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Introduction

Trade Expert is WEB based application which main purpose is to help traders to maximize their profit. Application is dedicated to both experienced and novice users.

Experienced users can analyze chart using built-in indicators, or create their own. They can also create custom trading strategies.

Novice users can use built-in strategies or custom strategies which were created by someone else. That way they can also learn basics of technical analysis.

Purpose of strategies which you can apply to charts is to show buy and sell signals. That’s how you will know when to do buying or selling. But this version of product doesn’t offer you automatic trading. So every trade you do, you must manually insert in this system so it could keep information about your funds. You must be careful not to forget to do this after trading. I hope that soon will be released new version which will have included feature for automatic trading.

Workspace

Trade Expert acts like MDI desktop application. You have workspace where you can open various documents. Like in desktop application you can load and save workspace, but instead of hard disk workspace is saved on web server. So you have ability to work with your workspace on different computers and different operating systems, all you need are Internet browser and flash player installed.

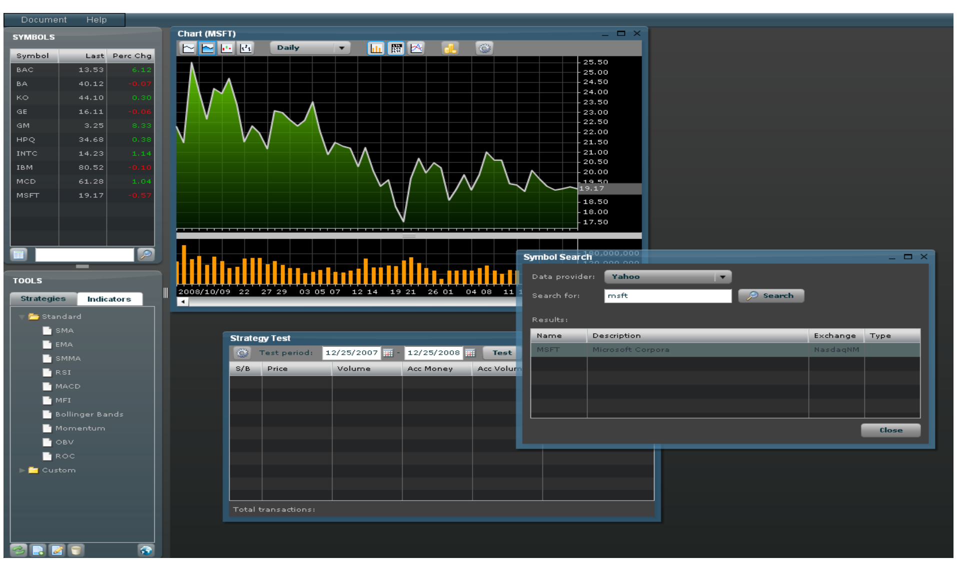


Figure 1: Typical workspace

On the top of the window there is a menu bar. It has two menus:

- Documents – contains commands for creating new documents and managing workspace (new, load and save).
- Help – contains link to this document and command which shows description about product and author.

On the left side of window there is a panel with symbols and tools. This panel and its components will be described in next section.

Most of space is required for MDI area where you can put your documents (windows). You can work with windows same way as you work in desktop application: you can move them, resize, maximize, minimize and close.

You can keep your workspace on server and load it when you want. But if you don't know how to start, you can create your workspace from template. From menu choose: Documents->New Workspace.

