

Time Tracker[®] User Guide



Time Tracker

Software Version: 4.40

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Document Change Log

Date	Author	Version	Change Reference
09/28/2007	Joseph Chen	1.1	Initial version.
10/02/2007	Joseph Chen, Roland Bennett	1.2	Paragraph revision and justify all text. Add software logo.

1. Introduction

Time Tracker (TT) is a PC activity monitor application for Windows. The main objective and the unique feature of TT is a time tracking tool that requires little user intervention.

Ever spent the day in front of your PC, only to wonder at 5pm what you did that day? TT will tell you.

TT will sit in your system tray and check every second which window is currently active on your desktop. The active window is the one you are currently typing or clicking in, and should provide an accurate estimate of what you are working on. TT captures the window caption from the title bar and tracks the active time for that window.

Who wants to do the boring work of timesheets? Rules allow TT to be able to tell which window activity belongs to which user task automatically. Rules can be one or more partial window captions or file names, when any of these conditions are met, TT will start the task timer. When the conditions cease, TT will stop the task timer.

TT also allows the traditional feature of manual timers. You may enter your own task name and either double click (or use Space or Enter) to start/stop the task timer.

However, TT does not capture keystrokes or mouse clicks. TT does not use the Internet. TT does not use the Windows registry.

The window and task active times can be saved to CSV (comma separated value) files.

TT was designed to use very little computer resources, especially when running minimized.

TT does not need to be installed, simply run the exe file. It can even run from any USB flash disk. The main functions of TT are available in a popup menu, right click anywhere in the window or on the system tray icon to display the popup menu.

TT was tested under Windows 98, XP and Vista. It should also run under 95 and 2000.

Basic package of Time Tracker includes the following files:

- license.txt: A copy of the GNU General Public License, version 2.0, June 1991.
- readme.txt: A simple readme file.
- TaskList.txt: A list of tasks and their trigger rules. Do not edit this file directly.
- TimeTracker.exe: Executable of the application. You can create a window short-cut of this executable program and place the short-cut in your Windows start-up folder to have the application running whenever you start your computer. For Windows Vista, do not place the executable program under the 'Program Files' folder, because Windows Vista uses folder virtualization to prevent file updates in that folder and this would prevent the update of application settings and the update of output files.
- TimeTracker.ini: Application settings.
- TimeUsage.csv: Application output of time usage history in CSV format.
- Uptime.csv: Application up-time in CSV format. If TT is placed in the start-up folder, this would be equal to your system up-time.

The following sections explain details of application settings, menu items, task and rule settings, and output data files.

2. Basic Settings

The application settings are stored in the 'TimeTracker.ini' file. The options that can be changed are:

- **TransparencyPercentage** (preset value =30): The level of transparency of the application main window (Windows XP only) with 0 being non-transparent and 100 being invisible.
- **FilterView** (preset value = 0, disabled): This is the same as the Options> Filter Windows menu item. It displays the tasks and activities which are active within the recent number of seconds specified by FilterCutoffSeconds, if enabled; otherwise, it displays all tasks and activities tracked.
- **FilterCutoffSeconds** (preset value = 120): It works with FilterView, if enabled, to display the tasks and activities which are active within the recent number of seconds. You can hide all non-task activity listing by setting the FilterCutoffSeconds value very high.
- **ListRefreshRateSeconds** (preset value = 1): It sets the update frequency of displayed data, when the application is not minimized. Preset value is to refresh data display at every second.
- **AlwaysOnTop** (preset value = 0, disabled): It is the same as the Options> Always On Top menu item. If enabled, the application always stays on top of other windows, when multiple windows are opened on your desktop. This provides the effect of a desktop clock. This feature is useful, if you need to use the manual timer feature to track your task time manually.
- **IdleCutoffSeconds** (preset value = 60): It identifies the threshold, in seconds, of an idle task. If there is no mouse or keyboard input beyond the threshold, your working time is considered to be in the idle state.
- **IgnoreWindowCaptions** (preset value = 0, disabled): It determines whether rules should be applied to Windows' captions or not. Default setting is to apply rules to Windows' captions; otherwise, if enabled, rules are applied to process file names only.
- **PromptWhenClosing** (preset value = 1, enabled): If enabled, the application prompts users to save data, when users or Windows system is closing the application; if disabled, the application does not prompt users to save data.
- **SaveTasksOnly** (preset value = 0, disabled): It is the same as the Options> Save Tasks Only menu item. If enabled, the applications saves only task data; otherwise, the application saves both task and window activity data.
- **AutoSave** (preset value = 0, disabled): It is the same as the Options>Auto Save menu item. If enabled, the application automatically saves data without prompting the user, when the application is closed.

