

Search complete.

Market Operations has the ability to change the criteria on trades before they are sent to the OCC. Development created a Replacement Rule wizard to do this quickly and easily. The steps involved for building a rule are:

1. Rule Name (THI1)
2. Execution Order: this is just a number in the sequence of all the rules for that BU.
3. BU: THI01m
4. Expression: This is what is going to be changed. The different categories are:
 - a. Branch Sequence Number
 - b. Broker Identity
 - c. Clearing Account
 - d. CMTA
 - e. Clearing Product ID (symbol)
 - f. Subaccount
 - g. Clearing Type (cust, firm, mm)
 - h. Client Category
 - i. Account Number
 - j. Extended Free text
 - k. Free Tex
 - l. Market ID
 - m. Market Segment ID
 - n. Product ID
 - o. User ID

5. Assignments: This is where you add the new value. The categories in the drop down are:
 - a. Branch Sequence Number
 - b. Broker ID
 - c. Clearing Account
 - d. CMTA
 - e. Subaccount
 - f. Free Text
 - g. Position Effect (open/close)
6. A lot of these fields have never been used. I will explain with an example of the ones we use.
7. To simplify if I want to take all SPY trades for ABN20E and change the clearing account, cmta and make them close. The order is as follows:
 - a. Completes steps 1 ,2 and 3
 - b. Go to Expressions and select Clearing Product ID (Spy). You can list multiple symbols.
 - c. Then go to Assignments and hit each individual drop down and select Clearing Account, CMTA and Position Effect.
 - d. Add the new value in fields next to each category
8. Hit activate immediately then save

Chapter 65. RD/E/ Explicit Calendar Days

Schedule Explorer: Explicit Calendar Day

Using: Contact Details • Corporate Actions • Contracts • M-24 • Market • Market Dates • NC-1MPP Parameter • Participant • Schedule • Trade Register • Unit of Work •

Searches: All

Open, Import, Refresh, Inspect, Add, Edit, Delete, Read, Copy, Refresh, Other Actions •

Creation Time	Date	Name	Type Of Day Name	Desc	Updated At	ID	Calendar Name	Calendar ID	Type Of Day Desc	Type Of Day Description	Type Of Day ID	Type Of Day Last Update Date	Last Used
03/02/2011 08:57:00	03/12/2011	DST Start			2011-03-12T00:00:00	4	ISE Production Master Calendar	ISE Production Master	Daylight Savings Time start	BEGIN	5	03/12/2011	IsUsed
03/02/2011 08:57:00	04/22/2011	Good Friday	System Down		2011-04-22T00:00:00	4	ISE Production Master Calendar	ISE Production Master	System Down	BEGIN	3	04/22/2011	IsUsed
03/02/2011 08:57:00	05/03/2011	Honest Day	System Down		2011-05-03T00:00:00	4	ISE Production Master Calendar	ISE Production Master	System Down	BEGIN	3	05/03/2011	IsUsed
03/02/2011 08:57:00	07/04/2011	Independence Day	System Down		2011-07-04T00:00:00	4	ISE Production Master Calendar	ISE Production Master	System Down	BEGIN	3	07/04/2011	IsUsed
03/02/2011 08:57:00	08/25/2011	Labor Day	System Down		2011-08-25T00:00:00	4	ISE Production Master Calendar	ISE Production Master	System Down	BEGIN	3	08/25/2011	IsUsed
03/02/2011 08:57:00	11/24/2011	Thanksgiving Day	System Down		2011-11-24T00:00:00	4	ISE Production Master Calendar	ISE Production Master	System Down	BEGIN	3	11/24/2011	IsUsed
03/02/2011 08:57:00	11/25/2011	Friday after Thanksgiving	Half Day		2011-11-25T00:00:00	4	ISE Production Master Calendar	ISE Production Master	Half Day	BEGIN	2	11/25/2011	IsUsed
03/02/2011 08:57:00	12/26/2011	Christmas Day observed	System Down		2011-12-26T00:00:00	4	ISE Production Master Calendar	ISE Production Master	System Down	BEGIN	3	12/26/2011	IsUsed
03/02/2011 08:57:00	03/05/2011	DST End			2011-03-05T00:00:00	4	ISE Production Master Calendar	ISE Production Master	Daylight Savings Time end	END	6	03/05/2011	IsUsed
03/18/2011 08:47:00	03/19/2011	First Member PT	Half Day		2011-03-19T00:00:00	4	ISE Production Master Calendar	ISE Production Master	Half Day	BEGIN	1	03/19/2011	AMER01A
03/19/2011 08:47:00	03/20/2011	Sun MPT check out	Half Day		2011-03-20T00:00:00	4	ISE Production Master Calendar	ISE Production Master	Half Day	BEGIN	1	03/20/2011	AMER01A
03/24/2011 08:35:00	03/25/2011	Second Member PT	Half Day		2011-03-25T00:00:00	4	ISE Production Master Calendar	ISE Production Master	Half Day	BEGIN	1	03/25/2011	AMER01A
03/24/2011 08:47:00	03/27/2011	Sun MPT check out 2	Half Day		2011-03-27T00:00:00	4	ISE Production Master Calendar	ISE Production Master	Half Day	BEGIN	1	03/27/2011	AMER01A
03/31/2011 08:41:00	04/02/2011	Third Member PT	Half Day		2011-04-02T00:00:00	4	ISE Production Master Calendar	ISE Production Master	Half Day	BEGIN	1	04/02/2011	AMER01A
04/07/2011 08:19:00	04/09/2011	Day 0 Member PT	Half Day		2011-04-09T00:00:00	4	ISE Production Master Calendar	ISE Production Master	Half Day	BEGIN	1	04/09/2011	AMER01A
05/20/2011 08:08:00	05/21/2011	1/3 Release Saturday	Half Day		2011-05-21T00:00:00	4	ISE Production Master Calendar	ISE Production Master	Half Day	BEGIN	1	05/21/2011	LUR04A3
07/08/2011 08:38:00	07/09/2011	1/4 Release Saturday	Half Day		2011-07-09T00:00:00	4	ISE Production Master Calendar	ISE Production Master	Half Day	BEGIN	1	07/09/2011	amerton
08/25/2011 08:35:00	08/27/2011	1/5/2012 Release Sat	Half Day		2011-08-27T00:00:00	4	ISE Production Master Calendar	ISE Production Master	Half Day	BEGIN	1	08/27/2011	amerton
09/08/2011 08:34:00	09/10/2011	1/5/2012 Release Sat	Half Day		2011-09-10T00:00:00	4	ISE Production Master Calendar	ISE Production Master	Half Day	BEGIN	1	09/10/2011	amerton
10/27/2011 08:05:00	10/29/2011	1/6 Release Saturday	Half Day		2011-10-29T00:00:00	4	ISE Production Master Calendar	ISE Production Master	Half Day	BEGIN	1	10/29/2011	lukasf
12/08/2011 08:00:00	12/10/2011	2/0/2012 Release Saturday	Half Day		2011-12-10T00:00:00	4	ISE Production Master Calendar	ISE Production Master	Half Day	BEGIN	2	12/10/2011	duffin
12/23/2011 08:20:00	01/02/2012	New Year Observed	System Down		2012-01-02T00:00:00	4	ISE Production Master Calendar	ISE Production Master	System Down	BEGIN	3	01/02/2012	lukasf
01/11/2012 08:07:00	01/16/2012	President's Day	System Down		2012-01-16T00:00:00	4	ISE Production Master Calendar	ISE Production Master	System Down	BEGIN	3	01/16/2012	lukasf
02/13/2012 08:24:00	02/20/2012	2012/2012 February	System Down		2012-02-20T00:00:00	4	ISE Production Master Calendar	ISE Production Master	System Down	BEGIN	3	02/20/2012	lukasf
03/06/2012 08:52:00	03/10/2012	DST Start 2012	DST Start		2012-03-10T00:00:00	4	ISE Production Master Calendar	ISE Production Master	Daylight Savings Time start	BEGIN	5	03/10/2012	lukasf
03/21/2012 08:00:00	03/24/2012	3/0 Release Saturday	Half Day		2012-03-24T00:00:00	4	ISE Production Master Calendar	ISE Production Master	Half Day	BEGIN	2	03/24/2012	duffin
04/06/2012 08:29:00	04/06/2012	2012 Good Friday	System Down		2012-04-06T00:00:00	4	ISE Production Master Calendar	ISE Production Master	System Down	BEGIN	3	04/06/2012	duffin
05/28/2012	05/29/2012	2012 Memorial Day	System Down		2012-05-29T00:00:00	4	ISE Production Master Calendar	ISE Production Master	System Down	BEGIN	3	05/29/2012	duffin
07/03/2012	07/03/2012	2012/2012 Independence Day	Half Day		2012-07-03T00:00:00	4	ISE Production Master Calendar	ISE Production Master	Half Day	BEGIN	2	07/03/2012	duffin
07/04/2012	07/04/2012	2012 Independence Day	System Down		2012-07-04T00:00:00	4	ISE Production Master Calendar	ISE Production Master	System Down	BEGIN	3	07/04/2012	duffin
09/03/2012	09/16/2012	2012 Labor Day	System Down		2012-09-16T00:00:00	4	ISE Production Master Calendar	ISE Production Master	System Down	BEGIN	3	09/16/2012	duffin
11/22/2012	11/22/2012	2012 Thanksgiving Day	System Down		2012-11-22T00:00:00	4	ISE Production Master Calendar	ISE Production Master	System Down	BEGIN	3	11/22/2012	duffin
11/23/2012	11/23/2012	2012 Friday after Thanksgiving	Half Day		2012-11-23T00:00:00	4	ISE Production Master Calendar	ISE Production Master	Half Day	BEGIN	2	11/23/2012	duffin
11/30/2012	11/30/2012	2012 DST Ends	DST End		2012-11-30T00:00:00	4	ISE Production Master Calendar	ISE Production Master	Daylight Savings Time end	END	6	03/10/2012	amerton
12/24/2012	12/24/2012	2012 Christmas Eve	Half Day		2012-12-24T00:00:00	4	ISE Production Master Calendar	ISE Production Master	Half Day	BEGIN	2	12/24/2012	duffin
12/25/2012	12/25/2012	2012 Christmas Day	System Down		2012-12-25T00:00:00	4	ISE Production Master Calendar	ISE Production Master	System Down	BEGIN	3	12/25/2012	duffin

Legend: Editable Mandatory Mandatory Relation ReadOnly Reset to Default Colors

Activity: Immediate Immediate (No Validation) OnEvent: 04/03/2012 08:00:00 PM Date and time: 04/03/2012 08:00:00 PM

Submit Selected

Run view count: 1

Market Operations are responsible for Trading Schedules. While normal schedule are in place for normal trading days and hours, Market Operations needs to have trading schedules in place when there are half day sessions, holidays and weekend tests.

Section IV. Market Operations Functions



Chapter 66. Linkage & The NYFIX Role

Actual Rule

Self Help Memo



DistribLink selfHelp
Memo

Technical Bulletins



TechnicalBu

Distributive Linkage PowerPoint Basic



DistributiveLinkage

Distributive Linkage PowerPoint Technical



DistributiveLinkage_T
echnical

ISO Specs



ISO Specs

Distributive Linkage for Electronic Access Members (EAMs)

Any member may enter an Intermarket Sweep Order (ISO)

Sending an ISO indicates that the member has taken the responsibility of clearing all better priced bids and offers and that the ISE should execute the incoming order without regard to other Exchanges prices. The *Intermarket Sweep Order* field on the order entry transaction is used to identify the order as **ISO** or **Regular**. An order *must* be identified as either **ISO** or **Regular**. No other value is allowed.

An ISO can only be entered if the series is in “Regular” or “Fast Market” status.

For “simple” orders, if the order is an **ISO**, *Validity Time must be IOC (Immediate or Cancel)*. IOC is the **only** allowed validity time for a simple ISO. A simple ISO will execute as a regular IOC order. I.e., execute as much as possible and cancel the balance.

For special orders, there are no changes or new requirements for submitting those orders except that the order is specifically identified as either **ISO** or **Regular**.

Changes to Simple Regular Order Handling

A *non-customer* DAY or GTC **Regular** order which crosses the away market best price will be **rejected**. This is new behavior.

A *non-customer* DAY or GTC **Regular** order which matches the away market best price will be rejected **if** a customer order exists at the same price. This is new behavior.

A **Regular** order may **not** be modified to become an **ISO**.

Changes to Special Order Handling

***For the purposes of this section, Special Orders consists of Block, Facilitation and Solicitation. PIMs cannot be ISOs**

Currently, away market prices are never checked upon entry of special orders. Price checks are performed upon execution, depending on the special order type. This behavior changes with the implementation of Distributive Linkage.

If a special order is entered as “**ISO**” then away market prices are *never* checked, neither at order entry (existing behavior), nor at order execution (new behavior). However, existing ISE BBO price checks apply.

If a special order is submitted as **Regular**, the price of the order must not be outside the NBBO (a price at the NBBO is valid) *except* for the following conditions:

- For a Facilitation or Block order: if the ISE is part of the NBBO on the same side as the Facilitation/Block order and there is a customer order on this side, the price must be *better* than the NBBO (Note that this is the current behavior).

Distributive Linkage for Market Makers

As with the existing Linkage rules, the PMM must still handle a regular customer order which locks because the away market is better (AMB Lock). Instead of a P or P/A order sent through the linkage hub, the PMM will send an Intermarket Sweep Order (ISO) to the far market (or markets). The routing mechanism by which the PMM sends the outbound ISO order is external to the ISE – the ISE has *no role* in the delivery of the outbound ISO from the PMM to a far market, or in the delivery of execution reports from that market to the PMM.

It is the PMM's responsibility to “sweep the top of book” at all away markets for the best prices. It should be noted that, logically, the handling of the locked order with respect to releasing or trade reporting that order is largely unchanged. In addition, the mechanism by which the order locks and the broadcasts which report and identify the locked order are also unchanged.

Customer Orders

Inbound customer orders are set, via the *ISO* field, either as **ISO** or as **Regular** orders.

An **ISO** order will be allowed to trade at the ISE BBO, even if the away market NBBO is better. This is new behavior.

A **Regular** order will lock to the PMM if the away market is better. This is the current behavior.

Processing a Locked Customer Order

Note: These are not the specific sequential steps that must be followed when processing a locked order, but are rather logical steps that occur when processing a locked order. Many of these steps can occur simultaneously.

For example: a partial quantity of the locked order may be released or trade reported at any time, as appropriate; ISOs can be sent to multiple exchanges at the same time; etc. Please refer to the examples at the end of this document for specific cases.

- To process the locked customer order, the PMM will:
- Match the NBBO or send an outbound ISO to an away market.
- The PMM can match part of the order and refer the remaining portion to an away market.
- Select the target away exchange for routing an outbound ISO.
- If there are multiple exchanges at the NBBO, the PMM can send the order to any remote exchange, or simultaneously send ISOs to multiple exchanges.
- If the outbound ISO is not satisfied at the target exchange and some of the other exchanges are at the NBBO, or are better than the ISE BBO, the PMM must send an outbound ISO to another exchange.
- Release remaining quantity as “ISO” to the ISE market.
- Receive executions for the outbound ISOs.
- Execute the locked customer order at the away market price.

Examples

These examples are not meant to be exclusive, nor do they dictate specific processing. They are meant simply to help clarify possible behavior based on various scenarios and market conditions.

Example 1 – LMT order:

ISE: ASK 20 @ 1.20 (TOB)

ISE: ASK 105 @ 1.25 (Depth +1)

Ex1: ASK 15 @ 1.10 (TOB)

Ex2: ASK 25 @ 1.25 (TOB)

Ex3: ASK 35 @ 1.20 (TOB)

An order to BUY 200 @ 1.10 is entered and locks (AMB).

- Time T + 1 PMM sends an ISO, BUY 15 @ 1.10, to Ex1. A part of the order is released using the MO111. The *Away Market Action* is set to 4 (Ignore – ISO), the *Release Quantity* is set to 185, and the *Limit Price* is set to 1.15 (worse than customer limit price). The customer order rests on the book with 185 open @ 1.10 (order price) & 15 locked.
- Time T + 2 The PMM receives a trade for 15 @ 1.10 from Ex1. PMM trade reports (MO112) 15 @ 1.10 with *Trade Report Action* set to 3 (ISO - Do Not Report). The customer order rests on the book with 185 open.

Example 2 – LMT order, MM steps up:

ISE: ASK 20 @ 1.20 (TOB)

ISE: ASK 105 @ 1.25 (Depth +1)

Ex1: ASK 15 @ 1.10 (TOB)

Ex2: ASK 25 @ 1.25 (TOB)

Ex3: ASK 35 @ 1.15 (TOB)

An order to BUY 200 @ 1.15 is entered and locks (AMB).

- Time T + 1 PMM sends an ISO, BUY 15 @ 1.10, to Ex1. PMM sends an ISO, BUY 35 @ 1.15, to Ex3. PMM trade reports (MO112) 10 @ 1.15 with *Trade Report Action* set to 4 (ISO - Report).
- Time T + 2 A part of the order is released using the MO111. The *Away Market Action* is set to 4 (Ignore – ISO), the *Release Quantity* is set to 140 and the *Limit Price* is set to 0 (OR 1.20). The customer order rests on the book with 140 open @ 1.15 & 50 locked.
- Time T + 3 The PMM receives a trade for 15 @ 1.10 from Ex1. PMM trade reports (MO112) 15 @ 1.10 with *Trade Report Action* set to 3 (ISO - Do Not Report). The customer order rests on the book with 140 open & 35 locked.
- Time T + 4 The PMM receives a trade for 35 @ 1.15 from Ex1. PMM trade reports (MO112) 35 @ 1.15 with *Trade Report Action* set to 3 (ISO - Do Not Report). The customer order rests on the book with 140 open.

Example 3 – Release with relock:

ISE: ASK 20 @ 1.20 (TOB)
ISE: ASK 105 @ 1.25 (Depth +1)
ISE: ASK 500 @ 1.30 (Depth +2)
Ex1: ASK 15 @ 1.15 (TOB)
Ex2: ASK 25 @ 1.25 (TOB)
Ex3: ASK 35 @ 1.15 (TOB)

An order to BUY 200 @ 1.30 is entered and locks (AMB).

- Time T + 1 FLASH Auction. 20 @ 1.15 executes during the auction. 180 relocks (AMB) to the PMM.
- Time T + 2 PMM sends an ISO, BUY 15 @ 1.15, to Ex1. PMM sends an ISO, BUY 35 @ 1.15, to Ex3. A part of the order is released using the MO111. The *Away Market Action* is set to 4 (Ignore – ISO), the *Release Quantity* is set to 130, and the *Limit Price* is set to 1.25 (*better than customer limit price*). 20 @ 1.20 executes. 105 @ 1.25 executes. The remaining 5 **relocks**. The customer order rests on the book with 0 open & **55 locked**.
- Time T + 3 PMM sends an ISO, BUY 5 @ 1.25, to Ex2.
- Time T + 4 The PMM receives a trade for 35 @ 1.15 from Ex3. PMM trade reports (MO112) 35 @ 1.15 with *Trade Report Action* set to 3 (ISO - Do Not Report). The customer order rests on the book with 0 open & 20 locked.

Example 4 – Customer BUY MKT order:

ISE: ASK 20 @ 6.00 (Top of Book)
ISE: ASK 20 @ 6.20 (Depth +1)
Ex1: ASK 40 @ 5.80 (TOB)
Ex2: ASK 30 @ 6.00 (TOB)
Ex3: ASK 10 @ 6.20 (TOB)

An order to BUY 100 @ MKT is entered and locks (AMB) to the PMM.

- Time T + 1 PMM sends an ISO, buy 40 @ 5.80, to Ex1. PMM sends an ISO, buy 30 @ 6.00, to Ex2. A part of the order is released using the MO111. The *Away Market Action* is set to 4 (Ignore – ISO), the *Release Quantity* is set to 30, and the *Limit Price* is set to 6.20. 20 @ 6.00 execute. 10 @ 6.20 executes. The customer order rests on the book with 0 open & 70 locked.
- Time T + 2 The PMM receives a trade for 40 @ 5.80 from Ex1. PMM trade reports (MO112) 40 @ 5.80 with *Trade Report Action* set to 3 (ISO - Do Not Report). The customer order rests on the book with 0 open & 30 locked.
- Time T + 3 The PMM receives a trade for 30 @ 6.00 from Ex2. PMM trade reports (MO112) 30 @ 6.00 with *Trade Report Action* set to 3 (ISO - Do Not Report). The customer order is filled.

Example 5 – Customer SELL MKT order:

ISE: BID 10 @ 1.00 (Top of Book)
ISE: BID 10 @ .95 (Depth + 1)
ISE: [no quote] (Depth + 2)
Ex1: BID 10 @ 1.05 (TOB)
Ex2: BID 10 @ 1.00 (TOB)
Ex3: BID 10 @ .90 (TOB)

An order to SELL 100 @ MKT is entered and locks (AMB) to the PMM.

- Time T + 1 PMM sends an ISO, sell 10 @ 1.05, to Ex1. PMM sends an ISO, sell 10 @ 1.00, to Ex2. A part of the order is released using the MO111. The *Away Market Action* is set to 4 (Ignore – ISO), the *Release Quantity* is set to 80, and the *Limit Price* is set to .90. 10 @ 1.00 executes 10 @ .95 executes. The remaining 60 **relocks**. The customer order rests on the book with 0 open & **80 locked**.
- Time T + 2 The PMM receives a trade for 10 @ 1.05 from Ex1. PMM trade reports (MO112) 10 @ 1.05 with *Trade Report Action* set to 3 (ISO - Do Not Report). The customer order rests on the book with 0 open & 70 locked.