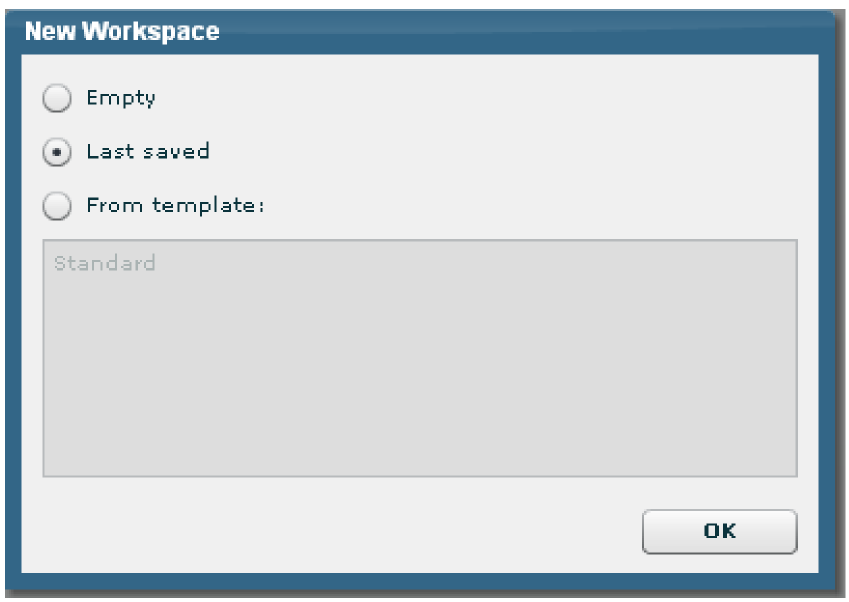


Figure 2: New workspace

"New Workspace" dialog offers you three options:

- To create empty workspace
- To open last saved workspace
- To create workspace from template (you can choose one of listed templates)

Note*:*
Every time you start application "New Workspace" dialog will be opened.

Symbols and Tools

On the left side of the window there is a panel with symbols and tools. You can resize its width to desired value, but you can't hide it. Height of "symbols" and "tools" panel is also adjustable.

List of symbols contains symbol code, last value and percentage change. So you can use it as quick watch for symbols.

Figure 3: Symbols list

If you move cursor above symbol code you can see additional information about it in tool tip (figure 3).

In bottom left corner of this panel there is a button "Symbol list" and clicking it you will see dialog which allows you to remove symbols or change their order.

Adding symbol to list can be done using drag & drop. But first you must find symbol. From menu bar choose: Documents->Symbol Search.

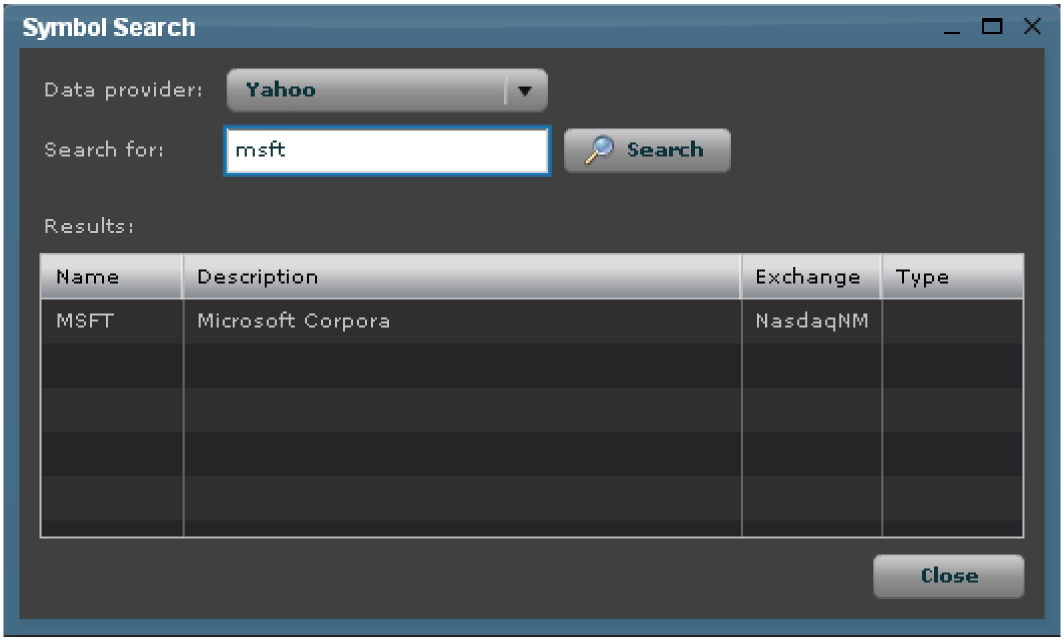


Figure 4: Symbol search

Select data provider (e.g. Yahoo) and search text. Search results will be shown in list. Then you can drag & drop symbol from list to desired location (symbol list or some other window).

