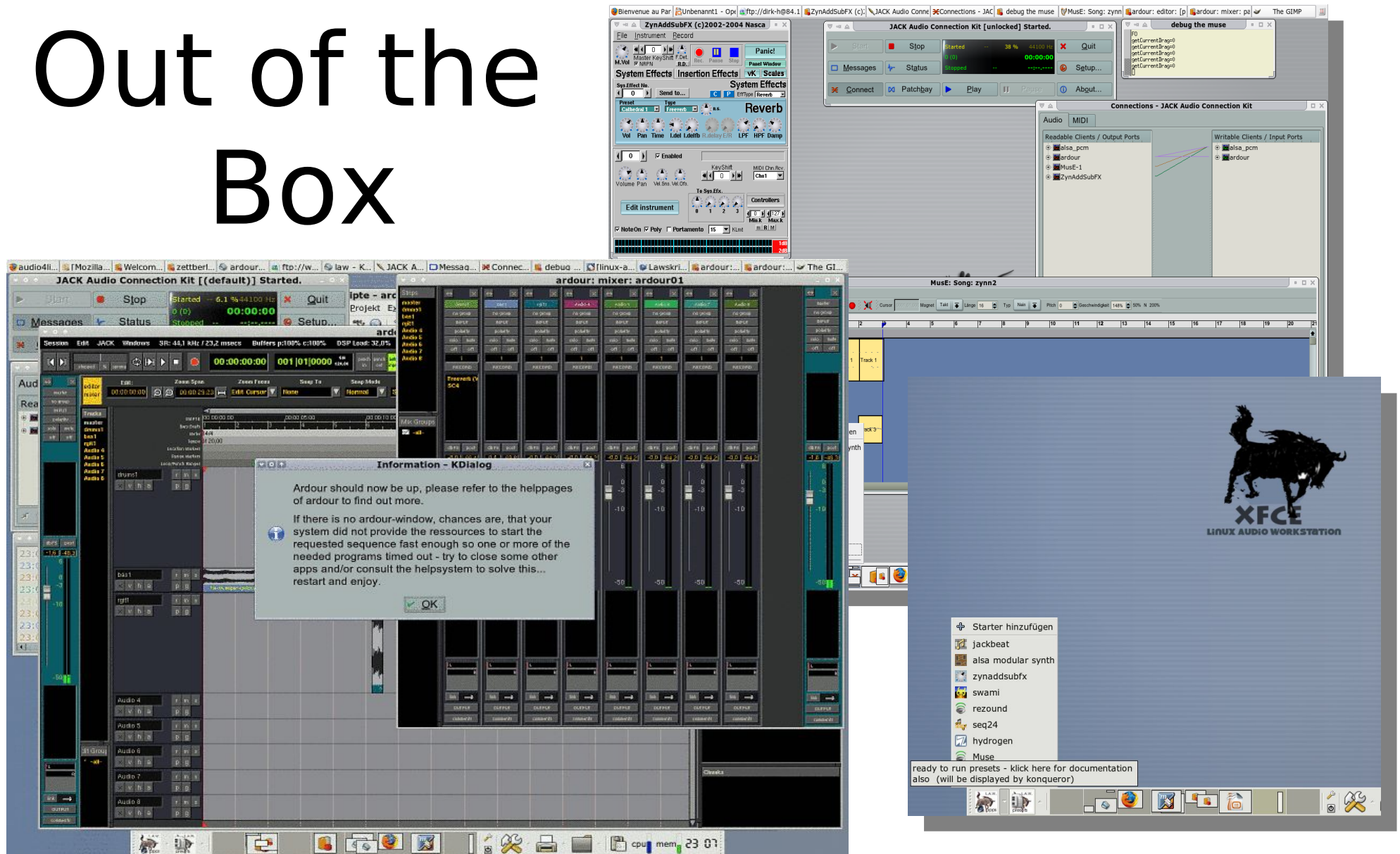


THE LINUX AUDIO WORKSTATION

Out of the Box

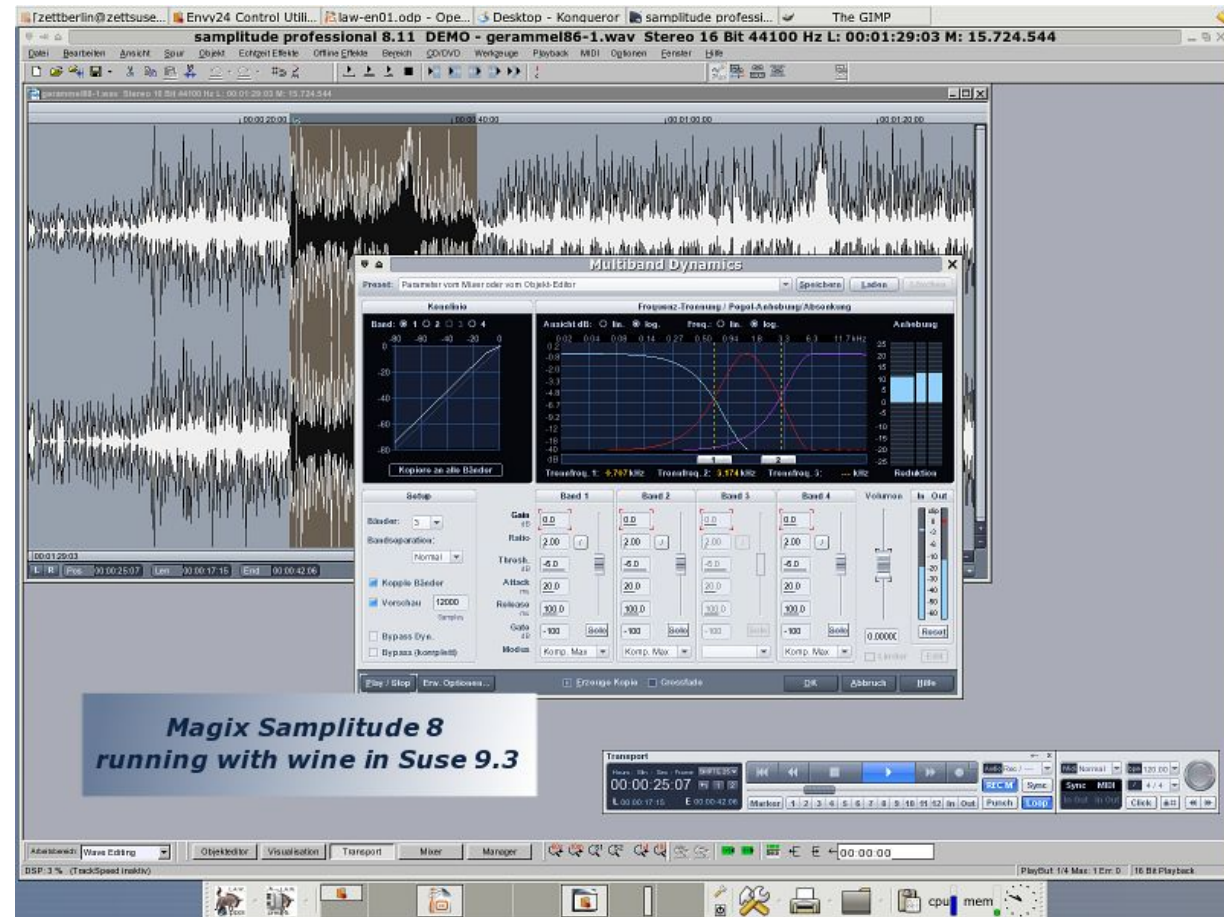


WHAT DO MUSICIANS WANT?

- They want, what they know – they dislike to abandon techniques they get used to.
- They want stability.
- They want integrated functions, either in a single application suite or in an standardized network of uniform components (vst, rewire).
- They like cuteness and fancy gimmicks but if they have to choose, they prefer stability.

