



ICE CHAT RECOGNITION

USER GUIDE

01 May 2017

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ICE CHAT RECOGNITION USER GUIDE

1. SUMMARY




ICE Chat offers proprietary message recognition technology which turns market messages into market data. Connect an analytics model to ICE Chat and get instant feedback on buy/sell opportunities.

ICE Chat allows the customization of the message data views; Display the data you want wherever you want.

2. INLINE DISPLAY

Once enabled for recognition, the message views can be set to display analytics and pricing in the message layouts themselves. The following pieces of data will be available as tools, all of which can be added or removed in the message layouts as desired. The data tools can be added in any order via drag and drop functionality.

2.1. AVAILABLE TOOLS

<u>Name</u>	<u>TOOL DISPLAY</u>
Theo Indicator	 Based on preferences for colors.
Open ICE Order Ticket	
ICE Price Indicator	
hh:mm:ss user message	9:46:53 am Scott Besner brent k18 40/45 csprd 3.7/3.9
Theo	3.92
Theo with Color	3.93 3.93
Delta	Δ 7.06
Residual Delta	Res Δ -3.02
Gamma	Γ -0.54
Vega	v -0.043

Theta	Θ 0.002
ICE Bid	B: 3.75
ICE Bid Quantity	BQty: 100
ICE Offer	O: 4.05
ICE Offer Quantity	OQty: 100
Under Price	UnderPr: 53.75
Last Trade	Last Trade: 3.75
Open Pricer	▼
New Line (Line Break)	↵ New Line
Tab	Tab
Reprice	

3. PRICING PREFERENCES

All ICE Chat users can send and receive markets to and from their counterparties. However, to take advantage of the added recognition functionality special permissions are required.

Once permissioned a new menu option, **Pricing**, will be available under **Preferences**.

3.1. PRICING SOURCE

There are currently two selections to get pricing in ICE Chat:

1. **Trade (Application):** sends the analytics and pricing values through from the **Trade** application. These values will come through whether the pricing api or Options Analytics is being used in **Trade**.
2. **Options Analytics (Server):** uses the valuations from ICE Options Analytics

3.2. LAYOUTS

ICE Chat offers full customization of the message layouts once permissioned for recognition. Four predefined layouts are provided. Note that the only portion of the message layout which *cannot* be broken up is the timestamp, sender, and message.

hh:mm:ss pm [Sender](#) message...

3.2.1. BASIC DOCKED

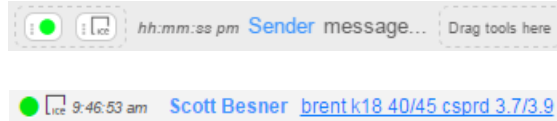
- This layout does not change the current layout of the messages.
- There is no inline data and all analytics and pricing is displayed in the market pricer at the bottom of the consoles.

Drag tools here hh:mm:ss pm [Sender](#) message... Drag tools here

9:41:27 am [Scott Besner](#) [brent k18 40/45 csprd](#)

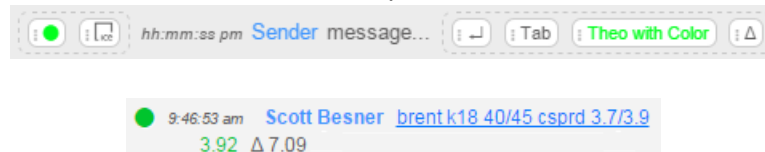
3.2.2. DOCKED

- This layout adds a theo indicator to the left of the message timestamp as well as an ICE indicator when there is a better price on ICE for the same market.
- All analytics and pricing is displayed in the market pricer at the bottom of the consoles.



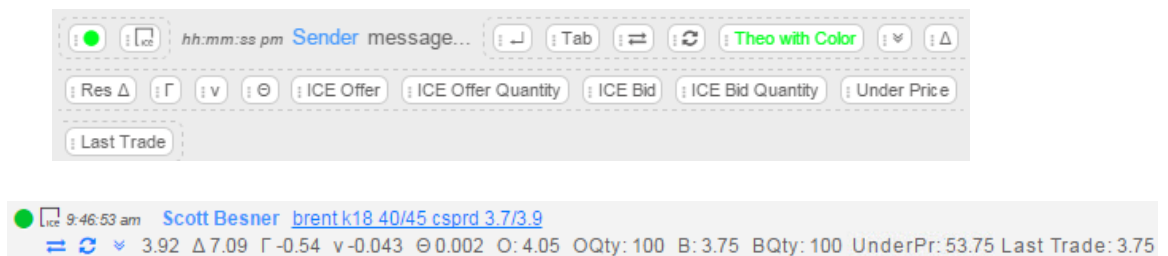
3.2.3. BASIC

- This layout adds a theo indicator to the left of the message timestamp as well as an ICE indicator when there is a better price on ICE for the same market.
- A new line break and a tab space are added after the message, creating a new line for the analytics data.
- On the new line will be a colored theo price and the delta.



