

Summercode application

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1. About Ardour

Ardour¹ is a free software hard disk recorder and digital audio workstation application released under the GNU General Public License. It is written in C++ and currently runs on Linux, Solaris, and Mac OS X.

Ardour is currently the most promising open source audio workstation available that strives to meet the needs of professional users. Its development is currently sponsored by The School of Audio Engineering (SAE)² to the extent that, together with donations from users, it is possible for the primary author, Paul Davis, to work on Ardour full-time.

2. About me

I am a second year student at the Helsinki University of Technology. My major is Communications Engineering and I have a minor in Computer Science and Engineering. I have been an enthusiastic open source user since 2002. Lately I have also started to participate in open source development and published some programming projects of my own as open source on my website³.

I have always been interested in programming, and developed my skills through hobby projects and taking courses in school. Most of my practical C++ experience is from our school C++ project work, which received maximum points⁴. My skills have also developed a lot through hacking on Ardour.

I have been an Ardour user for quite some time, and after learning the appropriate programming skills I immediately found my self contributing to the Ardour codebase, ending up fixing a couple of bugs for the next release⁵. Recently I have also started developing some new functionality for Ardour⁶.

3. Project plan

The goals of my project are to add meta data support and new audio export functionality to Ardour. Achieving both goals will make working on music collaboratively and sharing it a lot easier. Code will be committed to Ardour's SVN-repository and will be included in Ardour version 3.0 or later, depending on when 3.0 is released. The contact person from Ardour's side will be Paul Davis.

3.1. Meta data

With the huge amount of information available these days, having proper meta data is very important. My goal is to add features to Ardour that make it possible to include important meta data, such as licensing, copyright, name and artist information, into both Ardour sessions and exported files. Having such functionality in Ardour would encourage people to include proper meta data in their files. Especially specifying a license would broaden possibilities in sharing

1 <http://ardour.org> – Ardour website

2 <http://ardour.org/node/976> – SAE Institute Sponsors Ardour Open Source DAW Project

3 <http://beatwaves.net/> – My personal website

4 http://beatwaves.net/software/crumbled_earth – Crumbled Earth (C++ project work)

5 <http://tracker.ardour.org/view.php?id=1804>, <http://tracker.ardour.org/view.php?id=1681> – Ardour bug tracker entries for bugs I have fixed (username: SaBer)

6 <http://beatwaves.net/node/17> – Ardour session merger project

and reusing openly licensed audio material and thus boost collaborative creativity.

3.2. Export dialog and functionality

The basic purpose of Ardour's export functionality is to create mixdowns of multitrack arrangements. On the user interface side, this happens through a dialog. In many cases, exporting as it is currently implemented doesn't deliver the desired final result; additional steps and tools are needed. This is inefficient, and is more demanding on the user.

The goal is to streamline and add functionality to Ardour's export dialog. This would make it easier to share and store both ready compositions and snapshots of work in progress. Industrial designer Thorsten Wilms has done thorough concept work on renewing the export dialog, covering everything from a user survey to GUI mock-ups⁷. This work will provide an excellent basis for my work. New export functionality will include:

- Audio format profiles
- More encoding options (codecs and containers)
- Exporting to multiple files with different formats at once
- A possibility to include a date and time in filenames
- Trimming and/or adding silence to the beginning and end of files
- Normalization of audio
- Multichannel export
- Tagging support
- Allowing real-time exporting for increased compatibility with some applications
- Many usability improvements

3.3. Planned timetable

The following preliminary timetable covers weeks 23-35 (June 2nd to August 31st), and approximates the time spent for working on each part of the project:

Week	Planned work
23	Export: encoding options
24	Export: audio format profiles
25	Export: exporting of multiple files
26	Export: silence trimming and adding, normalization
27	Export: multichannel export
28	Export: real-time exporting, filename handling
29	Export: GUI fine-tuning
30	Meta data: support for meta data in session files
31	Meta data: GUI components for meta data
32, 33	Meta data & Export: tagging of export files
34, 35	Fine-tuning, testing, bug fixing, documenting

⁷ http://thorwil.files.wordpress.com/2007/08/export_design_2007-08-11.pdf – Ardour Export Redesign