WHAT IS KNOWN OUT THERE:

- Serious audio work on affordable machinery since about 2000.
- Costs for a simple audio workstation with proprietary software ca. EUR 800,-.
- Usage of cracked software is common, so prices have little effect.
- There are preset-oriented suites for beginners and powerful suites for pros.
- Proprietary projects focus (with great success) on „usability“.



WHAT DO WE HAVE:

- Software is organized in modules, that strongly depend on each other.
- No free all-in-one suites, no preset oriented programs distributed with lots of templates/samples etc.
- Only **wired** and **Imms** addressing the beginner, most software is rudimentary or pro-oriented.
- Since about late year 2004 there is nothing impossible anymore.

OUT OF THE DISK: AUDIO DISTROS

PROS AND CONS

- Most audio distros consist of repositories for hostsystems like debian or fedora or are modified standard distros with extra packages.
- All fullgrown audio distros rely upon an already working and installed hostsystem.
- Setup and integration of the software has to be done by the user.
- There are only little collections of presets and templates dedicated to Linux software.

WHAT WE WANT: EASIER FIRST STEPS WITHOUT COMPROMIZING FREEDOM.

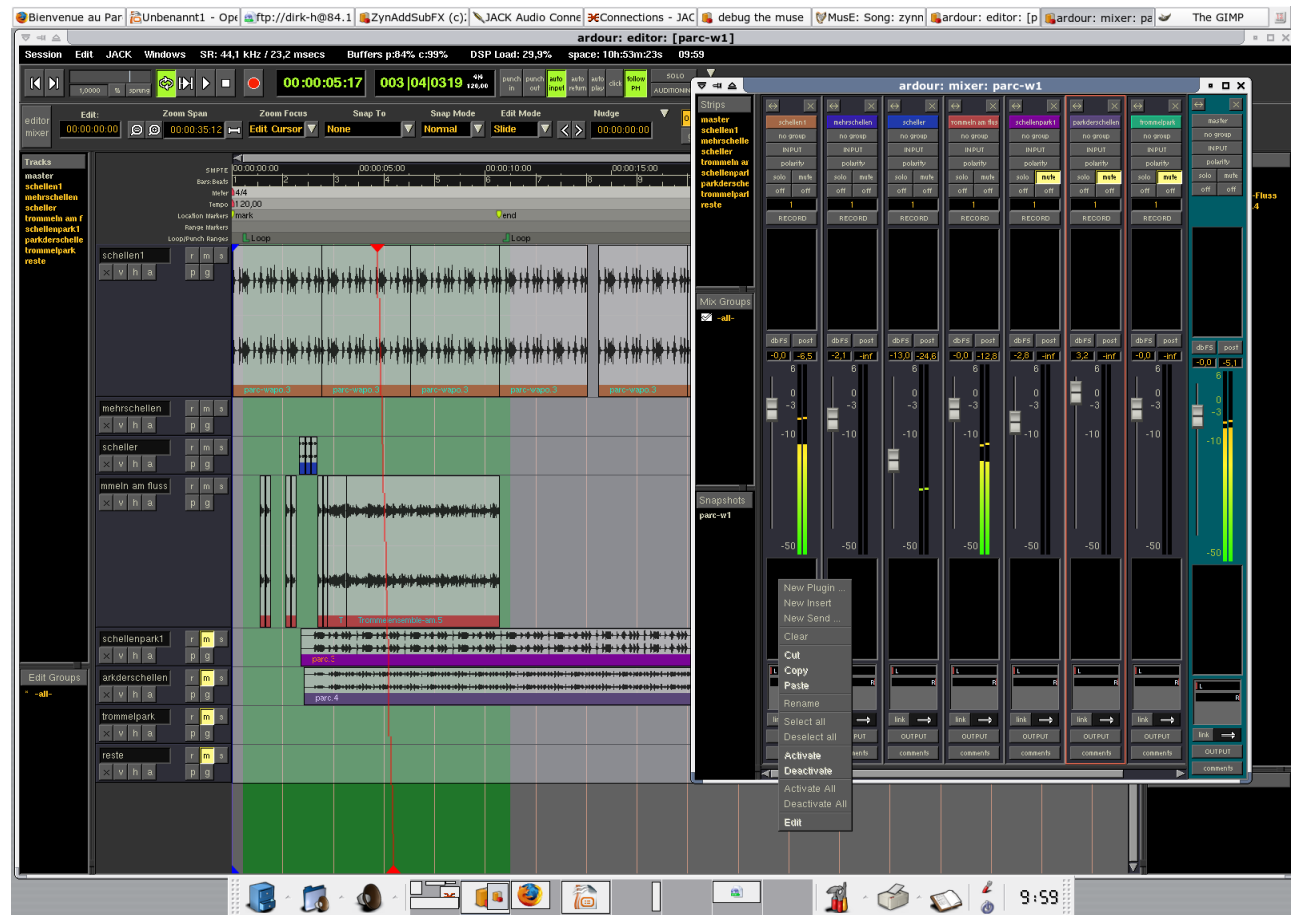
- The Linux Audio Workstation should basically be usefull in any desktop distro, that has the needed apps installed.
- Developement is done on an Linux optimized PC with pro-soundcard, that will be available as all-in-one bundle.
 - Built upon UBUNTU dapper drake (6.06) standard
 - Important packages are built from source on the box
 - The free distribution will be a tar-archive with the involved scripts, templates and documentation.

