

Adding Alerts to the Monitor

Making it easier to know the desired state of the market

Monitor - Default View

Ticker	Curr Px	Time	Pct Chg Day	Chg Day	Volume	Bid	Ask	△
A	29.36	16:15:01	0.38	0.11	1231400	29.36	29.38	
AA	13.58	16:15:01	3.19	0.42	5199300	13.58	13.6	
AAPL	198.67	16:29:59	1.73	3.38	7219137	198.69	198.79	
ABC	27.52	16:15:01	1.21	0.33	986800	27.52	27.54	
ABT	53.54	16:15:01	0.53	0.28	2862500	53.52	53.54	
ADBE	32.64	16:29:59	-0.37	-0.12	3087045	32.62	32.63	
ADI	27.67	16:15:02	2.29	0.62	1933000	27.64	27.67	
ADM	30.03	16:15:02	0.13	0.04	1938600	30.02	30.04	
ADP	40.9	16:29:59	0.54	0.22	833265	40.89	40.93	
ADSK	24.18	16:29:59	2.50	0.59	1060788	24.18	24.19	
AEE	24.63	16:15:02	0.90	0.22	564100	24.6	24.63	
AEP	33.08	16:15:02	0.18	0.06	763800	33.05	33.08	
AES	11.95	16:15:02	0.08	0.01	2416600	11.95	11.97	
AET	28.85	16:15:02	0.70	0.2	1006300	28.82	28.85	
AFL	47.36	16:15:02	0.53	0.25	1177200	47.36	47.41	
AGN	59.67	16:15:02	2.03	1.19	732100	59.65	59.68	
AIG	26.3	16:15:02	-2.03	-0.62	3431200	26.19	26.3	
AIV	15.53	16:15:02	0.58	0.09	447000	15.51	15.53	
AIZ	29.76	16:15:02	-1.23	-0.37	741500	29.73	29.76	
AKAM	25.37	16:29:59	1.64	0.41	1223350	25.37	25.39	
AKS	21.45	16:15:02	4.74	0.97	1731100	21.42	21.45	
ALL	29.41	16:15:02	2.83	0.81	1813000	29.39	29.41	
ALTR	22.66	16:29:59	2.72	0.6	3205488	22.65	22.66	
AMAT	12.47	16:29:59	1.96	0.24	5919348	12.46	12.47	
AMD	7.84	16:15:02	2.62	0.2	2560500	7.84	7.85	
AMGN	56.53	16:29:59	-0.55	-0.31	3179368	56.52	56.53	
AMP	38.06	16:15:02	-1.25	-0.48	873900	38.03	38.06	
AMT	42.52	16:15:02	2.24	0.93	918500	42.52	42.55	
AMZN	120.09	16:29:59	2.33	2.73	3064063	120.08	120.26	▽

Notes

This is the default view of the Monitor.

Double-clicking or highlighting "AAPL" and pressing enter opens a new window next to the Monitor to start creating Alerts.

Double-clicking or highlighting a Field within a Ticker will also open a new window next to the Monitor to start creating Alerts.

Alert Window - Initial Step

Alerts _ x

Ticker	Field	Condition	
AAPL ▼	▼	▼	<input type="button" value="Done"/> <input type="button" value="Cancel"/>

▽

Alert me when △

- AAPL's <field> meets <condition>

▽

Notes

After launching the Alert Window, the specified Ticker is pre-filled for a new Alert.

Clicking "Add alert" will add a new Alert to the table (no values are pre-filled).

The "Ticker" dropdown lists all available Tickers (in alphabetical order) to select from. Financial Analyst can also type in specified Ticker.

The "Field" dropdown lists all available Fields (in alphabetical order) to select from. Financial Analyst can also type in specified Field.

The "Alert me when" section dynamically updates to show the Financial Analyst what Alert(s) will be triggered from the Monitor.

The Financial Analyst can close the window (Financial Analyst is asked to confirm if any Alerts are still in the process of being created or edited) or minimize the window at any time during the process.

