



**Market Replay User's Guide  
Version 6.1**

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## 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
5/18/11	6.1	Updated screen shots. Enhanced the graph description section. Updated the CBOE logo.
12/31/10	6.0	Captured new web screens
11/02/05	5.10b	Modified to include displays for single acronym and automated auctions
6/17/05	5.08	Updated all display to reflect current data.
2/6/04	5.01b	Removed the Customizing Windows section Added RFQs and Composite displays
1/23/04	5.01b	First draft.

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## Introduction

**Purpose** This user guide was written to assist users in utilizing all of the features of the Market Replay system.

**Intended Audience** This user guide is intended for Help Desk Administrators, System Operators or any person 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. Some window control functions can also be activated by using keyboard commands.

Section 1 of the document illustrates the most efficient way to perform Market Replay functions. Additional information about each of the Menu Bar options and window configuration can be found in Section 2: Reference Guide.

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**)

Brackets [ ] Used to highlight keyboard commands (e.g., [Ctrl]-[P]). Note that when [Alt] or [Ctrl] are used in conjunction with another key, hold down the first key while pressing the second.

↳ 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 functions of the Market Replay system.

## 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.

The screenshot displays the CBOE Market Replay web application. The header includes the CBOE.org logo and navigation links. The main content area is divided into several sections:

- Market Replay Main Search Criteria:** Includes a Session dropdown (Options), Trade Date (05/19/2011), and a Refresh button. Below this are checkboxes for Near Real Time, Start Time, End Time, P/S, and Underly/Class filters. A list of selected series is shown at the bottom of this section.
- User Search Criteria:** Contains three dropdown menus for Firms, Users, and Clear Firms, each with a list of available options.
- Market Replay Screen Selection:** Features checkboxes for Orders, Trades, Quotes, Market Conditions, Assignments, Alerts, and CTHR Trades(T+1). An Export To dropdown is set to None.

A Retrieve button is located at the bottom right of the screen selection section.

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

## Display Trading Information

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 screenshot displays two side-by-side windows from the CBOE Market Replay application.

**Market Replay Main Search Criteria:**

- Session:** Options (dropdown)
- Trade Date:** 05/19/2011 (calendar icon)
- Refresh:** button
- Near Real Time:** ☒
- Enter Time in CST:**
  - Start Time:** 11:05:27.000
  - End Time:** 11:25:27.000
- P/S:** All (dropdown), ☒
- Underly:** \*ALL\* (dropdown), **Class:** \*ALL\* (dropdown)
- All Series:** ☒ **Strategies:** ☐
- Results:** All series selected.

**User Search Criteria:**

- Firms:** All (dropdown), list of firms including 3-D Trading, LLC, 303 Equity Trading Group II, LLC, AB Financial LLC, ABN AMRO Clearing Chicago LLC, Abn Amro Sage Corporation, ABR Management LLC, Adirondack Electronic Markets LLC, and Adm Investors Service.
- User Role:** All (dropdown)
- User:** All (dropdown), list of users including --- (Gray, Matthew I.) (M), --- (Boyle, Terrance G.) (M), ...1 (Boyle, Terrance G.) (M), ..X1 (TEST USER 1) (M), ..Y1 (TEST USER 2) (M), 0 (Weber, Daniel M.) (M), 000 (Spieldenner, Lawrence) (K), and 058 (Laravia, Nicole) (M).
- Clear Firm:** 001 (Cboe Billing/Accounting), 005 (Goldman Sachs & Co.), 008 (ABN AMRO Clearing Chicago Alt 1), 009 (Goldman Sachs Execution & Clearing L.P.), 015 (Morgan Stanley DW Inc/Alt 1), 017 (Interactive Brokers LLC), 031 (Natixis Bleichroeder Inc.), and 038 (RBC Capital Alt).

**Market Replay Screen Selection:**

- Export To:** None (dropdown)
- Orders:** ☐ **Trades:** ☐
- Quotes:** ☐ **Market Conditions:** ☐
- Assignments:** ☐ **Alerts:** ☐
- CTMR Trades(T+1):** ☐
- Retrieve:** button

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At this point, you can obtain current trading information for any CBOE *direct* trading session.



## 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 screenshot displays the Market Replay window with three main panels:

- Market Replay Main Search Criteria:**
  - Session: Options (dropdown)
  - Trade Date: 05/19/2011 (calendar icon)
  - Refresh button
  - Near Real Time: ☒
  - Enter Time in CST:
    - Start Time: 11:05:27.000
    - End Time: 11:25:27.000
  - P/S: All (dropdown) with a checkmark icon
  - Underly: \*ALL\* (dropdown) | Class: \*ALL\* (dropdown)
  - All Series: ☒ | Strategies: ☐
  - Results area: All series selected.
- User Search Criteria:**
  - Firms: List including 3-D Trading, LLC, 303 Equity Trading Group II, LLC, AB Financial LLC, ABN AMRO Clearing Chicago LLC, Abn Amro Sage Corporation, ABR Management LLC, Adirondack Electronic Markets LLC, and Adm Investors Service.
  - User Role: All (dropdown)
  - User: List including --- (Gray, Matthew I.) (M), ... (Boyle, Terrance G.) (M), ... 1 (Boyle, Terrance G.) (M), ... X1 (TEST USER 1) (M), ... Y1 (TEST USER 2) (M), Q (Weber, Daniel M.) (M), 000 (Spieldenner, Lawrence) (K), and 068 (Laravia, Nicole) (M).
  - Clear Firm: List including 001 (Cboe Billing/Accounting), 005 (Goldman Sachs & Co.), 008 (ABN AMRO Clearing Chicago Alt 1), 009 (Goldman Sachs Execution & Clearing L.P.), 015 (Morgan Stanley DW Inc/Alt 1), 017 (Interactive Brokers LLC), 031 (Natixis Bleichroeder Inc.), and 038 (RBC Capital Alt).
- Market Replay Screen Selection:**
  - Export To: None (dropdown)
  - Orders: ☐ | Trades: ☐
  - Quotes: ☒ | Market Conditions: ☐
  - Quote Event Type: All (dropdown)
  - Assignments: ☐ | Alerts: ☐
  - CTMR Trades(T+1): ☐
  - Retrieve button

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, User Role, Market Maker, or Clearing Firm.

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.

**User Search Criteria**

**Firms:** All  
 303 Equity Trading Group II, LLC  
 AB Financial LLC  
 ABN AMRO Clearing Chicago LLC  
 ABR Management LLC  
 Adm Investors Service  
 Alexandria Capital Partners, L.P.  
 Allston Trading, LLC  
 Andrie Trading LLC

**User Role:** All

**User:** 3CT(CTC-LMM, 3CT)(M)  
 3D1L(FIX, API)(M)  
 411(TestIndv, TestIndv)(B)  
 412(TestIndv, TestIndv)(K)  
 4CT(CTC-LMM, 4CT)(M)  
 501(Wolverine Trading LLC)(K)  
 551(Cutler Group LP RMM, CGG)(K)  
 572(Greco, Eric)(M)  
 848(Gardner, Larry)(M)

**Clear Firm:** All  
 977(Spear Leeds/Phlx Test Clearing Firm)

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

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

**Market Replay Screen Selection**

**Export To:** None  
 None  
 Excel  
 PDF  
 Graph  
 GraphPDF

☐ **Orders**

☒ **Quotes**  
 Quote Event Type: All

☐ **Assignments**

☒ **Trades**  
 Trade Type: All

☐ **Market Conditions**

☐ **Alerts**

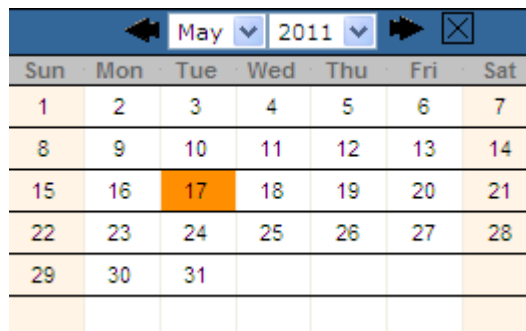
☐ **CTMR Trades(T+1)**

**Retrieve**

**Orders** Market Replay allows you to retrieve 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.



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**.
- 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, Origin Type Code or Order Source. Make your selections from the corresponding dropdown lists. The default for the filters is **All**.
- To save the query results to an Excel, PDF, Graph or Graph PDF format, select either format from the **Export To**: drop down list. For export details, refer to the Customize and Export Data section, page 39.
- 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.

for Trade Date: 05/17/2011

Trade Date: 05/17/2011

P/S: All

Firm: All

Sessions: AAPL

Underl: AAPL

Mkt: All

Options

Class: \*ALL\*

C. Firm: All

Start Time: 11:22:09.000

End Time: 13:42:09.000

All Series: Y

Refresh

Trade Type: All

Export results to: 

