Market Replay User Guide
Version 6.0

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**
1/11/08	6.0	Web based version of Market Replay
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.

Table of Contents

Introduction

Purpose

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

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.

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.

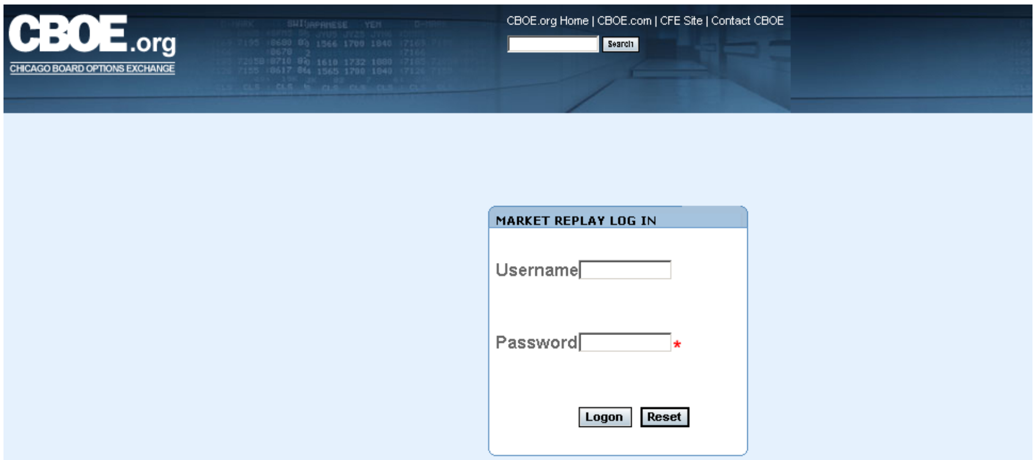
Section 1: Market Replay

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

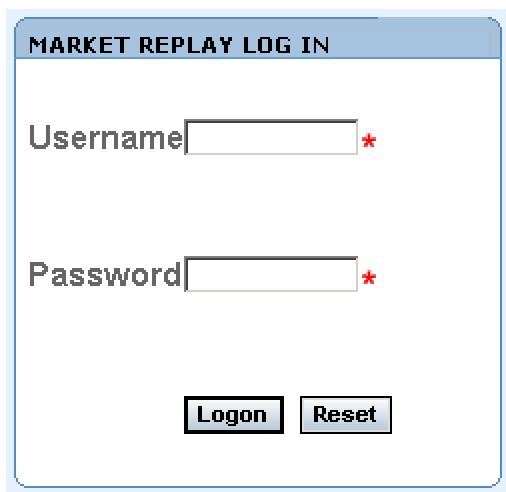
Getting Started

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

The following Login window will display.

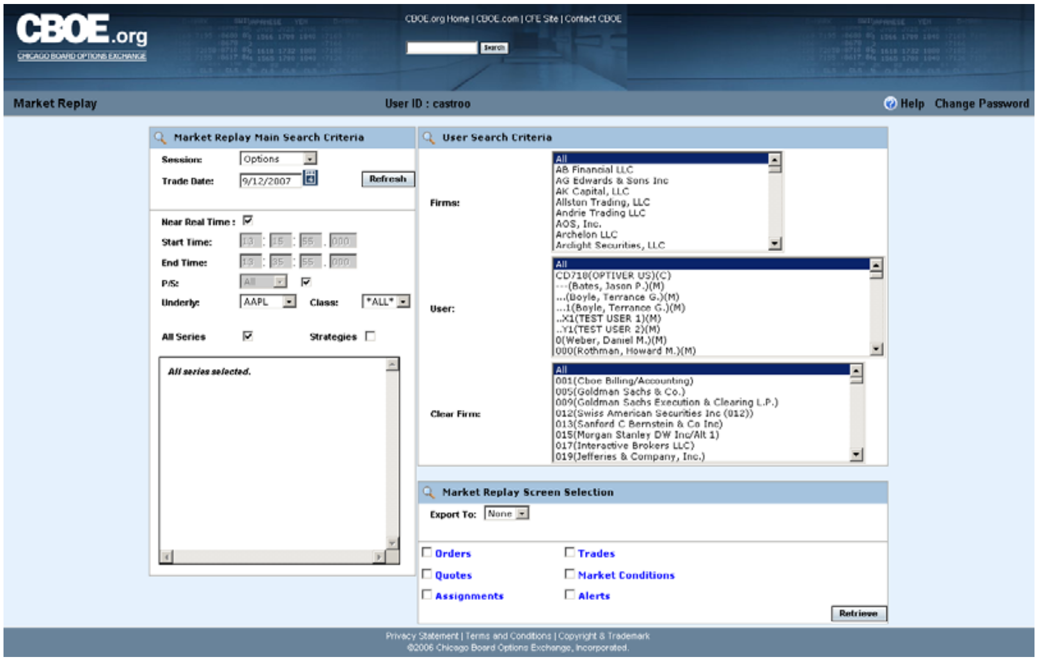


Login Enter your **Username** and **Password**.



If you incorrectly typed in your Username or Password, click **Reset**. The login window will clear. Re-enter your User name and Password.

Click **Logon**. Market Replay's main window will display.

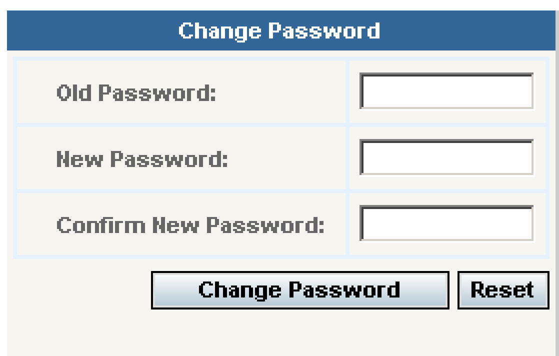


From this window you can query both real-time and historical trading information for CBOE*direct*, change passwords and search Help functions.

Change Password

Once you have logged into the Market Replay application, the system allows you to change your password.

Click on the **Change Password** link at the top right-hand corner of the main page. The **Change Password** window will display.

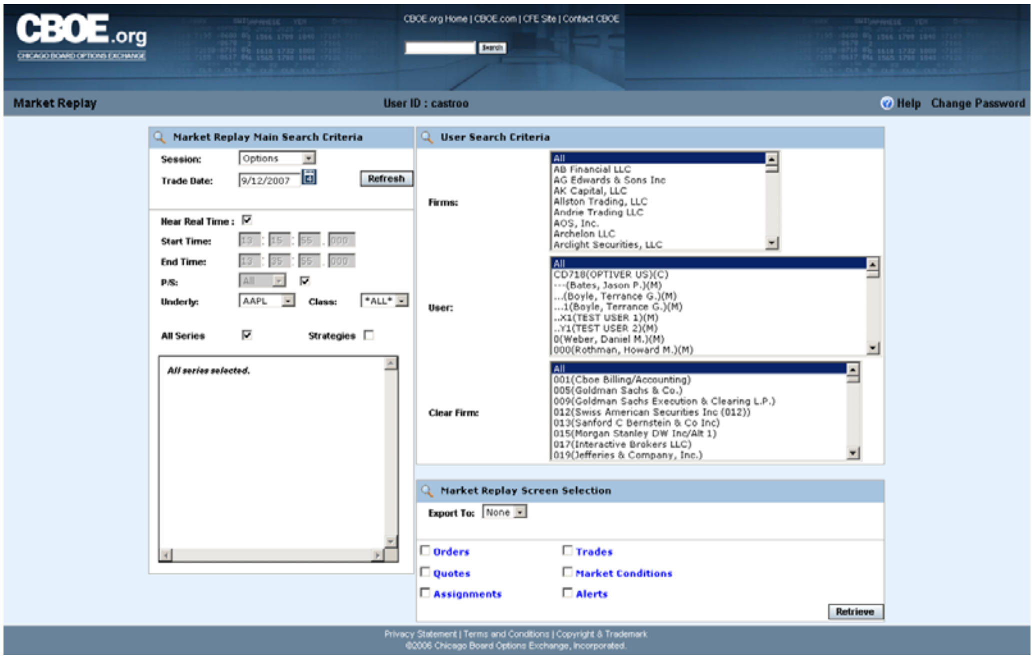


- Enter your **Old Password** in the text field provided.
- Enter your **New Password** in the corresponding text field.
- Re-enter your new password in the **Confirm New Password** text box. If you make a mistake, click **Reset**. The Change Password window will clear so you can re-enter your passwords.
- Click **Change Password**.

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

Display Options Trade Information

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

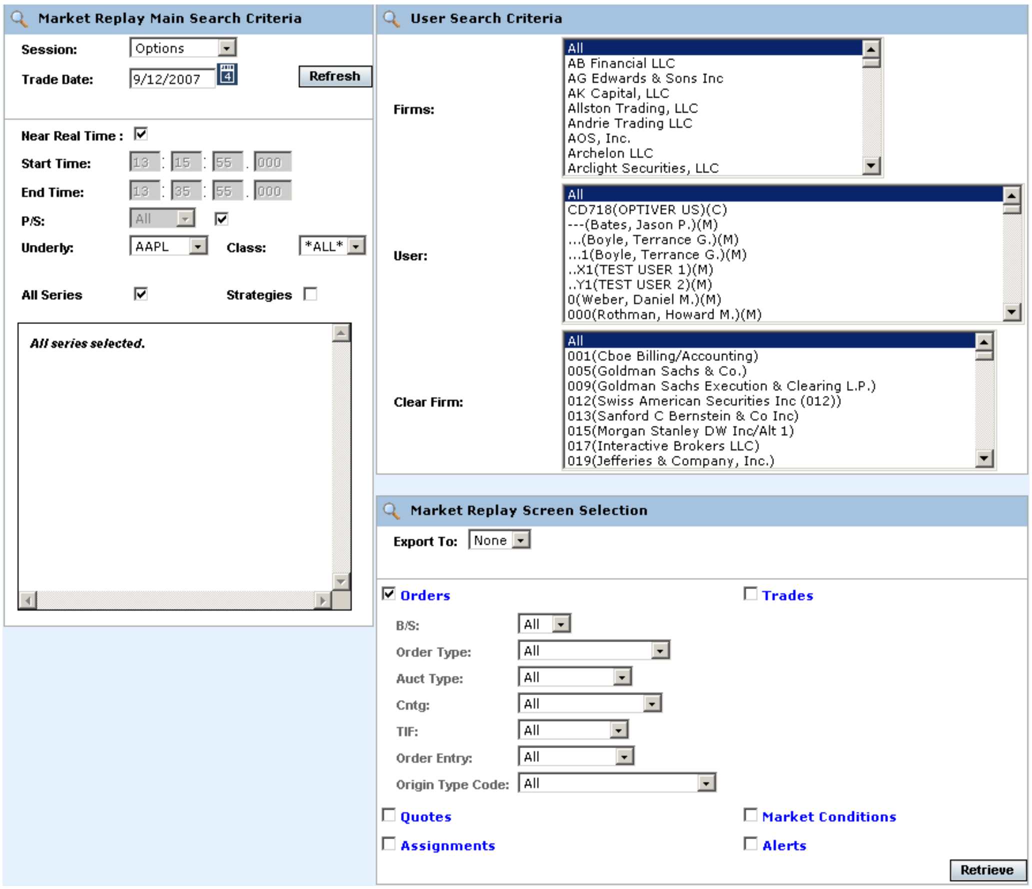


At this point, you can obtain current trading information for any CBOE*direct* trading session.

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).



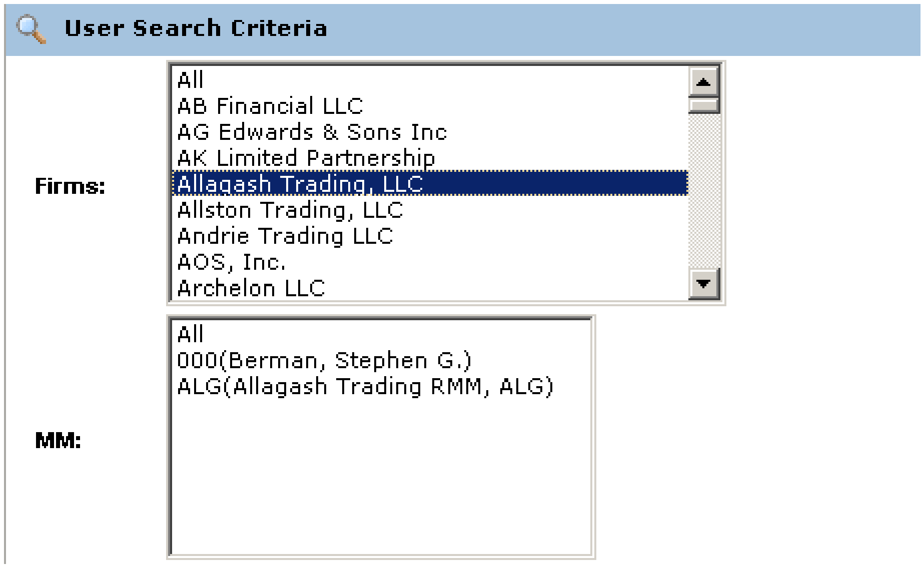
The Market Replay window is split into three panels: Market Replay Main Search Criteria, User Search Criteria and Market Replay Screen Selections. This window is used to set limitations for your data request.

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

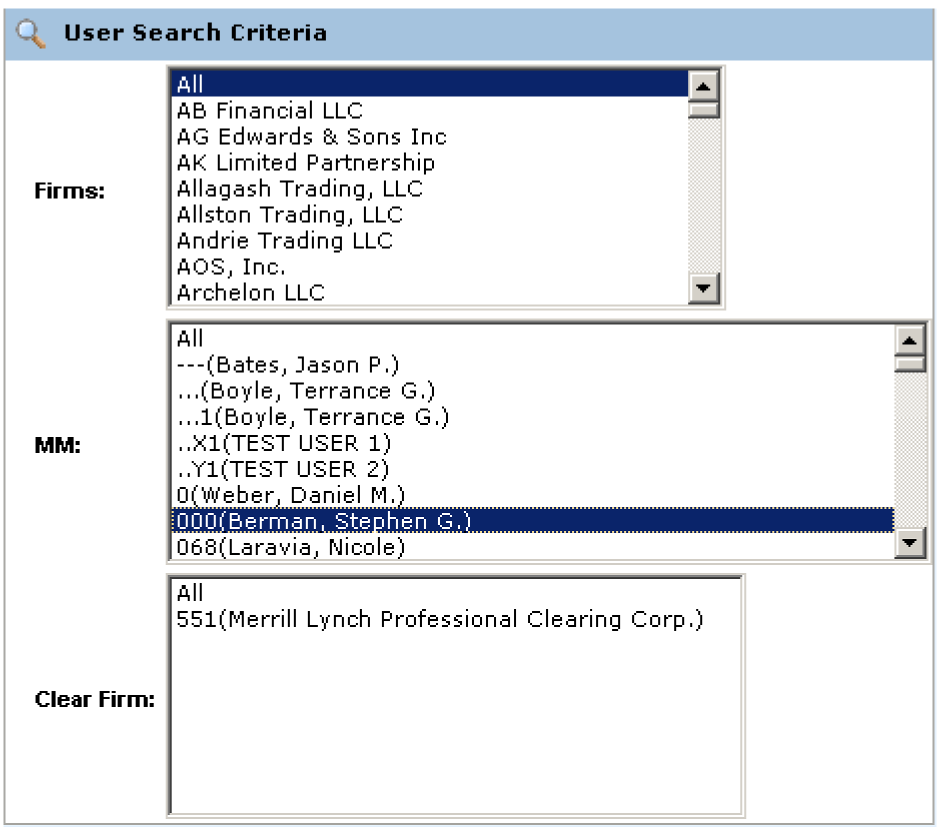
- The session and trade date
- Near real-time monitoring or a fixed time range
- Underlying and Class selections or select classes by Post and Station (P/S)

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 all Firms, Market Makers and Clearing Firms for the Options session.

If you select only one Firm from the Firm list, only the Market Makers for that Firm will display in the MM list box.



If you select only one Market Maker from the MM list, only the Clearing Firm for that Market Maker 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, Quotes, Market Conditions, Assignments and Alerts.

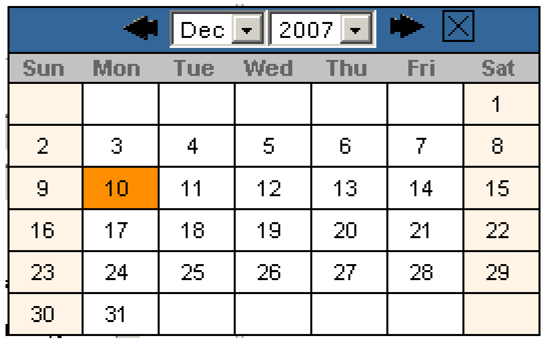
Note: The search for Assignments is only available for Data Warehourse archive Trade dates.

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

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

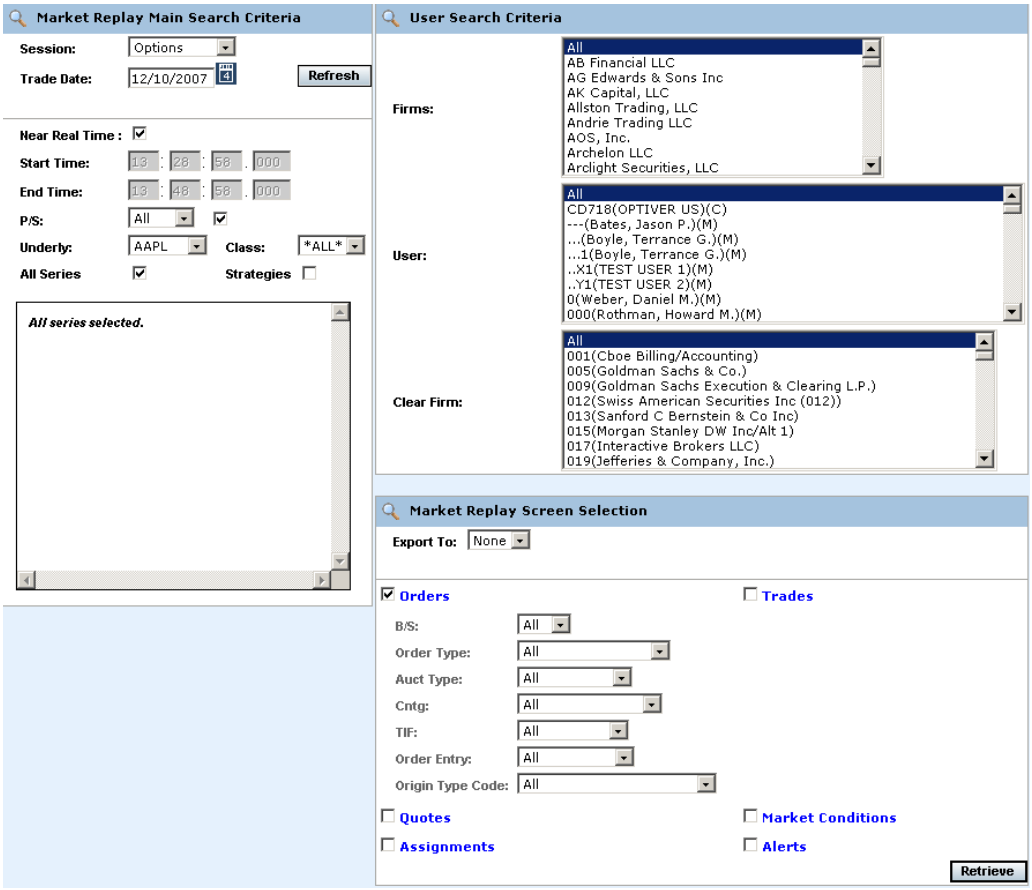
- Select the Options trading session from the **Session** drop down list.
- The date of the request defaults to the current business day and is displayed in the **Trade Date** text box.
- To choose a previous trading day, click on the calendar button. The following calendar window will display.

  ✎ **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** radio button. If you would like to select a fixed time range, deselect the **Near Real Time Monitoring** radio button. 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).
- 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.



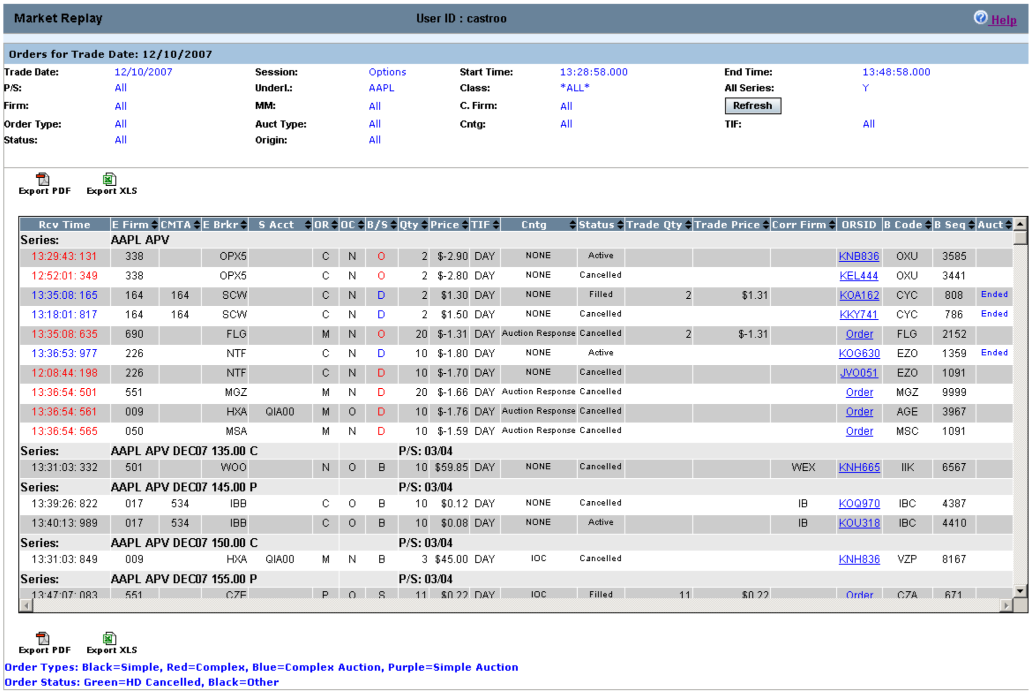
- To further filter your request, select to retrieve **Orders**, **Quotes**, **Trades**, **Market Conditions**, **Assignments** or **Alerts**. Select **Orders**.

  Note: The search for Assignments is only available for Data Warehouse archive trade dates.

- You can further filter your order requests by: Buy/Sell (B/S), Order Type, Order Entry 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 76.

- 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 on December 10, 2007 from 13:28:58 to 13:48:58 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.

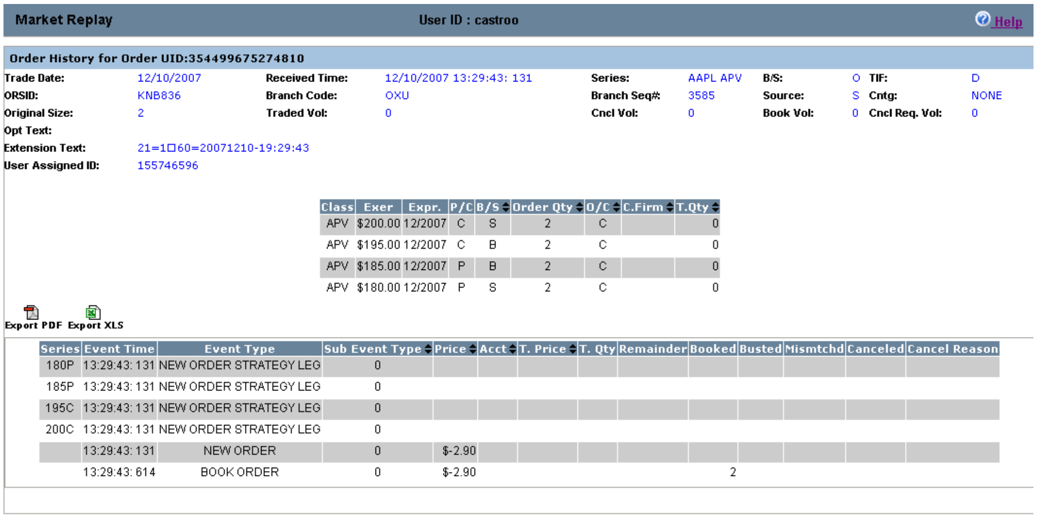
Most of the fields in the Orders display are descriptive. The following table describes valid system codes found in the orders display.

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.



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

Valid Codes& Definitions

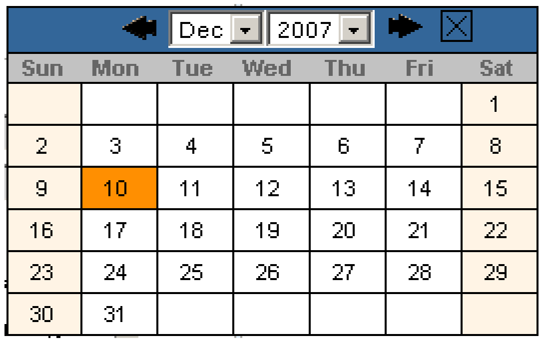
Column	Description
Start Time	When auction starts and RFQ is sent
End Time	When auction processing completes, including fill allocation (time when finished expiring the auction)
Expr Time	When auction processing completes, including fill allocation (time when CBOE starts processing the auction expiration.
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.
Auct Price	Auction starting price
Auct Qty	Auction quantity
State	State of the auction: Ended or Active
Auct Type	Internalization, strategy, regular single, HAL, SAL, unspecified

Terminate 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

Quotes Market Replay allows you to retrieve quote information for the current business day. Select the Options trading session from the **Session** drop down list.

