VELA

DEPTH FINDER WIDGET

User Guide

August 2015

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Purpose

The goal of this document is to serve as a manual and walk the user through the features of the depth finder widget. This document should serve as a guide for training any new user.

Business Logic Overview

The purpose of this widget is to help traders track the current book depth for all their placed orders. Traders can use the widget to see what their initial position was in the book, see how much progress they have made in the queue and track where they are currently placed.

The backend job records and updates order data in the following scenarios:

- Order is booked: the order is now being tracked (it will show up in the depth finder table with the correct filters) and its original book depth is recorded
- Tracked order is updated but still not filled: the order depth is recalculated, and the current depth is updated
- Another order was filled at the same price as the order: new current order depth = old current order depth - trade quantity
- Update to the market data for that instrument: when this happens, the job pulls the current book depth at that price, compares it to the original order depth that was recorded and updates it with the min (orig order depth, current book depth)
- Order status is filled, partial or cancelled: the order is removed from the list of tracked orders

Deliverables

Name	Description
DepthFinderWidget	The widget that launches from Metro and will serve as the main user interface for the application.
DepthFinder	This is the backend logic. This job must be running to provide data to the DepthFinderWidget.

Configuration and Setup

In order to use the Depth Finder Widget, the user must first add it to Metro. This is done by clicking on the inventory manager:

Once in the inventory manager the user will see the Depth Finder Widget. The user should check the toolbar box and click add widget.

There will now be a new icon to the right of the inventory manager. Click it to launch the widget.

Widget GUI Definitions

Label	Description
Symbol	List of active symbols that the user can filter on
Type	List of product types that the user trades
Expiry	Expiration Month of the instrument
Strike Price	Field that takes the desired strike price that the user wants to filter on
Max Legs	Field that takes the maximum legs for an option strategy
Strategy	Field that takes the strategy name for an option strategy
# of matches	Number of instruments that match the current filter
Add Instrument Filter	Button that attempts to add the entered instrument filter
Hide	Hides the filter when its checkbox is selected
Delete	Selects the filter for deletion when its checkbox is selected
Delete Selected Filters	Deletes all selected filters
Order Id	Order Id of this order. E.g.: 143305
CD	Current Depth of the order
OD	Original Depth of the order when placed
DD	Difference in depth (calculated as OD-CD), gives us the progress that the order has made up the queue since being placed
Side	Order side (BUY or SELL)

Label	Description
Qty	Order Quantity
Price	Booked price of the order
Product	Full product name of the instrument of the order

Functional Overview

Adding Instrument Filter Expressions

To begin tracking order depths, the widget allows the user to enter expressions to filter targeted instruments. This can be done using the top left panel in the widget. The user can specify the Symbol, (product) Type, Expiry, Strike Price, and (for Option Strategies) Max Legs and Strategy.