- **ListGridLines** (preset value = 1, enabled): If enabled, the application shows grid lines in the list view.
- **UptimeSave** (preset value = 1, enabled): If enabled, the application automatically saves TT uptime values.
- **SaveHourFractions** (preset value = 0, disabled): If enabled, in addition to time saved as hh:mm:ss, the application also saves time in fractions of hours.
- **LockStationAfterIdleSeconds** (preset value = 0, disabled): If enabled, the application is able to lock your computer for you, when user's working status becomes idle beyond the time limit specified by IdleCutoffSeconds. This setting is the same as Ctrl+Alt+Delete (available for Windows 2000, NT, XP, Vista).

3. Menu Items and Tabs

When you run the application, the application is running as a background application in your task tray with an icon of TT.



Figure 3.1: Time Tracker Running in Task Tray

If you double click the icon, the application window pops up. If you set TransparencyPercentage to be a non-zero value, your application window may not be as clear as the images below. Also, if your window is small, you can drag any corner of the window to make it bigger.

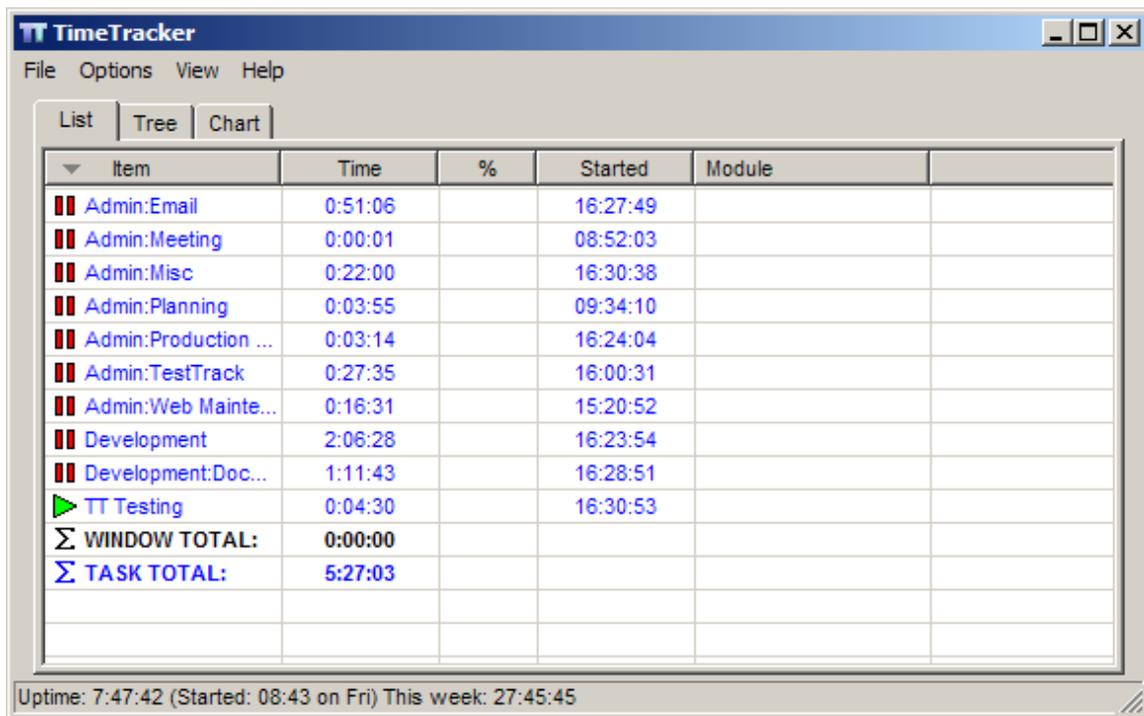


Figure 3.2: Time Tracker Application Window

Your window content may be different from what are shown here, depending on your settings of task (which will be explained later).

In the application window, we have 4 menu items and 3 tabs. The menu items are File, Options, View, and Help. The tabs are List, Tree, and Chart.

The **File** menu has the following 5 menu items as shown in Figure 3.3.

1. Load Task List: Load task list of your choice. The task list file needs to be a text file and in the format described in Section 4.
2. Save Items: Save your task time in CSV format.
3. Edit Settings: Open the application setting file, TimeTracker.ini, in a text editor (like Note Pad) for you to change.

4. Reload Settings: Reload your application settings after changes were made to the TimeTracker.ini file.
5. Exit: Exit application.

