The KTimetracker Handbook

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Abstract

KTimetracker tracks time spent on various tasks.

Chapter 1

Introduction

KTimetracker tracks time spent on various tasks. It is useful for tracking billable hours and can report the hours logged by task and day.

This time history can be exported to a comma-delimited text file for import into other billing and/or project management tools.

KTimetracker detects when your keyboard and mouse are idle and can associate different tasks with different desktops, two tools that can help keep the timer running on the correct task.

KTimetracker was originally written by Sirtaj Singh Kang. The word 'karm' means 'work' or 'deeds' in the author's native Punjabi and is the same word (but a better transliteration) as 'karma'.

Chapter 2

Using KTimetracker

2.1 Starting KTimetracker

Type **ktimetracker** at a command prompt or select Personal Time Tracker from the Applications → Utilities group in the KDE start menu. The standard Qt™ and KDE command options are available, and can be listed by entering **`ktimetracker --help`** at the command line.

KTimetracker provides an additional command option that allows you to enter the name of the iCalendar file that is used to store your labor history. You enter a remote iCalendar file by using http or ftp as part of the file name; for example, http://www.mysite.com/mydata/mylabor.ics.

2.2 Tasks

Problem: You are a free software consultant with many clients. Some clients have multiple projects. During the course of a day, you switch back and forth between different projects. You need to track your time to generate monthly invoices.

Solution: Create one top-level task for each client and a subtask for each client project. For projects that require more detailed tracking, create a list of project subtasks. Track time by double-clicking on task you are currently working on.

KTimetracker provides great flexibility in tracking your time, allowing unlimited tasks and task depth. Time may be logged to any task, and more than one task can be active at any given time.

To create a top-level task, select Task → New (**Ctrl+N**) To create a subtask, pick the parent task and select Task → New Subtask (**Ctrl+Alt+N**)

When KTimetracker exits, the task list is saved to the file specified in Settings → Configure KArm. When it next opens, it reloads the task list from the same file.

KTimetracker can import and export tasks to minimize your work. See Other Systems.

2.3 Timers

Problem: To remain solvent, you must bill an average of five hours a day. To stay on track, you watch your daily and weekly totals.

Solution: Reset the session timer at the beginning of each work day and reset all timers at the beginning of each week.

KTimetracker makes tracking time simple. To start logging time against a task, double-click on the task. To stop logging time, double-click the task again. Active tasks display a small clock in the Session Time column.

Another visual clue of logging activity is the KTimetracker system tray icon. When a task is active, the second hand in the icon moves. If you rest the mouse pointer over this icon, the name of the active task will display in a tooltip. If more than one task is active, the task names in the tooltip are separated by commas.

KTimetracker maintains two timers for each task: one for the session time and one for the total time. In the default configuration, KTimetracker displays two columns for each timer, resulting in a total of four columns for each task:

Session Time The time spent on the task since the session began.

Total Session Time The time spent on the task and all its subtasks since the session began.

Time The time spent on the task since all times were reset.

Total Time The time spent on the task and all its subtasks since all times were reset.

To start a new session, select File → Start New Session

To reset all times, select File → Reset All Times

2.3.1 Desktop Tracking

Problem: You have two main projects that you switch between each day. To help organize your work, you keep your project 1 files on Desktop 1 and your project 2 files on Desktop 2.

Solution: Associate project 1 task with Desktop 1 and the project 2 task with Desktop 2. When you switch from Desktop 2 to Desktop 1 active, KTimetracker automatically stops the project 2 task and starts the project 1 task.

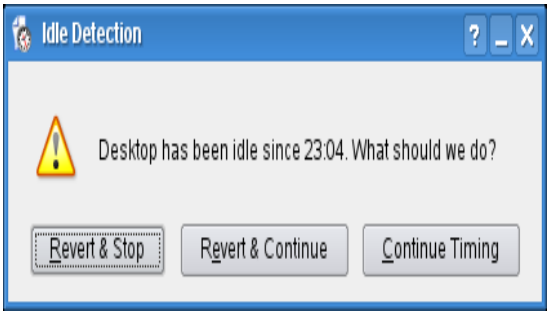
To associate a task with a one or more desktops, select Task → Edit (**Ctrl+E**). Turn on Auto tracking and select the desktop or desktops to associate with this task. When any of the selected desktops becomes active, after a short delay KTimetracker will be automatically start logging time against that task.

