Market Replay Member Firm User's Guide

Version 7.0

Disclaimer

Change Notices

The following change notices are provided to assist users of the CBOE*direct* market replay system in determining the impact of changes to their processing.

If you have any questions or review comments about this document, please contact Odalys Castro at (312) 786-8817.

Date	Version	Description of Change
4/24/09	7.0	- Removed the capability to change passwords.
		- RSA token value is required for login.
		- New order filtering capabilities.
2/05/08	6.0	First version of the Member Firm user's guide.

Table of Contents

Introduction

Purpose

This user guide was written to assist Firm users in utilizing all of the features of the Market Replay system using a web browser.

Intended Audience

This user guide is intended for CBOE Member Firms that are interested in Market Replay functions for CBOE*direct*.

Conventions Used in this Guide

The Market Replay system for CBOE*direct* was designed so that you can perform all of your Market Replay activities by trading session. More than one Market Replay window can be active at the same time.

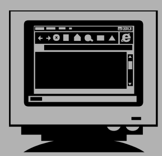
There are several conventions used throughout this guide to help trigger important information:

Bolding Used to highlight menu selections (e.g., **Login**) and button names (e.g., **Update**)

Note: This notation is used to indicate important information you should note when performing the associated function.

Valid Codes & Definitions

This graphic will appear in the margin when there is information relating to valid system codes and definitions.



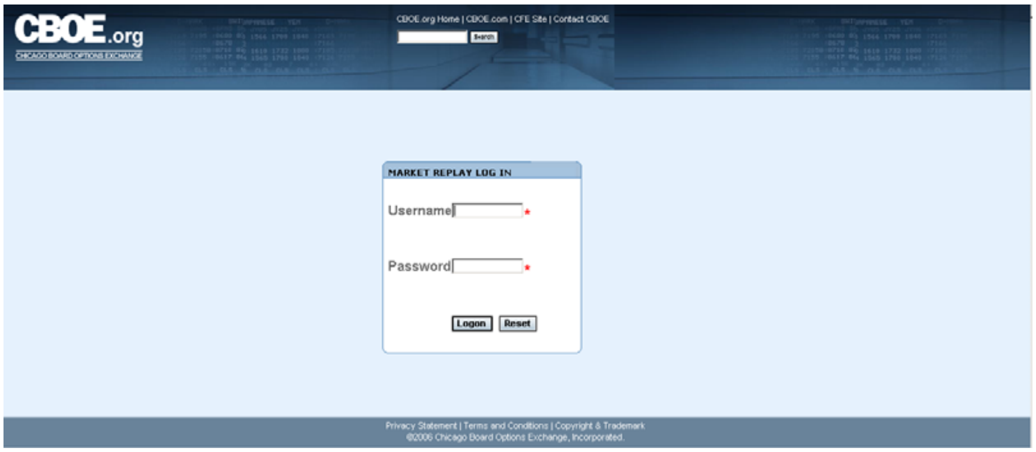
Section 1:
Market Replay

This section of the user guide will direct you through all the functions of CBOE's Market Replay system using a web browser.

Getting Started

To launch the Market Replay application, enter the URL: http://marketreplay.cboe.com/ on your web browser.

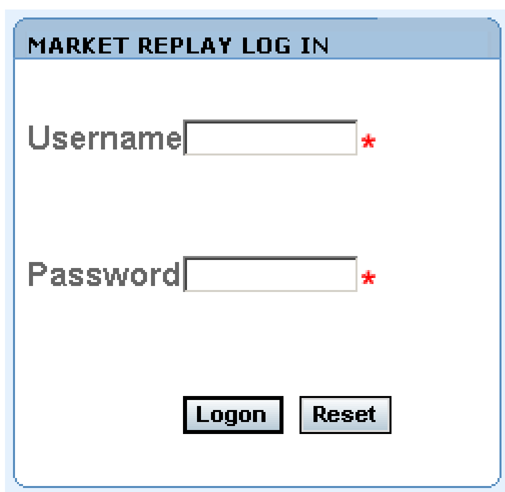
The following Login window will display.



Login In order to login to CBOE's Market Replay application, you will need to acquire, from CBOE, a valid user name, password and a RSA SecurID token value.

Enter your **Username**.

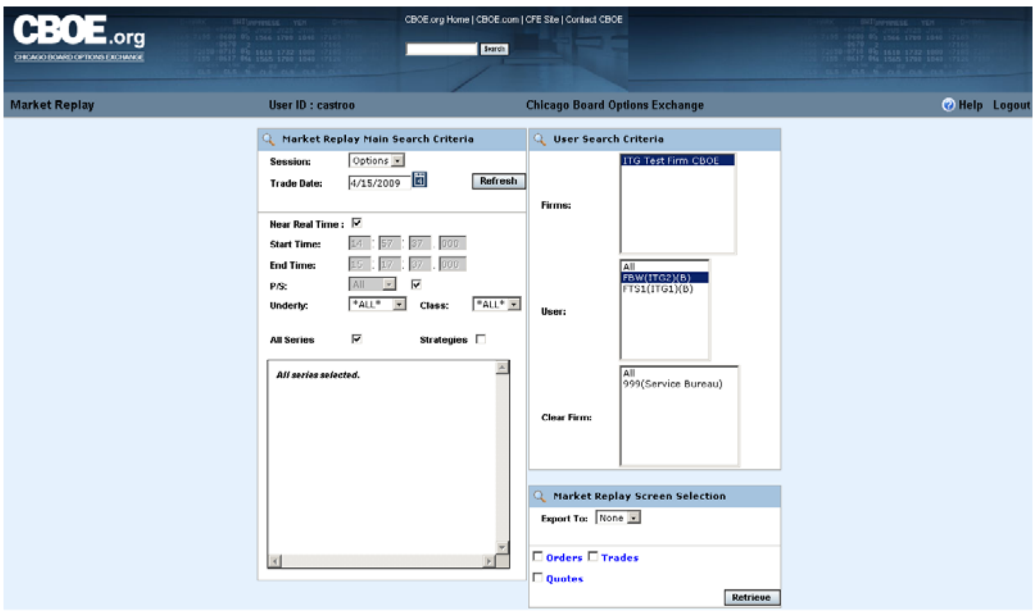
In the **Password** field, type in your password followed by your RSA token value**.** Do not enter a space between the password and token value.



If you incorrectly typed in your Username or Password, click **Reset**. The login window will clear. Re-enter your User name. Re-enter your Password followed by your RSA token value. Click **Logon**.

If you get a message indicating **Next Token Mode** when you login, please do the following:

- Open a browser and go to http://rsa.cboe.com
- Enter username and passcode when prompted: Enter the code displayed in the RSA SecurID window.
- You should receive a message that they are in next code mode.
- Be sure to wait for the RSA software application to flip to a new 8 digit tokencode, then enter that new tokencode.
- You should now get a message that they've been successfully authenticated.
- Please wait 90 seconds before attempting a login to Market Replay.
- After a successful login, Market Replay's main window will display.

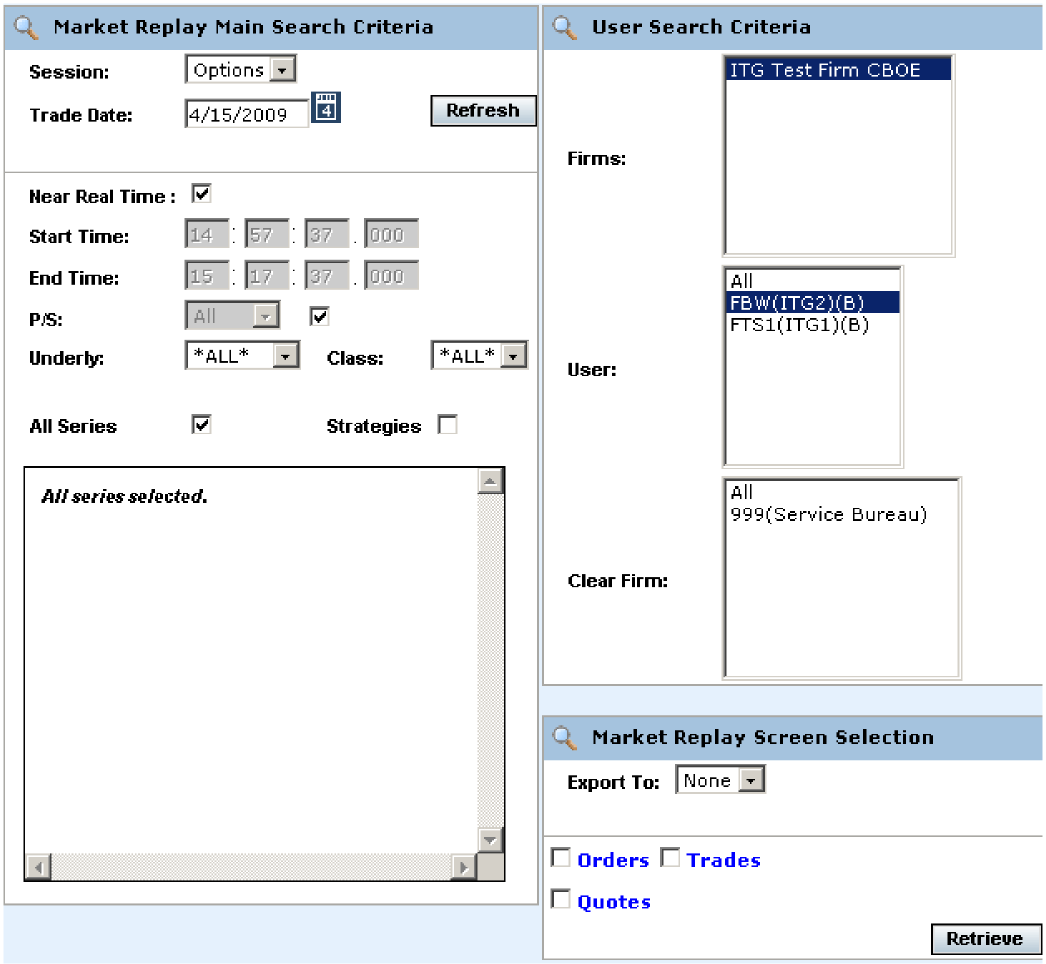


From this window you can query CBOE*direct's* real-time and historical trading information for your Firm.

You are now ready to use Market Replay's functionality.

Display Trade Information

The Market Replay system allows you to retrieve your Firm's real-time and historical trading information for CBOE*direct*. Historical information is maintained for three years.