- Time T + 3 The PMM receives a trade for 10 @ 1.00 from Ex2. PMM trade reports (MO112) 10 @ 1.00 with *Trade Report Action* set to 3 (ISO - Do Not Report). The customer order rests on the book with 0 open & 60 locked..
- Time T + 4 PMM sends an ISO, sell 10 @ .90, to Ex3. A part of the order is released using the MO111. The *Away Market Action* is set to 4 (Ignore – ISO), the *Release Quantity* is set to 50, and the *Limit Price* is set to zero (0). As there is **no** quantity left on the ISE book, the order converts to a limit order @ .05 and rests on the book with 50 open & 10 locked.
- Time T + 5 The PMM receives a trade for 10 @ .90 from Ex3. PMM trade reports (MO112) 10 @ .90 with *Trade Report Action* set to 3 (ISO - Do Not Report). The customer order rests on the book @ .05 with 50 open.

Chapter 67. Encore

The screenshot shows a web-based trading platform titled "OCC ENCORE". The main interface displays a grid of trade data with columns including: #, Status, CSN, Symb, C/P, Series/Contract, Date, Strike, Trade Price, Cbnt, Qty, Buy CM#, Buy AT ID, Buy CMTA CM#, Buy O/C CM#, Sell AT ID, Sell CMTA CM#, Sell O/C CM#, Sell Exec Brkr, Buy Alc Type, Buy Data, Sell Exec Brkr, Sell Alc Type, Sell Data, and As Of. There are four rows of data, each representing a trade for CSCCO on 06/16/2012 at a strike of 22.0000. The rows show different trade types (Valid, Invalid) and various market participants (QIA, WEY, JPM, etc.). Below the grid, a "Warning and Error Messages" section is visible, containing a single entry: "© 2012 The Options Clearing Corporation. All Rights Reserved.".

#	Status	CSN	Symb	C/P	Series/Contract	Date	Strike	Trade Price	Cbnt	Qty	Buy CM#	Buy AT ID	Buy CMTA CM#	Buy O/C CM#	Sell AT ID	Sell CMTA CM#	Sell O/C CM#	Sell Exec Brkr	Buy Alc Type	Buy Data	Sell Exec Brkr	Sell Alc Type	Sell Data	As Of
C 1	Valid	0008810	CSCO	C	06/16/2012	22.0000	0.28000000	217	00009	M	QIA	O	00722	C			O	HUL0		EXAN	ZSG30	03/14/2012		
C 2	Valid	0008811	CSCO	C	06/16/2012	22.0000	0.28000000	331	00501	M	WEY	O	00722	C			O	EYE0		EXAN	ZSG30	03/14/2012		
C 3	Valid	0008812	CSCO	C	06/16/2012	22.0000	0.28000000	129	00352	M	JPM	O	00722	C			O	JPMO		EXAN	ZSG30	03/14/2012		
C 4	Valid	0008813	CSCO	C	06/16/2012	22.0000	0.28000000	109	00551	M	ISS	O	00722	C			O	SIGX		EXAN	ZSG30	03/14/2012		

Warning and Error Messages

CSN	Excp Cat	Message	Message Type	Trd Key
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ENCORE is the clearing system utilized within the OCC. The clearing process is equally as crucial as trading for an exchange. This system is a way for firms to verify any issues or breaks. Market Operations Representatives use this daily to verify there are no trades that may have rejected. Exchanges/ firms/ customers are only allowed to see the trades that involve them.

There is limited access to this system.

Application

<https://myocc.theocc.com/siteminderagent/forms/login.fcc?TYPE=33554433&REALMID=06-3c7ff717-410a-001a-0000-013300000133&GUID=&SMAUTHREASON=0&METHOD=GET&SMAGENTNAME=-SM-LYnrrZz0UE3wKIGDCxcbeg%2fsb2Augxkj8YzdjhF76JZNjszsR4I8nTc%2fzbMZ2p95&TARGET=-SM-https%3a%2f%2fmyocc%2etheocc%2ecom%2f>

The OCC:

http://www.theocc.com/about/who_we_are/who_we_are.jsp
<http://www.theocc.com/initiatives/myocc.jsp>

http://www.optionsclearing.com/products/dds_ref/ENCORE_DDS_Guide_Proprietary_Transmissions_with_Changes.pdf

If you have a Username and Password, type them in the “**my OCC link.**”

Once you enter the My OCC Members Portal select ENCORE from the top left.

On the left is the “**Trade Monitor**” screen. Select it and select edited trades. Type in the authenticate code. (Limited access) and choose OK.

For investigation rejected trades. Select “**filter.**” Make sure the activity date is the current date. Make sure the “trade type” drop down says “incremental.” Make sure “trade source” drop down says “**ISE.**”

To the right, make sure “Trade Status” drop down says “rejected”

Hit OK at the bottom, Note: Do not hit any “search” buttons. Check on the rejected trade(s) that come up.

The process will run and the details of the trade will populate with the reason code.

Go to OMSECUR/ trade history and locate the trade in question and the member involved.

Contact the member using the Market Operation Contact list.

Discuss the trade and make the necessary change(s) to the trade(s).

For “Pended” trades all steps are essentially the same except for number 9). Instead of selecting “rejected” choose “pended.” To investigate “regular” trades follow essentially the same steps except, select “Trade Inquiry.” Make sure the activity date is the current date. If they are as/ of type in that date. Make sure “trade source” drop down says “ISE.” Make sure “Instrument Type” says “Option”

This uses an option “root” which is a 3 letter code that describes the option you are investigating. Enter it in the symbol field. It is case sensitive.

Populate the Series/ Contract date field using the drop downs. Use the whole number not the digit. Select calls or puts.

If you are ok with the criteria to search select OK” Note: Do not select “search.”

The screen will populate with the options selected with the pertinent information.

Glossary of Terms

You should be familiar with the following terms prior to reading this guide.

Batch – In a computer, a batch job is a program that is assigned to the computer to run without further user interaction. In larger commercial computers or servers, batch jobs are usually initiated by a system user. Some are defined to run automatically at a certain time. DDS (Data Distribution Services) – The ENCORE module that supports both batch and real time data delivery and utilizes the FIXML data formatting standard.

ENCORE – The clearing system utilized within OCC.

Event Driven Processing – A business event is a meaningful change in the state of the enterprise, such as the opening of a new customer account, clearing a trade, or the matching of a transfer. Event driven processing is system behavior that is initiated by these business events rather than system events — such as time based scheduling. Event driven systems posses the following attributes: 1) Individual treatment of transactions; 2) Push delivery systems; and 3) Electronic notification.

FIXML (Financial Information eXchange Markup Language) – The XML derived grammar of the FIX protocol. A FIXML implementation will have message format validation, cleaner, more expressive structure, and leverage off existing standards. The initial goal is to provide the ability to embed FIXML messages within traditional FIX header and trailers to minimize the impact on existing implementations.

Messaging – There are two major messaging server models: the point-to-point model and the publish/subscribe model. Messaging allows programs to share common message-handling code, to isolate resources and interdependencies, and to easily handle an increase in message volume. Messaging also makes it easier for programs to communicate across different programming environments

(languages, compilers, and operating systems) since the only thing that each environment needs to understand is the common messaging format and protocol.

Package – A Package is a collection of DDS transmissions that are grouped together based on selections made when the subscription was created.

Pull Delivery Model – In this information delivery model, the observer — or client — requests information from the information owner. An example of this model is the download of a document from a web page.

Push Delivery Model – In this information delivery model, the information owner distributes the data to the observer as it deems appropriate. An example of this model is the sending and delivery of an email message.

Real-Time – A level of computer responsiveness that a user senses as sufficiently immediate or that enables the computer to keep up with some external process (for example, to present trade data as trades are executed and cleared). *Real-time* is an adjective pertaining to computers or processes that operate in real time. Real-time describes a human rather than a machine sense of time.

Recipient – The entity (Clearing Member Organization, Exchange, Regulatory Agency or Service Bureau) that owns the systems where DDS delivers data for processing or retransmission.

STP (Straight-Through-Processing) – The seamless integration of systems and processes to automate the trade process from end-to-end--trade execution, confirmation and settlement -- without the need for manual intervention or the re-keying of data.

Subscriber – The entity (a Clearing Member Organization, Exchange, or Regulatory Agency) that requests a package of transmissions and owns the data that is transmitted to recipients.

XML (eXtensible Markup Language) – A simple and flexible text format derived from SGML (ISO 8879). Originally designed to meet the challenges of large-scale electronic publishing, XML is also playing an increasingly important role in the exchange of a wide variety of data on the Web and elsewhere.

Section V. Connectivity, Monitoring and Protections



Chapter 68. FIX

The screenshot shows the 'Alerts Viewer' application window. The main pane displays a grid of alerts with columns: Last Action, Alert, Session, Alert Information, Owner, and State. Most alerts are categorized as 'Order Ack Latency' and are associated with sessions like SIMA3, SIMA4, WLXH, WLXE, WLXD, and WLZ. The 'Alert Information' column contains detailed log entries for each alert, such as 'Order with CIOrldID 323659929 did not get ack within 465.Original Order...' and 'Order with CIOrldID 1XT-1FTX-1XT-1 did not get ack within 400.Original Order...'. The 'Owner' column shows 'admin' for all alerts, and the 'State' column indicates they are all 'Closed'. Below the grid, there are sections for 'Alert Information' (containing raw message logs), 'Notes' (containing author, date, and note details), and 'Manage Notes' buttons.

Members can use any one of four connectivity methods to connect to the ISE's interfaces.

Members that use a service bureau to provide a FIX interface to ISE are also connected to ISE at the telecommunication level by the service bureau that provides the FIX interface. Members that do not use a service bureau can use either an extranet provider, Equinix NY4 collocation, VPN/GRE Tunnel or Internet (PrecISE Trade Only). ISE's approach has always been to offer our members a variety of connectivity options to meet their particular trading needs. As speed and execution times are becoming more and more critical, we have expanded our connectivity options to include a Premium Access Collocation offering that will provide extremely low-latency connectivity to the Optimise platform relative to the DTI and MDI Interfaces. More information regarding connectivity and requirements for different membership is available by signing up for our [Members Area](#). A list of [ISE approved providers](#) is also available.

The Financial Information eXchange (FIX) protocol is a series of messaging specifications for the electronic communication of trade-related messages. It has been developed through the collaboration of banks, broker-dealers, exchanges, industry utilities and associations, institutional investors, and information technology providers from around the world.

FIX is the industry-driven messaging standard that is changing the face of the global financial services sector, as firms use the protocol to transact in an electronic, transparent, cost-efficient and timely manner. FIX is open and free, but it is not software. Rather, FIX is a specification around which software developers can create commercial or open-source software, as they see fit. As the market's leading trade-communications protocol, FIX is integral to many order management and trading systems. Yet, its power is unobtrusive, as users of these systems can benefit from FIX without knowing the language itself.

A member can use the FIX protocol to access ISE through either vendor-provided software, one of a number of order-routing service bureaus or their own proprietary interface application. Members using their own FIX interface applications connect directly to ISE's Order Routing System (IORS).

Chapter 69. PrecISE

The screenshot displays the PrecISE Trade application with several windows open:

- Market Data Window:** Shows a grid of bid/ask prices for various stocks like BOX, PCK, CBOE, and PHLX across different exchanges.
- Order Entry Window:** A large window titled "New Search" containing a grid of order details with columns for ID, Symb, BQty, Bid, Ask, AQty, and Qty.
- Order Status Window:** Titled "Order Status - (My Orders)", it lists orders by ID, Symb, Status, Date, Time, B/S, QTY, Prc, I, Open, Traded, Bell, AvgPrc, AcctCat, and Val.
- Bottom Navigation Bar:** Includes buttons for Ready, F1 - User Guide, and various trading functions like Cancel, Alter, Activate, Inactivate, Copy Order, Clearing, Order History, and Refresh BBO.

This dialog box is used for creating regular orders:

- Header:** Includes tabs for Regular, Block, Crossing Orders, Spread, With Stock, Stop, CAB, Set Defaults, Preferences, and Close.
- Search Bar:** Allows filtering by Id, Exp, ALL, or OPRA Symb.
- Order Grid:** Shows a grid of current orders with columns for Call, Instrument, Put, Id, Bid, and Ask.
- Order Details Panel:** Displays specific order details for a selected item (e.g., C7MAR50.0C) including Price, Qty, Exchange (ISE), Market, Inactive, Validity, Account Cat, Day, and Customer.
- Action Buttons:** BUY and SELL buttons at the bottom.
- Bottom Bar:** Includes Bin 8 and PMM: Citadel Derivatives Gip LLC.

ISE's **PrecISE Trade®** is front-end execution management system for trading options and stock-option combinations. PrecISE provides traders with the ability to submit, monitor, alter and cancel orders; display the BBO of options at both the ISE and the NBBO; and route orders to all options exchanges via Execution Brokers. PrecISE is installed on the trader's PC and connects to servers at ISE via the Internet using SSL security, Extranet Providers or Direct Connectivity.

PrecISE Supports:

- Spreads and Tied to Stock Orders
- Crossing Orders for Simple and Complex Orders
- Away Market Routing to sweep and send orders directly to other Exchanges
- Reserve Orders for Simple and Complex Orders
- Post-trade allocation capability
- Sweep and Cross
- Risk management settings that can be managed by Risk Administrator:
 - Max order quantity
 - Max day quantity
 - Max order notional value
 - Max day notional value
 - Reject pre-open orders
 - Restricted products list
- Kill Switch
 - When activated blocks order entry related requests and deletes open orders at the individual user or business unit level. PrecISE can be used to activate Kill Switch for PrecISE, FIX, or DTI business unit(s).

PrecISE Market Data:

- ISE and underlying BBO
- OPRA NBBO and Exchange BBO
- ISE Market Depth along with Customer Quantity

PrecISE Advantages:

- User-friendly, customizable interface
- Supports Administrator-set pre-trade risk parameters
- Allows for consolidated access to order and trade activity for multiple desks, business units and/or sponsored customers using PrecISE as well as FIX and API applications

Chapter 70. Market Maker Risk Management

1. **MM Curtailment (Speed Bumps)**
 - When triggered, speed bump inactivates all quotes in a symbol for the Business Unit
 - Quotes are manually reactivated via separate DTI transaction
 - Establish per symbol for each instrument type: simple or complex
 - Any or all Curtailment Parameters may be set:
 - Cumulative Count – total contracts traded
 - Percentage Count – traded quantity as percentage of total quantity
 - Delta – long vs. short, evaluated as absolute value put & call
 - Vega – bought vs. sold, evaluated as absolute value
 - Adjustable time intervals – configurable in milliseconds, from 1 second to 30 seconds
 - Adjustable in real-time

Implementation Method: Established and adjusted by request via DTI transaction
 2. **MM Delete All Quotes**
 - Delete all quotes for all series in one symbol with one transaction
 - Can target specific Business Unit or MM user
 - Implementation Method: Enacted via DTI transaction*
 3. **MM Quote Inactivation**
 - Manually inactivate all quotes in a symbol, a list of symbols, or market wide with a single transaction for the entire Business Unit
 - Implementation Method: Enacted via DTI transaction*
 4. **Delete All Orders**
 - Delete all orders in a series, symbol, list of symbols or market wide with one transaction
 - Can target specific Business Unit or MM user
 - Implementation Method: Enacted via DTI transaction*
 - Quotes are manually reactivated using same DTI transaction
 5. **Cancel on Disconnect**
 - All orders for a session are automatically deleted when that session disconnects
 - Implementation Method: Enacted via instruction on DTI Logon/Logout transaction*
 6. **Kill Switch**
 - Simultaneously cancel all orders and prevent new orders from being accepted via DTI, FIX, or PrecISE
 - Does not require disconnect to be triggered
 - PrecISE can be used to activate Kill Switch for DTI, FIX and PrecISE Business Units
 - Implementation Method: Enacted by request via DTI, FIX, PrecISE or ISE Market Operations*
 7. **Drop Copy**
 - FIX Order and Trade Drop Copy reports are available for orders routed via DTI, FIX, and PrecISE, allowing for enhanced risk management and more efficient order and trade information maintenance
 - Implementation Method: Upon Request*
- Automatic Exchange Features:**
1. **Session Disconnect**
 - All quotes for a session are automatically deleted when that session disconnects
 2. **MM Trade-Against-Order Protection**
 - Prevents regular MM IOC orders from matching against MM quotes from the same Business Unit
 - Prevents quotes from the same Business Unit from crossing
 3. **Price Limit Check**
 - Orders that entered through the ISE BBO by more than \$1.00 are rejected
 4. **Vertical Spread Check**
 - Vertical spreads with a negative limit price are rejected

- Vertical spreads are prevented from legging in to regular quotes if the net trade would result in a negative price
5. **Spread Trade Through Limit**
- Individual spread legs will not trade through the NBBO by more than \$0.05 on each leg

Chapter 71. Drop Copy

FIX Order Drop Copy reports and Trade Drop Copy reports are available for orders routed via PrecISE, FIX, and DTI, allowing for enhanced risk management and more efficient order and trade information maintenance. The Drop Copy sends updates about any activity for the business unit for whose activity it is configured to listen. The business unit is not necessarily the business unit which entered the order, but may also be a sponsoring member or a clearing member.

Firms receive the Drop Copy Trade Report from ISE if they use the FIX Drop Copy connection. A Drop Copy connection sends execution messages to the firm when trades are generated at ISE. These messages are sent only when the trade involves the firm, regardless of how the order was entered.

The trade execution details are provided if the firm is named:

- As the executing broker
- As the clearing member
- As the GiveUp Clearing firm
- The Drop Copy Trade Report is not sent for trades that are busted or adjusted the next day
- OrderID contains an ISE internal order reference code
- Drop Copy Trade reports for the Stock Legs can be distinguished as follows:
 - SecurityType(167) = CS – Common Stock
- MultilegReportingType(442) = 2 for the individual leg of a multileg security

In trade drop copy mode, DCA can report on TradelItemBroadcasts, or DealItemBroadcasts, or both. The configuration settings UseDealItemBroadcast and UseTradelItemBroadcast control which broadcast (or broadcasts) DCA uses. DCA will start and log an exception (but not process any messages) if neither setting is set to true and dropCopyOrders is also not set to true. If both settings are set to true, which is a valid configuration, DCA will report on each trade twice. If either UseDealItemBroadcast or UseTradelItemBroadcast is set to true, and dropCopyOrders is also set to true, DCA will start and log an exception (but not process any messages). Note that the TradelItemBroadcast will cause DCA to populate tag 9730, LiquidityIndicator, and that each DealItemBroadcast may be associated with one or more TradelItemBroadcasts (refer to GTS documentation)

The ISE FIX interface provide support for the Order Drop Copy, which sends member reports for order state changes such as order creation, modification, or deletion in addition to reporting trades.

Use the configuration setting dropCopyOrders to turn order drop copy mode on or off. DCA will start and log an exception (but not process any messages) if one of UseTradelItemBroadcast and UseDealItemBroadcast and dropCopyOrders is not set to true. If either UseDealItemBroadcast or UseTradelItemBroadcast is set to true, and dropCopyOrders is also set to true, DCA will start and log an exception (but not process any messages).

DCA handles busts and allocations. The message (35=8) and all the necessary tags are available.

Chapter 72. Heartbeats

The client application must maintain an active session by sending at least one message, either a request message or a **Heartbeat** broadcast message, within every heartbeat interval to maintain the session. The DTI forcibly disconnects a session if the client is inactive for three-times the heartbeat interval specified in the logon response.

NOTE: You can send a **Heartbeat** even if you have exceeded your Outstanding Request Limit. Heartbeats do not count against, nor do they reduce, any of the throttle counters.

A client application can check on the state of the exchange trading system. If there are no broadcast messages sent, a **Heartbeat** broadcast is sent by the DTI to the client every heartbeat interval. If a heartbeat is not received by the client in two intervals, the client should initiate a recovery action. The recovery action can include:

- Raise an alarm/call ISE Technical Support
- Close the existing TCP/IP session, wait 5 seconds then attempt to start a new session. (However, do not attempt more than three times in case there are two sessions with same password continuously logging each other out.)

Chapter 73. Kill Switch

The Kill Switch allows member firms to cancel all open orders and prevent new order submission. This feature provides firms with an immediate and powerful risk management tool for immediate control of their ISE order activity.

Kill Switch can be targeted to affect an entire member firm, specific trading desks within a member firm or specific sessions within a trading desk.

Specially entitled users can send a *Member Kill Switch Request* to block another user or business unit's ability to enter new orders, alter existing orders, and create complex instruments. A user can be entitled to block another user, or all other users, of its own business unit. It can also be entitled to block another user in another business unit, or an entire business unit, belonging to the same participant. When it receives a request to block a user or business unit, the Matching Engine deletes all open orders for the user or business unit being blocked.

Specially entitled Mkt Ops users can send a *Member Kill Switch – Mkt Ops Request* to block or unblock a user or business unit's ability to enter new orders, alter existing orders, and create complex instruments. When it receives a request to block a user or business unit, the Matching Engine deletes all open orders for the user or business unit being blocked.

The Matching Engine handles deletion of a blocked user's orders identically to the way it handles a series of *Delete All Orders Requests* which would delete all of the user's open orders across all products.

When the Matching Engine changes a user's blocked/unblocked state it will communicate the new state by writing an ATMemberKillSwitchEvent record to the audit trail for each affected user. The Reference Data system will read the record from the audit trail and persist the new state.

If a user or business unit is blocked, the Matching Engine will reject the following messages submitted by the user or business unit:

- Add order request
- Add cross request
- Modify order request
- Add complex instrument request

It is assumed that the Gateway or OFI sends the *Member Kill Switch Request* message to the Session Manager, and the Session Manager forwards the request to each Matching Engine.

Validation of the *Member Kill Switch Request* and the *Member Kill Switch Mkt Ops Request* takes place in the Gateway or the OFI.

Determination of whether a user is blocked from sending a certain request takes place in the Gateway or the OFI.

As configured in production, the Matching Engine receives messages from one or many instances of the Gateway or the OFI. All Gateway and OFI instances will always use the last blocked/unblocked status received from the reference data system for each user. Since it is possible that reference data updates may not propagate to all Gateway and OFI instances immediately or at the same time, the Matching Engine also performs a separate check of whether a user is blocked from sending a certain request.