3.2.4. ALL TOOLS

- The All Tools layout will add all available tools to the message layout.
- To the left of the message timestamp will be a theo indicator as well as an ICE indicator when there is a better price on ICE for the same market.
- A new line break and a tab space are added after the message, creating a new line for the analytics data.
- On the new line will be all of the available tools.



3.2.5. CUSTOMIZE LAYOUTS

The predefined layouts can be customized as desired by simply dragging and dropping tools into and out of the layout as well as reordering.

All changes are updated and saved dynamically for the layouts.



9:46:53 am Scott Besner brent k18 40/45 csprd 3.7/3.9
3.93 Δ 7.06 Γ -0.54 v -0.043 Θ 0.002

3.2.6. CREATE NEW LAYOUTS

Clicking the “+” button on the Layouts layer provides the ability to create a new blank layout or add any Preset layouts. Likewise, the ability to duplicate the selected layout will be available.

3.2.7. COPY LAYOUTS

By selecting a layout and then clicking on the drop-down arrow, an option to **Copy Layout** is presented. Clicking this will copy the layout. From there, the layout can be customized.

3.2.8. DELETE LAYOUTS

Select the layout to delete and click the Delete button.

3.3. LEFT-CLICK PREFERENCE

For all layouts, there is a preference for the left-click action on a recognized market. **When I left-click on a Recognized Market**,

- **Display Market Pricer** - opens the market pricer in the bottom of the consoles
- **Open in Watch Tab** - selects the market in the Market Watch in **Trade**.

3.4. DISPLAY BUY AND SELL OPPORTUNITIES

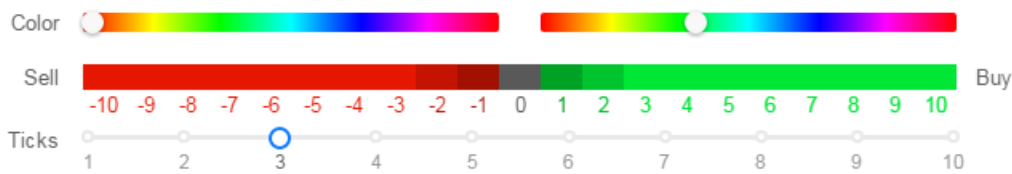
The colors displayed for buy and sell opportunities can be configured as well. This will be under **“Display Preferences when comparing Theo vs Bid/Offer”**.

These colors will affect the **Theo Indicator** tool as well as the **Theo with Color** tool.

- Select the base color for **Sell** and **Buy** opportunities from the respective sliders. The default base colors are red for a sell opportunity and green for a buy opportunity.
- Select the number of ticks to shade the **Theo Indicator** and **Theo with Color** tools by. The default number of ticks is 3.
- Once the selections are made, a preview of the various shadings will be displayed in the color sliders.

Default settings for the preferences:

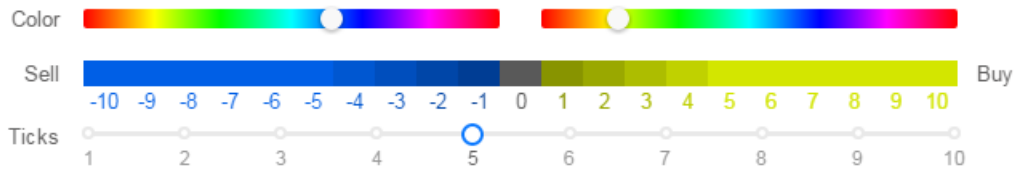
Display Preferences when comparing Theo vs Bid/Offer



