

The Beginning: Debian Multimedia Project

18 Feb 2006: Tokyo-Area Debian Meeting

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Meaning of DAW

DAW: Digital Audio Workstation

A workstation used in audio recording and editing. Usually consists of unusually large amount of memory (max them out!), quiet, high-speed disk storage, and inordinate amount of audio I/O. Systems capable of 10 to 24 track audio input/output is not unusual, and is one of the ways music-lovers can waste their money quite efficiently.

Meaning of DAW

DAW: Debian Audio Workstation

An adventurous attempt to use Debian to perform recording and mastering with many audio tracks. It was known to be a difficult path until beginning of 2006. With improvement of real-time response times, it became popular by year 2007... (hope)

State of the Union

- AGNULA/DeMuDi: A project that ran in Europe with some funding for the last few years. A Custom Debian Distribution focused on Multimedia.
- linux-audio-dev: Mailing list for developing audio applications on linux. A very active list where applicaitons like ladspa and jack were born. There are frequent postings of new application annoucements also.
- Debian-multimedia: A mailing list for multimedia in Debian. Required for coordination for things as ladspa and jack. There was a Debian Multimedia-meeting in Brasil in 2004, but the list hasn't been very active for the last few years.

Fundamentals

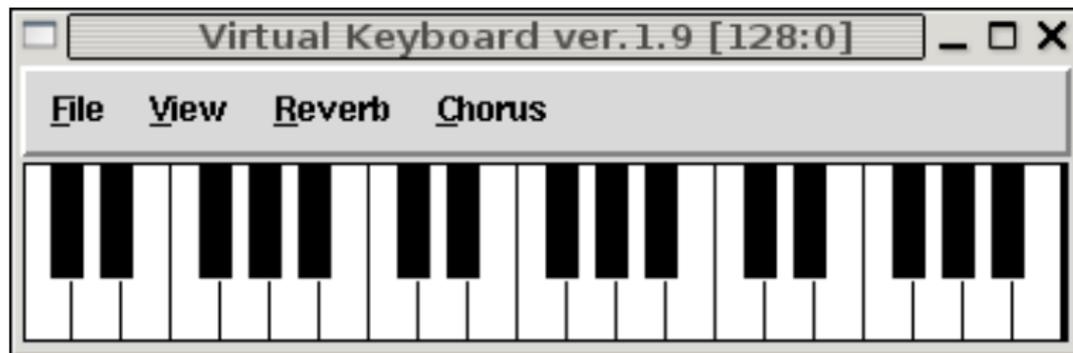
- audio I/O
- MIDI
- software effects
- software synthesizers
- Audio/midi sequencers

Fundamentals, in Linux

- Audio I/O: ALSA audio, jack
- MIDI: ALSA MIDI
- Software effects: LADSPA
- Software synthesisers: ALSA MIDI-driven, output with jack
- audio/MIDI sequencer: audacity, muse, ardour, rosegarden etc.

Operation is done through Jack audio, and MIDI (ALSA-midi).

