SpyLite User's Guide
for
BTW
General Release

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LICENSED SOFTWARE

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1 Introduction

The BTServer SpyLite (SpyLite) application is part of WIDCOMM's BTW software. The application allows the user to monitor Bluetooth trace information based on BTW software version dependent profiles. You will have received the SpyLite application that matches your selection of profiles in BTW

SpyLite monitors Bluetooth activity; when the application is open, the current activity is displayed in the trace window in the sequence that the Bluetooth devices send and respond to each other.

Some knowledge of the sequence of Bluetooth events is necessary to understand the information that is displayed.

Data throughput analysis and data integrity check-functions are incorporated into the displayed results

1.1 OPEN THE PROGRAM

Double-click SpyLite.exe in the BTW installation folder to run the program.

2   The SpyLite Trace Window

Bluetooth commands and the responses to those commands are displayed in this window in the sequence that they are executed, depending on user configuration (Figure 1).

The trace information that is displayed is configurable; the options are described later in this document.

Figure 1:   The SpyLite interface.
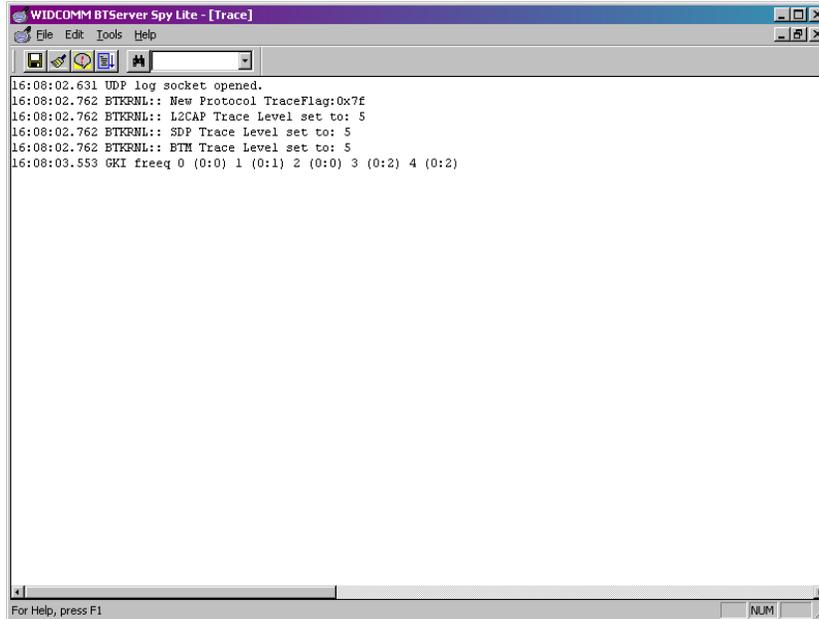
3   Menus & Toolbar

Figure 2 shows the Menu items and Icon shortcuts of the SpyLite interface.

Each icon displays a ToolTip (ScreenTip) when the cursor is over it.

The remainder of this section describes the individual menu items and the selections within each.

Figure 2:   SpyLite menus and toolbar options.
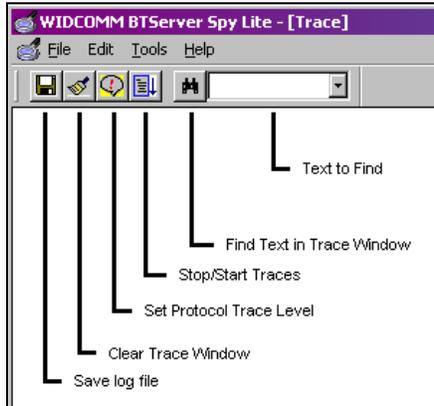
3.1   FILE MENU

The File menu (Figure 3) has one option: Exit, which closes the SpyLite application.

