

OpenLogbook User's Guide

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24th February 2003

Abstract

This document is the user's guide to OpenLogbook. It contains all needed information for users to take full advantage of the software. It describes the installation procedure, the user interface and all current features.

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Version	Date	Author	Description
1.0	24.1.2003	Mikko	First release version

Table 1: Changelog

More detailed history log can be found from WebCVS of the project [2].

1 Introduction

OpenLogbook is an application for presenting multi-dimensional data from different kinds of experiments. This application enables a scientist to go through an experiment and review all data related to it, e.g. video streams, audio streams and log files describing e.g. equipment parameters. Parameter logs can be searched through using different search parameters.

2 Installing and running OpenLogbook

2.1 General requirements

Before you can start using OpenLogbook you have to install Java 2 JRE version 1.4 or greater on your machine. OpenLogbook also uses JMF (Java Media Framework) version 2.1.1 to display multimedia data. These can both be downloaded from <http://java.sun.com/j2se/download>. After installing these OpenLogbook will work without any further installations. OpenLogbook itself doesn't set any other software or hardware requirements.

Following environment variables have to be set:

\$JAVA_HOME This should point to your Java installation directory.

\$JMFHOME This should point to your JMF installation directory.

OpenLogbook sets the correct CLASSPATH itself, so you don't have to worry about that.

Java Media Framework (JMF) requires the following minimum hardware:

- 200 MHz Pentium, 160 MHz PowerPC, or 166 MHz UltraSparc.
- At least 64 MB RAM
- Soundcard

2.2 Linux-environment

Running OpenLogbook on a Linux platform doesn't require any special configuration, just run "build.sh run" in the `code`-directory.

2.3 Windows-environment

Currently there seems to be some problems with Java version 1.4.1. To be certain that the software works as well as possible, please use Java version 1.4.0.

When installing the JMF its installer prompts you whether you want to install some files to the system directory. Answer "yes" to this.

Before starting to compile the program you have to change the accompanying build.xml file, which can be found in the `code`-directory. In the entry for including jmf libraries you have to change the fileset entry to the following: `<fileset dir="$jmf.home/lib/">`

After modifying the build.xml file, just run "build.bat run".

2.4 Removing OpenLogbook

All you need to remove OpenLogbook is to delete the source code tree. Java and JMF are not part of OpenLogbook, so you can keep them if you need them otherwise, or delete them as well.

2.5 Running OpenLogbook

After you have completed the required installations and configurations, OpenLogbook can be started by first changing to the `code`-directory of the OpenLogbook file tree, and then running either “Build.sh run”, in Linux-environment, or “build.bat run” in Windows-environment.

3 User Interface

3.1 Menu bar

All main functions can be controlled through the drop-down menu bar. It contains several different menus, each of which will be further detailed below. Actions' short keys are shown in parentheses after the corresponding action.

3.1.1 File

New Project (CTRL-N) This action creates a new project by initialising required components.

Open Project (CTRL-O) This action lets the user open an existing project. A new window will be opened with which the user can either browse files or give the file's name directly.

Close Project (CTRL-W) This actions closes the currently open project.

Save (CTRL-S) This action saves an experiment that the user has already saved.

Save As This action saves an experiment by first prompting the user for a file name to use.

Recent Projects This action lets you choose between projects that you have recently used, i.e. which have been loaded into the current session.

Exit This action exits the program, first querying the user whether he/she wants to save the project data before exiting.

3.1.2 Edit

Undo (CTRL-Z) This action undos the last text editing action that you have committed.

Redo (CTRL-Y) This action redos the last undo action that you have committed.

Cut (CTRL-X) This action cuts the selected area of text and deletes it.

Copy (CTRL-C) This action copies the selected area without deleting it.

Paste (CTRL-V) This action pastes the current text on the clipboard.

Preferences Shows preference dialog for the program. Not implemented yet.

3.1.3 Project

Hotspots (CTRL-H) This action opens the hot spot manager window. See section 7 for more information on this feature.

Main controller (CTRL-M) This action opens the main controller. See section 6.1 for more information on this feature.

Synchronize (CTRL-E)

Text logger (CTRL-T) This action opens the text logger. See section 8 for more information on this feature.

Add files... (CTRL-F) This action allows you to add files to the current project.

Remove files... (CTRL-R) This action allows you to remove files from the current project.

Show/hide files This action allows you to display files in the main window, or remove them from it. Removing a window with this action doesn't remove it from the project, but just from the main window.

Project properties (CTRL-P) This opens the project properties window. See 3.3 for more information.

3.1.4 Windows

Cascade Sorts subwindows inside the OpenLogbook main window. Not implemented yet.

Tile Horizontally Sorts subwindows horizontally inside the OpenLogbook main window. Not implemented yet.