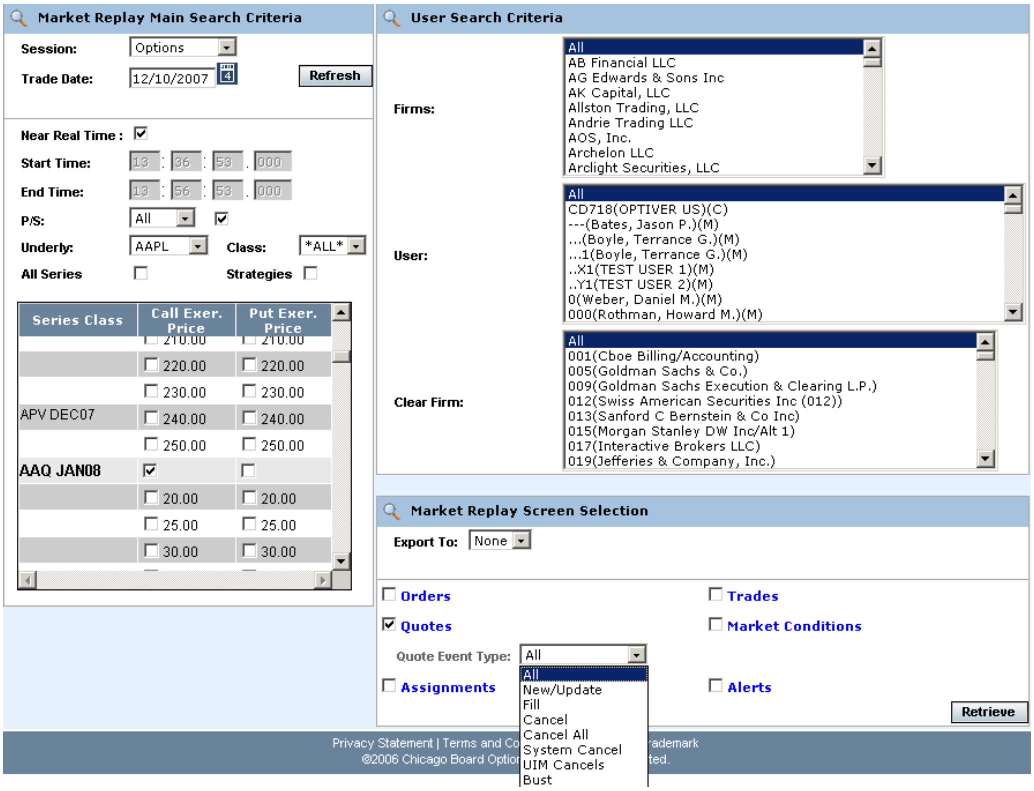
- The date of the request defaults to the current business day and is displayed in the **Trade Date** text box.
- To choose a previous trading day, click on the calendar button. The following calendar window will display.

  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** radio button. If you would like to select a fixed time range, deselect the **Near Real Time Monitoring** radio button. 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).
- 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.

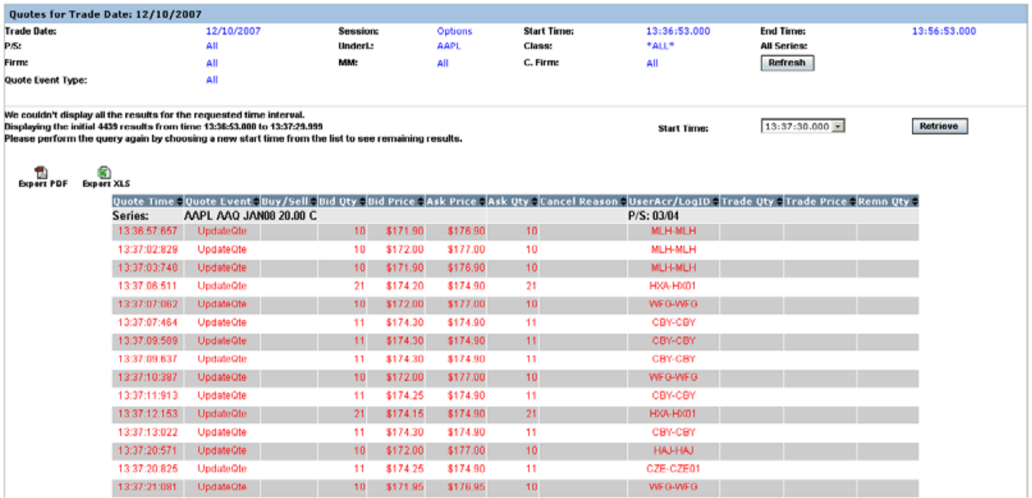


- To further filter your request, select to retrieve **Orders**, **Quotes**, **Trades**, **Market Conditions**, **Assignments** or **Alerts**. Select **Quotes**.

  Note: The search for Assignments is only available for Data Warehouse archive trade dates.

- 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 76.
- 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: 12/10/2007

Trade Date:	12/10/2007	Session:	Options	Start Time:	13:36:53.000	End Time:	13:56:53.000
P/S:	All	Underl.:	AAPL	Class:	*ALL*	All Series:	
Firm:	All	MM:	All	C. Firm:	All	Refresh	
Quote Event Type:	All						

We couldn't display all the results for the requested time interval.
Displaying the initial 4439 results from time 13:36:53.000 to 13:37:29.999
Please perform the query again by choosing a new start time from the list to see remaining results.

Start Time: 13:37:30.000 Retrieve

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 AAQ JAN08 20.00 C							P/S: 03/04			
13:36:57:657	UpdateQte		10	$171.90	$176.90	10		MLH-MLH			
13:37:02:829	UpdateQte		10	$172.00	$177.00	10		MLH-MLH			
13:37:03:748	UpdateQte		10	$171.90	$176.90	10		MLH-MLH			
13:37:06:511	UpdateQte		21	$174.20	$174.90	21		HXA-HX01			
13:37:07:062	UpdateQte		10	$172.00	$177.00	10		WFG-WFG			
13:37:07:464	UpdateQte		11	$174.30	$174.90	11		CBY-CBY			
13:37:09:509	UpdateQte		11	$174.30	$174.90	11		CBY-CBY			
13:37:09:637	UpdateQte		11	$174.30	$174.90	11		CBY-CBY			
13:37:10:387	UpdateQte		10	$172.00	$177.00	10		WFG-WFG			
13:37:11:913	UpdateQte		11	$174.25	$174.90	11		CBY-CBY			
13:37:12:153	UpdateQte		21	$174.15	$174.90	21		HXA-HX01			
13:37:13:022	UpdateQte		11	$174.30	$174.90	11		CBY-CBY			
13:37:20:571	UpdateQte		10	$172.00	$177.00	10		HAJ-HAJ			
13:37:20:825	UpdateQte		11	$174.25	$174.90	11		CZE-CZE01			
13:37:21:081	UpdateQte		10	$171.95	$176.95	10		WFG-WFG			

In the example above, quote information for class AAPL 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.

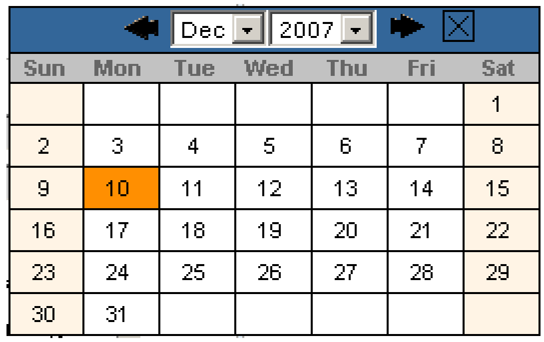
Click **Refresh** at anytime to update the window display.

Market Conditions

Market Replay allows you to retrieve market condition information for the current business day. Select the Options trading session from the **Session** drop down list.

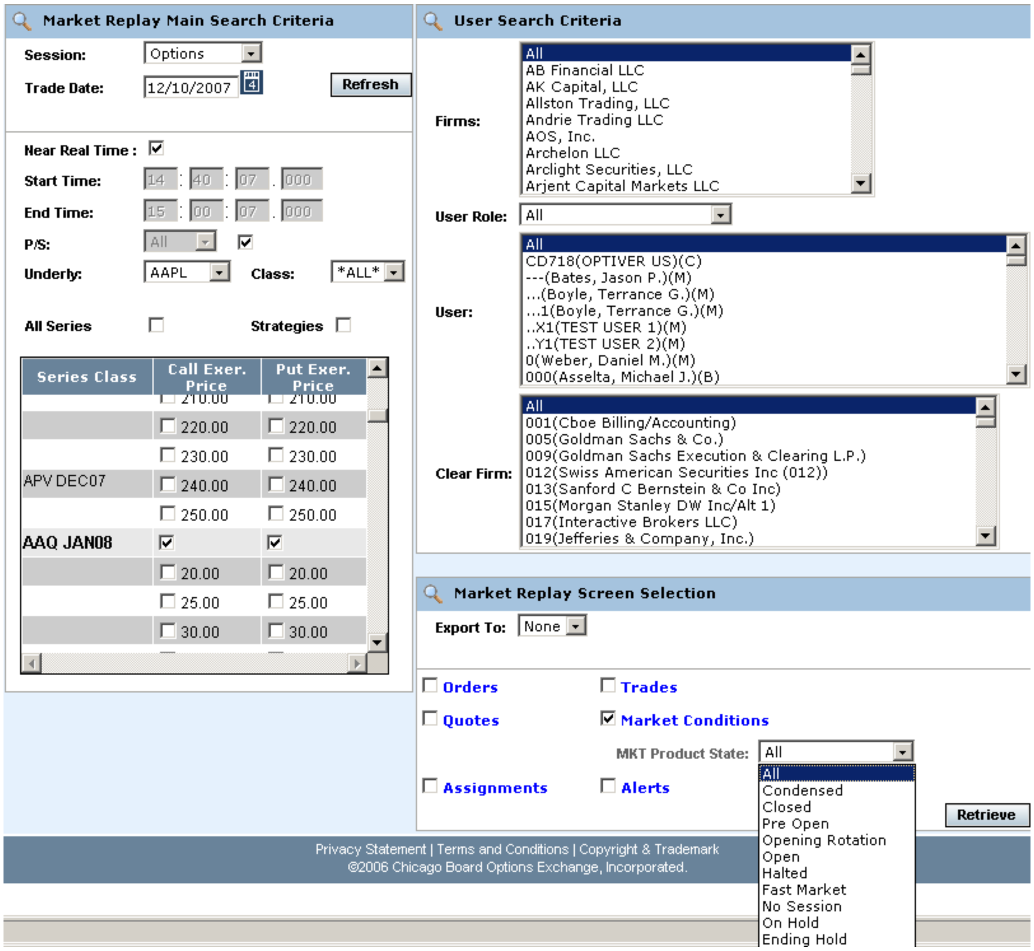
- The date of the request defaults to the current business day and is displayed in the **Trade Date** text box.
- To choose a previous trading day, click on the calendar button. The following calendar window will display.

  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** radio button. If you would like to select a fixed time range, deselect the **Near Real Time Monitoring** radio button. 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).
- 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.



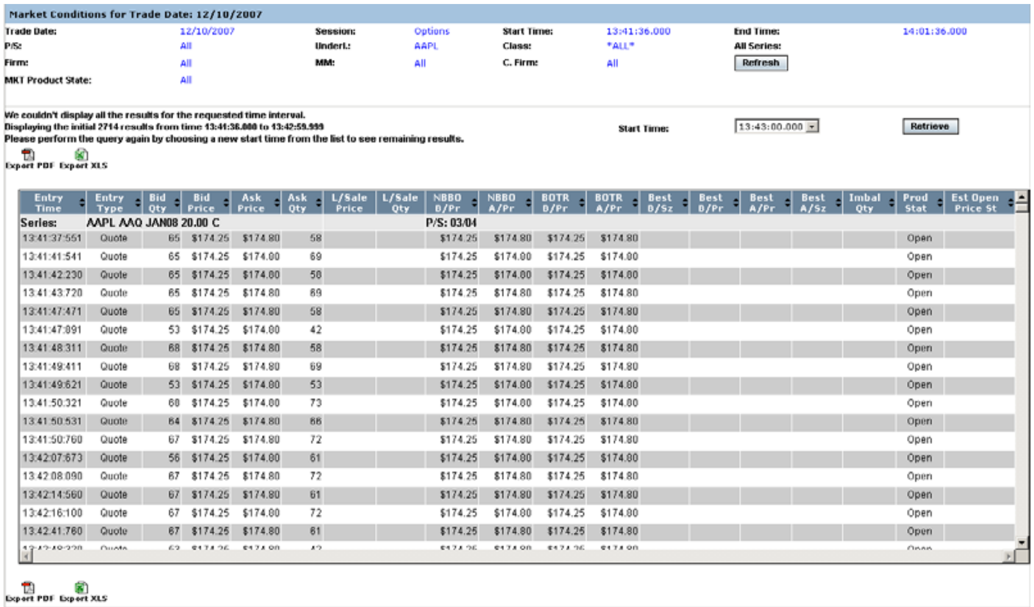
- To further filter your request, select to retrieve **Orders**, **Quotes**, **Trades**, **Market Conditions**, **Assignments** or **Alerts**. Select **Market Conditions**.

  ✎ **Note**: The search for Assignments is only available for Data Warehouse archive trade dates.

- You can further filter your market conditions request by **Market (Mkt) Product State**. Make your selections from the corresponding dropdown lists. The default for the filters is **All**.

  ✎ **Note**: Choosing **Condensed** will display a smaller subset of columns and automatically export the query results to Excel. Refer to the Exporting Data section, page 76.

- 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 76.
- 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 Conditions for Trade Date: 12/10/2007

Trade Date:	12/10/2007	Session:	Options	Start Time:	13:41:36.000	End Time:	14:01:36.000
P/S:	All	Underl.:	AAPL	Class:	*ALL*	All Series:	
Firm:	All	MM:	All	C. Firm:	All	Refresh	
MKT Product State:	All						

We couldn't display all the results for the requested time interval.
Displaying the initial 2714 results from time 13:41:36.000 to 13:42:59.999
Please perform the query again by choosing a new start time from the list to see remaining results.

Start Time: 13:43:00.000 Retrieve

Export PDF Export XLS

Entry Time	Entry Type	Bid Qty	Bid Price	Ask Price	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 AAQ JAN08 20.00 C							P/S: 03/04										
13:41:37:551	Quote	65	$174.25	$174.80	58			$174.25	$174.80	$174.25	$174.80						Open	
13:41:41:541	Quote	65	$174.25	$174.00	69			$174.25	$174.00	$174.25	$174.00						Open	
13:41:42:230	Quote	65	$174.25	$174.00	50			$174.25	$174.00	$174.25	$174.00						Open	
13:41:43:720	Quote	65	$174.25	$174.80	69			$174.25	$174.80	$174.25	$174.80						Open	
13:41:47:471	Quote	65	$174.25	$174.80	58			$174.25	$174.80	$174.25	$174.80						Open	
13:41:47:891	Quote	53	$174.25	$174.00	42			$174.25	$174.00	$174.25	$174.00						Open	
13:41:48:311	Quote	68	$174.25	$174.80	58			$174.25	$174.80	$174.25	$174.80						Open	
13:41:49:411	Quote	68	$174.25	$174.80	69			$174.25	$174.80	$174.25	$174.80						Open	
13:41:49:621	Quote	53	$174.25	$174.00	53			$174.25	$174.00	$174.25	$174.00						Open	
13:41:50:321	Quote	60	$174.25	$174.00	73			$174.25	$174.00	$174.25	$174.00						Open	
13:41:50:531	Quote	64	$174.25	$174.80	66			$174.25	$174.80	$174.25	$174.80						Open	
13:41:50:760	Quote	67	$174.25	$174.80	72			$174.25	$174.80	$174.25	$174.80						Open	
13:42:07:673	Quote	56	$174.25	$174.00	61			$174.25	$174.00	$174.25	$174.00						Open	
13:42:08:090	Quote	67	$174.25	$174.80	72			$174.25	$174.80	$174.25	$174.80						Open	
13:42:14:560	Quote	67	$174.25	$174.80	61			$174.25	$174.80	$174.25	$174.80						Open	
13:42:16:100	Quote	67	$174.25	$174.00	72			$174.25	$174.00	$174.25	$174.00						Open	
13:42:41:760	Quote	67	$174.25	$174.80	61			$174.25	$174.80	$174.25	$174.80						Open	

Export PDF Export XLS

Details are provided for all the market events that occurred in the W_MAIN session from 13:41:36 to 14:01:36 for all the Put/Call series in the APPL class. Columns that are specific to Market Replay for market conditions are defined in the picture above.

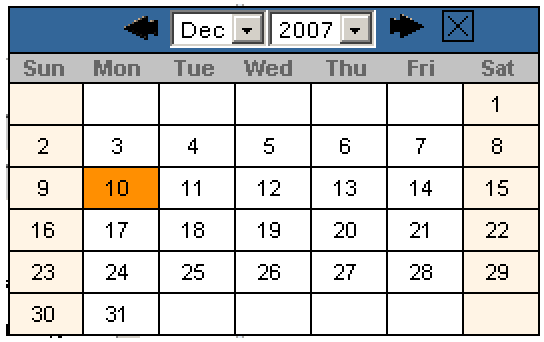
Scroll down on your scroll bar to view all the events for each series.

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 for the current business day. Select the Options trading session from the **Session** drop down list.

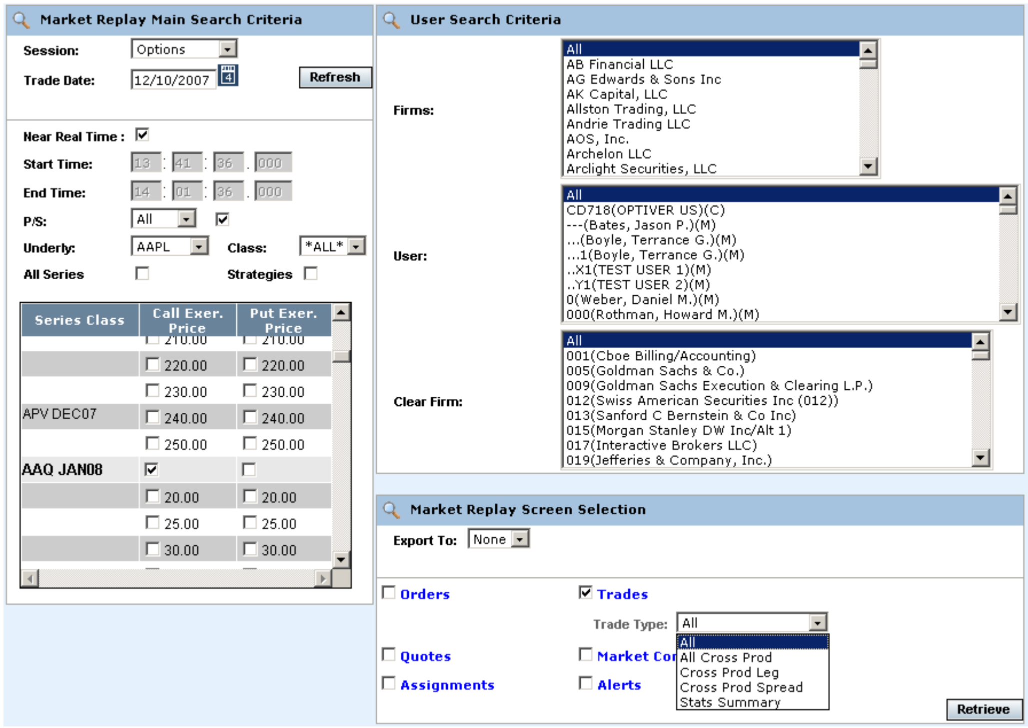
- The date of the request defaults to the current business day and is displayed in the **Trade Date** text box.
- To choose a previous trading day, click on the calendar button. The following calendar window will display.

    ✎ **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** radio button. If you would like to select a fixed time range, deselect the **Near Real Time Monitoring** radio button. 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).
- 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.



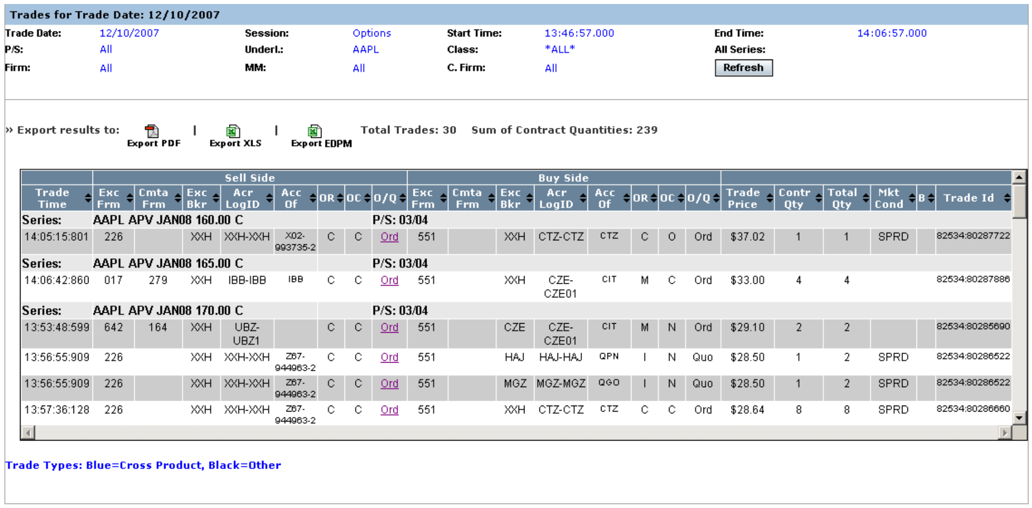
- To further filter your request, select to retrieve **Orders**, **Quotes**, **Trades**, **Market Conditions**, **Assignments** or **Alerts**. Select **Trades**.

  Note: The search for Assignments is only available for Data Warehouse archive trade dates.

- 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 76.

- 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.



Trades for Trade Date: 12/10/2007

Trade Date:	12/10/2007	Session:	Options	Start Time:	13:46:57.000	End Time:	14:06:57.000
P/S:	All	Underl.:	AAPL	Class:	*ALL*	All Series:	
Firm:	All	MM:	All	C. Firm:	All	Refresh	

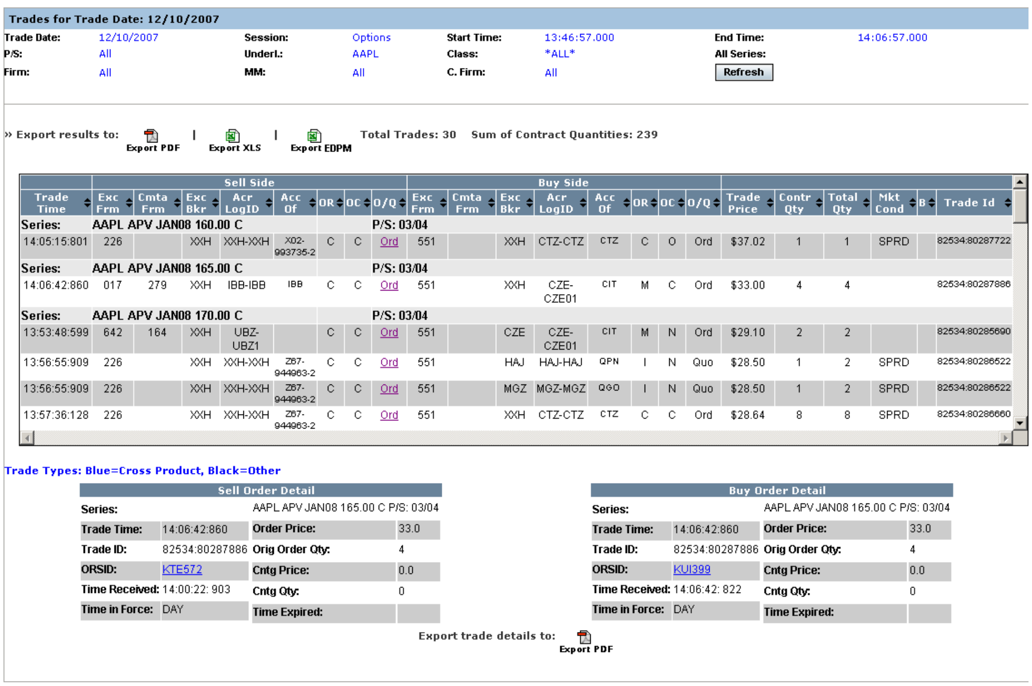
» Export results to: Export PDF | Export XLS | Export EDPM Total Trades: 30 Sum of Contract Quantities: 239

	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 APV JAN08 160.00 C							P/S: 03/04														
14:05:15:801	226		XXH	XXH-XXH	X02-993735-2	C	C	Ord	551		XXH	CTZ-CTZ	CTZ	C	O	Ord	$37.02	1	1	SPRD		82534:80287722
Series:	AAPL APV JAN08 165.00 C							P/S: 03/04														
14:06:42:860	017	279	XXH	IBB-IBB	IBB	C	C	Ord	551		XXH	CZE-CZE01	CIT	M	C	Ord	$33.00	4	4			82534:80287886
Series:	AAPL APV JAN08 170.00 C							P/S: 03/04														
13:53:48:599	642	164	XXH	UBZ-UBZ1		C	C	Ord	551		CZE	CZE-CZE01	CIT	M	N	Ord	$29.10	2	2			82534:80285690
13:56:55:909	226		XXH	XXH-XXH	Z67-944963-2	C	C	Ord	551		HAJ	HAJ-HAJ	QPN	I	N	Quo	$28.50	1	2	SPRD		82534:80286522
13:56:55:909	226		XXH	XXH-XXH	Z67-944963-2	C	C	Ord	551		MGZ	MGZ-MGZ	QGO	I	N	Quo	$28.50	1	2	SPRD		82534:80286522
13:57:36:128	226		XXH	XXH-XXH	Z67-944963-2	C	C	Ord	551		XXH	CTZ-CTZ	CTZ	C	C	Ord	$28.64	8	8	SPRD		82534:80286660

Trade Types: Blue=Cross Product, Black=Other

The example above displays all the trades that occurred in the W_MAIN session on December 10, 2007, for the AAPL class between 13:46:57-14:06:04. The total number of trades represents all the trades in the display.