Figure 3:   File menu.
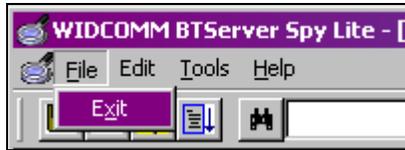
3.2   EDIT MENU

The Edit menu (Figure 4) has one option: Find in Trace.

This icon – ![binoculars icon] — will also access Find in Trace dialog box (Figure 5).

Figure 4:   Find in Trace option

Find in Trace allows the user to locate a word or group of words in the trace window.

- Type the text string to be found in the Find what: field.
- Check the "Match whole word only" and/or "Match case" options, as appropriate, and click Find All to execute the search.

The Trace window must be the active window, i.e., it must have the "focus."

Each instance of the search string will be highlighted in the trace window.

Figure 5:   The Find in Trace dialog box
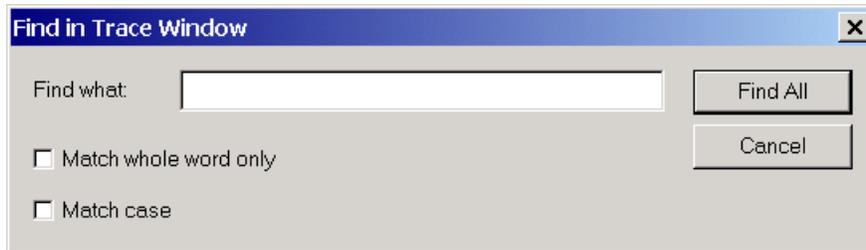
3.3 TOOLS MENU

The Tools menu (Figure 6) contains two groups of functions:

- Format/File Logging Options...—sets text and background colors; sets the font and font size; sets log file options.
- Set Trace/Clear Trace Options—controls the display and level of trace messages; clears the trace window

Figure 6:   Tools menu.

3.3.1 Format...

Displays a dialog box with two tabs (Figure 7):

- Trace Colors (Figure 7)—displays a list of trace items for which custom text colors and background colors can be set using the Windows color-picker.
  To set the trace colors:
  a) Click Tools > Format… and the Trace Colors tab.
  b) Double-click an item, e.g., "Error trace," in the list (Figure 7) to change its color properties. The background color picker (Figure 9) appears.
  c) Choose a background color from the color picker and click OK.
  d) A second color picker appears to allow the selection of the text color. Choose a text color and click OK.

  The "Default" button on the Trace Colors tab resets the background and text colors to their original settings.

NOTE: The Select Text Color picker appears in exactly the same location on the screen as the Select Background Color picker. The only way to tell them apart is to read the menu title bar.

- Set Font (Figure 8)—provides a means to select the font and font size of the text in the Trace window.
  To change the font and font size:
  a) Select Tools > Format… and the Set Font tab
  b) Choose a font from the drop-down menu. A sample of the font style appears in the Preview section of the dialog box.
  c) Choose a font size from the drop-down menu.
  d) Click OK to apply the choices and close the Color and Font Options dialog box.

  The Default button resets the text font style and size in the Trace window to the default, Courier New, nine points.