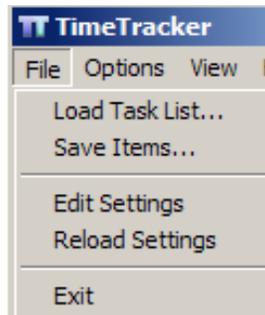


Figure 3.3: File Menu Items

The **Options** menu has the following 5 menu items in Figure 3.4. These menu items are on/off switches of application features. Each of these items has a corresponding variable in the application settings. If a feature is enabled, you would see a check mark next to the feature; if disabled, the check mark is removed.

1. Always On Top: Like AlwaysOnTop in application settings, if enabled, the application always stays on top of other windows, when multiple windows are opened on your desktop. This provides the effect of a desktop clock. This feature is useful, if you need to use the manual timer feature to track your task time manually.
2. Filter Windows: Like FilterView in application settings, it displays the tasks and activities which are active within the recent number of seconds specified by FilterCutoffSeconds in application settings, if enabled; otherwise, it displays all tasks and activities tracked.
3. Save Tasks Only: Like SaveTasksOnly in application settings, if enabled, the applications saves only task data; otherwise, the application saves both task and window activity data.
4. Auto Save: Like AutoSave in application settings, if enabled, the application automatically saves data, when the application is closed.
5. List Lines: Like ListGridLines in application settings, if enabled, the application shows grid lines in the list view.

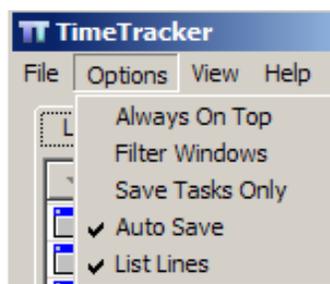


Figure 3.4: Options Menu Items

The **View** menu has the following 2 menu items in Figure 3.5.

1. Refresh Now: Refresh data in active tab as shown in Figure 3.6.
2. Clear Window Items: Clear all activity tracking data except for tasks. For example, Figure 3.6 shows the data in the List tab after we refresh data in the tab. If we click View> Clear Window Items, a window pops up as shown in Figure 3.7 to confirm our decision to clear the window items. If we click OK, we have the data in Figure 3.8 for the same List tab. Note that only tasks with their usage time are listed in the tab as a result of the Clean Window Items.