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



Trades for Trade Date: 12/10/2007

Trade Date:	12/10/2007	Session:	Options	Start Time:	13:46:57.000	End Time:	14:06:57.000
P/S:	All	Underl.:	AAPL	Class:	*ALL*	All Series:	
Firm:	All	MM:	All	C. Firm:	All	Refresh	

» Export results to: Export PDF | Export XLS | Export EDPM Total Trades: 30 Sum of Contract Quantities: 239

	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 APV JAN08 160.00 C							P/S: 03/04														
14:05:15:801	226		XXH	XXH-XXH	X02-993735-2	C	C	Ord	551		XXH	CTZ-CTZ	CTZ	C	O	Ord	$37.02	1	1	SPRD		82534:80287722
Series:	AAPL APV JAN08 165.00 C							P/S: 03/04														
14:06:42:860	017	279	XXH	IBB-IBB	IBB	C	C	Ord	551		XXH	CZE-CZE01	CIT	M	C	Ord	$33.00	4	4			82534:80287886
Series:	AAPL APV JAN08 170.00 C							P/S: 03/04														
13:53:48:599	642	164	XXH	UBZ-UBZ1		C	C	Ord	551		CZE	CZE-CZE01	CIT	M	N	Ord	$29.10	2	2			82534:80285690
13:56:55:909	226		XXH	XXH-XXH	Z67-944963-2	C	C	Ord	551		HAJ	HAJ-HAJ	QPN	I	N	Quo	$28.50	1	2	SPRD		82534:80286522
13:56:55:909	226		XXH	XXH-XXH	Z67-944963-2	C	C	Ord	551		MGZ	MGZ-MGZ	QGO	I	N	Quo	$28.50	1	2	SPRD		82534:80286522
13:57:36:128	226		XXH	XXH-XXH	Z67-944963-2	C	C	Ord	551		XXH	CTZ-CTZ	CTZ	C	C	Ord	$28.64	8	8	SPRD		82534:80286660

Trade Types: Blue=Cross Product, Black=Other

Sell Order Detail

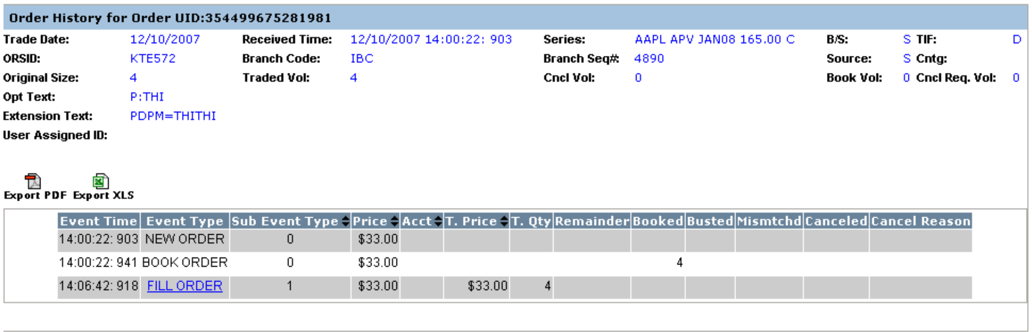
Series:	AAPL APV JAN08 165.00 C P/S: 03/04		
Trade Time:	14:06:42:860	Order Price:	33.0
Trade ID:	82534:80287886	Orig Order Qty:	4
ORSID:	KTE572	Cntg Price:	0.0
Time Received:	14:00:22: 903	Cntg Qty:	0
Time in Force:	DAY	Time Expired:	

Buy Order Detail

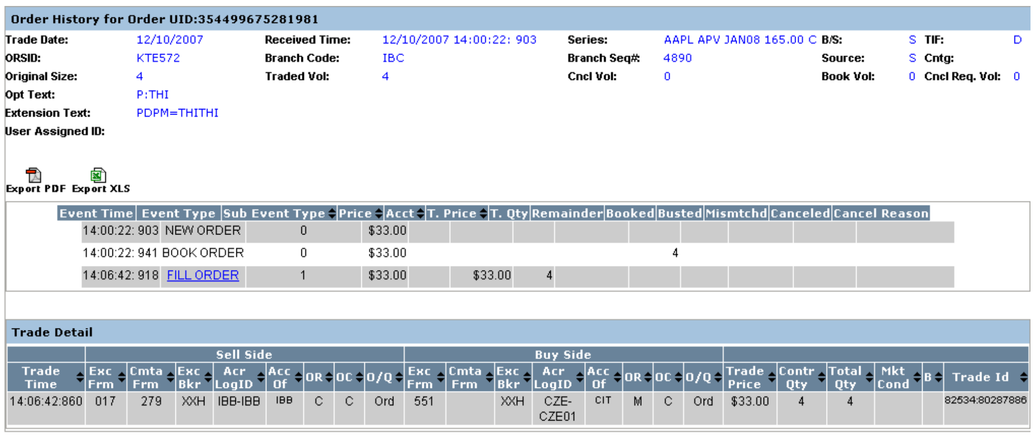
Series:	AAPL APV JAN08 165.00 C P/S: 03/04		
Trade Time:	14:06:42:860	Order Price:	33.0
Trade ID:	82534:80287886	Orig Order Qty:	4
ORSID:	KUI399	Cntg Price:	0.0
Time Received:	14:06:42: 822	Cntg Qty:	0
Time in Force:	DAY	Time Expired:	

Export trade details to: Export PDF

Click on the **ORSID** field to display order history details.



Click on the **FILL ORDER** link to display trade details.



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.

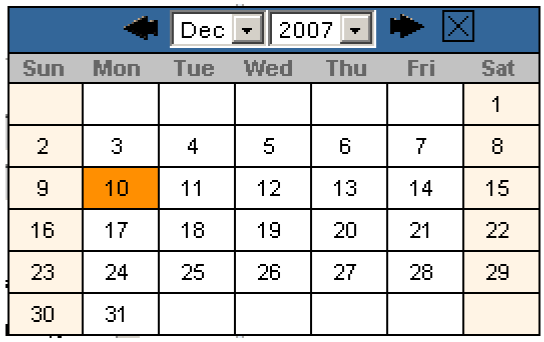
Alert Messages

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

To retrieve current data in the Alert Messages display, make your selections from the **Selection Parameters** window.

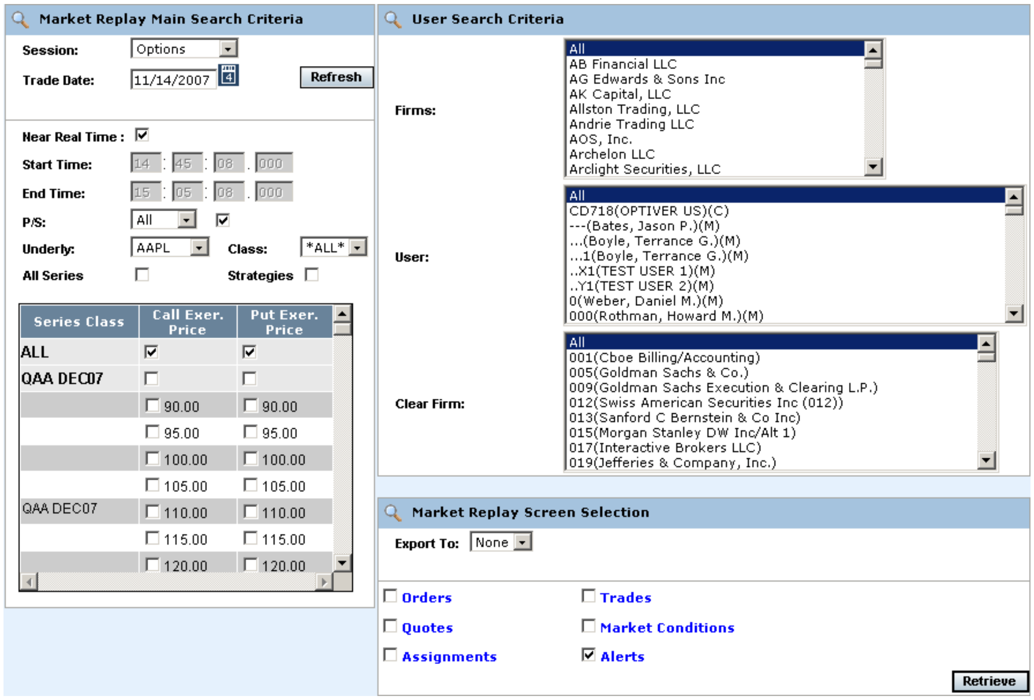
- Select the Options trading session from the **Session** drop down list.
- The date of the request defaults to the current business day and is displayed in the **Trade Date** text box.
- To choose a previous trading day, click on the calendar button. The following calendar window will display.

  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** radio button. If you would like to select a fixed time range, deselect the **Near Real Time Monitoring** radio button. 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).
- 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.

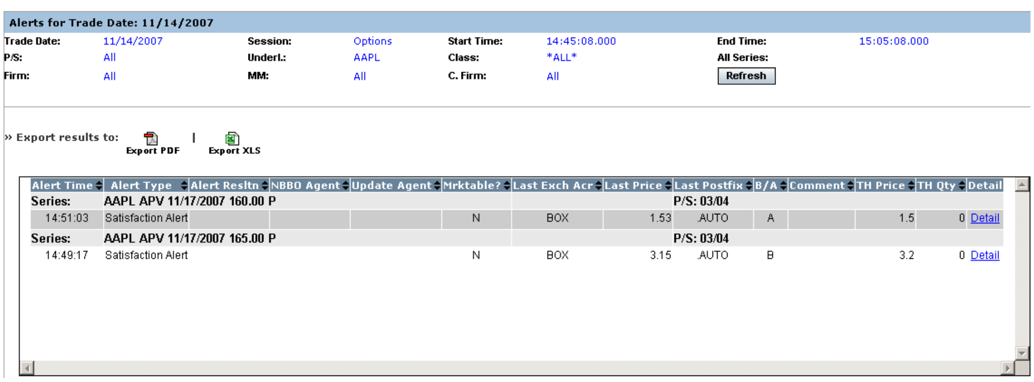


- To further filter your request, select to retrieve **Orders**, **Quotes**, **Trades**, **Market Conditions**, **Assignments** or **Alerts**. Select **Alerts**.

  ✎ **Note**: The search for Assignments is only available for Data Warehouse archive trade dates.

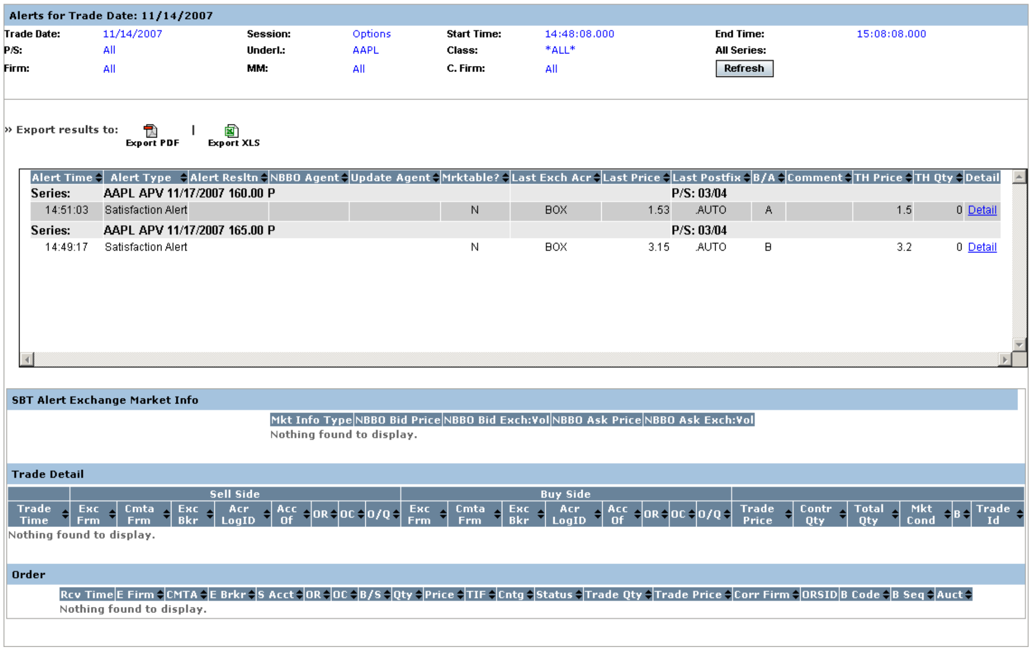
- To save the query results to an Excel or PDF format, select either format from the **Export To**: drop down list. For export details, refer to the Exporting Data section, page 76.

- 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.



The **Alert Messages** window above displays all the alerts that occurred on November 14, 2007 from 14:45:08 to15:05:08 for all Hybrid classes. If there is any related trade / order activity in the alert, it is shown in the bottom half of the display.

Click on the **Detail** link in the Detail column to view additional information about the alerts.



You can sort on the contents of any column in the display by clicking on the column heading.

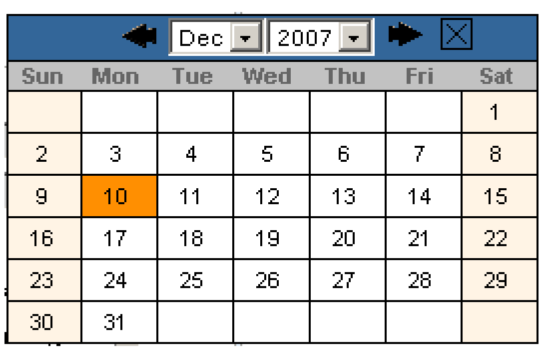
Assignments

The Assignments display allows you to view user assignments for historical trade dates.

To retrieve user assignments data, make your selections from the **Selection Parameters** window.

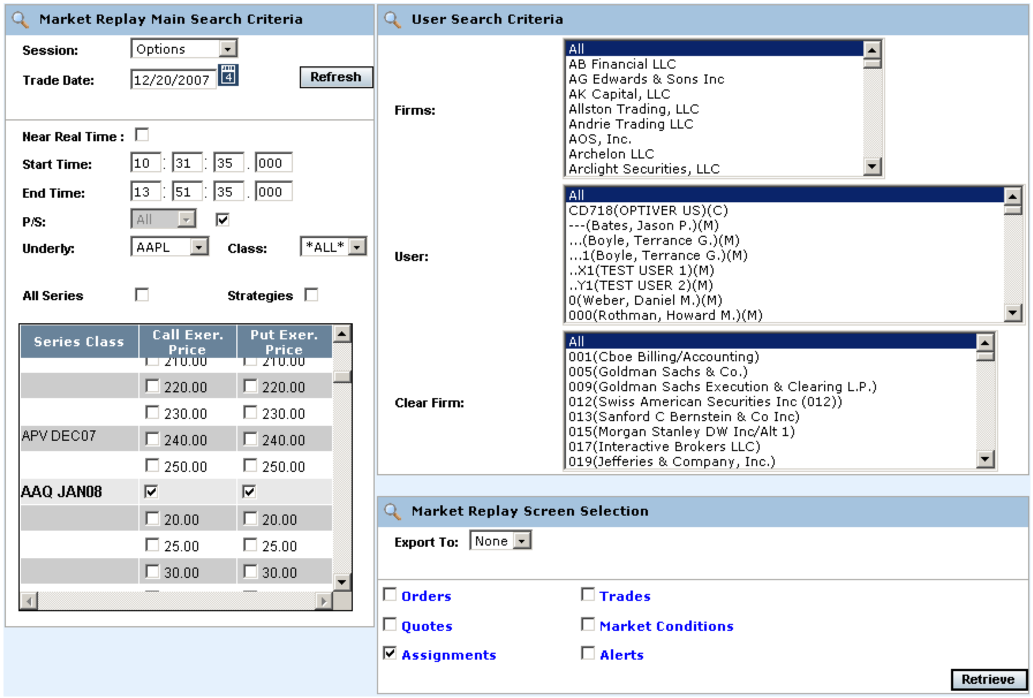
- Select the Options trading session from the **Session** drop down list.
- The date of the request defaults to the current business day and is displayed in the **Trade Date** text box.
- To choose a previous trading day, click on the calendar button. The following calendar window will display.

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



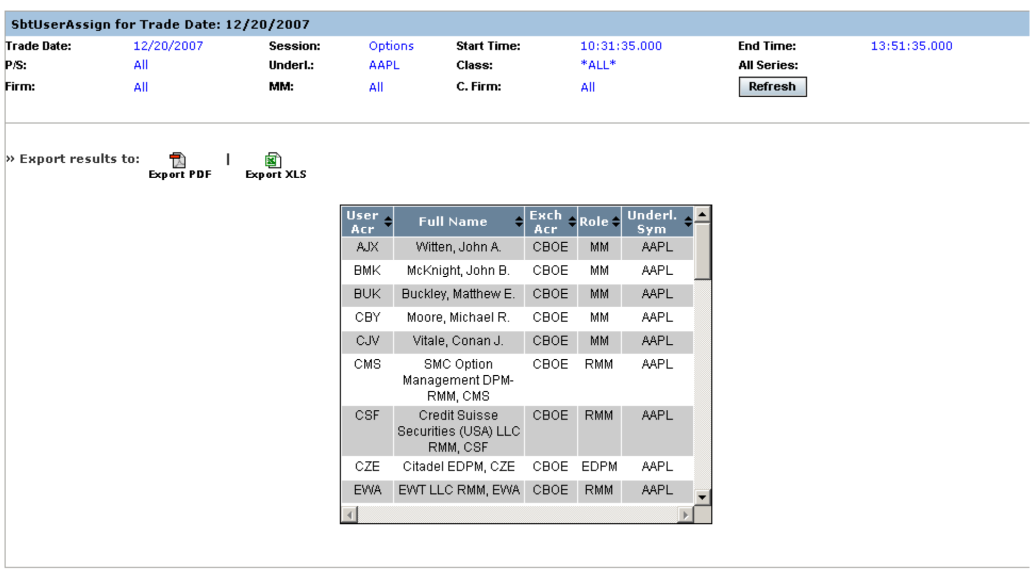
- Click on the archive trade day you wish to query. The date will display in the **Trade Date** text box.
- Choose the time of your request as near real time by selecting the **Near Real Time** radio button. If you would like to select a fixed time range, deselect the **Near Real Time Monitoring** radio button. 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).



- To further filter your request, select to retrieve **Orders**, **Quotes**, **Trades**, **Market Conditions**, **Assignments** or **Alerts**. Select **Assignments**.

- To save the query results to an Excel or PDF format, select either format from the **Export To**: drop down list.
- If you are satisfied with your selections and would like to view the data, click **Retrieve**. The **User Assignments** window will display with the requested data.

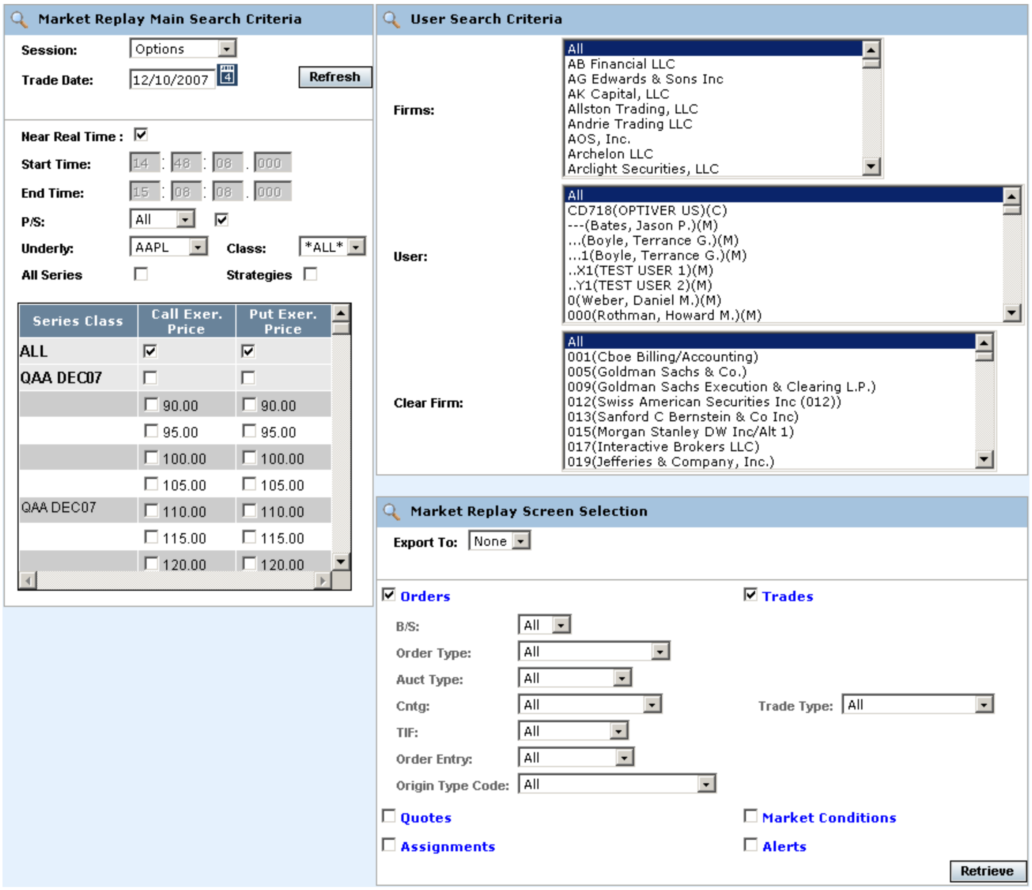


The **Assignments** window displays the user assignments for the AAPL class that occurred on the archive date of December 20, 2007 from 10:33:35 to 13:51:35.

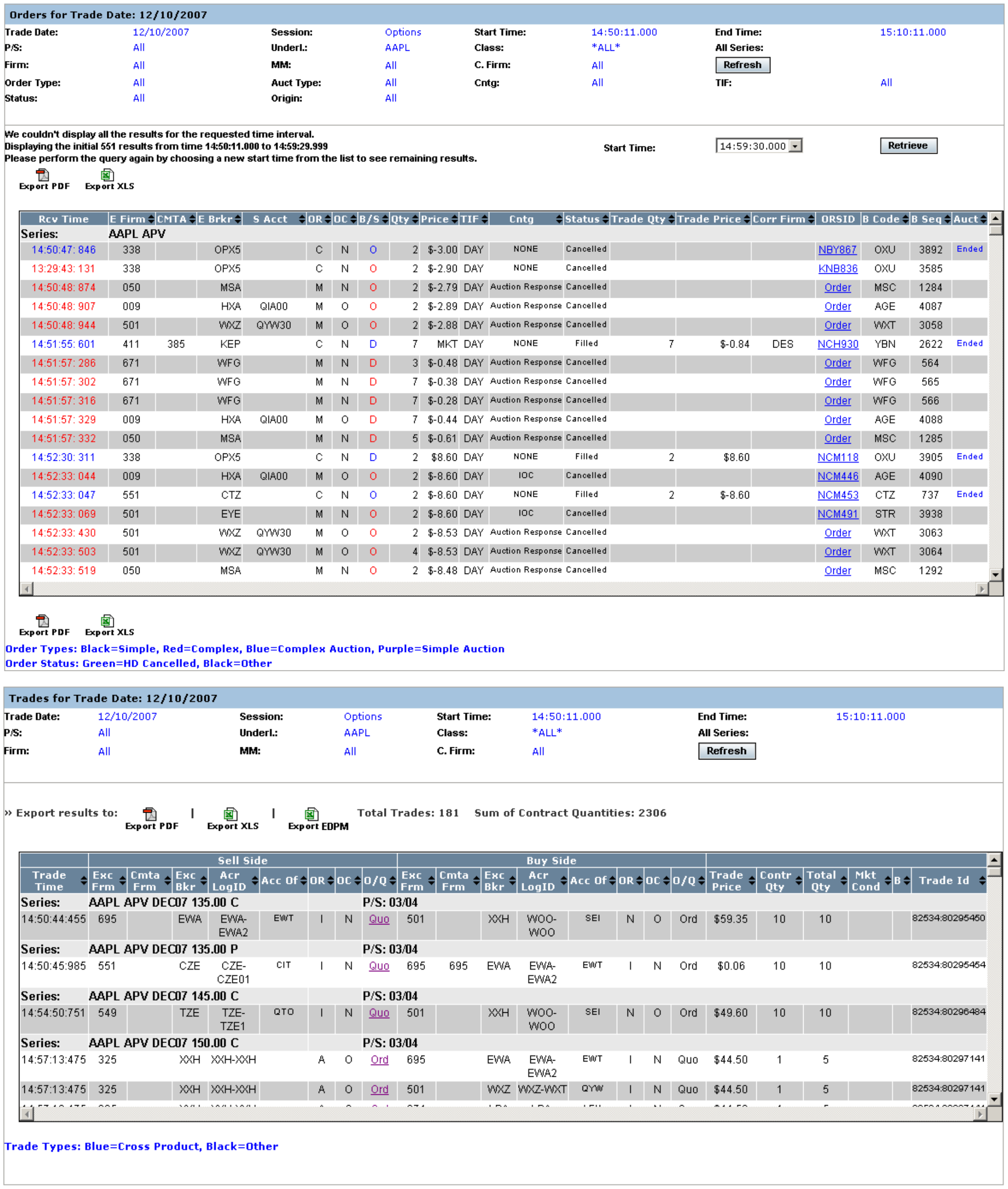
You can sort on the contents of any column in the display by clicking on the column heading.

Composite Display

Market Replay allows you to query for more than one type of criteria (orders, trades, quotes, alerts, market conditions). 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.



Orders for Trade Date: 12/10/2007

Trade Date:	12/10/2007	Session:	Options	Start Time:	14:50:11.000	End Time:	15:10:11.000
P/S:	All	Underl.:	AAPL	Class:	*ALL*	All Series:	
Firm:	All	MM:	All	C. Firm:	All	Refresh	
Order Type:	All	Auct Type:	All	Cntg:	All	TIF:	All
Status:	All	Origin:	All				

We couldn't display all the results for the requested time interval.
Displaying the initial 551 results from time 14:50:11.000 to 14:59:29.999
Please perform the query again by choosing a new start time from the list to see remaining results.