2.3.2 Idle Detection

Problem: You leave work early on Friday to run an errand and forget to stop the timer. When you return on Monday, the timer is still running.

Solution: Turn on idle detection.

KTimetracker can be configured to detect when the mouse and keyboard become idle. If the mouse and keyboard are idle for longer than the specified number of minutes, KTimetracker displays the following dialog:



Revert & Stop Subtract the amount of idle time from all active timers and stop them.

You were not working on the task(s) while you computer was idle and you are still are not.

Revert & Continue Subtract the amount of idle time from all active timers but keep them running.

You were not working on the task(s) while your computer was idle but you are now.

Continue Timing Apply the idle time to all active timers and keep them running.

You were working on the task(s) while your computer was idle and still are.

2.4 Reporting

KTimetracker provides three ways to report on time you have logged. You can send the session and time totals to the printer, copy the time totals to the clipboard, or copy the time history to the clipboard.

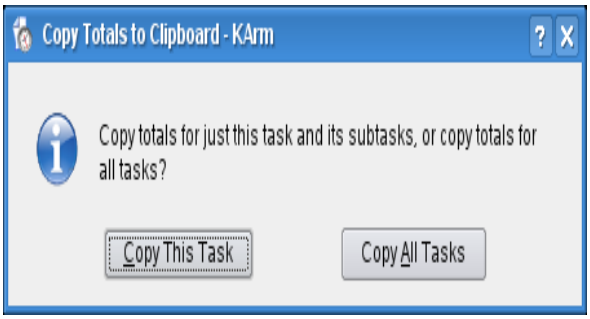
2.4.1 Print Totals

To generate the totals report for the printer, select File → Print (**Ctrl+P**). This generates a three-column report for the complete list of tasks. The first column is the task name, the second column is the Total Session Time and the third column is the Total Time.

2.4.2 Clip Totals

To generate the totals report to the clipboard, select File → Copy Totals to Clipboard (**Ctrl+C**).

This report is generated for the currently selected task and all its subtasks. If the current task is a top-level task, KTimetracker asks you if you want to generate the report for the current task and its subtasks or for the entire task list.



Once the report is generated, open KEdit or some other text editor and paste the report data.

```
Task Totals
2004-07-10 02:26
__Time____Task_____________________________
  9:14    kde
   9:14    karm
    1:08    bugs
    0:00    checkin changes
   0:00    promo
___0:00____web_stuff_____________________
  9:14 Total
```

The first column is the Total Time and is indented (like the task names) to indicate task/sub-task relationships. The reported times include the sub-task times.

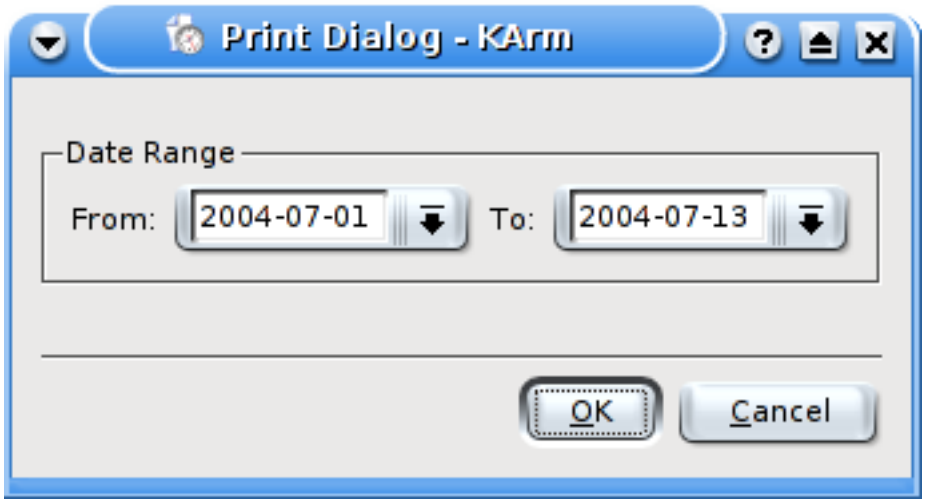
2.4.3 Clip History

To generate the totals report to the clipboard, select File → Copy History to Clipboard (**Ctrl+Alt+C**).