Alert Window - Field Specified

Alerts _ x

Ticker	Field	Condition	
AAPL ▼	Last Price ▼	▼	<input type="button" value="Done"/> <input type="button" value="Cancel"/>

▽

Alert me when △

- AAPL's Last Price meets <condition>

▽

Notes

This screen shows the "Last Price" Field specified.

The Condition dropdown holds the following values:
Greater than, Less than, Equal to, Greater than or less than,
Greater than or equal to, Less than or equal to,
Greater than field, Less than field, Greater than or less than
field, Increases by percent, Decreases by percent, Increases
or decreases by percent

In the event the Financial Analyst started from a Ticker's
Field in the Monitor, the Financial Analyst would start from
this step when creating an Alert.

Alert Window - Condition Selected

Alerts _ x

Ticker	Field	Condition			
AAPL ▼	Last Price ▼	Greater than ▼	<input type="text"/>	<input type="button" value="Done"/>	<input type="button" value="Cancel"/>

▽

Alert me when △

- AAPL's Last Price is greater than <amount>

▽

Notes

This screen shows the "Condition" dropdown specified.

Once the Financial Analyst has specified a Condition, an additional field appears to specify the amount the specified field should be greater than to trigger the Alert.

Alert Window - Value Specified

Alerts _ x

Ticker	Field	Condition		
AAPL ▼	Last Price ▼	Greater than ▼	600	<input type="button" value="Done"/> <input type="button" value="Cancel"/>

△

Alert me when △

- AAPL's Last Price is greater than 600

▽

Notes

This screen shows the value of the "Condition" has been specified.

Clicking on "Done" finishes the editing process and will trigger the system to start checking for the specified Alert.

Clicking on "Cancel" discards any changes made to the Alert.

Alert Window - Alert Added

Alerts _ x

Ticker	Field	Condition	
AAPL	Last Price	Greater than 600	<input type="button" value="Edit"/> <input type="button" value="Delete"/>

▽

Alert me when △

- AAPL's Last Price is greater than 600

▽

Notes

After clicking on "Done", the system shows the added Alert.

Clicking on "Edit" opens the specified Alert in edit mode, pre-filling all Alert values.

Clicking on "Delete" allows the Financial Analyst to remove the Alert from the system, after confirming his/her desire to do so.

Alert Window - Adding Another Alert

Alerts _ x

Ticker	Field	Condition		
AAPL	Last Price	Greater than 600	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="button" value="Done"/>	<input type="button" value="Cancel"/>

▽

Alert me when △

- AAPL's Last Price is greater than 600
- <ticker>'s <field> meets <condition>

▽

Notes

After clicking on "Add alert", a new row is added to the table.

Subsequent Alerts are added with a zebra-stripe (alternated background color) to allow the Financial Analyst to scan through entries in the table.

Entering the new Alert has the same experience as the previously added Alert.

Alert Window - Specifying a Ticker

Alerts _ x

Ticker	Field	Condition		
AAPL	Last Price	Greater than 600	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="text" value="IBM"/>	<input type="text"/>	<input type="text"/>	<input type="button" value="Done"/>	<input type="button" value="Cancel"/>

Alert me when △

- AAPL's Last Price is greater than 600
- IBM's <field> meets <condition>

Notes

This screen shows that the Financial Analyst has specified "IBM" as the "Ticker" for this Alert.

Alert Window - Field Specified

Alerts _ x

Ticker	Field	Condition	
AAPL	Last Price	Greater than 600	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input type="text" value="IBM"/> ▼	<input type="text" value="Last Price"/> ▼	<input type="text"/>	<input type="button" value="Done"/> <input type="button" value="Cancel"/>

▽

Alert me when △

- AAPL's Last Price is greater than 600
- IBM's Last Price meets <condition>

▽

Notes

This screen shows that the Financial Analyst has specified "Last Price" as the "Field" for this Alert.