Figure 7:   Tools menu > Format... > Trace Color tab.
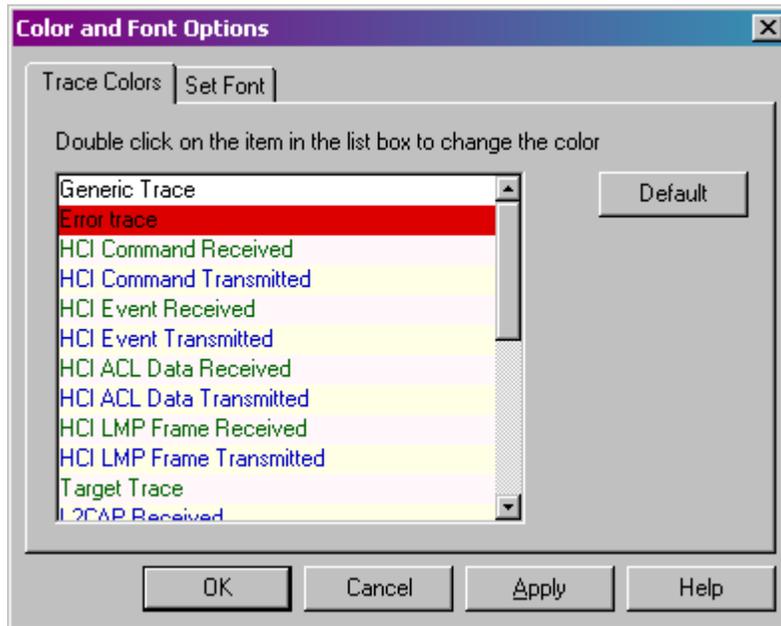
Figure 8:   Tools menu > Format... > Set Font tab
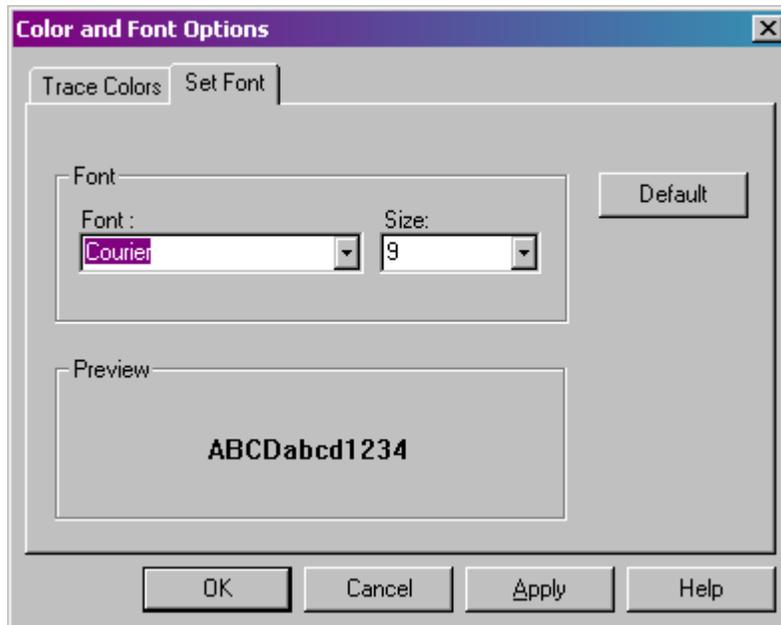
Figure 9: Tools menu > Format... > Trace background and text color pickers.

3.3.2 File Logging Options...

This icon — 🖫 — will also access the File Logging Options… (Figure 10).

Trace window output may be saved as log files in a user-specified directory and file names.

The "Append to File" option adds log information to the end of existing log file, specified in the "Log File Name." This option must be selected to create a single ongoing log; if it is not checked, the existing log file will be overwritten each time a trace is started by clicking the Start Logging button. If a trace is in process and "Append to file" is then checked, the log file will only contain trace information from that point forward.

The "Prepend trace window contents" option adds the entire contents of the Trace window to the existing log file. This specifically includes trace information that was generated before the point when the "Start Logging" button was clicked. If the trace information can be seen using the scrollbars in the Trace window, then that information will be added to the log file.

Regardless of the state of the "Prepend trace window contents" check box, whether the trace information is appended to, or overwrites the existing log file is still determined by the state of the "Append to file" check box

See Figure 11 for the effects of the Append and Prepend options.

Click Start Logging to begin writing data to the log file.

Click Stop Logging to terminate the logging process. No further data will be written to the log file.

Click OK close the File Logging Options window.

Click Cancel to nullify any changes that have been made and to close the window.