The Matching Engine's internal state is updated during processing of the *Member Kill Switch Request* and the *Member Kill Switch Request – Mkt Ops Request*. However, it is recovered from the isBlocked field of the Matcher User Data Parameters view during startup and recovery.

The *Member Kill Switch Request* and the *Member Kill Switch – Mkt Ops Request* specify the business unit, and optionally, user, to be blocked. See *DFS3810 Production Matcher R3.1 Part D v1.0* or higher for details.

The ***Member Kill Switch Request*** is used to block another user's or BU's ability to enter new orders, alter existing orders, delete all orders, and create complex instruments. The transaction also causes all open orders for the specified BU/user to be deleted.

Only specifically entitled users can send a ***Member Kill Switch Request***. If an unentitled user sends the request, or if the requested BU or user does not exist, the transaction is rejected.

Only one BU or user may be specified per request.

- To block (all users of) a BU, one instance of the *PartyDetailGrp* group is specified, with *PartyDetailRole* set to 59 (executing unit), and *PartyDetailID* set to the BU to be blocked ("ABC01E").
- To block a single user, two instances of the *PartyDetailGrp* group are specified. One instance identifies the BU, as described above, and the second instance identifies the specific user, with *PartyDetailRole* set to 55 (session ID), and *PartyDetailID* set to the user (session) to be blocked ("1").

If a user or BU is blocked, the following messages submitted by that user or BU would be rejected:

- *New Order Single*
- *New Order Multileg*
- *New Order Cross*
- *Order Cancel Replace Request*
- *Multileg Order Cancel Replace Request*
- *Delete All Orders Request*
- *Add Complex Instrument Request*
- *Member Kill Switch Request*

Except for those messages indicated above, a blocked user may still send all other messages.

Kill switch feature only applies to ORA. IORS allows member to send party entitlement definition request to terminate other member's order submit capability since R3.1 release. IORS rejects party entitlement definition request if more than 1 *PartyEntitlementUpdateGrp* is specified. IORS doesn't validate duplicate *EntitlementRequestID*. IORS sends party entitlement definition request message to the gateway and expects a response message from the gateway. IORS forwards the party entitlement definition response message back to the member. IORS is a purely kill message translator for this functionality. It extends the kill switch functionality offered by the core to IORS members.

- Please refer to **J:\Optimise R3.1\1. Requirements (BRD)** for requirement details about this change of this SIR.
- Please refer to SIR 193823 is SIRE about details of this SIR
- Please refer to DTI manual for new DTI kill switch messages
- Please refer to FIX manual for new FIX kill switch messages

The following are kill switch message definitions.

PartyEntitlementsDefinitionRequest

Tag	Field Name	Req'd	Action	Valid Value(s)	Comments
	<i>Standard Header</i>	Y		MsgType = UDA	New message type
1770	<i>EntitlementRequestID</i>	Y	Add		IORS will not validate value. Only allow 20 bytes.
1772	[NoPartyEntitlements]	Y	Add	1	Map to DTI's <i>PartyEntitlementUpdateGrp</i> (11041)
1324	>ListUpdateAction	Y	Add	D [Delete]	Delete

<i>Tag</i>	<i>Field Name</i>	<i>Req'd</i>	<i>Action</i>	<i>Valid Value(s)</i>	<i>Comments</i>
1671	> [NoPartyDetails]	Y	Add	1-2	To block a BU, only provide 1 instance and specify the BU. To block a user, provide 2 instances and specify both the BU and the user. The core will perform verification in cases where a specified user does not belong to the specified BU, and vice versa. Map to DTI's PartyDetailGrp (11040)
1691	>>PartyDetailID	Y	Add		Identifies which BU (ABC01E) or user (ABC01E-1) will be blocked.
1693	>>PartyDetailRole	Y	Add	55 [Session ID] 59 [Executing Unit]	
	<i>Standard Trailer</i>	Y			

PartyEntitlementsDefinitionRequestAck

<i>Tag</i>	<i>Field Name</i>	<i>Req'd</i>	<i>Action</i>	<i>Valid Value(s)</i>	<i>Comments</i>
	<i>Standard Header</i>	Y		MsgType = UDB	New message type
1770	EntitlementRequestID	Y	Add		Same ID in Party Entitlements Definition Request
1882	EntitlementRequestStatus	Y	New	0 [Accept] 2 [Reject]	Indicates the Party Entitlements Definition Request was accepted by the core.
1881	EntitlementRequestResult	N	New	99 [Other]	
58	Text	N	New	Will contain the SessionRejectReason from Gateway field 373	Populated if if EntitlementRequestStatus = 2 and EntitlementRequestResult = 99

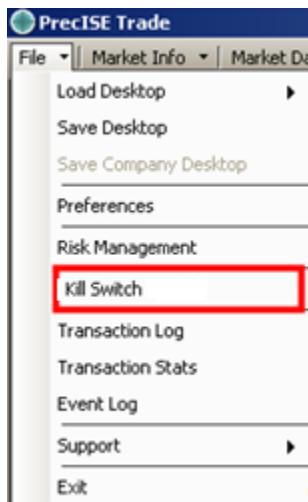
Tag	Field Name	Req'd	Action	Valid Value(s)	Comments
1772	[NoPartyEntitlements]	Y	Add	1	Map to DTI's PartyEntitlementAckGrp (11042)
1324	>ListUpdateAction	Y	Add	D [Delete]	Delete
1883	> EntitlementStatus	Y	Add	0 [Accepted]	
1671	> [NoPartyDetails]	Y	Add	1-2	To block a BU, only provide 1 instance and specify the BU. To block a user, provide 2 instances and specify both the BU and the user. The core will perform verification in cases where a specified user does not belong to the specified BU, and vice versa. Map to DTI's PartyDetailGrp (11040)
1691	>>PartyDetailID	Y	Add		Identifies which BU (ABC01E) or user (ABC01E-1) will be blocked.
1693	>>PartyDetailRole	Y	Add	55 [Session ID] 59 [Executing Unit]	
	<i>Standard Trailer</i>	Y			

- Embedded FIX engine supports party entitlement definition request and response messages, aka kill switch messages
- IORS validate PartyEntitlementUpdateGrp and PartyDetailGrp
- IORS sends business reject message if validation fails
- IORS translates Kill Switch message from FIX manual to DTI for request message, and vice versa for response message

Allows member firms to cancel all open orders and prevent new order submission. This is a powerful risk management tool that provides firms with immediate control of order activity for all of their connections to ISE. PrecISE can be used to activate Kill Switch for PrecISE, FIX, or DTI business unit(s).

A new window will be added to PrecISE Trade to accommodate the addition of "Kill Switch" functionality. This new screen will allow members to select and block business units and their users.

Entitled members can access the Kill Switch functionality from the PrecISE main tool bar/File. This menu entry will be hidden for non-entitled members.



Access is also available for entitled members directly through a tab on the PrecISE main toolbar. This tab will be hidden for non-entitled members.

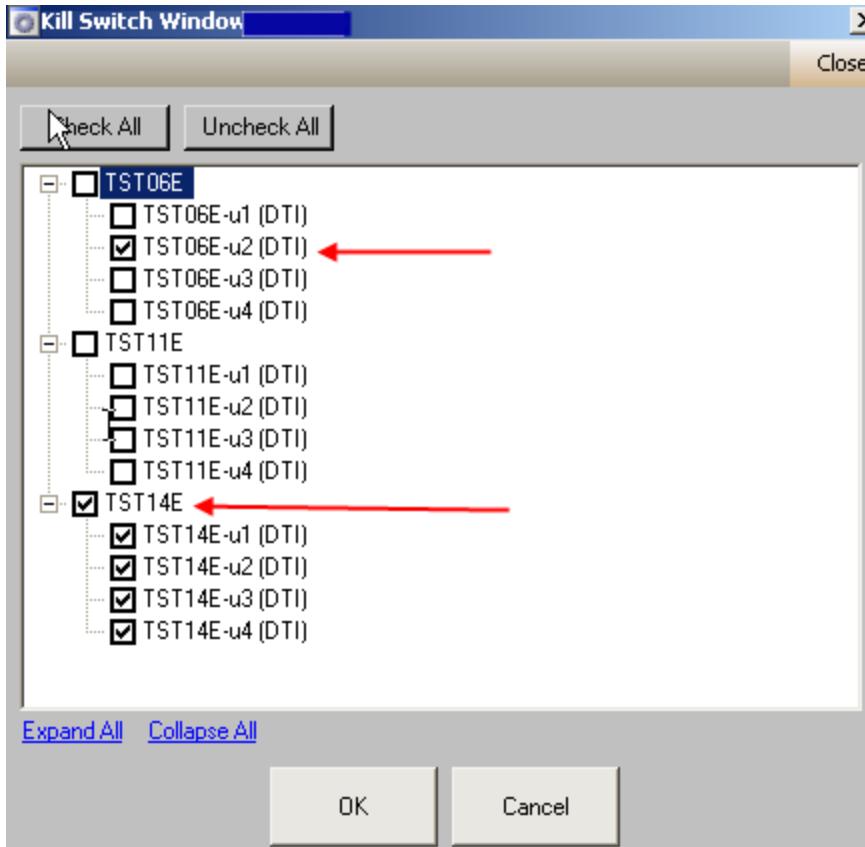


The Member Kill Switch window displays all business units for a participant in a tree structure. Members can click the +/- icon in the left-hand corner of the row to expand/hide the users attached to each BU. When necessary, a scroll bar will appear on the right-hand side to allow a full view of all business units and users associated with a participant. Business units will be displayed in alphabetical order. Users will be displayed in alphabetical order within BU.

Members can block:

- one or more users per BU by clicking the checkbox for that user under the BU name.
- multiple users across business units by clicking the checkboxes for the selected users
- all users for a BU by clicking the BU checkbox
- all users for multiple business units by clicking multiple BU checkboxes
- all business units by clicking all BU checkboxes

Each user displays the User Login name and mapped Access Type (DTI, FIX or PrecISE). See 1.3.8 Kill Switch Preferences.



Proposed PrecISE Kill Switch Window

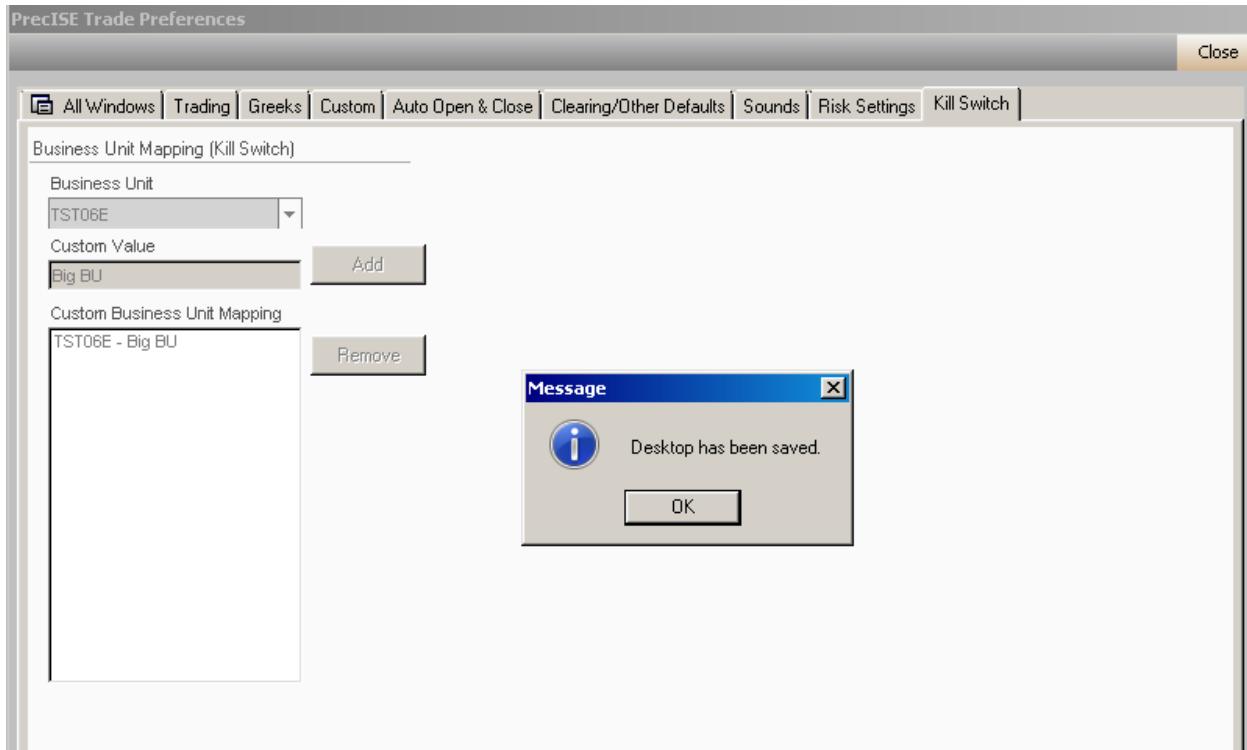
- Only active BUs (as defined in the Reference data) should be displayed. PrecISE relies on RDCX to deliver active BUs / Users.
- PrecISE front-end will receive a comma separated list of BU names from web service, where it is optionally configured for the user's BU. The validation of this list whether all BU belongs to the participant of the user is NOT performed.
- The Uncheck button will return both users and business units to original state.
- The Cancel button will return both users and business units to original state and close the window.

Since PrecISE is using DTI to connect to core, the kill switch unblocking is not supported by PrecISE. Members will have to call Market Operations to unblock the kill switch.

Members must be entitled to use Kill Switch. This entitlement is configured per BU at Web Server level.

- 'Options.Transactions.PrecISE.MemberKiller' needs to be added to the Markets->Resources
- The above entitlements should be added to the User who needs to get this entitlement.

Each user in the Kill Switch window displays the User Login name and mapped Access Type (DTI, FIX or PrecISE). This mapped access type will be customizable by the member through PrecISE Trade Preferences.



PrecISE Kill Switch Mapping Preferences

A new tab (Kill Switch) will be added to the PrecISE Trade Preferences. This screen will allow PrecISE users to map their business units to an alias that is easier to remember.

When the OK button is clicked, the following text appears in a confirmation response.

"The following Business Units/Users will be blocked from Entering Orders:"

- If one or more users (but NOT ALL users) for a BU have been blocked, the list of affected users will be displayed (but not the BU name).
- If ALL users for a BU have been blocked, only the BU name will be displayed.

PrecISE will process order status changes resulting from the core performing a kill switch request in the same way it processes any other order status updates.

Chapter 74. Market Maker Parameter

In order to avoid market maker quotes being matched too much during a short period of time, a product-wide market maker protection mechanism, also known as “Speed Bump” or “Curtailment” is introduced.

It applies to a market maker’s quotes of all instruments of a given instrument type in a product, i.e. separately for quotes in simple instruments and for quotes in complex instruments based on this product. When one of the defined trade volume limits is exceeded during a defined time interval for the market maker’s quotes for an instrument type in a product, it triggers for this market maker an immediate quote inactivation for this instrument type in this product

The market maker protection mechanism applies at the end of trading transactions in which the simple or complex market maker quotes are partially or fully matched

- every regular match event independently no matter whether the quote is incoming or book,
- at the end of one or several parallel auctions,
- at the end of the opening uncrossing rotation before the stop orders are triggered
- It does never break a trading sequence but can prevent the matching of the next incoming quote sides in case of a mass quote entry

Note the market maker protection applies also to the Guaranteed Directed Orders matched during a Directed Order auction. Since the GDO is created from an existing quote of the Directed Market Maker (DMM), the GDO traded volume is counted as a quote of the corresponding DMM.

When the opening rotation is performed for the whole product the market maker protection will be checked after each instrument rotation. In case a market maker protection limit is exceeded by the opening uncrossing rotation of one instrument, all other quote sides of this market maker in the product are inactivated, including the tick worse quote of the rotated instrument

A market maker can configure per product and instrument type, the size of a moving time window and four counter limits, called “Volume”, “Percent”, “Delta” and “Vega”. These limits will be set and checked separately for simple and complex instruments of the product.

Based on the market maker’s executed quote volume during the moving time window, the Matching Engine will calculate and keep track of the four corresponding counters for the single and the complex instruments based on the product.

If the configured limit for one of the counters is exceeded inside the time window, the current trading cascade (match event) will be processed normally including the potential tick worse quote part, but an inactivation of all relevant quotes of the market maker will be done.[\[DFS3510-00575\]](#)

The quote inactivation always takes place at the end of the complete match event. All the inactivated quote sides are audit trailed with Quote Side records (Activity Type = Modify Quote Side and LogReason = Market Maker Protection). The quote inactivation itself is audit trailed with a Quote Activation record (Activity Type = Quote Inactivation and LogReason = Market Maker Protection). The corresponding market maker protection counters are added as well.

The market maker will be notified of the inactivation by a Private Quote Broadcast message.

There will be no specific reset action by the market maker, to bring him back into the market. A normal reactivation request is enough.

The four counters represent four different ways to count the traded contracts due to execution of quotes in a specific product:

- The Volume counter counts the total number of traded contracts
- The Percent counter sums up a value calculated from the relative traded volume that is compared to the original total quote volume at the time of the trade. See details below.
- The Delta counter holds the absolute number of purchased call contracts plus sold put contracts minus sold call contracts minus purchased put contracts
- The Vega counter holds the absolute number of purchased contracts minus sold contracts.

Expressed in a beautiful equation format, the counters can be represented as follows:

Volume = (#BC + #BP) + (#SC + #SP)
Delta = (#BC - #BP) - (#SC - #SP)
Vega = (#BC + #BP) - (#SC + #SP)

where #BC is the number of bought call contracts, #BP is the number of bought put contracts, #SC is the number of sold call contracts and #SP is the number of sold put contracts

Note that the calculated Delta and Vega for a match event can be negative. So the accumulation during the market protection time window of these negative or positive values can also be negative. That is the reason why this is the absolute value of the accumulated counters for Delta and Vega which are checked against the limit defined by the market makers.

For a complex instrument quote trade, the same calculation described above applies for each component legs with the corresponding ratio but results are saved in the complex market maker protection counters.

Percent = Round (100 * Traded quantity / Total quote size)

The Percent counter calculation is identical for simple and complex instruments. It works as follows.

When a quote side is traded in a match step, take the traded volume expressed as a percentage of the total quote size at that moment. The calculated percentage value is rounded to the nearest 0.0001%. The result is then added to the counter. The new counter value is compared to the configured limit at the end of the match event.

Example of percent calculation featuring trades in one instrument only that illustrates the behavior when a quote ticks worse:

	Traded	Remain.	Exec.	Total	Percent	Accum.%
Original quote quantity fully matched	100	0	100	100	100%	100%
Tick worse quantity refilled with 20	0	20	100	120	0%	100%
Partial match 5 of Tick worse qty	5	15	105	120	4%	104%
Partial match 10 (new match event)	10	5	115	120	8%	112%
Full match 5 (new match event)	5	0	120	120	4%	116%

In case of complex instruments matched against complex instrument quotes and synthetic leg quotes, both the simple and the complex counters will be updated. In any case the update is effective at the end of the transaction as same as the potential quote inactivation.[DFS3510-00584]

The time interval and the limits are defined differently for simple and complex instruments which correspond to different market models. They are maintained by the Matching Engine in the Market Maker Parameters internal table per product, instrument type and business unit for each business unit which has a market maker role defined for a product.

The time interval can be zero which means the market protection does not apply even if some counters are defined. Otherwise it must be defined between a configurable minimum and maximum time (by default 2 and 30 seconds).

The market maker protection limits are not mandatory and can be Zero. Only one or several values can be defined. By default a null value (zero) means that the limit is not checked by the Matching Engine. That means also the corresponding counter is not calculated.

The time interval and the limits can be changed intraday by the market maker itself using the Modify Market Maker Parameter Request or by Mkt Ops on behalf of the market maker. However there is no check after a limit modification that the new limit is already exceeded. The new values will be taken into account and checked the next time a quote will be matched. Moreover the counters will be reset only when a new time interval will be started or when the time interval is set to zero.

Two lists of matched quote events are maintained for each product and each market maker by the Matching Engine. One list applies for the simple instrument quote trades and the other list for the complex instrument trades. Each list contains the four counters and is sorted by time. .

Each time a new quote is matched, the corresponding counters are calculated and a new element is added at the end of the relevant list. Then the time stamp of the first (oldest) elements of the list are compared against the new transaction time stamp. When they exceed the time interval window they are removed. .

Once the time interval maintenance of the list of matched quote events is complete, counters of all remaining elements are accumulated and compared against the corresponding limits. Note these matched quote event list are not expected to be very large.

When a limit is exceeded for simple or complex instruments, the corresponding time interval must be reset as same as all the counters. That means the list will be emptied.

Note that the counters and the limits are maintained independently between simple and complex instruments. For instance when one limit is exceeded for a complex instrument, only the complex quotes are inactivated and only the complex counters and time window are reset. This has no impact on the simple quotes and on the simple market maker protections counters.

The inactivation request will be effective instantly at the end of the transaction, such that no further quotes of the market maker are traded in the product. This applies namely for the matching quote sides of mass quote entry.

For mass quote transactions, the non-matching quote sides are processed first in parallel and entered in the book. Then matching quote sides are processed sequentially by the Matching Engine.

When a matching quote side triggers the market protection, all quotes already in book are inactivated and the next matching quote sides are entered in book as inactive, such that they cannot match anymore.

The T-Cross Timer is a configurable feature that, when turned on, provides functionality aimed at preventing matches among quotes sides of different market makers when they react to price changes at different speeds. When enabled, it is used only when matching is occurring, i.e. during the Regular and Fast instrument states.

When the InstrumentType parameter tCrossTimer is set to 0 (zero), the T-Cross timer is turned off, and matching can occur among incoming quotes sides of different market makers.

When the InstrumentType parameter tCrossTimer is set to any integer > 0, the T-Cross timer is turned on, and matching **cannot** occur among incoming quotes sides of different market makers. A detailed description of how the t-cross timer works is provided in this section.