Alert Window - Condition Specified

Alerts _ x

Ticker	Field	Condition	
AAPL	Last Price	Greater than 600	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input type="text" value="IBM"/> ▼	<input type="text" value="Last Price"/> ▼	<input type="text" value="Increases or decreases by percent"/> ▼ <input type="text"/>	<input type="button" value="Done"/> <input type="button" value="Cancel"/>

▽

Alert me when △

- AAPL's Last Price is greater than 600
- IBM's Last Price increases or decreases by <percent>

▽

Notes

This screen shows that the Financial Analyst has selected "Increases or decreases by" as the "Condition" for this alert.

A new field appears to allow the Financial Analyst to enter the specified percent the alert should be triggered.

Alert Window - Value Specified

Alerts _ x

Ticker	Field	Condition	
AAPL	Last Price	Greater than 600	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input type="text" value="IBM"/> ▼	<input type="text" value="Last Price"/> ▼	<input type="text" value="Increases or decreases by percent"/> ▼	<input type="text" value="10"/> <input type="button" value="Done"/> <input type="button" value="Cancel"/>

▽

Alert me when △

- AAPL's Last Price is greater than 600
- IBM's Last Price increases or decreases by 10 percent

▽

Notes

This screen shows that the Financial Analyst has specified "10" as the percent needed for this Alert to trigger.

Alert Window - Alert Added

Alerts _ x

Ticker	Field	Condition	
AAPL	Last Price	Greater than 600	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
IBM	Last Price	Increases or decreases by 10 percent	<input type="button" value="Edit"/> <input type="button" value="Delete"/>

▽

Alert me when △

- AAPL's Last Price is greater than 600
- IBM's Last Price increases or decreases by 10 percent

▽

Notes

After clicking on "Done" the system shows the Financial Analyst the newly entered Alert.

Alert Window - Adding Another Alert

Alerts _ x

Ticker	Field	Condition		
AAPL	Last Price	Greater than 600	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
IBM	Last Price	Increases or decreases by 10 percent	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="button" value="Done"/>	<input type="button" value="Cancel"/>

▽

Alert me when △

- AAPL's Last Price is greater than 600
- IBM's Last Price meets increases or decreases by 10 percent
- <ticker>'s <field> meets <condition>

▽

Notes

After clicking on "Add alert", a new row is added to the table.

The new Alert has the same experience as the previously added Alerts.

Alert Window - Specifying a Ticker

Alerts _ x

Ticker	Field	Condition		
AAPL	Last Price	Greater than 600	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
IBM	Last Price	Increases or decreases by 10 percent	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="text" value="S&P 500"/>	<input type="text"/>	<input type="text"/>	<input type="button" value="Done"/>	<input type="button" value="Cancel"/>

▽

Alert me when △

- AAPL's Last Price is greater than 600
- IBM's Last Price meets increases or decreases by 10 percent
- S&P 500's <field> meets <condition>

▽

Notes

This screen shows that the Financial Analyst has specified "S&P 500" as the "Ticker" for this Alert.

Alert Window - Adding Another Alert

Alerts _ x

Ticker	Field	Condition		
AAPL	Last Price	Greater than 600	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
IBM	Last Price	Increases or decreases by 10 percent	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
<input type="text" value="S&P 500"/>	<input type="text" value="52-week Low Price"/>	<input type="text"/>	<input type="button" value="Done"/>	<input type="button" value="Cancel"/>

▽

Alert me when △

- AAPL's Last Price is greater than 600
- IBM's Last Price meets increases or decreases by 10 percent
- S&P 500's 52-week Low Price meets <condition>

▽

Notes

This screen shows that the Financial Analyst has specified "52-week Low Price" as the "Field" for this Alert.

Alert Window - Field Specified

Alerts _ x

Ticker	Field	Condition	
AAPL	Last Price	Greater than 600	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
IBM	Last Price	Increases or decreases by 10 percent	<input type="button" value="Edit"/> <input type="button" value="Delete"/>

△

Alert me when △

- AAPL's Last Price is greater than 600
- IBM's Last Price meets increases or decreases by 10 percent
- S&P 500's 52-week Low Price is greater than or less than its <field>

▽

Notes

This screen shows that the Financial Analyst has specified "Greater than or less than field" as the "Condition" for this Alert.

