

The Second International Linux Audio Conference

A Big Noise

The Center for Art and Media Technology in Karlsruhe, Germany, held a Linux audio event. The Linux Audio Conference has grown from a small meeting aimed purely at developers to a tightly-packed four day event featuring sessions for users, demonstrations and musical concerts. **BY DANIEL JAMES**

Jaroslav Kysela from the ALSA project related the challenges of supporting the wide variety of sound cards in use with Linux.

Kysela's presentation was followed by that of fellow ALSA team member, Takashi Iwai. He covered the common problems that users face when installing and configuring the ALSA drivers.

Audio applications

Ardour project leader Paul Davis talked about approaches to providing Linux support for VST plugins, a de facto standard for effects on the Windows and Mac platforms. At least two free software solutions now exist which can be demonstrated running Windows binary VST plugins, but there remains a gray area with the licensing of VST header files.

Bob Ham described his work on the LASH session management tool, previously known as LADACCA. Linux audio applications tend to be highly modular, which can cause problems when complex settings have to be saved and

restored. LASH offers a solution for this problem, but it will require the inclusion of support for the tool in Linux audio applications if it is to become effective.

Frank Barknecht explained his ideas for 'rapid reusable audio development' using the application Pure Data. This represents sound generating objects in a window, with signals routed between them represented by drawn lines, and the interface can get complicated with complex musical projects. His 'RRADical' solution offers building blocks for complete musical systems, featuring pre-built GUI instruments.

Han-Wen Nienhuys demonstrated the LilyPond musical notation software which attempts to re-create the quality of hand engraved scores, while providing MIDI and PDF output capability. Users claim better printed notation than proprietary alternatives, while the developers are continuously refining its capabilities.

Julien Patrick Claassen gave a presentation on Linux console based audio applications, including a demonstration

of recording using Ecasound. This is about more than just saving computing resources, since Julien is blind and uses a screen reader – this hasn't stopped him from recording and producing music.

Steve Harris showed off the Jamin mastering tool, designed to prepare audio projects for public distribution. Linux users now have a tool which can produce compressed, equalized and limited audio comparable to that produced on proprietary mastering systems.

Linux instruments

The ALSA Modular Synthesizer was explained by Matthias Nagorni; this virtual instrument can emulate the sounds of the original Moog synthesizers, and supports LADSPA plugins with MIDI input and output. The emulation extends far enough that connections between synthesizer modules are made by drawing patch cables in the application.

Another instrument presented at the conference was the Aeolus church organ simulator, using additive synthesis to create a realistic pipe organ sound on modest PC hardware. Also demonstrated was LinuxSampler, an application designed to enable the playback of very large sample sets running into GBytes.

The event featured two demonstrations of hardware musical instruments that are actually embedded Linux systems. The Hartmann Neuron bears the closest physical resemblance to a traditional synthesizer, but is, in fact, a re-synthesizing keyboard employing neural network technology. By contrast, the Lionstracs Mediastation can have an external monitor fitted which allows the musician to use a standard Linux desktop environment, as well as the built-in display panel on the keyboard itself.

The conference closed with a panel debate. The issue of software patents was raised, as was audio hardware vendor support and application maturity. Participants generally agreed that the conference had been an inspiring event, and the hosts have already offered to hold a third event in 2005. ■



Figure 1: Linux Audio Conference speakers from the final day.

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- [1] Linux Audi Conference site:
<http://www.linuxdj.com/audio/lad/eventszkm2004.php3>