Using PC keyboard as musical keyboard



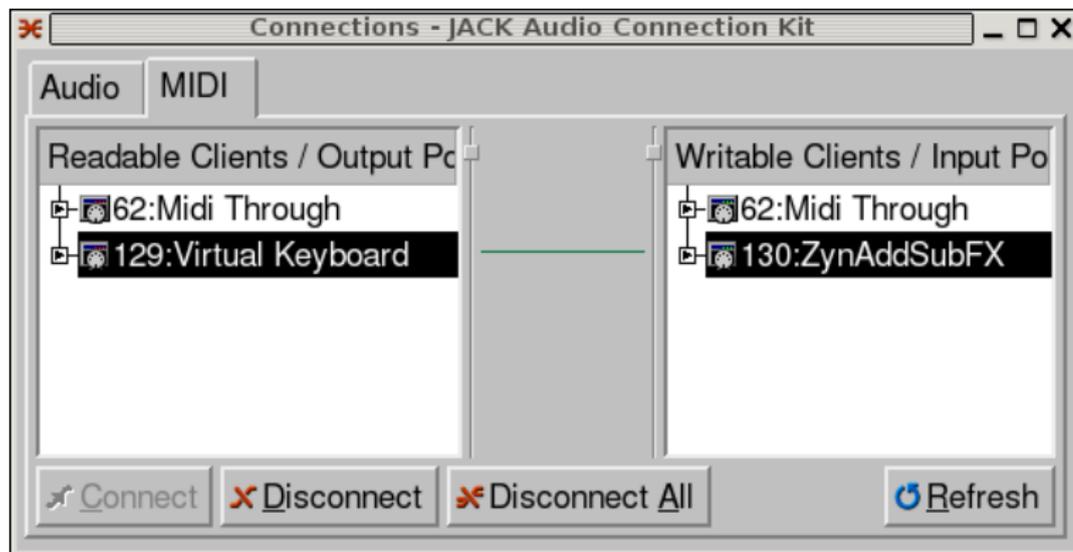
vkeybd, useful for testing out.