9:41:27 am	Scott Besner	brent k18 40/45 csprd	3.93	Δ 7.06	Γ -0.54	v -0.043	Θ 0.002
9:41:56 am	Scott Besner	brent k18 40/45 csprd 3.7/4.1	3.93	Δ 7.06	Γ -0.54	v -0.043	Θ 0.002
9:44:33 am	Scott Besner	brent k18 40/45 csprd 3.7/4.1	3.93	Δ 7.06	Γ -0.54	v -0.043	Θ 0.002
9:45:57 am	Scott Besner	brent k18 40/45 csprd 3.9/4.1	3.93	Δ 7.06	Γ -0.54	v -0.043	Θ 0.002
9:46:10 am	Scott Besner	brent k18 40/45 csprd 3.95/4.1	3.93	Δ 7.06	Γ -0.54	v -0.043	Θ 0.002
9:46:53 am	Scott Besner	brent k18 40/45 csprd 3.7/3.9	3.93	Δ 7.06	Γ -0.54	v -0.043	Θ 0.002
10:04:56 am	Scott Besner	brent Jun17 54.50/55.00 callspread vs 54.63 10d offer .28	0.23	Δ 6.25	Γ 6.16	v 0.004	Θ -0.007
10:05:25 am	Scott Besner	brent Jun17 54.50/55.00 callspread vs 54.63 10d .24/28	0.23	Δ 6.25	Γ 6.16	v 0.004	Θ -0.007
10:05:39 am	Scott Besner	brent Jun17 54.50/55.00 callspread vs 54.63 10d .25/28	0.23	Δ 6.25	Γ 6.16	v 0.004	Θ -0.007
10:05:45 am	Scott Besner	brent Jun17 54.50/55.00 callspread vs 54.63 10d .26/28	0.23	Δ 6.25	Γ 6.16	v 0.004	Θ -0.007
10:06:10 am	Scott Besner	brent Jun17 54.50/55.00 callspread vs 54.63 10d offer .22	0.23	Δ 6.25	Γ 6.16	v 0.004	Θ -0.007
10:06:16 am	Scott Besner	brent Jun17 54.50/55.00 callspread vs 54.63 10d offer .21	0.23	Δ 6.25	Γ 6.16	v 0.004	Θ -0.007
10:06:19 am	Scott Besner	brent Jun17 54.50/55.00 callspread vs 54.63 10d offer .20	0.23	Δ 6.25	Γ 6.16	v 0.004	Θ -0.007

Customized settings for the preferences:

Display Preferences when comparing Theo vs Bid/Offer

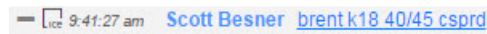


9:41:27 am	Scott Besner	brent k18 40/45 csprd
9:41:56 am	Scott Besner	brent k18 40/45 csprd 3.7/4.1
9:44:33 am	Scott Besner	brent k18 40/45 csprd 3.7/4.1
9:45:57 am	Scott Besner	brent k18 40/45 csprd 3.9/4.1
9:46:10 am	Scott Besner	brent k18 40/45 csprd 3.95/4.1
9:46:53 am	Scott Besner	brent k18 40/45 csprd 3.7/3.9
10:04:56 am	Scott Besner	brent Jun17 54.50/55.00 callspread vs 54.63 10d offer .28
10:05:25 am	Scott Besner	brent Jun17 54.50/55.00 callspread vs 54.63 10d .24/28
10:05:39 am	Scott Besner	brent Jun17 54.50/55.00 callspread vs 54.63 10d .25/28
10:05:45 am	Scott Besner	brent Jun17 54.50/55.00 callspread vs 54.63 10d .26/28
10:06:10 am	Scott Besner	brent Jun17 54.50/55.00 callspread vs 54.63 10d offer .22
10:06:16 am	Scott Besner	brent Jun17 54.50/55.00 callspread vs 54.63 10d offer .21
10:06:19 am	Scott Besner	brent Jun17 54.50/55.00 callspread vs 54.63 10d offer .20

3.4.1. THEO INDICATOR

The Theo Indicator tool will display as a colored circle displaying when there is a buy/sell opportunity, based on the preference settings, when there are prices sent/received on the IM markets. Should there be no buy/sell opportunity the neutral indicator is a gray circle.