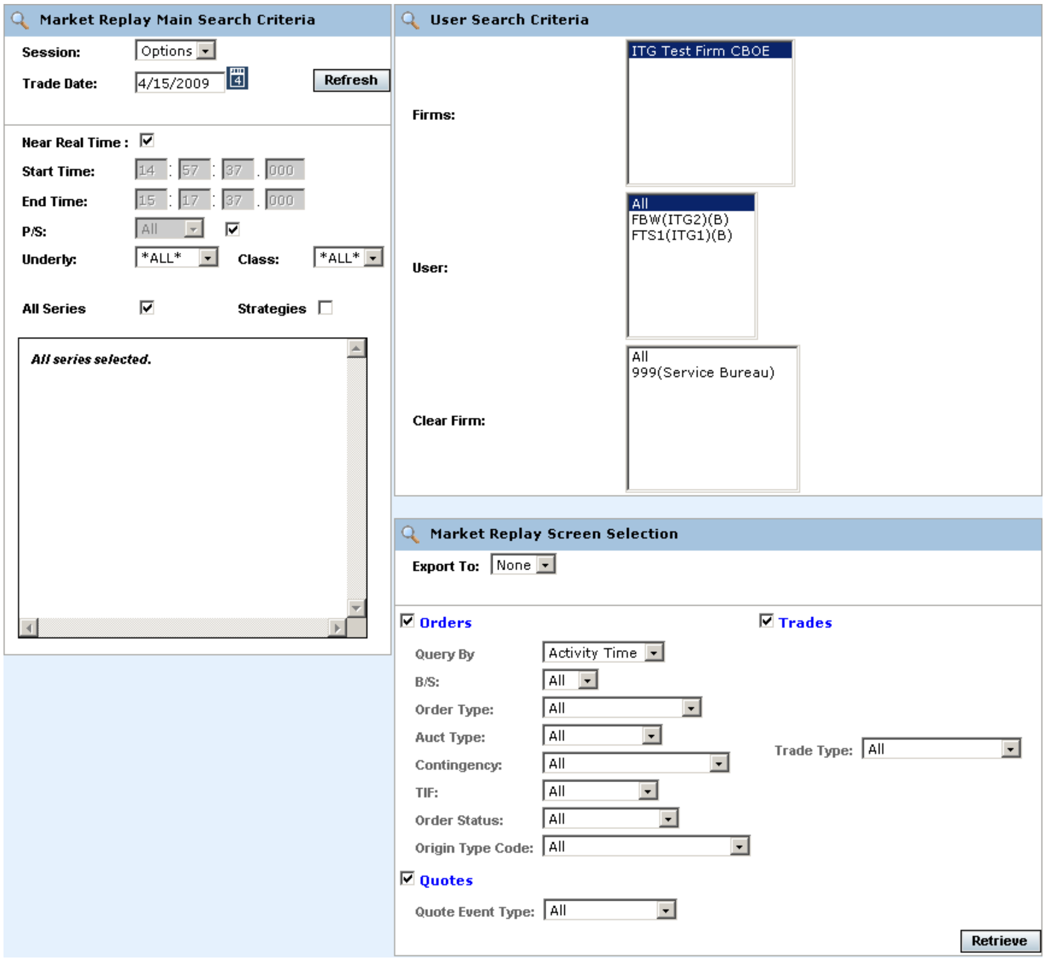


Trading information is available based on the security access setup for your Firm.

Selection Parameters

The Market Replay window allows you to specify the type of trading data you wish to view by session. The window defaults to the Options session and the current business day.

To easily understand the data represented in Market Replay, the window displays are presented as single data types (i.e. Trades) rather than combination displays (i.e. Trades & Orders).

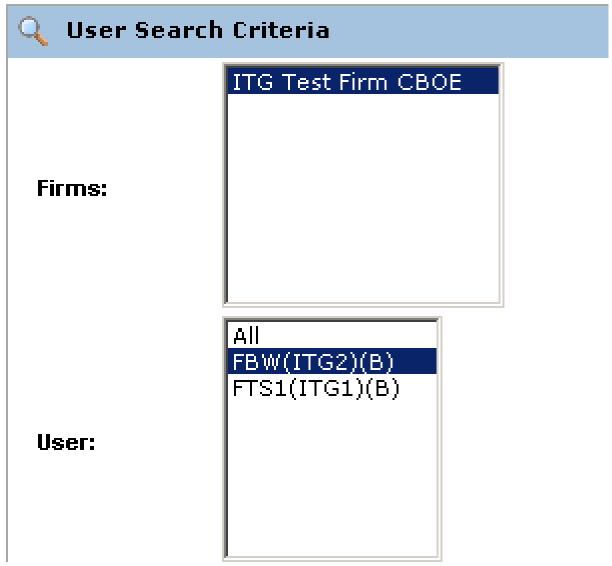


The Market Replay window is split into three panels: Market Replay Main Search Criteria, User Search Criteria and Market Replay Screen Selections. This window is used to set limitations for your data request.

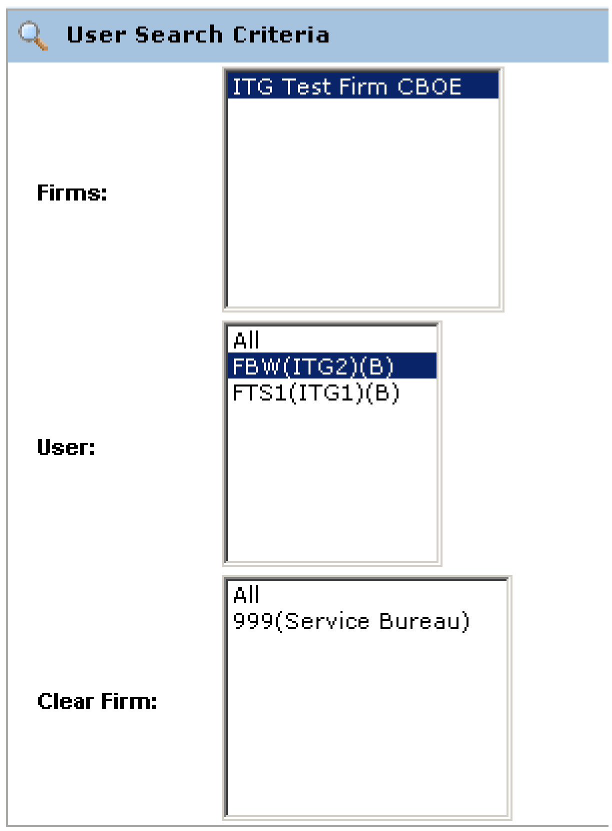
The Market Replay Main Search Criteria section of the window allows you to select:

- The session and trade date
- Near real-time monitoring or a fixed time range
- Underlying and Class selections or select classes by Post and Station (P/S)

The User Search Criteria section allows you to filter your Market Replay requests by Firm, Market Maker, or Clearing Firm. The window defaults to display your Firm name, your Firm's users and Clearing Firms.

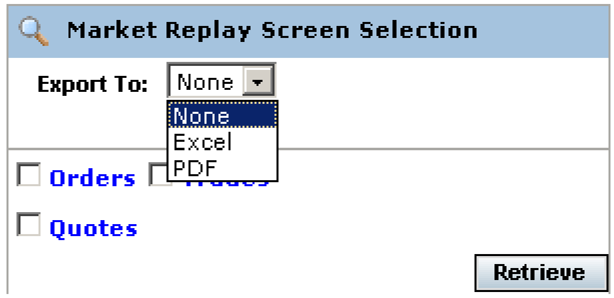


If you select only one user from the User list, only the Clearing Firm for that user will display in the Clear Firm list box.



The Market Replay Screen Selection section allows you to filter your Market Replay requests by Orders, Trades and Quotes.

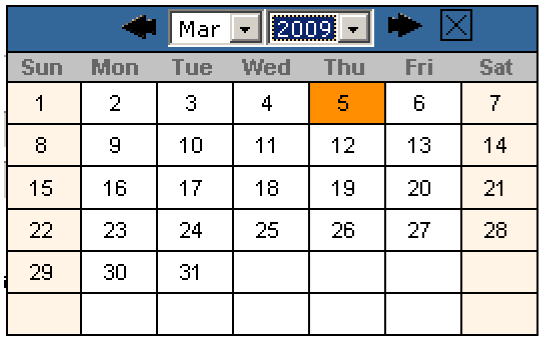
You can also export the data to Excel or PDF formats.


Market Replay Screen Selection
Export To:
None
None
Excel
PDF
Orders
Quotes
Retrieve

Orders Market Replay allows you to retrieve your Firms order information. Make your selections from the **Market Replay Main Search Criteria** section of the window.

- Select the trading session from the **Session** drop down list.
- The date of the request defaults to the current business day and is displayed in the **Trade Date** text box.
- To choose a previous trading day, click on the calendar button. The following calendar window will display.

  Note: The data warehouse maintains trade information for three years.

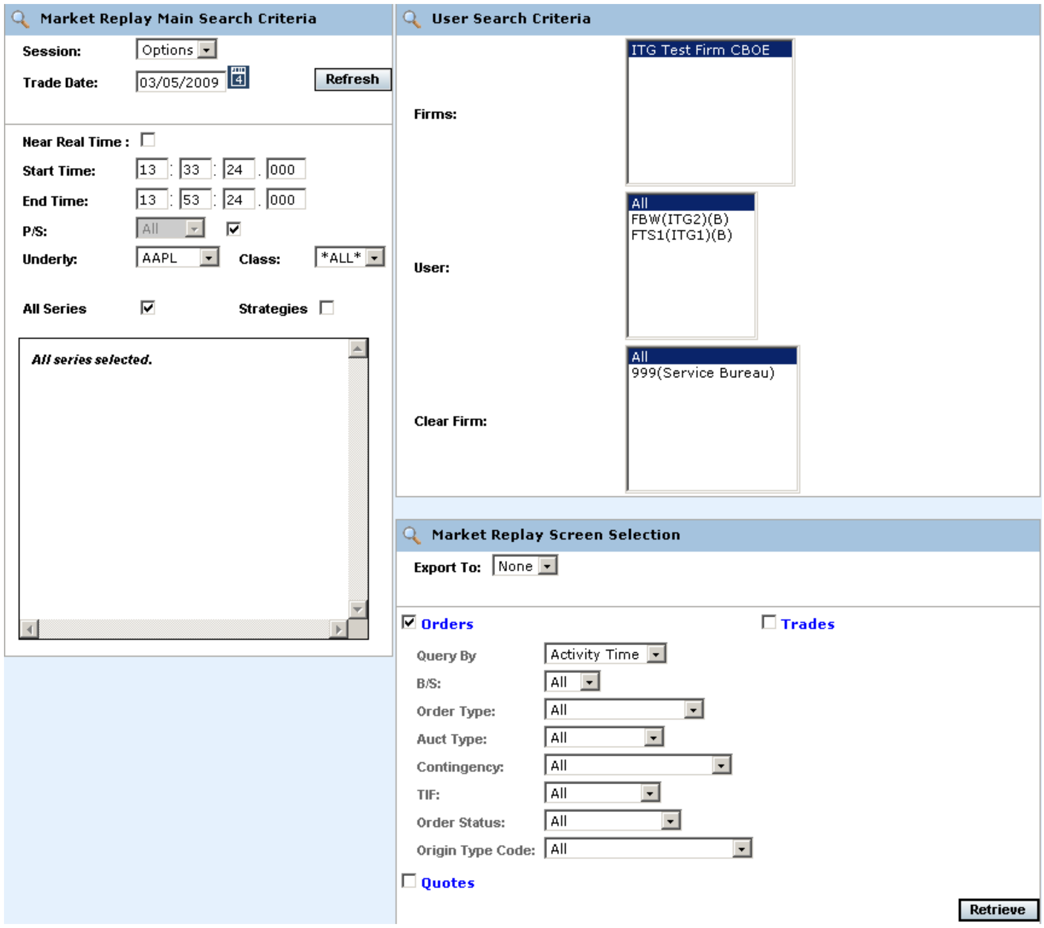


- Click on the trade day you wish to query. The date will display in the **Trade Date** text box.
- Choose the time of your request as near real time by selecting the **Near Real Time** checkbox. If you would like to select a fixed time range, deselect the **Near Real Time Monitoring** checkbox. Enter the **Start Time** and **End Time** by, hour:minutes:seconds:milliseconds (i.e. Start Time: 10:48:00:000, End Time: 13:55:00:000).

  Note: The maximum valid time range is 20 minutes.