Export PDF

Export XLS

Export EDPM

Export CTMR

Total Trades: 1866 Sum of Contract Quantities: 12106

Sell Side										Buy Side										Trade		Contr		Total		Hkt		Trade	
Trade Time	Exc Firm	Conta Firm	Exc Bkr	Acc LogID	Acc Of	OR	OC	O/Q	Exc Firm	Conta Firm	Exc Bkr	Acc LogID	Acc Of	OR	OC	O/Q	Trade Price	Contr Qty	Total Qty	Hkt Cond	C	Trade Id							
Series: AAPL AAPL 21MAY11 280.00 P																						P/S: 03/03							
12:10:05.485	551		CZE	CZE-CZE02	CIT	I	N	Quo	501		JOH	GTG-GTB	QMC	M	N	Ord	\$0.02	1	1			102096 573556025							
12:12:03.524	551		MLF	MLF-MLF2	TOR	I	N	Quo	501		JOH	GTG-GTB	QMC	M	N	Ord	\$0.02	2	5			102096 573556047							
12:12:03.524	551		CZE	CZE-CZE02	CIT	I	N	Quo	501		JOH	GTG-GTB	QMC	M	N	Ord	\$0.02	3	5			102096 573556047							
Series: AAPL AAPL 21MAY11 290.00 P																						P/S: 03/03							
12:34:38.820	501		ZLK	ZLK-ZLK	C	O		Quo	575	777	XLK	XLK-XLK	1500	C	C	Ord	\$0.02	1	1			102096 573556089							
Series: AAPL AAPL 21MAY11 295.00 C																						P/S: 03/03							
11:37:48.812	551		MLF	MLF-MLF2	TOR	I	N	Quo	551		JOH	CZE-CZE02	CIT	M	C	Ord	\$37.55	1	1	FTAO		102096 573556414							

Trade Types: Blue=Cross Product, Brown=Basket Component, Red=Busted, Black=Other, \*=Auct Trade, \*\*=Auct Paired Trade

Exc Bkr Types: Orange=Short Sale, Green=Short Exempt

The example above displays all the order activity that occurred in the Options (W\_MAIN) session on May 17, 2011 from 11:22:09 to 13:42:09 for all the Call and Put series in the AAPL 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
<b>OR &amp; CVG</b>	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
<b>OC</b>	O=Open, C=Close
<b>TIF</b>	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.

Market Replay User ID: castroo Chicago Board Options Exchange

Order History for Order UID:438509570888490

Trade Date: 05/17/2011 Received Time: 13:34:38:721 Series: AAPL AAPL 21MAY11 290.00 P B/S: Buy TIF: DAY  
 ORSID: 2BLFC0 Branch Code: ACH Branch Seq: 537 Source: S Cntg: Sweep  
 Original Size: 1 Traded Vol: 1 Cnd Vol: 0 Book Vol: 0 Cnd Req Vol: 0  
 Cntg Vol: 0 Corr Firm: LKO CMTA Firm: Exec Firm: 501 Orig: C  
 Opt Text: 21=1,PDPM=CDM,6818=WOLVERINE,60=20110517-13:34:38.720,100=BATS  
 Extension Text: Sbl User UID: 0 User Assigned ID: Open/Close: O

Export PDF Export XLS ☐ Hist. Detail ☐ Show Debug Events

Order Events History

Event Time	Event Type	Sub Event Type	Price	Lnkg Price	Acct	T Price	T Qty	Remdr	Okd	Bstd	Hamtd	Cnclcd	Cancel Reason	SRV Loc	RT Loc	RT Loc Type	RT Descn
13:34:38:722	NEW ORDER		\$0.02		XLK									OHS		0	
13:34:38:731	ROUTE_TO_AWAY_EXCHANGE		\$0.02		XLK									OHS	BATS	0	
13:34:38:825	FILL_ORDER_BATS	Within BOTR	\$0.02		XLK	\$0.02	1							BATS	OHS	0	
13:34:38:827	EXECUTION_REPORT_ROUTED		\$0.02		XLK									BATS	TE	0	Auto Link fill report is being Routed to: PRODBCT01H01ndTradeServer1
13:34:38:827	ORDER_ROUTED		\$0.02		XLK									BATS	BATS	0	Auto Link Return Remainder is being Routed to: TE

Related Orders

Rev Time	F Firm	CMTA	F Brkr	S Acct	OR	OC	B/S	Qty	Price	TIF	Cntg	Bid Loc	Status	Trade Qty	Trade Price	Corr Firm	ORSID	B Code	B Seq	Asct	Linkcd
Series: AAPL AAPL 21MAY11 290.00 P																					
13:34:38:568	575	777					O	1	\$0.02	DAY	NONE		Filled	1	\$0.02	AAA	2BLFC0	BBB	3712		Execs

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

Start Time	End Time	Expr Time	Time To Live	Price	Qty	State	Type	Term Reason	Term Quote Key	Term User Id
14:06:50:147	14:06:51:151	14:06:51:148	1000	\$-0.23	245	Ended	2	Normal	0	

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

<b>Term Reason</b>	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
<b>Term Quote Key</b>	The quote key value for the terminated the auction.
<b>Term User ID</b>	The identification of the user who terminated the auction.

To view market conditions, click on the **Derived Market** link.

for Trade Date: 11/12/2010

Trade Date:11/12/2010

P/S:All

Firm:All

MKT Product State:Strategy

Session:Options

Underl.:AAPL

MM:All

Start Time:08:30:00.000

Class:AAPL

C. Firm:All

End Time:11:32:51.000

All Series:Y

Refresh

We couldn't display all the results for the requested time interval.  
Displaying the initial 2404 results from time 08:30:00.000 to 08:40:00.000  
Please perform the query again by choosing a new start time from the list to see remaining results.

Start Time:

08:30:00.000

Retrieve

SessionClassExerExpr.P/CB/SOrder Qty+

W\_MAINAAPL\$330.0012NOV10C B1

W\_MAINAAPL\$320.0012NOV10C S2

W\_MAINAAPL\$310.0012NOV10C B1

Export PDF

Export XLS

Strategy Time	Series	Entry Time	Entry Type	NC Bid Qty	NC Bid Price	NC Ask Price	NC Ask Qty	L/Sale Price	L/Sale Qty	NBBO B/Pr	NBBO A/Pr	BOTR B/Pr	BOTR A/Pr	Best B/Sz	Best B/Pr	Best A/Pr	Best A/Sz	Imbal Qty	Prod Stat	Est Open Price St
08:30:00.000		08:30:00.000			\$-5.88	\$6.04				\$-5.88	\$6.04									
08:30:00.000	AAPL 08:29:50:054 AAPL 12NOV10 330.00 C	Quote		11	\$0.01	\$0.04	23			\$0.01	\$0.04				11	\$0.01	\$0.05	86		Pre-Open
08:30:00.000	AAPL 08:29:59:817 AAPL 12NOV10 320.00 C	Quote		8	\$0.30	\$0.24	23			\$0.30	\$0.24				8	\$0.30		15		Pre-Open
08:30:00.000	AAPL 08:29:59:907 AAPL 12NOV10 310.00 C	Quote		11	\$6.35	\$6.60	10			\$6.35	\$6.60				5	\$2.00		5		Pre-Open

**Quotes** Market Replay allows you to retrieve 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.

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.



**Market Replay Main Search Criteria**

Session: Options  
Trade Date: 5/17/2011

Near Real Time: ☐

Enter Time in CST  
Start Time: 09:00:12:000  
End Time: 15:44:24:000  
P/S: All ☒  
Underly: AAPL Class: \*ALL\*

All Series ☐ Strategies ☐

Series Class	Call Exer. Price	Put Exer. Price
	<input type="checkbox"/> 200.00	<input type="checkbox"/> 200.00
	<input type="checkbox"/> 205.00	<input type="checkbox"/> 205.00
AAPL 22OCT11	<input checked="" type="checkbox"/> 210.00	<input checked="" type="checkbox"/> 210.00
	<input checked="" type="checkbox"/> 215.00	<input checked="" type="checkbox"/> 215.00
	<input checked="" type="checkbox"/> 220.00	<input checked="" type="checkbox"/> 220.00
	<input checked="" type="checkbox"/> 225.00	<input checked="" type="checkbox"/> 225.00
	<input type="checkbox"/> 230.00	<input type="checkbox"/> 230.00
AAPL 22OCT11	<input type="checkbox"/> 235.00	<input type="checkbox"/> 235.00

**User Search Criteria**

Firms: All  
3-D Trading, LLC  
303 Equity Trading Group II, LLC  
AB Financial LLC  
ABN AMRO Clearing Chicago LLC  
Abn Amro Sage Corporation  
ABR Management LLC  
Adirondack Electronic Markets LLC  
Adm Investors Service

User Role: All

User: FLA(Wilson, Scott L.)(M)  
FLD(Felden, William N.)(M)  
FLEX(FlexTrade, FLXO)(B)  
FLG(Geneva Stock LLC RMM, FLG)(M)  
FLK(Falkner, Jeffery K.)(M)  
FLR(Rothman, Philip L.)(M)  
FLP(Filpovich, Matthew J.)(M)  
FLR(Feller, Benjamin J.)(M)  
FLS(Fliss, Melody L.)(M)

Clear Firm: 501(Goldman Sachs Execution & Clearing, L.P.)