Start Time: 14:59:30.000 Retrieve

Export PDF Export XLS

Rcv Time	E Firm	CMTA	E Brkr	S Acct	OR	OC	B/S	Qty	Price	TIF	Cntg	Status	Trade Qty	Trade Price	Corr Firm	ORSID	B Code	B Seq	Auct
Series:	**AAPL APV**																		
14:50:47: 846	338		OPX5		C	N	O	2	$-3.00	DAY	NONE	Cancelled				NBY867	OXU	3892	Ended
13:29:43: 131	338		OPX5		C	N	O	2	$-2.90	DAY	NONE	Cancelled				KNB836	OXU	3585	
14:50:48: 874	050		MSA		M	N	O	2	$-2.79	DAY	Auction Response	Cancelled				Order	MSC	1284	
14:50:48: 907	009		HXA	QIA00	M	O	O	2	$-2.89	DAY	Auction Response	Cancelled				Order	AGE	4087	
14:50:48: 944	501		WXZ	QYW30	M	O	O	2	$-2.88	DAY	Auction Response	Cancelled				Order	WXT	3058	
14:51:55: 601	411	385	KEP		C	N	D	7	MKT	DAY	NONE	Filled	7	$-0.84	DES	NCH930	YBN	2622	Ended
14:51:57: 286	671		WFG		M	N	D	3	$-0.48	DAY	Auction Response	Cancelled				Order	WFG	564	
14:51:57: 302	671		WFG		M	N	D	7	$-0.38	DAY	Auction Response	Cancelled				Order	WFG	565	
14:51:57: 316	671		WFG		M	N	D	7	$-0.28	DAY	Auction Response	Cancelled				Order	WFG	566	
14:51:57: 329	009		HXA	QIA00	M	O	D	7	$-0.44	DAY	Auction Response	Cancelled				Order	AGE	4088	
14:51:57: 332	050		MSA		M	N	D	5	$-0.61	DAY	Auction Response	Cancelled				Order	MSC	1285	
14:52:30: 311	338		OPX5		C	N	D	2	$8.60	DAY	NONE	Filled	2	$8.60		NCM118	OXU	3905	Ended
14:52:33: 044	009		HXA	QIA00	M	O	O	2	$-8.60	DAY	IOC	Cancelled				NCM446	AGE	4090	
14:52:33: 047	551		CTZ		C	N	O	2	$-8.60	DAY	NONE	Filled	2	$-8.60		NCM453	CTZ	737	Ended
14:52:33: 069	501		EYE		M	N	O	2	$-8.60	DAY	IOC	Cancelled				NCM491	STR	3938	
14:52:33: 430	501		WXZ	QYW30	M	O	O	2	$-8.53	DAY	Auction Response	Cancelled				Order	WXT	3063	
14:52:33: 503	501		WXZ	QYW30	M	O	O	4	$-8.53	DAY	Auction Response	Cancelled				Order	WXT	3064	
14:52:33: 519	050		MSA		M	N	O	2	$-8.48	DAY	Auction Response	Cancelled				Order	MSC	1292	

Export PDF Export XLS

Order Types: Black=Simple, Red=Complex, Blue=Complex Auction, Purple=Simple Auction
Order Status: Green=HD Cancelled, Black=Other

Trades for Trade Date: 12/10/2007

Trade Date:	12/10/2007	Session:	Options	Start Time:	14:50:11.000	End Time:	15:10:11.000
P/S:	All	Underl.:	AAPL	Class:	*ALL*	All Series:	
Firm:	All	MM:	All	C. Firm:	All	Refresh	

» Export results to: Export PDF | Export XLS | Export EDPM Total Trades: 181 Sum of Contract Quantities: 2306

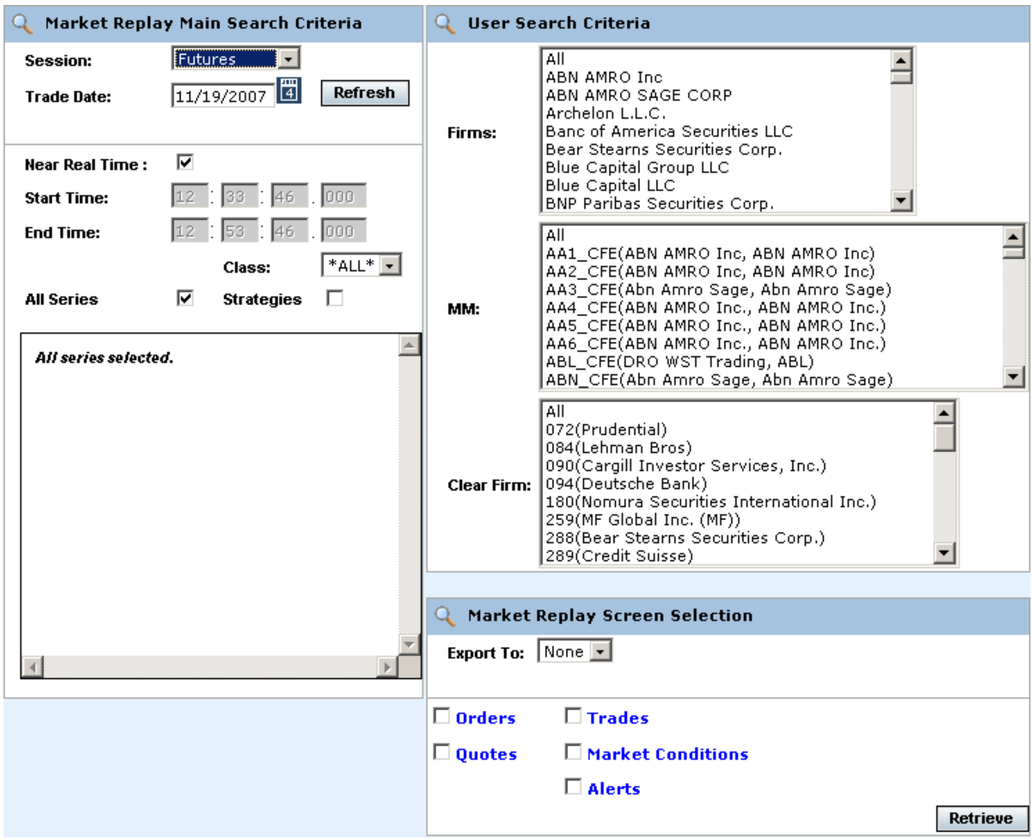
	Sell Side								Buy Side													
Trade Time	Exc Frm	Cmta Frm	Exc Bkr	Acr LogID	Acc Of	OR	OC	O/Q	Exc Frm	Cmta Frm	Exc Bkr	Acr LogID	Acc Of	OR	OC	O/Q	Trade Price	Contr Qty	Total Qty	Mkt Cond	B	Trade Id
Series:	**AAPL APV DEC07 135.00 C**							**P/S: 03/04**														
14:50:44:455	695		EWA	EWA-EWA2	EWT	I	N	Quo	501		XXH	WOO-WOO	SEI	N	O	Ord	$59.35	10	10			82534:80295450
Series:	**AAPL APV DEC07 135.00 P**							**P/S: 03/04**														
14:50:45:985	551		CZE	CZE-CZE01	CIT	I	N	Quo	695	695	EWA	EWA-EWA2	EWT	I	N	Ord	$0.06	10	10			82534:80295454
Series:	**AAPL APV DEC07 145.00 C**							**P/S: 03/04**														
14:54:50:751	549		TZE	TZE-TZE1	QTO	I	N	Quo	501		XXH	WOO-WOO	SEI	N	O	Ord	$49.60	10	10			82534:80296484
Series:	**AAPL APV DEC07 150.00 C**							**P/S: 03/04**														
14:57:13:475	325		XXH	XXH-XXH		A	O	Ord	695		EWA	EWA-EWA2	EWT	I	N	Quo	$44.50	1	5			82534:80297141
14:57:13:475	325		XXH	XXH-XXH		A	O	Ord	501		WXZ	WXZ-WXT	QYW	I	N	Quo	$44.50	1	5			82534:80297141

Trade Types: Blue=Cross Product, Black=Other

Display Futures Trade Information

Market Replay allows you to view current and historical Futures data for both the CFE and OneChicago sessions. The window defaults to the Options session and the current business day.

The window examples below present single data types (i.e. Trades) rather than combination displays (i.e. Trades & Orders).



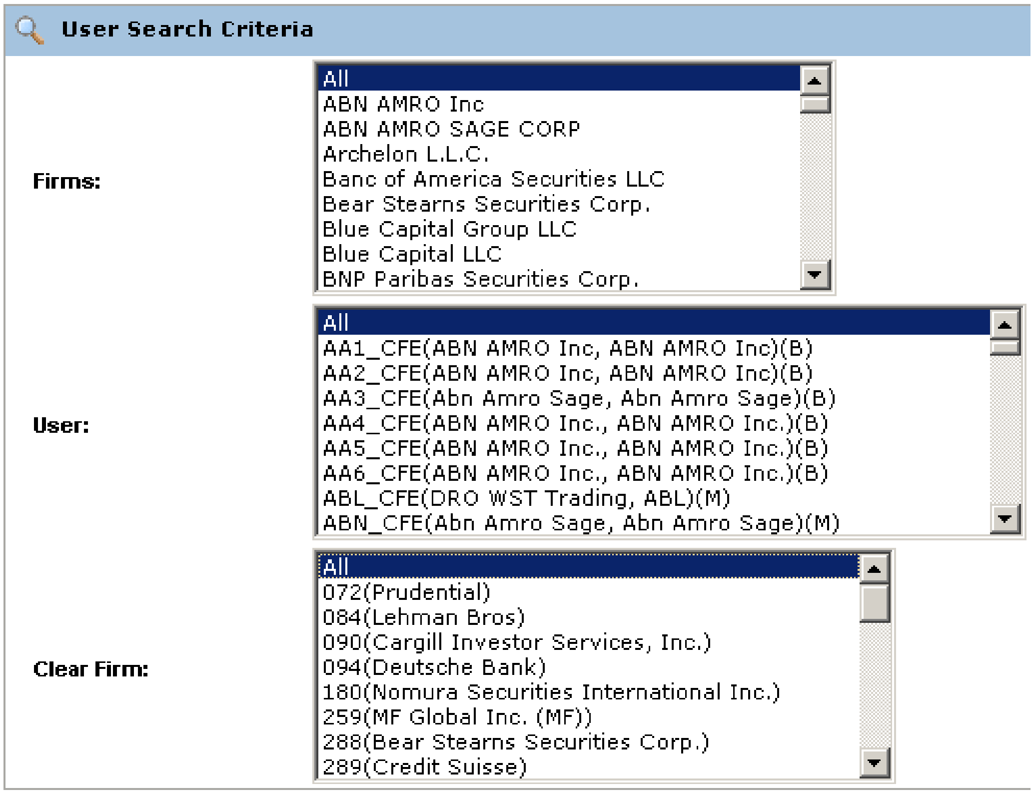
The Market Replay window is split into three panels: Market Replay Main Search Criteria, User Search Criteria and Market Replay Screen Selections. This window is used to set limitations for your data request.

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

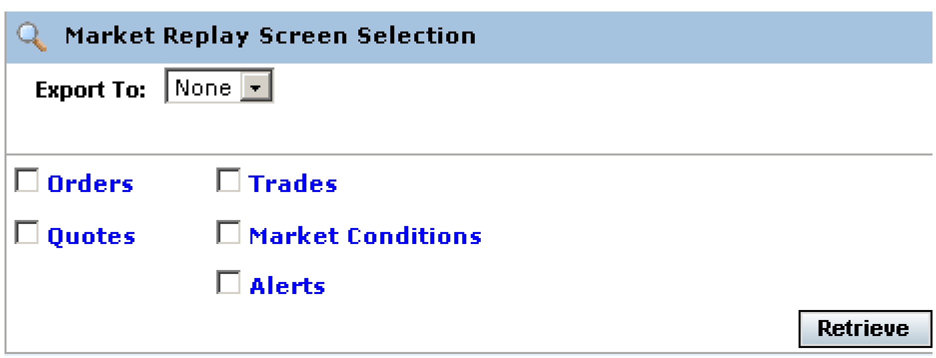
The User Search Criteria section allows you to filter your Market Replay requests by Firm, Market Maker, or Clearing Firm. The window defaults to display all Firms, Market Makers and Clearing Firms for the Options session.

If you select only one Firm from the Firm list, only the Market Makers for that Firm will display in the MM list box.



If you select only one Market Maker from the MM list, only the Clearing Firm for that Market Maker will display in the Clear Firm list box.

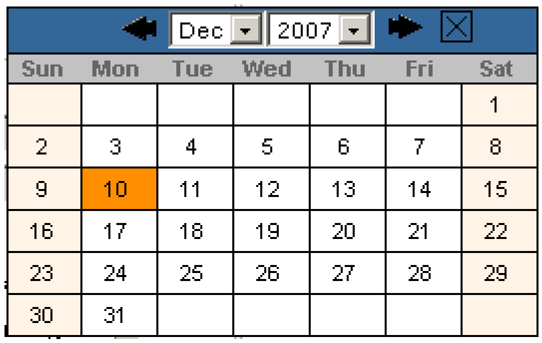
The Market Replay Screen Selection section allows you to filter your Market Replay requests by Orders, Trades, Quotes, Market Conditions and Alerts. You can also export the data to Excel or PDF formats.



Orders Market Replay allows you to retrieve current order information for CFE and OneChicago futures contracts. Make your selections from the **Selection Parameters** window:

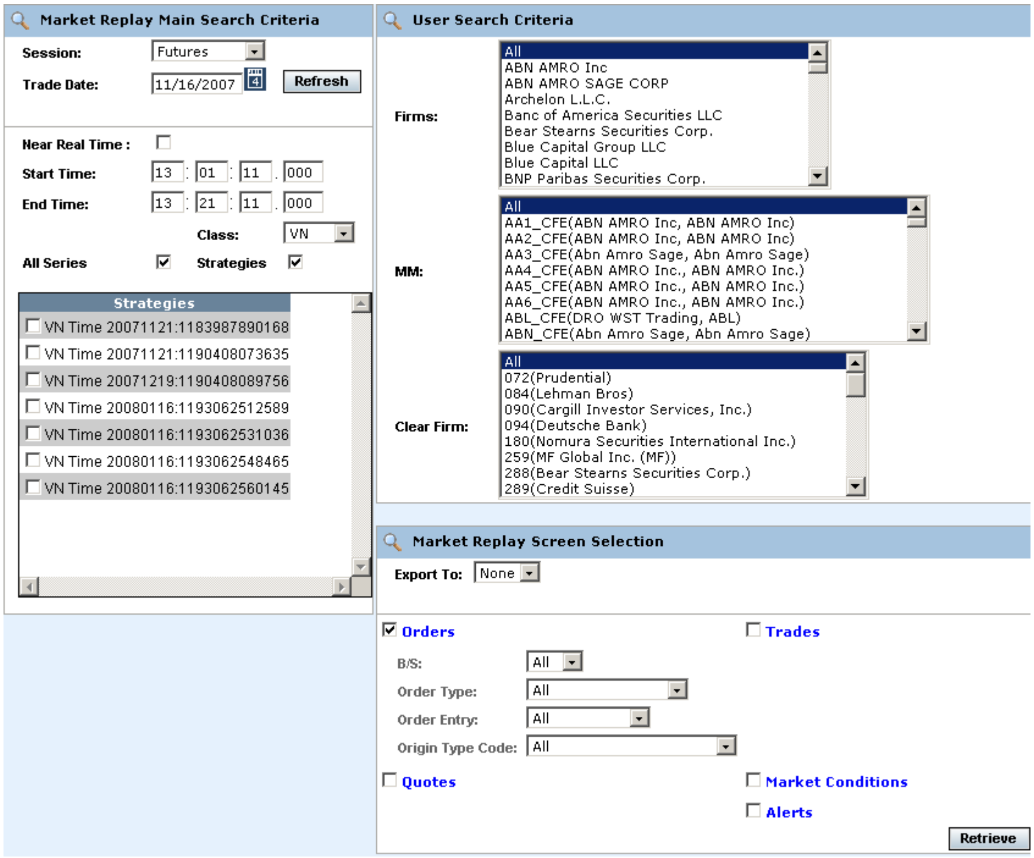
- Select either the Futures or OneChicago trading session from the **Session** drop down list.
- The date of the request defaults to the current business day and is displayed in the **Trade Date** text box.
- To choose a previous trading day, click on the calendar button. The following calendar window 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** radio button. If you would like to select a fixed time range, deselect the **Near Real Time Monitoring** radio button. 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).
- If you wish to view only Strategy contracts, select the **Strategy** checkbox. If you wish to view all classes and series, deselect the checkbox.
- Specify the futures contract you are interested in viewing by clicking on the corresponding checkbox.

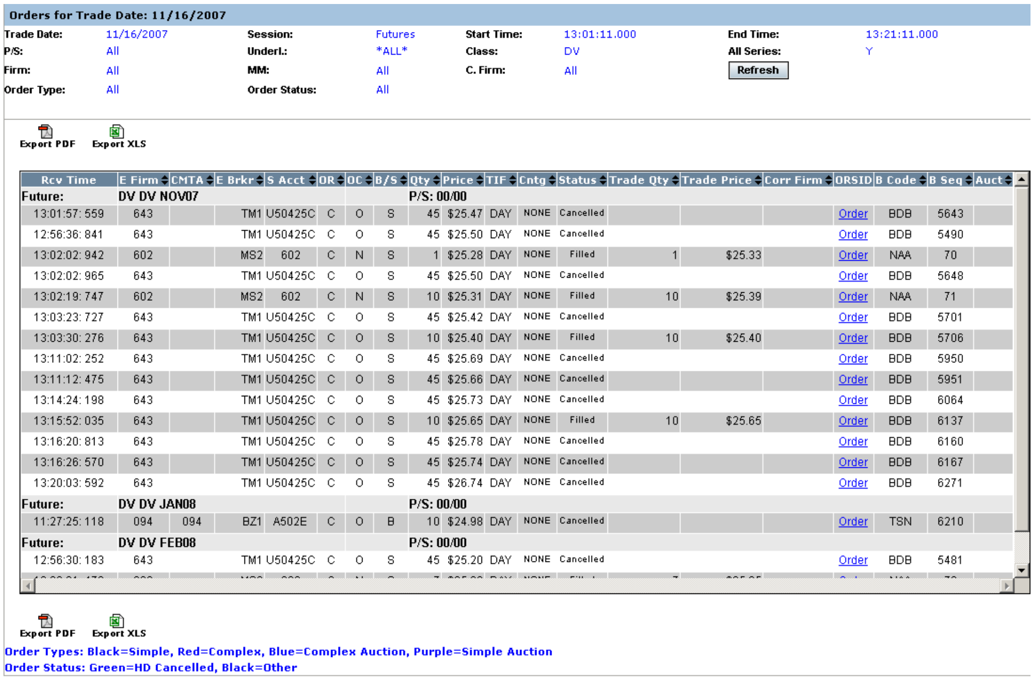
  ✎ **Note:** You must select a futures contract, clearing firm or broker in order to retrieve the data.



- To further filter your request, select to retrieve **Orders**, **Quotes**, **Trades**, **Market Conditions**, or **Alerts**. Select **Orders**.

- You can further filter your orders request by: Buy/Sell (B/S), Order Type, Order Entry or Origin Type Code. Make your selections from the corresponding dropdown lists. The default for the filters is **All**.

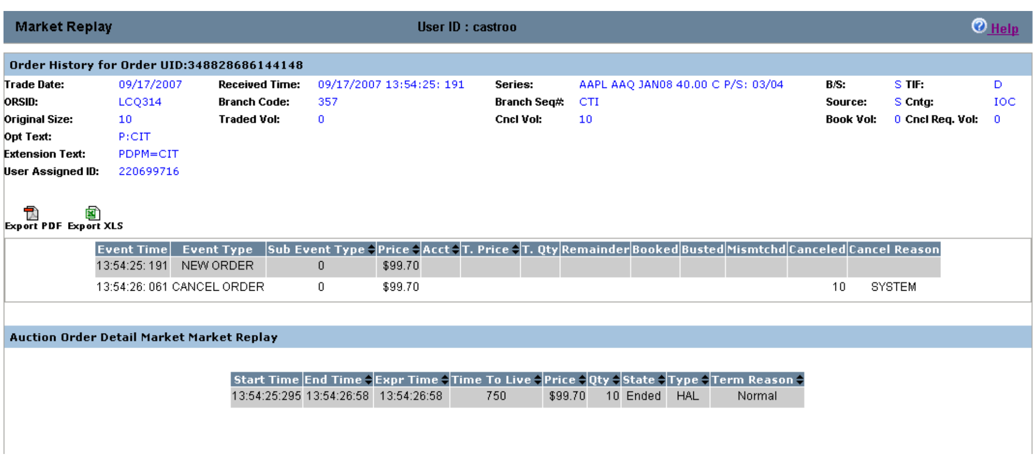
- To save the query results to an Excel or PDF format, select either format from the **Export To**: drop down list. For export details, refer to the Exporting Data section, page 76.
- If you are satisfied with your selections and would like to view the data, click **Retrieve**. The **Orders** window will display with the requested data.



The example above displays all the order transactions that occurred in the CFE_MAIN session on November 16, 2007, for all the DV futures contracts.

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

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



If the order is an Auction order, the Auction order details display in the lower portion of the window. Data fields are described below.

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.
Auct Price	Auction starting price
Auct Qty	Auction quantity
Auct Type	Internalization, strategy, regular single, unspecified
Match ORS ID	Related (match) ORS ID to determine which order is the related (match) order to the auction order.
Terminate 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
State	State of the auction: Expired or Active

Window buttons and system codes that are specific to Market Replay are defined in the table below.

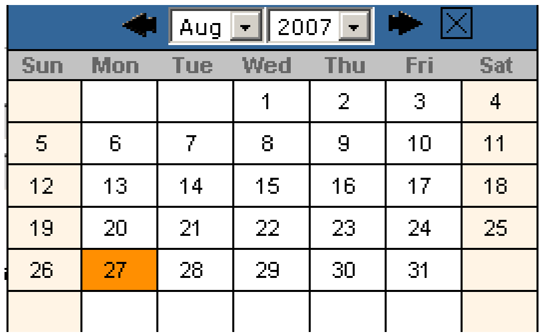
Valid Codes& Definitions

Column	Description
OR & CVG	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

Quotes Market Replay gives you the ability to retrieve current quote information for CFE and OneChicago futures contracts. Make your selections from the **Selection Parameters** window:

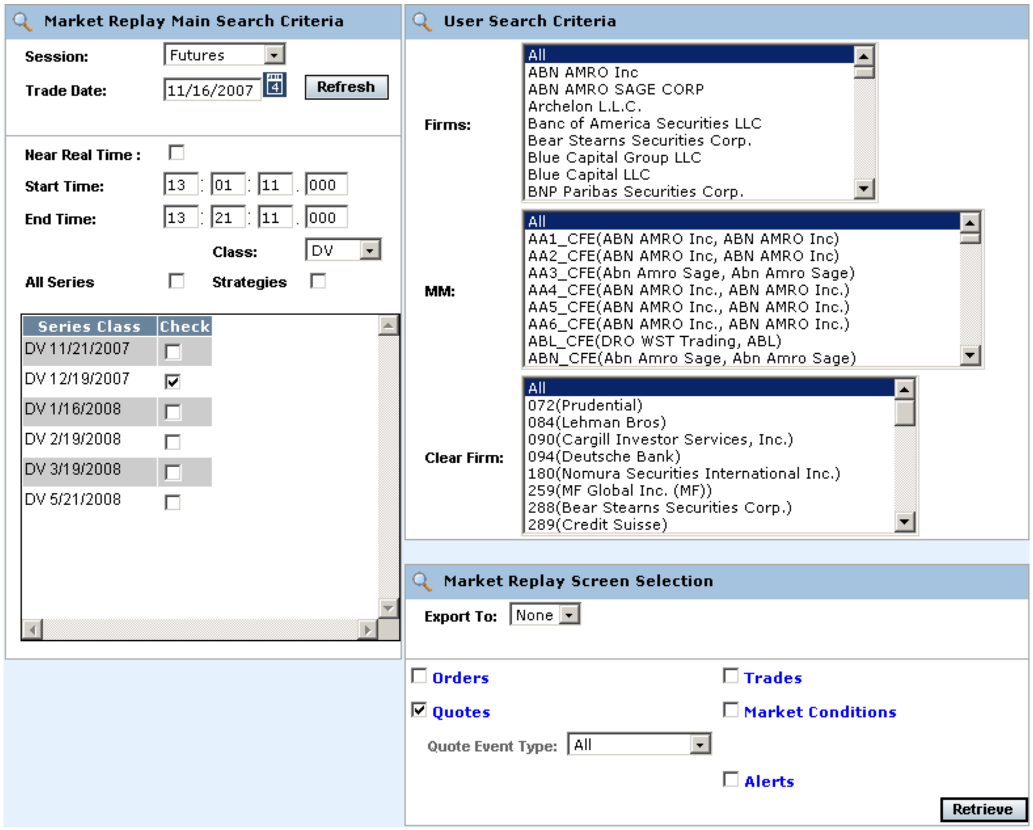
- Select either the Futures or OneChicago trading session from the **Session** drop down list.
- The date of the request defaults to the current business day and is displayed in the **Trade Date** text box.
- To choose a previous trading day, click on the calendar button. The following calendar window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

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



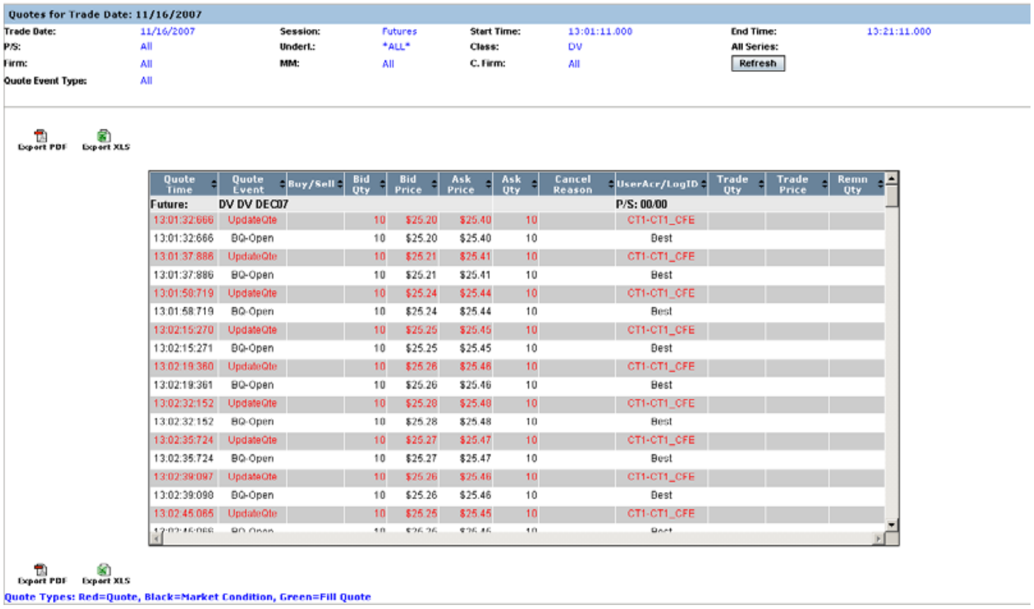
- Click on the trade day you wish to query. The date will display in the **Trade Date** text box.
- Choose the time of your request as near real time by selecting the **Near Real Time** radio button. If you would like to select a fixed time range, deselect the **Near Real Time Monitoring** radio button. 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).
- If you wish to view only Strategy contracts, select the **Strategy** checkbox. If you wish to view all classes and series, deselect the checkbox.
- Specify the futures contract you are interested in viewing by clicking on the corresponding checkbox.