qjackctl: managing connections



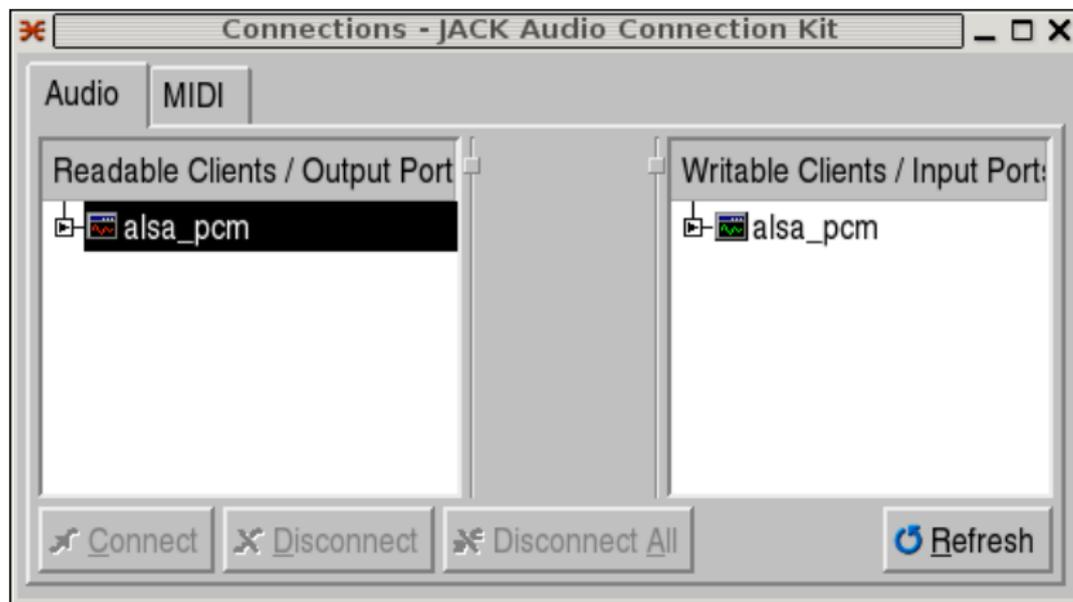
managing jackd startup and connection

qjackctl managing MIDI



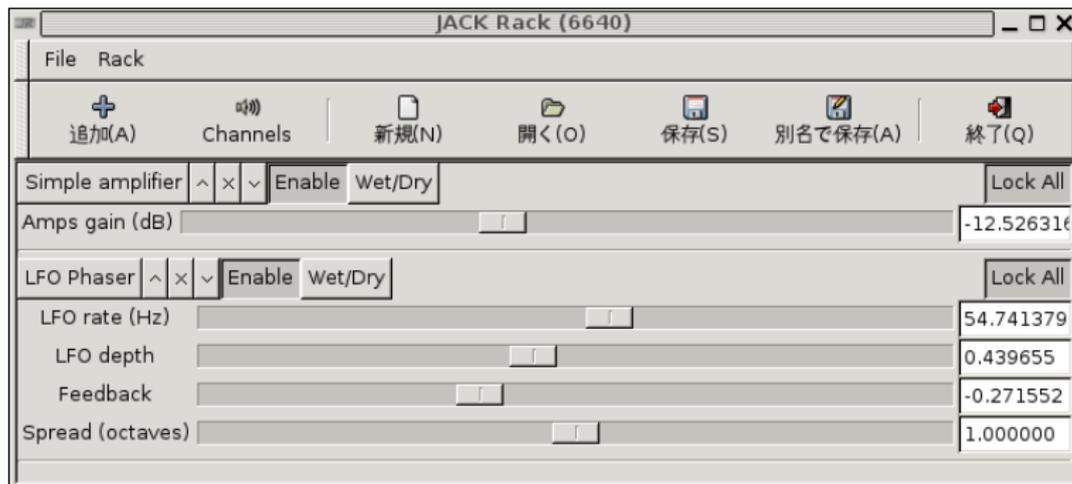
managing MIDI connections

qjackctl