A WORD ON MONEY:

- Audio projects are not well supported by sponsors or not supported at all.
- As a L.A.W.-PC is sold, 30% of the profit will go to projects, that are important for Linux audio and not funded by a company yet.
- The L.A.W.-project and its users should be involved in a system dedicated to reward audio software developers as well as other underfunded programmers, that write good and important free software beyond server and corporate desktop.

WHAT WE NEED TO ACHIEVE: 5 FEATURES, A MUSICIAN DEMANDS FROM HIS/HER AUDIO-PC.

- The 3 most important:
 - 1) stability
 - 2) stability
 - 3) stability
- 2 other:
 - ✓ consistent user interface
 - ✓ all needed functions integrated



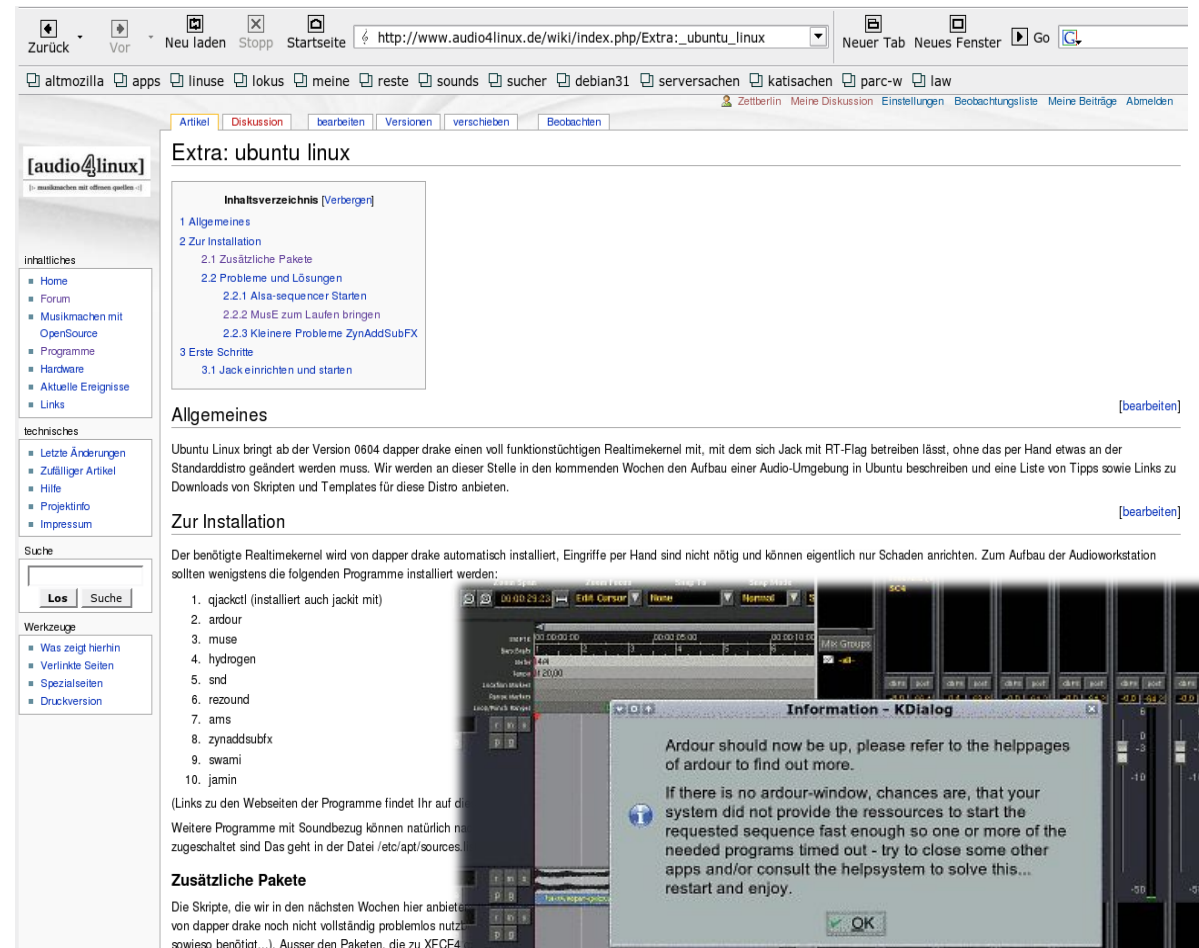
FREEDOM AND COMFORT

- Configurability and extensibility are not restricted.
- Templates and presets help to give experience of success and ahhhmm... *fun* – from day one, in complex szenarios also.
- Instead of trying to make complex things look simple, we explain complexity to make obstacles transparent.
- A complete build-environment for GTK and QT allows to experiment with software from source.



WHAT WE HAVE NO NAME FOR... : THE LAW-FRAMEWORK

- 1.) A collection of trustable, well developed software, that provides the needed functionality.
- 2.) Wrapper-scripts and scripts to start complex scenarios.
- 3.) scripts, that help to set up system services (especially for the distributed version)
- 5.) Templates, presets, samples
- 6.) Online help as usefull dialogs and html-pages.
