

Introduction

The strategy building process

Building trading strategies is a kind of research activity. Traders constantly search for better techniques, analysis methods etc. Sometimes this is implied by the market changes; often the process is driven just by desire to go better.

The technical analysis paradigm deals with functions, applied on history data, called indicators. Typically, when building strategy, the trader selects a set of indicators, defines conditions on them and actions to be done when conditions are met. Then the strategy is tested, test results are analyzed, when needed some changes are done and the process repeats until the strategy is rejected or considered acceptable.

Problem statement

Building automated system generally requires programming skills. The researchers have to deal with additional level of complexity while building the strategy which distracts them from the main goal – defining a set of profitable trading rules.

How RGT helps?

Simple language allow trader to shift focus from technical details to trading logic. Generally, traders are not programmers and will never be. The attempt is to create a handy tool for building automated trading strategies.

How easy is RGT?

RGT have just three types of declarations:

- custom indicator
- logical variable
- counter

There are two operators in the language:

- conditional execution operator - "if"
- assignment operator - "="

The other language constructs are logical and algebraic expressions and a set of built in engine functions.

How functional is RGT?

RGT allows creating and testing of fully functional automated trading systems by:

- using external indicators,

- interpreting indicator values,
- monitoring account and open positions,
- controlling a set of build in functions for trading and managing positions;
- registering and documenting each performed testing.

How it works:

RGT interpreter is embedded in a Metatrader 4 expert advisor. Further this EA will be referenced as "the engine".

The engine provides the following basic services:

Initially:

- performs initial parsing of provided code, reporting any errors in the journal;
- builds appropriate data structures to hold the objects, defined in rgt code;
- if the engine is started in strategy tester and not in visual mode, initializes testing report;
- executes the script;

At every tick:

- checks if the bar is changed;

At the first tick of each bar:

- calculates values of the used external indicators, regarding their respective timeframe;
- calculates some aggregated account and position values as predefined buffers;
- executes the script, which eventually enables or disables some options;
- executes build in commands, regarding current options values;

Finally:

- if in strategy tester and not in visual mode, generates testing report;