  ✎ **Note:** You must select a futures contract, clearing firm or broker in order to retrieve the data.



- To further filter your request, select to retrieve **Orders**, **Quotes**, **Trades**, **Market Conditions**, or **Alerts**. 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 76.
- 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.



In the example above, quote information for DV futures contracts displays for the CFE_MAIN session.

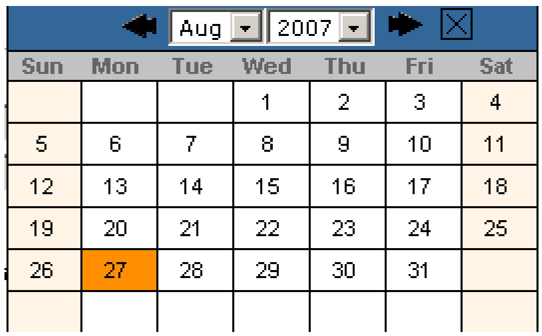
Market Replay gives you the ability to sort on the contents of any column in the display by clicking on the column heading.

Market Conditions

Market Replay gives you the ability to retrieve current market condition information for CFE and OneChicago futures contracts. Make your selections from the **Selection Parameters** window:

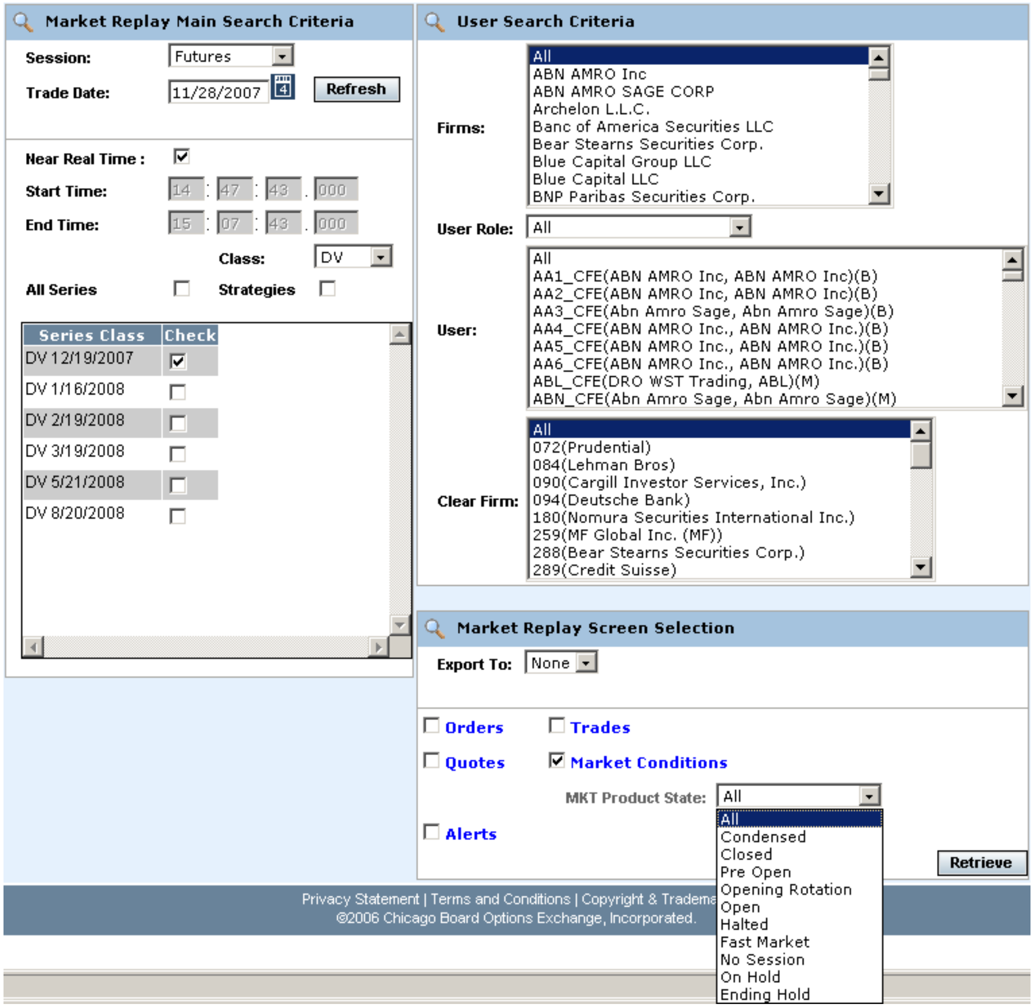
- Select either the Futures or OneChicago trading session from the **Session** drop down list.
- The date of the request defaults to the current business day and is displayed in the **Trade Date** text box.
- To choose a previous trading day, click on the calendar button. The following calendar window 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** radio button. If you would like to select a fixed time range, deselect the **Near Real Time Monitoring** radio button. 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).
- If you wish to view only Strategy contracts, select the **Strategy** checkbox. If you wish to view all classes and series, deselect the checkbox.
- Specify the futures contract you are interested in viewing by clicking on the corresponding checkbox.

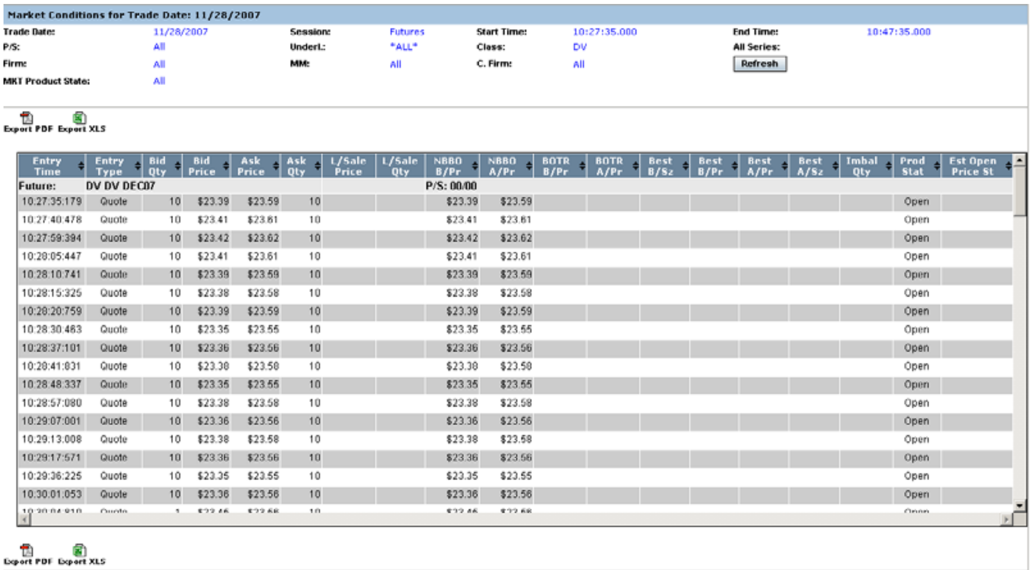
  Note: You must select a futures contract, clearing firm or broker in order to retrieve the data.



- To further filter your request, select to retrieve **Orders**, **Quotes**, **Trades**, **Market Conditions**, or **Alerts**. Select **Market Conditions**.
- You can further filter your request by **Mkt Product State.** Make your selections from the corresponding dropdown lists. The default for the filters is **All**.

  ✎ **Note**: Choosing **Condensed** will display a smaller subset of columns and automatically export the query results to Excel. Refer to the Exporting Data section, page 76.

- 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 76.
- 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 Conditions for Trade Date: 11/28/2007

Trade Date:	11/28/2007	Session:	Futures	Start Time:	10:27:35.000	End Time:	10:47:35.000
P/S:	All	Underl.:	*ALL*	Class:	DV	All Series:	
Firm:	All	MM:	All	C. Firm:	All	Refresh	
MKT Product State:	All						

Export PDF Export XLS

Entry Time	Entry Type	Bid Qty	Bid Price	Ask Price	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
Future:	DV DV DEC07							P/S: 00/00										
10:27:35:179	Quote	10	$23.39	$23.59	10			$23.39	$23.59								Open	
10:27:40:478	Quote	10	$23.41	$23.61	10			$23.41	$23.61								Open	
10:27:59:394	Quote	10	$23.42	$23.62	10			$23.42	$23.62								Open	
10:28:05:447	Quote	10	$23.41	$23.61	10			$23.41	$23.61								Open	
10:28:10:741	Quote	10	$23.39	$23.59	10			$23.39	$23.59								Open	
10:28:15:325	Quote	10	$23.38	$23.58	10			$23.38	$23.58								Open	
10:28:20:759	Quote	10	$23.39	$23.59	10			$23.39	$23.59								Open	
10:28:30:463	Quote	10	$23.35	$23.55	10			$23.35	$23.55								Open	
10:28:37:101	Quote	10	$23.36	$23.56	10			$23.36	$23.56								Open	
10:28:41:831	Quote	10	$23.38	$23.58	10			$23.38	$23.58								Open	
10:28:48:337	Quote	10	$23.35	$23.55	10			$23.35	$23.55								Open	
10:28:57:080	Quote	10	$23.38	$23.58	10			$23.38	$23.58								Open	
10:29:07:001	Quote	10	$23.36	$23.56	10			$23.36	$23.56								Open	
10:29:13:008	Quote	10	$23.38	$23.58	10			$23.38	$23.58								Open	
10:29:17:571	Quote	10	$23.36	$23.56	10			$23.36	$23.56								Open	
10:29:36:225	Quote	10	$23.35	$23.55	10			$23.35	$23.55								Open	
10:30:01:053	Quote	10	$23.36	$23.56	10			$23.36	$23.56								Open	

Export PDF Export XLS

Details are provided for all the market events that occurred in the CFE session from 10:27:35 to 10:47:35 for all the DV DEC07 futures contracts. Columns that are specific to Market Replay for market conditions are defined in the picture above.

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.

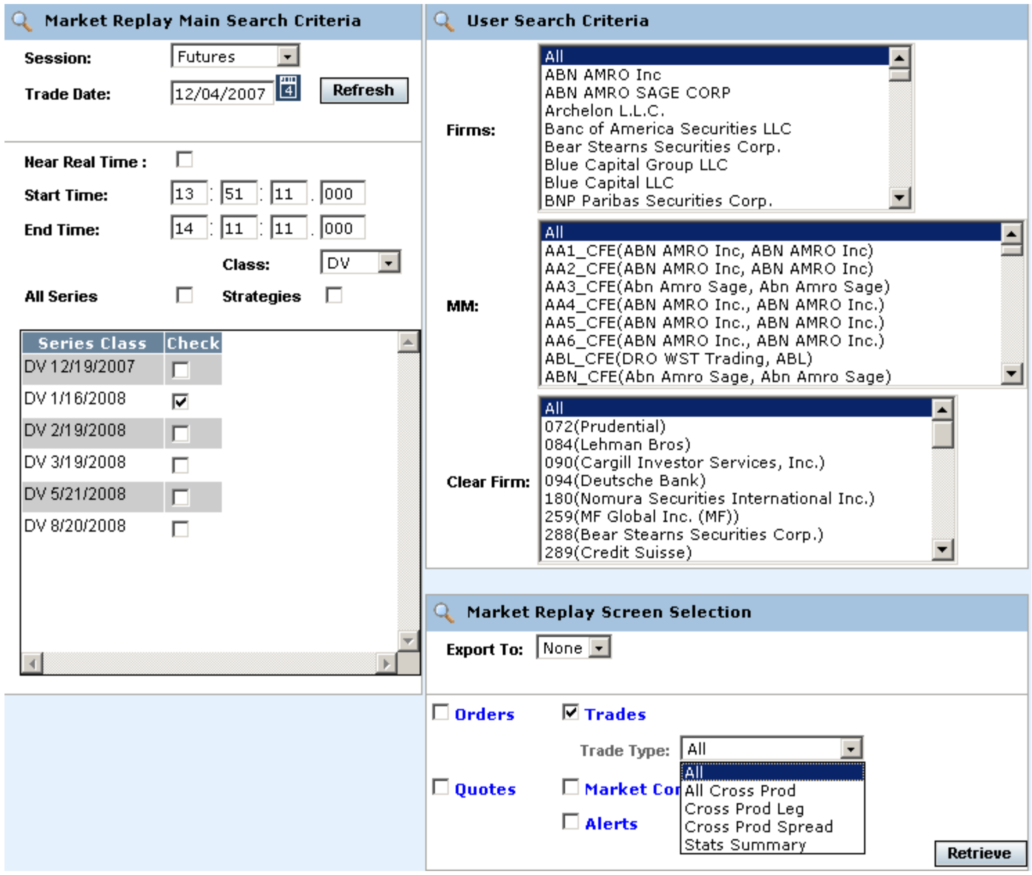
Trades Market Replay allows you to retrieve current trade information for futures contracts. Make your selections from the **Selection Parameters** window:

- Select either the Futures or OneChicago 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.

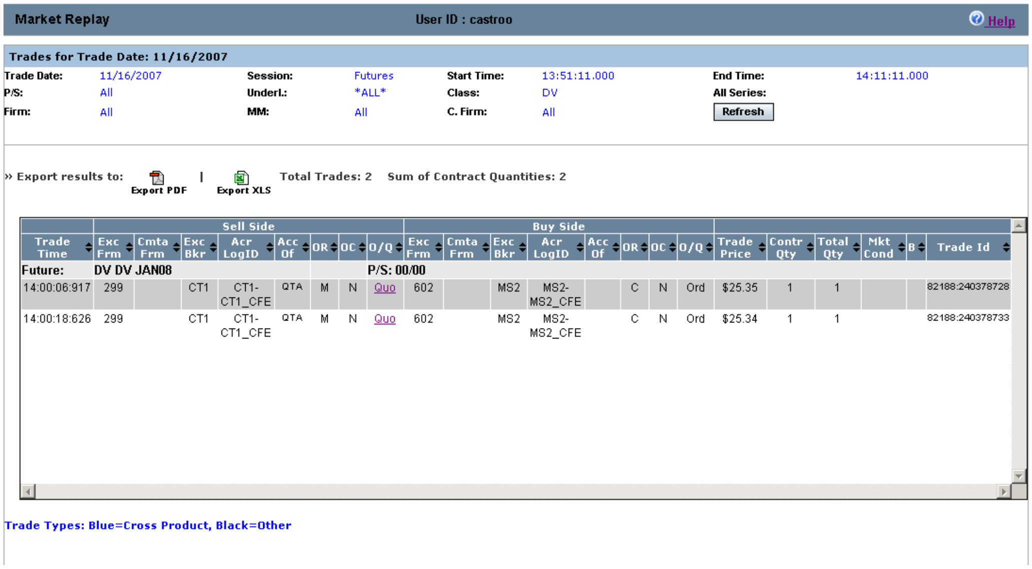
- Click on the trade day you wish to query. The date will display in the **Trade Date** text box.
- Choose the time of your request as near real time by selecting the **Near Real Time** radio button. If you would like to select a fixed time range, deselect the **Near Real Time Monitoring** radio button. 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).
- If you wish to view only Strategy contracts, select the **Strategy** checkbox. If you wish to view all classes and series, deselect the checkbox.
- Specify the futures contract you are interested in viewing by clicking on the corresponding checkbox.

    ✎ **Note:** You must select a futures contract, clearing firm or broker in order to retrieve the data.



- To further filter your request, select to retrieve **Orders**, **Quotes**, **Trades**, **Market Conditions**, or **Alerts**. Select **Trades**.
- You can further filter your trades 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 76.
- 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 Help

Trades for Trade Date: 11/16/2007

Trade Date:	11/16/2007	Session:	Futures	Start Time:	13:51:11.000	End Time:	14:11:11.000
P/S:	All	Underl.:	*ALL*	Class:	DV	All Series:	
Firm:	All	MM:	All	C. Firm:	All	Refresh	

» Export results to: Export PDF | Export XLS Total Trades: 2 Sum of Contract Quantities: 2

	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
Future:	DV DV JAN08							P/S: 00/00														
14:00:06:917	299		CT1	CT1-CT1_CFE	QTA	M	N	Quo	602		MS2	MS2-MS2_CFE		C	N	Ord	$25.35	1	1			82188:240378728
14:00:18:626	299		CT1	CT1-CT1_CFE	QTA	M	N	Quo	602		MS2	MS2-MS2_CFE		C	N	Ord	$25.34	1	1			82188:240378733

Trade Types: Blue=Cross Product, Black=Other

The example above displays all the trades that occurred in the CFE_MAIN session on November 16, 2007, for the DV futures contracts. The total number of trades represents all the trades in the display.

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.

Valid Codes& Definitions

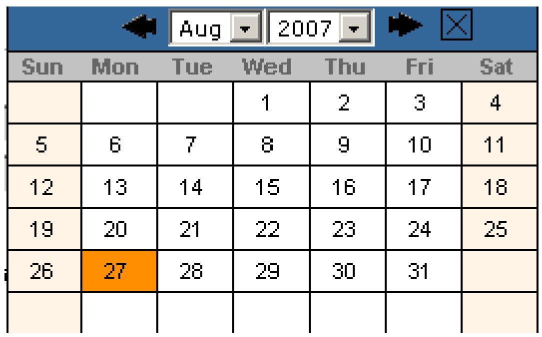
Column	Description
OR	P/A Linkage = 'A' B/D = 'B' CUSTOMER = 'C' Customer-FBW = 'D' Member, House Account **=** 'E' FIRM = F' User Proxy for trader, Customer Segregated **=** 'G' User Proxy for trader, House Account **=** 'H' In-Crowd MM = 'I' Firm - FBW = 'J' B/D-FBW='K' Firm-FBW='L' MARKET_MAKER =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

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

To retrieve current data in the Alert Messages display, make your selections from the **Selection Parameters** window.

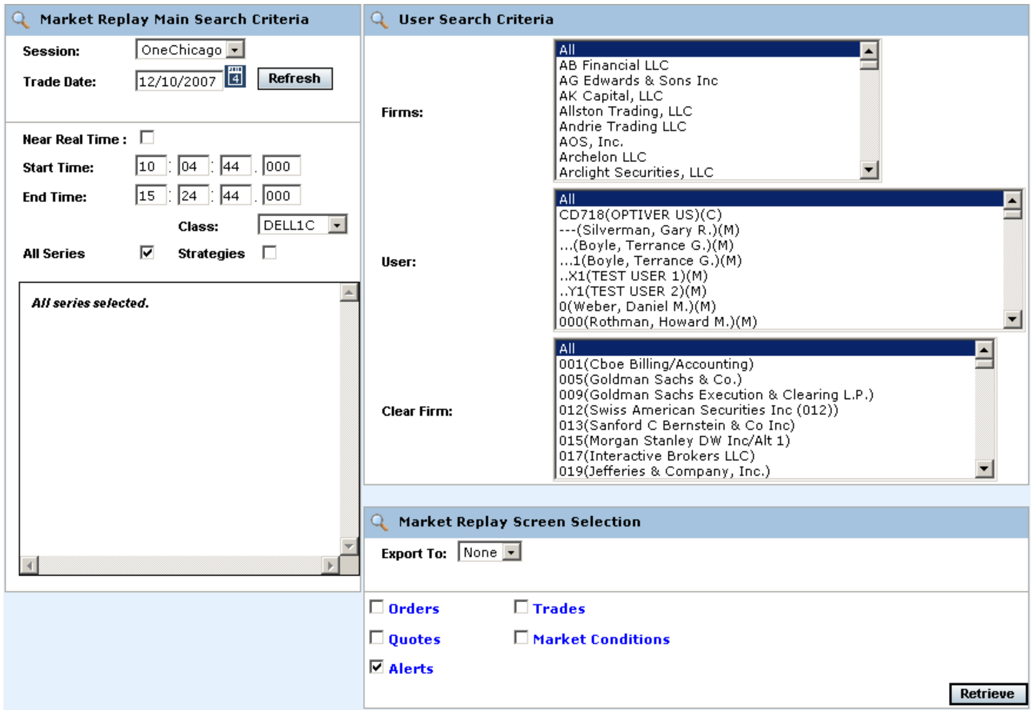
- Select either the Futures or OneChicago trading session from the **Session** drop down list.
- The date of the request defaults to the current business day and is displayed in the **Trade Date** text box.
- To choose a previous trading day, click on the calendar button. The following calendar window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

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



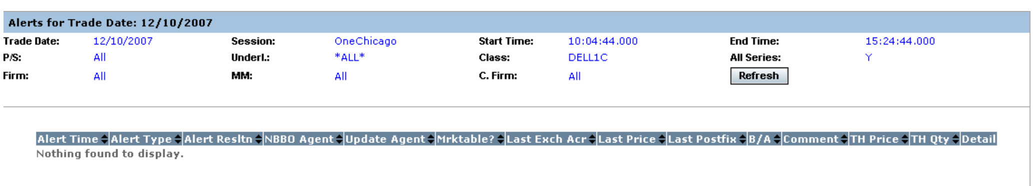
- Click on the trade day you wish to query. The date will display in the **Trade Date** text box.
- Choose the time of your request as near real time by selecting the **Near Real Time** radio button. If you would like to select a fixed time range, deselect the **Near Real Time Monitoring** radio button. 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).
- If you wish to view only Strategy contracts, select the **Strategy** checkbox. If you wish to view all classes and series, deselect the checkbox.
- Specify the futures contract you are interested in viewing by clicking on the corresponding checkbox.

  ✎ **Note:** You must select a futures contract, clearing firm or broker in order to retrieve the data.



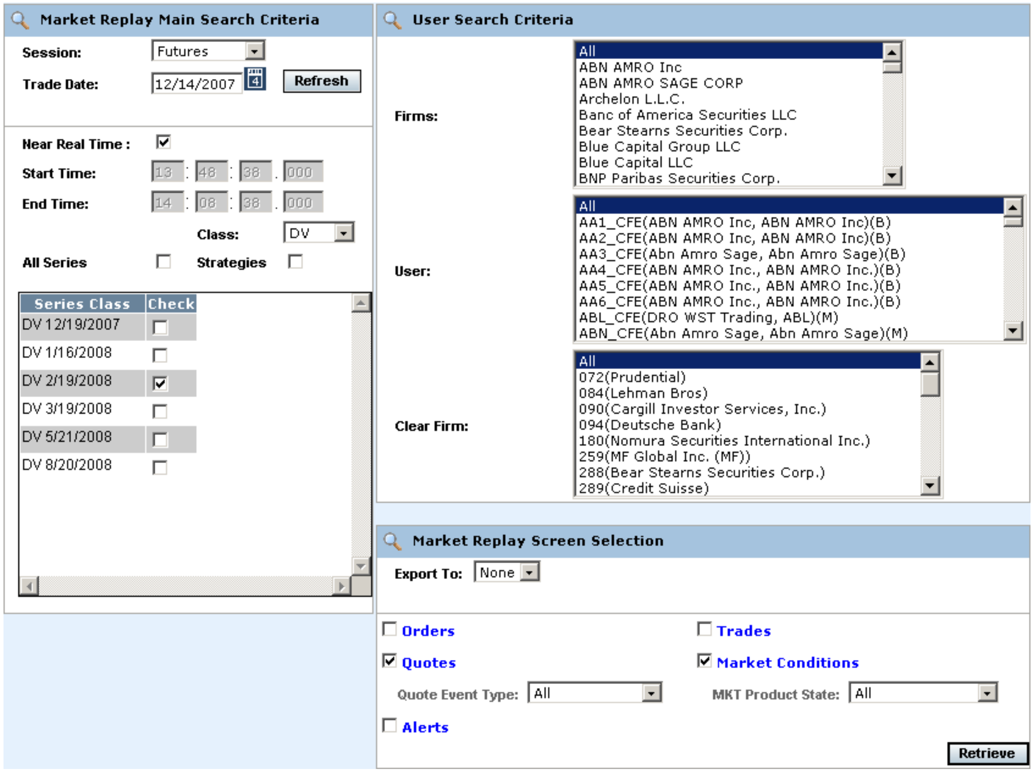
- To further filter your request, select to retrieve **Orders**, **Quotes**, **Trades**, **Market Conditions**, or **Alerts**. Select **Alerts**.

- 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 76.
- 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.

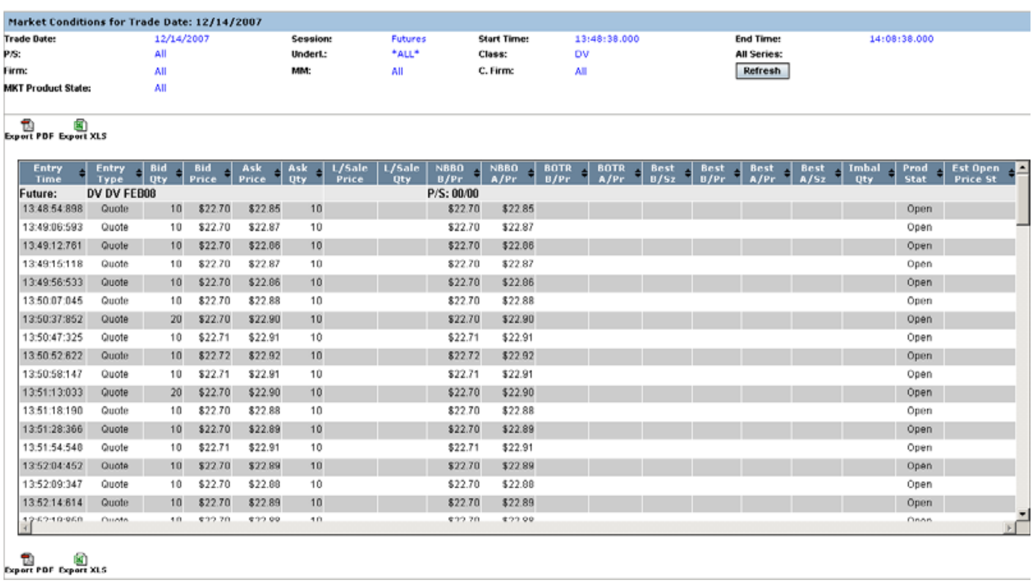


The Alerts window shows that no alerts occurred for the DELL1C futures contract on 12/10/07.

Composite Market Replay allows you to query for more than one type of criteria (orders, trades, quotes, alerts, market conditions). In the example below, the query has been set to display both quotes and market conditions for DV futures contract.



Two windows display for the query; Market Conditions and Quotes.