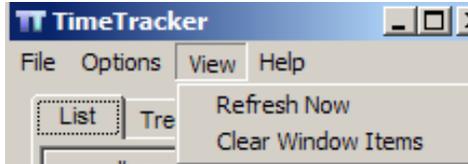


Figure 3.5: View Menu Items

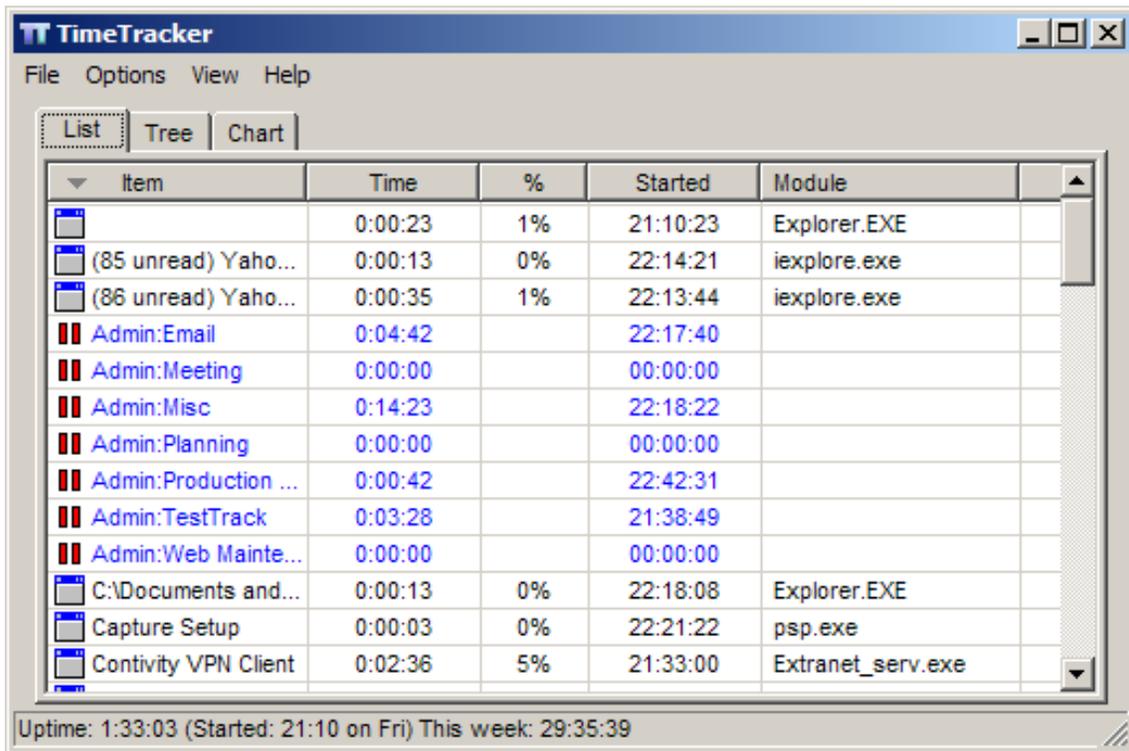


Figure 3.6: List Tab after Refresh

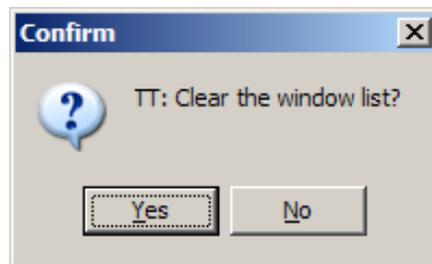


Figure 3.7: Confirmation of Clear Window Items

Item	Time	%	Started	Module
Admin:Email	0:04:42		22:17:40	
Admin:Meeting	0:00:00		00:00:00	
Admin:Misc	0:14:23		22:18:22	
Admin:Planning	0:00:00		00:00:00	
Admin:Production ...	0:00:56		22:43:38	
Admin:TestTrack	0:03:28		21:38:49	
Admin:Web Mainte...	0:00:00		00:00:00	
Development	0:00:21		22:13:10	
Development:Doc...	0:22:00		22:42:33	
TT Testing	0:01:47		22:43:40	
Σ WINDOW TOTAL:	0:00:00			
Σ TASK TOTAL:	0:47:37			

Uptime: 1:33:21 (Started: 21:10 on Fri) This week: 29:35:57

Figure 3.8: List Tab after Window Items Are Cleared

The **Help** menu shows the information window of the application (Figure 3.9).



Figure 3.9: Test Tracker Information Window

Next, we describe details of the List, Tree, and Chart tabs.

The **List** tab provides a listing of activities and tasks, which are tracked by TT, and their tracking information (Figure 3.10). The tracking information includes task and activity names, and their duration, start time, file (module) names, and ratios to the total window time.

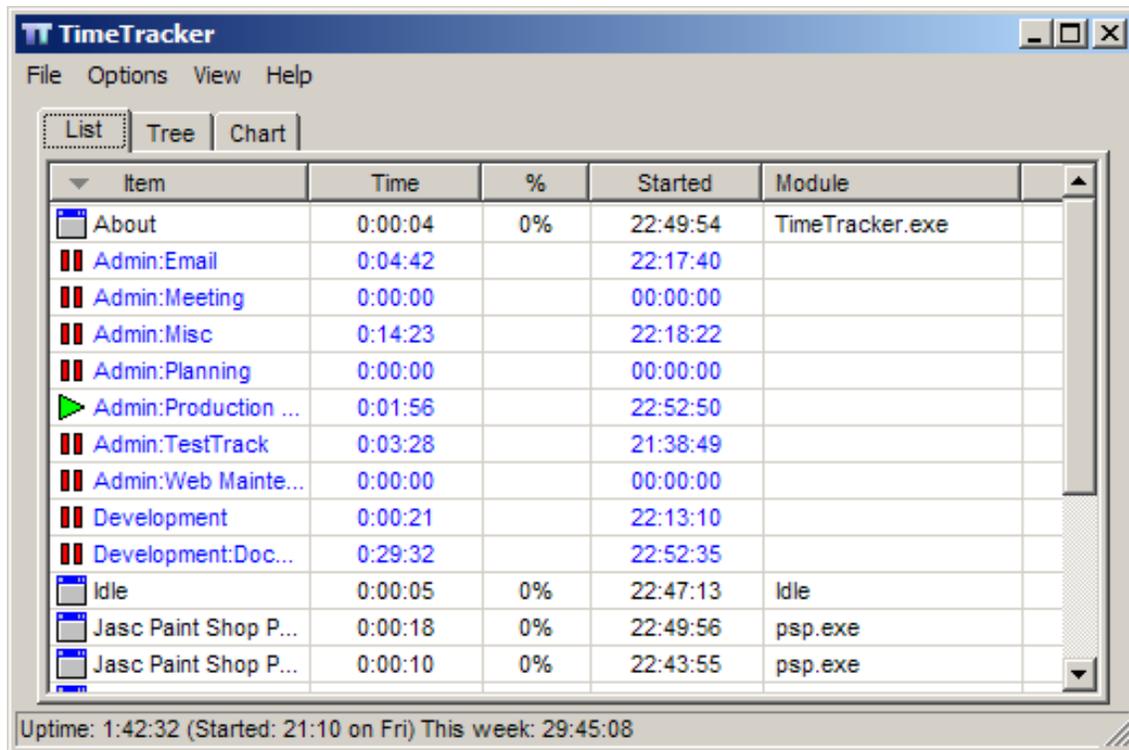


Figure 3.10: List Tab

For each task, a green arrow (play) identifies an active task; a red pause sign indicates a non-active task. TT determines a task to be active, if its rule is triggered or the task is turned on manually.