Tile Vertically Sorts subwindows vertically inside the OpenLogbook main window. Not implemented yet.

3.1.5 Help

About OpenLogbook This action displays some general information about the OpenLogbook program.

3.2 Main window

All windows are opened into the main window area. Each window can be individually moved, resized, minimized and maximized. There are three buttons in the upper right corner of a window. The leftmost minimizes the window. The window will appear as a small box in the bottom left corner of the main window. Clicking on that window displays the window again. The middle button maximizes the window. The window will resize itself to cover the whole main window. This can be useful if e.g. some specific part of an image is carefully observed on a small screen. The rightmost button closes the window. It disappears from the main window. If you want to open it again in the main window, you have to choose “Show/hide files” from the Project-menu and then choose the corresponding file from the submenu which opens.

There can also be buttons in the lower right corner of media file windows in case of video and audio files. Both video and audio files have a button in the utmost right which looks like a ladder. When pressed, this button displays information about the file, which is partly media type dependent. If the file is an audio file there is also a button which displays a loudspeaker. Clicking this button will mute the audio file.

3.3 Project properties

Project properties window can be opened by choosing “Project properties” from the Project-menu. This opens a window which displays different properties of the project, e.g. the author and description of the project, media files and wrapper files (see 11 for more information on these).

4 Handling project data

4.1 Loading a project

A project can be loaded by choosing “Open project” from the File-menu (or by pressing CTRL-O). This will open a file dialog from which you can choose the project xml file.

4.2 Saving a project

If you haven't saved your project previously, you have to choose “Save As” from the File-menu to save your project. If you have an already saved project, you can either choose “Save” (or press CTRL-S) to save it using the same name, or “Save As” to save the project using a new name.

4.3 Adding files

Files can be added to the project by choosing “Add files...” from the Project-menu. This action opens a window where you can choose the file you wish to add. You also have to choose the proper file type for the software to be able to handle the file. Each media file is opened into its own window, which is placed in the main window.

4.4 Removing files

Files can be removed from the project by choosing “Remove files...” from the Project-menu. This action opens a new window with media and wrapper files visible. This can be deleted by selecting a file and then pressing the “Delete selected file” button. You can also remove files from the project properties window, which can be opened by choosing “Project properties” from the Project-menu. The interface is similar to the previous method.

5 Recording an experiment

OpenLogbook is not used to record the whole experiment. It’s main purpose in the recording of an experiment is to provide the capability of recording hot spots (see section 7) and text comments (see section 8) throughout the experiment. Actual video, audio, and parameter data have to be recorded through other means. OpenLogbook will also be used to provide the reference time frame for later handling of experiment data. This means that when starting an experiment, the OpenLogbook is used to record the experiment time. Hot spots and text comments are synchronized to this time. This base time can change after the recording has been made, if files that are longer than the base time are added to the experiment. See section 4.3 for more information on this.

The basic procedure when beginning to record a new experiment is to choose “New Project” from the File-menu (or press CTRL-N). This opens a dialog where you can give your project an author and a description. After you have filled this information in, press OK. The main controller will be opened automatically in the main window. Before you start recording, you should also open the Hotspot Manager and Text logger so that they are ready when you begin the actual recording. When you want to begin recording, simply press the “Record”-button in the main slider. When you are finished, press “Stop” to stop recording. See sections 7 and 8 for more information on how to record hot spots and text comments.

6 Viewing the project

When you have recorded an experiment, and added the relevant media files, you can “review” your project by playing it. The most convenient way is to open all media files, log files etc. and use the main controller to “play” the project. For more information on the main controller, see 6.1. You can use the main controller to start playing all media files simultaneously. If you want to play just one media file independently of the others, you can use its own individual controllers, which are displayed in its own window. After you have played an individual file, it will be out of synchronization. It can be resynchronized with the main controller by just clicking the “play” button from the main controller.

6.1 Using the Main Controller

Main controller is used to control the experiment time. When creating a new project, the main controller displays two control buttons, “Record” and “Stop”. These are used

to record the experiment. When an experiment has been recorded, the main controller will display three control buttons, “Play”, “Pause”, and “Stop”.

The main controller shows the current position and the total length of the project in the slider. You can change the unit of time by choosing the desired unit using the drop-down menu on the right.

The red dots shown under the slider are hotspots of the project. The hotspot manager (see section 7) shows detailed information about these hotspots.

7 Using the Hotspot Manager

Hot spot manager lets you to easily record hot spots. You can also use this manager to add, remove and modify hot spots after the recording has been done. The Hot Spot Manager shows all existing hot spots, with the time of recording on the left column and comments on the right column. Hot spots are automatically ordered by their time of recording.