> IMPORTANT
> You must turn on the Log History option in Settings → Configure KArm. Otherwise, KTimetracker only keeps track of totals and not the detailed task history.

This report is generated for the currently selected task and all it's subtasks. You also have the choice to generate it for all tasks.

When you select the history report, KTimetracker first prompts you to enter the date range for the report:



After entering a date range, open KEdit or some other text editor and paste the report data.

```
Task History
From Thursday 01 July 2004 to Monday 12 July 2004
Printed on: 2004-07-12 17:18
                                  Week of Monday 05 July 2004
_____5_____6_____7_____8_____9____10____11_____________________________________
                                                0:00 kde
                                                0:00  dc
               !:22  1:46  3:14  1:44           8:06  karm
                                                0:00   3.2 feature plan
               1:08                             1:08   bugs
                                                0:00   checkin changes
                                                0:00  promo
_____________________________________________0:00__web_stuff_____________
               2:30  1:46  3:14  1:44           9:14 Total
```

The task history is totaled for each day and task, grouped by week. The first seven columns are Monday through Sunday. The eighth column is the total for the week and the ninth column is the task name. The task names are indented to indicate the task/sub-task relationships.

2.5 Other Systems

2.5.1 KOrganizer

KTimetracker, like KOrganizer and Apple's iCal, uses the industry standard iCalendar format for its data. KTimetracker can read and write the to do lists created by these two applications.

> WARNING
> If both KTimetracker and KOrganizer have the same file open, if you edit the file with KOrganizer, you risk losing data. To be safe, only edit the file with one application or the other.

2.5.2 Planner

As a typical usecase, you might want to plan a project with the project management tool Imendio Planner (from planner.imendio.org) and import its tasks to KTimetracker, to have them in the industry standard iCalendar format. Having done so, you are able to schedule the tasks in KOrganizer, and account your time to them in KTimetracker. That's one way to help ensure your project stays on time and under budget.

2.5.3 D-Bus

D-Bus is the mechanism KDE programs use to communicate with each other. A KDE program provides a list of functions that other programs (a Bash script, for example) can use.

Example 2.1 Bash script that echo's KTimetracker's version

```
qdbus org.kde.ktimetracker /KTimeTracker version 2>/dev/null ↩
    || echo "ktimetracker not running"
```

KTimetracker's current D-Bus interface is currently used mainly for automated testing, so it is very limited. For the full interface definition, see D-Bus Interface Appendix.

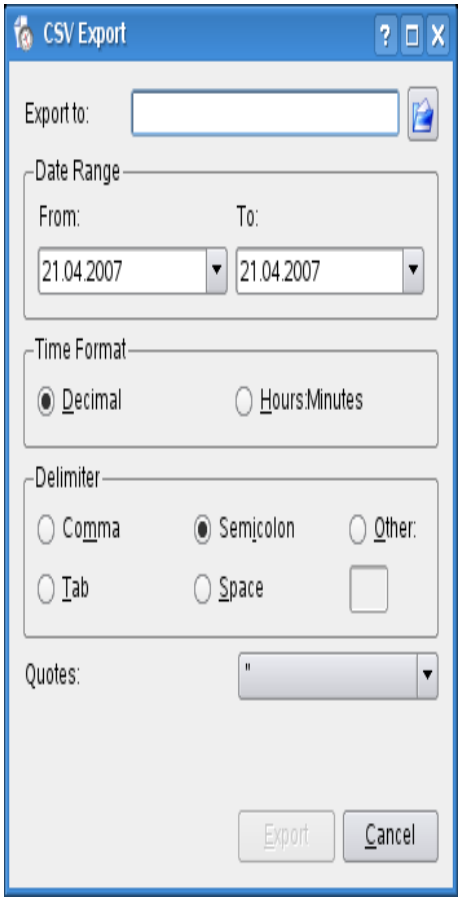
To see the full D-Bus interface of the KTimetracker version installed on your system, run the following Bash script:

Example 2.2 List KTimetracker's D-Bus interface to console

```
qdbus org.kde.ktimetracker /KTimeTracker 2>/dev/null || echo ↩
    "ktimetracker not running"
```

2.5.4 Export Totals to CSV

KTimetracker can export both totals and history to a comma-delimited file format. To export totals, select File → Import/Export → Export to CSV file... and KTimetracker displays the following export dialog:



Enter the file you would like to export the data to, and modify the other dialog defaults if necessary. Note that the date range control is disabled since you are exporting time totals, not the history data. Click Export and KTimetracker exports the totals for all tasks to the file you selected.