Alert Window - Value Specified

Alerts _ x

Ticker	Field	Condition		
AAPL	Last Price	Greater than 600	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>
IBM	Last Price	Increases or decreases by 10 percent	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>

△

Alert me when △

- AAPL's Last Price is greater than 600
- IBM's Last Price meets increases or decreases by 10 percent
- S&P 500's 52-week Low Price is greater than or less than its Last Price

▽

Notes

This screen shows that the Financial Analyst has specified "Last Price" as the field to compare for this Alert.

Alert Window - Alert Added

Alerts _ x

Ticker	Field	Condition	
AAPL	Last Price	Greater than 600	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
IBM	Last Price	Increases or decreases by 10 percent	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
S&P 500	52-week Low Price	Greater or less than its Last Price	<input type="button" value="Edit"/> <input type="button" value="Delete"/>

▽

Alert me when △

- AAPL's Last Price is greater than 600
- IBM's Last Price meets increases or decreases by 10 percent
- S&P 500's 52-week Low Price is greater than or less than its Last Price

▽

Notes

After clicking on "Done" the system shows the Financial Analyst the newly entered Alert.

Monitor - Updated Display

Ticker	y	Chg Day	Volume	Bid	Ask	Last Price	52-week Low Price	△	
A	8	0.11	1231400	29.36	29.38	29.36	29.36		
AA	9	0.42	5199300	13.58	13.6	13.58	13.04		
AAPL	3	3.38	7219137	198.69	198.79	198.67*	189.97		
ABC	1	0.33	986800	27.52	27.54	27.52	27.52		
ABT	3	0.28	2862500	53.52	53.54	53.54	35.99		
ADBE	7	-0.12	3087045	32.62	32.63	32.64	22.50		
ADI	9	0.62	1933000	27.64	27.67	27.67	25.87		
ADM	3	0.04	1938600	30.02	30.04	30.03	30.00		
ADP	4	0.22	833265	40.89	40.93	40.9	39.99		
ADSK	0	0.59	1060788	24.18	24.19	24.18	24.18		
AEE	0	0.22	564100	24.6	24.63	24.63	24.44		
AEP	8	0.06	763800	33.05	33.08	33.08	33.08		
AES	8	0.01	2416600	11.95	11.97	11.95	11.95		
AET	0	0.2	1006300	28.82	28.85	28.85	28.85		
AFL	3	0.25	1177200	47.36	47.41	47.36	47.36		
AGN	3	1.19	732100	59.65	59.68	59.67	44.23		
AIG	3	-0.62	3431200	26.19	26.3	26.3	26.3		
AIV	8	0.09	447000	15.51	15.53	15.53	15.53		
AIZ	3	-0.37	741500	29.73	29.76	29.76	29.76		
AKAM	4	0.41	1223350	25.37	25.39	25.37	25.21		
AKS	4	0.97	1731100	21.42	21.45	21.45	21.45		
ALL	3	0.81	1813000	29.39	29.41	29.41	28.09		
ALTR	2	0.6	3205488	22.65	22.66	22.66	22.66		
AMAT	6	0.24	5919348	12.46	12.47	12.47	12.47		
AMD	2	0.2	2560500	7.84	7.85	7.84	7.84		
AMGN	5	-0.31	3179368	56.52	56.53	56.53	44.56		
AMP	5	-0.48	873900	38.03	38.06	38.06	38.06		
AMT	4	0.93	918500	42.52	42.55	42.52	42.52		
		◀					▶	▽	

Notes

As the Financial Analyst adds alerts, the Monitor updates accordingly:

- Any new fields entered in the Alert Window are automatically displayed in the Monitor (in this example, the "Last Price" and "52-week Low Price" Fields were added)

- Any field which has an alert set on it is displayed with an asterisk (*) and a highlighted background to show that the system will trigger Alerts based on a Condition on the specified Field.

