Linux Audio Developers Conference

Audiophil

For the first time, an international meeting of audio developers on the Linux platform made it possible to present the state of the art in the field today and to discuss developments underway. **BY GERD FLAIG**

To the majority of musicians and audiophiles, Linux still isn't an option. Although sound support has matured a lot during the last couple of years, only a few would consider using Linux for studio work. Even though they are not in the spotlight, there is a bunch of enthusiasts [1] around who are trying to push Linux further in this field.

From 14th to 16th March, 2003, Linux audio developers from around the world had, for the first time, the opportunity to meet face to face, at the Center for Art and Media (ZKM) in Karlsruhe, Germany [2]. Many well-known people came to the event, for example Paul Davis, Francois Déchelle, Andrea Glorioso, Steve Harris, Takashi Iwai, Jaroslav Kysela, Fernando Pablo Lopez-Lezcano, Dave Phillips and Frank van de Pol to name just a few, holding talks covering a broad range of subjects.

Figure 1: Participants from The Netherlands, the UK, the USA, Czechia, Italy, France, Argentina, Germany and Japan found their way to Karlsruhe

Takashi Iwai and Jaroslav Kysela offered a glimpse into the development of the Advanced Linux Sound Architecture (ALSA) set to become the standard sound system of kernel version 2.6. In their talk they gave an overview of its overall structure, covered interesting aspects concerning the support of new types of hardware (USB, PCMCIA, IEEE1394), unraveling details of the memory management implementation.

Application development was the focus of Paul Davis's presentation. He told the audience why it is not wise to let the kernel swap out code that should compute your next audio buffer (insert a grin here). Frank van de Pol and François Déchelle took their audience on a trip through the lands of sequencer timing and modular sound synthesis, respectively. After Steve Harris's talk the author could even imagine writing a LADSPA (Linux Audio Developers Simple Plugin AP, [3]) plugin without being a DSP guru.

Lectures by Andrea Glorioso about the audio-centric distribution AGNULA, and by Fernando Pablo Lopez-Lezcano (Planet CCRMA) followed with Dave Phillips (Linux Music&Sound) rounding off the event taking a step back and presenting the whole picture. Their main conclusion: integration and documentation are desperately needed. Expect interesting stuff happening in the not too distant future.

Friday and Saturday evening was the time for practical demonstrations of already existing software like gAlan, BEAST, PD (synthesis and processing), Ardour (hard disk recording) and Common Lisp Music (algorithmic composition).
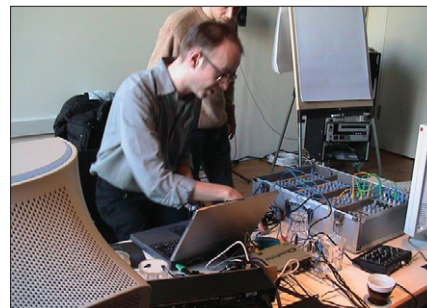
The presentations made clear that

Figure 2: It's a hard(ware) business ...

although many goals have been accomplished, there are still a lot of tasks waiting to be done. Loads of audio applications of all types and of varying quality are already available. An excellent overview can be found at Dave Phillips' web site [4]. For users with moderate skills and expectations, things look pretty good. Most Linux distributions have no problems detecting and configuring sound support for standard media applications like MP3 players.

Unfortunately, things don't look so bright for professional users in search of a solution that works out of the box. Although there is software available for hard disk recording, MIDI sequencing, software synthesis and audio processing, integration is still far from perfect. Ongoing work (see e.g. JACK [5]) will remedy this situation in the not too distant future, though.

But, if you are ready to get your hands dirty, you can get a professional music workstation without Gates and Windows right now. Ongoing work aims at obtaining better latency with mainstream kernels. For now, users have to patch their kernels to get low latency.

Overall the conference emerged as one of the small-scale meetings, with about 90 visitors on-site plus 30 via live audio streaming meetings, held in a relaxed and friendly atmosphere which is typical for the open source community. ■

INFO

[1] *http://www.linuxdj.com/audio/lad/*

[2] *http://on1.zkm.de/zkm/stories/ storyReader$3027*

[3] *http://www.ladspa.org/*

[4] *http://linux-sound.org/*

[5] *http://jackit.sourceforge.net/*

[6] *http://www.linuxdj.com/audio/lad/ eventszkm2003.php3*