Here is an example of the output format:

```
"kde",,,,,0.00,0.00,6.88,9.83
,"karm",,,,6.88,8.70,6.88,9.83
,,"3.2 feature plan",,,0.00,0.00,0.00,0.00
,,"bugs",,,0.00,1.13,0.00,1.13
,,"checkin changes - translation strings",,,0.00,0.00,0.00,0.00
,,"time card report",,,0.00,0.00,0.00,0.00
,"kopete",,,,0.00,0.00,0.00,0.00
```

```
,"promo",,,,0.00,0.00,0.00,0.00
,"web stuff",,,,0.00,0.00,0.00,0.00
```

Top-level tasks are output in the first column, sub-tasks in the second, and so on. The time data is output after the maximum task depth (five in this example). The first time column is Session Time, the second is Time, the third is Total Session Time and the fourth is the Total Time.

2.5.5 Export History to CSV

To export task history, select File → Import/Export → Export History to CSV file... and KTimetracker displays the same export dialog as shown above.

Enter the file you would like to export the data to, and select a date range that you want the task history. Modify the other dialog defaults if necessary. Click Export and KTimetracker exports the task history for all tasks to the file you selected.

Here is an example of the output format:

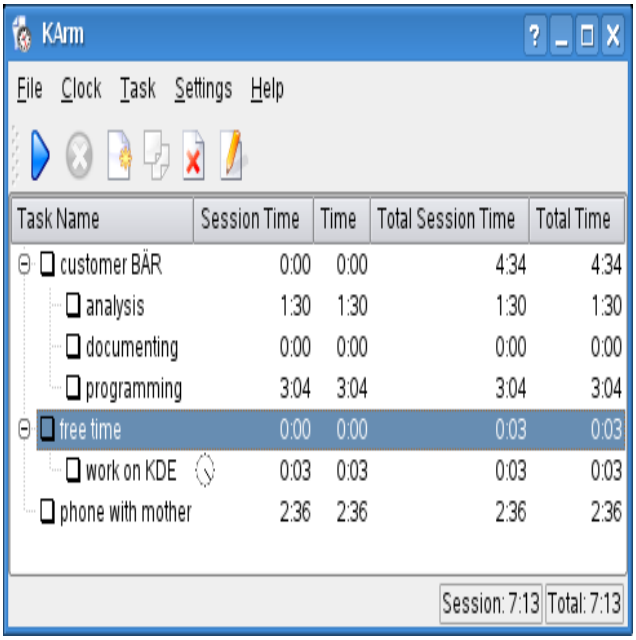
```
Task History
From Tuesday 06 July 2004 to Tuesday 13 July 2004
Printed on: 2004-07-13 18:10
2004-07-06,2004-07-07,2004-07-08,2004-07-09,2004-07-10,2004-07-11,2004-07-12,2004-07-13,
,,,,,,,,0.00,"kde"
,,1.77,3.23,1.73,,1.37,0.82,8.95,,"karm"
,,,,,,,,0.00,,,"3.2 feature plan"
,1.13,,,,,,,1.13,,,"bugs"
,,,,,,,,0.00,,,"checkin changes - translation strings"
,,,,,,,,0.00,,,"time card report"
,,,,,,,,0.00,,"kopete"
,,,,,,,,0.00,,"promo"
,,,,,,,,0.00,,"web stuff"
```

The three lines identify when the report was generated and for which date range. The fourth row is a comma-delimited list of the dates in the date range, in ISO 8601 format (YYYY-MM-DD). All subsequent rows list the time logged against each task. The last numeric column is the row total across all days. The task name prints after the total column, and is indented to indicate the task/sub-task relationship. Top level task names appear in the first column after the total.