Competitive Review

Pulling in knowledge from other financial applications

Competitive Review - Premium Alert

Create Alert

Alert me when **AAPL** meets the following conditions:

× **Quote** **Percent Change** **Intraday**

Compare To: **VALUE** | **FIELD** **Crosses** **Percent Change 1M** **AND**

× **Technical** **Moving Average** **20-Day**

Compare To: **VALUE** | **FIELD** **Within 5%** **425.00** **Add**

Frequency: Once Continuous

Timeframe: End-of-Day Intra

Notify: SMS Email

Note:

Apple Inc. (AAPL)

450.71 ↓ **-2.61 (-0.58%)** 12:09P EDT (NAS)

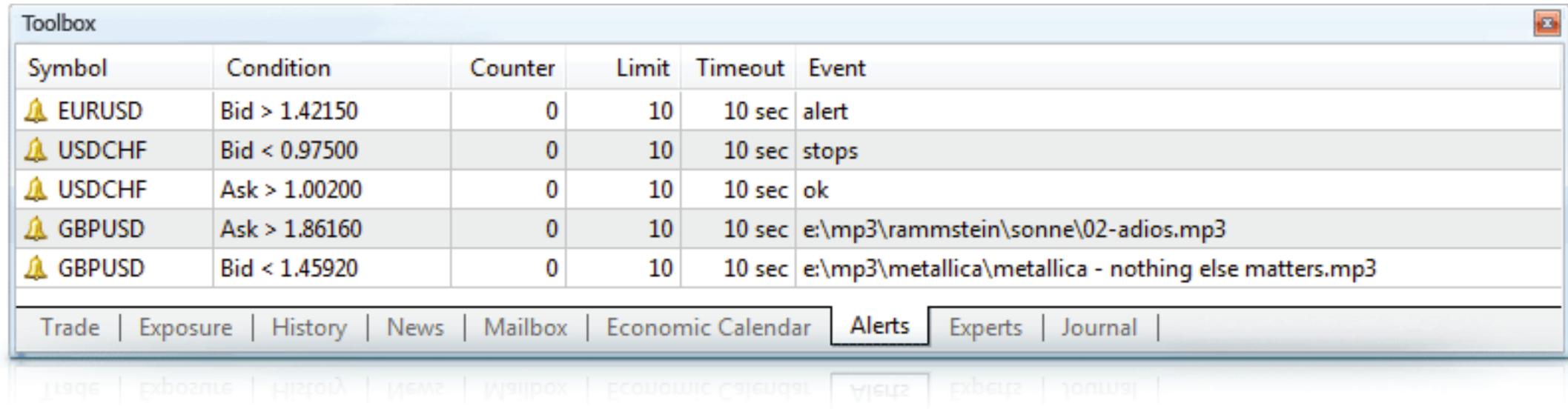
Quote Comments (2)