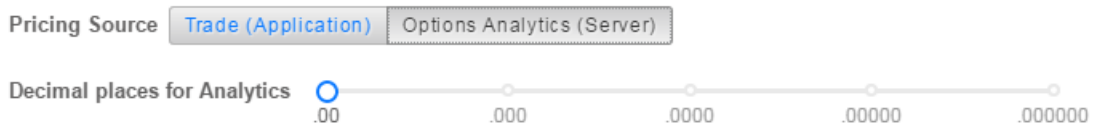
If no prices are included on the IM markets or a market was reloaded the Theo Indicator tool will display as a dash, clearly indicating there was no price to check against the model.



3.5. DECIMAL PLACES FOR ANALYTICS

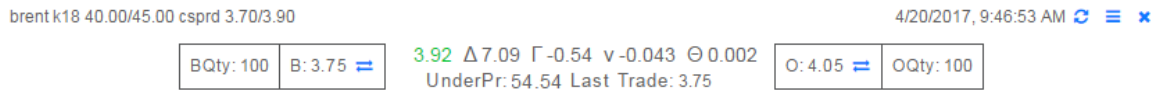
If the Pricing Source is set to Trade (Application) the decimal places will be displayed as they are set within the Trade application.

If the Pricing Source is set to Options Analytics (Server) there is a slider to select how many decimal places to display the analytics.



4. MARKET PRICER

The market pricer is available on the bottom of the consoles and can be displayed based upon the left-click preference being set to **Display Market Pricer** or by adding the **Open Pricer** tool into any views and clicking that.



4.1. DATA

The layout of the market pricer is not customizable and contains the following information.

In the top left of the market pricer will be the ICE Chat standardized string for the recognized market. This will show confirmation of what was actually recognized and constructed by the ICE Chat recognition engine.

In the top right of the market pricer will be the timestamp of the message along with a **Reprice** tool, an action menu, and ability to close the pricer itself.

BQty, B, O, and OQty: These four fields represent the ICE screen prices for the same market if available. The Bid and Offer fields will have the **Open ICE Order Ticket** tool to quickly allow for order entry on the Trade application.

Theo with Color tool will display the theo returned from the pricing source colored if a potential buy or sell opportunity is there based on the preferences.

Delta [Residual Delta], Gamma, Vega, Theta are all returned from the pricing model.

Clicking on the **Reprice** tool will update the analytics data for the market loaded in the pricer. The timestamp will update with the time the new pricing data was received.

The action menu contains the action items available for the market in the pricer, much like the right-click menu on a recognized string. These actions are documented in the User Interactions section.

5. USER INTERACTIONS

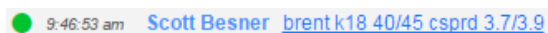
The actions available for recognized markets are based on permissions and user preferences.

5.1. TOOLS

Based on the view being utilized, any of the following tools can be used.

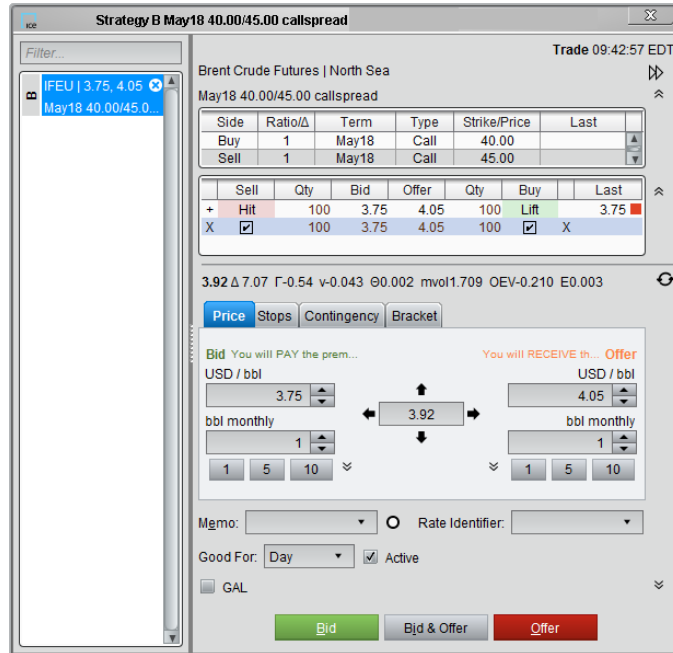
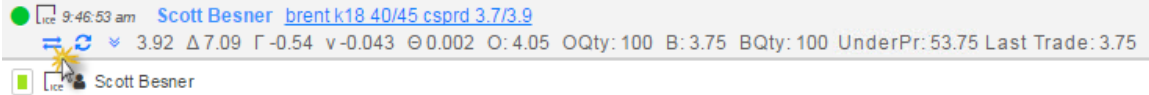
5.1.1. THEO INDICATOR - PIN MARKET

Clicking on the **Theo Indicator** tool will pin a market to the Market Watch tab in the Trade application. The theo indicator tool itself will change to a pin icon indicating that the market was successfully pinned to the market watch tab.