**Market Replay Screen Selection**

Export To: None

☐ Orders ☐ Trades  
☒ Quotes ☐ Market Conditions  
☐ Assignments ☐ Alerts  
Quote Event Type: All  
New/Update  
Fill  
Cancel  
Cancel All  
System Cancel  
UITM Cancels  
Bust  
CTMR Trades(T+1)

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- To further filter your request, select to retrieve **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, PDF, Graph or Graph PDF format, select either format from the **Export To**: drop down list. For export details, refer to the Customize and Export Data section, page 39.
- 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.

Market Replay

User ID : castroo

Chicago Board Options Exchange

Help

for Trade Date: 05/17/2011

Trade Date: 05/17/2011

Session: Options

Start Time: 09:00:12.000

End Time: 15:44:24.000

P/S: All

Underl.: AAPL

Class: \*ALL\*

All Series:

Firm: All

MM: FLG(Geneva Stock LLC RMM, FLG)(M)

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: AAPL AAPL 22OCT11 210.00 C								P/S: 03/03			
14:51:02.963	UpdateQte	Sell	10	\$124.65	\$128.05	10		FLG-FLG			
14:51:47.825	UpdateQte	Sell	10	\$124.65	\$127.85	10		FLG-FLG			
14:52:02.682	UpdateQte	Sell	10	\$124.65	\$128.00	10		FLG-FLG			
14:54:45.984	UpdateQte	Sell	10	\$124.65	\$128.25	10		FLG-FLG			
14:58:14.009	UpdateQte	Sell	10	\$124.85	\$128.30	10		FLG-FLG			
14:58:22.745	UpdateQte	Sell	10	\$124.95	\$128.55	10		FLG-FLG			
14:58:55.347	UpdateQte	Sell	10	\$125.15	\$128.55	10		FLG-FLG			
14:59:59.596	CndQte			\$125.15	\$128.55		User	FLG-FLG			
Series: AAPL AAPL 22OCT11 210.00 P								P/S: 03/03			
14:51:02.965	UpdateQte	Sell	10	\$0.52	\$1.13	10		FLG-FLG			
14:51:12.622	UpdateQte	Sell	10	\$0.51	\$1.13	10		FLG-FLG			
14:51:40.566	UpdateQte	Sell	10	\$0.52	\$1.13	10		FLG-FLG			
14:52:56.528	UpdateQte	Sell	10	\$0.51	\$1.13	10		FLG-FLG			
14:53:15.661	UpdateQte	Sell	10	\$0.52	\$1.13	10		FLG-FLG			
14:53:38.551	UpdateQte	Sell	10	\$0.51	\$1.13	10		FLG-FLG			
14:53:48.236	UpdateQte	Sell	10	\$0.52	\$1.13	10		FLG-FLG			

Export PDF

Export XLS

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

In the example above, quote information for all classes in underlying symbol AAPL, displays for user FLG.

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

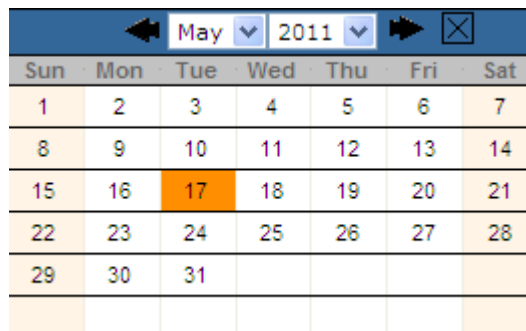
Click **Refresh** at anytime to update the window display.

**Market Conditions**

To obtain current market condition 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.



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.

**Market Replay Main Search Criteria**

Session: Options  
Trade Date: 5/17/2011 Refresh

Near Real Time: ☐

Enter Time in CST  
Start Time: 09:00:12:000  
End Time: 15:44:24:000  
P/S: All ☒  
Underly: AAPL Class: \*ALL\*

All Series ☐ Strategies ☐

Series Class	Call Exer. Price	Put Exer. Price
ALL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AAPL 21MAY11	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> 170.00	<input type="checkbox"/> 170.00
	<input type="checkbox"/> 175.00	<input type="checkbox"/> 175.00
	<input type="checkbox"/> 180.00	<input type="checkbox"/> 180.00
	<input type="checkbox"/> 185.00	<input type="checkbox"/> 185.00
AAPL 21MAY11	<input type="checkbox"/> 190.00	<input type="checkbox"/> 190.00
	<input type="checkbox"/> 195.00	<input type="checkbox"/> 195.00

**User Search Criteria**

Firms: All  
3-D Trading, LLC  
303 Equity Trading Group II, LLC  
AB Financial LLC  
ABN AMRO Clearing Chicago LLC  
Abn Amro Sage Corporation  
ABR Management LLC  
Adirondack Electronic Markets LLC  
Adm Investors Service

User Role: All

User: All  
---(Gray, Matthew I.)(M)  
...(Boyle, Terrance G.)(M)  
...1(Boyle, Terrance G.)(M)  
..X1(TEST USER 1)(M)  
..Y1(TEST USER 2)(M)  
0(Weber, Daniel M.)(M)  
000(Spieldenner, Lawrence)(K)  
068(Laravia, Nicole)(M)

Clear Firm: All  
001(Cboe Billing/Accounting)  
005(Goldman Sachs & Co.)  
008(ABN AMRO Clearing Chicago Alt 1)  
009(Goldman Sachs Execution & Clearing L.P.)  
015(Morgan Stanley DW Inc/Alt 1)  
017(Interactive Brokers LLC)  
031(Natixis Bleichroeder Inc.)  
038(RBC Capital Alt)

**Market Replay Screen Selection**

Export To: None

☐ Orders ☐ Trades  
☐ Quotes ☒ Market Conditions  
☐ Assignments ☐ Alerts  
☐ CTMR Trades(T+)

MKT Product State: All  
All  
Condensed  
Closed  
Pre Open  
Opening Rotation  
Open  
Halted  
Fast Market  
No Session  
On Hold  
Ending Hold  
Strategy

Retrieve

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Local intr.

- To further filter your request, select to retrieve **Market Conditions**.
- You can further filter your market condition requests by **Product State**. Make your selections from the corresponding dropdown lists. The default for the filters is **All**.
- To save the query results to an Excel, PDF, Graph or Graph PDF format, select either format from the **Export To**: drop down list. For export details, refer to the Customize and Export Data section, page 39.
- If you are satisfied with your selections and would like to view the data, click **Retrieve**. The **Market Conditions** window will display with the requested data.

Market Replay

User ID : castroo

Chicago Board Options Exchange

Help

for Trade Date: 05/17/2011

Trade Date:	05/17/2011	Session:	Options	Start Time:	09:00:12.000	End Time:	15:44:24.000
P/S:	All	Underl:	AAPL	Class:	*ALL*	All Series:	
Firm:	All	MM:	All	C. Firm:	All	<div>Refresh</div>	
MKT Product State:	All						

We couldn't display all the results for the requested time interval.  
 Displaying the initial 28052 results from time 09:00:12.000 to 09:00:59.999  
 Please perform the query again by choosing a new start time from the list to see remaining results.