Stock Price Quote as of Wednesday, Jul 31st, 2013

1 TRIGGERED ALERT

http://www.barchart.com/shared/images/prem_alert2.png

Competitive Review - MetaTrader



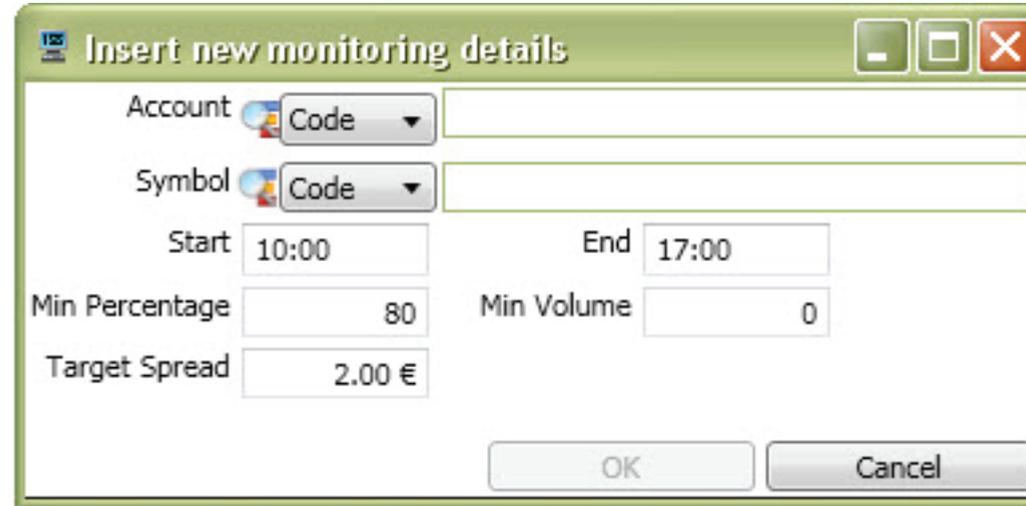
The image shows a screenshot of the 'Toolbox' window in MetaTrader, specifically the 'Alerts' tab. The window contains a table with the following columns: Symbol, Condition, Counter, Limit, Timeout, and Event. Below the table is a navigation bar with buttons for Trade, Exposure, History, News, Mailbox, Economic Calendar, Alerts (selected), Experts, and Journal.

Symbol	Condition	Counter	Limit	Timeout	Event
🔔 EURUSD	Bid > 1.42150	0	10	10 sec	alert
🔔 USDCHF	Bid < 0.97500	0	10	10 sec	stops
🔔 USDCHF	Ask > 1.00200	0	10	10 sec	ok
🔔 GBPUSD	Ask > 1.86160	0	10	10 sec	e:\mp3\rammstein\sonne\02-adios.mp3
🔔 GBPUSD	Bid < 1.45920	0	10	10 sec	e:\mp3\metallica\metallica - nothing else matters.mp3

Trade | Exposure | History | News | Mailbox | Economic Calendar | **Alerts** | Experts | Journal |

http://www.metatrader5.com/en/terminal/help/img/toolbox_alerts.png

Competitive Review - Hermes



Insert new monitoring details

Account  Code

Symbol  Code

Start End

Min Percentage Min Volume

Target Spread

OK Cancel

<http://www.bsnet.gr/portal/portals/0/Images/Products/hermes3.jpg>

Competitive Review - LiveCharts

View Alerts

Quote Alerts | News Alerts

	Symbol	Set Date	Field
✗	AAPL	14:42:42 05/3...	Last
✓	FB	14:44:35 05/3...	Last
✓	MSFT	14:44:59 05/3...	Last
✓	CSCO	14:45:21 05/3...	Last
✓	INTC	14:45:41 05/3...	Last
✓	GOOG	14:46:17 05/3...	Last

Quote Alert Message

AAPL.Last >= 579
Fired value: 579.17 at 14:42:42.

Reactivate | Edit | Dismiss | OK

Alert Log

Select Log: Workspace | Quote Alerts | News Alerts | 0 alert(s)

Symbol	Field	Above	Below	Fired	Fired Date	Description
AAPL	Last	579		579.17	14:42:42 05/30/...	The Last on AAPL fired on 579.17 at 14:42:42 05/...

Export to CSV | Print | Close

<http://www.esignal.com/images/trading-software/LiveCharts/LiveCharts-Alerts.png>

Sketching and Design Assumptions

Creating a solution visually and presenting my assumptions about the design space

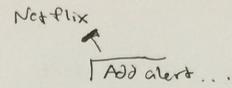
Sketches - Initial Ideas

initial ideas

- context menu
- frozen pane
- field-level interaction / row level interaction
- triangle - excel thing

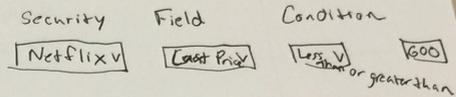
go find similar interactions

- gmail idea
- create tabbed monitor (metatrader 5)
esignal (with modal)
- new window (hermes)
barchart.com
- separate window
- azure way



Context menu

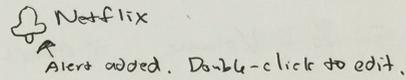
Add alert



This will create an alert for when Netflix's Last Price is less than or greater than 600.