If a quote side is entered that would be matched against a visible quote side, i.e. one that is considered during the IBBO determination, from another business unit and there is no pending T-Cross Timer for the instrument, the following happens:

1. The incoming quote side is matched against all orders it would normally be matched against but, is not matched against any quote sides.
2. If the quantity of the incoming quote side is exhausted, it is ticked worse such that it no longer crosses the other side of the book and no timer is started.
3. Otherwise, the remainder of the incoming quote side is hidden, i.e. the quote side is automatically modified and written to the orderbook with its TCrossTimerApplied field set to True and DisplayQty field set to 0 to indicate that it is a hidden quote side. A T-Cross Timer, with a configurable duration (specified by the tCrossTimer Instrument Type parameters), is then started.

If a quote side is entered that would be matched against another visible quote side and there is already a pending T-Cross Timer for the instrument, the same occurs as when there is no pending T-Cross Timer except that no additional T-Cross Timer is started. There is only one pending T-Cross Timer at a time for a single instrument and this timer is not reset by the entry of a new T-Cross quote.

Hidden quote sides are not considered during the IBBO determination and only interact with orders on the opposite side of the orderbook; they do not interact with quote sides from other MMs. An incoming order that crosses a hidden quote side will be matched against this quote side; however, an incoming quote side that crosses a hidden quote side will not interact with the hidden quote side in any way, assuming that the incoming order or quote is from another business unit than the hidden quote side.

If the crossing condition for any hidden quote side is resolved, i.e. the hidden quote side no longer crosses any visible quote sides, the quote side is made visible, i.e. the quote side is automatically modified such that the TCrossTimerApplied field is unset (set to "no value") and DisplayQty field is set equal to the OpenOrderQty field. It is then processed mostly like a normal incoming quote side except that it retains its original time priority timestamp. If the same event resolves the crossing condition for more than one hidden quote side, the aforementioned procedure happens for each quote side in time priority order.

Upon expiration of the T-Cross Timer, the following happens for each hidden quote side in time priority order:

1. The quote side is made visible
2. The quote side is processed mostly like normal incoming quote side, except it retains its original time priority timestamp and is now allowed to match with crossing, visible quote sides. In the event that the matching would cause both the previously hidden (incoming) and visible (resting) quote sides to tick worse, the visible quote sides are ticked worse first in match order.

Before T-Cross Timer expires, the following events cause it to be cancelled:

- The resolution of the crossing condition for all quote sides, i.e. all quote sides that cross other quote sides have been replaced, deleted, inactivated, or traded out.
- An instrument state change to a non-matching instrument state.

Upon cancellation of the T-Cross Timer, the same occurs as when the T-Cross Timer expires: in time priority order, each hidden quotes side, is made visible and is processed mostly like a normal incoming quote side, retaining its original time priority timestamp. .

On entry of an order that has a time validity of IOC and has no quantity restriction (AON or minimum execution quantity), matching is modified such that the incoming order:

1. does not match against a quote from the same business unit as the submitter of the order,
2. does not match against any order or quote with a limit price that is worse than a quote from the same business unit as the submitter of the quote.

In the General Allocation procedure, when an incoming IOC order (with No value in the QtyCondition) tries to match against a quote side with the same business unit, then this quote side is not taken into account for the price allocation. Moreover the matching will not continue after this allocation, even if the incoming IOC order is still marketable and not fully matched.

During the price allocation the other quotes and orders at the same prices are regularly matched as if the corresponding quote side does not exist. If the incoming IOC order is entered by the PMM there is no Small Order and no PMM Priority Share allocation. Likewise, if the incoming IOC order would be preferenced to himself (not sure it is very helpful), there would be no PrefMM Priority Share allocation.

This functionality applies to non-synthetic matching in both simple and complex instruments. For synthetic matching it is not checked whether the incoming complex IOC order matches against a simple instrument quote from the same business unit.

The functionality applies in the same way, if the opposing quote side from the same business unit is hidden through the T-cross timer mechanism.

This functionality does not apply to auction matching. When such an incoming IOC order triggers an early termination of an auction, it may match like a book order in the ensuing auction execution at a price that is worse than the limit price of an opposing quote side from the same business unit.

Ticking Worse is an automatic quote modification in case that a quote side is fully matched.

The pre-condition for tick worse to occur, is that both the two parameters tickWorseTicks and tickWorseQty have been set with non-zero values for the business unit that owns the quote and for the product.

The automatic quote modification will feature

- a deterioration of the price (i.e. lower for buy quote sides and higher for sell quote sides) by the number of ticks given in the tickWorseTicks parameter. For incoming quote sides it must furthermore deteriorate at least by enough ticks to make the price of the incoming quote side one tick worse than the opposite side of the IBBO. If that would result in a zero price, delete the incoming quote side instead.
- a total quote quantity that has been increased by the value given in the tickWorseQty parameter (leading to a new open quantity that equals the value of this parameter).

Example: An incoming sell quote side 100@0.80 matches fully against one buy order on the book 200@0.85. The tick worse settings of the user state a tick worse quantity of 50 at 2 ticks. The tick size is 1 cent. Normally, the quote side would tick worse to become 50@0.82. However, as it is an incoming quote side, and as the new price of 0.82 would still cross the buy order book with a best buy price at 0.85, the quote side will instead tick worse to 50@0.86.

As ticking worse is a form of quote modification, the quote side that ticks worse receives a new entry time stamp, a new time priority and a new exchange order ID.

The new time priority of the ticked worse quote side will be lower than the time priority of the incoming order or quote that initiated the transaction. If several quote sides are ticking worse in the same match event, their new priority time stamps will reflect the order in which they have been matched during the pro rata allocation. .

Tick worse occurs immediately after a match step. The ticked worse quote side may be available for matching in the same match event, at a worse price level. (See DFS3410 Part C for details on match events and match steps.)

A quote side that ticked worse is flagged as such and may not tick worse again. The ticked worse flag remains set until the flagged quote side is replaced (including modification as defined above for quotes) or deleted. The flag is not carried over to the new quote side.

If a quote side is deleted, either through a deletion request or by a modification request that resulted in a deletion, it does not tick worse.

Automatic quote replenishment facility (in the form of Tick Worse) is available for complex quotes.

During continuous trading, a resting quote side that gets completely matched away is ticked worse as per the tick worse rules for that business unit and allowed to continue trading.

During continuous trading, an initiating quote side that gets completely matched away is ticked worse, either by the number of ticks given by the business unit's tick worse parameter, or one tick worse from the best price on the opposite side of the complex order book, whichever of the two results in a bigger limit price change. This prevents the quote side from trading further at that time. Note that in this procedure, the best synthetic price is not taken into account, because quotes do not match synthetically anyway.

It is possible that a strategy can potentially exceed the maximum order setting after a tick worse due to one or more of its leg ratio.

For example:

Max Complex Ord Qty^{*} = 100

Buy L1 x 1

Buy L2 x 1

Combo Ord 1 Qty = 100

Buy L1 x 1

Buy L2 x 2

Combo Ord 2 Qty = 50

Tick Worse Qty = 75

Note that after a tick worse, the second leg on the second order exceeds Max Ord Qty, as defined below. To mitigate the maximum order quantity violation, ticked worse complex quotes will use the lesser of the **maximum allowed complex quantity** or the tick worse quantity.

^{*}Maximum allowed complex quantity is defined as follows.

- **For a standard combination: MaxOptionOrderQty / maximum leg ratio**
where maximum option leg ratio is the maximum option leg ratio on the complex instrument in question.

The tick worse parameters for simple instruments and standard combinations are identical but have different values and hence are independently maintained.

Chapter 75. DTI

ISE's Direct Trading Interface (DTI) is the binary trading interface to the core trading system. Members and third-party software vendors may develop trading applications that communicate directly to the exchange system. All applications developed to interact with ISE's DTI must be certified by ISE. A number of third-party API developers have written customized applications to ISE's Options Exchange. A list of [ISE-certified third-party developers](#) is also available.

The **MM Parameter Definition Request** message is used by MMs to set tick-worse, speed bump (curtailment), and/or stock leg short sale indicator parameters for one or more products. This request uses the ISE-defined MM Parameter Definition Request message type.

NOTE: All parameters are optional. There is no requirement to set MM parameters in order to quote. The system does not provide default parameters.

- The scope of the request is limited to a single instrument type.
- The TargetMarketSegmentGrp group and the PartitionGrp group are mutually exclusive – if TargetMarketSegmentGrp is present, PartitionGrp cannot be present, and vice versa.
- If the TargetMarketSegmentGrp group is present, the request is for the specified product(s).
- If the PartitionGrp group is present, the request is for all products in the specified partition(s).
- If neither the TargetMarketSegmentGrp nor the PartitionGrp group is present, the request is for the whole market. In this way, default parameters can be entered for the entire market, with subsequent requests redefining those parameters for subsets of products.
- Tick-worse parameters are set using the QuoteOffsetValue and NewQuoteSize fields.
- Speed bump (curtailment) parameters are set using the four counter fields: CumQty, PctCount, Delta, and Vega; and the timer field ExposureDuration.
- Short Sale indicator is set using the LegSide field.
- There is no speed bump for the stock combination instrument type.
- Tick-worse, speed bump, and short sale indicator parameters are set independently of each other.
- To turn off (unset) any existing tick-worse or speed bump parameter, set the new value to zero (0).
- To turn off (unset) the Short Sale indicator, set the new value to "B" (As Defined).
- Setting ExposureDuration to zero turns off all speed bump parameters, even if the counter fields are also explicitly set > 0.
- If RotateRequestIndicator is set ('Y'), and the PMM's offer is present, instruments are rotated and moved into regular trading at start of day or after a halt without any action on the part of the PMM.
- To turn off (unset) RotateRequestIndicator, set the new value to 'N' (do not rotate).

The format of the **MM Parameter Definition Request** is shown below:

MM Parameter Definition Request (MsgID=10308)

Tag	Field	Req	Value(s)	Comment
10308		Y		MM Parameter Definition Request
	<Request Header>	Y	MsgType=U14	MMParameterDefinitionRequest
1301	MarketID	N	XISX (default)	
1227	ProductComplex	N	1= Simple Instrument (default) 2=Standard Combination 3=Stock Combination	
14034	TargetMarketSegmentGrp	N		
8618	> TargetMarketSegmentID	Y		Product ID
14003	PartitionGrp	N		
5948	> PartitionID	Y		Partition ID
14	CumQty	N		
8615	PctCount	N	0 or . 99	Integer. E.g. 100% = 100
7966	Delta	N		
7968	Vega	N		
1629	ExposureDuration	N	0 or 1000 . 30000	milliseconds
8616	QuoteOffsetValue	N	1 . 8	ticks back
8617	NewQuoteSize	N		quantity
624	LegSide	N	5=Sell Short B=As Defined (default . No Short Sale)	Short Sale Indicator
8647	RotateRequestIndicator	N	Y = Yes N = No	

The MM Parameter Definition Request results in multiple responses.

The initial MM Parameter Definition Request Ack (MassActionResponse = 1) simply indicates that the request has been handled by the DTI; it does not mean that any parameters have been affected.

If the request cannot be forwarded by the DTI to a particular partition (ME), the response contains an exception list, the NotAffectedMarketSegment group, containing a list of the products for which the request could not be fulfilled.

If the request was a market or partition-scope request, an additional response may be received for each partition covered by the original request. This response contains the NotAffectedMarketSegment group, containing the list of the products in that partition for which the request could not be fulfilled (for example, the MM is not assigned that product, or a product is in a "halt" state). The products enumerated in this message are different from the products that may have been enumerated in the initial DTI response.

Subsequent product-specific responses are sent as the request is processed by the ME(s) and indicate that the request is Accepted, Rejected, or Accepted with Warning (Pending). A Pending response is always followed by another response indicating the final status for that product.

These responses never contain the NotAffectedMarketSegment group.

The final product ACK (Accepted or Rejected) is confirmation that the intended action has taken place.

The message uses the ISE-defined MM Parameters Definition Request Ack message type. The format is shown below:

Tag	Field	Req	Value(s)	Comment
10309		Y		MM Parameter Definition Request Ack
	<Request Header>	Y	MsgType=U14	MMPParametersDefinitionRequestAck
1301	MarketID	Y		
1300	MarketSegmentID	N		product-specific response
1227	ProductComplex	Y	1=Simple Instrument 2=Standard Combination 3=Stock Combination	
8636	MMReqStatus	Y	0=Accepted 1=Accepted With Warnings (Pending) 2=Rejected	
8637	MMReqResult	N		
58	Text	N		
14033	NotAffectedMarketSegmentGrp	N	0 or more	
8612	> NotAffectedMarketSegmentID	Y		Product ID

Chapter 76. Mass Cancels on Disconnect

By default, all quotes, active and inactive, entered by a user are deleted when that user either actively or passively disconnects.

By default, when a session is disconnected, quotes entered by that session are deleted and orders remain active.

Session instructions may specify a different action to take, for orders only, upon a session disconnect.

Instructions to delete orders can be specified for all orders (persistent and non-persistent), or non-persistent orders.

(Session instructions may also be optionally specified on the **Logout Req** message.)

NOTE: If session instructions are not provided, orders remain active if the session is disconnected. Quotes are always deleted.

If configured to do so, ORA will cancel a member's orders when the FIX session is disconnected, and in certain other situations.

The configuration setting that enables mass cancel on disconnect is `doMassCancelOnDisconnect`. Refer to the operations guide.

Scenario	OptimISE
Graceful client disconnect (sends logout, then disconnects the socket)	Mass cancel (via DeleteAllOrders request)
Ungraceful client disconnect (disconnects the socket with no logout message)	Mass cancel (via DeleteAllOrders request)
Fix session suspended or force logout	Mass cancel (via DeleteAllOrders request)
BSI stopped	Mass cancel (via logon session instructions)
Cameron stopped gracefully	N/A
Cameron crashes	N/A
BSI crashes	Mass cancel (via logon session instructions)
End of day	ORA will send a mass cancel if the member disconnects. ORA will mass cancel if the BSI is stopped. However, if the session remains connected through GTS post-end-of-day as recommended , GTC and GTD orders will not be cancelled.

Chapter 77. Price and Quantity Validations

When a new limit order is entered or when the limit price of a limit order is modified by a modification request, then the request is subject to the price reasonability check. If the request fails this check, the request is rejected.

The check consists of two validations that compare the new limit price with the opposite side of the IBBO. This means that a buy order is compared to the sell side of the IBBO, and a sell order is compared to the buy side of the IBBO.

The two checks are defined as follows:

1. The new limit price should not cross the opposite side of the IBBO by more than the configured percentage of the opposite side of the IBBO. The configured percentage is given by the prcReasonPct Market Model parameter as loaded from the reference database.
2. The new limit price should not cross the opposite side of the IBBO by more than the configured absolute price difference. The configured absolute price difference is given by the prcReasonAbs product parameter as loaded from the reference database..

The price reasonability check is considered failed and the request is rejected only, if both checks fail. It is not enough that only one of the two checks fails to reject the request.

The price reasonability check is not done for quotes. It is done only for real incoming orders, including all auction orders, and not for orders from the book processed as incoming orders, like triggered AON and MEQ orders or triggered stop orders (except when the stop order is triggered upon entry).

The price reasonability check is done only in the Regular and in the Fast instrument state. It is not done in any other (non-continuous trading) instrument state.

If the opposite side of the IBBO is not available, the price reasonability check is skipped.

A regular order can be either a limit order or a market order. Limit orders must have a limit price while market orders carry no limit price. The limit price indicates the maximum (minimum) price at which a buy (sell) order is allowed to match.[DFS3510-00185]

A limit price must comply with the following rules:

- It must conform to the tick rules as given by the price step table that is relevant for the instrument.
- It must be greater than zero.
- The absolute value of the price must be smaller than the maximum allowed price by at least one tick. The maximum allowed price is given by the maxOrderPrice parameter from the General Matching Engine parameter set of the reference data.

On order entry, it will be validated that the entered total order quantity is lower than or equal to the maximum order quantity (maxOptionOrderQty for simple instruments and standard combinations, or for stock combinations, maxOptionOrderQty for the option legs and maxStockOrderQty for the stock leg – Instrument Type parameters from the reference database). [DFS3510-00216]

This check applies to strategies with all “buy” legs only.

The Net Price of an order/quote is always distributed across all the component legs such that each option leg trades at a price that is in multiples of a penny and the stock leg trades at a price which is in 6 decimal places.

For a stock combination, the net price of an order/quote on a strategy with all buy legs (and consequently the trade price of the strategy) must be greater than the minimum net price. The minimum net price is the sum of all the “ratio times a penny” for each option component leg. The contribution of the stock leg is ignored in the calculation of the minimum net price. The Net Price in these cases is always positive.

The minimum net price of a complex instrument with all Buy legs is calculated and stored in the complex instrument table at the time of instrument creation. The entered limit price is validated against this value. The request is rejected if it fails this check.

Synthetic matching of a buy market order for a “vertical spread” is allowed if the resultant net trade price is negative. However, synthetic matching of a sell market order for a “vertical spread” must be prevented if the trade results in a payout (negative net price.)

Whenever a sell market order on a vertical spread trades at a negative price, then the trade must be prevented and an alert must be generated for Mkt Ops. If such a sell market order trades say two price levels, where the second price level results in a negative net price, then the second trade must be prevented and an alert must be generated for Market Operations. The order that is prevented from trading is written to the order book as an outstanding market order. This trade price restriction applies to sell market orders for vertical spreads only. The open quantity of this sell market order is ignored for the current match event and other orders/quotes on the same side are allowed to continue matching, both from the combinations book and the simple instrument book, even if they are at the same or worse price.

A vertical spread is defined as:

- Buy Low Strike Call, Sell High Strike Call, Same Expiry, Ratio 1:1
- Buy High Strike Put, Sell Low Strike Put, Same Expiry, Ratio 1:1.
-

The three tick rule is not applied to combination-to-combination matching, but it is applied to synthetic matching of an initiating complex order, i.e. not only for incoming orders.

In synthetic matching, the three tick check is applied independently on each leg. If the initiating standard combination order would meet the three tick condition for at least one leg, then the order is deleted¹ before the violating match step happens. The number of ticks to be applied is configured in the threeTickRuleTicksCmb parameter of the price step table used for the leg instrument.

- Maximum Quantity per Order: Prevents orders that exceed a pre-defined maximum quantity per order from being accepted by the Exchange
- Maximum Quantity per Day: Prevents orders that exceed a pre-defined total quantity per trading day from being accepted by the Exchange
- Maximum Notional Value per Order: Prevents orders that exceed a pre-defined maximum option notional value per order from being accepted by the Exchange. Market orders will be rejected for FIX connections with maximum notional value defined.
- Maximum Notional Value per Day: Prevents orders that exceed a pre-defined total option notional value per trading day from being accepted by the Exchange. Market orders will be rejected for FIX connections with maximum notional value defined.

- Maximum Quantity per Order: Prevents orders that exceed a pre-defined maximum quantity per order from being accepted by the Exchange
- Maximum Quantity per Day: Prevents orders that exceed a pre-defined total quantity per trading day from being accepted by the Exchange
- Maximum Notional Value per Order: Prevents orders that exceed a pre-defined maximum option notional value per order from being accepted by the Exchange. Market orders will be rejected for FIX connections with maximum notional value defined.
- Maximum Notional Value per Day: Prevents orders that exceed a pre-defined total option notional value per trading day from being accepted by the Exchange. Market orders will be rejected for FIX connections with maximum notional value defined.
- Restricted Securities: Prevents orders that are part of a specified restricted list of securities.
- Reject Pre-Open Orders: Prevents orders that are entered before the open of the market.
- Locate Code Required: Requires a locate code value to be entered for orders with a short-sale stock component prior to submission to the Exchange.
- PrecISE requires trader confirmation prior to order submission.
- PrecISE users can set a 'soft warning' for maximum quantity. This does not prevent order submission.
- PrecISE users receive an additional warning when the order is above/below the ISE bid/offer.
- PrecISE provides a feature set by an administrator that forces all users to acknowledge compliance with internal risk policy and procedure prior to application startup.

Chapter 78. Quote Activation

A MM business unit may deactivate (and re-activate) all his quotes in a product. The deactivation or activation is always valid for all the MM's quotes in the product. It is not possible to deactivate or activate individual quotes. On each quote side, there is also an *Inactivated* flag, that indicates in inquiry responses whether the individual quote side is inactive.

When an MM's quotes in a given product are inactive, none of the MM's quotes in that product participate in matching or are visible, i.e. included in the BBO or orderbook depth. Also, the MM can continue to perform quote maintenance, i.e. adding, modifying, and deleting individual quote sides while all his quotes in the product, including new ones remain inactive.

To deactivate his quotes, a MM uses the *Quote Activation* request specifying an *Activation Type* of *Inactivation*. To reactivate his quotes, the same request is used but with an *Activation Type* of *Reactivation* specified instead. Quote deactivation/reactivation can be requested per product or market wide. It should be noted that the Matching Engine only performs quote deactivation/reactivation on a per product basis. Any requests with a scope greater than a single product will be split into per product requests by the Gateway.

A Mkt Ops user may use the *Quote Activation* request to deactivate the quotes of any business unit. He may not use the request to reactivate quotes.

When a MM's quote deactivation request for a given product is processed, the MM's flag controlling the Quotes inactivated for the product is set to *True*, and the following occurs for each quote side entered by the MM in each instrument of the product where the MM has entered quotes:

1. The *Inactivated* field is set to *True* and the *DisplayQty* field is set to 0.
2. The deactivated quote side is processed as if it had been deleted, i.e. the Matching Engine removes it from its internal table of tradable orders and the IBBO is recalculated.
3. A quote side record detailing the deactivation (Activity Type = Modify Quote Side and LogReason = Incoming Request) is added to the audit trail. It is followed by the audit trail records of any events caused by the deactivation (e.g. updated IBBO).

Furthermore, a quote activation record is written to the audit trail (Activity Type = Quote Inactivation and LogReason = Incoming Request)

When a MM enters quotes in a product in which the *QuotesInactivated* flag is set to *True*, the following happens for each quote side upon entry:

1. The *Inactivated* field is set to *True* and the *DisplayQty* field is set to 0.
2. If there is a previous quote side for the same instrument and side, it is replaced.

