BookMap

User Guide

Introduction

BookMap is an innovative analysis and trading application that delivers a consolidated visualization of past and present market depth using a configurable gray scale heat map. BookMap keeps record of the order book activity over time and displays it to the trader together with current market depth. The visualization of the evolving order book activity givesthe trader an enhanced ability toanalyze market dynamics and patterns as well as assessing the perpetual strength and weakness of different price levels. BookMap allows the trader to quickly translate market analysis into trading actions with one click trading capability directly from the BookMap chart.

1. SystemRequirements

   The following hardware and software specifications are the minimal requirements for installing and using BookMap:

   a) Windows 7, Vista, 2000 or XP.
   b) Monitor with minimum resolution of 1024x768
   c) Minimum of 3Gigabytes RAM and 40 Megabytes free disk space.
   d) Intel Core 2 DUO (or equivalent), 2.0 GHz or above
   e) Stable internet connection. Minimal speed 1Mb/sec
   f) A mouse with a middle button is required for one-click trading.

2. User manual

   BookMapis installed with live and replay (offline) modes. The live mode presents real-time market data transmitted from Trading Technologies X_Trader Pro. It also allows transmission of orders to X_Trader Pro through one-click order placement directly from the BookMap chart.The replay mode allows traders to replay recorded trading sessions and view the evolution of the order book over the entire session. Traders can place and execute simulated orders to verify how theirtrading decisions and strategies fit theiranalysis of the market based on BookMap insights. Unlike the live mode, BookMap Replay is independent of any trading platform and runs as a standalone application

RunningBookMap Live

a.) Before launching BookMap Live make sure your X_Trader Pro is up and running.

b.) Open BookMap Live. This will open the BookMap Live control window.
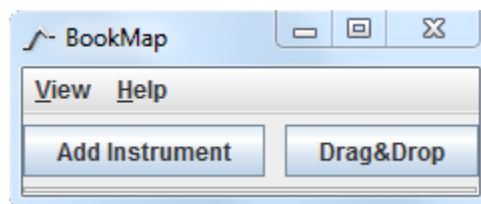
c.) There are two ways to add instruments to BookMap display. Click Add Instrument and type the details of the exchange and instrument of your choice. Note that these details must match those used by X_Trader Pro so it can identify the request. Aletrnatively, click Drag&Drop. This will open a new window which serves as a pad to drag and drop symbols from X_Trader Pro Market Explorer.
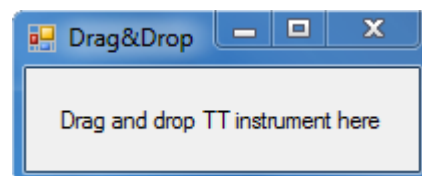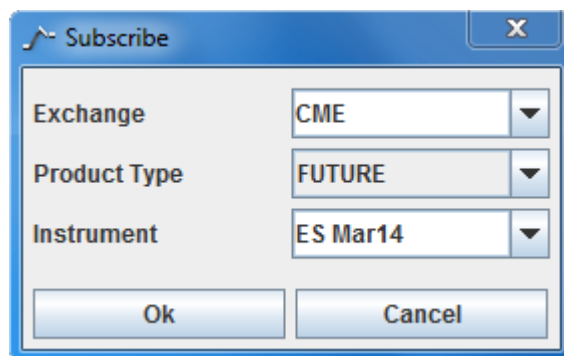
d.) After adding the details of the desired symbols in the subscribe window (or dragging and dropping the symbols from the Market Explorer),the selected symbols will be added to the BookMap live control window. Initially they will be displayed as a grayed out button but will turn active once new data is transmitted from X_Trader Pro. Once active, click the symbols button to open the relevant BookMapcharts.
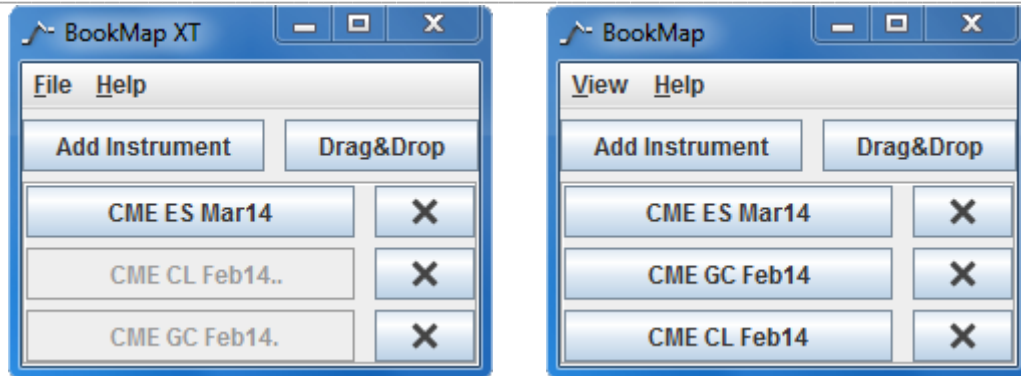
Bookmap Live