- 7.) Wiki and Forum on the Internet



The screenshot shows a web browser window with the address bar displaying `http://www.audio4linux.de/wiki/index.php/Extra:_ubuntu_linux`. The page title is "Extra: ubuntu linux". The left sidebar contains a navigation menu with links like "Home", "Forum", "Musikmachen mit OpenSource", "Programme", "Hardware", "Aktuelle Ereignisse", and "Links". The main content area has a table of contents titled "Inhaltsverzeichnis" with sections like "1 Allgemeines", "2 Zur Installation", and "3 Erste Schritte". Below the table of contents, there is a section titled "Allgemeines" which discusses the Ubuntu Linux version 0604 dapper drake and its Realtimekernel. Another section titled "Zur Installation" provides instructions on installing the Realtimekernel and lists several programs to be installed: qjackctl, ardour, muse, hydrogen, snd, rezound, ams, zynaddsubfx, swami, and jamin. At the bottom, there is a section titled "Zusätzliche Pakete" which mentions scripts for installing additional packages. In the bottom right corner, there is a small dialog box titled "Information - KDialog" with the text: "Ardour should now be up, please refer to the helppages of ardour to find out more. If there is no ardour-window, chances are, that your system did not provide the ressources to start the requested sequence fast enough so one or more of the needed programs timed out - try to close some other apps and/or consult the helpsystem to solve this... restart and enjoy."