Note:
Searching symbols using entered search text depends of provider. Some providers can use this text to search for symbol codes and descriptions, but other use this text only to search for symbol code (e.g. Yahoo).

You can also start symbol search using quick search tool. It is located just below list of symbols.

Tools panel contains indicators and strategies. On the bottom of this panel there is a small toolbar which contains functions for creating, editing, deleting and publishing code (for strategy or indicator). Publishing code you will make it visible to other users. That way other can use and test your code, but you can decide if they can only use it or they can view and modify your code.

Strategy and indicator code is written in java script. You must describe their behavior using set of functions. Rules for creating them will be described in separate document.

Adding strategies and indicators to other documents (chart, strategy tester) is done same way as you do it for symbols – using drag & drop.

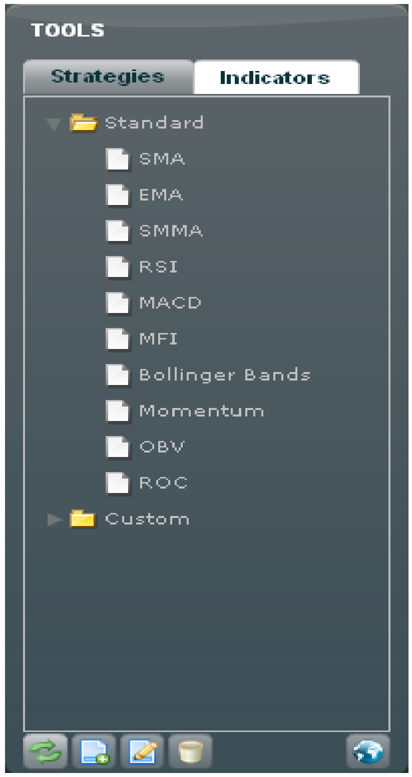


Figure 5: Tools panel

Drag & Drop

Adding symbols, indicators and strategies to other documents is performed using drag & drop. On figure 6 you can see how you can add indicator to chart document.

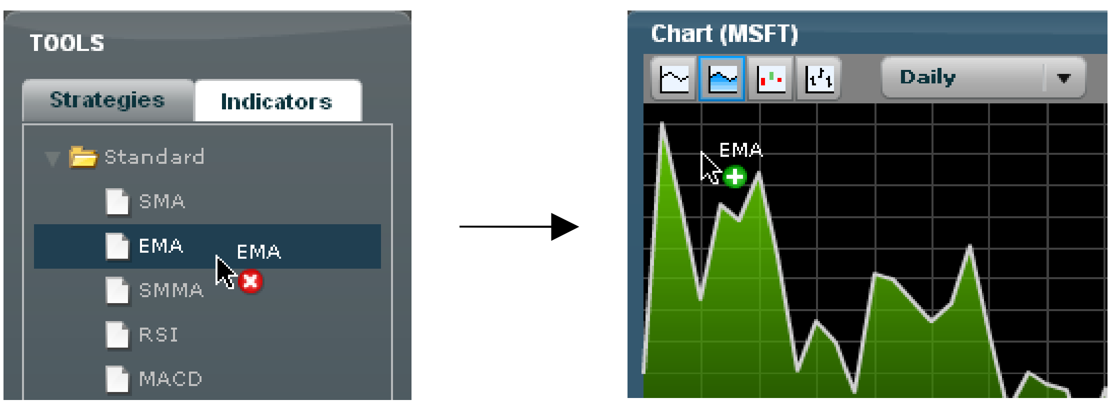


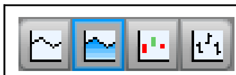
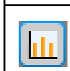
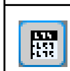
Figure 6: Drag & Drop

Chart

Chart is most important document of this application. It allows you to see historical data for symbol and to do analysis. You can do analysis by yourself, or to drag & drop already created strategy and to follow its directions (buy and sell signals).