To turn on/off a task manually, you would need to highlight a task and take either of the following action: double-click the task, press space key, or press enter key. Once a task is turned off, TT resumes its tracking based on task rules.

You can order items in this tab by clicking the header of the column which you would like to use to sort the items in a descending manner.

In this tab, you can also perform additional functions through its right click menu as shown in Figure 3.11.

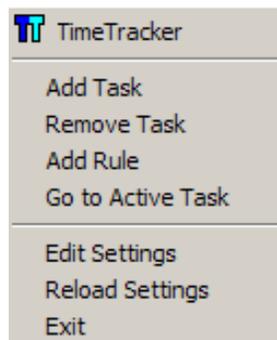


Figure 3.11: Right Click Menu in List Tab

The right-click menu allows you to

- Add Task: Add a new task (Section 4).
- Remove Task: Remove a task (Section 4).
- Add Rule: Add rules to the selected task (Section 4).
- Go to Active Task: Go to current active task (Section 4).
- Edit Settings: Open application settings in Note Pad for edit.
- Reload Settings: Reload application settings from a file.
- Exit: Exit application.

Keyboard options are also available for these task related menu items. You can use '+' or 'Insert' to add a task, and '-' or 'Del' to remove a task.

Section 4 will provide details of task management in TT and cover the task-related items in the right-click menu.

The **Tree** tab provides a listing of tasks and activities in a tree structure (Figure 3.12). In this window, you can do drag-and-drop activities into a task or use 'Del' key to remove activities in a task.

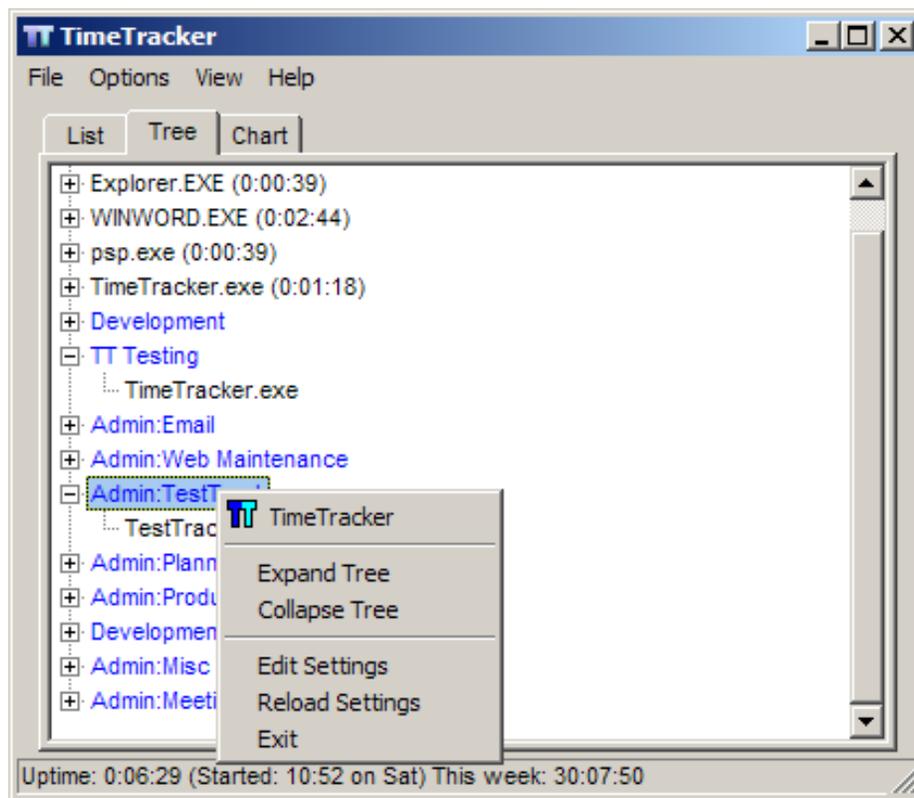


Figure 3.12: Tree Tab

The tab also provides right-click menu for each task or activity in the window. The right-click menu has menu items as Expand Tree, Collapse Tree, Edit Settings, Reload Settings, and Exit. In the tab, you can click View> Refresh Now to refresh items in the tab and click View> Clear Window Items to remove activities and leave only tasks listed in the tab.