Figure 10:   Tools menu > File Logging Options... dialog box.
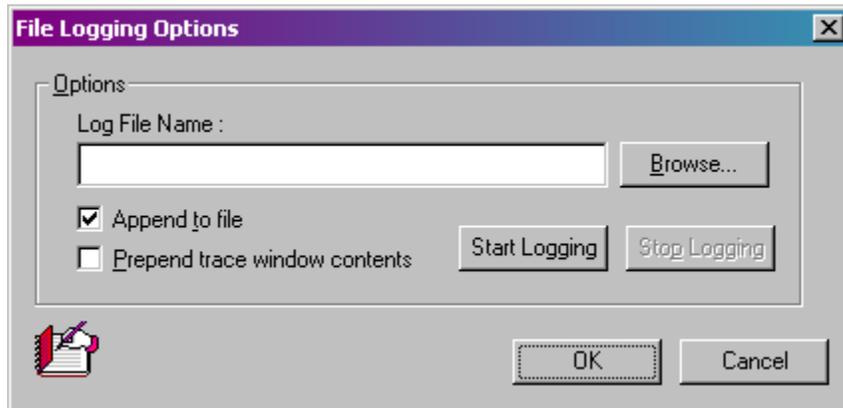
3.3.2.1 Saving log files for trace

Trace information is logged to a user specified HTML file (.*htm) or a text file (*.txt) for each trace, each time it is executed.

The file name extension "htm" (e.g., Log.htm) will cause the created log file to open in the default web browser when the log file is double-clicked.

The file name extension "txt" (e.g., Log.txt) will cause the created log file to open in the default text editor when the log file is double-clicked.

The root directory of the log file may be entered directly into the Log file Folder: field or selected using the Browse button.

To create a log file:

1. Click Tools > File Logging Options...
2. Enter the root logging directory:
    a) Type the directory name directly into the Log file Folder: field
        OR

        Click Browse (Figure 10) to navigate to the desired directory.
3. Click Start Logging and then click OK to close the dialog box.

To stop logging:

1. Click Tools > File Logging Options...
2. Click the Stop Logging and then click OK to close the dialog box.

Figure 11: The effects of the Append and Prepend options.

Select *Prepend trace window contents* to include everything from the Trace window in the existing trace log file, even if the data occurred before the Start Logging button was clicked.

Start Logging with the *Append to file* option checked was initiated when the trace was at this point in its execution. All trace information from this point forward will be appended to the existing log file.

If *Start Logging* is clicked without *Append to file* checked, the existing log file would be overwritten with the trace information from this point forward.

3.3.3   Set Protocol Trace

This icon – — will also access the Set Protocol Trace dialog box (Figure 12).

The "Trace Setting" section of the dialog box (labeled "Set Verbose Level") controls the display of messages created by the protocol analyzer feature of the SpyLite. The decoded air-interface messages show up as colored text in the Trace window.

When the check box associated with a protocol layer is checked, messages for that protocol layer are displayed.

The "Trace Level Setting" section of the dialog box controls the display of trace messages that exist throughout the software. In the Trace window, the default settings are: nine point black Courier New text on a white background.

The trace messages are assigned a level corresponding to the amount of information to display. Select a level of information for each of the available items.

The Trace Level Setting options, from least to most verbose, are:

- Error—displays only error messages.
- Warning—displays warnings and error messages.
- API—displays API-related information, warnings, and error messages.
- Event—displays Event and API-related information, warnings, and error messages.
- Debug—displays all messages (this is the default option).

If a check box associated with an item is un-checked, no information for that item is displayed in the Trace window.

The protocol and level settings can be set individually for maximum control.

Click Select All to check all boxes in the Set Protocol Trace Flag and Trace Level Setting sections and set the Trace Level Settings to the Debug option. (This is the default condition.

Click ClearAll to uncheck all selection boxes in the Set Protocol Trace Flag and Trace Level Setting sections.

3.3.4   Clear Trace

This icon – — will also clear the trace window.

Figure 12:   Tools menu > Set Protocol Trace options dialog box.