WHAT IS A WRAPPER?

zettberlin@zettusenova:~

zettberlin@zettusenova:~

```
^#!/bin/sh
# start the Alsa Modular Synth and check if Jackd is running before
# tetsted and found to be running OK on the tosh by the 18th of 0406
# tetsted and found to be running OK on the PreLAW by the 20th of 0406

kdialog --msgbox "This script will start the softsynth ams \n If you cannot hear anything and nothing goes on, you should check,
if any Audioapplications are running, that do not use the Jack-Audioserver - closing those often helps a lot....";

ps -C jackd >/dev/null&&(ams --jack --out 2 --preset $HOME/law/patches/ams/basmacher.ams &
)||(aplay $HOME/law/samples/acgit1-Ee.wav;
sleep 4;
qjackctl &
sleep 6;
kdialog --msgbox "jackd must be started first \n If jack has started, please click OK to start the softsynth ams";
ams --jack --out 2 --preset $HOME/law/patches/ams/basmacher.ams &
)
kdialog --msgbox "If the softsynth ams has started, clicking OK will connect it to the jack-audioserver.";
(sleep 2 &&
#Dr. Zoidbergs log: the earthlings fail to decide what name the ams-port for jack should have.
#BAH! here i simply list all ports i have ever seen so far... - this will give ugly error-messages in the console but should not
break execution...
if [ "ps ax|grep ams" != 0 ]
then
jack_connect ams_128_0:ams_out_0 alsa_pcm:playback_1
jack_connect ams_128_0:ams_out_1 alsa_pcm:playback_2
jack_connect ams_129_0:ams_out_0 alsa_pcm:playback_1
jack_connect ams_129_0:ams_out_1 alsa_pcm:playback_2
jack_connect ams_130_0:ams_out_0 alsa_pcm:playback_1
jack_connect ams_130_0:ams_out_1 alsa_pcm:playback_2
jack_connect ams_131_0:ams_out_0 alsa_pcm:playback_1
jack_connect ams_131_0:ams_out_1 alsa_pcm:playback_2
else
kdialog --msgbox "ams could not be started. \n Chances are, that your system did not provide the reSSources to start the request
ed set of applications fast enough so one or more of the needed programs timed out - try to close some other apps and/or consult
the helpsystem to solve this... restart and enjoy.."
fi)

kdialog --msgbox "ams can now be used, please refer to the Helppage of ams to find out more. \n If there is no ams-window, chan
ces are, that your system did not provide the reSSources to start the requested set of applications fast enough so one or more o
f the needed programs timed out - try to close some other apps and/or consult the helpsystem to solve this... restart and enjoy.
"
```

