

# 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 uneducated 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

- DeMuDi/agnula: A project that ran in Europe with some funding for the last few years. A Multimedia distribution based on Debian.
- 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

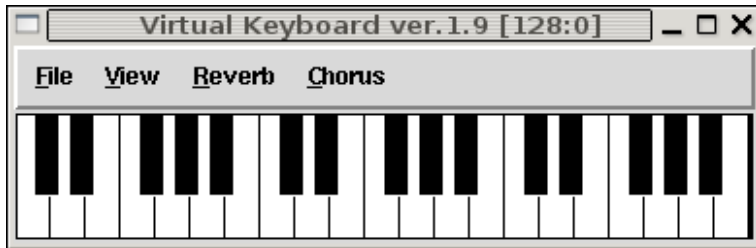
- audio I/O
- MIDI
- software effects
- software synthesizers
- Audio/midi sequencers

# 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.

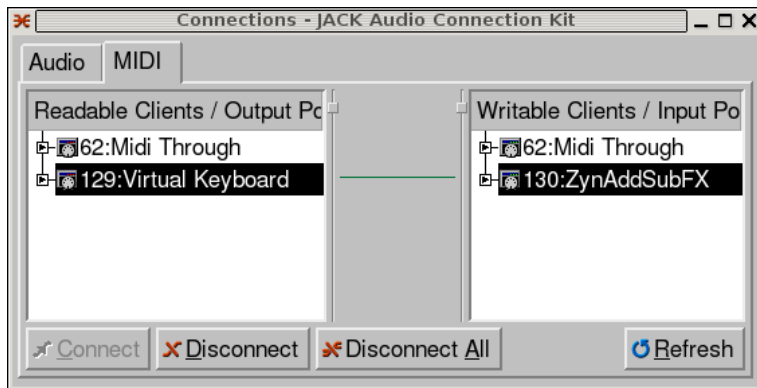
# qjackctl: managing connections



managing jackd startup and connection

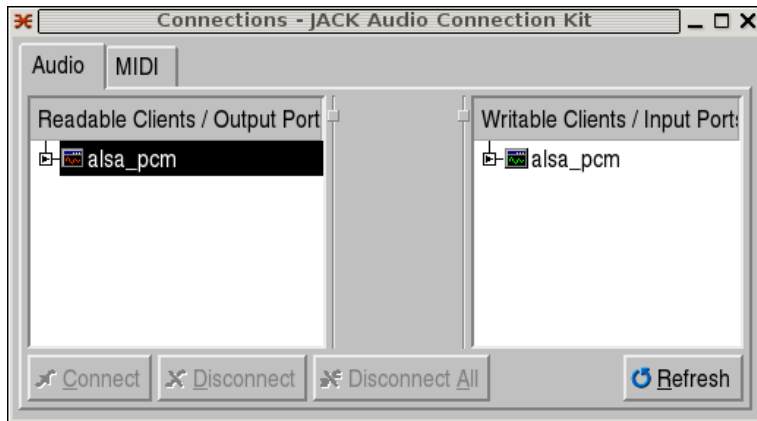