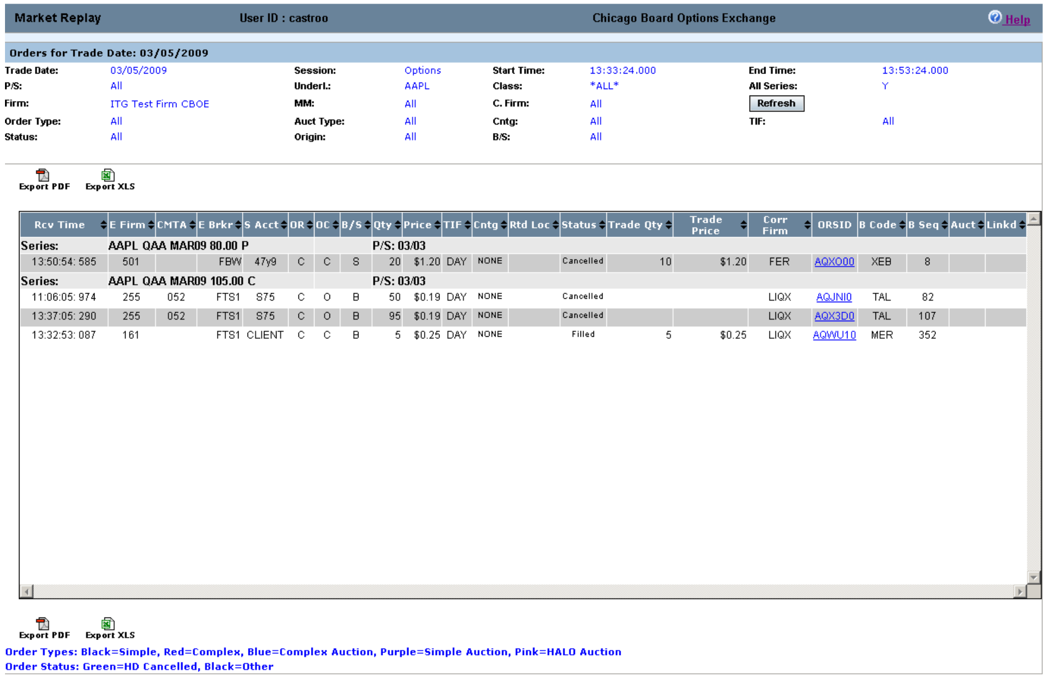
- Class/Series selection by post and station (**P/S**)
  - To query all the class and series at every post/station, select the **P/S** checkbox. The **P/S** drop down list will gray out, defaulting to query **ALL** post/stations.
  - If you wish to generate data for all the class and series activity for a specific Post and Station, select the Post/Station from the **P/S** drop down list box.
- Class/Series selection
  - Select the underlying security from the **Underly** drop down list box or select a class from the **Class** drop down list box. Select **ALL** for both to retrieve all class and series information.
  - Specify the series you are interested in viewing by clicking on the corresponding checkbox.

    Note: You must select a series, clearing firm or broker in order to retrieve the data.



- To further filter your request, select to retrieve **Orders**, **Quotes**, or **Trades**. Select **Orders**.
- You can further filter your order requests by: Query (Activity Time or Receive Time), Buy/Sell (B/S), Order Type, Auction Type, Contingency, TIF, Order Status or Origin Type Code. Make your selections from the corresponding dropdown lists. The default for the filters is **All**.

- To save the query results to an Excel or PDF format, select either format from the **Export To**: drop down list. For export details, refer to the Exporting Data section, page 31.
- If you are satisfied with your selections and would like to view the data, click **Retrieve**. The **Orders** window will display with the requested data.



The example above displays all the order activity that occurred in the W_MAIN session for options on March 5, 2009 from 13:33:24.00 to 13:53:24.00 for all the Call and Put series in the AAPL underlying class. Market Replay gives you the ability to sort on the contents of any column in the display by clicking on the column heading.

Click **Refresh** at anytime to update the query.

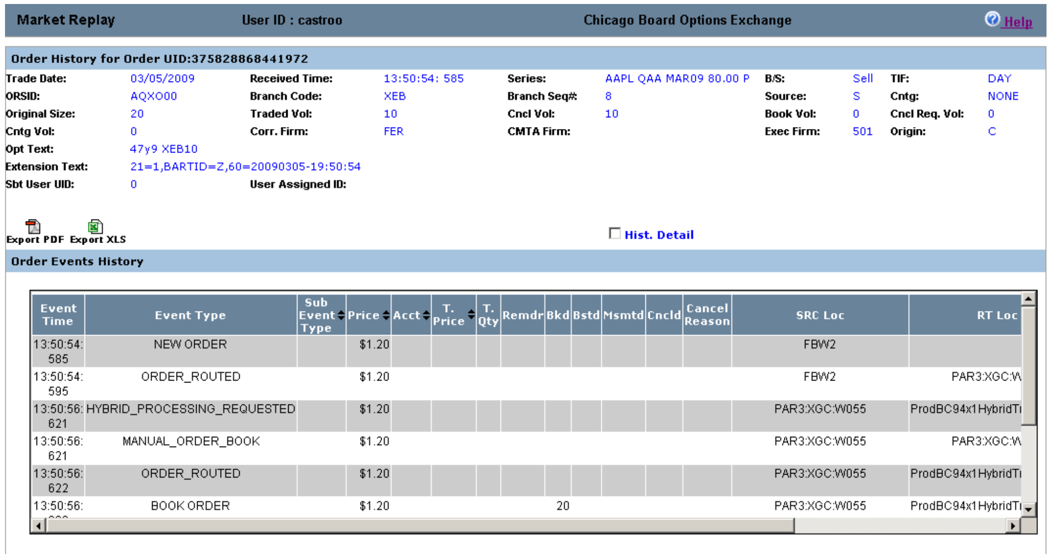
Most of the fields in the Orders display are descriptive. The following table describes valid system codes found in the order display.

Valid Codes& Definitions

Column	Description
OR	Role of the Originating User: CUSTOMER = C, CTI Equivalent - Non Member, Customer Segregated Account FIRM = F CTI Equivalent - Firm Trader, House Account BROKER_DEALER = B CUSTOMER_BROKER_DEALER= X MARKET_MAKER = M MARKET_MAKER_AWAY = N CTI1Origin1 = V - Member, Customer Segregated Account CTI1Origin2 = E - Member, House Account CTI1Origin5 = Q - Member, SIPC Protected Account CTI3Origin1 = G - User Proxy for trader, Customer Segregated Account CTI3Origin2 = H - User Proxy for trader, House Account CTI3Origin5 = R - User Proxy for trader, SIPC Protected Account CTI4Origin2 = O - Non Member, House Account CTI4Origin5 = T - Non Member, SIPC Protected AccounT PRINCIPAL = P PRINCIPAL_ACTING_AS_AGENT = A SATISFACTION = S
OC	O=Open, C=Close

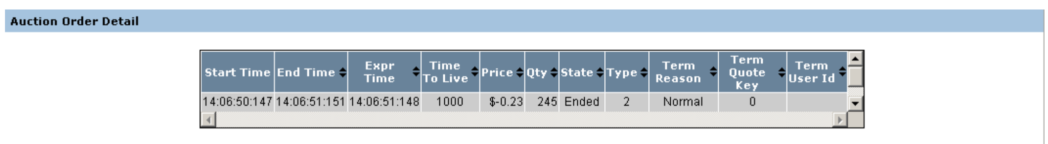
TIF	D=Day, G=Good until cancelled, T=Good until expire time

To view order details, click on the corresponding value in the ORSID column for the selected data row. The order history window will display.



Click on the **Hist. Detail** checkbox to obtain BBO, NBBO and BOTR details. Move the scroll bar to the right to view the data.

If the order is an Auction order, the Auction order details display in the lower portion of the window.

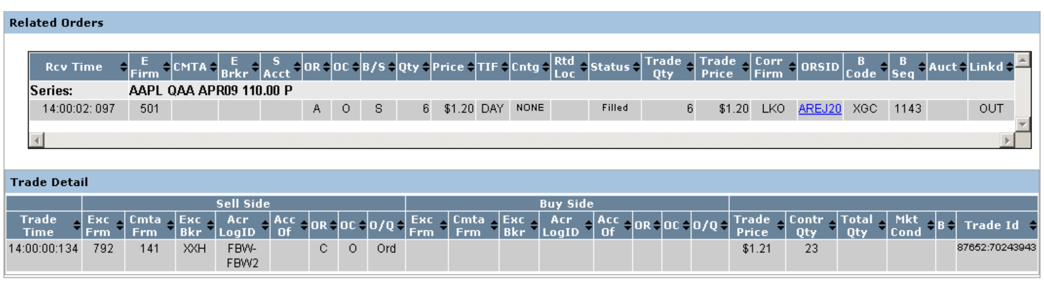


Valid Codes& Definitions

Column	Description
Start Time	When auction starts and RFQ is sent
End Time	When auction processing completes, including fill allocation (time when finished expiring the auction)
Expr Time	When auction processing completes, including fill allocation (time when CBOE starts processing the auction expiration.
Time to Live (sec)	Configured and calculated auction timeout period in milliseconds. It is the time period in milliseconds for which the auction will be live/active. Once the time to live expires, the auction order will get traded.
Price	Auction starting price
Qty	Auction quantity
State	State of the auction: Started or Ended
Type	Internalization, strategy, regular single, HAL, SAL, unspecified

Term Reason	Auction terminate reason: UNSPECIFIED = 0 ORDER_MARKETABLE_AGAINST_BOOK = 1 ORDER_MARKETABLE_AGAINST_AUCTION = 2 QUOTE_BID_LOCK = 3 QUOTE_ASK_LOCK = 4 QUOTE_BID_TRIGGER = 5 QUOTE_ASK_TRIGGER = 6 QUOTE_MARKETABLE_AGAINST_AUCTION = 7 Q_ORDER_LOCK = 8 Q_ORDER_TRIGGER = 9 Q_ORDER_MARKETABLE_AGAINST_AUCTION = 10 AUCTION_RESPONSE = 11 NEW_AUCTION = 12 AUCTIONED_ORDER_CANCEL = 13 PRODUCT_STATE_CHANGE = 14
Term Quote Key	The quote key value for the terminated the auction.
Term User ID	The identification of the user who terminated the auction.

To view order filled details, click on the **FILL ORDER** link for the interested data row. The Trade Detail window will display. The Related Orders windows will display only if there are associated orders.



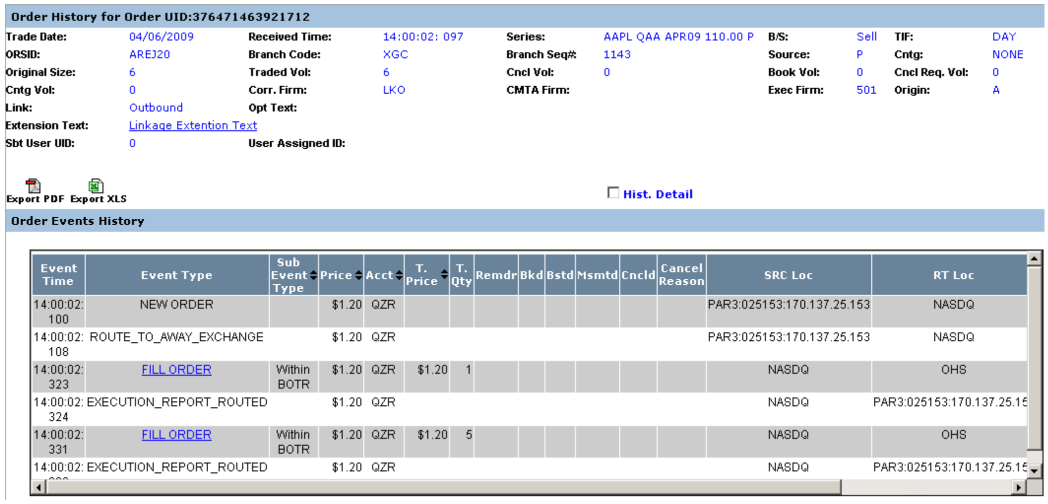
Related Orders

Rcv Time	E Firm	CMTA	E Brkr	S Acct	OR	OC	B/S	Qty	Price	TIF	Cntg	Rtd Loc	Status	Trade Qty	Trade Price	Corr Firm	ORSID	B Code	B Seq	Auct	Linkd
Series:	AAPL QAA APR09 110.00 P																				
14:00:02: 097	501				A	O	S	6	$1.20	DAY	NONE		Filled	6	$1.20	LKO	AREJ20	XGC	1143		OUT

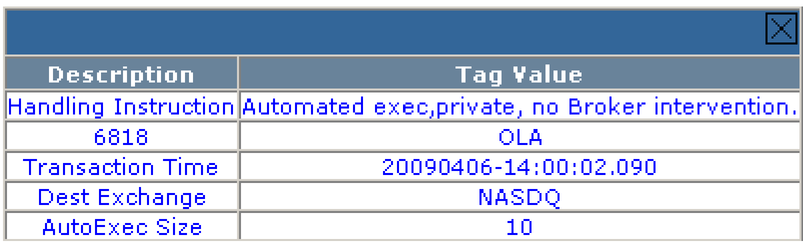
Trade Detail

	Sell Side								Buy Side													
Trade Time	Exc Frm	Cmta Frm	Exc Bkr	Acr LogID	Acc Of	OR	OC	O/Q	Exc Frm	Cmta Frm	Exc Bkr	Acr LogID	Acc Of	OR	OC	O/Q	Trade Price	Contr Qty	Total Qty	Mkt Cond	B	Trade Id
14:00:00:134	792	141	XXH	FBW-FBW2		C	O	Ord									$1.21	23				87652:70243943

The Related Orders window provides details on orders associated to the original order. Click on the **ORSID** in the Related Orders window to view information for this particular order.