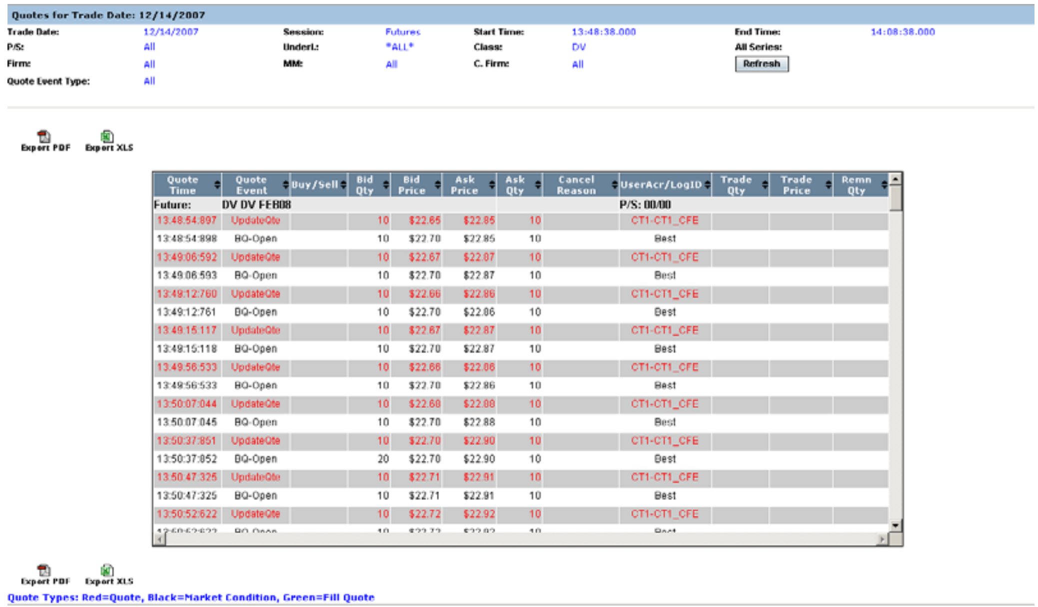
Market Conditions for Trade Date: 12/14/2007

Trade Date:	12/14/2007	Session:	Futures	Start Time:	13:48:38.000	End Time:	14:08:38.000
P/S:	All	Underl.:	*ALL*	Class:	DV	All Series:	
Firm:	All	MM:	All	C. Firm:	All	Refresh	
MKT Product State:	All						

Export PDF Export XLS

Entry Time	Entry Type	Bid Qty	Bid Price	Ask Price	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
Future:	DV DV FEB08							P/S: 00/00										
13:48:54:898	Quote	10	$22.70	$22.85	10			$22.70	$22.85								Open	
13:49:06:593	Quote	10	$22.70	$22.87	10			$22.70	$22.87								Open	
13:49:12:761	Quote	10	$22.70	$22.86	10			$22.70	$22.86								Open	
13:49:15:118	Quote	10	$22.70	$22.87	10			$22.70	$22.87								Open	
13:49:56:533	Quote	10	$22.70	$22.86	10			$22.70	$22.86								Open	
13:50:07:045	Quote	10	$22.70	$22.88	10			$22.70	$22.88								Open	
13:50:37:852	Quote	20	$22.70	$22.90	10			$22.70	$22.90								Open	
13:50:47:325	Quote	10	$22.71	$22.91	10			$22.71	$22.91								Open	
13:50:52:622	Quote	10	$22.72	$22.92	10			$22.72	$22.92								Open	
13:50:58:147	Quote	10	$22.71	$22.91	10			$22.71	$22.91								Open	
13:51:13:033	Quote	20	$22.70	$22.90	10			$22.70	$22.90								Open	
13:51:18:190	Quote	10	$22.70	$22.88	10			$22.70	$22.88								Open	
13:51:28:366	Quote	10	$22.70	$22.89	10			$22.70	$22.89								Open	
13:51:54:540	Quote	10	$22.71	$22.91	10			$22.71	$22.91								Open	
13:52:04:452	Quote	10	$22.70	$22.89	10			$22.70	$22.89								Open	
13:52:09:347	Quote	10	$22.70	$22.88	10			$22.70	$22.88								Open	
13:52:14:614	Quote	10	$22.70	$22.89	10			$22.70	$22.89								Open	

Export PDF Export XLS



Quotes for Trade Date: 12/14/2007

Trade Date:	12/14/2007	Session:	Futures	Start Time:	13:48:38.000	End Time:	14:08:38.000
P/S:	All	Underl.:	*ALL*	Class:	DV	All Series:	
Firm:	All	MM:	All	C. Firm:	All	Refresh	
Quote Event Type:	All						

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Quote Time	Quote Event	Buy/Sell	Bid Qty	Bid Price	Ask Price	Ask Qty	Cancel Reason	UserAcr/LogID	Trade Qty	Trade Price	Remn Qty
Future:	DV DV FEB08							P/S: 00/00			
13:48:54:897	UpdateQte		10	$22.65	$22.85	10		CT1-CT1_CFE			
13:48:54:898	BQ-Open		10	$22.70	$22.85	10		Best			
13:49:06:592	UpdateQte		10	$22.67	$22.07	10		CT1-CT1_CFE			
13:49:06:593	BQ-Open		10	$22.70	$22.87	10		Best			
13:49:12:760	UpdateQte		10	$22.66	$22.86	10		CT1-CT1_CFE			
13:49:12:761	BQ-Open		10	$22.70	$22.06	10		Best			
13:49:15:117	UpdateQte		10	$22.67	$22.87	10		CT1-CT1_CFE			
13:49:15:118	BQ-Open		10	$22.70	$22.87	10		Best			
13:49:56:533	UpdateQte		10	$22.66	$22.06	10		CT1-CT1_CFE			
13:49:56:533	BQ-Open		10	$22.70	$22.86	10		Best			
13:50:07:044	UpdateQte		10	$22.60	$22.08	10		CT1-CT1_CFE			
13:50:07:045	BQ-Open		10	$22.70	$22.88	10		Best			
13:50:37:851	UpdateQte		10	$22.70	$22.90	10		CT1-CT1_CFE			
13:50:37:852	BQ-Open		20	$22.70	$22.90	10		Best			
13:50:47:325	UpdateQte		10	$22.71	$22.91	10		CT1-CT1_CFE			
13:50:47:325	BQ-Open		10	$22.71	$22.91	10		Best			
13:50:52:622	UpdateQte		10	$22.72	$22.92	10		CT1-CT1_CFE			

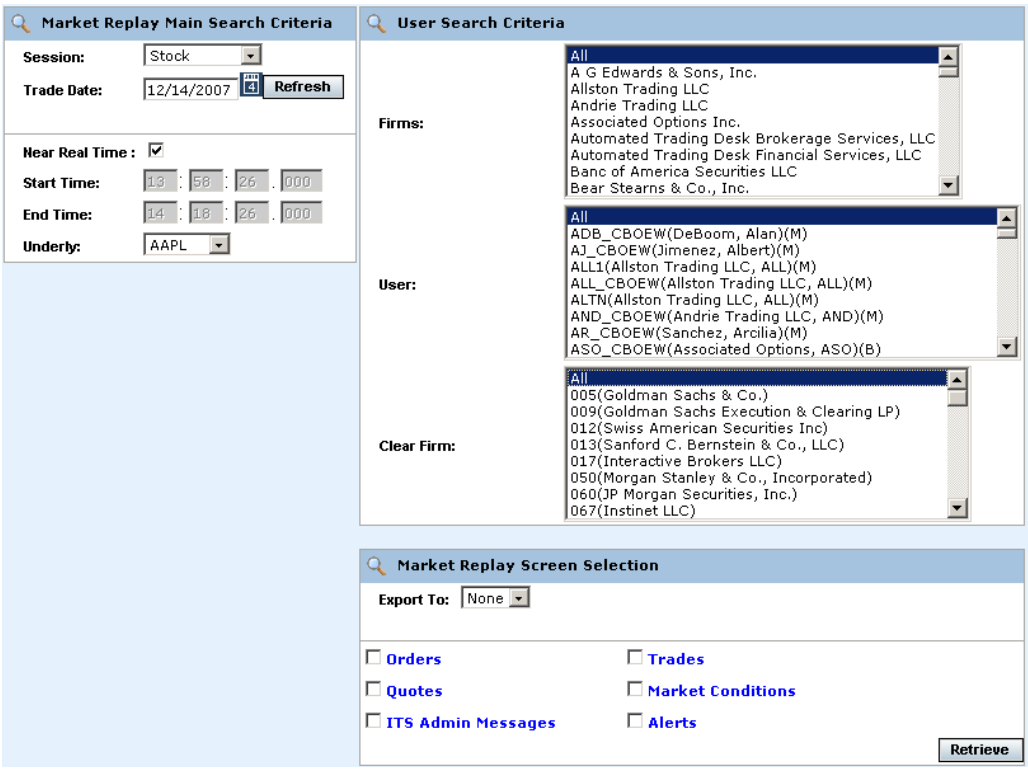
Export PDF Export XLS

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

Display Stock Trade Information

Market Replay allows you to view current and historical Stock (underlying) trading information. The window defaults to the Options session and the current business day.

The window examples below present single data types (i.e. Trades) rather than combination displays (i.e. Trades & Orders).



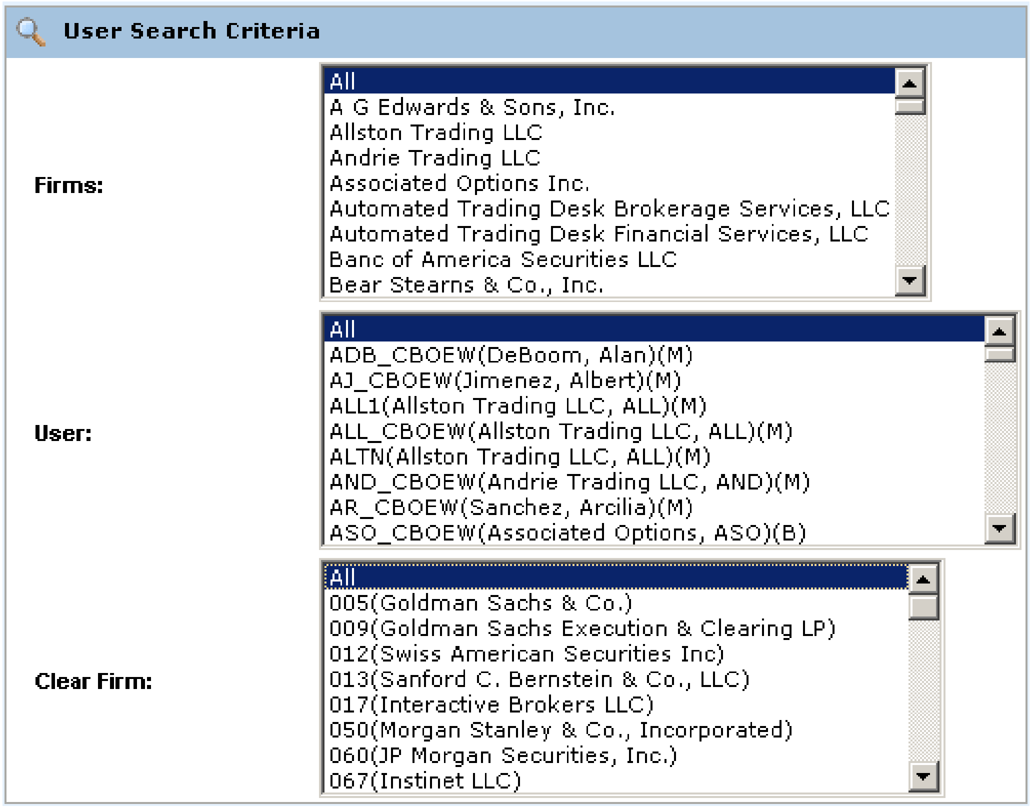
The Market Replay window is split into three panels: Market Replay Main Search Criteria, User Search Criteria and Market Replay Screen Selections. This window is used to set limitations for your data request.

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 selections

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 all Firms, Market Makers and Clearing Firms for the Options session.

If you select only one Firm from the Firm list, only the Market Makers for that Firm will display in the MM list box.



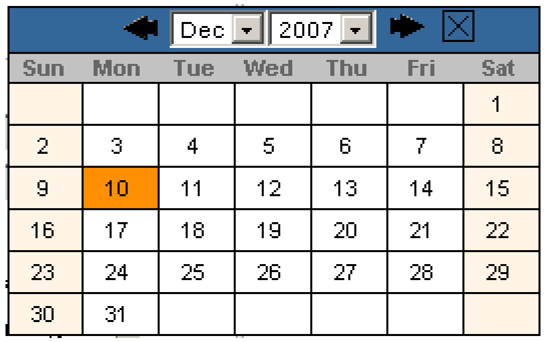
If you select only one Market Maker from the MM list, only the Clearing Firm for that Market Maker will display in the Clear Firm list box.

The Market Replay Screen Selection section allows you to filter your Market Replay requests by Orders, Trades, Quotes, Market Conditions, ITS Admin Messages and Alerts. You can also export the data to Excel or PDF formats.

Orders Market Replay allows you to retrieve current order information for the Stock (underlying) trading session. Make your selections from the **Selection Parameters** window:

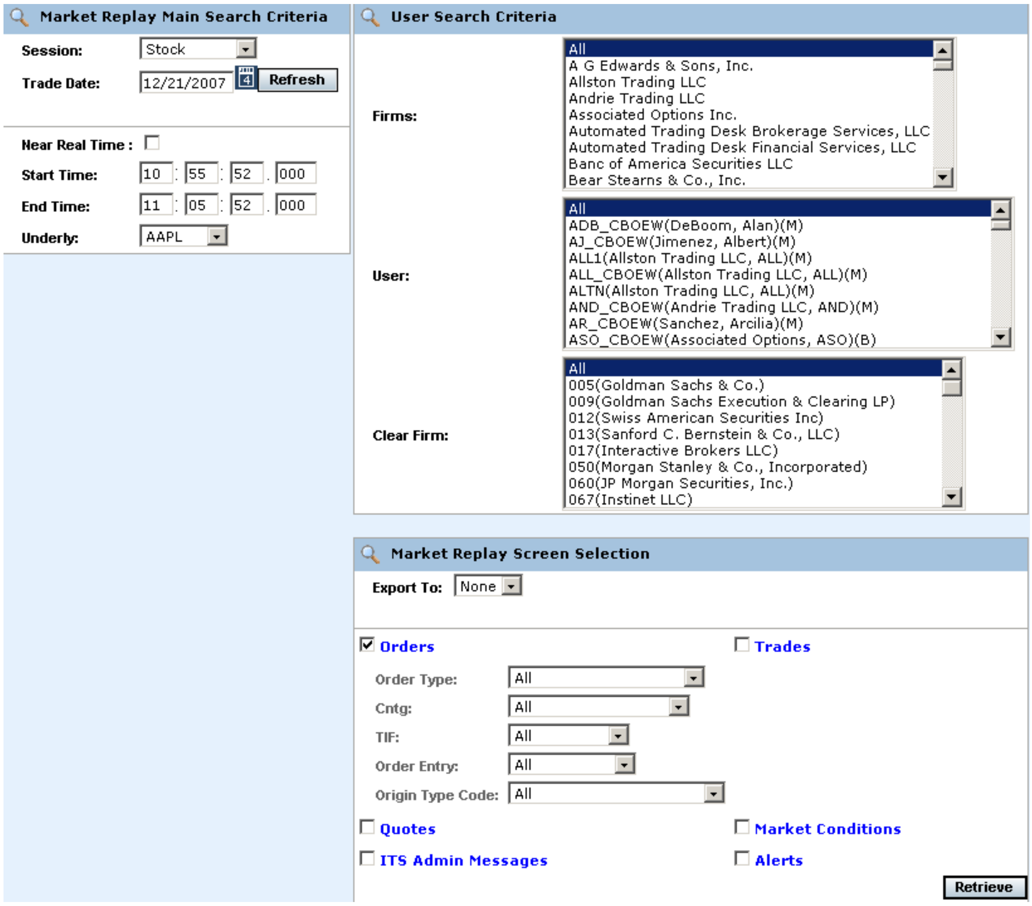
- Select the Stock trading session from the **Session** drop down list.
- The date of the request defaults to the current business day and is displayed in the **Trade Date** text box.
- To choose a previous trading day, click on the calendar button. The following calendar window will display.

  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** radio button. If you would like to select a fixed time range, deselect the **Near Real Time Monitoring** radio button. 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).
- Select the Stock (underlying) product.

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



- To further filter your request, select to retrieve **Orders**, **Quotes**, **Trades**, **Market Conditions**, **ITS Admin Messages** or **Alerts**. Select **Orders**.
- You can further filter your orders request by: Order Type, Contingency (Cntg), Time in Force (TIF), Order Entry 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 76.
- 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.

Orders for Trade Date: 12/21/2007

Trade Date:	12/21/2007	**Session:**	Stock	**Start Time:**	10:55:52.000	**End Time:**	11:05:52.000
P/S:	All	**Equity Sym.:**	AAPL				
Firm:	All	**MM:**	All	**C. Firm:**	All	Refresh	
Order Type:	All	**Auct Type:**	null	**Cntg:**	All	**TIF:**	All
Status:	All	**Origin:**	All				

Export PDF Export XLS

Rcv Time	E Firm	G UP	E Brkr	S Acct	OR	OC	B/S	Qty	Price	TIF	Cntg	Status	Trade Qty	Trade Price	Corr Firm	Order	B Code	B Seq	Cross	Exch
Stock:	**AAPL**																			
10:56:50: 568	355		CSU		L	N	Sell	100	$191.82	DAY	IOC	Cancelled				Order	AAB	2845	N	
10:57:09: 065	695		TNK	CBY	E	N	Buy	100	$191.90	DAY	NONE	Filled	100	$191.80	CBY	Order	TTV	3429	N	
10:54:50: 042	501		VXD	318T1209	I	N	Buy	100	$190.27	DAY	NONE	Cancelled				Order	UBG	8357	N	
10:54:50: 046	501		VXD	318T1209	I	N	Sell	100	$193.37	DAY	NONE	Cancelled				Order	UBG	8358	N	
10:57:16: 737	501		VXD	318T1209	I	N	Sell	100	$193.77	DAY	NONE	Cancelled				Order	UBH	1075	N	
10:57:16: 731	501		VXD	318T1209	I	N	Buy	100	$189.93	DAY	NONE	Cancelled				Order	UBH	1074	N	
10:57:16: 874	501		VXD	318T1209	I	N	Buy	100	$190.31	DAY	NONE	Cancelled				Order	UBH	1099	N	
10:57:16: 878	501		VXD	318T1209	I	N	Sell	100	$193.40	DAY	NONE	Cancelled				Order	UBH	1100	N	
10:58:20: 033	501		VXD	318T1209	I	N	Buy	100	$189.92	DAY	NONE	Cancelled				Order	UBH	2405	N	
10:58:20: 037	501		VXD	318T1209	I	N	Sell	100	$193.76	DAY	NONE	Cancelled				Order	UBH	2406	N	
10:58:20: 145	501		VXD	318T1209	I	N	Buy	100	$190.27	DAY	NONE	Cancelled				Order	UBH	2421	N	
10:58:20: 147	501		VXD	318T1209	I	N	Sell	100	$193.36	DAY	NONE	Cancelled				Order	UBH	2422	N	
10:59:23: 798	501		VXD	318T1209	I	N	Buy	100	$189.89	DAY	NONE	Cancelled				Order	UBH	3934	N	
10:59:23: 802	501		VXD	318T1209	I	N	Sell	100	$193.73	DAY	NONE	Cancelled				Order	UBH	3935	N	
10:59:23: 845	501		VXD	318T1209	I	N	Buy	100	$190.26	DAY	NONE	Cancelled				Order	UBH	3942	N	
10:59:23: 848	501		VXD	318T1209	I	N	Sell	100	$193.35	DAY	NONE	Cancelled				Order	UBH	3943	N	
10:59:37: 695	501		VXD	318T1209	I	N	Buy	100	$189.82	DAY	NONE	Cancelled				Order	UBH	4341	N	
10:59:37: 698	501		VXD	318T1209	I	N	Sell	100	$193.66	DAY	NONE	Cancelled				Order	UBH	4342	N	

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Order Types: Black=Simple, Red=Complex, Blue=Complex Auction, Purple=Simple Auction
Order Status: Green=HD Cancelled, Black=Other

The example above displays all the order activity that occurred in the W_MAIN session on December 21, 2007 from 10:55:52 to 11:05:52 for 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.

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

Order History for Order UID:355221579850546

Trade Date:	12/21/2007	**Received Time:**	12/21/2007 10:56:50: 568	**Series:**	AAPL	**B/S:**	S	**TIF:**	D
ORSID:		**Branch Code:**	AAB	**Branch Seq#:**	2845	**Source:**	S	**Cntg:**	IOC
Original Size:	100	**Traded Vol:**	0	**Cncl Vol:**	100	**Book Vol:**	0	**Cncl Req. Vol:**	0
Opt Text:									
Extension Text:	21=1□60=20071221-16:56:50								
User Assigned ID:									

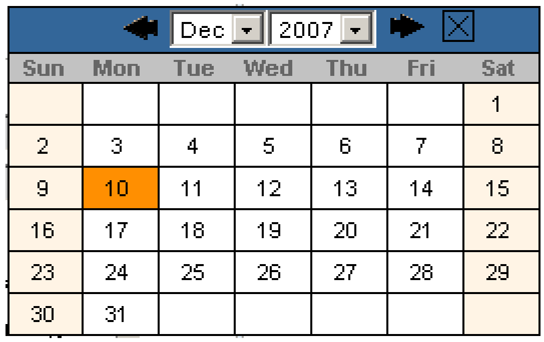
Export PDF Export XLS

Event Time	Event Type	Sub Event Type	Price	Acct	T. Price	T. Qty	Remainder	Booked	Busted	Mismtchd	Canceled	Cancel Reason
10:56:50: 568	NEW ORDER	0	$191.82									
10:56:50: 584	CANCEL ORDER	0	$191.82								100	USER

Quotes Market Replay allows you to retrieve current quote information for the Stock (underlying) trading session. Make your selections from the **Selection Parameters** window:

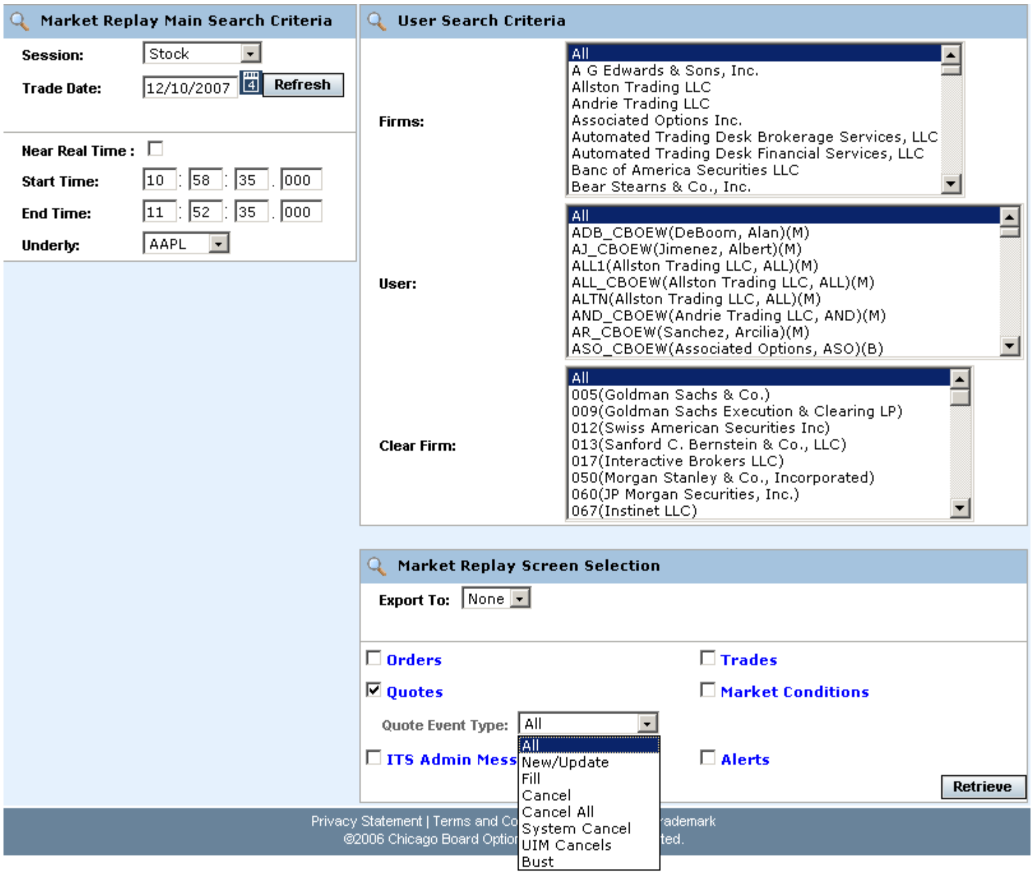
- Select the Stock trading session from the **Session** drop down list.
- The date of the request defaults to the current business day and is displayed in the **Trade Date** text box.
- To choose a previous trading day, click on the calendar button. The following calendar window will display.

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



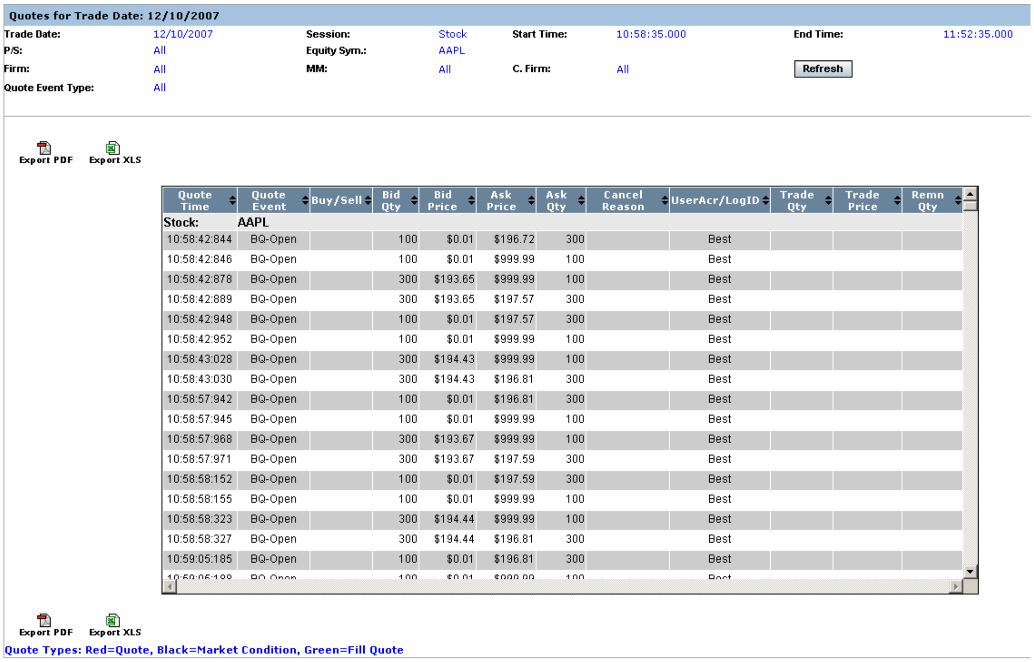
- Click on the trade day you wish to query. The date will display in the **Trade Date** text box.
- Choose the time of your request as near real time by selecting the **Near Real Time** radio button. If you would like to select a fixed time range, deselect the **Near Real Time Monitoring** radio button. 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).
- Select the Stock (underlying) product.