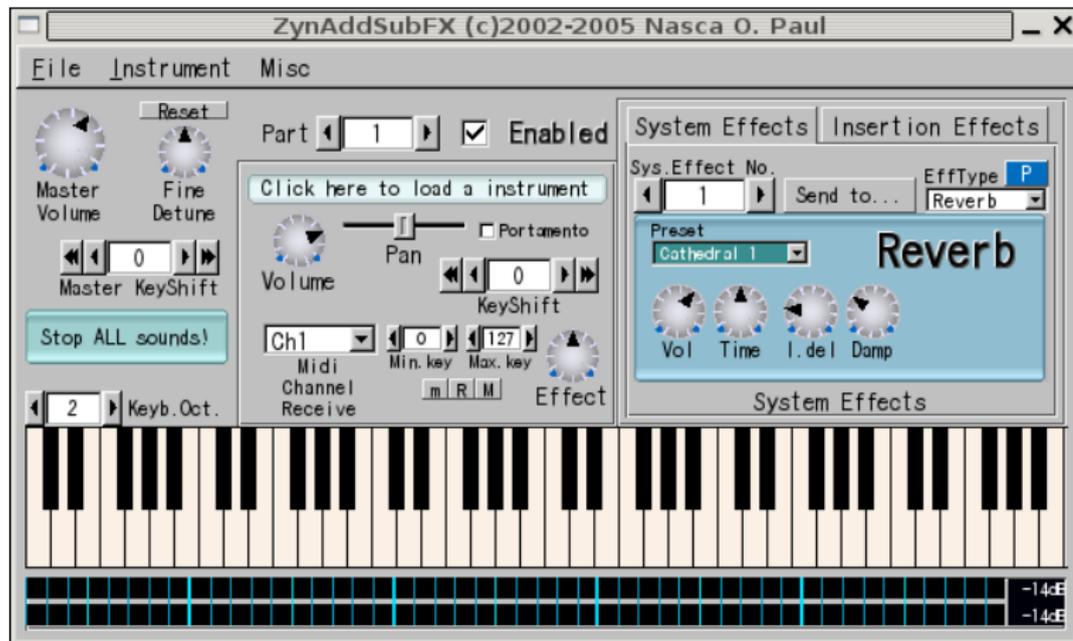
Jack connections

LADSPA effects

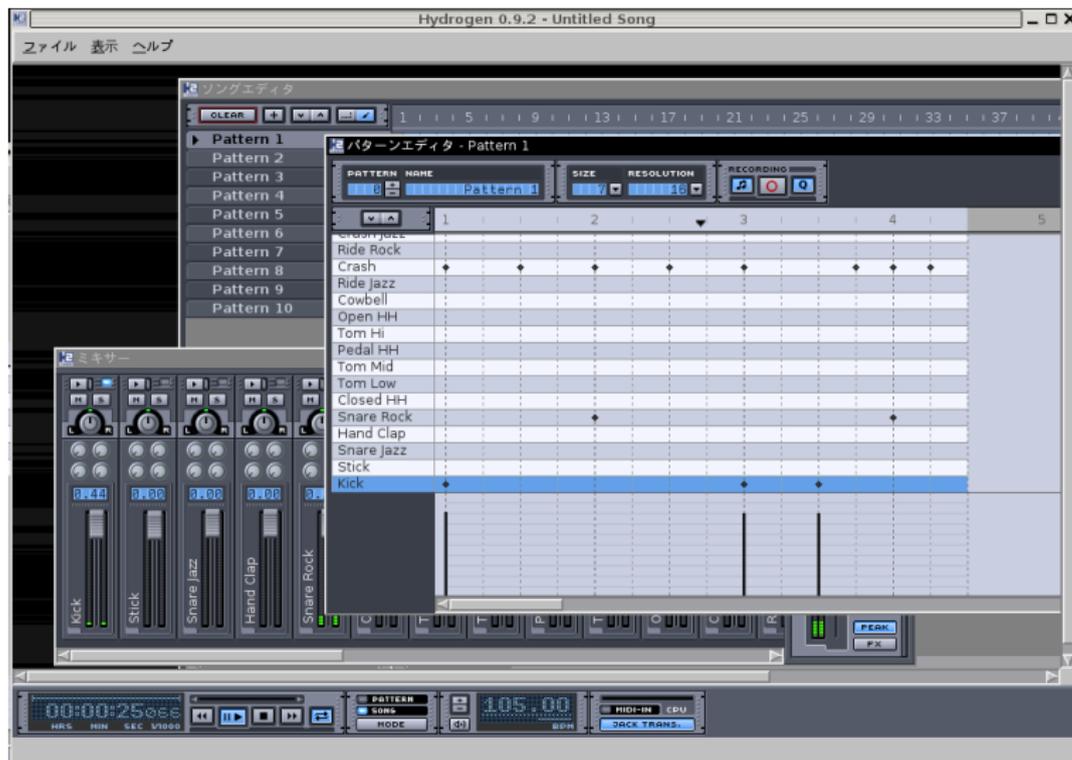


input from jack audio, process with LADSPA effect, then output
There are several hundred effects available.