ORSID AREJ20 is a Linkage order. Click on the **Linkage Extension Text** link to view the Linkage details.



Quotes Market Replay allows you to retrieve your Firms quote information. Make your selections from the **Market Replay Main Search Criteria** section of the window.

- Select the trading session from the **Session** drop down list.
- The date of the request defaults to the current business day and is displayed in the **Trade Date** text box.
- To choose a previous trading day, click on the calendar button. The following calendar window will display.

  Note: The data warehouse maintains trade information for three years.

Mar 2009

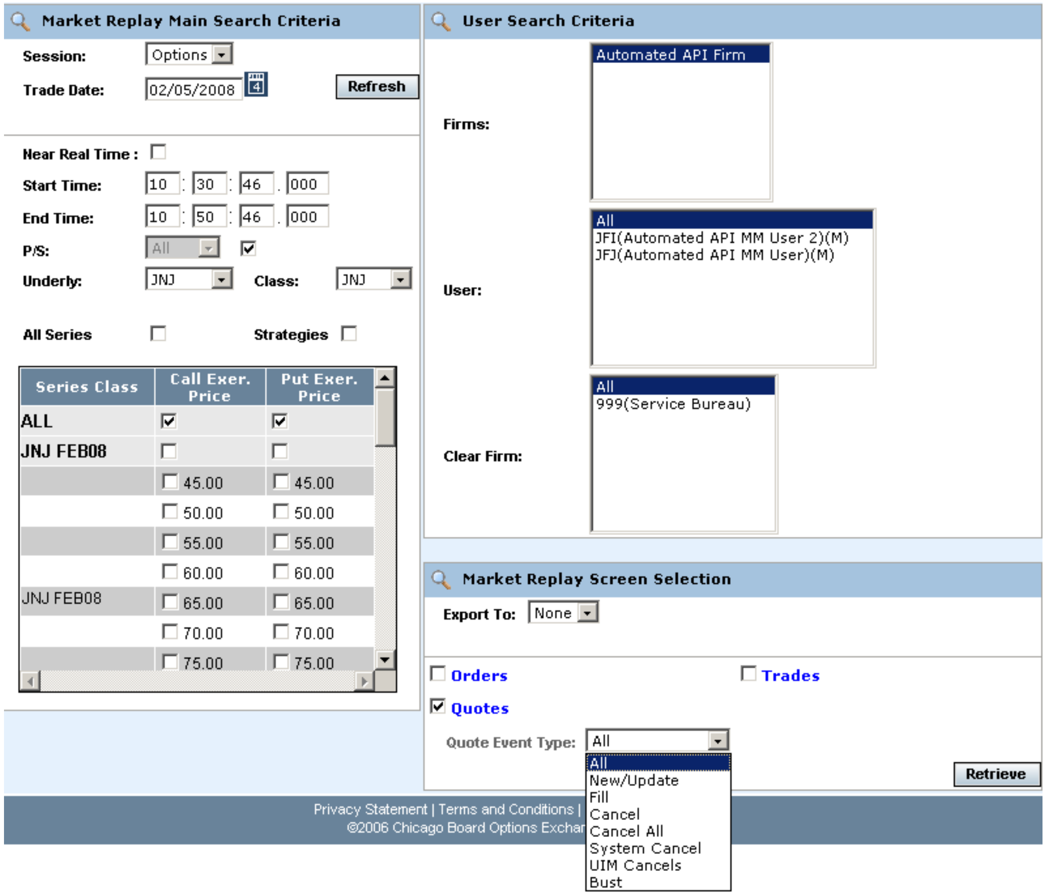
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

- Click on the trade day you wish to query. The date will display in the **Trade Date** text box.
- Choose the time of your request as near real time by selecting the **Near Real Time** checkbox. If you would like to select a fixed time range, deselect the **Near Real Time Monitoring** checkbox. Enter the **Start Time** and **End Time** by, hour:minutes:seconds:milliseconds (i.e. Start Time: 10:48:00:000, End Time: 13:55:00:000).

  Note: The maximum valid time range is 20 minutes.

- Class/Series selection by post and station (**P/S**)
  - To query all the class and series at every post/station, select the **P/S** checkbox. The **P/S** drop down list will gray out, defaulting to query **ALL** post/stations.
  - If you wish to generate data for all the class and series activity for a specific Post and Station, select the Post/Station from the **P/S** drop down list box.
- Class/Series selection
  - Select the underlying security from the **Underly** drop down list box or select a class from the **Class** drop down list box. Select **ALL** for both to retrieve all class and series information.
  - Specify the series you are interested in viewing by clicking on the corresponding checkbox.

    Note: You must select a series, clearing firm or broker in order to retrieve the data.



- To further filter your request, select to retrieve **Orders**, **Quotes** or **Trades**, Select **Quotes**.
- You can further filter your quote requests by **Quote Event Type**. Make your selections from the corresponding dropdown lists. The default for the filters is **All**.

- To save the query results to an Excel or PDF format, select either format from the **Export To**: drop down list. For export details, refer to the Exporting Data section, page 31.
- If you are satisfied with your selections and would like to view the data, click **Retrieve**. The **Quotes** window will display with the requested data.

Quotes for Trade Date: 02/05/2008

Trade Date:	02/05/2008	Session:	Options	Start Time:	10:30:46.000	End Time:	10:50:46.000
P/S:	All	Underl.:	JNJ	Class:	JNJ	All Series:	
Firm:	Automated API Firm	MM:	All	C. Firm:	All	Refresh	
Quote Event Type:	All						

Export PDF Export XLS

Quote Time	Quote Event	Buy/Sell	Bid Qty	Bid Price	Ask Price	Ask Qty	Cancel Reason	UserAcr/LogID	Trade Qty	Trade Price	Remn Qty
Series:	JNJ JNJ FEB08 45.00 C							P/S: 02/05			
10:30:59:953	FillQte	S	10000	$6.20	$6.40	9760		JFJ-JFJ	10	$6.40	9760
10:31:22:797	FillQte	S	10000	$6.20	$6.40	9750		JFJ-JFJ	10	$6.40	9750
10:31:55:680	FillQte	S	10000	$6.20	$6.40	9740		JFJ-JFJ	10	$6.40	9740
10:32:20:057	FillQte	S	10000	$6.20	$6.40	9730		JFJ-JFJ	10	$6.40	9730
10:32:47:122	FillQte	S	10000	$6.20	$6.40	9720		JFJ-JFJ	10	$6.40	9720
10:33:15:958	FillQte	S	10000	$6.20	$6.40	9710		JFJ-JFJ	10	$6.40	9710
10:33:39:676	FillQte	S	10000	$6.20	$6.40	9700		JFJ-JFJ	10	$6.40	9700
10:34:04:493	FillQte	S	10000	$6.20	$6.40	9690		JFJ-JFJ	10	$6.40	9690
10:34:54:604	FillQte	S	10000	$6.20	$6.40	9680		JFJ-JFJ	10	$6.40	9680
10:35:19:740	FillQte	S	10000	$6.20	$6.40	9670		JFJ-JFJ	10	$6.40	9670
10:35:44:757	FillQte	S	10000	$6.20	$6.40	9660		JFJ-JFJ	10	$6.40	9660
10:36:13:064	FillQte	S	10000	$6.20	$6.40	9650		JFJ-JFJ	10	$6.40	9650
10:36:40:775	FillQte	S	10000	$6.20	$6.40	9640		JFJ-JFJ	10	$6.40	9640
10:37:04:325	FillQte	S	10000	$6.20	$6.40	9630		JFJ-JFJ	10	$6.40	9630
10:37:32:120	FillQte	S	10000	$6.20	$6.40	9620		JFJ-JFJ	10	$6.40	9620
10:37:57:430	FillQte	S	10000	$6.20	$6.40	9610		JFJ-JFJ	10	$6.40	9610
10:38:22:704	FillQte	S	10000	$6.20	$6.40	9600		JFJ-JFJ	10	$6.40	9600

Export PDF Export XLS

Quote Types: Red=Quote, Black=Market Condition, Green=Fill Quote

In the example above, quote information for class JNJ displays for the W_MAIN session.

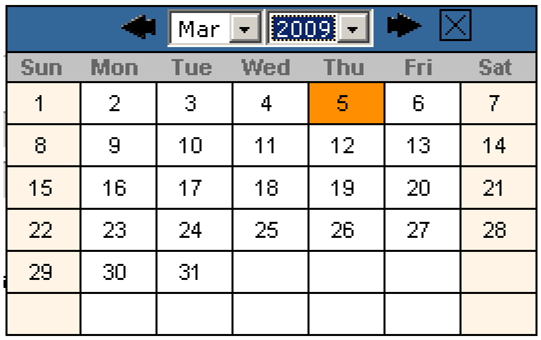
Market Replay gives you the ability to sort on the contents of any column in the display by clicking on the column heading.

Click **Refresh** at anytime to update the window display.

Trades Market Replay allows you to retrieve your Firms trade information. Make your selections from the **Market Replay Main Search Criteria** section of the window.

- Select the trading session from the **Session** drop down list.
- The date of the request defaults to the current business day and is displayed in the **Trade Date** text box.
- To choose a previous trading day, click on the calendar button. The following calendar window will display.