7.1 Recording hot spots

When recording an experiment, clicking “New hotspot” opens a new dialog for a hot spot. The moment you press the button sets the time for the hot spot. You can then either add a comment for the hot spot and press “Enter” to save the hot spot, or you can just leave the dialog open and add comments later on. Pressing “Cancel” closes the dialog and cancels the addition of the hot spot. Note that after entering the hot spot, it can still be modified afterwards. There’s no limit on how many hot spot dialogs you can have open simultaneously.

7.2 Modifying hot spots

After a hot spot has been created it can easily be modified using the same Hot Spot Manager.

To adjust the hot spot’s recording time, double click on the appropriate hot spot’s left column, which is showing the time. Then just enter a new value. The hot spot will automatically move to it’s proper place in the list, which is sorted by time.

To modify the comments, click on the appropriate hot spot’s right column, which is showing its comments. Then you can modify the comments.

To delete a hot spot, first choose it by clicking on the time field of the hot spot and then press “Delete selected hotspot(s)”. If you want, you can choose several hot spots at the same time by dragging the mouse pointer over several hot spots.

You can change the unit of time by pressing the button with a drop-down menu on the right.

8 Using the Text logger

When recording an experiment you might want to add some comments, which are not necessarily related to hot spots. The Text logger lets you do that. It consists of two parts, the bottom row is for inserting a comment. The larger text area above shows all comments which have been recorded. These are sorted by time. When recording an experiment, you can add a new comment by simply clicking on the bottom row, and then inserting your comment. After you're finished writing the comment, just press enter to save it. When you're finished recording comments, you can save the comment log by pressing "Save".

The log comments are saved into a separate file. When creating a new logger from the Project menu, the filename is prompted. Later the log file is automatically saved and loaded with the rest of the project.

9 Displaying parameter log files

You can view all parameters by adding a log file (see section 4.3) to your project. This opens a new window with all parameters visible as a table. There are two possible views to the parameter data.

When showing all parameters as a table, time is displayed in the first column, and each parameter in their own columns after that. You can change the position of the columns by clicking on them and dragging them to their new place. When you're "playing" your project, the row to show the current time gets automatically selected in the parameter log.

When viewing parameter values corresponding to the current time, all parameters are shown as a simple name-value list. When "playing" the project, these values are updated as time advances.

You can change the unit of time by choosing the desired unit using the drop-down menu on the right.

10 Synchronizing data

Each data can be individually synchronized to the project base time using the synchronization tool. This can be opened by choosing "Synchronize" from the Project-menu. This opens a window which shows the synchronization data of all files. The filename and offset are shown for each data file. Initially each data file has no offset at all (offset set to 0 seconds). This can be adjusted for each data file using its slider on the right. The offset describes the relation between the start of the base time and the start of the data file. E.g. if the offset is set to -10, it means that when playing starts, the data file starts from 10 seconds further, i.e. its starting point is moved ten seconds back in time (which takes it to -10 seconds related to the base time starting point).

You can change the unit of time by choosing the desired unit using the drop-down menu on the bottom.

11 Wrappers

Wrappers are a sort of an interface to different types of parameter data. Wrappers handle the conversion of these different types of parameter data into a format that OpenLogbook can understand. One example of a parameter file type is the Comma Separated Values (CSV) file. Each type of parameter file requires its own wrapper. At the moment OpenLogbook only supports CSV files. List of wrappers and the file types they support can be found in 15.2.

12 Using Search Manager

This feature will be part of the second alpha-release.

12.1 Displaying search results

13 Additional features

14 Bugs

14.1 Known bugs

14.2 Bug reporting

If you discover a bug in the software please report this bug to our development team. We will try to fix bugs as quickly as possible. You can submit a bug to our email address *openlogbook-dev@motha.tky.hut.fi*. Please include a description of the problem and the hardware and software environment in which it occurred.

References

- [1] Homepages of the project course
<http://www.soberit.hut.fi/T-76.115/>
- [2] OpenLogbook project webpages for the course T-76.115
<http://motha.tky.hut.fi/openlogbook/>

15 Appendices

15.1 List of shortcuts

Shortcut	Explanation
CTRL- F	Add files
CTRL- C	Copy text
CTRL- X	Cut text
CTRL- H	Hotspots
CTRL- M	Main controller
CTRL- N	New project
CTRL- O	Open project
CTRL- V	Paste text
CTRL- P	Project properties
CTRL- Y	Redo edit
CTRL- R	Remove files
CTRL- S	Save
CTRL- T	Text logger
CTRL- Z	Undo edit
CTRL- E	Synchronize
CTRL- W	Close project

Table 2: Shortcuts

15.2 List of wrappers and supported parameter file types

- Comma Separated Values (CSV)