

How to use WinEdt 5 as an interface for TDA

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Description The text editor WinEdt 5 may be easily configured to provide a user interface for TDA. The configuration described below allows you to launch TDA command files directly from within WinEdt (via menu or shortcut). TDA's standard output will be written to disk and displayed in WinEdt automatically. Furthermore, you may also just execute selected parts of a command file.

Prerequisites Install TDA (<http://www.stat.ruhr-uni-bochum.de/tda.html>) and WinEdt 5 (<http://www.winedt.com>) on your Windows system. The following macros have been tested for TDA 6.4f and WinEdt 5.3 on Windows XP. Other TDA, WinEdt 5 and Windows versions should do as well. To be able to view the Post-Script plots produced by TDA, you might want to install Ghostscript and GSview (<http://www.cs.wisc.edu/~ghost/>)

Procedure Execution of the following macro will launch TDA and automatically load its output into WinEdt:

```
01 // cf.edt //
02
03 CMD("Save");
04 StartWorking("Running TDA ...");
05 IfStr('%S', '', '=', '>', >
06   |WinExe('', 'cmd.exe /C ""D:\Home\TDA\tda.exe">
07     cf=""%N%T"" >""%N.out""', >
08     '%P', 'TDA ...', 000100, 1, '', '', '');|, >
09   |OpenOutput("D:\Home\TDA\_temp.cf");>
10     WrL('print ("Source command file: %N%T");');>
11     WrL("%S");>
12     CloseOutput;>
13     WinExe('', 'cmd.exe /C ""D:\Home\TDA\tda.exe">
14       cf="D:\Home\TDA\_temp.cf" >""%N.out""', >
15       '%P', 'TDA ...', 000100, 1, '', '', '');|);
16 StopWorking;
17 Open('%N.out');CMD('Update');
18 End;
```

First, the command file you are currently working on will be saved to disk (line 3) and WinEdt will be locked (line 4). Then, if there is no selection (i. e., if %S is empty; line 5), the whole command file will be executed by TDA (lines 6–8). Otherwise,

the selection will be copied to a temporary command file (lines 9–12) which will be executed by TDA (lines 13–15). Finally, WinEdt will unlock (line 16) and TDA’s output will be loaded (line 17). Note that the output will be saved to disk (using the name of the command file and extension “.out”).

While TDA is processing the command file, WinEdt will be locked, i. e. the hour-glass appears and you cannot work on your file for that time. Thus, if launching time consuming jobs, you might want to use an alternative code, which doesn’t lock WinEdt (and doesn’t display the output automatically):

```

01 // cf_silent.edt //
02
03 CMD("Save");
04 IfStr('%S', '', '=', >
05   |WinExe(' ', 'cmd.exe /C "'D:\Home\TDA\tda.exe">
06     cf=""%N%T"" >""%N.out""", >
07     '%P', 'TDA ... ', 010000, 1, ' ', ' ', ' '); |, >
08   |OpenOutput("D:\Home\TDA\_temp.cf"); >
09     WrL('print ("Source command file: %N%T");'); >
10     WrL("%S"); >
11     CloseOutput; >
12     WinExe(' ', 'cmd.exe /C "'D:\Home\TDA\tda.exe">
13       cf="D:\Home\TDA\_temp.cf" >""%N.out""", >
14       '%P', 'TDA ... ', 010000, 1, ' ', ' ', ' '); |);
15 End;

```

Change all occurrences of “D:\Home\TDA” to the path name of your TDA directory (note that names with spaces are fully supported) and save the two macros (without the line numbers) to a location of your choice (e. g., in the TDA directory or somewhere in the WinEdt path).

Although it is possible to execute the macros manually (“Macros” => “Execute Macro...”) I propose to set up corresponding menu and/or shortcut items. For example, use the following definitions:

```

01 // m_tda.dat //
02
03 MAIN MENU: 170
04 // Extracted from WinEdt 5
05
06 MENU:T&DA
07   Flags:0
08   Hint:
09   Macro:11
10     Item:Run &TDA
11     Definition:Exe("D:\Home\TDA\cf.edt")
12     Shortcut:16452
13   Macro:11

```

```

14     Item:Run TDA (&silent)
15     Definition:Exe("D:\Home\TDA\cf_silent.edt")
16 Macro:27
17     Item:&Open .out
18     File:%P%\N.out
19     Definition:Open('%P%\N.out');CMD('Update')
20 Utility:1
21     Item:TDA &Interactive
22     Definition:D:\Home\TDA\tda.exe i
23 Macro:3
24     Item:TDA &Manual
25     Definition:Run(|%$( 'AcroRead' ); "D:\Home\TDA\doc\tman.pdf" |);
26     Image:33
27 END Menu:T&DA

```

Adjust the path names and save the definitions to "C:\temp\m_tda.dat" (or alike). Open WinEdt's macro dialog ("Macros" => "Define and Run Macro...") and type "AddMenus("C:\temp\m_tda.dat")" in the "Command Line:" field to load the definitions.

A new menu "TDA" will be added to your menu bar. It contains the items "Run TDA", "Run TDA (silent)", "Open .out", "TDA Interactive", and "TDA Manual". "Run TDA" (or shortcut "Ctrl+D", respectively) executes the current command file (or a selection of it) and displays the output. WinEdt will be locked while TDA is working. "Run TDA (silent)" executes the current command file in background mode, i.e., WinEdt won't lock and the output won't be loaded (use this for time consuming jobs). After TDA terminates you may use "Open .out" to fetch the output. "TDA Interactive" will start TDA in interactive mode (useful, e. g., to view TDA's help entries; for example, type "help=rate;" to see the help page of the command "rate"; type "exit;" to leave interactive mode). "TDA Manual" will open the PDF version of TDA's documentation.

Use WinEdt's menu setup dialog ("Options" => "Menu Setup..."), if you want to customize the menu items.

Technical note Restating WinEdt may help if something doesn't work right away. Check all path names if problems persist.

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