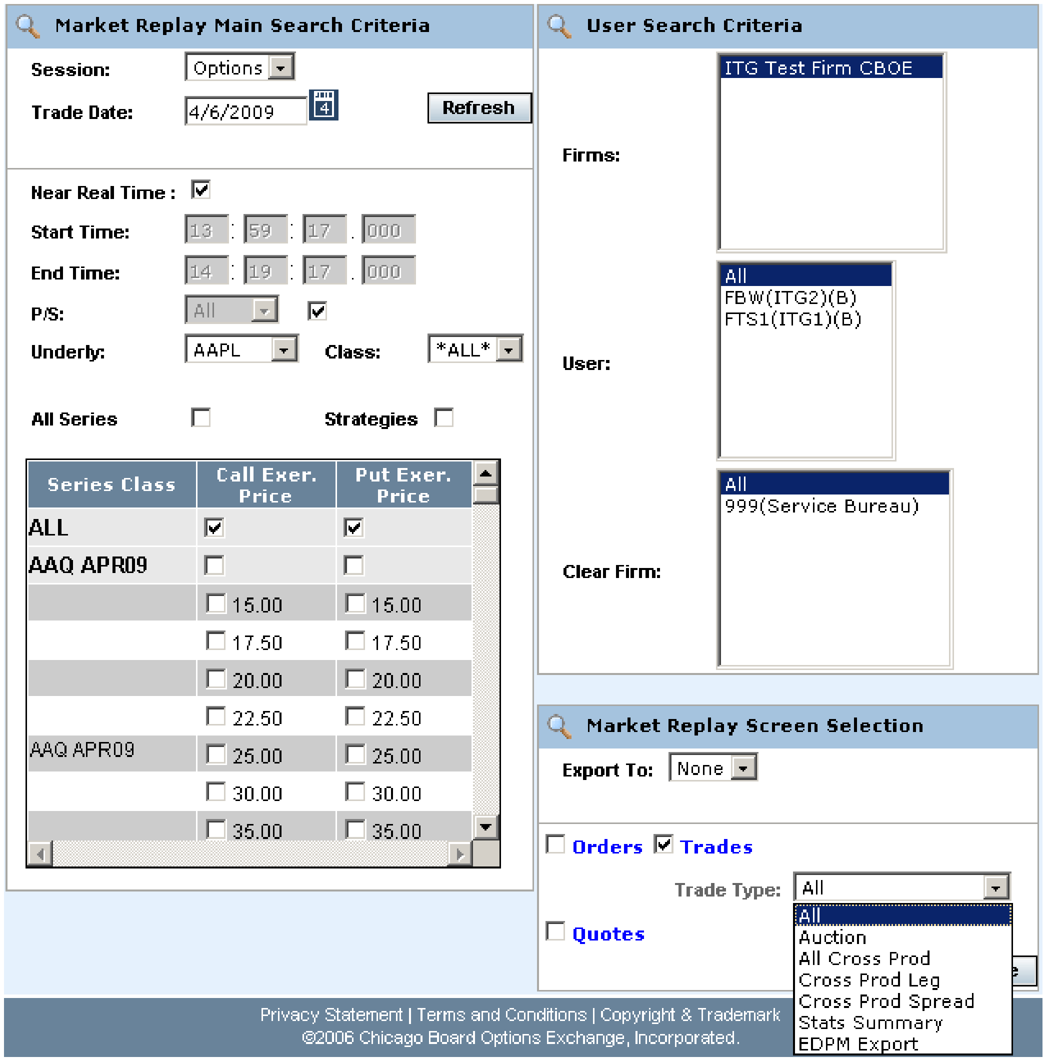
  Note: The data warehouse maintains trade information for three years.



- Click on the trade day you wish to query. The date will display in the **Trade Date** text box.
- Choose the time of your request as near real time by selecting the **Near Real Time** checkbox. If you would like to select a fixed time range, deselect the **Near Real Time Monitoring** checkbox. Enter the **Start Time** and **End Time** by, hour:minutes:seconds:milliseconds (i.e. Start Time: 10:48:00:000, End Time: 13:55:00:000).

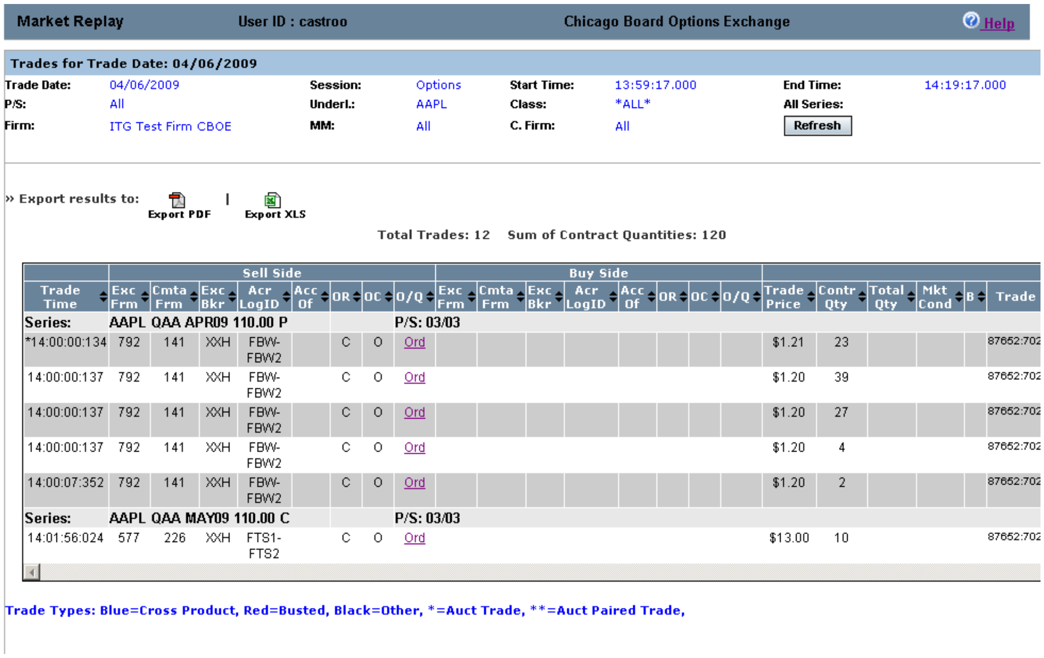
  Note: The maximum valid time range is 20 minutes.
- Class/Series selection by post and station (**P/S**)
  - To query all the class and series at every post/station, select the **P/S** checkbox. The **P/S** drop down list will gray out, defaulting to query **ALL** post/stations.
  - If you wish to generate data for all the class and series activity for a specific Post and Station, select the Post/Station from the **P/S** drop down list box.
- Class/Series selection
  - Select the underlying security from the **Underly** drop down list box or select a class from the **Class** drop down list box. Select **ALL** for both to retrieve all class and series information.
  - Specify the series you are interested in viewing by clicking on the corresponding checkbox.

  Note: You must select a series, clearing firm or broker in order to retrieve the data.



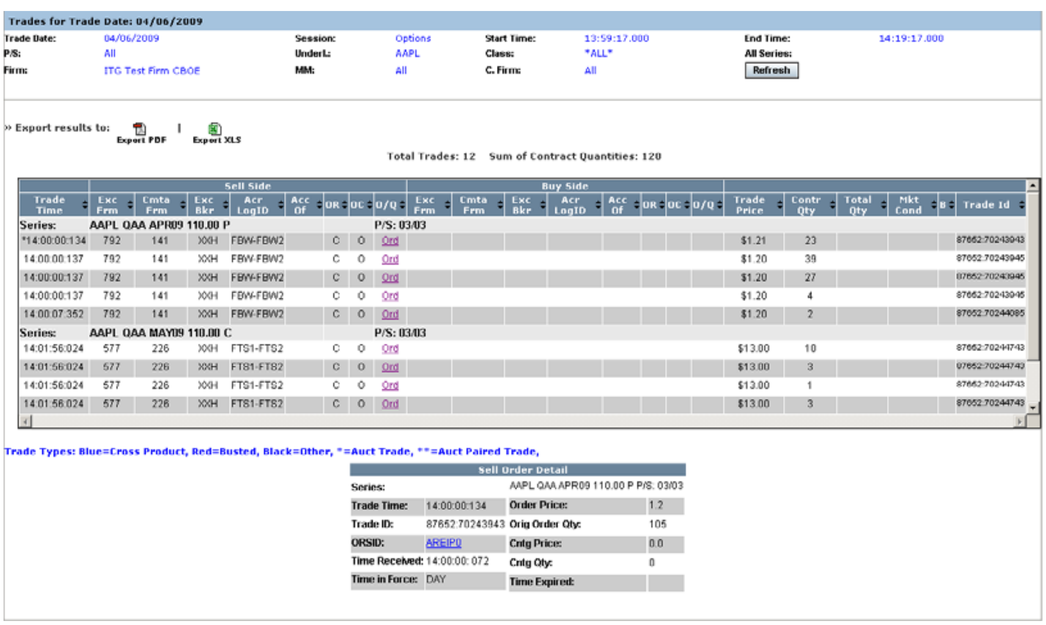
- To further filter your request, select to retrieve **Orders**, **Quotes**, or **Trades**, Select **Trades**.
- You can further filter your trade request by **Trade Type**. Make your selections from the corresponding dropdown lists. The default for the filters is **All**.

- To save the query results to an Excel or PDF format, select either format from the **Export To**: drop down list. For export details, refer to the Exporting Data section, page 31.
- If you are satisfied with your selections and would like to view the data, click **Retrieve**. The **Trades** window will display with the requested data.

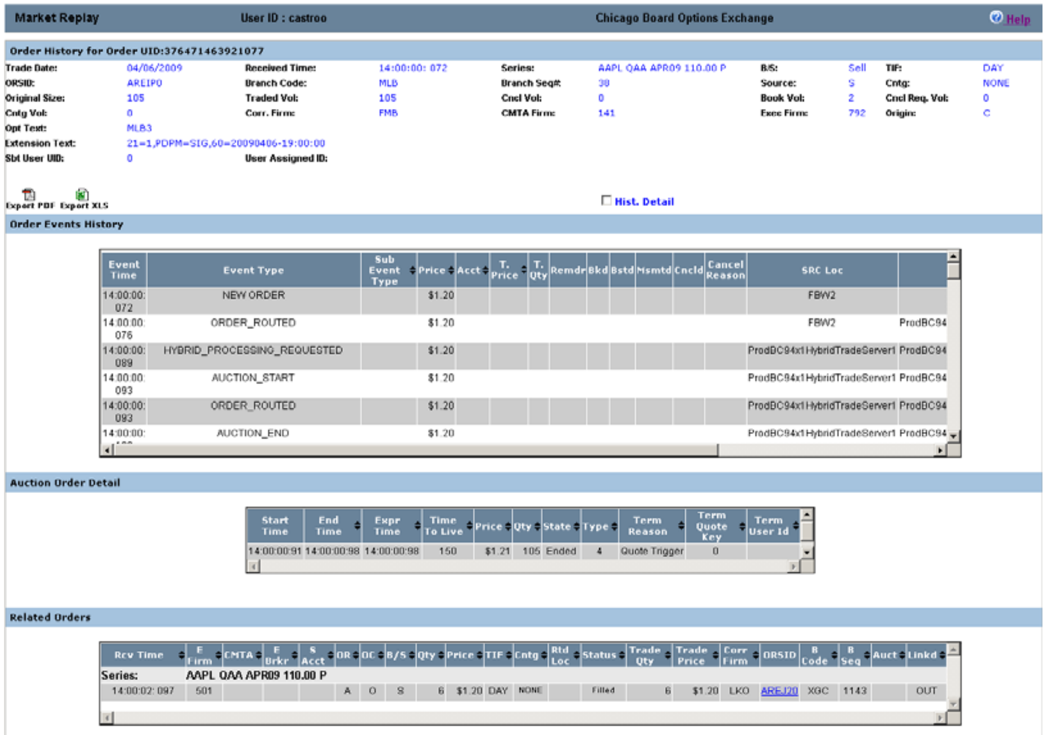


The example above displays all the trades that occurred in the W_MAIN session on April 6, 2009, for the AAPL class between 13:59:17-14:19:17. The total number of trades represents all the trades in the display.

Click on the **Ord** or **Quo** link in the O/Q column to display order and quote details.



Click on the ORSID link to view details on related orders.



Market Replay gives you the ability to sort on the contents of any column in the display by clicking on the column heading.

Valid codes and column definitions that are represented in the Trades window are defined in the table below.