Start Time:

09:01:00.000

Retrieve

Export PDF

Export XLS

Entry Time	Entry Type	NC Bid Qty	NC Bid Price	NC Ask Price	NC Ask Qty	L/Sale Price	L/Sale Qty	NBBO B/Pr	NBBO A/Pr	BOTR B/Pr	BOTR A/Pr	Best B/Sz	Best B/Pr	Best A/Pr	Best A/Sz	Imbal Qty	Prod Stat	Est Open Price St
Series:	AAPL AAPL 21MAY11 170.00 P							P/S: 03/03										
09:00:26.949	Quote			\$0.04	23			\$0.04		\$0.04								Open
Series:	AAPL AAPL 21MAY11 175.00 P							P/S: 03/03										
09:00:26.949	Quote			\$0.16	24			\$0.16		\$0.16								Open
Series:	AAPL AAPL 21MAY11 180.00 C							P/S: 03/03										
09:00:23.483	Quote	10	\$150.80	\$153.45	11			\$150.95	\$153.45	\$150.95	\$153.45							Open
09:00:23.495	Quote	10	\$150.80	\$153.40	10			\$150.95	\$153.40	\$150.95	\$153.45							Open
Series:	AAPL AAPL 21MAY11 180.00 P							P/S: 03/03										
09:00:26.949	Quote			\$0.04	23			\$0.04		\$0.04								Open
Series:	AAPL AAPL 21MAY11 185.00 C							P/S: 03/03										
09:00:48.619	Quote	10	\$145.30	\$148.00	11			\$145.95	\$147.50	\$145.95	\$147.50							Open
09:00:48.643	Quote	10	\$145.30	\$147.95	10			\$145.95	\$147.50	\$145.95	\$147.50							Open
Series:	AAPL AAPL 21MAY11 185.00 P							P/S: 03/03										
09:00:26.949	Quote			\$0.05	23			\$0.05		\$0.05								Open

Quote Types: Bold Red=manual(PAR)

Export PDF

Export XLS

Quote Types: Bold Red=manual(PAR)

Export PDF Export XLS

Details are provided for all the market events that occurred in the Options session for all the Put/Call series in the AAPL class.

Scroll down on your scroll bar to view all the events for each series.

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

**Trades** Market Replay allows you to retrieve 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.

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.

**Market Replay Main Search Criteria**

Session: Options  
Trade Date: 5/17/2011

Near Real Time: ☐

Enter Time in CST

Start Time: 09:00:12:000  
End Time: 15:44:24:000  
P/S: All ☒  
Underly: AAPL Class: \*ALL\*

All Series ☐ Strategies ☐

Series Class	Call Exer. Price	Put Exer. Price
ALL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AAPL 21MAY11	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> 170.00	<input type="checkbox"/> 170.00
	<input type="checkbox"/> 175.00	<input type="checkbox"/> 175.00
	<input type="checkbox"/> 180.00	<input type="checkbox"/> 180.00
	<input type="checkbox"/> 185.00	<input type="checkbox"/> 185.00
AAPL 21MAY11	<input type="checkbox"/> 190.00	<input type="checkbox"/> 190.00
	<input type="checkbox"/> 195.00	<input type="checkbox"/> 195.00

**User Search Criteria**

Firms: All  
3-D Trading, LLC  
303 Equity Trading Group II, LLC  
AB Financial LLC  
ABN AMRO Clearing Chicago LLC  
Abn Amro Sage Corporation  
ABR Management LLC  
Adirondack Electronic Markets LLC  
Adm Investors Service

User Role: All

User: All  
---(Gray, Matthew I.)(M)  
...(Boyle, Terrance G.)(M)  
...1(Boyle, Terrance G.)(M)  
...X1(TEST USER 1)(M)  
...Y1(TEST USER 2)(M)  
0(Weber, Daniel M.)(M)  
000(Spieldenner, Lawrence)(K)  
068(Laravia, Nicole)(M)

Clear Firm: All  
001(Cboe Billing/Accounting)  
005(Goldman Sachs & Co.)  
008(ABN AMRO Clearing Chicago Alt 1)  
009(Goldman Sachs Execution & Clearing L.P.)  
015(Morgan Stanley DW Inc/Alt 1)  
017(Interactive Brokers LLC)  
031(Natixis Bleichroeder Inc.)  
038(RBC Capital Alt)

**Market Replay Screen Selection**

Export To: None

☐ Orders ☒ Trades  
Trade Type: All  
All  
Auction  
PAR  
MMHH  
All Cross Prod  
Cross Prod Leg  
Cross Prod Spread  
Basket Component  
Multi Linkage  
Stats Summary  
Firms Stats Summary  
Linkage Stats Summary  
EDPM Export

☐ Quotes ☐ Market Cor ☐ Alerts ☐ CTMR Trad

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- To further filter your request, select to retrieve **Trades**.
- You can further filter your trades request by **Trade Types**. Make your selections from the corresponding dropdown lists. The default for the filters is **All**.
- To save the query results to an Excel, PDF, Graph or Graph PDF format, select either format from the **Export To**: drop down list. For export details, refer to the Customize and Export Data section, page 39.
- 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.

Market Replay

User ID : castroo

Chicago Board Options Exchange

Help

for Trade Date: 05/17/2011

Trade Date: 05/17/2011

Session: Options

Start Time: 09:00:12.000

End Time:

P/S: All

Underl: AAPL

Class: \*ALL\*

All Series:

Firm: All

MM: All

C. Firm: All

Refresh

Trade Type: All

We couldn't display all the results for the requested time interval.  
Displaying the initial 3650 results from time 09:00:12.000 to 11:00:59.999.  
Please perform the query again by choosing a new start time from the list to see remaining results.

Start Time: 11:01:00.000

» Export results to:

Export PDF

Export XLS

Export EDPM

Export CTMR

Total Trades: 3650 Sum of Contract Quantities: 22746

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										
Series: AAPL AAPL 21MAY11 275.00 P																						P/S: 03/03									
09:58:48.682*	792	792	XXH	MPF-		C	C	Ord	501		GTG	GTG-GTB	QMC	M	N	Ord	\$0.01	1	1	FTAO											
Series: AAPL AAPL 21MAY11 280.00 P																						P/S: 03/03									
09:57:20.877	551		MLF	MLF-	TOR	I	N	Quo	501		XXH	GTG-GTB	QMC	M	N	Ord	\$0.02	1	5	FTAO											
09:57:20.877	551		CZE	CZE-	CIT	I	N	Quo	501		XXH	GTG-GTB	QMC	M	N	Ord	\$0.02	4	5	FTAO											
09:59:27.562	551		MLF	MLF-	TOR	I	N	Quo	501		XXH	GTG-GTB	QMC	M	N	Ord	\$0.02	2	2												
10:00:22.034	551		CZE	CZE-	CIT	I	N	Quo	501		XXH	GTG-GTB	QMC	M	N	Ord	\$0.02	4	5												
10:00:22.034	551		MLF	MLF-	TOR	I	N	Quo	501		XXH	GTG-	QMC	M	N	Ord	\$0.02	1	5												

Trade Types: Blue=Cross Product, Brown=Basket Component, Red=Busted, Black=Other, \*=Auct Trade, \*\*=Auct Paired Trade  
Exc Bkr Types: Orange=Short Sale, Green=Short Exempt

The example above displays all the trades that occurred in the W\_MAIN session on May 17, 2011, for the AAPL class. 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.

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										
Series: AAPL AAPL 12NOV10 280.00 P (W)																						P/S: 03/03									
11:23:46.629*	009		HZA	HZA-	QIA	M	N	Ord	501		XXH	ABC-ABC		W	O	Ord	\$0.02	1	1	FTAO	100398 1234981571										
11:29:44.560	501		ZLK	ZLK-ZLK		W	O	Ord	501		XLK	XLK-ZLK		W	O	Ord	\$0.02	76	76		100398 1234983495										
11:31:58.095*	551	234	XXH	CAB-		C	C	Ord	255		LBH	LBH-LBH1	LEH	M	N	Ord	\$0.02	1	1		100398 1234984342										
11:31:58.112*	551	234	XXH	CAB-		C	C	Ord	551		CZE	CZE-	CIT	M	N	Ord	\$0.02	31	31		100398 1234984344										
11:31:58.410	551	234	XLK	XLK-ZLK		C	C	Ord	792	909	ZLK	ZLK-ZLK		C	O	Ord	\$0.02	19	19		100398 1234984354										
11:32:00.030	551	234	XLK	XLK-ZLK		C	C	Ord	792	909	ZLK	ZLK-ZLK		C	O	Ord	\$0.02	16	16		100398 1234984373										
11:32:04.877*	226		XXH	NTF-		C	C	Ord	009		HZA	HZA-	QIA	M	O	Ord	\$0.01	3	3	SPRD	100398 1565054696										
11:56:41.922	226		XXH	NTF-		C	C	Ord	551		XXH	CIT-CIT	CIT	M	O	Ord	\$0.08	1	1	SPRD	100398 1565057843										

Trade Types: Blue=Cross Product, Brown=Basket Component, Red=Busted, Black=Other, \*=Auct Trade, \*\*=Auct Paired Trade  
Exc Bkr Types: Orange=Short Sale, Green=Short Exempt

Sell Order Detail

Series: AAPL AAPL 12NOV10 320.00 C (W) P/S: 03/03

Trade Time: 11:45:07.690

Trade ID: 100398 1234988602

ORSID: 218H40

Time Received: 11:45:07.493

Time in Force: DAY

Order Price: 0.05

Orig Order Qty: 80

Cntg Price: 0.0

Cntg Qty: 0

Time Expired:

Buy Order Detail

Series: AAPL AAPL 12NOV10 320.00 C (W) P/S: 03/03

Trade Time: 11:45:07.690

Trade ID: 100398 1234988602

ORSID: 218H70

Time Received: 11:45:07.647

Time in Force: DAY

Order Price: 0.05

Orig Order Qty: 23

Cntg Price: 0.0

Cntg Qty: 0

Time Expired:

Export trade details to: Export PDF



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

Order History for Order UID:438509570264672

Trade Date:03/17/2011

ORSID:2F18W0

Original Size:1

Cntg Vol:0

Opt Text:P:SIG;

Extension Text:21=1,PDPM=51GNGS,60=20110517-14:58:48.658

Sbt User UID:0

Received Time:09:58:48: 678

Branch Code:CJA

Traded Vol:1

Corr. Firm:

User Assigned ID:113=MEU(9321=CJA0928-20110517)50=MPF6:MPF6

Series:AAPL AAPL 21MAY11 275.00 P

Branch Seq:928

Cnd Vol:0

CMTA Firm:792

B/S:Sell

Source:8

Book Vol:0

Exec Firm:792

TIF:DAY

Orig:NONE

Cnd Req. Vol:0

Origin:C

Open/Close:C

Export PDF

Export XLS

☐ Hist. Detail

☐ Show Debug Events

Order Events History

Event Time	Event Type	Sub Event Type	Price	Link Price	Acct	T. Price	T. Qty	Remdr	Rkd	Btd	Hsmtd	Cncl	Cancel Reason	SBC Loc	RT Loc	RT Type	RT Desc
09:58:48: 678	NEW ORDER		\$0.01											MPF6		0	
09:58:48: 679	HYBRID_PROCESSING_REQUESTED		\$0.01											MPF6	ProdBC10x1H/bndTradeServer1	0	Deviation Check Passed Level 1
09:58:48: 680	ORDER_ROUTED		\$0.01											MPF6	ProdBC10x1H/bndTradeServer1	0	Deviation Check Passed Level 1
09:58:48: 680	AUCTION_START		\$0.01											ProdBC10x1H/bndTradeServer1	ProdBC10x1H/bndTradeServer1	0	
09:58:48: 684	<a href="#">FILL ORDER</a>	Within BOTR	\$0.01			\$0.01	1							ProdBC10x1H/bndTradeServer1	ProdBC10x1H/bndTradeServer1	0	

Auction Order Detail

Start Time	End Time	Exp. Time	Time To Live	Price	Qty	State	Type	Term Reason	Term Quote Key	Term User Id
09:58:48:078	09:58:48:082	09:58:48:082	100	\$0.01	1	Ended	HAL 2	Order	0	

Trade details are provided as well as system specific information. Valid codes and column definitions that are represented in the Trades window are defined in the table below.

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

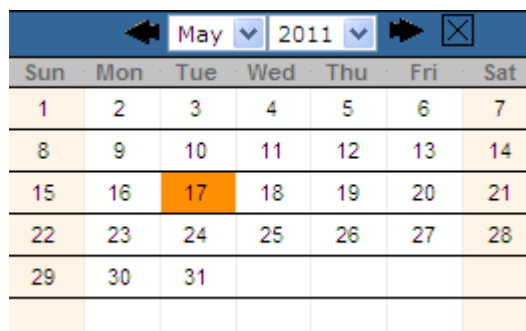


Column	Description
<b>OR</b>	P/A Linkage = 'A' B/D = 'B' CUSTOMER = 'C' Customer-FBW = 'D' Member, House Account = 'E' FIRM = 'F' User Proxy for trader, Customer Segregated = 'G' User Proxy for trader, House Account = 'H' In-Crowd MM = 'I' Firm - FBW = 'J' B/D-FBW='K' Firm-FBW='L' MARKET_MAKER = 'M' 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'
<b>OC</b>	O=Open, C=Close
<b>Sell Acc of</b>	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 <i>direct</i> .
<b>Buy Acc of</b>	This column represents the buyer's account information. If this is a trade from a quote, the Q account or Market Maker acronym is displayed. If this is a trade from an order, it is a free form field for the firm.
<b>Mkt Cond</b>	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
<b>S (Trade Source)</b>	How the trade was entered. SYSTEM or MANUAL. The Help Desk has the ability to enter a manual trade (block trade)
<b>B</b>	The letter 'B' stands for Bust. An * displayed in this column represents a busted trade.

**Assignments** Market Replay allows you to retrieve user assignment 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.



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.

The screenshot displays the 'Market Replay Main Search Criteria' and 'User Search Criteria' windows. The 'Market Replay Main Search Criteria' window includes fields for Session (Options), Trade Date (5/17/2011), Near Real Time (unchecked), Start Time (09:00:12.000), End Time (15:44:24.000), P/S (All), Underly (AAPL), Class (\*ALL\*), All Series (checked), and Strategies (unchecked). The 'User Search Criteria' window includes fields for Firms, User Role (All), User, and Clear Firm. The 'Market Replay Screen Selection' window includes an Export To (None) dropdown, checkboxes for Orders, Trades (checked), Quotes, Market Conditions, Assignments (checked), Alerts, and CTMR Trades(T+1), and a Trade Type (All) dropdown. A Retrieve button is located at the bottom right of the 'Market Replay Screen Selection' window.

- To further filter your request, select to retrieve **Assignments**.
- To save the query results to an Excel, PDF, Graph or Graph PDF format, select either format from the **Export To:** drop down list. For export details, refer to the *Customize and Export Data* section, page 39.
- If you are satisfied with your selections and would like to view the data, click **Retrieve**. The **Assignments** window will display with the requested data.

Market Replay

User ID : castroo

Chicago Board Options Exchange

Help

for Trade Date: 05/17/2011

Trade Date: 05/17/2011

Session: Options

Start Time: 09:00:12.000

End Time: 15:44:24.000

P/S: All

Underl.: AAPL

Class: \*ALL\*

All Series: Y

Firm: All

MM: All

C. Firm: All

Refresh

» Export results to:

Export PDF

Export XLS

User Acr	Full Name	Exch Acr	Role	Underl. Sym
AAG	Heels 27 LLC MM FIRM, AAG	CBOE	MM	AAPL
ACM	Zydeco Trading MM-FIRM, ACM	CBOE	MM	AAPL
BMK	McKnight, John B.	CBOE	MM	AAPL
BMN	Volant Liquidity RMM, BMN	CBOE	MM	AAPL
BXC	Baedke, William D.	CBOE	MM	AAPL
CDM	Citigroup Derivatives Markets eDPM, CDM	CBOE	EDPM	AAPL
CEJ	Heels 27 LLC MM-FIRM, CEJ	CBOE	MM	AAPL
CSF	Credit Suisse Securities (USA) LLC RMM, CSF	CBOE	MM	AAPL

The example above displays the user assignments on May 17, 2011 for the class, AAPL.

**Alert Messages**

The Alerts message display allows you to view types of trade throughs that have occurred in CBOE*direct*.

- Select the trading session from the **Session** drop down list.
  - ↳ **Note:** Alert messages are not available for the OneChicago, CFE Options and Futures sessions.
- 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.

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.

**Market Replay Main Search Criteria**

Session: Options  
Trade Date: 5/17/2011  
Refresh

Near Real Time: ☐  
Enter Time in CST  
Start Time: 09:43:32.000  
End Time: 13:03:24.000  
P/S: All  
Underly: AAPL Class: \*ALL\*

All Series ☒ Strategies ☐

All series selected.

**User Search Criteria**

Firms: All  
3-D Trading, LLC  
303 Equity Trading Group II, LLC  
AB Financial LLC  
ABN AMRO Clearing Chicago LLC  
Abn Amro Sage Corporation  
ABR Management LLC  
Adirondack Electronic Markets LLC  
Adm Investors Service

User Role: All

User: All  
---(Gray, Matthew I.)(M)  
...(Boyle, Terrance G.)(M)  
...1(Boyle, Terrance G.)(M)  
..X1(TEST USER 1)(M)  
..Y1(TEST USER 2)(M)  
0(Weber, Daniel M.)(M)  
000(Spielfenner, Lawrence)(K)  
068(Laravia, Nicole)(M)

Clear Firm: All  
001(Cboe Billing/Accounting)  
005(Goldman Sachs & Co.)  
008(ABN AMRO Clearing Chicago Alt 1)  
009(Goldman Sachs Execution & Clearing L.P.)  
015(Morgan Stanley DW Inc/Alt 1)  
017(Interactive Brokers LLC)  
031(Natixis Bleichroeder Inc.)  
038(RBC Capital Alt)

**Market Replay Screen Selection**

Export To: None




☐ Orders ☐ Trades  
☐ Quotes ☐ Market Conditions  
☐ Assignments ☒ Alerts  
☐ CTMR Trade

Alert Type: All Trade Alerts  
All Trade Alerts  
Low OI Alerts  
Potential Reversals  
Bid/Offer Alert  
Quote Width Alert  
Order/Trade Ratio Alert  
Restricted Trade Alert  
Put Call Parity  
Satisfaction Alert

Retrieve

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- To further filter your request, select to retrieve **Alerts**.
- To save the query results to an Excel, PDF, Graph or Graph PDF format, select either format from the **Export To**: drop down list. For export details, refer to the *Customize and Export Data* section, page 39.
- If you are satisfied with your selections and would like to view the data, click **Retrieve**. The **Alerts** window will display with the requested data.