When a MM's quote reactivation request for a given product is processed, the following occurs for all remaining (and therefore inactive) quote sides entered by the MM in each instrument of the product where the MM has quotes:

1. The *Inactivated* field is set to *False* and the *DisplayQty* field is set equal to the *OpenOrderQty* field.
2. The reactivated quote side is processed identically to a normal incoming quote side, including being assigned a new time priority timestamp upon being processed.
3. A quote side record detailing the reactivation (Activity Type = Modify Quote Side and LogReason = Incoming Request) is added to the audit trail. It is followed by the audit trail records of any events caused by the reactivation.

Furthermore, a quote activation record is written to the audit trail (Activity Type = Quote Activation and LogReason = Incoming Request.)

Note that when processing an inactivation or reactivation for an instrument where inactivating/reactivating MM has quotes, the bid quote side is processed before the ask quote side.

Quote inactivation and reactivation is not persisted. After a failure of the Matching Engine, not only the quotes are lost, but also the knowledge that quotes had been inactivated. After a failover, new quotes are in any case active.

The same holds for a new business day. Quotes get lost in the end-of-day processing and so does the knowledge that they had been inactivated. On the next day, new quotes are in any case active.

T to Quote inactivation instructs the system to hide all quotes in a product from the BBO calculation and from trading. While the quotes are inactive, the MM may continue to update the quotes and the updated values are stored on the book. The MM can send a separate message to activate or inactivate the quotes. Quotes can be inactivated/activated in a product, a list of products, or for all products market wide.

- The inactivation indicator is held at the product level, so that quotes can be inactivated in a product before any quotes are submitted. The quotes can be entered and deleted while the inactivation flag is set.
- Quote activation/inactivation affects the *entire* BU. In other words, if two different sessions (1 and 2) are quoting instruments in the same product, and session 1 inactivates quotes in that product, session 2's quotes are *also* inactivated. Similarly, if sessions 1 and 2 are quoting different products, and session 1 inactivates quotes across the market, session 2's quotes are also inactivated.
- Quotes are inactivated and reactivated using the **Quote Action Request** message. A list of products can be specified on the message. There is no restriction on how many products are specified. If the list of products has zero items, then all products that the BU is entitled to quote across the market are inactivated.
- The **Quote Action Report** enumerates the products captured by the request and provides positive or negative confirmation that each of the specified products is now active/inactive.

NOTE: The **Quote Action Request** to inactivate, only, is **not** subject to throttling – it is not counted against the transaction limit or outstanding request limit, nor does the response reduce the outstanding counter. It is a “free” transaction.

Chapter 79. SOR Auto Shut Off

If a stock execution venue doesn't respond for a configurable amount of time and should the number of such incidents exceed a configurable number of times, the SOR automatically shuts off the stock execution venue. Auto-shutoffs can also occur if a trade requires manual busting. Upon such action Mkt Ops and COPS are alerted. The ME is notified via the Stock Matching Type Status message whenever all stock execution venues for a particular matching type – cross, legging-in or pinging – are auto-shutoff. The stock execution venue auto-shutoff can be overridden from operator's application called CombEX_{ST} Control Panel.

Chapter 80. Stale Message

- Stale message checking is done on New Order Single and Order Cancel / Replace Request messages.
- No checking is done on straight Order Cancel Request messages.
- TransactionTime(60) is a required field on the New Order Single, Order Cancel Request and Order Cancel Replace Request messages.
- TransactionTime(60) must be present or orders will be rejected.
- The default stale time interval is 15 seconds behind or ahead of the ISE system clock.
- The ISE can bypass stale message checking for firms not currently sending the required FIX tag TransactionTime(60) or for firms sending SendingTime(52) and/or TransactionTime(60) in local time rather than GMT.

Chapter 81. Transaction Limits (TPS)

A DTI session is limited to a specified throughput limit that is specified in the logon response. If this limit is exceeded, the DTI delays response messages to the client in order to limit the session throughput.

The DTI counts the number of transactions sent in each interval, as specified in the logon response. If the number of transactions exceeds the value in the transaction limit, responses are delayed.

Required heartbeats do not count against the transaction limit.

NOTE: The transaction limit does not guarantee throughput rates. As load fluctuates in the exchange system, throughput rates may vary.

The Transaction Limit is the maximum number of messages that a client application may send within a configured time interval.

The system allows for very granular configuration of this parameter, and the maximum rate can be specified in seconds (for example, n messages per 1 sec.), tenths of seconds (n messages per 0.1 sec.), hundredths of seconds (n messages per 0.01 sec.), or milliseconds (n messages per 0.001.). The interval may also be specified in multiples of the time unit; for example, n messages per 5 seconds, etc.

If the number of messages exceeds the configured rate, the DTI delays delivery of ACKs to the client application until the time interval has expired. Broadcast messages are never delayed.

Required heartbeats do not count against the transaction limit.

For example, a Transaction Limit of 100 messages/sec. could be represented in the

LogonResp, ThrottleParamsGrp group as:

ThrottleAction (tag 1611) = 1 (Queue Outbound)

ThrottleType (tag 1612) = 0 (Inbound Rate)

ThrottleNoMsgs (tag 1613) = 100

ThrottleTimeInterval (tag 1614) = 1000

ThrottleTimeUnit (tag 1615) = 3 (Seconds/1000)

Note that the same time interval could also be represented as:

ThrottleTimeUnit (tag 1614) = 1

ThrottleTimeUnit (tag 1615) = 0 (Seconds) Title: Direct Trading Interface (DTI) Programming

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It is possible, and easy, to use up the transaction limit early in the time interval; therefore, Members should smooth out their message load to spread messages evenly across the configured interval and not exceed their transaction limit.

A DTI Quoting Session is defined as any connection with a profile that includes the quoting transaction.

Capacity is allocated to Market Makers based on the number of PMM bins to which they are appointed and the number of CMM Trading Rights held.

- Primary Market Makers (PMMs): 9000 TPS for first bin, with a maximum of fifteen users; 5500 TPS, with a maximum of twelve users, for each additional bin.
- Competitive Market Makers (CMMs): 6000 TPS, with a maximum eighteen users, for the first Trading Right; 2000 TPS, with a maximum of six users, for each additional Trading Right.
- FX PMMs: 25 TPS per licensed product, with a maximum of one user.
- FX CMMs: 20 TPS per licensed product, with a maximum of one user.

Example: A Market Maker quotes as a PMM in one bin, and has 5 CMM Trading Rights. That market maker has a maximum total of 23,000 TPS allocated across no more than 57 users. Those users can be configured to quote in all appointed or selected products, and there is no ISE requirement to establish distinct PMM and CMM users.

Each quoting user is allocated 1.5 million quotes per day. If a market participant exceeds this allocation, that firm will be charged for additional sessions based on the number of quotes submitted. Title: Technical Bulletin – **User Policy Updates**

Each month, an “average quotes per day” will be calculated for each market maker across all quoting users, based on the total number of quotes submitted that market maker. This number will be divided by 1.5 million and rounded up to the nearest whole number.

Market makers will be invoiced for the maximum of: a) the number of logged-in quoting users for the month, or b) the number of quoting sessions based on actual quotes submitted.

Example: A market maker with 10 logged-in quoting sessions submits an average 16 million quotes per day. The market maker will be charged for 11 quoting sessions.

A DTI Order Entry Session is defined as any connection with a profile that includes the order entry transaction. Both Market Makers and Electronic Access Members (EAMs) may utilize these sessions.

Capacity Allotment Policy

A user is defined for each 20 TPS per session.

Admin users do not include the quoting or any order entry transactions, and can be used by Market Makers and EAMs for any trade support purpose.

Capacity Allotment Policy

These users are provided with up to 100 TPS.

Capacity Allotment Policy

A user is defined for each 40 TPS per session.

Chapter 82. Window Size

The maximum number of messages sent for which the client application has not yet received a response.

A client application must count the number of outstanding requests and when it reaches the Outstanding Message Limit, it must wait for an ACK before sending another message; otherwise, the next message sent is rejected by the DTI. If too many requests are rejected due to exceeding the request limit, the session is terminated.

Heartbeat messages do not count as request messages. If the client is waiting for a response, it must still send a heartbeat message every heartbeat interval to maintain the session.

Some request messages can receive multiple responses. In this case, the first response is counted. The Response Header contains the *ThrottleCountIndicator* field. If the *ThrottleCountIndicator* is set to "N," the response does not count in the reduction of the open message count.

Broadcast messages do not reduce the count of open requests.

Example of throttle values from a Logon response

An Outstanding Request Limit of five messages is represented in the

ThrottleParamsGrp as:

ThrottleAction (tag 1611) = 2 (Reject)

ThrottleType (tag 1612) = 2 (Outstanding Requests)

ThrottleNoMsgs (tag 1613) = 5

The maximum number of sequential message rejects allowed by the DTI.

Once an ACK has been sent, the Reject/Disconnect Limit counter is reset.

If the client application continues to send messages that are rejected for exceeding the Outstanding Message Limit (as described above) and the Reject/Disconnect Limit is exceeded, the DTI disconnects the session.

For example, a Reject Limit of 50 is represented in the *LogonResp.ThrottleParamsGrp* as:

ThrottleAction (tag 1611) = 3 (Disconnect)

ThrottleType (tag 1612) = 2 (Outstanding Requests)

ThrottleNoMsgs (tag 1613) = 50

Section VI. External Communications



Chapter 83. ISE Alerts

When a Market Operations Representative (MktOps) arrives each morning they are to open all applicable tools that are required to perform the MktOps job function.

ISE Alerts is located on each representatives PC.

Each member of MktOps is considered an “agent.” The builds are located in the Edit Agents fields. Only “agents can send messages.

Name	IM Address	Domain Name	Is Administrator	Receives Messages	Can Send Alerts
Adam Rubin	lcs_arubin@iseoptions.com	nyise_arubin	True	True	True
Alex Kogan	lcs_akogan@iseoptions.com	nyise_akogan	True	False	True
Brian Duffy	lcs_bduffy@iseoptions.com	nyise_bduffy	True	True	True
Christina Benotti	lcs_cbenotti@iseoptions.com	nyise_cbenotti	True	True	True
Daniel Amar	lcs_damar@iseoptions.com	nyise_daa	True	True	True
David Chen	lcs_dchen@iseoptions.com	nyise_dchen	True	False	False
Mark Fries	lcs_markfries@iseoptions.com	nyise_markfries	False	False	True
James Anastas	lcs_janastas@iseoptions.com	nyise_janastas	True	True	True
Katrina Lukacs	lcs_klukacs@iseoptions.com	nyise_klukacs	True	True	True
Nicholas Piccirillo	lcs_npiccirillo@iseoptions.com	nyise_npiccirillo	True	True	True
Richard Siegel	lcs_rsiegel@iseoptions.com	nyise_rsiegel	True	True	True
Sean Walsh	lcs_swalsh@directedge.com	de-offc_swalsh	True	True	True
Stanley Quelle	lcs_squelle@directedge.com	de-offc_squelle	True	True	True
Thomas Zielinski	lcs_tzielinski@iseoptions.com	nyise_tzielinski	True	True	True
Tom Oshaughnessy	lcs_toshaughnessy@iseoptions.com	nyise_too	True	True	True

Each morning, as required in the “Market Operations morning procedures document” a test page is sent to an ISE Internal Group.

The recipients of this internal group are sent an immediate message and an email message. The person sending the test page should verify they have received both messages and determined the health of the application.

Any ISE Alert issue should immediately be brought to Application Support attention with an e-ticket, email and phone call. In addition, an incident ticket should be created in order to track the progress and solution of the problem.

The main part of the Alerts window displays a number of predefined alert messages. Each message succinctly explains a specific notification that the ISE needs to make to the members.

MktOps can build more predefined messages by selecting “Edit Predefined Alerts.” Agent can either select an already existing free row or choose to “Add Row.” The text window open and a message can be created and submitted.

If the message is wrong, agents can simple highlight the message and choose “Remove Row” and submit.

Category	Text
Important	This ISE Profits and partitions are located at www.nyse.com/vnbd/Form/viewPage.aspx?categoryID=88 Important: Triple width quoting exemption has been granted at the open in the following symbol: Important: Triple width quoting exemption has been granted at the open in ALL symbols.
Important	The ISE is reviewing an issue affecting trading. More details to follow. Important: The ISE has revoked Self Help on the PHLX. The PHLX is back in the NBBO calculation.
Important	The ISE is reviewing an issue affecting trading. More details to follow. Important: The ISE has revoked Self Help on the NYSE/ ARCA. The NYSE/ARCA has been removed from the NBBO calculation.
Important	The ISE has revoked Self Help on the NYSE/ AMEX. The NYSE/ AMEX is back in the NBBO calculation.
Important	The ISE has revoked Self Help on the NASDAQ. The NASDAQ is back in the NBBO calculation.
Important	The ISE has revoked Self Help on the BOX. The BOX is back in the NBBO calculation.
Important	The ISE has revoked Self Help on the BATS. BATS is back in the NBBO calculation.
Important	The ISE has revoked Self Help on the CBOE. The CBOE has been removed from the NBBO calculation.
Important	The ISE has revoked Self Help on the CRD. The CRD has been removed from the NBBO calculation.
Important	The ISE has revoked Self Help on the NYSE. The NYSE has been removed from the NBBO calculation.
Important	The ISE has revoked Self Help on the NYSE. The NYSE has been removed from the NBBO calculation.
Important	Important: Double width quoting spread exemption has been granted at the open in ALL symbols.
Important	Important: Double width quoting spread exemption has been granted at the open in the following symbol: Important: Precise Trade Notification - The ISE is currently investigating an issue affecting the Precise Trade Application. Midas - The ISE is currently investigating an issue affecting Midas.
Info	Important: Double width quoting spread exemption has been granted at the open in ALL symbols.
Info	Important: Double width quoting spread exemption has been granted at the open in the following symbol: Important: ISE Spreads - The ISE is currently investigating an issue affecting spreads. All other option orders are functioning properly.
Info	Important: FDX Connection Notification - The ISE is currently investigating an issue affecting FDX connections.
Info	Important: Double width quoting spread exemption has been granted at the open in ALL symbols.
Notice	Important: Double width quoting spread exemption has been granted at the open in ALL symbols.

<u>Triple width quoting spread exemption has been granted at the open in the following symbol:</u>
<u>Triple width quoting exemption has been granted at the open in ALL symbols.</u>
<u>Trades under review in the following symbol:</u>
The ISE Products and Partitions are located at www.ise.com/WebForm/viewPage.aspx?categoryId=88
The ISE is investigating an issue that is impacting trading. More details to follow.
The ISE has revoked Self Help on the PHLX. The PHLX is back in the NBBO calculation.
The ISE has revoked Self Help on the NYSE/ ARCA. The NYSE/ARCA is back in the NBBO calculation.
The ISE has revoked Self Help on the NYSE/ AMEX. The NYSE/ AMEX is back in the NBBO calculation.
The ISE has revoked Self Help on the NASDAQ. The NASDAQ is back in the NBBO calculation.
The ISE has revoked Self Help on the CBOE. The CBOE is back in the NBBO calculation
The ISE has revoked Self Help on the BOX. The BOX is back in the NBBO calculation.
The ISE has revoked Self Help on BATS. BATS is back in the NBBO calculation.
The ISE has revoked Self Help on ALL exchanges. ALL Exchanges have been put back into the NBBO calculation.
The ISE has declared Self Help on the PHLX. The PHLX has been removed from the NBBO calculation.
The ISE has declared Self Help on the NYSE/ ARCA. The NYSE/ARCA has been removed from the NBBO calculation.
The ISE has declared Self Help on the NYSE/ AMEX. The NYSE/ AMEX has been removed from the NBBO calculation.
The ISE has declared Self Help on the NASDAQ. The NASDAQ has been removed from the NBBO calculation.
The ISE has declared Self Help on the CBOE. The CBOE has been removed from the NBBO calculation.
The ISE has declared Self Help on the BOX. The BOX has been removed from the NBBO calculation.
The ISE has declared Self Help on BATS. BATS has been removed from the NBBO calculation.
The ISE has declared Self Help on ALL exchanges. ALL Exchanges have been removed from the NBBO calculation.
PrecISE Trade Notification - The ISE is currently investigating an issue affecting the PrecISE Trade application
Midas - The ISE is currently investigating an issue affecting Midas.
<u>ISE Spreads with Stock -</u>
<u>ISE Spreads - The ISE is currently investigating an issue affecting spreads. All other option orders are functioning properly.</u>
<u>FIX Connection Notification - The ISE is currently investigating an issue affecting FIX connections.</u>
<u>Double width quoting spread exemption has been granted at the open in the following symbol:</u>
<u>Double width quoting exemption has been granted at the open in ALL symbols.</u>

In addition, there is a free form field to explain any unique type of issue. This is more commonly used when there is a market outage.

If there is a market outage, MktOps must first select “Edit Email Options.” Here the pre-formed subject headings are given the title “ISE Alert.” When there is a major market issue, MktOps is required to make the subject heading: **Critical Event** and then submit. Even though the change has been made, there is no notification at this time. Only when the message is sent and received will MktOps know a change has been made.

Each notification has a 400 character limit in the message and no characters other than letters are accepted.

The ISE has been using the application for several years and over time has developed several hundred notification contacts.

Contacts can tell us if they prefer notification be made by email, immediate message or both.

To add a group, select the Select Alert button on the left. There are two tabs in the middle of the screen, select the Group View. Group names and contacts will appear. There are extra lines to create more groups if needed. Once a group is created select add. There will be no members in this group until they are added. If removing select remove.

In the Group view we have a several set up to notify certain groups for certain situations. All are readily configurable. Currently they are: PMM Issues, CMM Issues, EAM Issues, EAM API Issues, EAM Combo Feed Services Issues, EAM IORS Issues, EAM MDI Issues, EAM DTI Issues, AMR-PrecISE, EAM API, Exchange-Wide Issues Broadcast, ISE Internal, Market Depth Issues, Morning Test Page, Opening Width Exemption, PrecISE Issues/ AMR, PrecISE Users, SFTI Issues, Trade Review. Contacts can be added into one or more of these groups.

To add a Contact, go to the Send Alert button on the left. There are blank lines on the bottom of the window. Populate the Contact name, IM Address (if requested), Company (choose from the dropdown), Groups (choose the alert(s) that you want and the email. Submit when complete. To remove a contact, highlight the name and select remove.

ISE Business Development, Surveillance, Management and Market Operations are on all ISE Alerts.

If a contact belongs to a company that is not in the alerts drop down. At the top of the send alert window there is an Edit companies drop down. Find a selection that says New ___, highlight the entry and type over what is needed and select add then OK. GO back to the contact that was added, select from the drop down the company name will be there. Submit. In April of 2012, the name of the person that added the contact and the date will be displayed.

Mkt Ops can Import this list of contacts to a spreadsheet to research any names.

The biggest challenge with this notification list is keeping it up to date and accurate. Member will tell us when they want to add or remove a name(s) or group(s) from the distribution list. Frequently when a member leaves the firm they do not tell us. Each day we receive a Postini Quarantine Summery at 10:06AM each day. By periodically sorting this mail by the ISE Alert subject heading "Alert from the ISE" you can determine which contact has left the firm. There will be a failure to deliver message.

After Member Processing is completed new firms are contacted by MktOps to introduce them to our group and familiarize them with what we do. At this time we ask them if they want to receive ISE Alerts.

If any member wants to be removed from alerts for any reason, we ask them to email helpdesk@ise.com. Once the request is received, removal takes a few moments. MktOps saves the request for future reference if needed.

There is no recall feature to this application.

There is no spell checking with this application.

The notifications need to be accurate, informative and succinct. This is especially true in Code Red situations where constant status updates need to be made to members.

Notifications are periodically audited by the ISE Audit team.

Each message sent to members is a representation of the ISE.