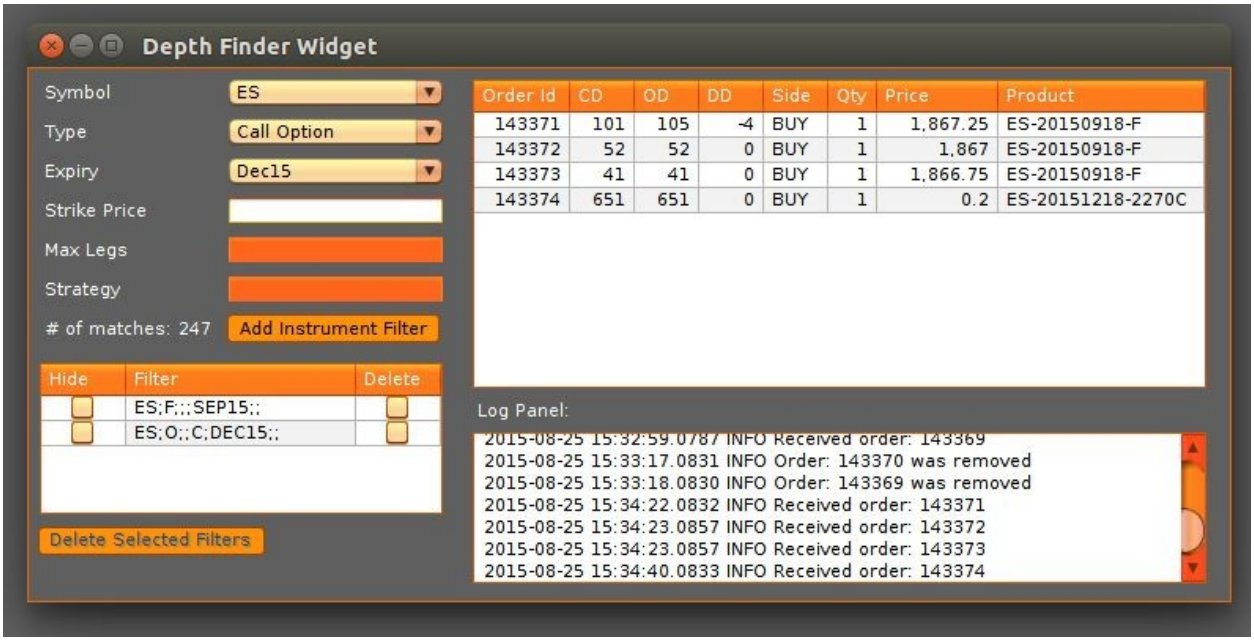

Illustration 1: Filters added with relevant trades being displayed in the table

Once the search parameters have been entered, the user can enter the filter by clicking the "Add Instrument Filter" button. Each time a filter is successfully added, it will show up in the filter table to the bottom left.

Note: Expressions that have already been added or return no instruments are ignored.

Notice the "# of matches" next to the "Add Instrument Filter" button. This shows the count for number of instruments returned by the last entered filter. This number ideally should be low (typically less than 100). This is because the application filters market messages to only those that pertain to the filtered instruments. By entering a loose filter, the application is being forced to listen to an unnecessarily large stream of data.

For example, in the screenshot above the second filter "ES;O;;C;DEC15;;" corresponds to all the call options for the symbol ES for December 2015. This filter could be improved by adding a strike price and then adding the filter.

Deleting Instrument Filters

To remove a filter, the user can select the Delete checkbox next to the filter they want deleted.

When one or more filters have been selected to be deleted, the “Delete Selected Filters” button at the far bottom left will be “clickable”. On clicking the button, the selected filters will be removed and any orders that correspond to that filter will also be removed from the order depth table to the right.