5.1.2. OPEN ICE ORDER TICKET

If a market received and recognized has a corresponding market listed on the ICE, clicking this tool will open an order ticket in the Trade application.



5.1.3. OPEN PRICER

Use the **Open Pricer** tool to view the docked market pricer on the bottom of the console for more information.



5.1.4. REPRICE

Click the **Reprice** tool to refresh the analytics for the market.

5.2. LEFT-CLICK

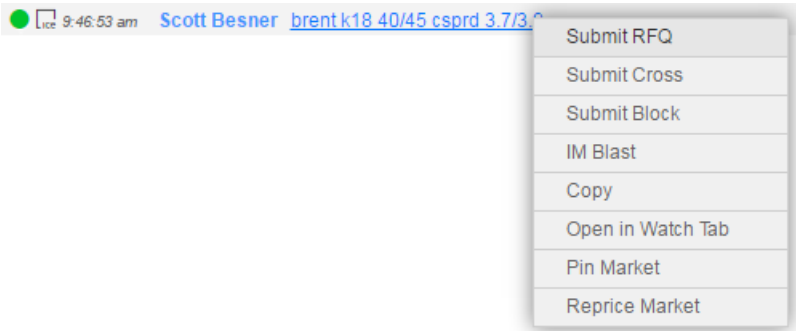
On the preferences screen there is a setting for the left-click action. When I left-click on a Recognized Market, has two choices available:

- **Open in Watch Tab** - brings the market into focus in the Market Watch tab in Trade.

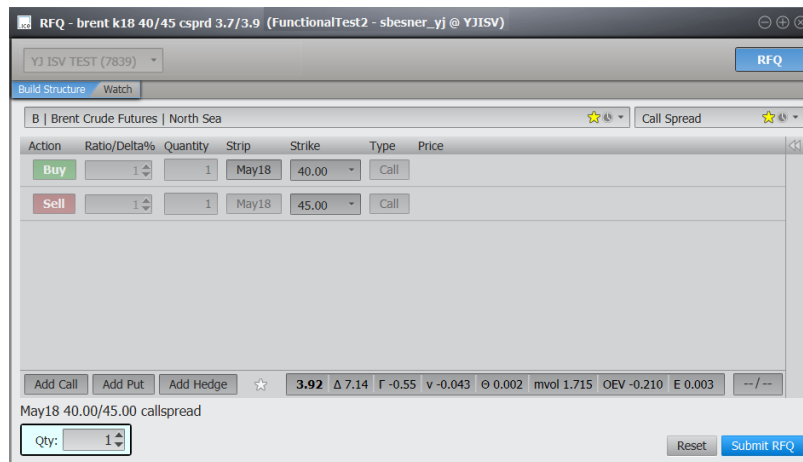
- **Display Market Pricer** - opens the Market Pricer in the bottom of the ICE Chat console.

5.3. RIGHT-CLICK

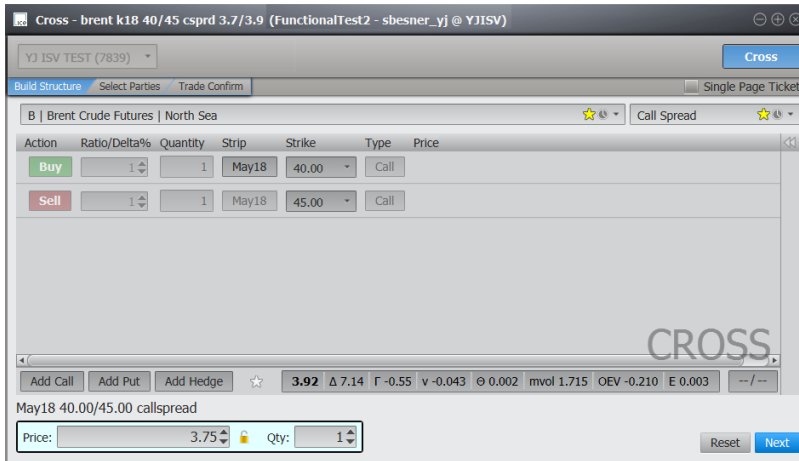
The right-click menu will be available on all recognized markets. Available options are dependent upon user permissions.