Market Replay			User ID : castroo		Chicago Board Options Exchange			 Help	
for Trade Date: 05/17/2011									
Trade Date:	05/17/2011	Session:	Options	Start Time:	09:43:32.000	End Time:	13:03:24.000		
P/S:	All	Underly:	AAPL	Class:	*ALL*	All Series:	Y		
Firm:	All	MM:	All	C. Firm:	All	<div>Refresh</div>			
Alert Type:	All	Log Status:	MME Actv Log						
QW Alert Count:	1	QW Alert Quantity:	2						
BOP Alert Count:	0	BOP Alert Quantity:	0						
OTP Alert Count:	0	OTP Alert Quantity:	0						
RTR Alert Count:	0	RTR Alert Quantity:	0						
PCP Alert Count:	0	PCP Alert Quantity:	0						
» Export results to:									
<div> Export PDF</div>				<div> Export XLS</div>					
Alert Type	Trade Time	Series	Price	Qty	Spread	Reason	TR	MC QT	Open Int
QW	10:55:01.649	AAPL AAPL 19JAN13 210.00 C	137.03	2	4.44	Trade Price 137.03 occurred with a quote of Bid: 134.50 and Ask: 138.95. The spread width was 4.44, which is greater than the allowed spread of 4.00	Tr	MC QT	269

The **Alert Messages** window above displays all the alerts that occurred on May 17, 2011 from 09:43:32 to 13:03:24 for all the AAPL class. If there is any related trade / order activity in the alert, it is shown in the bottom half of the display.

Click the **TR** link to view trade summary data.

for Trade Date: 05/17/2011

Trade Date: 05/17/2011

Session: W\_MAIN

Start Time: 10:54:51.649

End Time: 10:55:11.649

P/S: All

Underl: AAPL

Class: AAPL

All Series:

Firm: All

MM: All

C. Firm: All

Refresh

Trade Type: All

» Export results to:

Export PDF

Export XLS

Export EDPM

Export CTMR

Total Trades: 1

Sum of Contract Quantities: 2

Sell Side										Buy Side														
Trade Time	Exc Firm	Cmta Firm	Exc Bkr	Acc LogID	Acc Of	OR	OC	O/Q		Exc Firm	Cmta Firm	Exc Bkr	Acc LogID	Acc Of	OR	OC	O/Q		Trade Price	Contr Qty	Total Qty	Mkt Cond	B	Trade Id
Series: AAPL AAPL 19JAN13 210.00 C										P/S: 03/03														
10:55:01.649	551		XXH	SPH-SPM29	QMD	M	O	Ord	226	XXH	NTF-NTF7			C	O	Ord			\$137.03	2	2	SPRD		102096 1123594298

Trade Types: Blue=Cross Product, Brown=Basket Component, Red=Busted, Black=Other, \*=Auct Trade, \*\*=Auct Paired Trade

Exc Bkr Types: Orange=Short Sale, Green=Short Exempt

To view market condition information, click the **MC** link.

for Trade Date: 05/17/2011

Trade Date: 05/17/2011  
P/S: All  
Firm: All

Session: W\_MAIN  
Underl: AAPL  
MM: All

Start Time: 10:54:51.649  
Class: AAPL  
C. Firm: All

End Time: 10:55:11.649  
All Series:  

Refresh

Export PDF Export XLS

Entry Time	Entry Type	NC Bid Qty	NC Bid Price	NC Ask Price	NC Ask Qty	L/Sale Price	L/Sale Qty	NBBO B/Pr	NBBO A/Pr	BOTR B/Pr	BOTR A/Pr	Best B/Sz	Best B/Pr	Best A/Pr	Best A/Sz	Imbal Qty	Prod Stat	Est Open Price St
Series: AAPL AAPL 19JAN13 210.00 C								P/S: 03/03										
10:54:55.432	Quote	41	\$134.50	\$138.95	10			\$134.50	\$138.25	\$134.50	\$138.25						Open	
10:54:57.812	Quote	41	\$134.50	\$138.85	11			\$134.50	\$138.25	\$134.50	\$138.25						Open	
10:54:58.338	Quote	41	\$134.50	\$138.90	11			\$134.50	\$138.25	\$134.50	\$138.25						Open	
10:55:00.358	Quote	41	\$134.50	\$138.95	21			\$134.50	\$138.25	\$134.50	\$138.25						Open	
10:55:00.381	Quote	41	\$134.50	\$138.95	31			\$134.50	\$138.25	\$134.50	\$138.25						Open	
10:55:00.667	Quote	51	\$134.50	\$138.95	41			\$134.50	\$138.25	\$134.50	\$138.25						Open	
10:55:01.650	LSale/Pr					\$137.03	2	\$134.50	\$138.95								Open	
10:55:01.676	Quote	51	\$134.50	\$138.90	11			\$134.50	\$138.25	\$134.50	\$138.25						Open	
10:55:01.706	Quote	41	\$134.50	\$138.90	11			\$134.50	\$138.25	\$134.50	\$138.25						Open	
10:55:01.718	Quote	31	\$134.50	\$138.90	11			\$134.50	\$138.25	\$134.50	\$138.25						Open	
10:55:01.897	Quote	11	\$135.95	\$138.90	12			\$135.95	\$137.85	\$134.55	\$137.85						Open	

Quote Types: Bold Red=manual(PAR)

Export PDF Export XLS

Quote summary information can be viewed by clicking on the **QT** link.



for Trade Date: 05/17/2011

Trade Date:	05/17/2011	Session:	W_MAIN	Start Time:	10:54:51.649	End Time:	10:55:11.649
P/S:	All	Underl:	AAPL	Class:	AAPL	All Series:	N
Firm:	All	MM:	All	C. Firm:	All	<a href="#">Refresh</a>	
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: AAPL AAPL 19JAN13 210.00 C P/S: 03/03											
10:54:55.431	UpdateQte	Sell	10	\$134.40	\$139.40	10		VXZ-WWE			
10:54:55.432	BQ-Open		41	\$134.50	\$138.95	10		Best			
10:54:57.812	UpdateQte	Sell	11	\$134.50	\$138.85	11		HZA-HZ05			
10:54:57.812	BQ-Open		41	\$134.50	\$138.85	11		Best			
10:54:58.338	UpdateQte	Sell	11	\$134.50	\$138.90	11		HZA-HZ05			
10:54:58.338	BQ-Open		41	\$134.50	\$138.90	11		Best			
10:55:00.358	UpdateQte	Sell	11	\$134.50	\$138.95	11		HZA-HZ05			
10:55:00.358	BQ-Open		41	\$134.50	\$138.95	21		Best			
10:55:00.381	UpdateQte	Sell	10	\$134.50	\$138.95	10		TIS-TIS			
10:55:00.381	BQ-Open		41	\$134.50	\$138.95	31		Best			
10:55:00.667	UpdateQte	Sell	10	\$134.50	\$138.95	10		BMK-BMK			
10:55:00.667	BQ-Open		51	\$134.50	\$138.95	41		Best			
10:55:01.650	LSalePr-Open							Best	2	\$137.03	
10:55:01.676	UpdateQte	Sell	11	\$134.50	\$138.90	11		HZA-HZ05			
10:55:01.676	BQ-Open		51	\$134.50	\$138.90	11		Best			
10:55:01.690	UpdateQte	Sell	10	\$134.50	\$139.20	10		TIS-TIS			

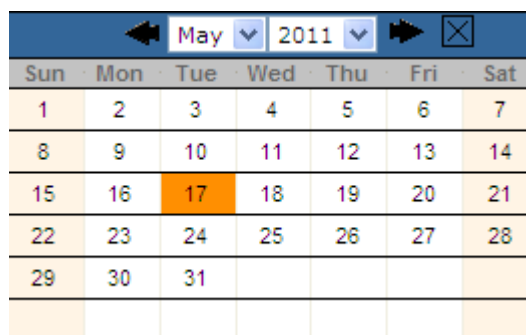
Export PDF Export XLS

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

Click **Refresh** at anytime to update the search results.