  ➯ **Note:** You must select a Stock product, clearing firm or broker in order to retrieve the data.



- To further filter your request, select to retrieve **Orders**, **Quotes**, **Trades**, **Market Conditions**, **ITS Admin Messages** or **Alerts**. 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 76.
- 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: 12/10/2007

Trade Date:	12/10/2007	Session:	Stock	Start Time:	10:58:35.000	End Time:	11:52:35.000
P/S:	All	Equity Sym.:	AAPL				
Firm:	All	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
Stock:	AAPL										
10:58:42:844	BQ-Open		100	$0.01	$196.72	300		Best			
10:58:42:846	BQ-Open		100	$0.01	$999.99	100		Best			
10:58:42:878	BQ-Open		300	$193.65	$999.99	100		Best			
10:58:42:889	BQ-Open		300	$193.65	$197.57	300		Best			
10:58:42:948	BQ-Open		100	$0.01	$197.57	300		Best			
10:58:42:952	BQ-Open		100	$0.01	$999.99	100		Best			
10:58:43:028	BQ-Open		300	$194.43	$999.99	100		Best			
10:58:43:030	BQ-Open		300	$194.43	$196.81	300		Best			
10:58:57:942	BQ-Open		100	$0.01	$196.81	300		Best			
10:58:57:945	BQ-Open		100	$0.01	$999.99	100		Best			
10:58:57:968	BQ-Open		300	$193.67	$999.99	100		Best			
10:58:57:971	BQ-Open		300	$193.67	$197.59	300		Best			
10:58:58:152	BQ-Open		100	$0.01	$197.59	300		Best			
10:58:58:155	BQ-Open		100	$0.01	$999.99	100		Best			
10:58:58:323	BQ-Open		300	$194.44	$999.99	100		Best			
10:58:58:327	BQ-Open		300	$194.44	$196.81	300		Best			
10:59:05:185	BQ-Open		100	$0.01	$196.81	300		Best			

Export PDF Export XLS

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

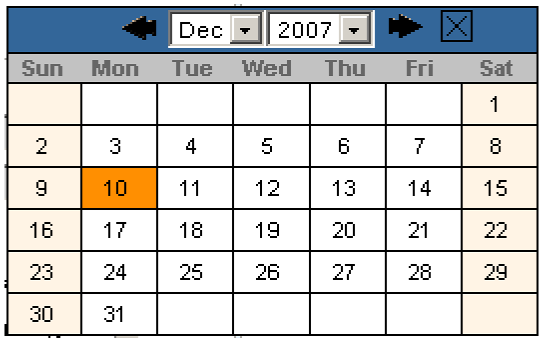
In the example above, quote information for APPL displays for the Stock session.

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 current trade information for the Stock (underlying) trading session. Make your selections from the **Selection Parameters** window:

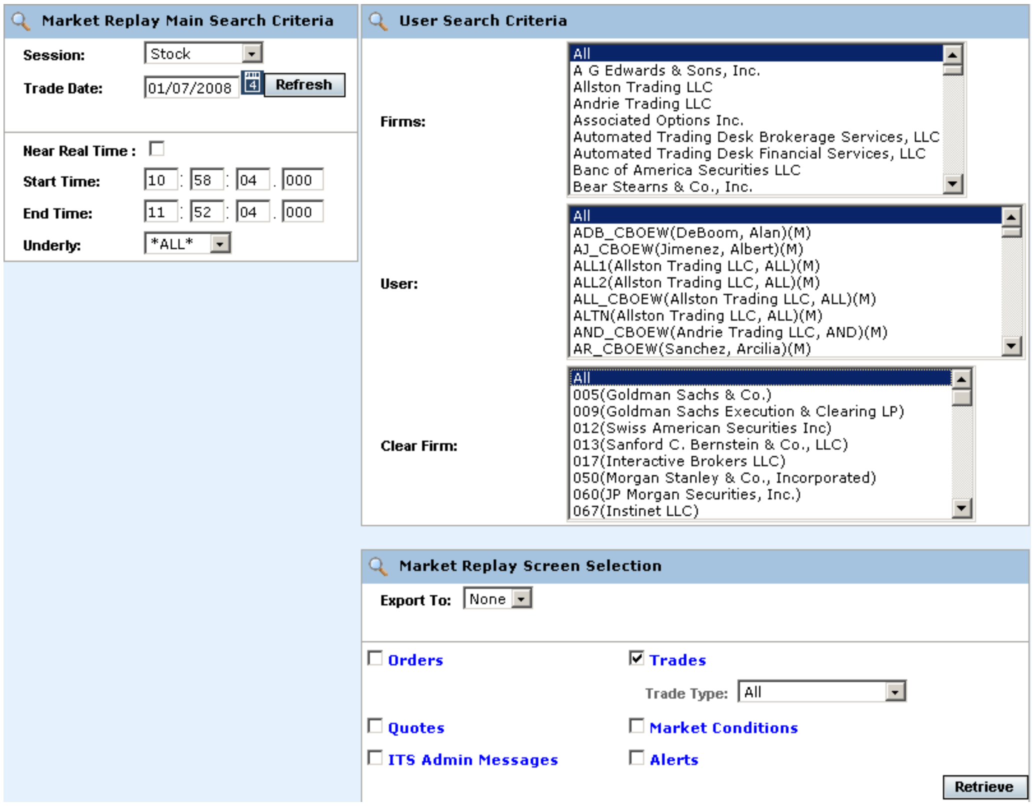
- Select the Stock trading session from the **Session** drop down list.
- The date of the request defaults to the current business day and is displayed in the **Trade Date** text box.
- To choose a previous trading day, click on the calendar button. The following calendar window will display.

  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** radio button. If you would like to select a fixed time range, deselect the **Near Real Time Monitoring** radio button. 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).
- Select the Stock (underlying) product.

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

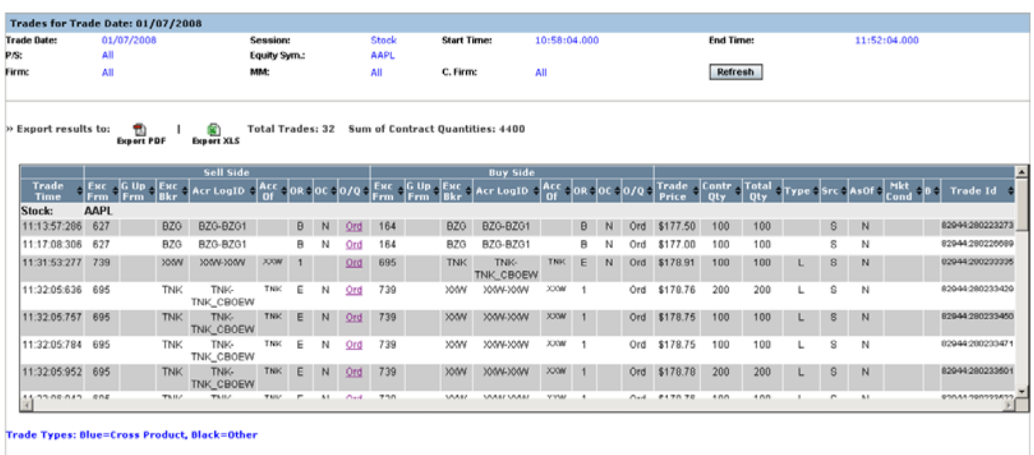


- To further filter your request, select to retrieve **Orders**, **Quotes**, **Trades**, **Market Conditions**, **ITS Admin Messages** or **Alerts**. Select **Trades**.

- You can further filter your quote requests 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 76.

- 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 Stock session on January 7, 2008, for the APPL class. The total number of trades represents all the trades in the display.

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.

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 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 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.

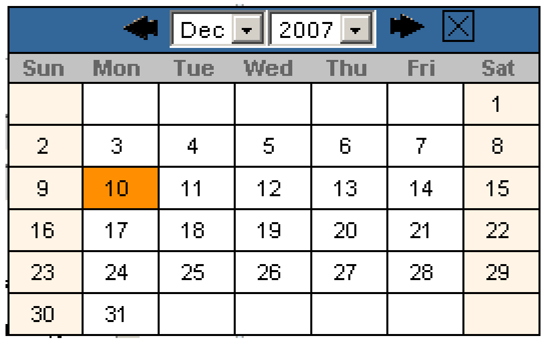
Mkt Cond	CANC=trade bust report CNCO=trade bust report for opening trade FTAO=used if the first trade for product occurs after the opening OPNT=used if first trade for product occurs during opening REOP=trade that occurs during an opening rotation that is not the first rotation of the day
Src (Trade Source)	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.

Market Conditions

Market Replay allows you to retrieve current market condition information for the Stock (underlying) trading session. Make your selections from the **Selection Parameters** window:

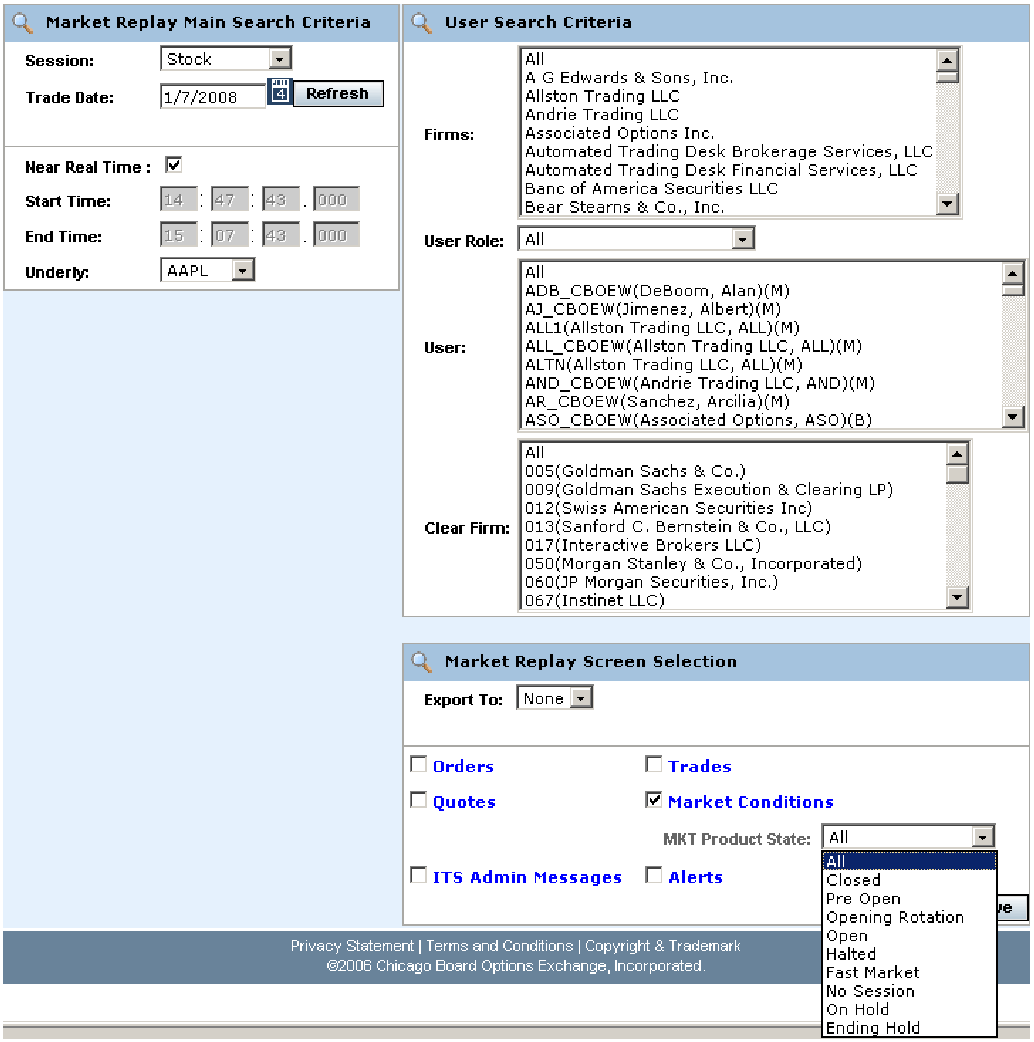
- Select the Stock trading session from the **Session** drop down list.
- The date of the request defaults to the current business day and is displayed in the **Trade Date** text box.
- To choose a previous trading day, click on the calendar button. The following calendar window will display.

  ✎ **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** radio button. If you would like to select a fixed time range, deselect the **Near Real Time Monitoring** radio button. 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).
- Select the Stock (underlying) product.

  ✎ **Note:** You must select a Stock product, clearing firm or broker in order to retrieve the data.

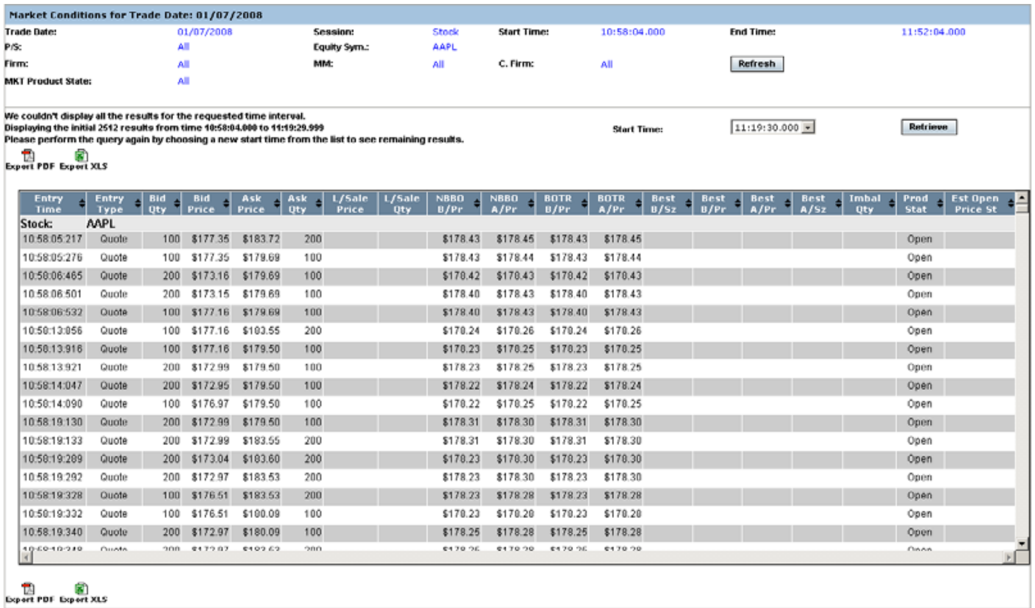


- To further filter your request, select to retrieve **Orders**, **Quotes**, **Trades**, **Market Conditions**, **ITS Admin Messages** or **Alerts**. Select **Market Conditions**.

- You can further filter your request by **Mkt 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 or PDF format, select either format from the **Export To**: drop down list. For export details, refer to the Exporting Data section, page 76.

- 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.



Entry Time	Entry Type	Bid Qty	Bid Price	Ask Price	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
Stock:	AAPL																	
10:58:05:217	Quote	100	$177.35	$183.72	200			$178.43	$178.45	$178.43	$178.45						Open	
10:58:05:276	Quote	100	$177.35	$179.69	100			$178.43	$178.44	$178.43	$178.44						Open	
10:58:06:465	Quote	200	$173.16	$179.69	100			$178.42	$178.43	$178.42	$178.43						Open	
10:58:06:501	Quote	200	$173.15	$179.69	100			$178.40	$178.43	$178.40	$178.43						Open	
10:58:06:532	Quote	100	$177.16	$179.69	100			$178.40	$178.43	$178.40	$178.43						Open	
10:58:13:856	Quote	100	$177.16	$183.55	200			$178.24	$178.26	$178.24	$178.26						Open	
10:58:13:916	Quote	100	$177.16	$179.50	100			$178.23	$178.25	$178.23	$178.25						Open	
10:58:13:921	Quote	200	$172.99	$179.50	100			$178.23	$178.25	$178.23	$178.25						Open	
10:58:14:047	Quote	200	$172.95	$179.50	100			$178.22	$178.24	$178.22	$178.24						Open	
10:58:14:090	Quote	100	$176.97	$179.50	100			$178.22	$178.25	$178.22	$178.25						Open	
10:58:19:130	Quote	200	$172.99	$179.50	100			$178.31	$178.30	$178.31	$178.30						Open	
10:58:19:133	Quote	200	$172.99	$183.55	200			$178.31	$178.30	$178.31	$178.30						Open	
10:58:19:209	Quote	200	$173.04	$183.60	200			$178.23	$178.30	$178.23	$178.30						Open	
10:58:19:292	Quote	200	$172.97	$183.53	200			$178.23	$178.30	$178.23	$178.30						Open	
10:58:19:328	Quote	100	$176.51	$183.53	200			$178.23	$178.28	$178.23	$178.28						Open	
10:58:19:332	Quote	100	$176.51	$180.09	100			$178.23	$178.28	$178.23	$178.28						Open	
10:58:19:340	Quote	200	$172.97	$180.09	100			$178.25	$178.28	$178.25	$178.28						Open	

Details are provided for all the market events that occurred in the Stock session from 10:58:04 to 11:52:04 for the AAPL class. Columns that are specific to Market Replay for market conditions are defined in the picture above.

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

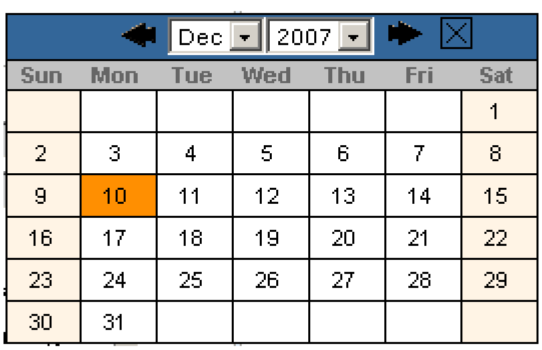
Market Replay gives you the ability to sort on the contents of any column in the display by clicking on the column heading.

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

To retrieve current data in the Alert Messages display, make your selections from the **Selection Parameters** window.

- Select the Stock 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.

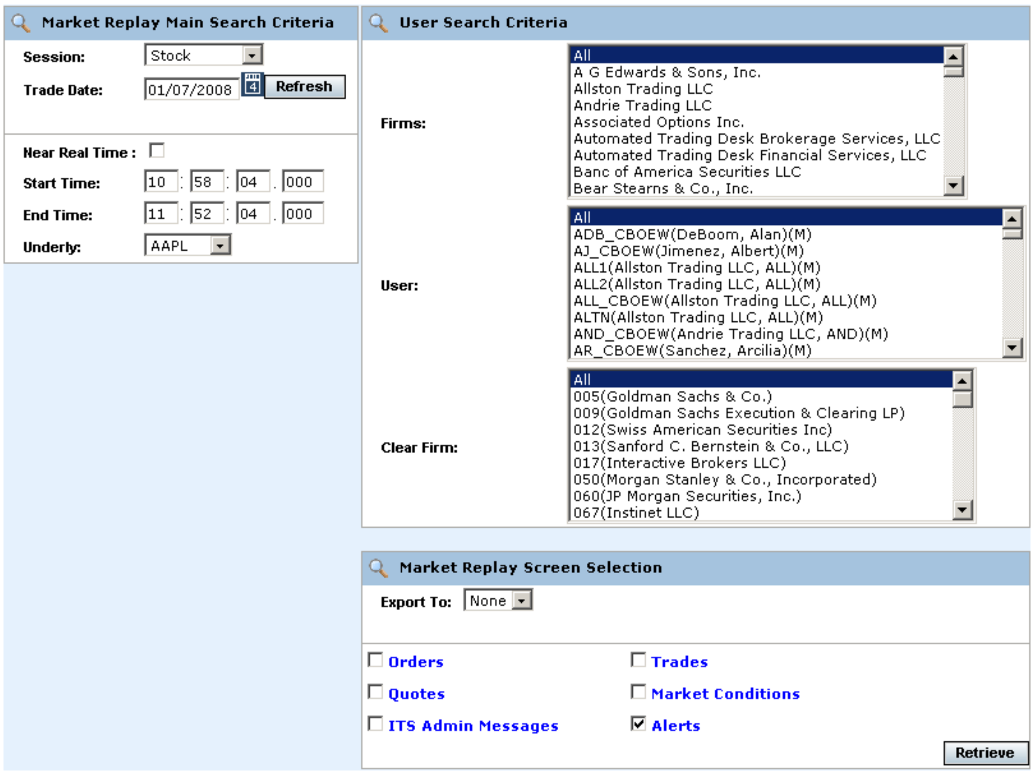
  Note: The data warehouse maintains trade information for three years.



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					

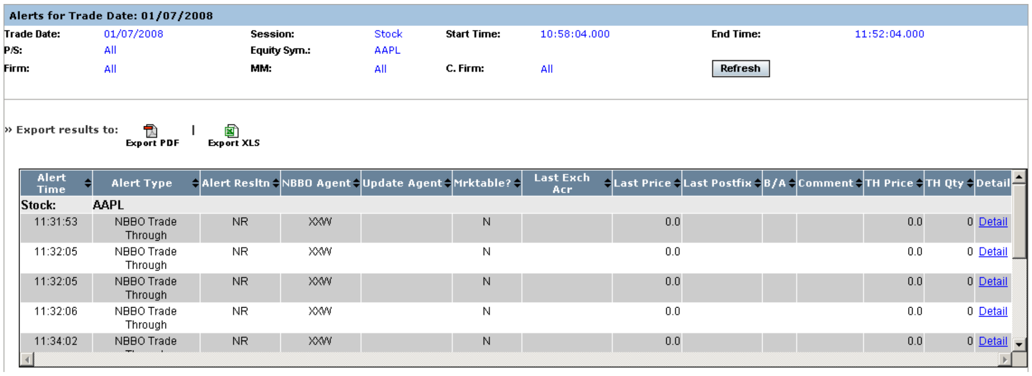
- Click on the trade day you wish to query. The date will display in the **Trade Date** text box.
- Choose the time of your request as near real time by selecting the **Near Real Time** radio button. If you would like to select a fixed time range, deselect the **Near Real Time Monitoring** radio button. 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).
- Select the Stock (underlying) product.

  ✎ **Note:** You must select a Stock product, clearing firm or broker in order to retrieve the data.



  - To further filter your request, select to retrieve **Orders**, **Quotes**, **Trades**, **Market Conditions**, **ITS Admin Messages** or **Alerts**. Select **Alerts**.

- 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 76.
- 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.



Alerts for Trade Date: 01/07/2008

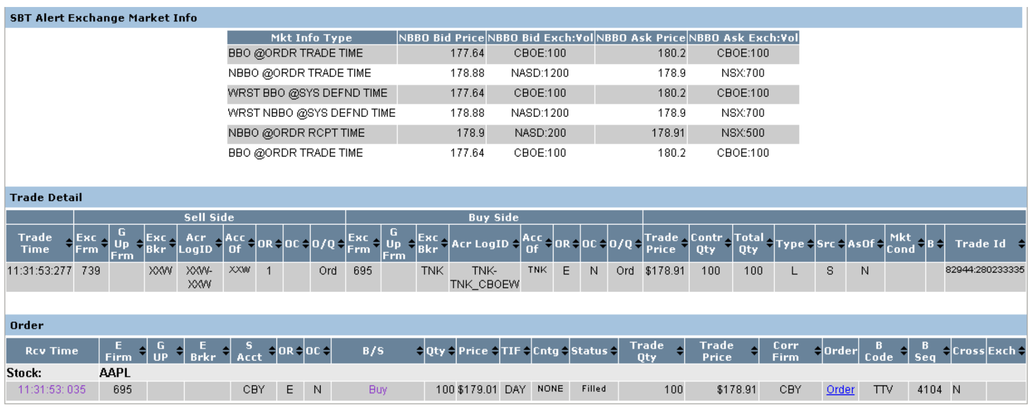
Trade Date:	01/07/2008	Session:	Stock	Start Time:	10:58:04.000	End Time:	11:52:04.000
P/S:	All	Equity Sym.:	AAPL				
Firm:	All	MM:	All	C. Firm:	All	Refresh	

» Export results to: Export PDF | Export XLS

Alert Time	Alert Type	Alert Resltn	NBBO Agent	Update Agent	Mrktable?	Last Exch Acr	Last Price	Last Postfix	B/A	Comment	TH Price	TH Qty	Detail
Stock:	AAPL												
11:31:53	NBBO Trade Through	NR	XXW		N		0.0				0.0	0	Detail
11:32:05	NBBO Trade Through	NR	XXW		N		0.0				0.0	0	Detail
11:32:05	NBBO Trade Through	NR	XXW		N		0.0				0.0	0	Detail
11:32:06	NBBO Trade Through	NR	XXW		N		0.0				0.0	0	Detail
11:34:02	NBBO Trade	NR	XXW		N		0.0				0.0	0	Detail

Alerts that occurred on 1/7/08 for AAPL display in the window above.

Click on the **Detail** link of any row to view additional information on the alert type.