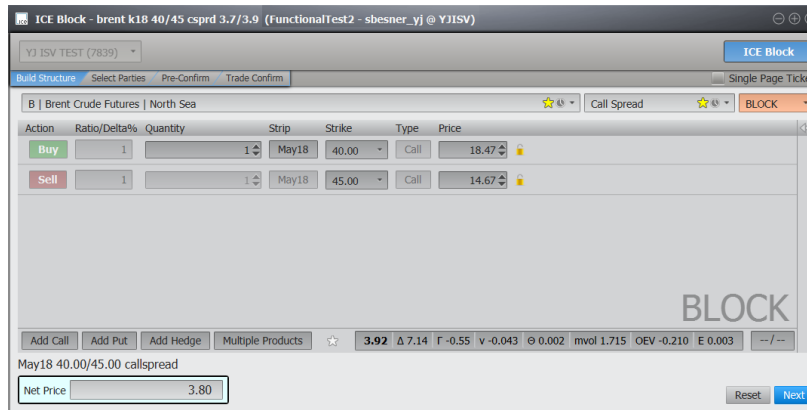
- **Submit RFQ** prepopulates the RFQ Wizard in Trade. **



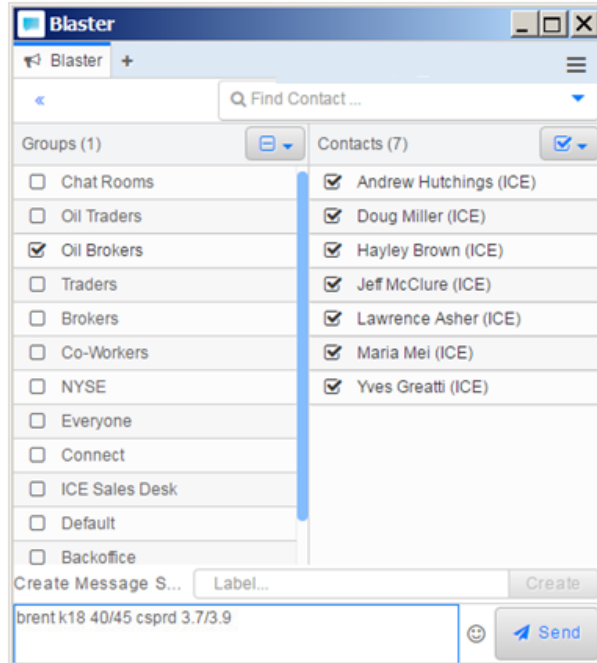
- **Submit Cross** prepopulates a crossing order ticket in Trade. **



- **Submit Block** prepopulates a block order ticket in Trade. **



- **IM Blast** prepopulates the ICE Chat Blaster with the recognized market string.



- **Copy** copies the market string.
- **Open in Watch Tab** brings focus to the market in the market watch tab
- **Pin Market** pins market to the top of the market watch tab

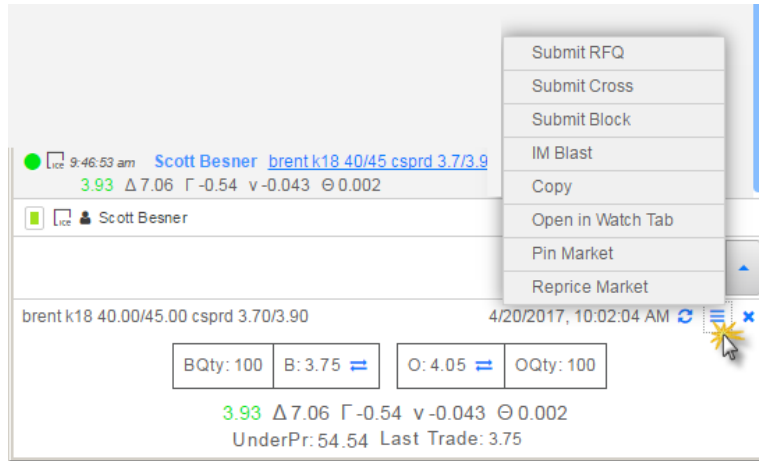
St...	Updated	Type	Contact	CC	Strip	Description	RFQ	Sell	B Qty	Bid	Theo	Offer	O Qty	Buy
3.92	11:38:07	IM-R	Scott Besner	B	May18	brent k18 40.00/45.00 csprd 3.70/3.90				3.70	3.92	3.90		

- **Reprice Market** reprices the market's analytics.