**CTMR Trades** The CTMR trades display allows you to view trade match information for CBOE *direct*.

- Select the trading session from the **Session** drop down list.
  - ↳ **Note:** CTMR trades are not available for the OneChicago, CFE Options and Futures sessions.
- 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.



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.

Market Replay Main Search Criteria			User Search Criteria	
Session:	Options			
Trade Date:	5/17/2011	<input type="button" value="Refresh"/>		
Near Real Time: <input type="checkbox"/>				
Enter Time in CST				
Start Time:	09:43:32	000		
End Time:	13:03:24	000		
P/S:	All	<input type="checkbox"/>		
Underly:	AAPL	Class: *ALL*		
All Series	<input type="checkbox"/>	Strategies	<input type="checkbox"/>	
Series Class	Call Exer. Price	Put Exer. Price		
ALL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
AAPL 21MAY11	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/> 170.00	<input type="checkbox"/> 170.00		
	<input type="checkbox"/> 175.00	<input type="checkbox"/> 175.00		
	<input type="checkbox"/> 180.00	<input type="checkbox"/> 180.00		
	<input type="checkbox"/> 185.00	<input type="checkbox"/> 185.00		
AAPL 21MAY11	<input type="checkbox"/> 190.00	<input type="checkbox"/> 190.00		
	<input type="checkbox"/> 195.00	<input type="checkbox"/> 195.00		
			<b>Firms:</b> All 3-D Trading, LLC 303 Equity Trading Group II, LLC AB Financial LLC ABN AMRO Clearing Chicago LLC Abn Amro Sage Corporation ABR Management LLC Adirondack Electronic Markets LLC Adm Investors Service	
			<b>User Role:</b> All	
			<b>User:</b> All --- (Gray, Matthew I.) (M) ... (Boyle, Terrance G.) (M) ... 1 (Boyle, Terrance G.) (M) ... X1 (TEST USER 1) (M) ... Y1 (TEST USER 2) (M) 0 (Weber, Daniel M.) (M) 000 (Spieldenner, Lawrence) (K) 068 (Laravia, Nicole) (M)	
			<b>Clear Firm:</b> All 001 (Cboe Billing/Accounting) 005 (Goldman Sachs & Co.) 008 (ABN AMRO Clearing Chicago Alt 1) 009 (Goldman Sachs Execution & Clearing L.P.) 015 (Morgan Stanley DW Inc/Alt 1) 017 (Interactive Brokers LLC) 031 (Natixis Bleichroeder Inc.) 038 (RBC Capital Alt)	
<b>Market Replay Screen Selection</b> Export To: None				
<input type="checkbox"/> Orders <input type="checkbox"/> Trades <input type="checkbox"/> Quotes <input type="checkbox"/> Market Conditions <input type="checkbox"/> Assignments <input type="checkbox"/> Alerts <input checked="" type="checkbox"/> CTMR Trades (T+1)				
Trade Type: All All Non-Electronic				
<input type="button" value="Retrieve"/>				

- To further filter your request, select to retrieve **CTMR Trades (T+1)**.
- To save the query results to an Excel, PDF, Graph or Graph PDF format, select either format from the **Export To:** drop down list. For export details, refer to the *Customize and Export Data* section, page 39.
- If you are satisfied with your selections and would like to view the data, click **Retrieve**. The **CTMR** window will display with the requested data.

Market Replay

User ID : castroo

Chicago Board Options Exchange

Help

for Trade Date: 05/17/2011

Trade Date: 05/17/2011

Session: Options

Start Time: 09:43:32.000

End Time: 13:03:24.000

P/S: All

Underl: AAPL

Class: \*ALL\*

All Series:

Firm: All

MM: All

C. Firm: All

Refresh

» Export results to:

Export PDF

Export XLS

Trade Time	B/S	Qty	Trade Price	Exc Firm	Exc Bkr	Opp Firm	Opp Bkr	Org	Acc	CMTA Firm	Cor. Firm	Sub Acc	O/C	ORSD	Trd	FBW	Bra	Branch Seq	Trd Type
Series: AAPL AAPL 21MAY11 275.00 P																			
09:58:48	B	1	0.01	501	GTG	792	XXH	M	QMC	0	IMC	34DW1209		Ord			GAA	2015	R
09:58:48	S	1	0.01	792	XXH	501	GTG	C	792	792		BAML868B	C	2F18W			CJA	928	R
Series: AAPL AAPL 21MAY11 280.00 P																			
09:57:20	B	1	0.02	501	XXH	551	MLF	M	QMC	0	IMC	34DW1209		Ord			GAA	1991	R
09:57:20	S	1	0.02	551	MLF	501	XXH	I	TOR	0								0	R
09:57:20	B	4	0.02	501	XXH	551	CZE	M	QMC	0	IMC	34DW1209		Ord			GAA	1991	R
09:57:20	S	4	0.02	551	CZE	501	XXH	I	CIT	0								0	R
09:59:27	B	2	0.02	501	XXH	551	MLF	M	QMC	0	IMC	34DW1209		Ord			GAA	2024	R
09:59:27	S	2	0.02	551	MLF	501	XXH	I	TOR	0								0	R
10:00:22	B	4	0.02	501	XXH	551	CZE	M	QMC	0	IMC	34DW1209		Ord			GAA	2030	R


The example above shows trade match data for the AAPL class that occurred on May 17, 2011 from 09:43:32 to 13:03:24.

From the Trd (Trade) column, click on the Globe icon to view CBOEdirect trade history.

Market Replay

User ID : castroo

Chicago Board Options Exchange

 Help

for Trade Date: 05/17/2011

Trade Date: 05/17/2011

Session: W\_MAIN

Start Time: 09:43:32.000

End Time: 13:03:24.000

P/S: All

Underl.: N/A

Class: null

All Series:

Firm: All


MM: 0


C. Firm: All


Refresh


Trade Type: All


» Export results to:

 Export PDF

 Export XLS

 Export EDPM

 Export CTMR



Total Trades: 1

Sum of Contract Quantities: 1

Trade Time	Sell Side										Buy Side										Trade Price	Contr Qty	Total Qty	Mkt Cond	B	Trade Id
	Exc Firm	Cmta Firm	Exc Bkr	Exc LogID	Acc Of	OR	OC	O/Q	Exc Firm	Cmta Firm	Exc Bkr	Exc LogID	Acc Of	OR	OC	O/Q										
Series:	AAPL AAPL 21MAY11 275.00 P										P/S: 03/03															
09:58:48.682*	792	792	XXH	MPF-MPF8		C	C	Ord	501		GTG	GTG-GTB	QMC	M	N	Ord	\$0.01	1	1	FTAO		102086 57356021				

Trade Types: Blue=Cross Product, Brown=Basket Component, Red=Busted, Black=Other, \*=Auct Trade, \*\*=Auct Paired Trade

Exc Bkr Types: Orange=Short Sale, Green=Short Exempt

To save the query results to an Excel, PDF, Graph or Graph PDF format, select either format from the **Export To:** drop down list. For export details, refer to the *Customize and Export Data* section, page 39.

## Ending a Market Replay Session

**Exit the System** To exit the Market Replay system, click **Logout**. The application will be closed and you will be returned to your system desktop.