*General Orientation:*

Bookmap Live has several distinctive elements:

a) The blue and green bars on the far right side represent the volume of executed orders at each price level accumulated from the start of the session. The blue and green colors represent the relative size of executed orders by each group of aggressors. Blue represents buyers were the aggressors and green represents sellers were the aggressors. This can help traders assess which aggressors had more power at the relevant price level since the start of the session.

The volume bars can be reset to restart accumulating executed orders. This can be done either manually or automatically at a preset frequency. To reset the volume bars, place the mouse cursor over the volume bars area and right click to choose from either a manual reset or automatic reset settings.

[*See illustration in the next page*]
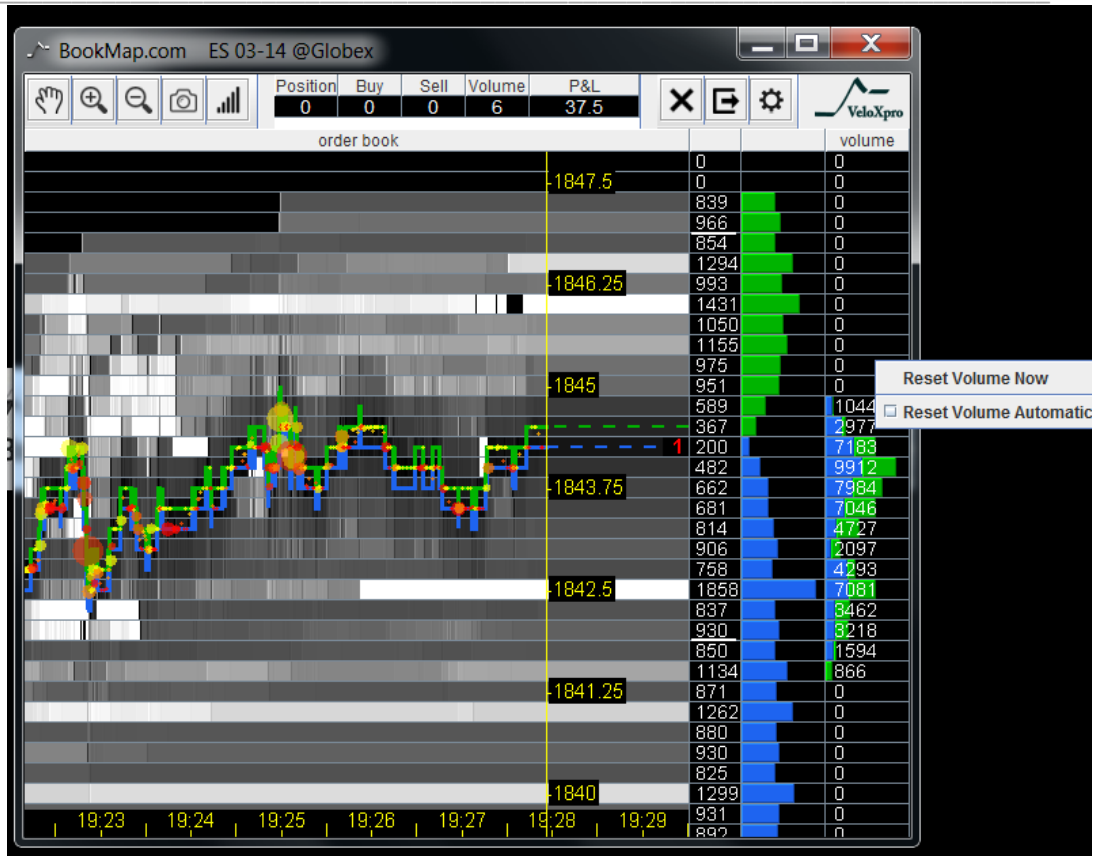
b) The green and blue bars to the left of the volume bars represent the size of the current bid (blue) and ask (green) orders at each price level.

