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History Center

Technical analysis is a researching in market changes in order to forecast future price changes. The market is usually analyzed by means of charts. This is why it is very important to possess history price data for all symbols and periods used. History data are continuously formed and saved in the server. When connecting to it, the terminal downloads all necessary data. Later on, they are used for drawing of charts, testing, and optimizing of experts. There is a specially designed window named "History Center" in terminal that manages history data. This window can be opened by execution of the "Tools — History Center" menu command or by pressing of F2.

After the terminal has been shut down, all history data are stored in the "History Center", history file sizes not exceeding values pre-defined in the settings. If the amount of history data stored exceeds the value set in the " Max. bars in history:" field, the oldest bars will be deleted at saving. A separate history file named as SSSSSP.hst (where SSSSS is the symbol name, and PP is time period in minutes) is formed for each timeframe and stored in the /HISTORY directory. In future, the stored data are used for drawing of charts and for trading strategies testing.

The available data can be changed in the "History Center" window. To do so, one has to select the necessary symbol and period in the left part of the window. The corresponding data will be downloaded and represented as a table. To add a record about a new bar, one has to press the button of the same name, fill out the necessary fields in the new window, and press "OK". After that, the new bar will appear in the history base. One can also modify the bar having selected the corresponding record and pressed the "Edit" button. To delete a bar from history, one has to select it and press the corresponding button.

History Data Export/Import

History data can be exported to files of CSV, PRN, HTM formats. To do so, one has to select the desired symbol in the left part of the "History Data" window and press the "Export" button. Then one has to select one of three available file formats and specify the path to where it will be saved on the hard disk. History data can also be imported into terminal for further use. Only files in formats of CSV, PRN, HTM, and HST, can be imported. At that, one has to select a symbol and a timeframe in the left part of the "History Center" window for which the data will be imported. Then, having pressed the "Import" button, one has to set up import parameters:

- **Separator** — data separator in the file to be imported. Comma, semicolon, blank, or tabulation character can be selected for being separators;
- **Skip columns** — skip a certain amount of columns when importing. This can be useful if the file to be imported has more data types than necessary;
- **Skip rows** — skip a certain amount of rows (lines) when importing;
- **Shift hours** — shift data by a certain amount of hours in time;
- **Use selected only** — import only selected data. Data are selected by lines, "Ctrl" and "Shift" keys being used at that;
- **Volume** — enable/disable volumes import;

After history data have been completely imported, they can be used to draw charts and test experts.

History (HST) File Format

The base header is shown first

```
struct HistoryHeader
{
    int          version;          // version of the base
```

```
char    copyright[64]; // copyright information
char    symbol[12];   // security
int     period;      // security period
int     digits;      // the amount of digits after point shown for the symbol
time_t  timesign;    // timesign of the base creation
time_t  last_sync;   // last synchronization time
int     unused[13];  // for future use
};
```

then the bars array (one-byte justification) follows

```
#pragma pack(push,1)
//---- Standard representation of a quote in the base
struct RateInfo
{
    time_t    ctm;          // current time in seconds
    double    open;
    double    low;
    double    high;
    double    close;
    double    vol;
};
#pragma pack(pop)
```

Export of Quotes

Source data serving as a basis for the entire analytical work of the terminal user are those about security price changes. This information is provided by the brokerage company. Price data allow to draw symbol charts, research in financial markets, use various trading tactics, and make trade decisions. Quotes represent files with records in format of "SYMBOL, BID, ASK, DATE" (security symbol, bid price, ask price, date and time) and income in the terminal automatically as soon as connection to the server has been established.

The terminal allows to export the current quotes to other programs in the real-time mode through "DDE" (Dynamic Data Exchange) protocol. This is a protocol of operational systems of MS Windows used for dynamic data exchange among various applications. Quotes are given through DDE only at incoming of new ticks (ADVISE mode), but not immediately on request (REQUEST mode) where the latest price is shown. N/A is shown on the first REQUEST, and after the new price has been income, quotes will appear.

To activate the export of quotes from the terminal through DDE, one has to enable the "Enable DDE server" option in the terminal settings.

Attention: History Data cannot be exported through DDE protocol. The current quotes are exported only when the client terminal is online.

DDE request formats and their possible results by the example of "DDE-sample.xls" file:

```
BID request:  = MT4|BID!USDCHF    result: 1.5773
ASK request:  = MT4|ASK!USDCHF    result: 1.5778
HIGH request: = MT4|HIGH!USDCHF   result: 1.5801
LOW request:  = MT4|LOW!USDCHF    result: 1.5741
TIME request: = MT4|TIME!USDCHF   result: 21.05.02 9:52
QUOTE request: = MT4|QUOTE!USDCHF result: 21.05.02 9:52 1.5773 1.5778 1.5776
```

Attention: For data to be shown properly in MS Excel, one has to enable "Tools — Options... — Translation — Translation formula entry" menu option of MS Excel.

Global Variables

Several experts can be launched in the client terminal at the same time. Sometimes, there is a need them to interchange with information. To provide possibility of prompt transfer of moderate amounts of information among experts, as well as organize conflict-free simultaneous working of several experts, there are global variables in the terminal. Unlike variables claimed at a global level in the expert source code and available only within the corresponding module, global variables exist independently on experts. Their values are saved between terminal launches, unlike those of variables claimed at a global level (they are set at every expert launch and lost at expert remove). Global variables are available within four weeks since their last call from experts or manual modifying.

There is a special window in terminal that manages global variables. It can be opened by execution of the "Tools — Global Variables" menu command or by pressing of F3.

All global variables, their values and times of their last calls are listed in a table in this window. Using buttons located in the right part of the window, one can add a new global variable or delete an existing one. To change the name or value of a global variable, one has to double-click with the left mouse button on the corresponding cell of the table. The last call time will be changed automatically for this variable.

Contract Specification

This message window allows to view securities contract specifications. The main parameters are grouped in table with following fields:

- **Spread** — difference between Bid and Ask prices in points;
- **Digits** — the amount of digits after decimal point in the price representation;
- **Stops level** — minimum distance to the current price in points at which Stop Loss and Take Profit orders can be placed;
- **Pendings are good till cancel** — forced closing of pending orders at the end of a session. "Yes" means that pending orders will not be closed forcedly;
- **Contract size** — one-lot price in deposit currency;
- **Tick price** — the size of minimal price change in term currency;
- **Tick size** — minimal symbol price change interval in points;
- **Profit calculation mode** — accepted profit calculation technique (Forex, CFD, Futures);
- **Swap type** — rollover calculation type (in points, in deposit currency, or in per cents);
- **Swap long** — rollover size for a long position;
- **Swap short** — rollover size for a short position;
- **Margin calculation mode** — accepted free margin calculation technique (Forex, CFD, Futures)
- **Margin hedge** — size of margin for hedged positions.

The symbol specification window can be called by pressing of "Properties" button in the Market Watch window or the "Symbol properties" of the "Tester — Settings" window.

Languages Support

The Client Terminal interface is multilingual. It can be represented in any available language. This feature makes the program not only easy-to-use, but also allows to reduce the amount of errors that occur during trading because of lack of understanding of foreign terms and notions. The list of all available languages can be found in the "View — Languages" menu. One can switch one's terminal to a language by selecting of this language in the list. The language can be changed actually only after restart of the terminal.

The MultiLanguage Pack program that allows to independently translate the terminal interface into any language is delivered together with terminal, as well. The program is very easy to use and intuitively clear. MultiLanguage Pack can be launched directly from terminal by execution of the "View — Languages — MultiLanguage Pack" menu command. More details about how to work with MultiLanguage Pack can be found in its in-built Help Files.