## **Section 2: Reference Guide**

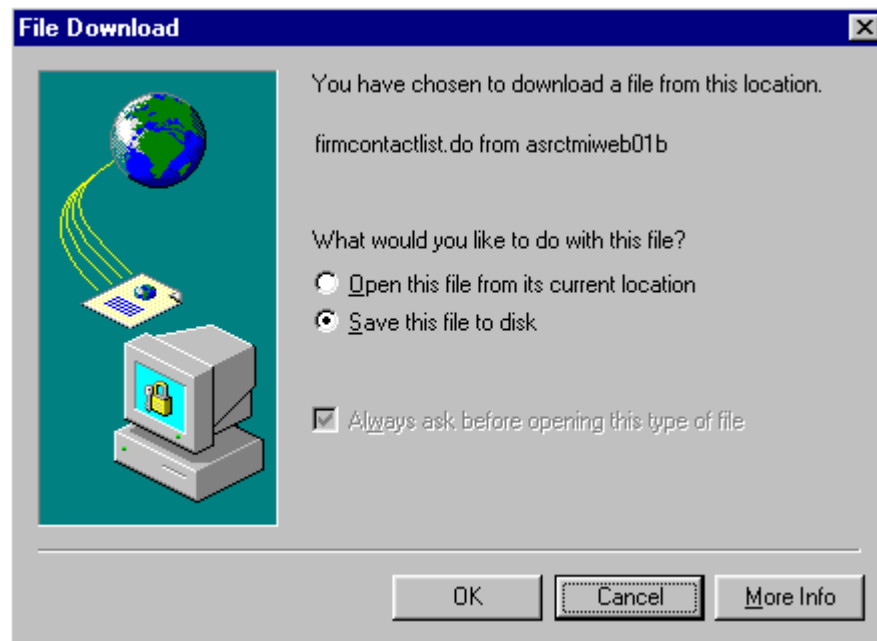
## Customize and Export Data

### Exporting Data

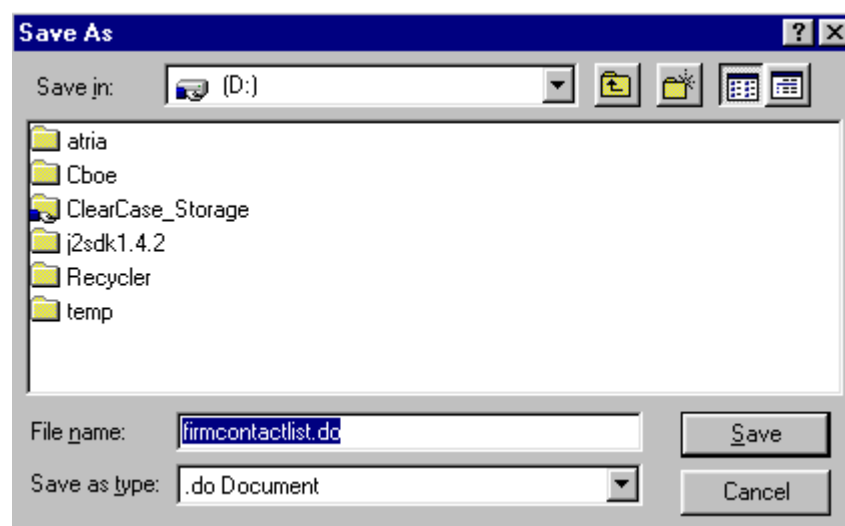
CTM windows that exhibit data in column format can be exported to different file formats.

#### Export to CSV Format

- Click **CSV** (Comma Separated Values). The File Download window will display. The window defaults to **Save this file to disk**.



- Click **OK**. The Save As window displays.



- Select the location where you want to save the file and enter the file name.

- Click **Save**. Your file will be saved in CVS format.
- To exit the window without saving, click **Cancel**.

### Export to Excel

If you wish to export the data to an Excel spreadsheet, click **Excel**. The system will open an Excel window and export the data.

Microsoft Excel - http://asrcmtiweb01b:8090/ctmi/firmcontactlist.do?657870617274=

File Edit View Insert Format Tools Data Window Help Acrobat

File Edit View Insert Format Tools Data Window Help Acrobat


A1 = Firm Number

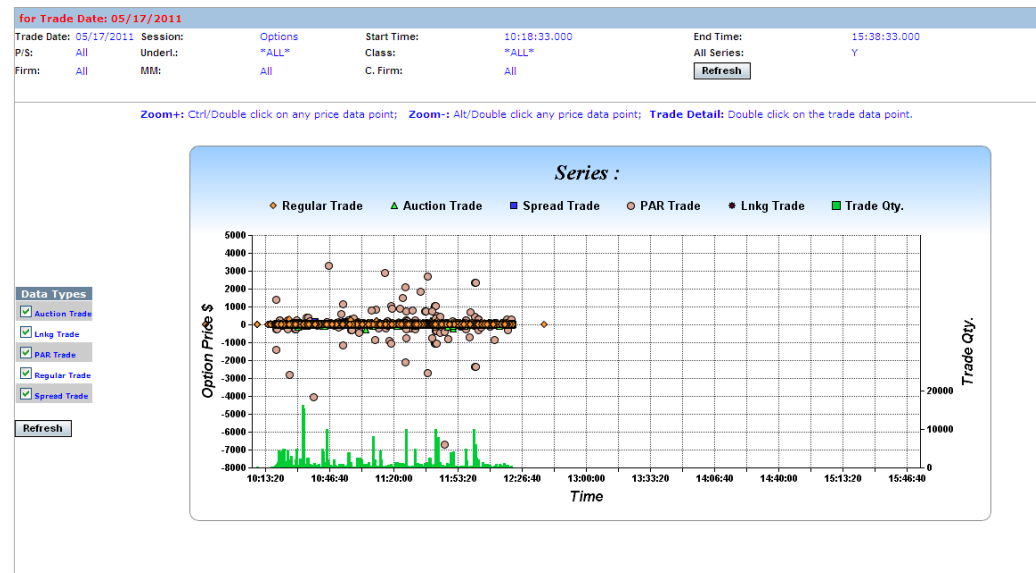
	A	B	C	D	E	F	G
1	Firm Num	Firm Desc	Firm Acro	Phone Nur	Email Address		
2	5	Goldman S	SAX	312.555.12	gsbackoffice@gsm.com		
3	9	FOC Divisi	SHD	630.456.7842			
4	15	Morgan St	D	708.305.66	MorganStanleyClearing@msdwi.com		
5	44	National In	NIS	815.598.3698			
6	60	J. P. Morg	JPM	201.258.14	jpmorgantradecheckers@jpms.com		
7	67	Instinet Cl	INC	408.258.4563			
8	74	Lehman Br	LB	201.159.35	Lehman_Brothers_Clearing@lbi.com		
9	100	N. K. & Co	NKC	312.753.15	nkinc_bkoffice@nkinc.com		
10	112	Pax Cleari	ABF	312.654.12	paxclearingtradechecking@pax.com		
11	161	Merrill Lyn	M	312.789.3214			
12	180	Nomura Se	NOM	708.126.3654			
13	267	ING Secur	QC	815.951.3576			
14	286	SG Americ	COW	408.136.6842			
15	327	Herzog, H	ZOG	219.397.1268			
16	454	E.D. & F.	IMR	630.764.2796			
17	651	Credit Lyonnais Securities (USA)			tradechecking@clsinc.com		
18	725	Raymond	RAJ	312.428.1262			
19	844	Van Der M	QTS	312.371.1482			



## Export to a Graph

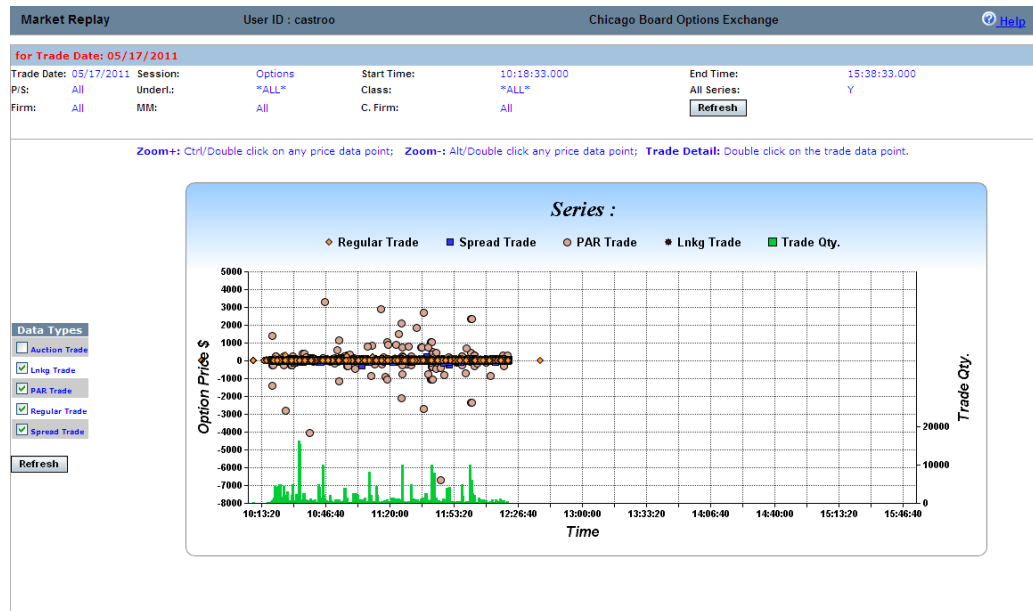
If you wish to export the data to a graph, select **Graph** from the **Export To** drop down

list or click on the graph icon,  when it appears in the search results. The Market Replay system will export the data to a graph.



Graphs will appear according to the type of data being reported. In the example above, trade data was converted to graph format. The details below pertain to the above trade data graph but can apply to other data types such as orders or quotes.

- Hover on any of the price data points to display the trade data.
- Double-click on any of the price data points to open the Trade Summary window for that particular trade.
- The graph above displays data types for trades that occurred through regular trades, spreads, auctions, linkage and PAR. To remove a data type from the graph, deselect the type from the Data Types legend and click **Refresh**. The graph will rebuild without the deselected data type. In the example below, trades that occurred through auctions were removed from the graph display.



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