c) The green and blue lines on the left side of the chart represent the best bid and ask prices.

d) The color shadesof the various price levels represent the evolution of the order book during the session. BookMap keeps the history of the order book size at each price level with a matching color code. The brighter the color the larger the order book size at that price level. The color shades settings are configurable, as explained below.

When a price level goes out of the range transmitted by the exchange (for example CME transmits only the best 10 levels of bid and ask) BookMap keeps record of its last transmitted size and updates it once the level returns to the transmitted range. This allows traders to estimate market depth even beyond the exchange transmitted range.

e) The progressing yellow vertical line represents current time. The area left of the vertical line representshistorical price changes and order book size. The area to the right of the yellow line is an extended picture of the current price and order book size.
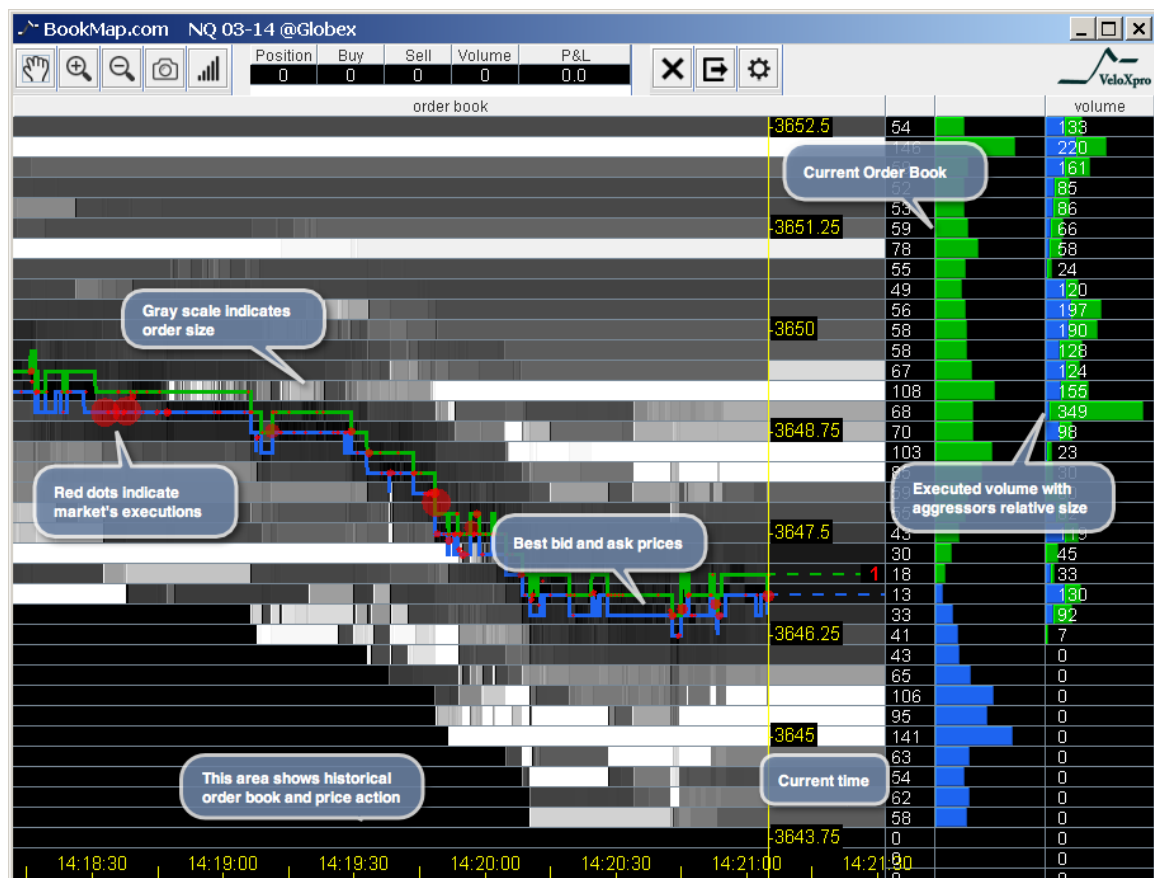
BookMap Chart