The **Chart** tab provides the usage time of activities in a pie chart (Figure 3.13). The tab provides right-click menu with menu items as Edit Settings, Reload Settings, and Exit. In the tab, you can click View> Refresh Now to refresh the pie chart. Since the pie chart does not the usage time of tasks, if you click View> Clear Window Items, you would simply have a blank chart.

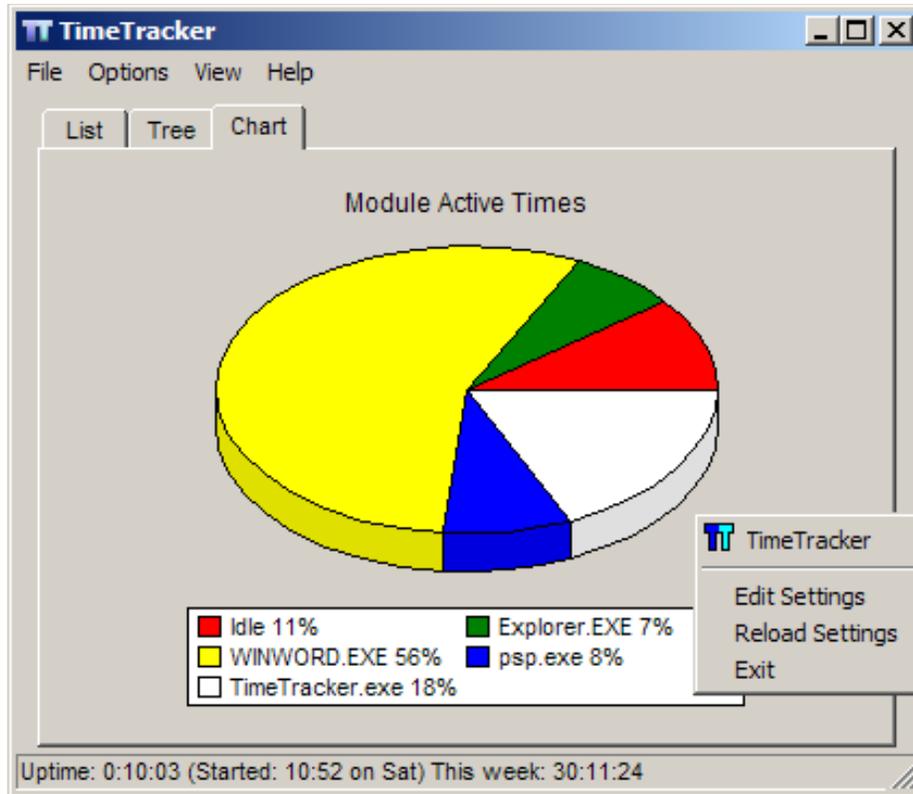


Figure 3.13: Chart Tab

The status at the bottom of the application window shows your total up-time, when the application was last started, and the total up-time for the current week starting from Monday. Next section describes how tasks are managed in the application.

4. Task Management

Task data and their trigger rules are stored in TaskList.txt by default. It is not recommended to edit this file directly unless you fully understand the data structure of the task configuration file.

In the file, each row of data represents a task which you would like the application to track its usage time, when the application is running. A row starts with a task name followed by an equation operator and its list of trigger rules or patterns, separated by commas.

Taskname="Window Caption1", "Window Caption2", "Window Caption3", "File name"

TT will apply these patterns to your active application file names and application window captions. If there is a match, e.g., the patterns are substrings of active application file names or window captions, it turns on the tracking of the corresponding task. This is why they are called trigger rules. If there is a match on multiple tasks, all matching tasks are turned on automatically. When the match is no longer valid, the tracking of these tasks is turned off. The matching of trigger rules is case-sensitive.

To add a task, you will need to use the right-click menu in the List tab by clicking Add Task anywhere in the tab. TT then shows you the window in Figure 4.1 for you to add a task.

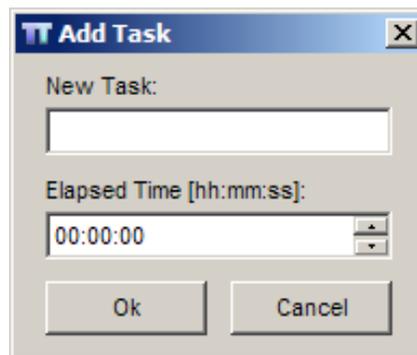


Figure 4.1: Add Task Window

In this window, you just need to type in a new task name and optionally specify a time, if the task has been started for a while.