SBT Alert Exchange Market Info

Mkt Info Type	NBBO Bid Price	NBBO Bid Exch:Vol	NBBO Ask Price	NBBO Ask Exch:Vol
BBO @ORDR TRADE TIME	177.64	CBOE:100	180.2	CBOE:100
NBBO @ORDR TRADE TIME	178.88	NASD:1200	178.9	NSX:700
WRST BBO @SYS DEFND TIME	177.64	CBOE:100	180.2	CBOE:100
WRST NBBO @SYS DEFND TIME	178.88	NASD:1200	178.9	NSX:700
NBBO @ORDR RCPT TIME	178.9	NASD:200	178.91	NSX:500
BBO @ORDR TRADE TIME	177.64	CBOE:100	180.2	CBOE:100

Trade Detail

	Sell Side								Buy Side																
Trade Time	Exc Frm	G Up Frm	Exc Bkr	Acr LogID	Acc Of	OR	OC	O/Q	Exc Frm	G Up Frm	Exc Bkr	Acr LogID	Acc Of	OR	OC	O/Q	Trade Price	Contr Qty	Total Qty	Type	Src	AsOf	Mkt Cond	B	Trade Id
11:31:53:277	739		XXW	XXW-XXW	XXW	1		Ord	695		TNK	TNK-TNK_CBOEW	TNK	E	N	Ord	$178.91	100	100	L	S	N			82944:280233335

Order

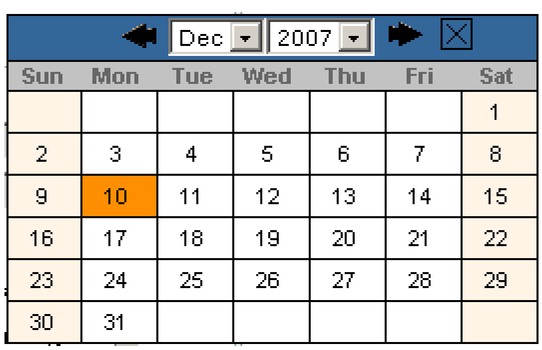
Rcv Time	E Firm	G UP	E Brkr	S Acct	OR	OC	B/S	Qty	Price	TIF	Cntg	Status	Trade Qty	Trade Price	Corr Firm	Order	B Code	B Seq	Cross	Exch
Stock:	AAPL																			
11:31:53: 035	695			CBY	E	N	Buy	100	$179.01	DAY	NONE	Filled	100	$178.91	CBY	Order	TTV	4104	N	

ITS Admin Messages

Market Replay allows you to view Intermarket Trading System (ITS) administrative messages that occurred on a specific trade date.

- Select the Stock 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.

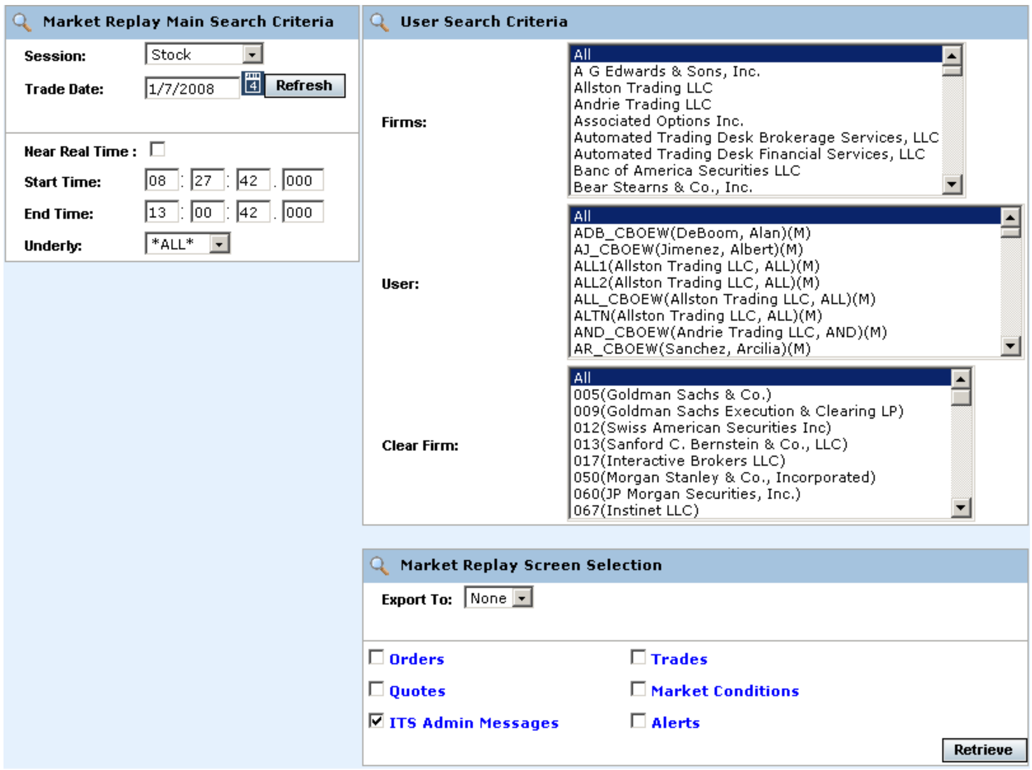
  Note: The data warehouse maintains trade information for three years.



- Click on the trade day you wish to query. The date will display in the **Trade Date** text box.

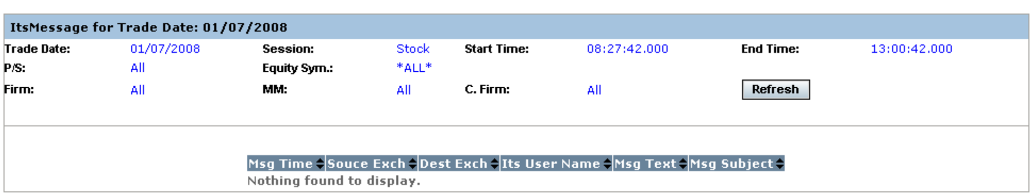
- Choose the time of your request as near real time by selecting the **Near Real Time** radio button. If you would like to select a fixed time range, deselect the **Near Real Time Monitoring** radio button. Enter the **Start Time** and **End Time** by, hour:minutes:seconds:milliseconds (i.e. Start Time: 10:48:00:000, End Time: 13:55:00:000).
- Select the Stock (underlying) product.

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



- To further filter your request, select to retrieve **Orders**, **Quotes**, **Trades**, **Market Conditions**, **ITS Admin Messages** or **Alerts**. Select **ITS Admin Messages**.

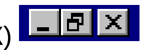
- To save the query results to an Excel or PDF format, select either format from the **Export To**: drop down list. For export details, refer to the Exporting Data section, page 76.
- If you are satisfied with your selections and would like to view the data, click **Retrieve**. The **ITS Message** window will display with the requested data.



In the example above, there were no ITS administrative messages delivered on 1/07/08 from 08:27:42 through 13:00:42.

Ending a Market Replay Session

Exit the System

To exit the Market Replay system, click the right button (**X**)  in the upper right corner of the window. The application will be closed and you will be returned to your system desktop.

Section 2:
Reference Guide

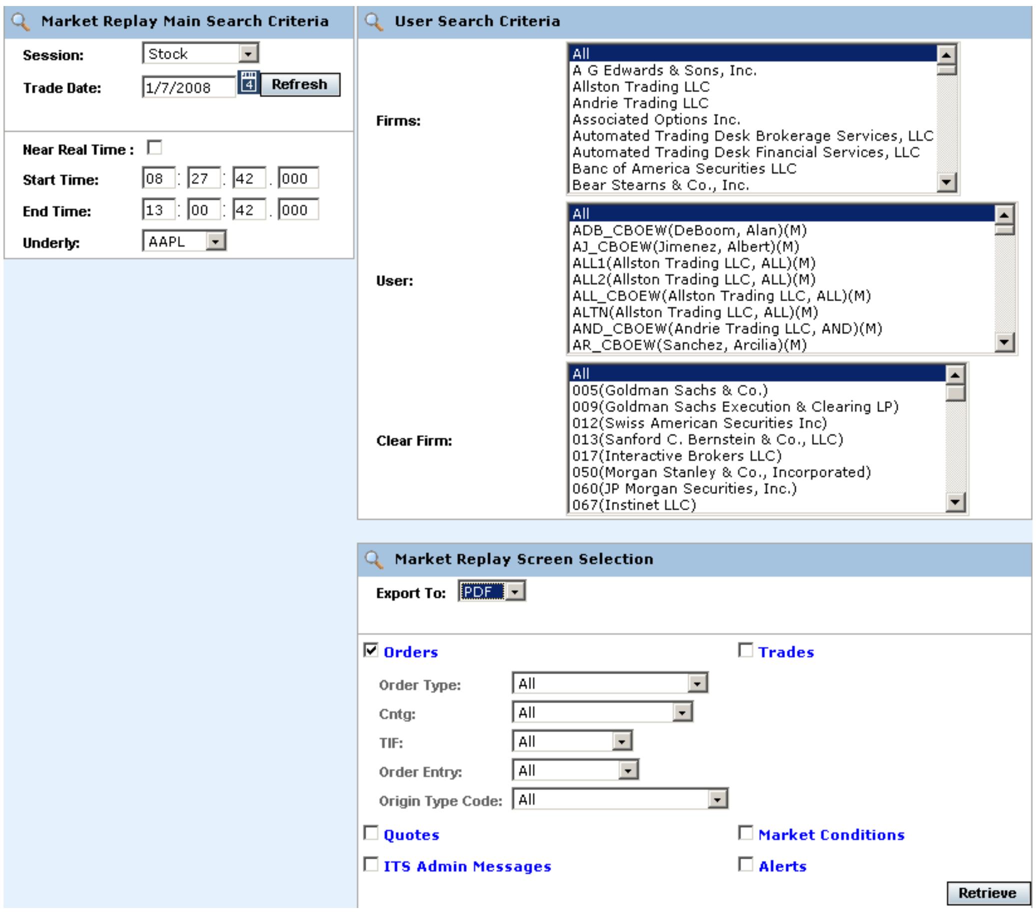
Exporting Data

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

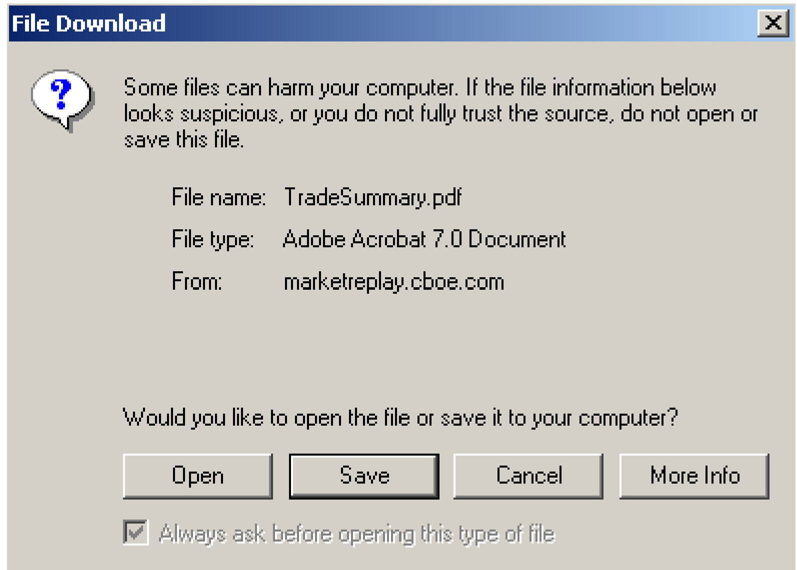
Export to PDF Format

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

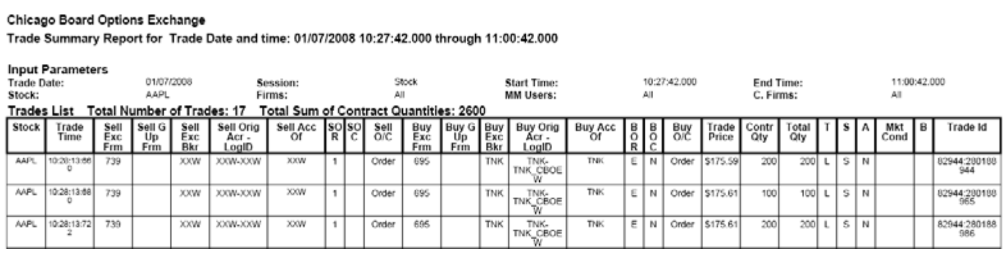
To export your query results to PDF format, select your Main Search Critiera, User Search Criteria and Screen Selection.



- 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

Trade Summary Report for Trade Date and time: 01/07/2008 10:27:42.000 through 11:00:42.000

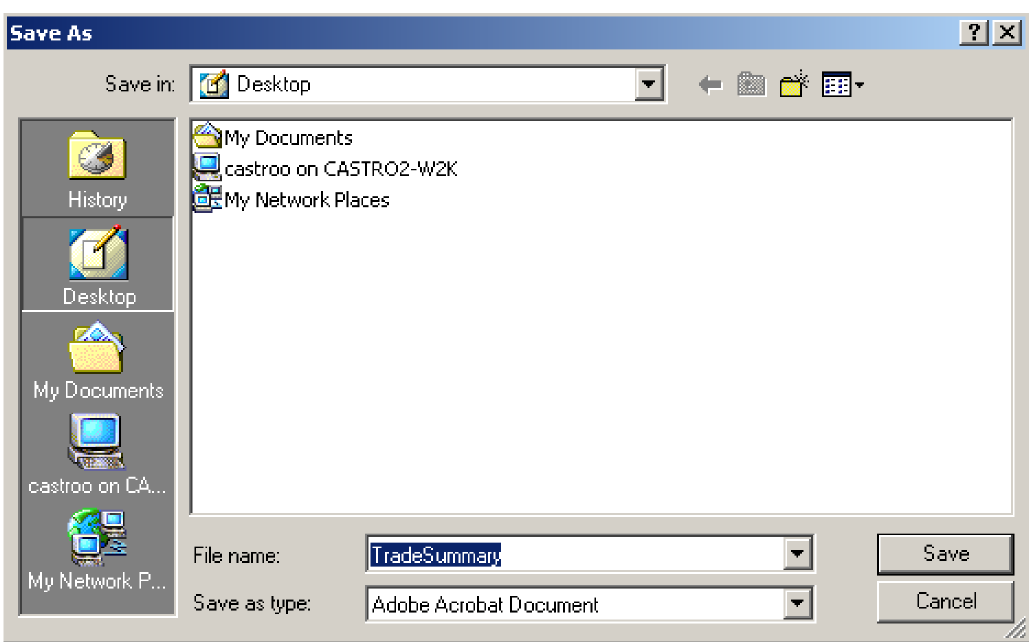
Input Parameters

Trade Date:	01/07/2008	Session:	Stock	Start Time:	10:27:42.000	End Time:	11:00:42.000
Stock:	AAPL	Firms:	All	MM Users:	All	C. Firms:	All

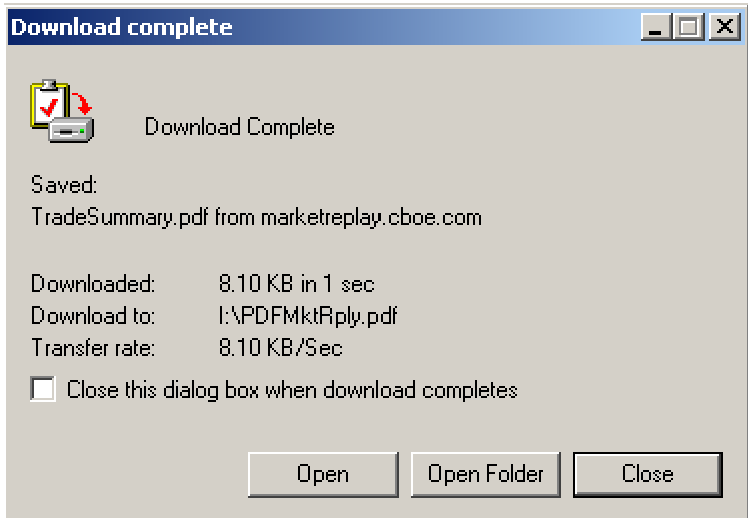
Trades List Total Number of Trades: 17 Total Sum of Contract Quantities: 2600

Stock	Trade Time	Sell Exc Frm	Sell G Up Frm	Sell Exc Bkr	Sell Orig Acr - LogID	Sell Acc Of	SO R	SO C	Sell O/C	Buy Exc Frm	Buy G Up Frm	Buy Exc Bkr	Buy Orig Acr - LogID	Buy Acc Of	B O R	B O C	Buy O/C	Trade Price	Contr Qty	Total Qty	T	S	A	Mkt Cond	B	Trade Id
AAPL	10:28:13:660	739		XXW	XXW-XXW	XXW	1		Order	695		TNK	TNK-TNK_CBOEW	TNK	E	N	Order	$175.59	200	200	L	S	N			82944:280188944
AAPL	10:28:13:680	739		XXW	XXW-XXW	XXW	1		Order	695		TNK	TNK-TNK_CBOEW	TNK	E	N	Order	$175.61	100	100	L	S	N			82944:280188965
AAPL	10:28:13:722	739		XXW	XXW-XXW	XXW	1		Order	695		TNK	TNK-TNK_CBOEW	TNK	E	N	Order	$175.61	200	200	L	S	N			82944:280188986

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



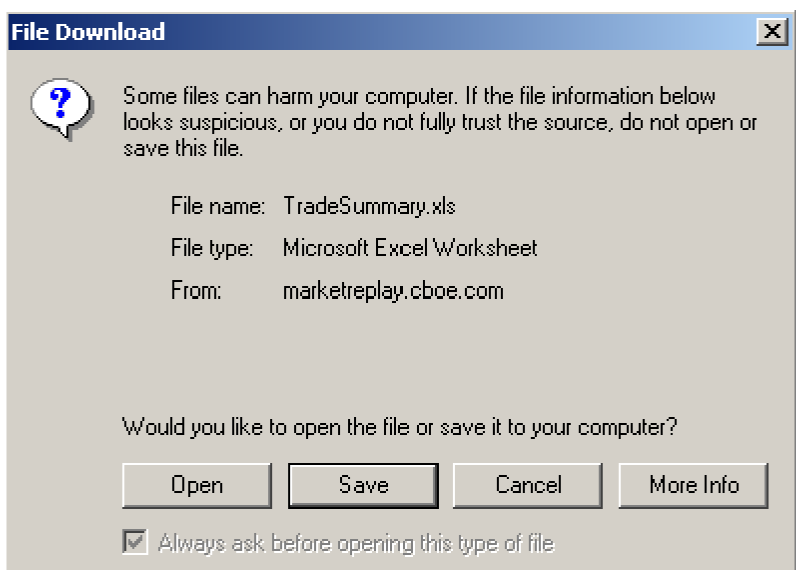
- Select the location where you want to save the file and enter the file name. If you wish to exit the window without saving the file, click **Cancel**.
- Click **Save**. Your file will be saved in PDF format. The system will display the **Download complete** window.



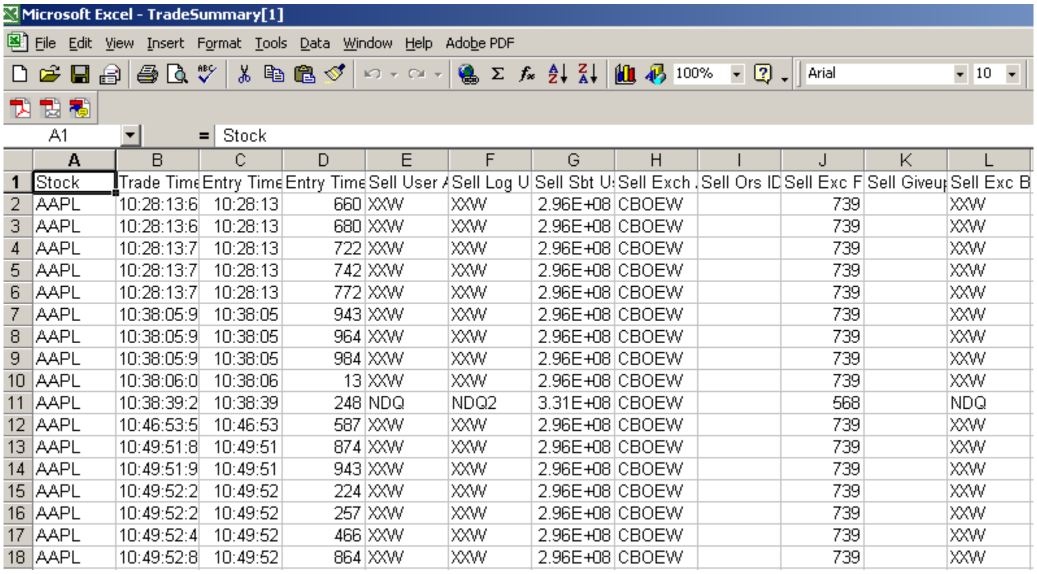
- Click **Open** to extract the data in PDF format, or select **Open Folder** to choose the file from the Windows directory.
- Click **Close** to exit the window without opening the PDF file.

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**.

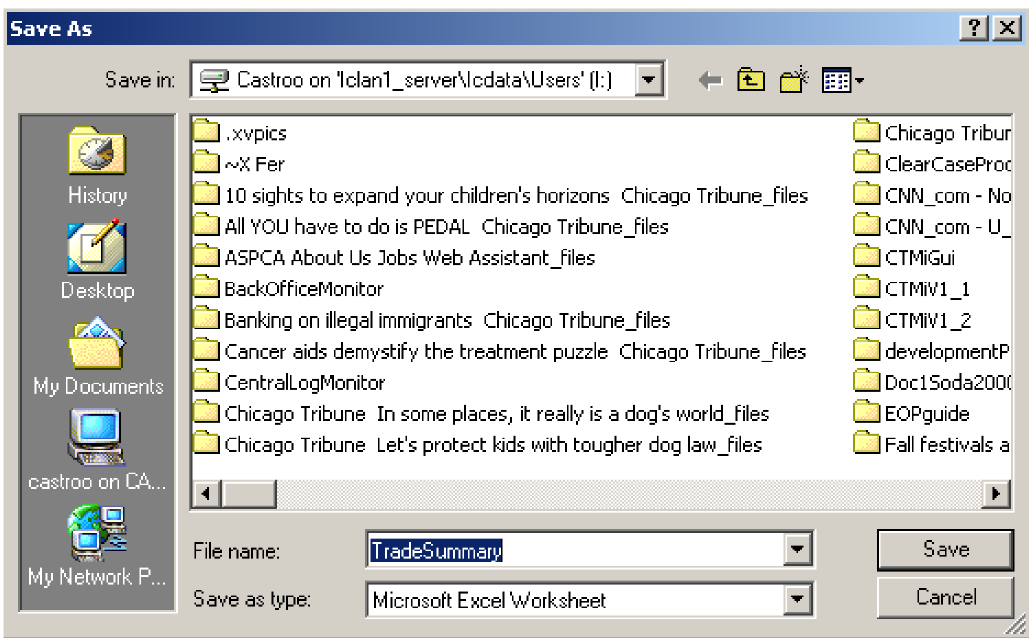


- To quickly view the data in Excel format, click **Open**. The data will be exported to Excel.

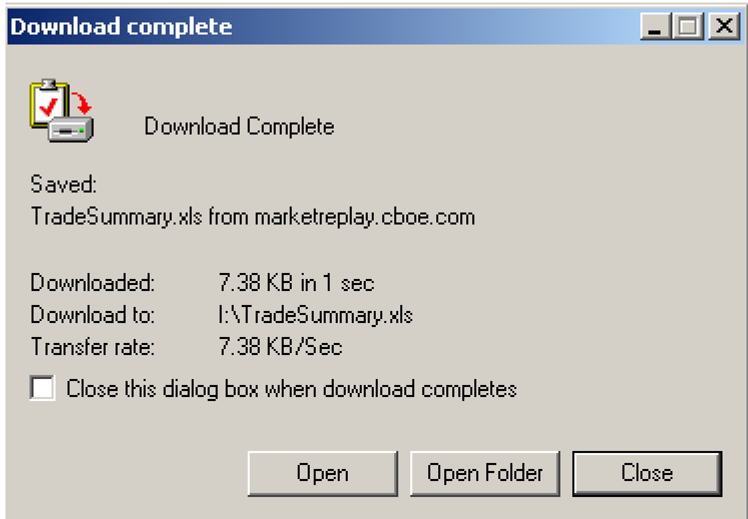


	A	B	C	D	E	F	G	H	I	J	K	L
1	Stock	Trade Time	Entry Time	Entry Time	Sell User /	Sell Log U	Sell Sbt U	Sell Exch .	Sell Ors ID	Sell Exc F	Sell Giveup	Sell Exc B
2	AAPL	10:28:13:6	10:28:13	660	XXW	XXW	2.96E+08	CBOEW		739		XXW
3	AAPL	10:28:13:6	10:28:13	680	XXW	XXW	2.96E+08	CBOEW		739		XXW
4	AAPL	10:28:13:7	10:28:13	722	XXW	XXW	2.96E+08	CBOEW		739		XXW
5	AAPL	10:28:13:7	10:28:13	742	XXW	XXW	2.96E+08	CBOEW		739		XXW
6	AAPL	10:28:13:7	10:28:13	772	XXW	XXW	2.96E+08	CBOEW		739		XXW
7	AAPL	10:38:05:9	10:38:05	943	XXW	XXW	2.96E+08	CBOEW		739		XXW
8	AAPL	10:38:05:9	10:38:05	964	XXW	XXW	2.96E+08	CBOEW		739		XXW
9	AAPL	10:38:05:9	10:38:05	984	XXW	XXW	2.96E+08	CBOEW		739		XXW
10	AAPL	10:38:06:0	10:38:06	13	XXW	XXW	2.96E+08	CBOEW		739		XXW
11	AAPL	10:38:39:2	10:38:39	248	NDQ	NDQ2	3.31E+08	CBOEW		568		NDQ
12	AAPL	10:46:53:5	10:46:53	587	XXW	XXW	2.96E+08	CBOEW		739		XXW
13	AAPL	10:49:51:8	10:49:51	874	XXW	XXW	2.96E+08	CBOEW		739		XXW
14	AAPL	10:49:51:9	10:49:51	943	XXW	XXW	2.96E+08	CBOEW		739		XXW
15	AAPL	10:49:52:2	10:49:52	224	XXW	XXW	2.96E+08	CBOEW		739		XXW
16	AAPL	10:49:52:2	10:49:52	257	XXW	XXW	2.96E+08	CBOEW		739		XXW
17	AAPL	10:49:52:4	10:49:52	466	XXW	XXW	2.96E+08	CBOEW		739		XXW
18	AAPL	10:49:52:8	10:49:52	864	XXW	XXW	2.96E+08	CBOEW		739		XXW

- 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.