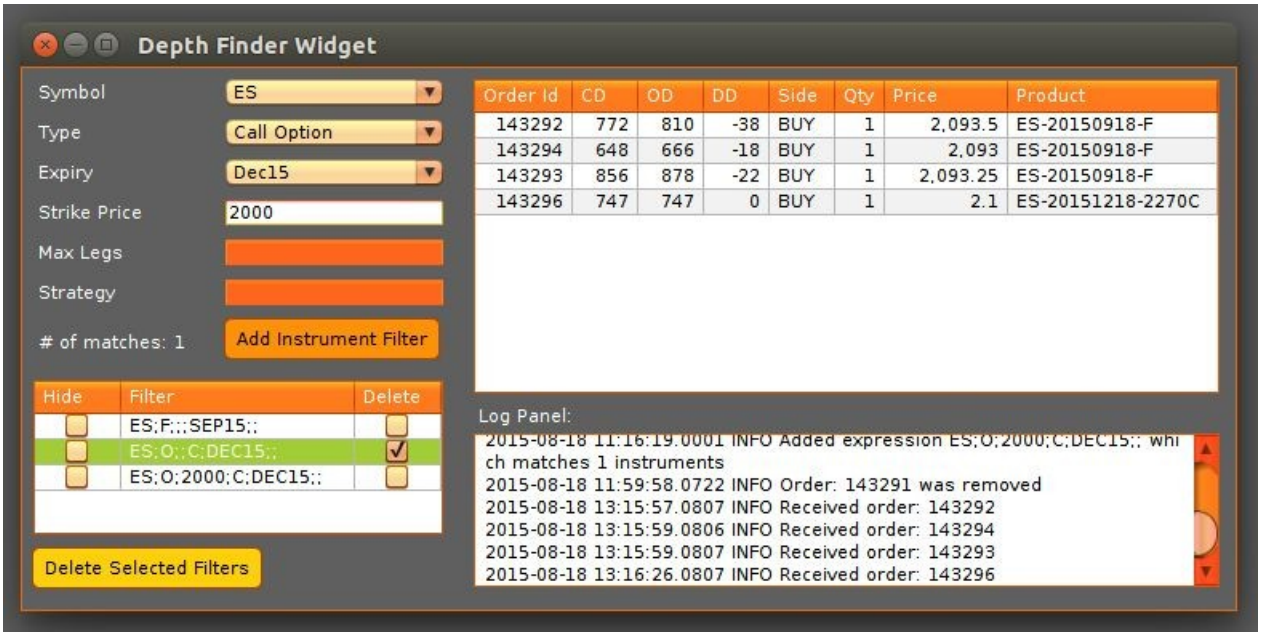

Illustration 2: Orders pertaining to ES;O;;C;DEC15;; have been selected for deletion

Note: It is possible for an order to have an instrument that qualifies for more than one filter. In this case, the order will be removed if and only if all filters that include that order's instrument have been removed.

Note: The order in which filters are added/deleted relative to the orders has no effect on how they are displayed, i.e. orders can be placed before or after a filter is added. If these actions are performed after the widget has been launched, it will display data related to all orders placed in that timeframe.

Sorting & Hiding Orders

The table to the right displays the orders that have been placed along with relevant data pertaining to the order. A user can sort orders on any column by clicking the column header (See Illustration 3). Details about the table columns can be found in the GUI definitions section.