*** Requires an ICE account with permissions to Trade and/or Block. ***

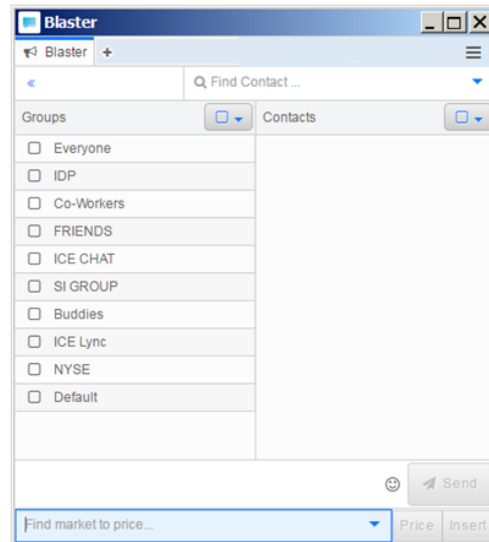
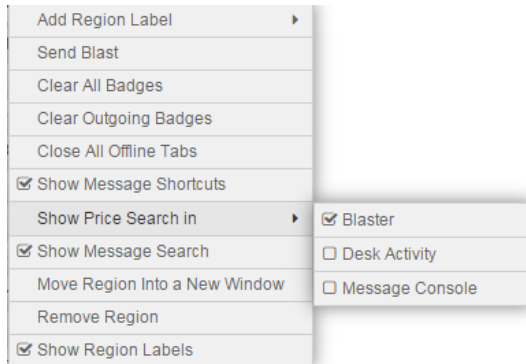
5.4. ACTION MENU IN MARKET PRICER

The action menu found in the market pricer will have the same menu options as the right-click menu described above.



6. PRICE SEARCH

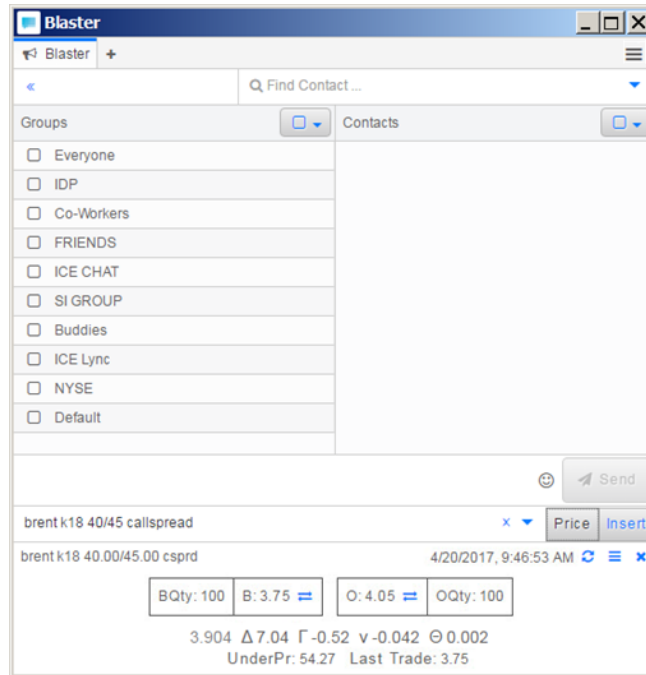
The Price Search functionality provides the ability to price markets prior to sending. The price search is available in the blaster by default and can be added to the message consoles and desk activity widget if desired. It can be toggled off/on in any of these widgets from any of the region menus.



6.1. PRICE A MARKET

- Type a market into the field **Find market to price...**
- Price the market by:
 - Clicking the Price button

- Hitting the Enter key
- Hitting F9



- Click **Insert** to populate the market into the text entry area and **Send** when ready.

6.2. REPRICE AND RESEND MARKETS

The price search text entry field is also a type-ahead drop-down displaying the last ten recognized markets priced and/or sent.

Select a previous market to price again to get an updated snapshot of the analytics.