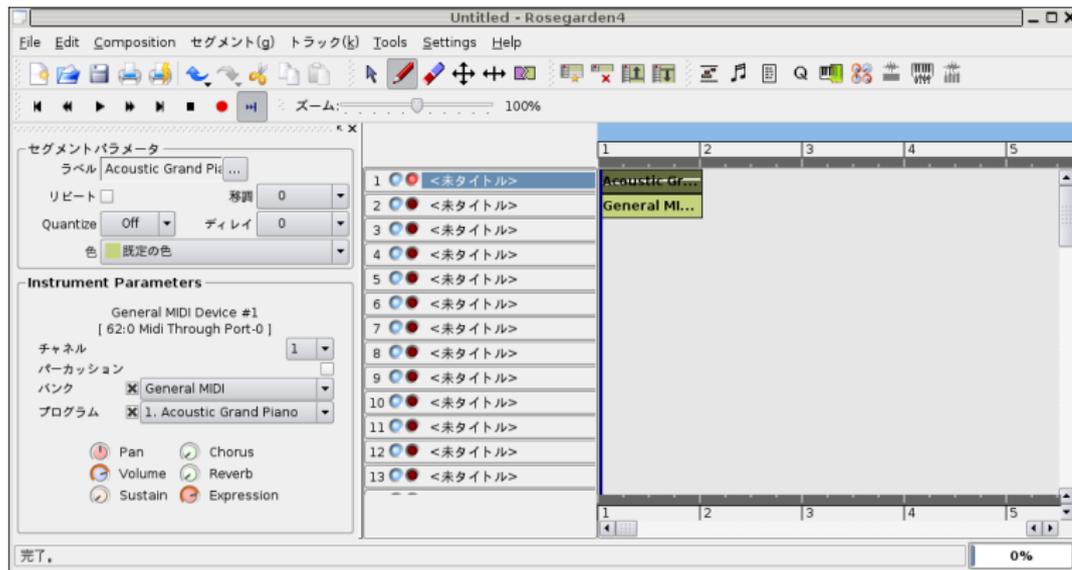
zynaddsubfx



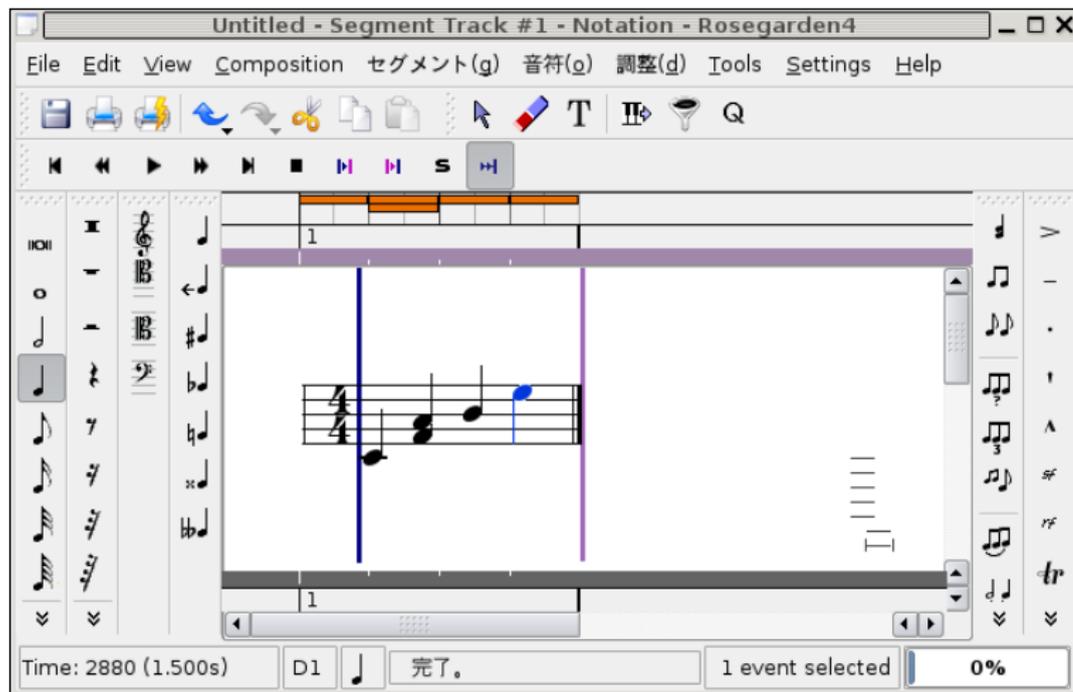
hydrogen



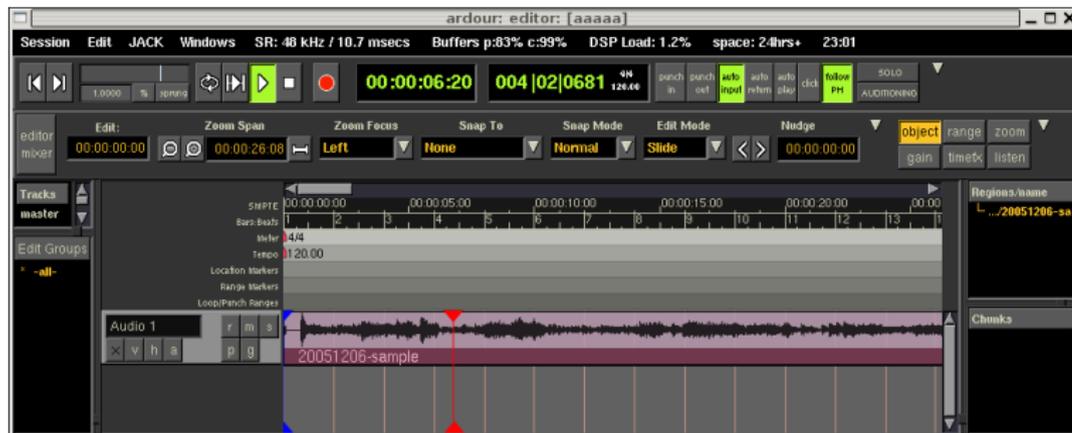
rosegarden4



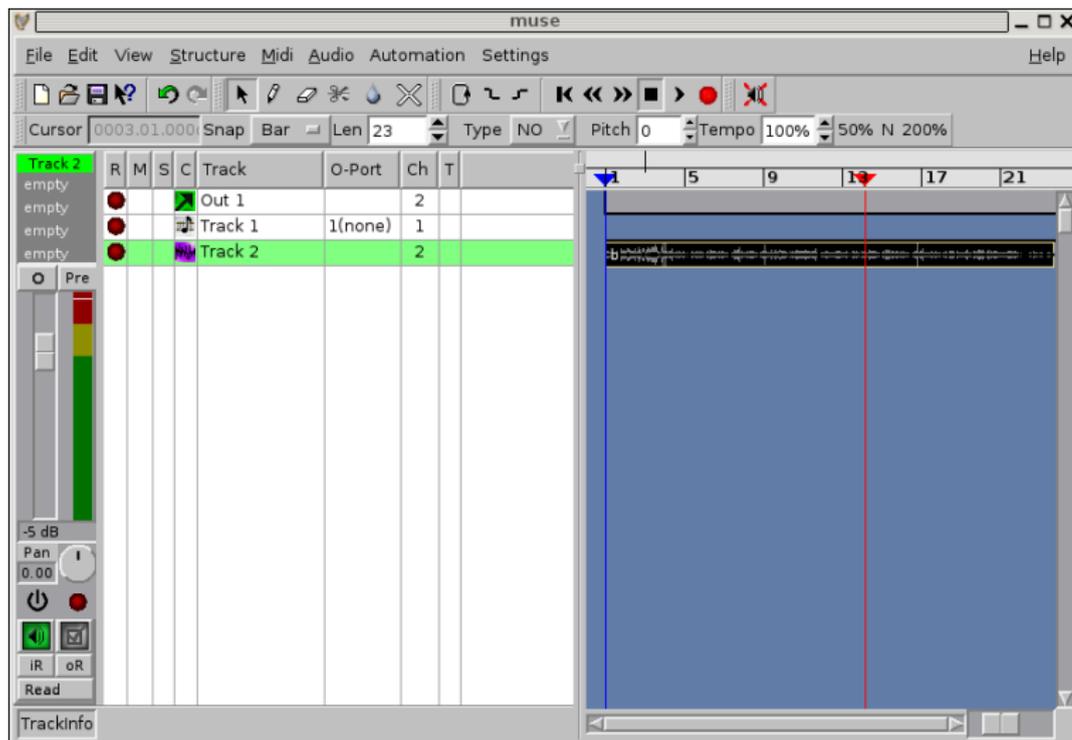
rosegarden4



ardour



muse



Action Plans

- debian-multimedia-policy: Try to come up with a plan so that applications cooperate with each other. Unify default behaviour.
- demudi-to-debian merge: merge packages as necessary. Things such as kernel-patch-realtime-lowlatency required in Debian main.
- LASH: Automating the process of starting the applications and then connecting them. Currently, it's cumbersome.
- Quality assurance. Want to start adding regression testsuites. Most of applications I don't know how to use; starting with researching the usage scenarios.