Figure 7: Chart

Toolbar functions:

	Toggle button bar which lets you choose chart type (line, area, candlestick or bar).
	Chart compression combo box. You can choose compressions supported by data provider (daily, minute…).
	“Volume” toggle button. When pressed, volume is shown in bottom panel.
	“Show last price” toggle button. When pressed, last price is marked.
	“Indicators” button. Opens indicators manager where you can choose and configure chart indicators.
	“Strategy” button. Lets you configure strategy attached to chart.

	“Options” button. Opens options dialog where you can set how data for chart will be fetched (fetch last N records or fetch data from defined time range).

When you move mouse cursor over chart document you will see crosshair with legend. In legend you can find additional information about focused chart bar.

Figure 8: Chart with crosshair

If you want to change density of bars use mouse wheel.

To scroll data use scroll bar located in bottom of the window, or use hand tool. When you press left mouse button on curve area and hold it, hand tool is activated. Then you can move your mouse and scroll data (you must keep on holding mouse button down). When you release button, scrolling is finished.

Figure 9: Increased bar density

Indicators

In section about symbols and tools was described how indicators can be created, modified, deleted and published. To add indicator to chart document use drag & drop (from tools) or use indicators manager ("indicators" button on chart toolbar).

Figure 10: Chart with SMA(12) indicator

Before you add indicator you should set its parameters. Number of parameters and their meaning vary for each indicator (every indicator has its own code and it is up to its creator to decide what parameters could be set).

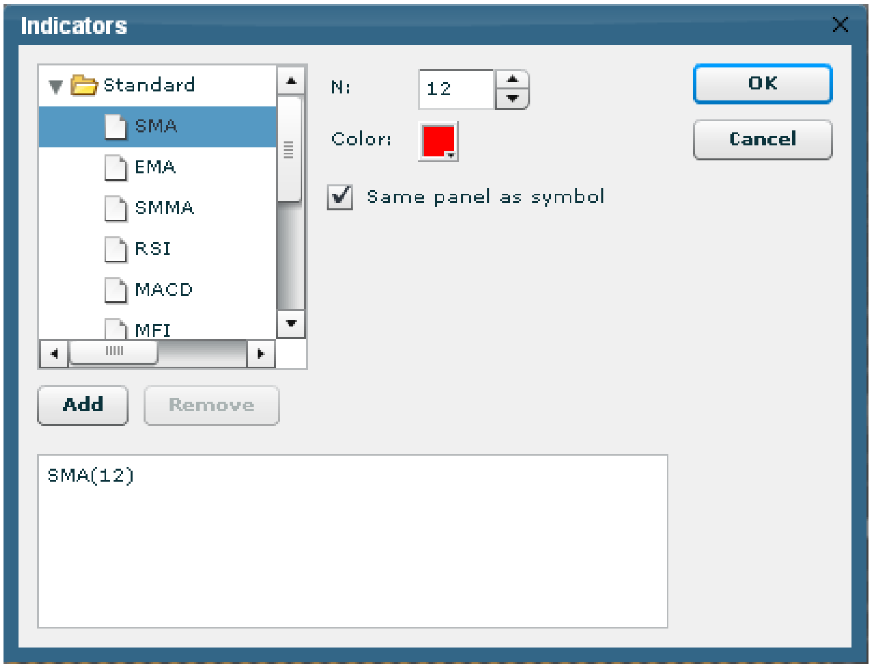


Figure 11: Indicator configuration

Indicator interpretation is part of technical analysis and will not be described in this document. You can find plenty of Internet sites and books where you can find more information about technical analysis.

Strategies

What is a strategy? Strategy is set of functions which application will call to create buy and sell signals. Strategy uses one or more indicators, and it must define what indicators it will use. When you add strategy to chart document application reads list of indicators you defined. And whenever it receives new trade it will pass calculated values for indicators along with tick data (price, volume, time) to strategy function which is responsible for strategy calculation.