TT does not support task category or group directory. But, this can be achieved through the naming of your tasks. For example, if you have E-Mail, Meeting, Training, Production Support, and Misc as your administrative related tasks, you can name these tasks as Admin:E-Mail, Admin:Meeting, Admin:Training, Admin:Production Support, and Admin:Misc. This way, when you use an external program or script to parse the data of TT, you can use the naming convention to find the total amount of time spent in administrative related tasks.

A task can be removed by selecting the task that you want to remove first and then clicking Remove Task in the right-click menu in the List tab (Figure 4.2). The pop-up window then confirms your decision to remove the task. If you click Yes, the task and its trigger rules are removed.

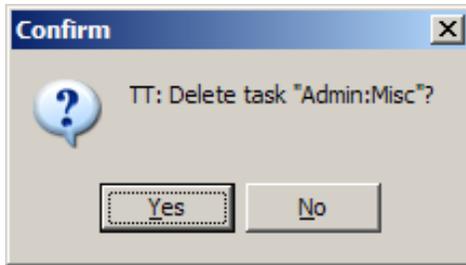


Figure 4.2: Remove Task Window

To add a rule to a task, you can either right click the task in the List tab and click the Add Rule menu item, or right click any item in the List tab and click the Add Rule menu item. Figure 4.3 shows you the pop-up window, when you click the Add Rule menu item.

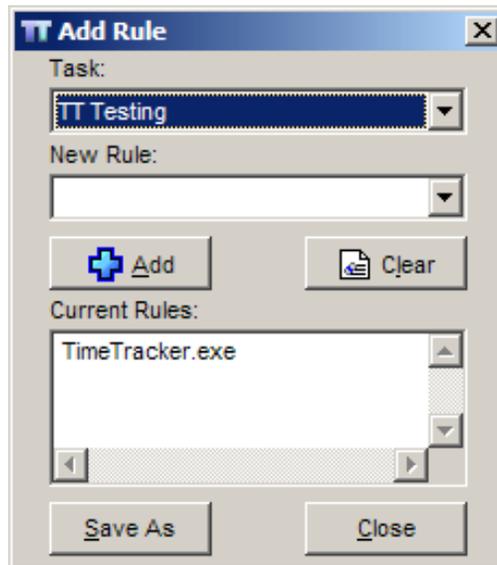


Figure 4.3: Add Rule Window

In the Add Rule window, you can click the Task drop-down box to change the task that you want to add rule to. The selected task in the list tab is by default the one which rules are added to. Once a task is selected, you can type in the trigger rule / pattern in the New Rule box. The New Rule drop-down provides a list of all active activities in your computer. You can type in your own trigger pattern / rule, select one from the list, or edit the one in the list and change it to be your own simple trigger pattern. Once you have your trigger pattern / rule filled out in the New Rule box, you can click the Add button to add the rule to other rules of the same task. If you click the Clear button, you would clear ALL rules defined for the task. The Save As button allows you to save all of your task and rule settings in the default file or in a different file. The Close button simply closes this window.

Next section describes output data of the TT application.

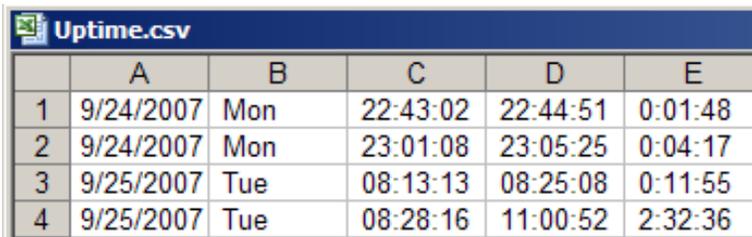
5. Time Usage and Up Time

In addition to application settings in 'TimeTracker.ini', the TT application creates two output files:

- Uptime.csv: A log of your TT usage time, and
- TimeUsage.csv: A log of your usage time by tasks and activities.

Both files have data separated by commas so you can use any text editor to open and edit them, e.g., Note Pad, Excel, and OpenOffice. New data are appended to both files automatically, i.e., old data remain in both data files, if not removed manually.

The 'Uptime.csv' file reports your computer usage time with the following data: Usage Date, Usage Week Day, Usage Start Time, Usage End Time, and Usage Time, as shown in Figure 5.1.



	A	B	C	D	E
1	9/24/2007	Mon	22:43:02	22:44:51	0:01:48
2	9/24/2007	Mon	23:01:08	23:05:25	0:04:17
3	9/25/2007	Tue	08:13:13	08:25:08	0:11:55
4	9/25/2007	Tue	08:28:16	11:00:52	2:32:36

Figure 5.1: Uptime.csv

The 'TimeUsage.csv' reports your detailed usage time with the following data: Usage Date, Usage Week Day, Task Name or Window Activity Caption, Usage Time, Usage Start Time, and Name of window application (if the activity does not belong to any task).