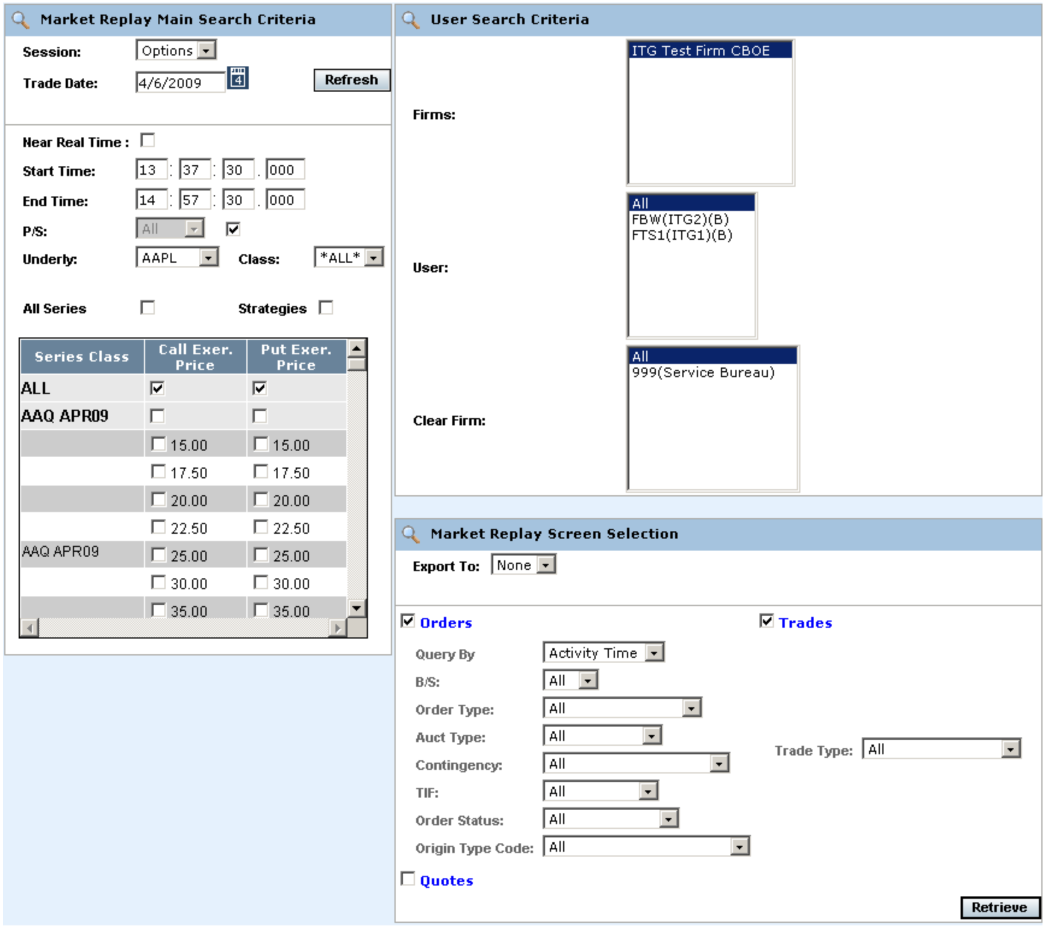
Valid Codes& Definitions

Column	Description
OR	P/A Linkage = 'A' B/D = 'B' CUSTOMER = 'C' Customer-FBW = 'D' Member, House Account **=** 'E' FIRM = F' User Proxy for trader, Customer Segregated **=** 'G' User Proxy for trader, House Account **=** 'H' In-Crowd MM = 'I' Firm - FBW = 'J' B/D-FBW='K' Firm-FBW='L'

	MARKET_MAKER = 'M' Away MM='N' Non Member, House Account='O' Principle Linkage = 'P' Member, SIPC Protected Account = 'Q' User Proxy for trader, SIPC Protected Account = 'R' Satisfaction Linkage = 'S' Non Member, SIPC Protected Account='T' M-FBW='U' Member, Customer Segregated Account='V' Broker/Dealer-FBW='W' Customer Broker/Dealer='X' Underly Specialist='Y' N,Y-FBW='Z'
OC	O=Open, C=Close
Sell Side/Acc of	This column will be populated with a Q account if this side of the trade was originated by a DPM, otherwise, it will be populated with the Broker or Market Maker acronym. If the order originator is not a Market Maker or a broker, then the value in this field will not be validated by CBOE*direct*.
Buy Side/ Acc of	This column represents the buyer's account information. If this is a trade from a quote, the Q account or Market Maker acrynom is displayed. If this is a trade from an order, it is a free form field for the firm.
Mkt Cond	CANC=trade bust report CNCO=trade bust report for opening trade FTAO=used if the first trade for product occurs after the opening OPNT=used if first trade for product occurs during opening REOP=trade that occurs during an opening rotation that is not the first rotation of the day
S (Trade Source)	How the trade was entered. SYSTEM or MANUAL. The Help Desk has the ability to enter a manual trade (block trade)
B	The letter 'B' stands for Bust. An ***** displayed in this column represents a busted trade.

Composite Display

Market Replay allows you to query for more than one type of criteria (orders, trades and quotes). In the example below, the query has been set to display both orders and trades for the AAPL class.



Two windows display for the query; Orders and Trades.

Market Replay | User ID : castroo | Chicago Board Options Exchange | Help

Orders for Trade Date: 04/06/2009

Trade Date:	04/06/2009	**Session:**	Options	**Start Time:**	13:37:30.000	**End Time:**	14:57:30.000
P/S:	All	**Underl.:**	AAPL	**Class:**	*ALL*	**All Series:**	
Firm:	ITG Test Firm CBOE	**MM:**	All	**C. Firm:**	All	Refresh	
Order Type:	All	**Auct Type:**	All	**Cntg:**	All	**TIF:**	All
Status:	All	**Origin:**	All	**B/S:**	All		

Export PDF Export XLS

Rcv Time	E Firm	CMTA	E Brkr	S Acct	OR	OC	B/S	Qty	Price	TIF	Cntg	Rtd Loc	Status	Trade Qty	Trade Price	Corr Firm	ORSID	B Code	B Seq	Auct	Linkd
Series:	**AAPL APV**																				
13:49:30: 492	501	572	FBW	4Y311209	C	N	D	1,440	$2.90	DAY	NONE		Filled	1,440	$2.90	FAO	ARD2R0	ASD	7		
13:52:33: 384	551		FBW		F	N	O	1,440	$-2.90	DAY	NONE		Cancelled	940	$2.90	FAO	ARDHE0	ASD	8		
13:53:07: 573	551		FBW	8JZ	F	N	O	500	$-2.90	DAY	NONE		Filled	500	$2.90	FAO	ARDL20	ASD	9		
Series:	**AAPL QAA APR09 90.00 P**							**P/S: 03/03**													
14:31:40: 937	352		FTS1	burketrade	C	O	B	20	$0.10	DAY	NONE		Filled	20	$0.10	LIQX	ARY6I0	BRK	48		
Series:	**AAPL QAA APR09 110.00 P**							**P/S: 03/03**													
13:59:36: 209	792	141	FBW		C	O	S	105	$1.22	DAY	NONE		Cancelled			FMB	AREGL0	MLB	37		
14:00:00: 072	792	141	FBW		C	O	S	105	$1.20	DAY	NONE		Filled	105	$1.21	FMB	AREIP0	MLB	38	Ended	
Series:	**AAPL QAA MAY09 110.00 C**							**P/S: 03/03**													
14:01:56: 021	577	226	FTS1	700061441	C	O	S	25	$13.00	DAY	NONE		Filled	25	$13.00	LIQX	ARESO0	EBS	23		

Export PDF Export XLS

Order Types: Black=Simple, Red=Complex, Blue=Complex Auction, Purple=Simple Auction, Pink=HALO Auction

Order Status: Green=HD Cancelled, Black=Other

Click on the **ORSID** for a data row to view order details.

Order History for Order UID:376471463921077

Trade Date:	04/06/2009	**Received Time:**	14:00:00: 072	**Series:**	AAPL QAA APR09 110.00 P	**B/S:**	Sell	**TIF:**	DAY
ORSID:	AREIP0	**Branch Code:**	MLB	**Branch Seq#:**	38	**Source:**	S	**Cntg:**	NONE
Original Size:	105	**Traded Vol:**	105	**Cncl Vol:**	0	**Book Vol:**	2	**Cncl Req. Vol:**	0
Cntg Vol:	0	**Corr. Firm:**	FMB	**CMTA Firm:**	141	**Exec Firm:**	792	**Origin:**	C
Opt Text:	MLB3								
Extension Text:	21=1,PDPM=SIG,60=20090406-19:00:00								
Sbt User UID:	0	**User Assigned ID:**							

Export PDF Export XLS

Hist. Detail

Order Events History

Event Time	Event Type	Sub Event Type	Price	Acct	T. Price	T. Qty	Remdr	Bkd	Bstd	Msmtd	Cncld	Cancel Reason	SRC Loc	
102														
14:00:00: 102	BOOK ORDER		$1.20					105					ProdBC94x1HybridTradeServer1	ProdBC94
14:00:00: 104	AUCTION_TRIGGER_START		$1.20										ProdBC94x1HybridTradeServer1	ProdBC94
14:00:00: 147	FILL ORDER	Within BOTR	$1.20		$1.21	23							ProdBC94x1HybridTradeServer1	ProdBC94
14:00:00: 150	FILL ORDER	Within BOTR	$1.20		$1.20	70							ProdBC94x1HybridTradeServer1	ProdBC94
14:00:00: 152	AUCTION_TRIGGER_END		$1.20										ProdBC94x1HybridTradeServer1	ProdBC94

Auction Order Detail

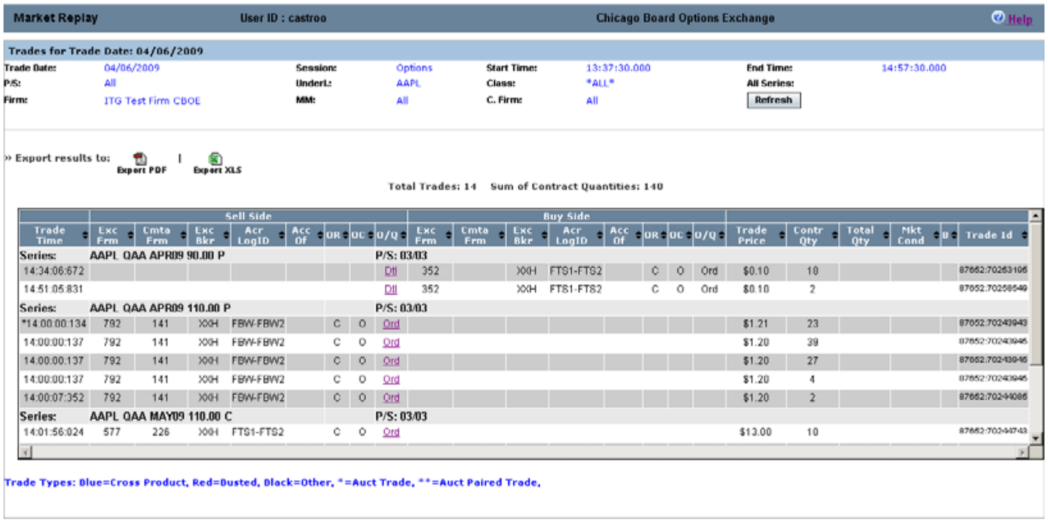
Start Time	End Time	Expr Time	Time To Live	Price	Qty	State	Type	Term Reason	Term Quote Key	Term User Id
14:00:00:91	14:00:00:98	14:00:00:98	150	$1.21	105	Ended	4	Quote Trigger	0	

For fill report details, click on the **FILL ORDER** link in the Order History window.

Trade Detail

	Sell Side								Buy Side													
Trade Time	Exc Frm	Cmta Frm	Exc Bkr	Acr LogID	Acc Of	OR	OC	O/Q	Exc Frm	Cmta Frm	Exc Bkr	Acr LogID	Acc Of	OR	OC	O/Q	Trade Price	Contr Qty	Total Qty	Mkt Cond	B	Trade Id
14:00:00:137	792	141	XXH	FBW-FBW2		C	O	Ord									$1.20	4				87652:70243945
14:00:00:137	792	141	XXH	FBW-FBW2		C	O	Ord									$1.20	39				87652:70243945
14:00:00:137	792	141	XXH	FBW-FBW2		C	O	Ord									$1.20	27				87652:70243945

Click on the Trade Summary window to view trades data for class AAPL.