Chapter 3

The KTimetracker interface

The main KTimetracker window has the following components: menubar, toolbar, task/time window and status bar.



3.1 The Task/Time window

The various tasks are displayed in this window, along with the time accumulated for each in the current session and in total. Tasks being timed have a small clock icon next to the session time.

Subtasks can be created for each task. Clicking the plus sign and minus sign in front of the main task toggles the view of its associated subtasks. The total time accrued for a task includes the times for its subtasks, as well as its own accumulated time.

3.2 The Toolbar

The toolbar contains icons for the following commands:

> NOTE
> (All behave identically to the menu command.)

- Start
- Stop
- New
- New Subtask
- Delete
- Edit

3.3 The Statusbar

Reports the total elapsed time for the session.

Chapter 4

Credits and License

KTimetracker
Program copyright:

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KTimetracker was inspired by Harald Tveit Alvestrand's very useful utility called titrax, the only failing of which is that it is based on the Xt toolkit.

Documentation copyright 2000-2004 Jonathan Singer jsinger@leeta.net and Sirtaj Singh Kang taj@kde.org.

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Chapter 5

Glossary

active task A task which has a timer running.

D-Bus The interprocess communication protocol used in KDE. Short for Desktop COmmunication Protocol.

desktop GNU/Linux®, FreeBSD and other systems that run X-Windows have multiple desktops. You typically have four different desktops installed by default. Each desktop can display its own set of programs and files. When KDE first starts up, the desktop you see is Desktop 1. If you press Ctrl+F2, you will see Desktop 2. Pressing Ctrl+F1 will bring back Desktop 1.

history If KTimetracker is configured to log history, it will record ever start/stop timer event. This history is never cleared when times are reset cleared and remains on file until the task is deleted.

session A user-defined starting point for the session timers. A new session begins when you select File → Start New Session. Session data is not saved when you create a new session.

Session Time The time spent on the task since the session began.

system tray The system tray is in the bar that (by default) appears at the bottom of the screen. In this system tray  the KTimetracker icon is on the far right.

top level task A task with no parent tasks.

Total Session Time The time spent on the task and all its subtasks since the session began.

Time The time spent on the task since all times were reset.

Total Time The time spent on the task and all its subtasks since all times were reset.

Appendix A

Installation

A.1 How to obtain KTimetracker

KTimetracker is part of the KDE project http://www.kde.org/ .

KTimetracker can be found in the kdepim package on ftp://ftp.kde.org/pub/-kde/ , the main FTP site of the KDE project.

For detailed information on how to compile and install KDE applications see Building KDE4 From Source

Since KDE uses **cmake** you should have no trouble compiling it. Should you run into problems please report them to the KDE mailing lists.

Appendix B

D-Bus Interface

B.0.0.0.0.1 version

Name

version – Return KTimetracker's version.

Synopsis

```
QString version()
```

Description

`version()` is a D-Bus call that returns KTimetracker's version number; for example 1.5.0. The version number is returned as a string in the typical GNU format of major.minor.bugfix.

B.0.0.0.0.2 quit

Name

quit – Return KTimetracker's quit.

Synopsis

```
QString quit()
```

Description

`quit()` is a D-Bus call that provides a way that an external program can gracefully shutdown KTimetracker.

B.0.0.0.0.3 hastodo

Name

hastodo – Check if top-level to-do exists.

Synopsis

```
QString hastodo(QString taskname)
```

Parameters

taskname The name of the to-do to look for.

Description

`hastodo(QString taskname)` is a D-Bus call that looks for a of the given name. If found, it returns the iCalendar UID that identifies that to-do. If not found, it returns an empty string.

The iCalendar file that KTimetracker currently has opened is the file that is searched. All to-do trees are searched, not just top-level to-do's. If more than one to-do has a matching name, the first one found is returned.

B.0.0.0.0.4 addtodo

Name

addtodo – Add new todo.

Synopsis

```
QString addtodo(QString todoname)
```

Parameters

todoname The name of new to-do.

Description

`addtodo(QString todoname)` is a D-Bus call that adds a new top-level to-do to the current storage. The UID of the new to-do is returned.