142	*****								
143	9/26/2007	Wed	"Admin:Email"	1:27:35	13:58:25				
144	9/26/2007	Wed	"Admin:Meeting"	0:54:04	13:54:08				
145	9/26/2007	Wed	"Development"	0:37:30	14:02:44				
146	9/26/2007	Wed	"Admin:TestTrack"	0:19:37	14:01:51				
147	9/26/2007	Wed	"TT Testing"	0:13:34	14:03:21				
148	9/26/2007	Wed	"Admin:Misc"	0:08:26	14:03:13				
149	9/26/2007	Wed	"Admin:Production Suppo	0:02:18	14:02:36				
150	9/26/2007	Wed	"Admin:Web Maintenance	0:02:05	13:54:19				
151	9/26/2007	Wed	"Admin:Planning"	0:01:46	11:15:53				
152	9/26/2007	Wed	"WebEx Meeting Manage	0:08:05	13:18:22	"C:\Program Files\WebEx\atmgr.exe"			
153	9/26/2007	Wed	"Idle"	0:04:57	13:18:58	"Idle"			
154	9/26/2007	Wed	"Inbox - Microsoft Outlook	0:04:14	13:34:46	"C:\PROGRA~1\MICROS~2\OFFICE11\OUTLOOK.EXE"			

Figure 5.2: TimeUsage.csv

Each session of your computer usage is separated by '*****'. For example, in Figure 5.2, the session was recorded on September 26th of 2007. During the session, the user spent an hour and 27 minutes on Email task, 54 minutes on Meeting, 37 minutes on Development, ..., etc. Email task started at 1:58 pm. Meeting started at 1:54pm. There is a "atmgr.exe" application running at 1:18pm for 8 minutes with a window caption as "WebEx Meeting Manager ...". The computer was idle at 1:18pm for almost 5 minutes.

So, if you find additional items in your 'TimeUsage.csv' not being included in your tasks, you may add them to your task rules so you can have a better tracking of your task time.

In summary, Task Tracker is a small window application but provides complete support of task tracking on your computer desktop. It supports both automatic tracking of tasks through task rules applied to running window activities and their window captions, and manual tracking of tasks through a very friendly user interface. I hope you find it to be a very useful tool to improve your productivity. Please feel free to send me your feedback at <http://sourceforge.net/projects/ttracker>.

Appendices of this user guide provide a list of past software releases with their enhancements and a copy of the GNU GPL license for the distribution of the software.

Appendix

A. Software Releases

Version	Release Date	Release Note
4.4.0	13 Sep. 2007	Fixed bug with system date format when calculating current week uptime. Fixed bug which allowed task nodes to be dragged.
4.3.0	01 Sep. 2007	Fixed bug where time part in the tree view was also dragged. Implemented Feature Request (1715259) i.e. added tasks to tree view and added drag and drop support. Added INI setting: LockStationAfterIdleSeconds. Added DEL key functionality for tree view task nodes.
4.2.0	12 Aug. 2007	Fixed bug when saving uptime to file. Added timeout to popup menu when nothing selected. Added error prompt when unable to save 'Uptime.csv'. Implemented Feature Request (1710688) i.e. removing comma characters in task or window names when writing to csv file. Added INI setting: SaveHourFractions.
4.1.0	22 April 2007	Added display of uptime for the current week. Fixed bug where the application prevented shutdown. Fixed sorting of list columns when items have the same name. Fixed flickering in the status bar. Added Started column to the list view. Added Start and End times to 'Uptime.csv'. Added Start times to 'TimeUsage.csv'. Added Find Active Task to popup menu (F3). Added started task name as system tray hint.
4.0.0	15 April 2007	Major release. Changed look&feel to match Windows Task Manager. Added elapsed time to Add Item dialog. Changed list view to "virtual" mode to improve performance for a large number of items.
3.3.0	22 March 2007	Added tree and chart view (for window items only). Fixed critical window handle leak. Added different system tray icons for when a task has started.
3.2.0	19 March 2007	Added Edit INI to popup menu. CSV file items are now sorted according to time. CSV file window items are now also filtered selected on the popup menu. Added Uptime.csv file. Fixed popup menu items when minimized.
3.1.0	10 March 2007	Added detailed error messages when loading task list fails. Close button now minimizes the window. Added branding to popup menu.
3.0.0	03 March 2007	Prevented duplicate entries for a new rule. This is the initial public release.

B. GNU GPL License

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