Market Replay   User ID : castroo   Chicago Board Options Exchange   Help

Trades for Trade Date: 04/06/2009

Trade Date:	04/06/2009	Session:	Options	Start Time:	13:37:30.000	End Time:	14:57:30.000
P/S:	All	Underl.:	AAPL	Class:	*ALL*	All Series:	
Firm:	ITG Test Firm CBOE	MM:	All	C. Firm:	All	Refresh	

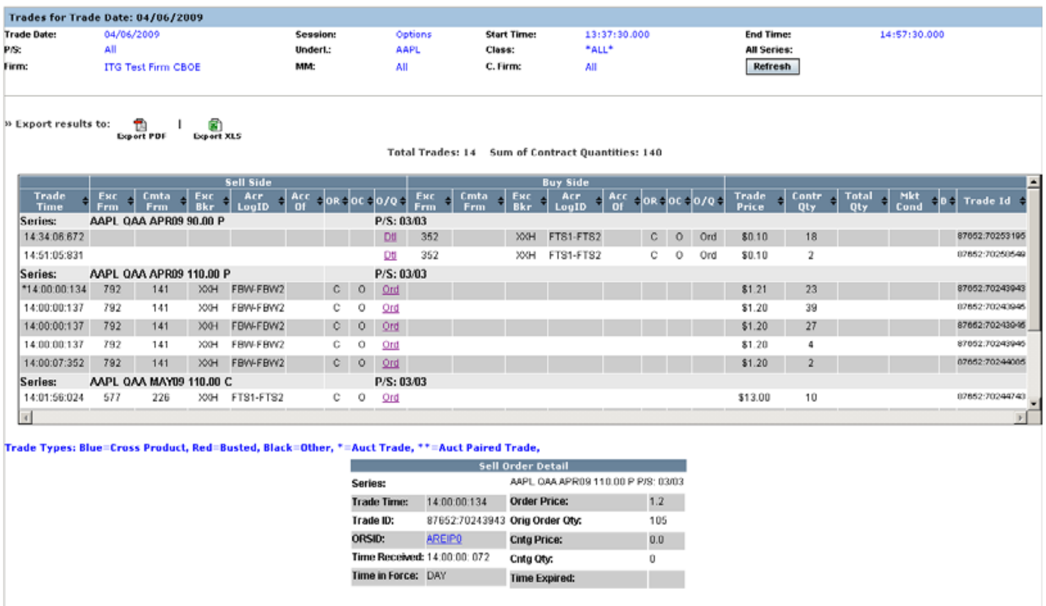
» Export results to: Export PDF | Export XLS

Total Trades: 14   Sum of Contract Quantities: 140

	Sell Side								Buy Side													
Trade Time	Exc Frm	Cmta Frm	Exc Bkr	Acr LogID	Acc Of	OR	OC	O/Q	Exc Frm	Cmta Frm	Exc Bkr	Acr LogID	Acc Of	OR	OC	O/Q	Trade Price	Contr Qty	Total Qty	Mkt Cond	B	Trade Id
Series:	AAPL QAA APR09 90.00 P							P/S: 03/03														
14:34:06:672								Dtl	352		XXH	FTS1-FTS2		C	O	Ord	$0.10	10				87652:70253196
14:51:05:831								Dtl	352		XXH	FTS1-FTS2		C	O	Ord	$0.10	2				87652:70258549
Series:	AAPL QAA APR09 110.00 P							P/S: 03/03														
*14:00:00:134	792	141	XXH	FBW-FBW2		C	O	Ord									$1.21	23				87652:70243943
14:00:00:137	792	141	XXH	FBW-FBW2		C	O	Ord									$1.20	39				87652:70243945
14:00:00:137	792	141	XXH	FBW-FBW2		C	O	Ord									$1.20	27				87652:70243946
14:00:00:137	792	141	XXH	FBW-FBW2		C	O	Ord									$1.20	4				87652:70243946
14:00:07:352	792	141	XXH	FBW-FBW2		C	O	Ord									$1.20	2				87652:70244086
Series:	AAPL QAA MAY09 110.00 C							P/S: 03/03														
14:01:56:024	577	226	XXH	FTS1-FTS2		C	O	Ord									$13.00	10				87652:70244743

Trade Types: Blue=Cross Product, Red=Busted, Black=Other, *=Auct Trade, **=Auct Paired Trade,

From the Trades window, click on the **Quo** link to view quote details for the trade.



Trades for Trade Date: 04/06/2009

Trade Date:	04/06/2009	Session:	Options	Start Time:	13:37:30.000	End Time:	14:57:30.000
P/S:	All	Underl.:	AAPL	Class:	*ALL*	All Series:	
Firm:	ITG Test Firm CBOE	MM:	All	C. Firm:	All	Refresh	

» Export results to: Export PDF | Export XLS

Total Trades: 14   Sum of Contract Quantities: 140

	Sell Side								Buy Side													
Trade Time	Exc Frm	Cmta Frm	Exc Bkr	Acr LogID	Acc Of	OR	OC	O/Q	Exc Frm	Cmta Frm	Exc Bkr	Acr LogID	Acc Of	OR	OC	O/Q	Trade Price	Contr Qty	Total Qty	Mkt Cond	B	Trade Id
Series:	AAPL QAA APR09 90.00 P							P/S: 03/03														
14:34:06:672								Dtl	352		XXH	FTS1-FTS2		C	O	Ord	$0.10	10				87652:70253196
14:51:05:831								Dtl	352		XXH	FTS1-FTS2		C	O	Ord	$0.10	2				87652:70258549
Series:	AAPL QAA APR09 110.00 P							P/S: 03/03														
*14:00:00:134	792	141	XXH	FBW-FBW2		C	O	Ord									$1.21	23				87652:70243943
14:00:00:137	792	141	XXH	FBW-FBW2		C	O	Ord									$1.20	39				87652:70243945
14:00:00:137	792	141	XXH	FBW-FBW2		C	O	Ord									$1.20	27				87652:70243946
14:00:00:137	792	141	XXH	FBW-FBW2		C	O	Ord									$1.20	4				87652:70243946
14:00:07:352	792	141	XXH	FBW-FBW2		C	O	Ord									$1.20	2				87652:70244086
Series:	AAPL QAA MAY09 110.00 C							P/S: 03/03														
14:01:56:024	577	226	XXH	FTS1-FTS2		C	O	Ord									$13.00	10				87652:70244743

Trade Types: Blue=Cross Product, Red=Busted, Black=Other, *=Auct Trade, **=Auct Paired Trade,

Sell Order Detail

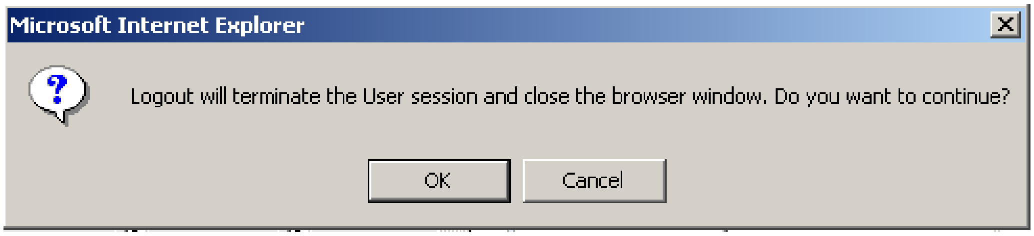
Series:		AAPL QAA APR09 110.00 P P/S: 03/03	
Trade Time:	14:00:00:134	Order Price:	1.2
Trade ID:	87652:70243943	Orig Order Qty:	105
ORSID:	AREIP0	Cntg Price:	0.0
Time Received:	14:00:00: 072	Cntg Qty:	0
Time in Force:	DAY	Time Expired:	

Ending a Market Replay Session

Exit the System

To exit the Market Replay system, click 

in the upper right corner of the window. The Market Replay system will prompt you to confirm your logout.



Click **OK** to confirm your logout request or click **Cancel** to remain in the system.

If you click **OK** the system will prompt you to reconfirm terminating the Market Replay session.

Click **No** to remain in the system.

Click **Yes** to close the application. You will be returned to your system desktop.

Section 2: Reference Guide

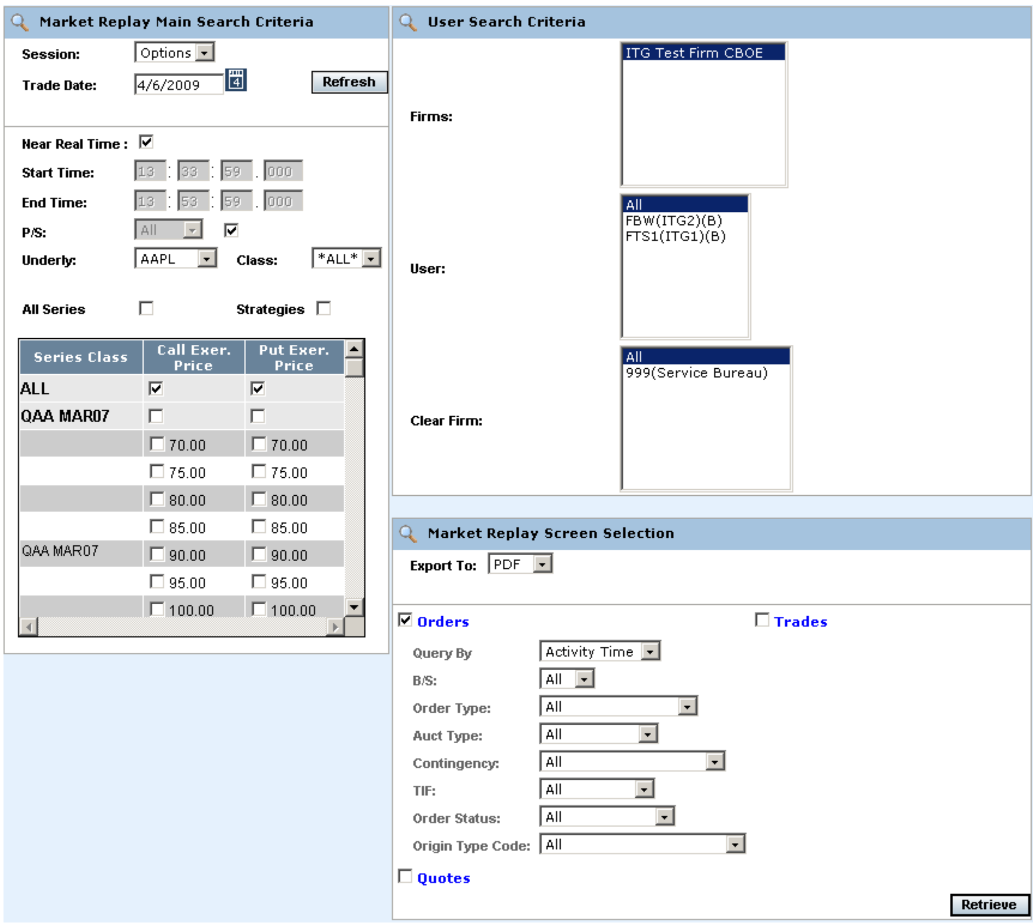
Exporting Data

Market Replay data can be exported to two different file formats: PDF and Excel.

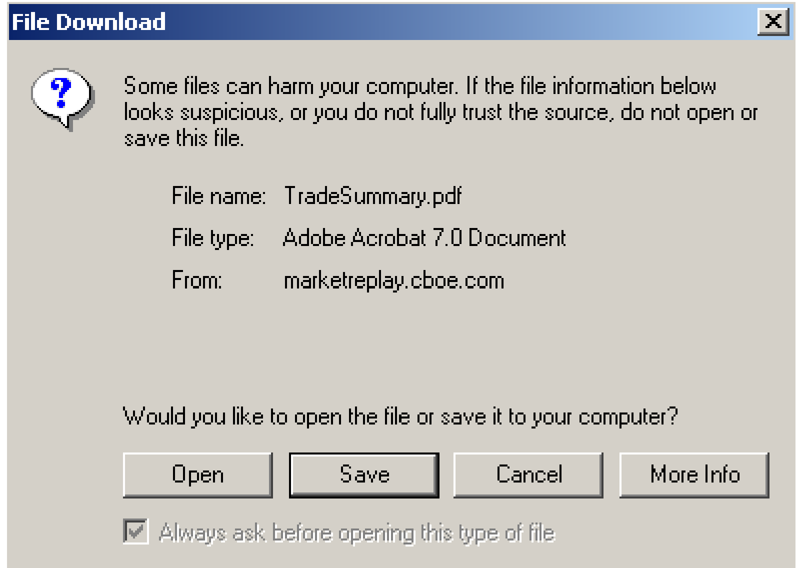
Export to PDF Format

Market Replay allows you to save your search results in PDF format.