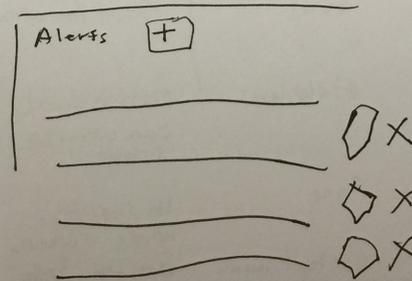
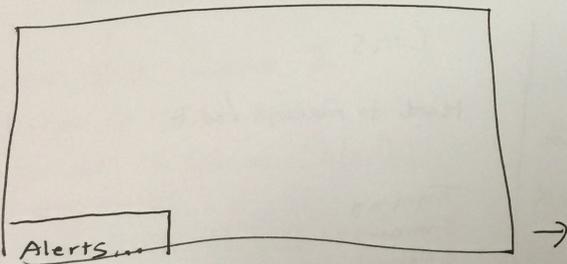
Proceed?

Yes No



Monitor

Frozen pane

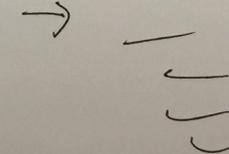


Alerts +

Netflix Last Price < > 600 X

Netflix Last Price < > 52 week X

Netflix



Sketches - Initial Ideas

field-level

	Last price
Apple	575

→ Double click on cell →

Add alert

Security Apple Apple

Field Last price

Add field

Condition $\boxed{< 600}$

Field Last Price

Field 52 week low price

Condition $\boxed{\text{Field 1} < \text{Field 2}}$

Add alert

excel type



→ type in = % < Volume → Alert set

Gmail idea

Options ↓

Add alert → add alert flow

Tradeoffs

Approach	Pros	Cons
Gmail	New option in current system	Hard to manage/edit
Excel	Good for advanced	Training Cumbersome Changing read-only model of s
Field level	Feels natural can utilize current setup	Only on current fields
Pane	In system whole screen	can't see both at once
Context menu	Doesn't look like it's system	

Sketches - Alert Window

Add Alert
 Alerts me when:
 Security

can type or pick

Security	Field	Condition	Value percent
AAPL v	Last Price v	Greater than or less than v	600
IBM v	Last Price v	Increases or decreases by percent v	10
S&P 500 v	52 week low price v	Compare v	Last Price v
		Less than v	

↑ all from monitor ↑ all present fields in monitor ↑ compare fields ↑ compare: fields extra value extra percent ↑ textbox or dd depending on choice

each field is dependent on other ones

Descriptions

An alert will be created when

- AAPL's Last Price is greater than 600
- IBM's Last Price increases or decreases by 10%
- S&P 500's 52 week low price is less than its Last Price

OK Cancel

Improves after iteration 2

- show in new window
- remove ok/cancel (close)
- alignment
- make text not bold
- show conditions only when needed (3 to start)
- show allowed values in notes
- note stuff can be typed too (w/ autocomplete)

- increases or decreases by percent (can lose 1 textbox)
 - compare → compare to field greater than less than

Design Assumptions and Colleague Feedback

Assumptions

- Content in the Monitor doesn't change position through the day
- Financial Analysts know the market very well and the fields of each ticker
- Financial Analysts use other tools in addition to the Monitor to make investment decisions
- A Monitor has a limited set of controls to allow Financial Analysts to enter Alerts
- An Alert can be added at any time during the day

Updates from Colleague Critiques

- Make the design more efficient - allow for typing and selection
- Reconsider what text should be bold for easier reading
- Present all allowed values to make reviewers understand the design better
- Make the verbiage in the dropdowns more clear (e.g. compare should inform what type of comparison should happen)
- Make the verbiage in the "Alert me when" section more clear as the Financial Analyst is in the flow of creating an Alert
- Double-check alignment of numbers to make large numbers easy to read
- Is there a way to save a "click" to add an alert?