Chapter 84. Emailing Trade Recaps to Members

Trades by BU

Search Criteria

Market:	ISE	Max Num Rec:	200000	Time Disp.:	Milli	Trade Statistics	Search
<input checked="" type="checkbox"/> Match Event Date	10/22/2012	Firm:		User:		Date:	10/22/2012
<input type="checkbox"/> Trade Business	10/22/2012	<input type="checkbox"/> Instr Type Equity		Bin:		Product:	All
<input type="checkbox"/> System Date Time	From: 10/21/2012 00:00:00	Status:	<input checked="" type="radio"/> Active	Identifier:		Advanced Filter	Preferences
To: 10/22/2012 23:59:59	<input type="radio"/> InActive	CSCO	<input type="button"/> Excel Pref				

Trades

Exchano	Product	Instrument	Trd Qty	Trade Price	Buy Own BLU	Buy Crg Acct	Buy Urg CMTA Acct	Sell Own BU	Sell Crg Acct	Sell Urg CMTA Acct
	CSCO	CSCO2NOV19.0P	4	1.29	IAB01E	00017	00226	CDL01M	00551	
	CSCO	CSCO2DEC20.0C	2	.22	THI01M	00549		BAM43E	00792	00792
	CSCO	CSCO2DEC19.0C	1	.48	CDL01M	00551		WLX11E	00105	
	CSCO	CSCO2DEC17.0C	6	1.58	CDL01M	00551		GEB02E	00552	00338
NTS	CSCO	CSCO	600	18.15	GEB02E	OXPS		CDL01M	CDGO	
	CSCO	CSCO2NOV18.0C	2	.80	CDL01M	00551		ATD01E	00411	00777
NTS	CSCO	CSCO	200	18.17	ATD01E	S85H		CDL01M	CDGO	
	CSCO	CSCO2OCT18.0C-26	2	.29	HUL01M	00009		MGS13E	00050	00777
	CSCO	CSCO2NOV19.0C	5	.36	HUL01M	00009		NOS12E	00520	
	CSCO	CSCO2NOV19.0C	81	.36	HUL01M	00009		NOS12E	00520	
	CSCO	CSCO2NOV19.0C	12	.36	CDL01M	00551		NOS12E	00520	
	CSCO	CSCO2NOV18.0C	3	.78	HUL01M	00009		MGS14E	00050	00777
	CSCO	CSCO2OCT19.0P-26	11	.90	WLV01M	00501		CDL01M	00551	
	CSCO	CSCO2NOV18.0C	3	.78	HUL01M	00009		WLX11E	00501	
	CSCO	CSCO3JAN20.0P	95	2.32	UBS02E	00642	00164	HUL01M	00009	
	CSCO	CSCO3JAN20.0P	25	2.32	UBS02E	00642	00164	PRO01M	00551	
	CSCO	CSCO3JAN20.0P	10	2.32	UBS03E	00642	00164	SIG01M	00551	
	CSCO	CSCO2NOV18.0C	7	.78	CDL01M	00551		ATD01E	00411	00226
	CSCO	CSCO2NOV18.0P	4	.67	HUL01M	00009		ATD01E	00411	00226
	CSCO	CSCO3JAN21.0C	6	.14	ATD01E	00411	00551	ATD01E	00411	00501
	CSCO	CSCO3JAN21.0C	6	.14	ATD01E	00411	00551	PRO01M	00551	
	CSCO	CSCO3JAN21.0C	2	.14	ATD01E	00411	00551	GLD13E	00005	

Product: CSCO Bin: 9 Instrument: CSC02NOV19.0P

Event ID	1	Event Type	Incoming Order	Event Business Date	10/22/2012
Trade Price	1.29	Bid Price	0.00000000	Offer Price	0.00000000
Displayed Offer Price	1.33000000	Displayed Bid Qty	11	Displayed Offer Qty	122
Displayed Offer Cust	0	Local Step ID	1	Step Type	Outright
TM Txn Type	New MatchEvent by ME	TM Txn Timestamp	10/22/2012 9:30:00 AM	Trd ID	13508190
Trd Stat	Active	Trd Type	New	Trd Create Date	10/22/2012
Buy Own BU	IAB01E	Buy Own UserID	3558	Buy Crg Type	Customer
Buy Crg Sub Acct		Buy Crg CMTA Acct	00226	Buy Pos Effect	Close
Buy Cust Acct	UG973606	Buy Br Seq		Buy Free Text	
Sell Enrich Chlt Cat	ISE MM	Sell Own BU	CDL01M	Sell Own User ID	7465

of Rows: 497 Total Selected: 1 Average Price: 01.290 Total Qty: 4

Several times throughout the trading day members request a Trade Recap.

The customer may be experiencing a quoting issue, technical problem, clearing problem or an audit. They may also want a recap if they feel there may be an issue with the ISE.

Sending a consistent recap that only contains the users trades and getting it to them quickly, will allow them the opportunity to get the information and begin to double check what has been executed.

MktOps should have the MPT/ Trades by BU window open.

They select the proper date if different than the default present day.

MktOps can enter the first three characters of the business unit (BU) acronym immediately follow by a “*” wildcard.

Once the grid fills, users will notice all option and stock trades and the specific details will populate.

Mkt Ops can cut and paste the recap out of the grid and would then need to organize a spreadsheet.

A better method it the right click “Export to Excel.”

A “Save As” window appears and users will need to select the Network Drive (Z).

On the right side of the “save as” all the current available files are listed.

MktOps should select “Usr”

Next the MktOps Citrix formatted name will appear. Mkt Ops should select it.

Finally users name the file and close the window.

On a MktOps PC, users should open “My Computer”

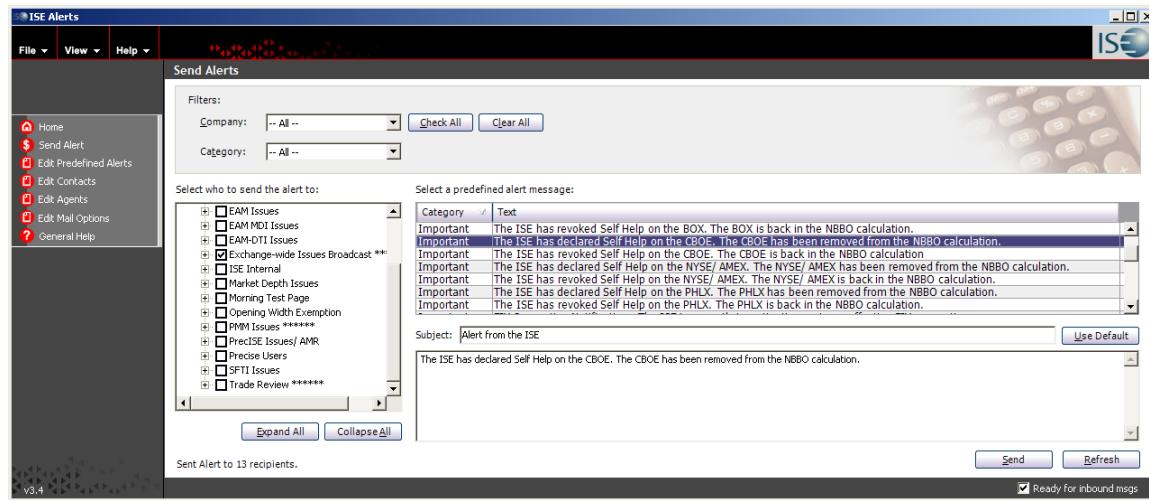
Select the “Z: Drive”, “usr,” the user name and then select the file that was just created.

When the spreadsheet opens verify that ONLY the requesting BU's trades are displayed.

By default the “ME Txn Time Stamp” incorrectly displays the date only and the not the HH:MM:SS:SS format. This will be corrected in a future release. Make this change manually.

Send the spreadsheet to the member and include the MktOpsReminderGrp email.

Chapter 85. Declaring Self Help on an Exchange



There are times when an away exchange must be excluded from ISE's Away Best Bid / Best Offer (ABBO) calculation. Some examples are as follows: it could be due to crossed or stale markets in multiple series or products, or it could be due to an issue at that exchange in handling orders or disseminating quotes.

Notification of a problem at that exchange can come from Mkt Ops observations and verification, the exchange(s) having the issue itself, or an ISE member(s) calling the Mkt Ops with examples that are confirmed.

Once it has been determined by Mkt Ops that the exclusion is valid, steps are taken to remove this exchange and to notify ISE Members.

Mkt Ops must confirm with the away exchange that there is an issue and that the ISE is removing them from the NBBO calculation. We ask that the call or email us to put them back in the calculation when there issues are resolved.

In the MPT for Optimise window, select the eighth button: ABBO Management.

The ABBO Mgmt window displays: the market, which defaults ISE, a search field, and the list of options exchanges under the Exegy Hosts 11.3.254.245.

At this time if there is an issue it is the entire exchange that is removed even if there are only a few products. Individual products cannot be removed.

When excluding an entire exchange, the checked box next to that exchange must be unchecked. When excluding symbols listed away without excluding the entire exchange, the check box next to each symbol must be unchecked

Once selection(s) is complete, hit 'Submit Changes' button.

Separate window appears confirming exchange and list of symbols to be excluded. Hit 'Submit'.

A confirmation window appears.

An email notification is sent to the excluded exchange notifying them of their status and the time it was performed.

A separate email is sent internally notifying management of the exchange and time, along with any reason behind the exclusion.

ISE Alerts are sent to members notifying them that an exchange has been removed.

Phone calls are made to PMMs telling them an exchange(s) has been removed.

Once Market Operations has determined that the away exchange has resolved their issue, the same steps above are used to include the exchange back into the ISE ABBO calculation and notifications are sent out updated with timestamps of inclusion.

A separate email is sent internally notifying management of the exchange and time, along with any reason behind the inclusion.

ISE Alerts are sent to member notifying them that an exchange(s) has been included

Phone calls are made to PMMs telling them an exchange(s) has been included.

Create a delta neutral position, but in no case in a ratio greater than eight (8) option contracts per unit of trading of the underlying stock or convertible security established for that series by the Clearing Corporation.

The PIM order responses should be considered as if they are quotes in the market. Assuming the EAM enters an order properly,

(1) A Crossing Transaction must be entered only at a price that is better than the ISE best bid or offer ("ISE BBO") and equal to or better than the national best bid or offer ("NBBO").

and the responses are through the away market and satisfaction is sent, we owe a report. Please give the firm that responded with the trade through limit an execution.

Chapter 86. Market Information Circulars (MIC)

The ISE Options Exchange sends out Market Information Circulars (MICs) to notify members of important policy and trading changes affecting our options market. Please refer to this page for the latest updates.

http://www.ise.com/WebForm/options_product_notices.aspx?fileType=mic&categoryID=189

Chapter 87. Regulatory Information Circulars (RIC)

ISE has adopted a hybrid model of regulation in partnership with the Financial Industry Regulatory Authority, or FINRA. ISE operates a highly automated surveillance system and employs in-house surveillance analysts: to monitor trading on the Exchange; to review trading alerts and reports; and to conduct investigations into potential violations of ISE rules and the federal securities laws. The ISE surveillance group may close investigations without action, pursue disciplinary sanctions, or refer investigations to FINRA for further development.

With respect to investigations referred to FINRA, ISE staff works closely with FINRA personnel. At the conclusion of an investigation, FINRA consults with ISE with respect to what type of disciplinary action, if any, is appropriate. If ISE takes formal disciplinary action, ISE works closely with FINRA either to reach a settlement of the case or to prosecute the case before an ISE hearing panel. Thus, the contractual relationship with FINRA is highly interactive. Throughout the process, ISE retains complete responsibility for all disciplinary matters.

While ISE maintains surveillance and disciplinary programs for conduct related to the trading of options on the Exchange, certain other aspects of ISE's self-regulatory responsibilities are outside of ISE's legal responsibility. For example, ISE is not a designated examining authority, or DEA under Section 17d-1 of the Exchange Act for any of its members. Thus, ISE does not conduct any financial responsibility examinations.

In addition, ISE is a participant in the Options Sales Practices Agreement approved by the Commission under Section 17d-2 of the Exchange Act. Under this agreement, the six options exchanges and FINRA allocate responsibility for conducting examinations and enforcing rules with respect to options sales practices. ISE is not allocated any responsibility under this agreement; therefore, ISE is not responsible for conducting sales practices examinations. In addition, we have entered into a joint agreement with the other options exchanges to form the Options Regulatory Surveillance Authority, or ORSA. The purpose of ORSA is to consolidate insider trading surveillance, which traditionally has been done separately by each of the options exchanges. Under this joint agreement, CBOE performs the function on behalf of all of the options exchanges, but each exchange continues to monitor the activities conducted under the joint agreement and continues to have regulatory responsibility in this area.

We believe that this hybrid model of regulation works very well. On the one hand, we benefit from having dedicated surveillance analysts who are experts on ISE rules and are intimately familiar with the Exchange's policies, practices and trading system. We also operate an automated surveillance system that is designed specifically for our market and that is maintained by our in-house development staff. This assures that the front-line people who initially review trading alerts and reports have the knowledge and instinct necessary to recognize trading behavior that violates ISE rules and the federal securities laws, and that the automated surveillance system is tailored to the unique aspects of our electronic trading system. On the other hand, ISE has access to the resources and expertise of FINRA to conduct investigations, as well as to prosecute enforcement cases.

Sections VII. Internal Communication and Training



Chapter 88. Training Schedule for New Market Operations Representatives

A training program has been developed for incoming new hires to Market Operations. This program spans a time frame of a month, and introduces the representative to information and applications required to perform all functions and tasks within the team.

Within the training schedule, one of the first topics covered is the ISE Rules, concentrating on those chapters, or portions of chapters, that are referred to by Market Operations frequently. Other topics include order types, member interaction and customer service, and the front-end applications and tools that help manage and monitor the market place.

Throughout this program, the new hire reviews these topics with veteran representatives and has hands-on training. Towards the end, there are informal quizzes that refer back to the topics introduced to confirm and reinforce understanding.

- Chapter 7 (skip 720); Chapter 8
- ISE Application review - Market Place Tool (MPT), Marketwatch, Reference Data Front End (RDFE), Order Book Explorer (OBE), SOR Control Panel, Thomson ILX, ClearTrust, IMAlerts, Phone System, ERS, The alert tone
- Chapter 4 (412- 419), Trade Correction Facility Review, OCC Clearing (Encore); Chapter 7 (Rule 720)
- Chapter 19 (Intermarket Linkage); Market Place Tool Application - Trade Through Alerts, Obvious Error, Order Deviation, Locked Orders; Review of Complex Order Book and Matching attempts,
- Chapters 5, 9 and 20
- Code Red Review, Emergency call lists
- Releases and System Architecture Review; Daily Checklists

Chapter 89. Trade Adjustment - Management Notification Process

Adjustments to some or all terms of a deal or trade are part of the normal course of business for a Trading and Market Operations Representative. However, to provide a level of quality assurance and oversight, Market Operations has instituted a graduated reviewing process based on the value of the trade being adjusted. The delegated levels of authority appear below in this document followed by the steps required for each type of adjustment.

This chapter explains the ISE Trade Adjustment Process and mandatory notification to management of qualifying adjustments.

In order to provide the proper audit trail for changing characteristics of a trade executed on the ISE, all trade adjustments must be logged into the ISE ERS phone log system. Furthermore, certain types of trade adjustments require notification to Management for review and oversight purposes.

There is a criteria required for notifying Management. This is done through the ERS/Avaya Market Operations Trade Adjustment Recap Report. This is based on the following actions and value of a trade:

For all:

Adjustments to account types
Busts or partial busts of trades
Next day clearing changes
Any price adjustment

When the trade value of the adjusted or busted trade is:

\$250,000 to the Options Lead
\$500,000 to the Director
\$1,000,000 to the Vice President of Trading and Market Operations

Notification must be given to a Market Operations Lead prior to any adjustment being made when the adjustment is for 400,000 contracts or greater regardless of value.

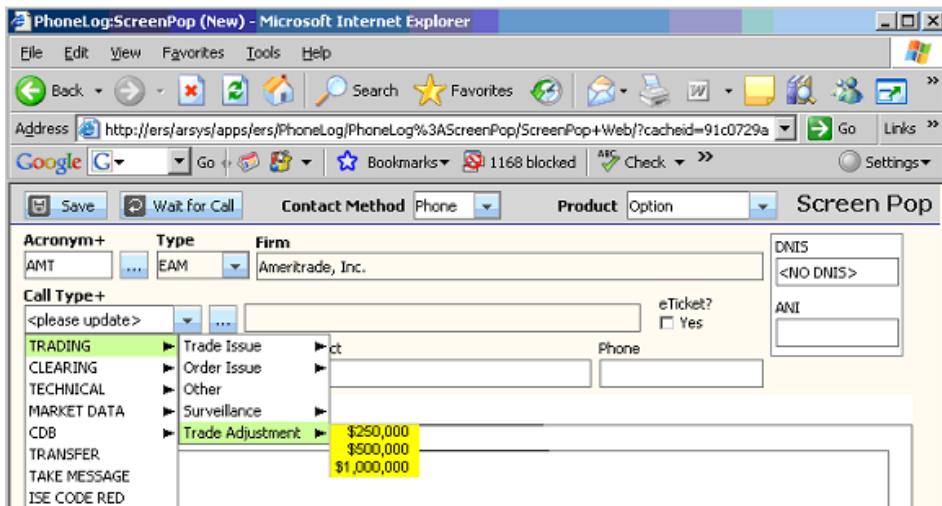
At the conclusion of each trading day, the appropriate reviewer will receive the log of trade adjustments and approve each electronically. Each level will escalate any improprieties to the above level if necessary. There will also be a monthly review of the trade adjustment phone calls by Market Operations management to check for any possible patterns of impropriety.

As stated above **ALL** Trade Adjustments are recorded by the Market Operations Team in the Enterprise Request System (ERS).

- Required management signature notification messages are generated where applicable once the trade cost of the execution is \$250,000 or greater based on the sliding scale above.
- The screen shot below illustrates the path needed to be taken for procedural purposes.

Adjustments will be booked in the ERS call logs by Call Type. The proper selection will follow the drop down path "Trade Adjustments">> followed by the proper cost category "\$250,000", "\$500,000" or "\$1,000,000". These categories are based on the cost of the original trade and calculated using the formula:

$$\text{Contracts traded} * 100 * \text{option premium} = \text{Total cost of the trade}$$



The Call Detail window should have the original trade details as well as the adjustment details. For a large number of trade adjustments, a spread sheet attachment will be necessary and if a request by email, the email with an adjustment request.

An example of the proper format for a single trade adjustment:

Call Detail	eTickets	Attachments	Admin
Notes			
Original: a/o mm/dd - X 2000x spread @ \$4.95 Adjustment: bust 500; sell side gu 158, sub acc NJD,			

When a Market Operations Representative (MktOps) arrives each morning they are to open all applicable tools that are required to perform the MktOps job function.

These tools are launched from the Citrix Toolbar located on the bottom right corner of the main production monitor.

MktOps selects Applications and then chooses Market Place Tool (**MPT Client**).

Only MktOps can make price adjustments. Member cannot. MktOps can only make a price adjustment only if both sides agree to this change.

Additionally, members frequently enter the incorrect clearing instructions and contact MktOps to assist them by making the necessary changes.

Members contact Market Operations by calling our toll free number at 877-473-9989 or emailing instructions to: Helpdesk@ise.com.

For same day trades, MktOps will use MPT Deals. After locating the trade(s) MktOps will right click and select Deal Maintenance.

In this window, the Clearing account, Clearing Type, Client Category, Sub Account, CMTA, Account and Position Effect may be altered either individually and as multiple. Once submitted, the matching engine will automatically generate and email if the net value of the trades exceeds \$250,000, \$500,000 and \$1,000,000.

Also in this window if the price is agreed to be changed or busted, MktOps can right click and select Deal rectification or bust. If the net value exceeds the limits in 8) a mail will be generated.

In MPT Trades, Mkt Ops can also make clearing changes, price changes or trade busts. If this is done same day or from prior day and the net value exceeds \$250,000, \$500,000 and \$1,000,000 an automated mail will be generated.

The outlook Email is received automatically. MktOps highlights the details and copies the information in the mail.

MktOps use a call/mail monitoring application called Avaya/ ready for call which is an application tied into ERS.

MktOps log calls into this application that has the detail of who called and when.

MktOps fills out the required fields but since this call or mail exceed the \$250,000, \$500,000 and \$1,000,000 net value it must be tagged properly to be reviewed by Operations Management and to be compliant with audit trail.

In the Ready for call window, MktOps select either call (default) or mail. This is located at the top of the window.

Next users will verify the proper BU and member contact and then select “Call Type” “Trading” then select the proper value.

In the detail area, MktOps right click and pastes the email information verifies the remaining information and selects “Save.”

This will creates an alert for Operations Management to Review the trade and ask questions for clarity if needed.

Management selects the change as reviewed and meets the Audit requirement.

The mails generated have the MktOps representatives name on them and the mails can be used as a backup for audit trails if needed.

Chapter 90. Sending the Volume Mail and Page

At the end of the trading day MktOps is responsible for providing Senior Management with recap of the ISE volume, percentage of volume and ranking.

First is Market Place Tool (MPT), Trades by BU and the top, right portion of the screen is the Trade Statistics button. We wait until 5 minutes after the 4:15PM ET close. This total includes the linkage volume.

MktOps will also use the ISE Market Share Monitor located on the Intranet: <http://marketstats/msm/>

The monitor is a closed watched tool throughout the exchange and is a dynamic view of where we stand every trading day. We page this information to management to augment the information.

The monitor volume includes the actual volume, the projected volume and each exchanges volume and percentage of volume including: the CBOE, PHLX, AMEX, ARCA, NSDQ, BOX, BATS, C2, BX Options, Miami and the ISE/ TOPAZ.

Additionally, the Index volume, Index %, Total, Total %. These totals do not include the linkage totals therefore must be included.

MktOps cut and pastes the volumes into excel.

Using the MPT/ Trades by BU total volume number, MktOps adjusts the total is to the spreadsheet.

By doing so we are accurately calculating the actual totals properly and the excel formulas and percentages will adjust accordingly.

MktOps goes back to the intranet site. The user selects tools, ERS, and then ePaging.

After selecting apply template and ISE volume report, the prior day numbers are in place already. MktOps types in the new numbers into the body of the message and then checks off post to message board and send. Senior manage on the distribution will receive the message to their mobile devices.

At the end of the trading day MktOps is responsible for providing the send the Associated Press the most accurate ISE volume numbers.

These numbers are published to the option industry and in nationwide news organizations.

MktOps uses several sources of the information to compile this numbers.

First is Market Place Tool (MPT), Trades by BU and the top, right portion of the screen is the Trade Statistics button. We wait until 5 minutes after the 4:15PM ET close.

User may also use OBE/ Functional Stats.

MktOps users verify they have the proper date selected and the information that is returned in is the Option Volume Quantity, the Call Quantity and the Put Quantity.

Next MktOps will use Thomson and/or LiveVol which are third party vendors. Using the option volume symbols: VOOIS, (Option Volume Quantity), .VOCIS, (Call Quantity) and .VOCIS, (Put Quantity). This number does not count our linkage statistics. This used for comparison reasons.

Using Outlook mail, MktOps email the details to:

To: McGregor, Molly; 'mrose@ap.org'; 'jpereira@ap.org'; *MktOpsReminder Group
Cc:
Subject: ISE Volume Stats for Thursday October 10, 2012

Total Option Volume:	2,196,319
Total Call Volume:	1,181,638
Total Put Volume:	1,014,681

Chapter 91. Escalation Pages

This chapter describes the steps taken by Market Operations in escalating an issue through the Enterprise Request System (ERS) that requires a certain area of management and expertise.

Basically; three levels of escalation will be used depending upon the circumstances:

1. MOINFO – Expert Level Only
2. MOALERT – Upgraded Alert beyond the experts
3. MOEME – Code Red – All Hands on Deck

Level 1 Support, which includes Market Operations, Computer Operations and Network Operations, acts as the frontline of the Exchange in monitoring and dealing with the day to day activities.

All Market Operations Representatives need to have a strong knowledge base in many different areas to deal with the day to day internal and external customer service activities.