To export your query results to PDF format, select your Main Search Critiera, User Search Criteria and Screen Selection.



- From the **Export To** dropdown list, select **PDF**.
- Click **Retrieve**. The system will prompt you to either **Open** or **Save** the file to your computer. At this point, you may also cancel your format request my clicking on the **Cancel** button.



- To quickly view the data in PDF format, click **Open**. The data will be exported in PDF format.

Chicago Board Options Exchange
Order Summary Report for Trade Date and time: 03/05/2007 13:32:02.000 through 13:52:02.000

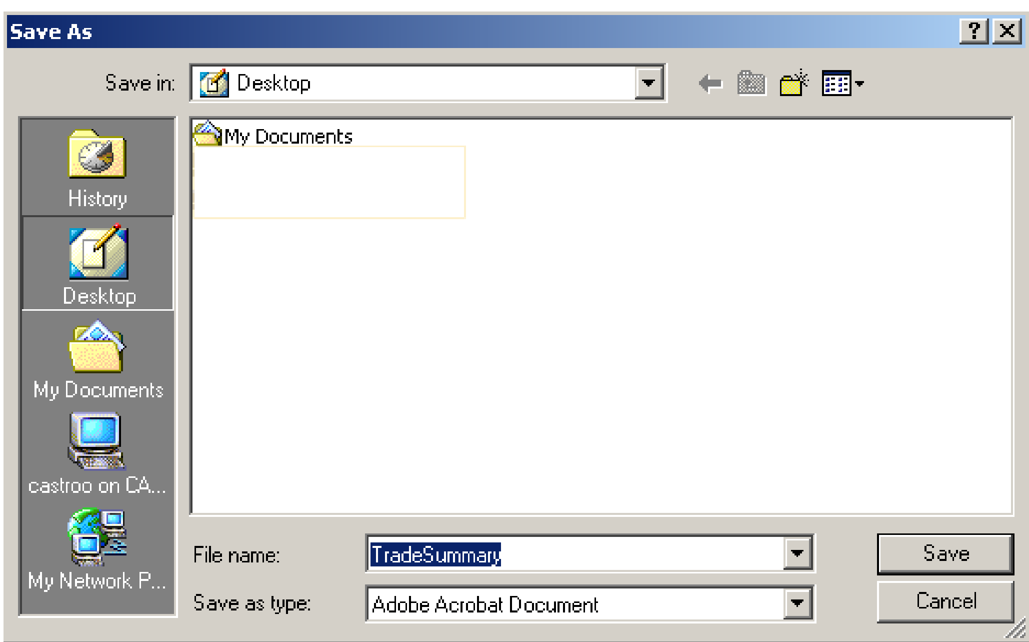
Input Parameters

Trade Date:	03/05/2007	Session:	Options	Start Time:	13:32:02.000	End Time:	13:52:02.000
P/S:	All	Underl.:	AAPL	Class:	*ALL*	All Series Ind:	
Firms:	ITG Test Firm CBOE	MM Users:	All	C. Firms:	All		
Order Type:	All	Auct Type:	All	Cntg:	All	TIF:	All
Status:	All	Origin:	All				

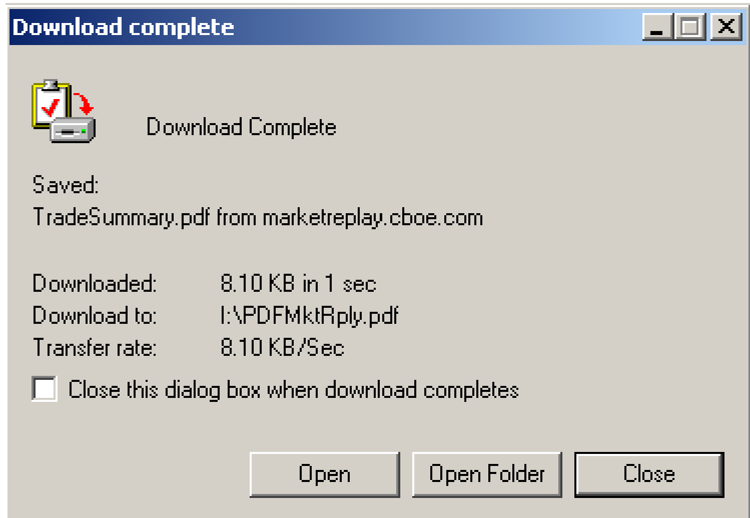
Order List

Series	P/S	Rcv Date	Rcv Time	E. Firm	CMTA	E. Brkr	Acct	S. Acct	OR	OC	B/S	Qty	Price	TIF	Cntg	Status	Trd Qty	Trd Price	Corr. Firm	ORSID	B. Code	B. Seq#	Auct State

- To store the data before viewing, click **Save**.



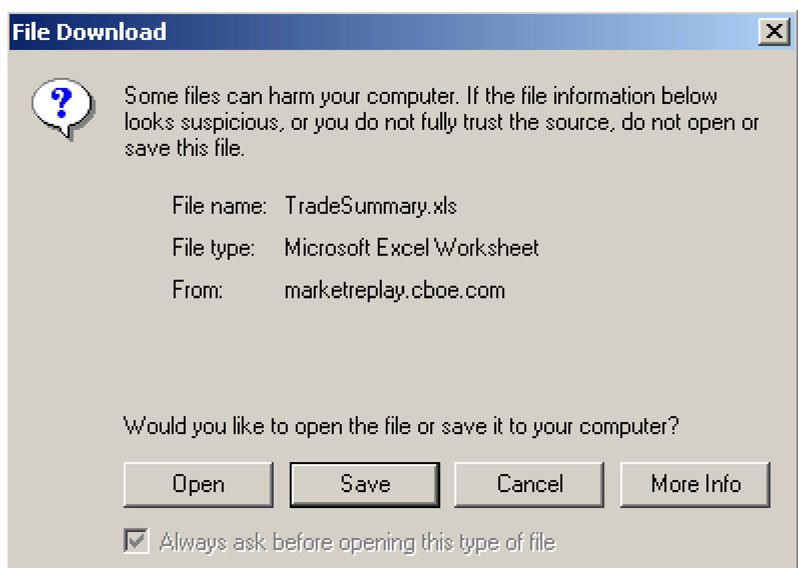
- Select the location where you want to save the file and enter the file name. If you wish to exit the window without saving the file, click **Cancel**.
- Click **Save**. Your file will be saved in PDF format. The system will display the **Download complete** window.



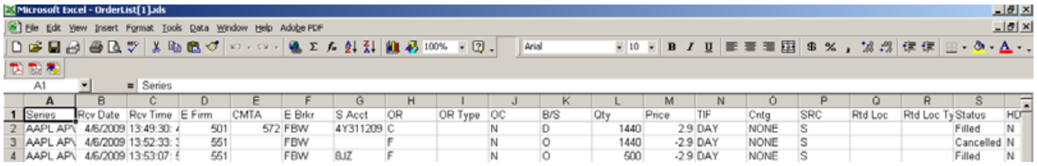
- Click **Open** to extract the data in PDF format, or select **Open Folder** to choose the file from the Windows directory.
- Click **Close** to exit the window without opening the PDF file.

Export to Excel

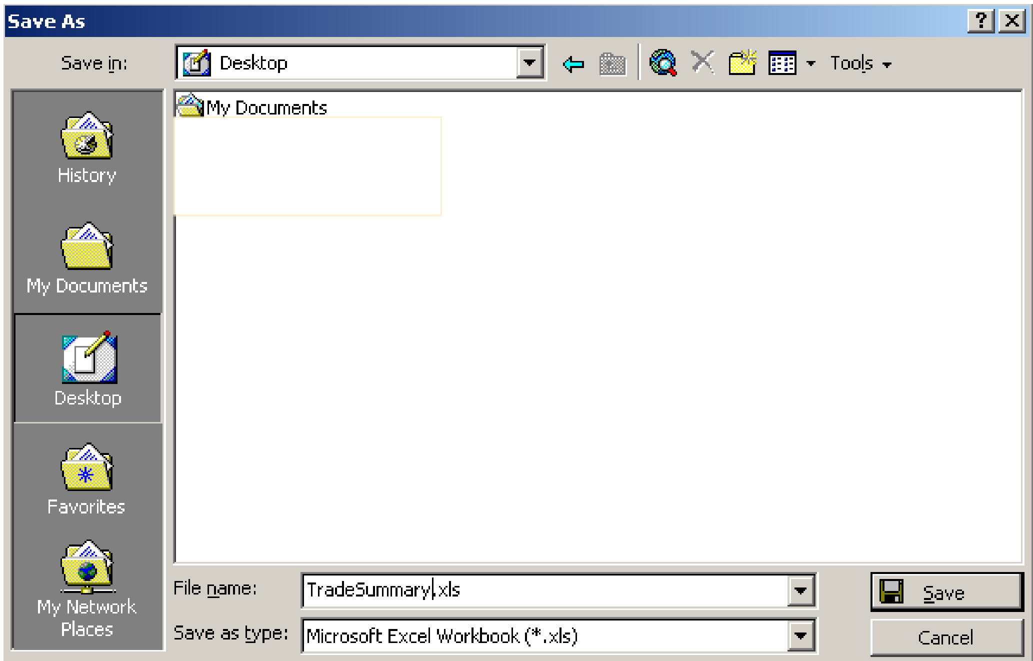
If you wish to export the data to an Excel spreadsheet, select **Excel** from the **Export To** drop down list. The system will prompt you to open an Excel window or save the data. If you wish to cancel your export request, click **Cancel**.



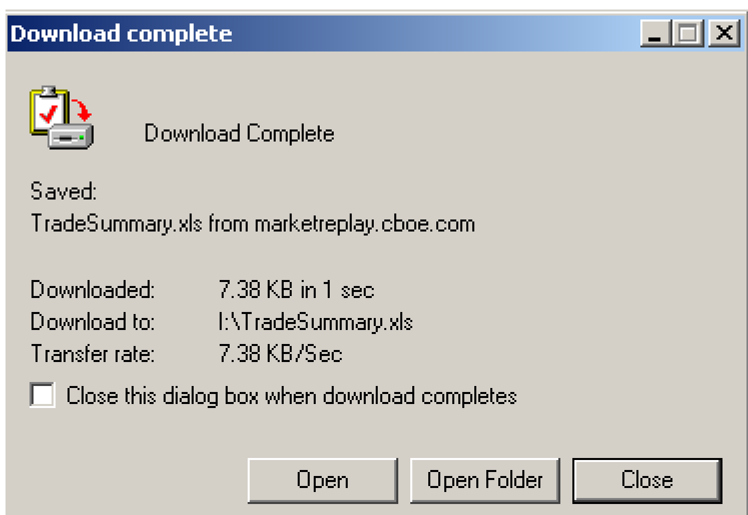
- To quickly view the data in Excel format, click **Open**. The data will be exported to Excel.



- To store the data before viewing, click **Save**.



- Select the location where you want to save the file and enter the file name. If you wish to exit the window without saving, click **Cancel**.
- Click **Save**. Your file will be saved in Excel format. The system will display the Download complete window.



- Click **Open** to extract the data to Excel format or select **Open Folder** to choose the file from the Windows directory.
- Click **Close** to exit the window without opening the Excel file.