Placing Orders:

Every time the BookMapchartopens the one-click trading feature is disabled. To enable one

click trading click the ⚙ icon above the chart for trading configurations. This will open a new window. Check **Enable One-Click Trading** and specify the number of contracts per click (order size). Once One-Click Trading is enabled follow the instruction below to place or cancel orders:

a) To place a **Buy Limit**order, click the left mouse button below the current bid at the desired price level. Note that clicking the left mouse button at or above the current ask will result in a buy at current market price.

b) To place a **Sell Limit**order click the right mouse button above the current ask at the desired price level. Note that clicking the right mouse button at or below the current bid will result in a sell at market price.

c) A single mouse click places an order for the number of contracts specified by the trader in the trading configuration.Each additional mouse click will add another order for a similar number of contracts.

d) To cancel pending orders place the mouse pointer over the relevant price level and click the middle mouse button.

e) To delete all of the pending orders at a certain price level place the mouse pointer over the relevant price level and press CTRL + click the middle mouse button.

f) To cancel all pending orders click the ✖icon above the chart.

g) To exit all open positions click the ➡ icon above the chart.

Order Status:

a) Cyan circle marks the placement of a buy order. Cyan line extends from the circle until the order is either filled or cancelled. A filed buy order is marked by cyan square.

b) Magenta circle marks the placement of a sell order. Magenta line extends from the circle until the order is either filled or cancelled. A filed buy order is marked by magenta square.

c) It is possible to define what type of order information will be displayed on the chart. By default pending orders, cancelled orders, and executions are all presented on the chart.

To change the default settings click the ⚙ icon for trading configurations and uncheck the relevant information.

d) The pending orders and open positions are also designated by counters above the chart.

e) P&L is indicated above the chart. The P&L is asummation of both the realized and unrealized P&L during the session.

f) Orders generated for s specific instrument directly fromX_Trader Pro will also be displayed and updated on the BookMap chart opened for the same instrument.

[See illustration in the next Page]

Bookmap Live with pending, cancelled and executed orders

Approximation of Order Queue:

BookMap can display an approximation of the position of the trader's order in the queue of all pending orders at the relevant price level. BookMap approximates the position in the queue according to FIFO matching algorithm, using a more pessimisticscenario assumptions relating to cancelled orders. The ability to display a more accurate position in the queue ultimately depends on the quality of data that is available for distribution on the trading platform.

BookMap presents queue approximation with white vertical lines on top of the current order book histogram. The place in the queue is illustrated by the position of the line over the bar representing the current size of pending order at any given price level.

In order to activate the presentation of queue approximation, click the ⚙ icon for trading configurationand check Orders queue.