Market Operations needs to basically have a strong understanding of an extensive amount of issues including the following areas to effectively support the big picture:

- Application Support (over 25 apps are managed by each rep daily to support the marketplaces).
- Rules and Regulations of the Exchange(s).
- Technical knowledge regarding customer connectivity troubleshooting.
- Capacity constraints
- Customer Service
- Marketplace savvy
- Change Management

Sometimes an issue will fall outside the realm of the Level 1 expertise and the ERS Escalation Process needs to kick in.

(MOINFO) Expert Level Only

Exclusive escalation groups have been created to exclusively support certain types of issues.

These groups have been specifically designed to get only the issue specific experts involved for the first ten minutes. Once the ten minutes has elapsed Step 2 (identified below) will kick in.

For example: The ISE Developed Market Watch application that monitors the status of all actively traded symbols in the Options Marketplace goes down. Market Operations would select the Escalation – Market Watch paging group in ERS to get just the experts involved first.

The following illustration shows how the paging mechanism is used to select one of these specialized groups:

Quick Page

The screenshot shows a software application window titled "Quick Page". At the top left, there is a dropdown menu labeled "Paging Group" with "Escalation - MarketWatch" selected. Below this are buttons for "Send Message", "Create Paging Group", and "Group Member Maintenance". A text input field labeled "Message (up to 255 characters):" contains a placeholder message. A "Send Message!" button is located below the message field. To the right, a list titled "Member" displays 16 group members: Alano, Joseph; Amer, Daniel; Bradley, Bonnie; Cheng, Gall; Chung, Kwokman; Duffy, Brian; Han, Anthony; Kelly, Adam; Loewinger, Martin; Marinich, Mike; Olive, Lamarr. A "Refresh" button is at the top right of this list. Below the member list is a section titled "Step 1 Issue Specific Escalation Paging Groups" containing a scrollable list of escalation groups: Escalation - Clearing, Escalation - COMBEX and COMBEX_ST, Escalation - Financial, Escalation - Level 1, Escalation - MarketWatch, Escalation - MPT, Escalation - Networks, Escalation - OM Apps, Escalation - Precise/SDA, Escalation - ROM, Escalation - RTP, Escalation - SOPs, Escalation - Stock Apps.

Note – These messages will all be prefaced with MOINFO, which means the message is from Market Operations (MO) and the level of escalation is low and tailored only to the experts (INFO).

(MOALERT) Upgraded Alert beyond the experts

Once the exclusive escalation groups have worked on the issue without any resolution for over ten minutes the next level above just the experts will then be notified.

The next level encompasses a level of management as high as the Chief Technology Officer and covers all areas of expertise including Level 1, 2 and 3 Support, Technology Member Services, Software Development, Surveillance, Business Development, SQM and Product Development.

Note – These messages will all be prefaced with MOALERT, which means the message is from Market Operations (MO) and the level of escalation has been upgraded to the next level of support (ALERT).

(MOEME) Code Red Escalation

Code Red is described best as a potential market-wide impact issue that calls for ALL HANDS to be on Deck.

The goal is to deliver clear, concise communication both internally and externally in an effort to manage the event in a controlled and efficient manner.

The Alert Tone Generator application is an audio tool utilized by Market Operations to alert the ISE folks that a Stock and/or Options issue has been uncovered that calls for all hands to be on deck.

Note - The ERS Company-wide paging group will be utilized for internal communications prefaced with MOEME

Chapter 92. Compiling the Linkage Volume

MktOps maintains a document for the analysis of linkage volume for each exchange on a month by month basis.

The Applications & Links Required:

Thomson ONE

Microsoft Excel

OCC Website: <http://www.theocc.com/webapps/exchange-volume>

ISE Dividend: <http://www.ise.com/WebForm/viewPage.aspx?categoryId=533>

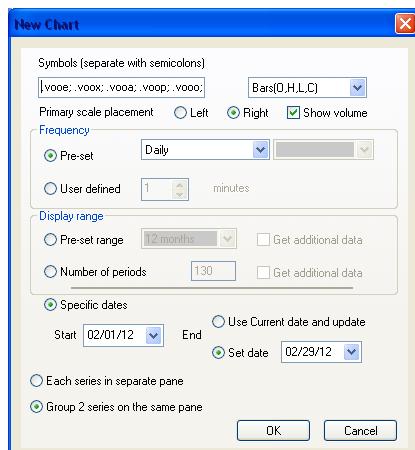
ISE Linkage

http://marketstats.ReportServer_MARKETSTATS/Pages/ReportViewer.aspx?%2fMarket+Stats%2fSpecial+Activity+Reports%2fFlash_Order_Post_Distributive_Linkage&rs%3aCommand=Render

To extract the exchange Volume from Thomson into excel you need the unique exchange codes.

Exchange	Thomson Code
CBOE	.VOOE
PHLX	.VOOX
AMEX	.VOOA
ARCA	.VOOP
BOX	.VOOB
NSDQ	.VOOO
BATS	.VOOK
C2	.VOOY
BX Options	.VOOJ

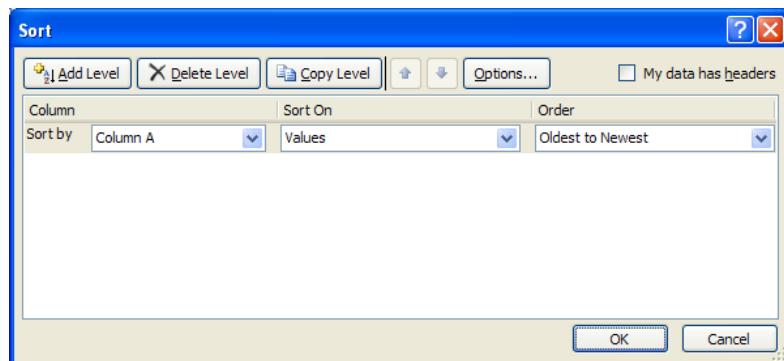
In Thomson, select the ‘Chart’ tab under the ‘Trading’ tab. You must “Add new chart”. Select basic. Then, you must enter each exchange code in order from the table above followed by a semi-colon.



Under 'Display Range', you can select the specific date range for the data needed. Select 'OK'. Now you must export this information to MS Excel. This can be done by selecting the 'Export to Excel' button in the top right hand corner of the chart window.

Once the new excel spreadsheet opens with the exchange volume, you must manipulate the data so it fits the Exchange Volume Data.xlsx template.

Begin by sorting the data by Date. It should be 'Oldest to Newest'.



Next you must delete all unnecessary data. This includes information under the "OPEN, HIGH, LOW" subheadings under each exchange. I must stress that the column should NOT be deleted, just the data under those subheadings.

Now you are ready to Copy & Paste the formatted data into the main spreadsheet (Exchange Volume Data.xlsx) in the "Exchange Volumes" worksheet under the previous month. Copy all data that is associated with a date. This excludes all headings.

Accounting for ex-dividend volume is a critical step. It is however one of the easier numbers to extract. Please use the following link to the ISE website for this information.

<http://www.ise.com/WebForm/viewPage.aspx?categoryId=533>

The time increment on the table should be set to Monthly. The start and end date should be populated with the month needed.

Once the data loads, select "Download to Excel." A pop-up should appear shortly. Select "Open" Once the excel spreadsheet opens, you must copy the table into (Exchange Volume Data.xlsx) worksheet Ex-Dividend Volume directly following the preceding month. Allow a two row gap between tables. This data will be referred to shortly.

Total Cleared Volume from OCC

Total OCC Cleared volume should be larger than the reported Thomson/Reuters volume for each exchange. This would be the discrepancy deemed to be linkage volume. You must now extract that volume number for each exchange by following this link:

<http://www.theocc.com/webapps/exchange-volume>

Similar to the Ex-Dividend Volume extraction from above, the report type should be set to Monthly. Then select the preferred month and submit query.

After the table is generated, the Exchange Total Volume column is solely what is needed for the report. Simply cut and copy the data for each exchange into the Exchange Volumes worksheet. The appropriate cell is marked **a)** in Table 1 found on the next page.

ISE Numbers

The ISE numbers do not have to be calculated in such a manner as they are data points that can be easily obtained from the Statistical Reports on our Intranet Site. Flash Order – Post

Distributive Linkage

http://marketstats/ReportServer_MARKETSTATS/Pages/ReportViewer.aspx?%2fMarket+Stats%2fSpecial+Activity+Reports%2fFlash_Order_Post_Distributive_Linkage&rs%3aCommand=Rende

Here, you must select the appropriate start and end dates for the time period needed. Select view report. Once it generates, please find the column/cell marked below. Highlighted in red is

the Linkage ADV for that specified period. On the Exchange Volumes worksheet, the ISE data is located on the far right. This can be cut and copied from that report and placed in the cell marked i) in Table 1. Finally, you must obtain the numbers from Step #4 and place them in the appropriate cells listed in Table 1.

Contracts Traded Post Auction	Contracts Traded Post Auction Due to PMMSteppingUp	Contracts Traded Post Auction PMMTradeReported After Linking Away
53,294	2,349	50,945
1,225,758	54,032	1,171,726

All data points from external sources have now been collected. The next step would be to calculate total volumes and ADV's for your selected time frame. I have attached an example of how the data should appear.

TABLE 1

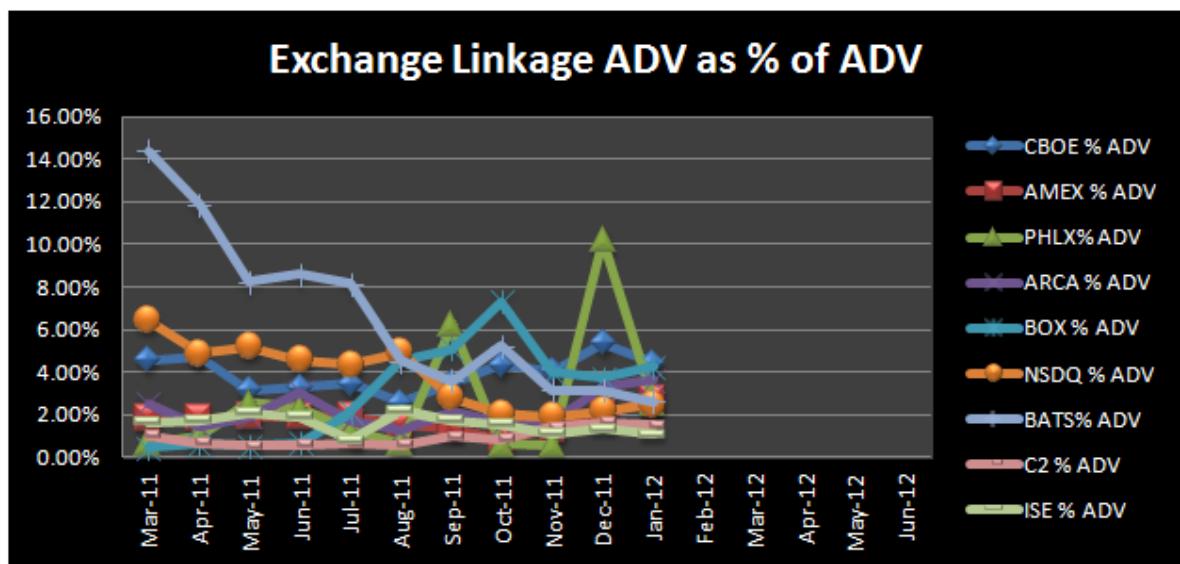
DATE	OCC	CBOE	CLOSE	LINKAGE	
03/01/11			4,013,988	-	a) OCC Monthly total volume
03/02/11			3,753,322	-	b) Ex-Dividend Volume. Please see Ex-Dividend Volume worksheet and match appropriate exchange/period
03/03/11			4,016,180	-	c) =a-b
03/04/11			4,524,649	-	d) =c / # of trading days in given period
03/07/11			4,100,403	-	e) Summation of Thomson Daily Volume for given period
03/08/11			3,979,693	-	f) = e-b
03/09/11			3,580,474	-	g) f / # of trading days in given period
03/10/11			5,715,870	-	h) = c-f (total linkage contracts for given period)
03/11/11			4,304,312	-	i) =h / # of trading days in given period
03/14/11			4,446,985	-	
03/15/11			7,556,196	-	
03/16/11			7,834,533	-	
03/17/11			5,613,529	-	
03/18/11			5,615,160	-	
03/21/11			4,480,436	-	
03/22/11			3,718,787	-	
03/23/11			3,640,726	-	
03/24/11			4,136,632	-	
03/25/11			4,468,546	-	
03/28/11			2,890,726	-	
03/29/11			2,895,050	-	
03/30/11			3,854,354	-	
03/31/11			3,376,708	-	
		a)107,417,338	e)102,517,259		
DIV		b)191,574	b)191,574		
Totals		c)107,225,764	f)102,325,685	h)4,900,079	
ADV		d)4,661,990	g)4,448,943	j)213,047	

Here we finally create the chart that is used to display each of the exchanges' average daily volume in linkage as a percentage of their average daily total volume. The table found in the worksheet labeled 'Results' extracts 2 data points (d & i) from Table 1, OCC ADV and Exchange Linkage ADV. Simply enter d) in column marked A and i) in column B in the appropriate period denoted on the far left. Column C = B/A. Or simply Ctrl C -> Ctrl V from a previous period. Data should be automatically populated in the chart. If this is not the case, to create the chart you must select the period column (hold Ctrl) and select the % ADV column from every exchange. Then insert a line graph.

TABLE 2

A B C

Period	CBOE OCC ADV	CBOE Linkage ADV	CBOE % ADV
Mar-11	4,661,990	213,047	4.57%
Apr-11	4,299,019	204,038	4.75%
May-11	4,001,591	125,452	3.14%
Jun-11	4,300,285	141,872	3.30%
Jul-11	4,341,431	149,572	3.45%
Aug-11	6,257,693	161,403	2.58%
Sep-11	4,727,271	162,929	3.45%
Oct-11	4,727,481	205,682	4.35%
Nov-11	3,998,495	160,785	4.02%
Dec-11	3,352,871	179,426	5.35%
Jan-12	4,292,496	190,920	4.45%
Feb-12			



Chapter 93. Market Operations Turnover

Turnover Link

At the beginning of the day, open and save the day's turnover by following this path:

My Computer

Market Ops Drive L:

Market Operations Folder

Market Operations Files Folder

Turnover Folder

Go to the appropriate date and open previous day's turnover

Delete all information relevant to the previous day (Market Events, Customer Service, Trade Reviews)

Go to 'Save As' and change the file name to today's date. The file name must be in that format to be able to post on the intranet.

Change the date and 'recorded by' field at the top to reflect correct information.

Reference Market Data announcements for any new listings, delistings, or corporate actions and make note of them in bold at the top of the 'Market Events' text box.

After Market Data announcements, daily events and observations should be recorded in chronological order. The following are items of interest and where they can be found:

ERS pages (ERS e-mails pertaining to options)

Opening width announcements (PrecISE market messages/ISE Alerts)

Trade reviews (PrecISE market messages/ISE Alerts)

Pulling quotes (MPT Order/Quote Puller tab)

of Trying orders and time that they cleared (Tally all symbols in Market Watch that had a trying order)

Significant movements of PMMs: Note the times they are not quoting in their bins and why

Any details related to Code Red events: PMM and EAM activity; information from COPS; contact with other exchanges

Technical issues at other exchanges (removing/including from the NBBO)

Any other events of the day that are significant to members or required detailed attention in MOPs (ex. large trying orders, member technical issues, large price improvement, significant trading volume by member or symbol)

Under the market events listed by time, PrecISE user sessions will be recorded at 4 different times. At 8:30, 9:30, 12:00, and 2:30, record the total number of PrecISE user sessions that is indicated at the bottom of the SDA PrecISE Console in System Statistics.

Throughout the day, make observations and ask for suggestions from other Market Operations Representatives to highlight specific customer service events. These should be noted in the 'Customer Service' text box. Examples are: significant price improvements for customers; the ISE reimbursing a member; detailed investigations by MOPS on behalf of customers. As much insight into the event should be provided.

There is a text box to record trade reviews, undeliverables, satisfaction orders, and code red events. Information will mainly be derived from the SOPS Console and other Market Operations Representatives. The details of most interest are:

Members reporting the issue (for trade review)

Symbol and series details

Actions taken (busted, adjusted, PMM took over undeliverable, rejected satisfaction order)

Members affected (besides original member in case of obvious error, undeliverable busts, code red events)

After 1:00, the Deutsche Börse stock information will be available. Go to the following website:
<http://www.boerse-frankfurt.de/EN/index.aspx?pageID=35&ISIN=DE0005810055>

Copy the 'Xetra' chart from the website and copy to the turnover under the 'Deutsche Börse AG' heading. You must right click the chart and select 'Format Picture,' 'Layout,' 'Tight,' and 'OK.' After that, you may adjust the alignment of the chart.

Use the price information table for Xetra on the right to copy and paste the relevant stats to the turnover.

Around 4:00, Market Data will provide Market Operations with an e-mail containing symbol conversion memo(s). Copy the attachments to the turnover under 'Symbol Conversions.'

After 4:15, the daily statistics can be gathered for the turnover. Referencing the Thomson ONE monitor, the following values will supply the necessary data:

.VOOIS = ISE Volume
.VOCIS = ISE Call Volume
.VOPIS = ISE Put Volume
.VOLIS = ISE/DE Stock Volume

Under the 'Market Overview' heading and 'Market Trends' tab, enter the following codes in the 'Page Code' field for the following data:

CALL = Most traded Call series
PUT = Most traded Put series
ICALL = Most traded Index Calls
IPUT = Most traded Index Puts

Additional ISE Statistics are found in CIBOIS, by selecting the 'Market' menu and 'Statistics.' The following information is provided:

Index Volume
Index Call and Put volume
Second Market Volume
FX Volume

After gathering put and call volume for the day, calculate the Total P/C ratio and the Index P/C ratio. This can be done by dividing the corresponding put volume by the call volume.

At 4:30, Market Operations receives an e-mail with the subject: 'MOPS Daily Combex Stats.' Copy the value for Total Combo Vol and paste it in the corresponding field in the turnover.

The Industry Statistics for market share can be found on the Market Share Monitor or in the evening page that is sent out. The monitor can be found on the intranet at:

<http://marketstats/msm/>. Record each exchange's market share in the first table on the turnover.

Make note of any unusual market shares and the reason. For example: dividend spreads on PHLX lead to increased market share.

At the end of the turnover, an overview of three market indicators is provided: the DJIA, SPX, and VIX. The charts and market information can be found on the CNBC website. Copy the 1 day chart from the website and paste it in the turnover. Then, copy the day's summary data directly below the chart and paste it in the turnover under the corresponding chart. Each chart can be found at:

DJIA: <http://data.cnbc.com/quotes/.DJIA/tab/2>
SPX: <http://data.cnbc.com/quotes/.SPX/tab/2>
VIX: <http://data.cnbc.com/quotes/VIX/tab/2>

After all data has been compiled and the turnover is complete, save the document and post it to the intranet. This can be done by:

File, Save As
Right click the day's turnover and 'Copy'
Go to My Computer
Turnovers Drive I:
Marketops Folder
Go to corresponding Year and Month
Right click inside the window and 'Paste' the turnover document.

Chapter 94. QCC Report to Management

One the closely watched Order Types that is monitored at the ISE is the Qualified Contingent Cross (QCC) and Combo QCC.

A Qualified Contingent Cross (QCC) mechanism allows a member to cross option leg(s) of a stock/options order at a price equal to or better than the NBBO and ISE BBO while trading the stock leg in equity market outside of ISE.

Qualified Contingent Cross Order is comprised of an order to buy and an order to sell at least 1000 contracts. It allows for the execution of a net-priced transaction that is to be executed on two different markets and satisfies the following Reg NMS requirements of a qualified contingent trade:

At least one component must be an NMS Stock

There is a product or price contingency that has been agreed to by all of the counterparties to the trade or arranged for by a broker-dealer

The execution of one component is contingent upon the execution of all other components at or near the same time.

The specific relationship between the component orders (the spread between the prices of the component orders) is determined when the contingent order is placed.

The component orders bear a derivative relationship to one another.

The transaction is fully hedged.

A Qualified Contingent Cross Order is an order, satisfying the requirements of a “qualified contingent trade”, which results in the execution of the buy and sell orders without auction exposure.

The order can be immediately executed if priced between the IBBO or at the IBBO as long as there is no priority customer at the cross price.

A limit order priced in regular trading increments. The limit price must be at or between the NBBO. It may be at the ISE BBO if there are no priority customer orders resting at that price. Must be a minimum of 1000 contracts.

If the order is not executed, it will be immediately cancelled. It will not rest on the order book. This is important to management because it also allows the ISE to complete for large orders and to be compensated for them trading on the here.

We also assist our business development and surveillance colleagues

We first use **MPT/ Order Status/ Advanced Search** to query the orders/fills.

Under the Advanced Category column select both the *Combo Qualified Contingent Cross* and the *Qualified Contingent Cross*. Be sure to use the shift key to select both.

Under the Side Types columns select **Buy**. Selecting only the buy will narrow down the query.

After the search is selected and the grid is populated sort by the execution time.

In the MktOps shared drive in the folder QCC Busts and Adjusts, all the past QCC executions and folders are stored.

Select the Excel spreadsheet called QCC and you will be able to view all the past QCC Recaps. There are tabs on the bottom for the past months executions.

Be sure all columns are unhidden.

In MPT highlight, cut and past the executions out of the grid and past them into the spreadsheet starting in column B.

The current format used is business unit, instrument, trade quantity, order category, and time of event. Add two extra columns for “On Ticket?” and Details. All other columns should be removed.

At this time the “Time of Event” does not properly format with the “hhmmss: AMPM format.” This will be changed in a future release.

Follow the prior day's column heading as a guide to the columns that are needed. You can bold and underline the headers to make them easier to view.

At the present time, there is no column in MPT that populate with the stock details. This will be coming in a future release. Finding this information is a **manual** effort.

Open a Query Viewer window and search to verify the member correctly populated the ticket with the stock details and required by Surveillance.