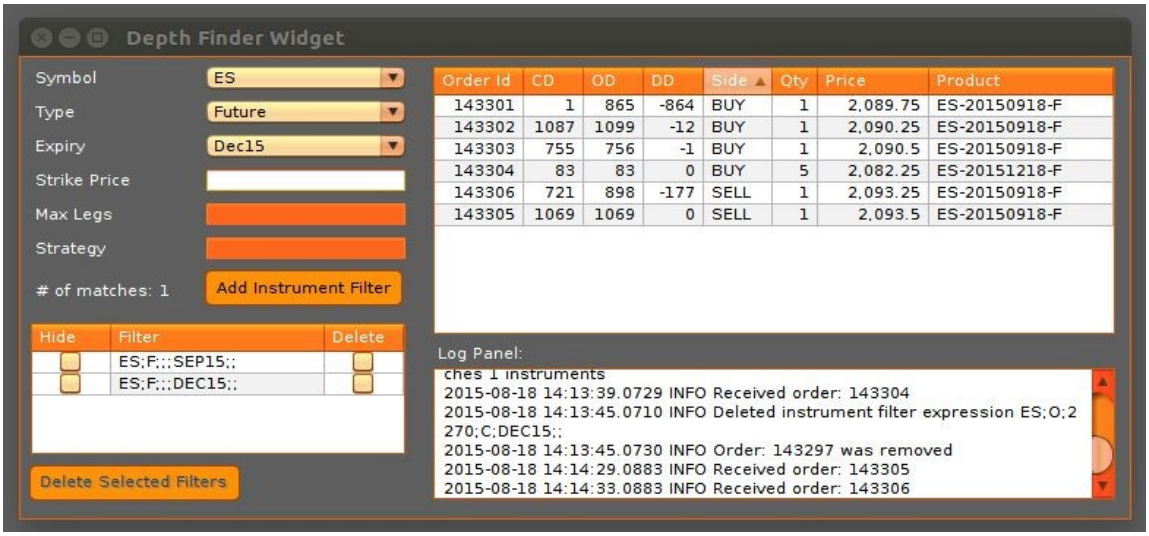

Illustration 3: Orders sorted by Buy/Sell Side

The user also can hide orders for an instrument that is associated with a filter. This can be done by selecting the “Hide” checkbox next to a filter to hide orders that belong to the filter (See Illustration 4). If Hide is unchecked, the orders will show again.

<u>Note:</u> Hiding orders works much like deleting filters, i.e. An order will be hidden if and only if all filters that it qualifies for have been hidden.

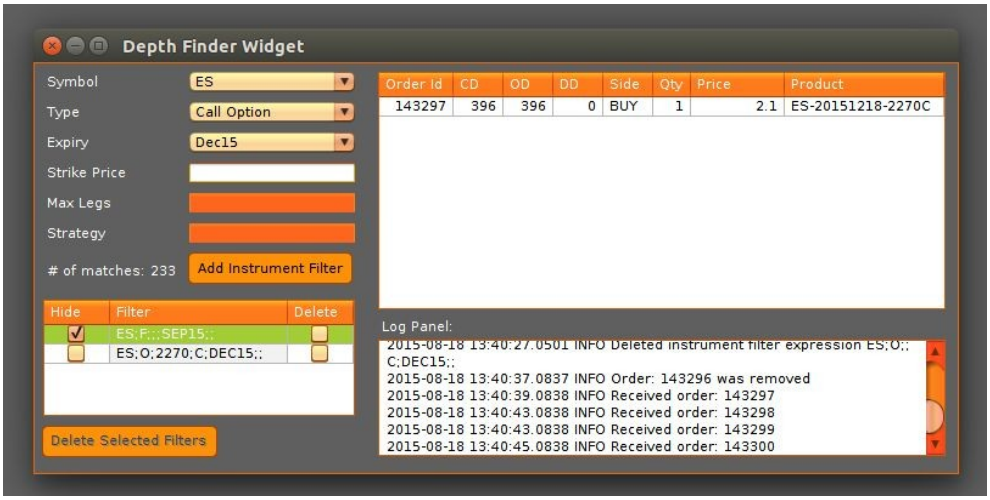

Illustration 4: Orders of ES;F;;;SEP15;; have been hidden. Compare to Ill

Logging Actions

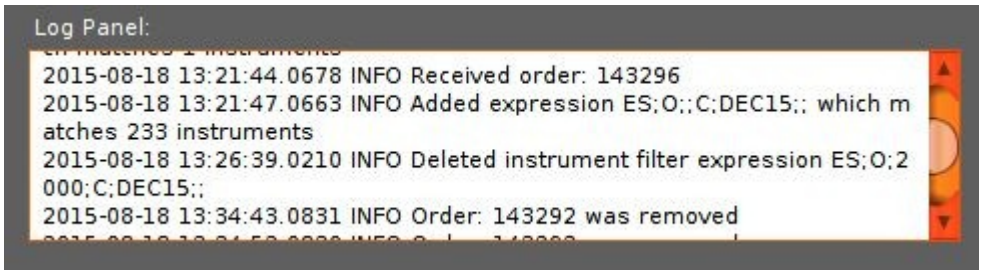

Illustration 5: Log panel displaying timestamped events

The log panel at the bottom right corner logs important events while the application runs, such as:

1. Added expression
2. Expression retrieved no instruments
3. Deleted instrument filter expressions
4. Received order
5. Order was removed

Using Multiple Widgets

A user can also launch multiple instances of the widget if he or she desires. Each widget will still see all the orders he or she is placing since they were launched but each can be configured separately to filter and hide orders as per the user's needs.