# qjackctl managing MIDI



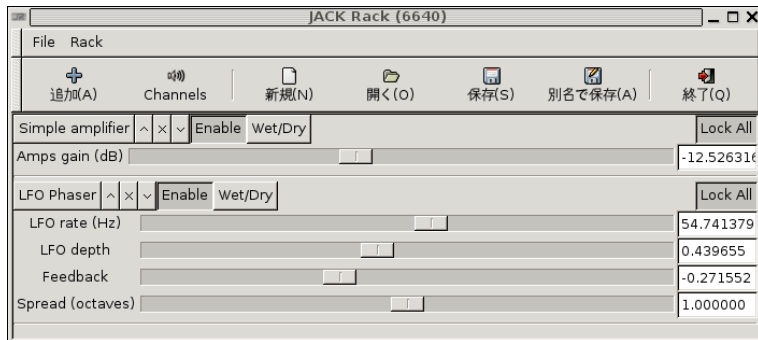
managing MIDI connections

## qjackctl



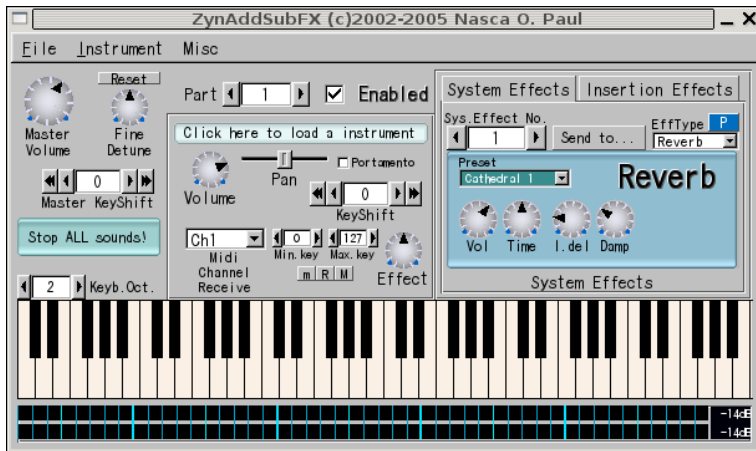
Jack connections

# LADSPA effects

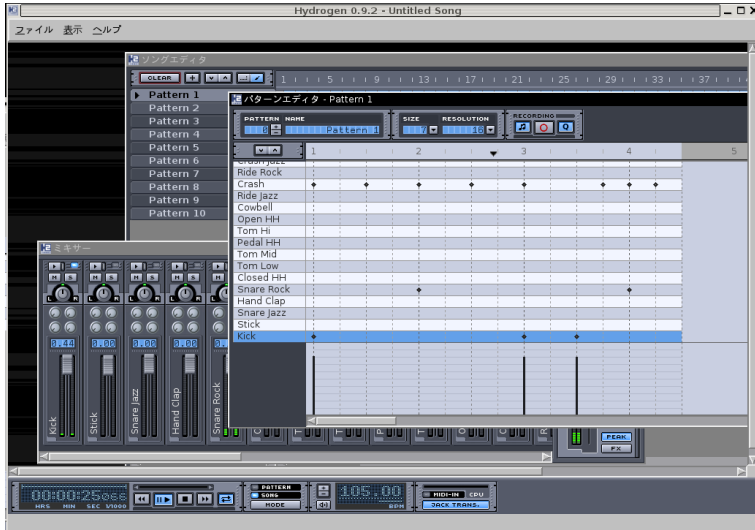


input from jack audio, process with LADSPA effect, then output  
There are several hundred effects available.

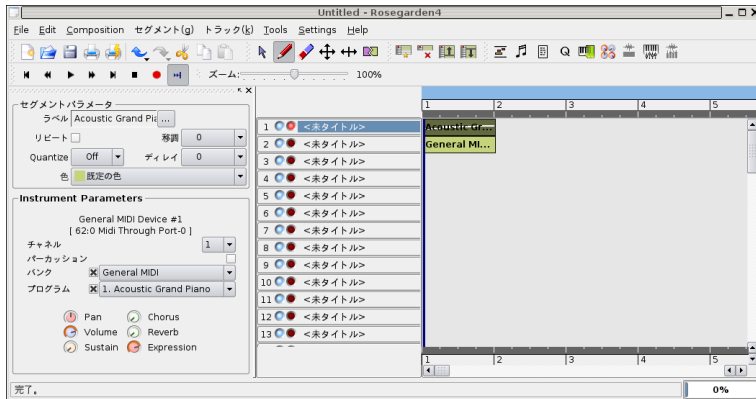
## zynaddsubfx



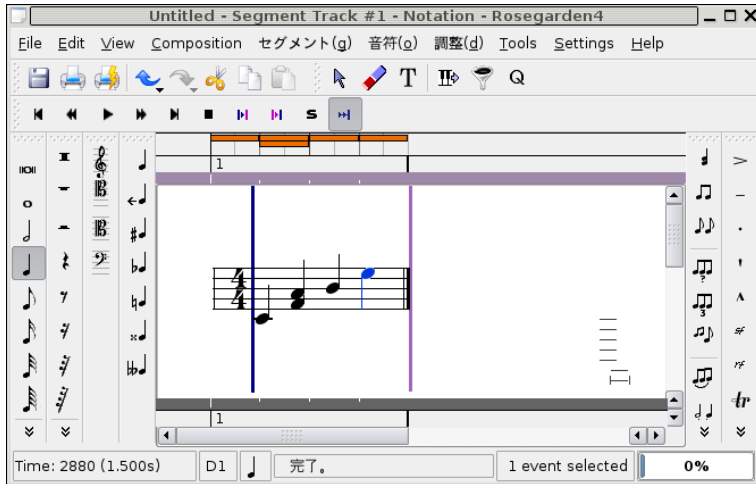
# hydrogen



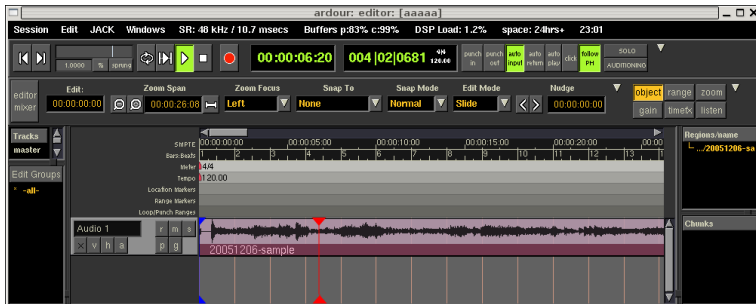
## rosegarden4



## rosegarden4

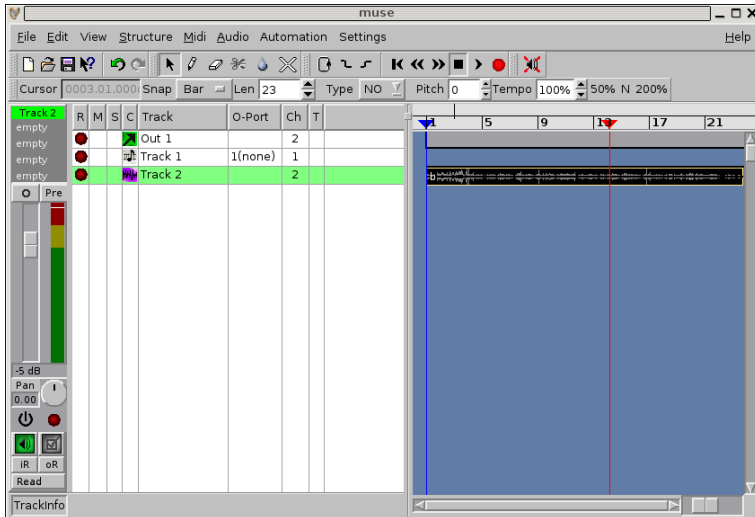


## ardour





## 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.