In QV select the Option investigation drop down, and then search for the details of the trade. If the print is QCC (single leg) executions then cut and paste the instrument details into the instrument field in QV.

If it is a Combo QCC (spread), populate the product in the product field.

In the "Msg Type" dropdown select order type "Order Record."

Narrow down the search time to receive quicker performance (be conscious of the AM and PM time searches) and if needed for option legs in active products like SPY. Additionally, adding the business unit (BU) will also narrow the search.

Select the order record and the detail window at the bottom of the window will populate.

Expand the "Value 3" column and if the member properly entered the information it will appear in the "Agreement Detail" field with the shares, price and delta.

Enter a yes or no into the "On Ticket?" window.

If it is not populated a follow call must be made to verify the properly executed the stock. Precise at this time does not validate before sending the order out to the street.

PrecISE at this time does not allow for cancel correcting the execution in "Trade Correction" so retrieving the information is the responsibility of MktOps.

Each execution will need to be manually searched this way. MktOps will need to periodically search throughout the day until the 4:15PM close.

At the close, Mkt Ops will then need to enhance the format on the spreadsheet.

Sum the trade quantity.

First each "Combo" side needs to be added into the total volume. Select a combo and view the ratio. This is displayed in the middle of the MPT Order Status grid

If a 1x to 1x ratio, then double the volume amount. If 1x to 2x then triple it, 1x to 3x quadruple, etc.

Erase the product and move it to the instrument column. Once the list is completed then remove the Product column completely. Highlight, right click delete, shift cells left.

Next, go to the prior day's column "A" that provides the members full firm name.

Right click to copy the prior day and then paste it into the present day column "A." The column has a formula and will fill in all the member names when you drag down on the cell.

Then highlight and copy and paste the "Total Contract and Total Sides" box. It will automatically tally populate the box with the sum of the trade quantity in column "D."

Go to the top of the spread sheet and "Hide" column "B" (BU). Right click and select "Hide."

Each member that has not populated the trade details will need to now be called to retrieve the information.

Member will search for this and provide MktOps with the details which are then entered on the spreadsheet.

Once complete MktOps then needs to go back into the shared drive under the month and present day and search if there were any busts and or reductions. Information is entered by all MktOps reps.

If a reduction was made, have it reflected on the spread sheet.

If the trade was busted then highlight the row in yellow, add another column and enter the word "busted"

Reduce the sum of the trade quantity total by the amount busted.

Custom sort the spreadsheet by the Firm, product, time of event and then save.

Close the spreadsheet on the production windows reopen in on the PC.

Copy the Firm, Instrument, Trade Quantity, Order Category and Busted (if any).

Paste and format into a new Outlook mail.

Enter into the subject field QCC volume for mm/dd and the total contract and total sides.

Mail it to:

Katz, Gary; Ilyevsky, Boris; Friel, Daniel P.; Amar, Daniel; Hightower, Jeanine; Rathi, Kapil; Endo, Geralyn; Martin, Tommy; Smanik, David; He, Chris; Bhotika, Roli; HelpDesk

Once complete a second similar mails need to be created.

Include Firm, Instrument, Trade Quantity, Order Category, Busted, On Ticket? and Details.
The total is not needed.

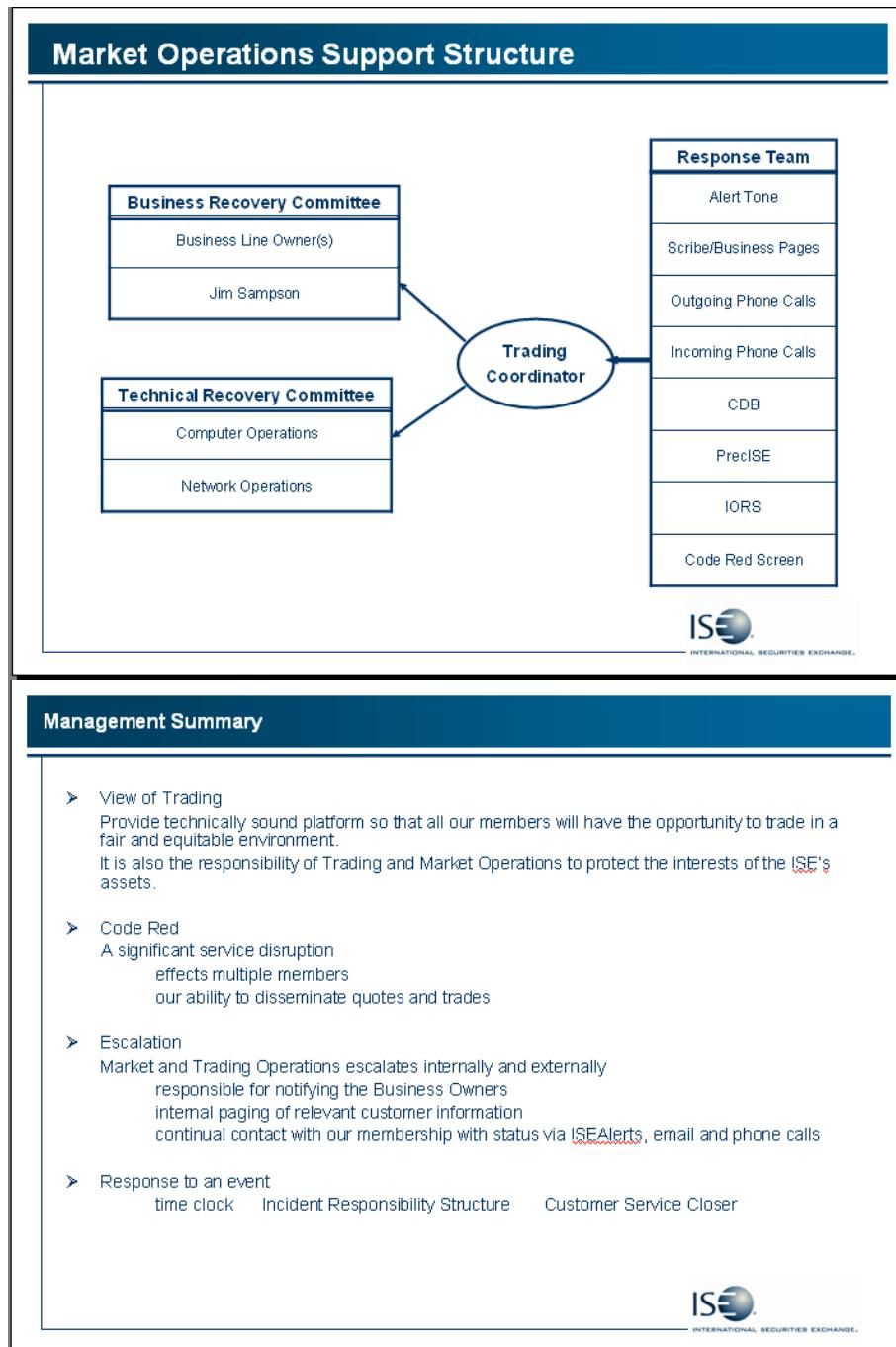
Paste and format into a new Outlook mail. (use the table tools, design and select light blue).
Enter into the subject field QCC details mm/dd/yy

Mail it to:

Amar, Daniel; Essafi, Khalid; Fitzsimmons, Mollie; Rathi, Kapil; Hightower, Jeanine;
*MktOpsReminder Group

Chapter 95. Managing a Code Red Incident

Below is an overview on the flow that takes in the event of a Code Red.



Code Red Incident Phases

Incident	Diagnose	Recommendation	Take Action
Identifying a Problem:	Determine:	Details as known:	Decision:
Increased Member calls asking specific questions	Severity	Who, What, Why, How long?	Risk assessment and buy-in by BRC
Indications on monitoring screens	Members/Systems affected	If minimal trading impact, monitor situation	Time allowed for completion agreed on by TRC
Calls from COPS or NOPS	Internal/External reporting anomalies	If impact is detrimental:	Restart or Halt to Restart
	Execution or quoting delays	Evaluate process and length of restart time	Confirmation of event resolution
	MOSICAL	Determine need for fallback procedure	Post-mortem to determine after market follow up
		Discuss with BRC criticality of component	Document steps taken to resolve
		Refer to Decision Matrix	



Code Red Matrix

Halt	Potential System Disruption	Monitor
Reliable Transaction Router	Reliable Transaction Router	Reliable Transaction Router
Gateways	Gateway	Gateway
OMNet	OMNet node	OMNet node
BSIs – Precise and IORS2	BSI – Precise and IORS2	BSI – Precise and IORS2
IMP Severe Slowness	CL Trading Listener	CDB Dual line failure
Circuit Breakers	Combex/Combex ST	ROM – Rapid Opening Mechanism
CL Trading Listener	IVS – Index Value Server	Precise data feed
CL Shadow	Linkage	SOPS
OCC Broadcasts		
OPRA Inbound/Outbound		
Information Dissemination		



Market Operations Incident Responsibility Structure

Alert Tone/Scribe

- Trigger audio alert and send ERS Page to all staff of escalation issue requiring relevant personnel to respond

Outgoing Phone Detail

- Representatives assigned to call Members in pre-determined groups and relay information and status

Incoming Phone Detail

- Representatives assigned to receive calls from Members and relay information and status
- Responsible for providing account and order details, order cancellation

Order Entry Exchange Access

- API – allows Members to connect directly to the Central Exchange System for quoting and order routing
- IORS – provides order entry, order mgmt, and trade reporting functions to EAMs
- PrecISE – ISE proprietary trading system that provides order entry and mgmt, as well as clearing allocation functionality

Code Red Monitor

- Display of internal pages, system status, and Members that have called into the desk



Emergency Monitoring Tools

Phase	System Connection	Login	Order Entry/Routing	Order Confirms/Executions	Clearing
Error	•Exchange Unavailable/ No Connectivity	•Cannot login	•Cannot get orders to the book or cancel	•No acks back to Member •No execution reports	•Execution reports not going to OCC
Market Operations Internal Monitor	•Cameron/ MagniFIX •PrecISE SDA •IORS2 SDA •Order/Execution counters	•Password reset •Application update/CDB •Forced logout	•Checks premarket for order entry •Tests throughout the day •Throttling •TPS limits	•Order history screen •BSI front end counters	•ENCORE

Enhancements required for SDAs, MagniFIX, Market Place Tool, SOPS, System Status Monitor



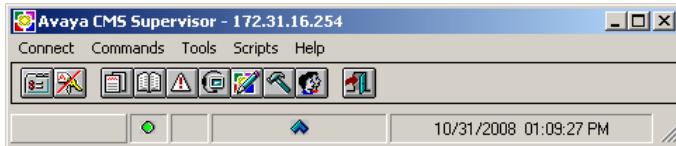
Post Event Customer Service

Once the incident has been resolved and the affected systems normalized, Market Operations takes the following steps:

- Contact Members that have called the desk or are in a designated contact group
- Communicate out Exchange wide that the matter has been resolved
- Respond to any emails or IMs that were received during the time of the system disruption
- Send Members any order or trade information requested
- Compile customer satisfaction requests for review and submission



Chapter 96. Avaya CMS Supervisor Tool



Part of the Avaya phone solution is a supervisor tool to monitor some of the inflows and outflows of customer calls. The reports contained are canned reports that were included in the package. We are in the process of developing them right now.

Each Market Operations Rep has a unique log-in they need to enter each morning. Once they are logged in they can start receiving calls. If they are working on an issue they require time off the phones they can go into "AUX" which takes them out of the incoming phone queue.

1. Meetings
2. Project Work
3. Customer Visit
4. Trade Issue/ Trade Review

Once in the queue the intelligence of the phone system will shift incoming calls to whoever is most idle.

Agent Summary Monthly - Duffy, Brian																			
Report Edit Format Tools Options Help																			
Agent: Duffy, Brian																			
Month Starting	ACD Calls	Avg ACD Time	Avg Occup	% Agent w/o ACW	Extn In	Avg Extn	Avg Out	ACD Time	ACW Time	Agent Ring	Other Time	AUX Time	Avail Time	% Skills Avail	Staffed Time	Trans Out	Held Calls	Avg Hold Time	
Totals	535	1:57 :18	20	17	103	2:19	363	1:33	17:23:11	2:42:13	:46:15	:27:20	82:22:38	85:30:57	100.00	189:12:34	72	97 :19	
3/1/2008	535	1:57 :18	20	17	103	2:19	363	1:33	17:23:11	2:42:13	:46:15	:27:20	82:22:38	85:30:57	100.00	189:12:34	72	97 :19	

Below are links to more detailed explanations:

[J:\mkt operations\Align_ISE_MOPS_QRG_041201 \(2\).doc](J:\mkt operations\Align_ISE_MOPS_QRG_041201 (2).doc)
[J:\mkt operations\Align_ISE_MOPS_SQRG_041117 \(2\).doc](J:\mkt operations\Align_ISE_MOPS_SQRG_041117 (2).doc)

[J:\mkt operations\CMS_ReportDesign1 \(2\).pdf](J:\mkt operations\CMS_ReportDesign1 (2).pdf)
J:\mkt operations\CMS_ReportsR131.pdf

Chapter 97. ITIL

Project Streamline is a customized IT Service Management process improvement initiative that is being designed to enhance our operational service management disciplines (e.g., change management, problem management and incident management to name a few).

IT Service Management (ITSM) is defined as the implementation and management of quality IT services that meet the needs of the business. IT Service Management (ITSM) is performed by IT service providers through an appropriate mix of people, process, and information technology.

This project initiated earlier in the year and is expected to continue for a duration of 24 – 27 months. The early focus of the project has been organizing an ITSM competency center where we nominated several process owners that would be accountable to the project on a consistent basis. There are 12 ITSM processes so we had to nominate several individuals both in and out of technology to take part in this newly formed competency center.

ISE has implemented a customized version of ITIL (Information Technology Infrastructure Library). ITIL is a complex framework of concepts, processes, and policies for managing information technology (IT) infrastructure, development and operations. With this, the goal is to:

- Define and leverage a clear technology organization structure
- Establish clear team objectives and Key Performance Indicators

Vision Statement:

Implement a customized ITSM process discipline for the organization that will enhance operational service management objectives while leveraging staff expertise and teamwork.

Mission Statement:

- We will commit ourselves to a successful implementation
- We will work as a team and eliminate existing barriers between groups

Accomplishments

- Weekly Incident tracking meeting and report developed to provide transparency and closure to incidents.
- Daily Incident and Problem management handshake to ensure turnover for root cause analysis of any incident.
- Developed formalized problem management process for identifying root cause of incidents.
- New change management policies developed to ensure environment integrity.
- Established Change Advisory Board (CAB) for change management governance.
- Implemented new workflow processing tool (Service-Now.COM) for streamlining process workflow.
- Completed Incident, Problem, and Change Management Process Designs (Phase 1 complete)

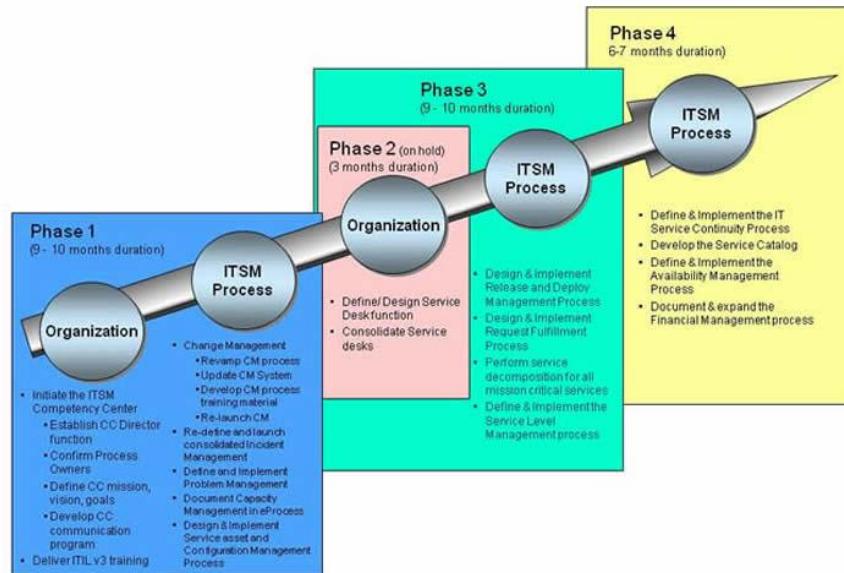
Future Objectives

- Service Level Management, Request fulfillment, and Release and Deployment processes starting (Phase 2)
- Implementation of Change, Problem, and Incident Management into Service-Now.Com Tool.
- Complete design of Configuration Management and CMDB for better tracking of environment.
- Working with TMS/DBS for refined member service tracking database

Service Now

We have purchased a new work flow tool from Service Now. This tool will strengthen all of the processes, beginning with Change Management. This tool will ensure fall back and test plans, provide metrics and statistics, and bundle changes into change windows. The result:

- Reduced downtime of incidents associated with change
- Proactive planning
- Calculated and reduced change risk



Chapter 98. Ahead of the Market Instructions

Go URL: <http://global.factiva.com>. Username: **ISEmkt**. Password: **MktOps**
The Web site brings you immediately to the search builder.

Go to Saved Searches. Click on Run Search on any of the saved topics.
Select article(s) you want to add.
Click on the “Newsletter (last) icon (looks like a newspaper).

To the right of the date column, hover the area and select the “Clear” button on the pop-up window. This clears the template for the prior day.

Go back to the same place and select “Add.”
Add the article to the pertinent topic. It will say items have been added. Select close.
Select other articles from the saved searches.

Click Add. *Do not click clear again, or the template will re-clear.*
Repeat steps until template is full.

Another way to find articles is by selecting “News Pages” (Top Left). Click on an article you like and if you want to add it repeat steps 5-9.

For specific topics, use the search builder. You should then type in the key words to fill the remaining sub headings. (For example: To find articles for the industry section, you could type “GM” or “Goldman Sachs” into the free text window.)

Publish the newsletter. Go to Tools (on the top right) > Newsletter
Click Edit change the present date.
Click Add Link (top right)

Go to http://online.barrons.com/public/page/barrons_econoday.html
Paste this link in URL.
In Title, type: **Barron's Economic Calendar: Today's Events**.
Click “Save”

Repeat steps with different links below.
<http://www.earnings.com/highlight.asp?client=cb> - Type **Earnings Recap**

http://seekingalpha.com/news/market_currents?source=headtabs – Type **Market Currents**

<http://seekingalpha.com/?source=headtabs> - Type **Wall St. Breakfast: Must Know News**

<http://dealbook.nytimes.com> Type **DealB%k**

http://www.thestreet.com/dividends/index.html?cm_ven_int=more **Dividend Calendar**

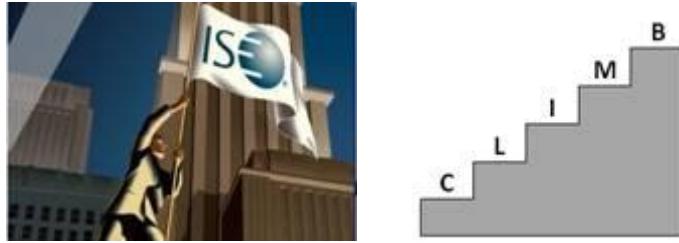
<http://www.optionseducation.org/default.jsp>. Select an informative topic. Paste this link in URL. In Title, type: the name of the topic.

<http://www.cnbc.com/id/28282083> **CNBC Options Action**

<http://www.investopedia.com/?viewed=1>. Find a “Word” or “Term of the Day.”

<http://quotations.about.com/cs/inspirationquotes/a/Business1.htm>

Click Publish (bottom right)
Select "Create edition", type in today's date.
Click "Create Edition."
Enter the proper date
Select "Over ride Edition"
Go to File > Send Page by E-mail
If that doesn't work, Select "Download" and then cut and paste it into an email.
Right click and choose "select all" and then "copy"
Open Outlook and select a new mail and paste the web page.
Insert the picture(s) below on to the mail.



Find the ISEE email that is sent the night before at 4:45 PM. Paste the sentiment into the bottom of the email.
Populate the subject heading with: "Market Operations: Ahead of the Market"
Go to the bottom of the page and cut and paste the "added links" to the top of the page.
Under the picture and check the spacing between each.
Insert the ISE Sentiment Index (ISEE) from the mail sent at 4:45:am
Send to staff@ise.com

Deleting a Search:

In Search Builder, select "Saved Searches."
Select "Delete Search."
Click "Saved Searches" to refresh

Creating a search with a new source:

Select search builder
Click on source
Click "Edit" after any source
Click "Create New List" in blue on the top, right-hand side. Enter Name. Click Save
Go to the drop-down in Select Source Category
Select a source by clicking on it. Hold down the control button to select more than one source.
Click Add, Click Done

**You will be brought back to the search builder. Your new search should appear in the drop-down menu of Source.*

Saved Searches:

After completing a search:

On the top, right-hand side of the search window, you will see three options in grey: "Save Search", "Save as an alert" and "modify" search. Click Save Search.
You will be prompted to title your search. Search titles must be 25 characters or less.

Appendix & Links

- 1) [Market Stats Dashboard](#)
- 2) [Market Information Circulars](#)
- 3) [Member Website](#)
- 4) [Latency Statistics](#)
- 5) [Schedules and Fee Notices](#)
- 6) [Market Operations Call Tree](#)
- 7) [ISE Call Tree](#)
- 8) [ISE Org Charts](#)
- 9) [Market Operations Tools Business Requirements](#)
- 10) [Presidents Letter](#)
- 11) [ISE Market Data](#)
- 12) [Stock MPID on PrecISE](#)
- 13) [OCC Clearing Corp Member Information](#)
- 14) [The Options Clearing Corporation](#)
- 15) [The Options Industry Council](#)
- 16) [ERS User Guide](#)
- 17) [FIX](#)
- 18) [Financial Terms](#)
- 19) [ISE Publications](#)
- 20) [FTP Handling](#)
- 21) [PrecISE User Guide](#)

- 22) [Core Trading System](#)
- 23) [PrecISE](#)
- 24) [IORS](#)
- 25) [Code of Conduct](#)