Simplified, if you want to create your own strategy you have to define function which will return list of indicators and function which will create decision (buy/sell) based on input data (indicator values, ticks and account data). So strategy is set of java script functions. Rules for creating these functions and code samples are not part of this document (it will be described in another document). If you are not interested to create you own strategies you can always choose built-in strategy.

If you want to attach strategy to chart, use drag & drop. After that you will be asked if you want to import indicators list from strategy. If you confirm that, you will be able to see on your chart document indicators used in strategy and to visualize process of creating buy and sell signals.

Before strategy could be used, you must first configure it. Configuration dialog will pop up after strategy is added to chart.

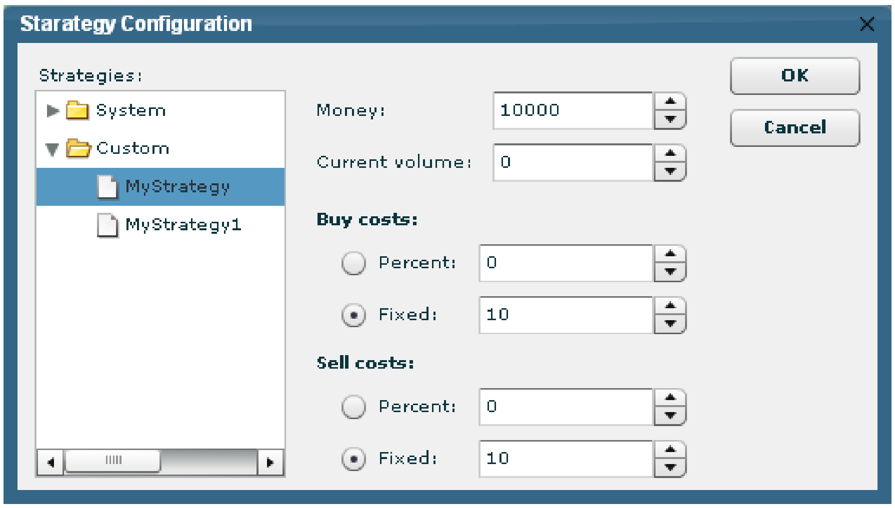


Figure 12: Strategy configuration

Configuring strategy includes setting starting money, starting volume (e.g. number of shares that you already own), buy and sell costs. Costs can be calculated as percent of every trade or fixed amount of money which will be allocated for every trade you do.

You can change this configuration in run time. To do that, start strategy manager (from chart toolbar press button “strategy”).

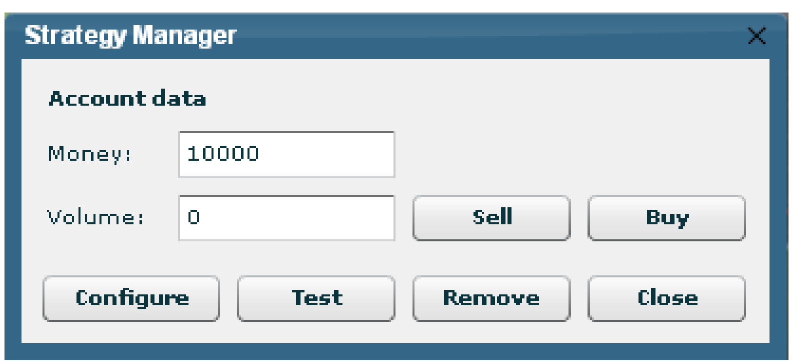


Figure 13: Strategy manager

Strategy manager shows your current funds (money and volume) and offers you set of commands for strategy management:

- Sell – opens sell dialog.

- Buy – opens buy dialog.
- Configure – opens strategy configuration dialog (for setting funds and costs).
- Test – opens strategy test document. It will be described in next section.
- Remove – removes strategy from chart document.