Trades Visualization:

BookMap can display a graphical representation of all trades (i.e. of all market participants) that took place during the session for the displayed instrument. BookMap draws varying sizes of red or yellow circles over the best bid and ask line. The circles are drawn with precision of a single pixel of your monitor. The area of the circle represents total executed volume. This size is scaled to create reasonable range of circles per each instrument's volume. The center of the circle represents the exact time and the volume weighted average price of all trades that occurred at given pixel (if occurred). According to the location of the circles on the price axis and the red-to-yellow color gradient used, users can identify whether the traded volume was initiated by buyer(s) or by seller(s).The redder the color of the circle, the greater the selling activity at that price and time. The yellower the color of the circles, the greater the buying activity at that price and time.

To activate trades visualization, click the ⚙ icon for trading configuration and check Market's trades

Chart contrast and other Settings:

a) BookMap automatically sets the contrast of the chart heat map based on the maximum size on the order book and the distribution of pending prders at the different price levels.

Users can control when BookMap recalibrates the heat map contrast. It can be set at predefined frequencies and at every time the chart is recentered. To control these setting, click the contrast icon above the chart and check the recalibration options you want to use.

User can also control the brightness of the display by using the slider on the contrast settings window.
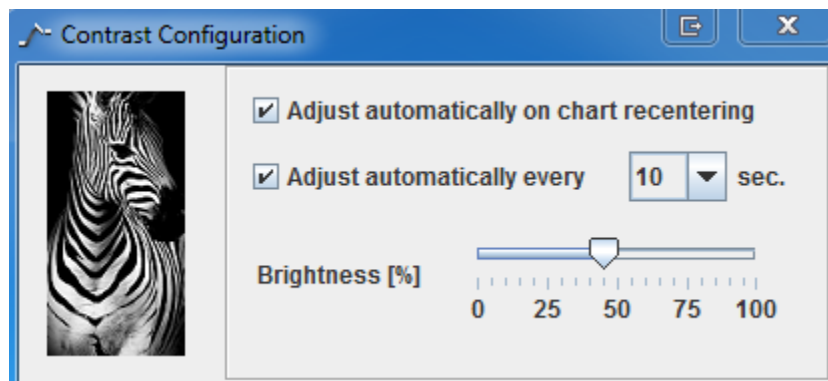
BookMap Contrast Configuration

b) For a zoomed in and out view of the chart click the ⊕ and ⊖ icons above the chart.

c) Use the 🖐 icon above the chart to scroll the chart sideways. Note that while thehand icon is pressed BookMap will keep the presentation anchored to the area chosen by the trader. While in scrolling mode the chart can be zoomed in and out while anchoring to the middle point of the current chart view. Zooming in and out in scrolling mode can be done wither with the zoom in and out icons or with mouse scrolling. In order to switch back to current time unclick the hand icon.

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BookMap Replay

BookMap Replay enables to replay pre-recorded market data and place order in simulation mode during the replayed session. Except for playing non-real time data, the chart in the BookMap replay mode has the same features as in the live mode BookMap live

Running BookMap Replay:

a.) Open BookMap Replay. This will open BookMap Replay control window.
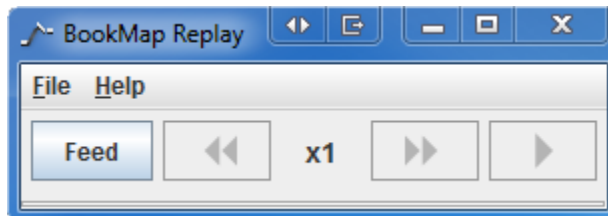
e.) In the control windowclick "Feed". This will open a new window. Choose one of the text feed files and click "Open". Each feed file represents a prerecorded trading sessions.
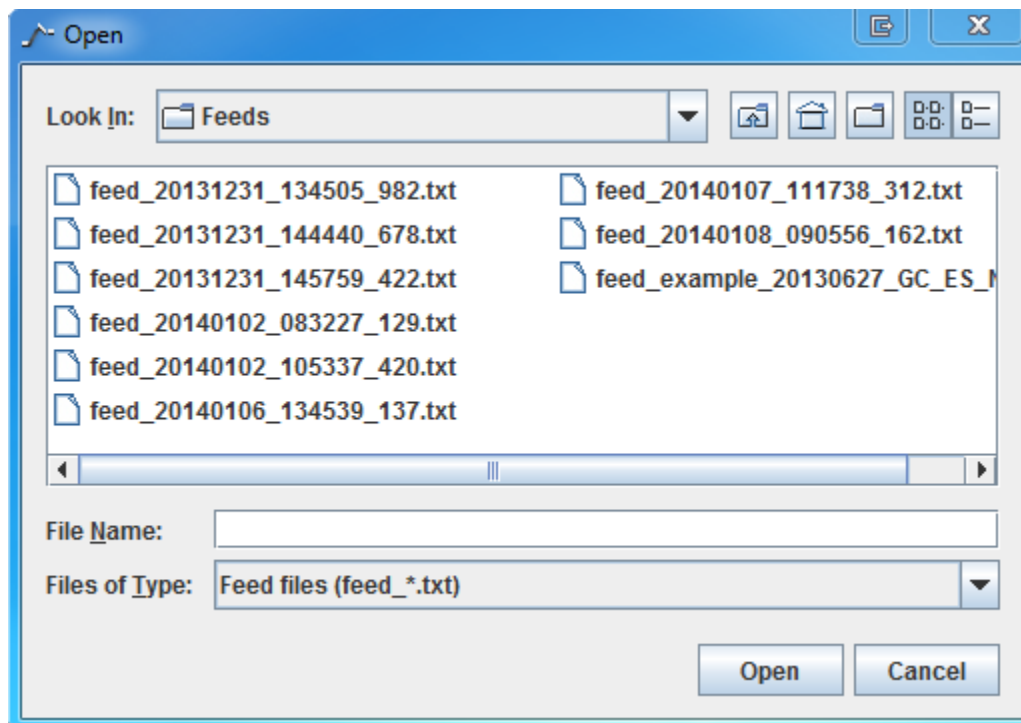
f.) The recorded instruments will now load. They will initially be displayed as grayed out buttons and will turn active once information is fully loaded.
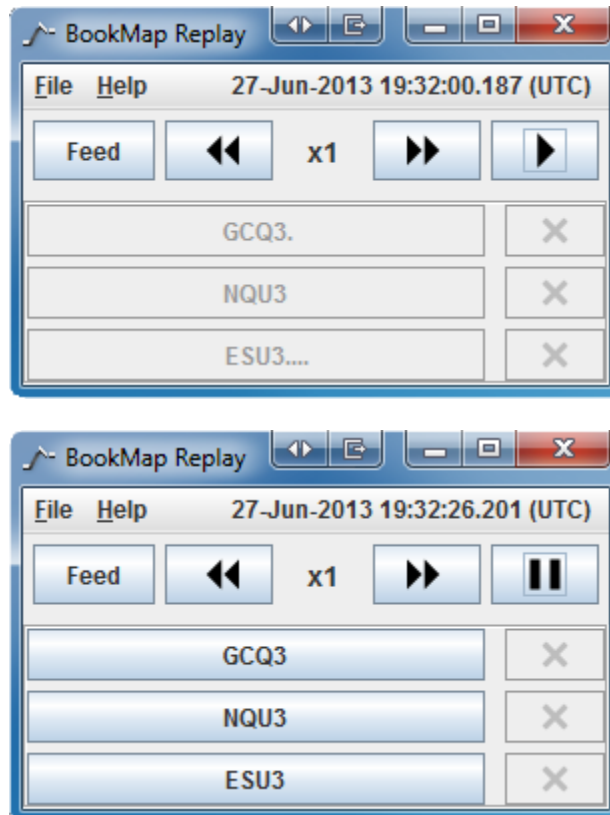
g.) You are now ready to replay the recorded session. Click any of the recorded instruments button to open BookMap Replay chart window. Note that once the recorder instruments are loaded their respective market data is replayed automatically even if the chart is not open. You can view the date and time progression above the instruments symbols on the BookMap replay control window. Click any of the active symbol buttons to open BookMap chart.

h.) To pause and for faster or slower replay speed, use the controllers above the BookMap chart.