After you successfully configured strategy it becomes active, and after that every received tick will be analyzed. Strategy function analyzes ticks, calculated indicators and your account. If condition for buy or sell is satisfied it returns buy/sell request which you must confirm in displayed dialog.

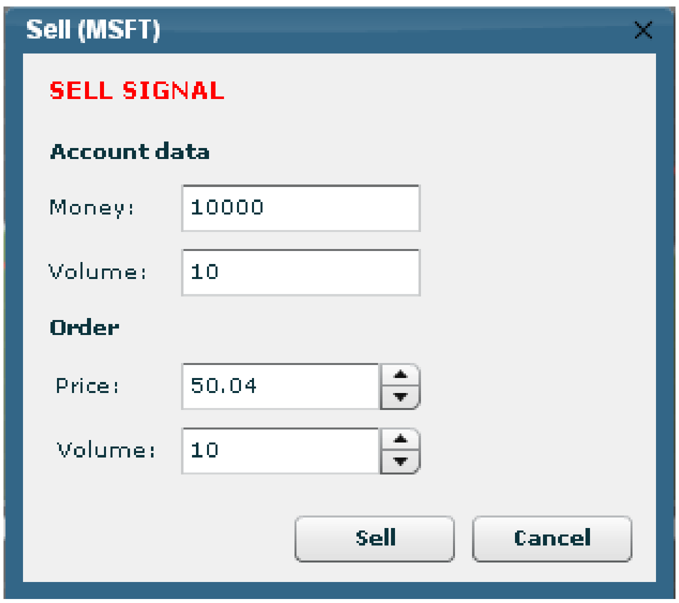


Figure 14: Sell request

Remember that application is not connected to trading server, so when you do trade (buy or sell) you must manually set your money and volume.

Strategy test

In previous section was described how you can use strategy. But how to choose right strategy for symbol you want to trade?

You can use strategy test document. Purpose of this document is to do back testing of desired strategy. Using drag & drop set symbol for testing and after that add strategy. Choose testing time range and start test. Application will calculate how much money you would gain/loose if you used this strategy in selected period.

So you can do testing in a past assuming that strategy will have similar performance in the future.

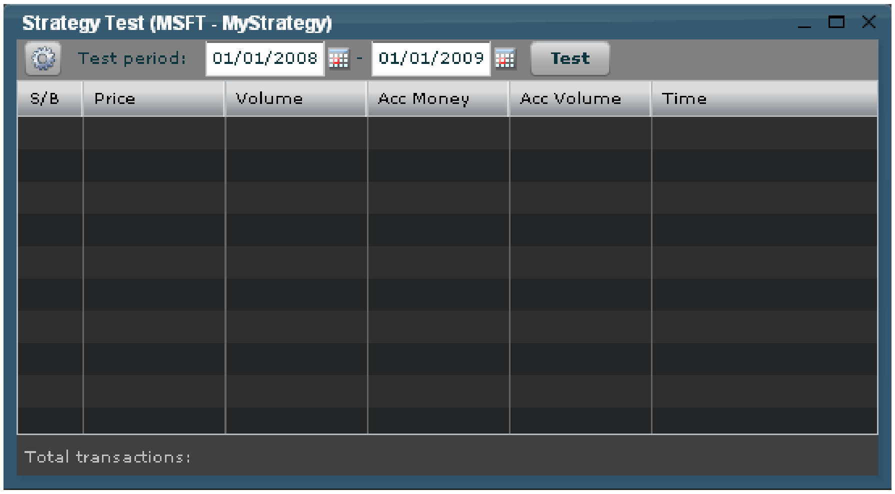


Figure 15: Strategy test

Before you start testing application will ask you do you want to do testing using compression from strategy or to use tick by tick compression. If you use compression from strategy, testing process will be faster but less accurate. Why? For example let’s assume that you have selected strategy which has daily compression. Application will use daily bar for testing, and if order created from strategy is in daily range with enough volume it will mark that order as filled. But ticks can hold totally different information, and maybe just one part of order could be filled. But advantage of this method is its speed. It will do calculation much quicker then tick by tick analysis.