ZOIDBERG-SYNTHAX

```
zettberlin@zettusenova:~/bin/law
Datei Bearbeiten Ansicht Terminal Reiter Hilfe
^#!/bin/bash
#Systemdienste stoppen, die für Audio nicht gebraucht werden, nicht
installierte Dienste sollten auskommentiert werden.
#das Skript muss mit rootrechten laufen und sollte vom Starter an
ein xterm geschickt werden

# webserver und Konsorten anhalten
/etc/init.d/httpd stop ;
/etc/init.d/apache2 stop ;
/etc/init.d/mysql stop ;
/etc/init.d/proftpd stop ;
/etc/init.d/pure-ftpd stop ;
/etc/init.d/sendmail stop ;
/etc/init.d/mailman stop ;
/etc/init.d/named stop ;
/etc/init.d/ypbind stop ;

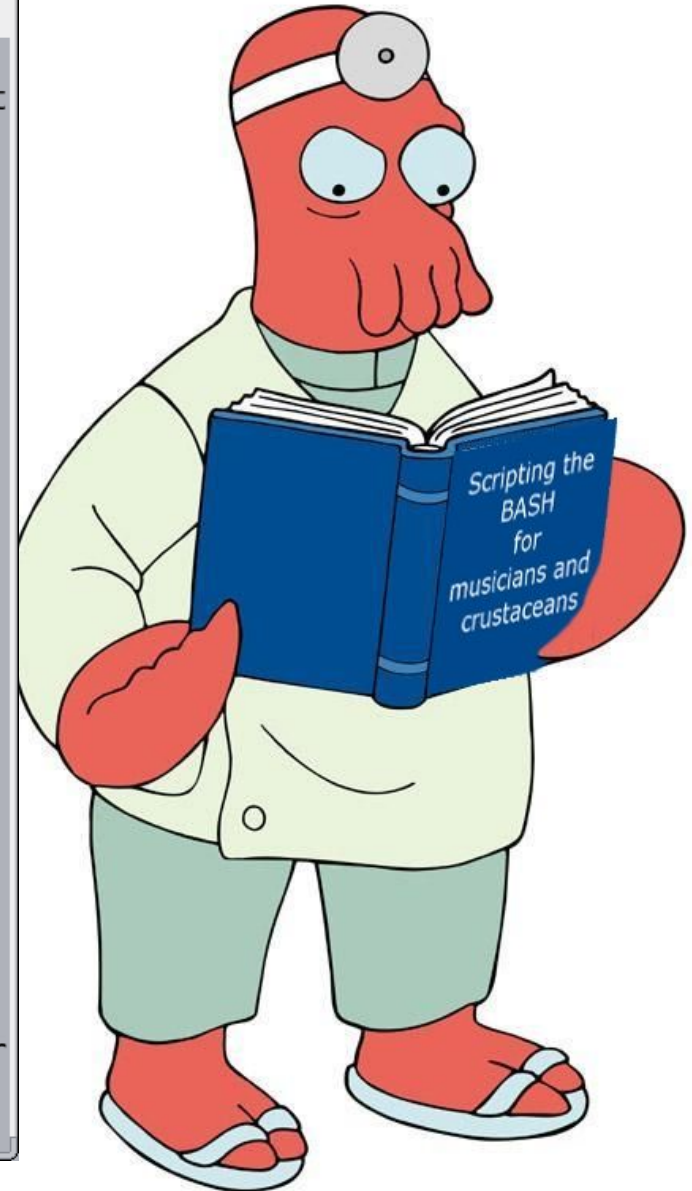
#Drucker aus
/etc/init.d/cupsrenice stop ;
/etc/init.d/cups stop ;

#und auch der Scanner
/etc/init.d/sane-dev stop ;

#lowlevel Netzwerkfunktionen abstellen
# Vorsicht: in dieser Liste könnten Funktionen stehen, die auch für
den Normalbetrieb benötigt werden (nfs, ntp etc)
-- EINFÜGEN --
```

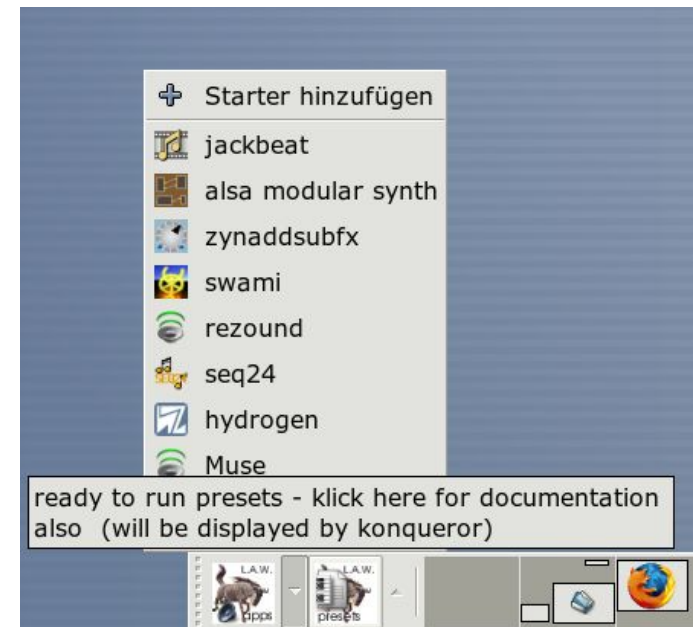
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Anfang



TO CHOOSE MEANS TO SELECT

- There are several Linux programs for each function we need.
- The LAW-framework only incorporates a small set of applications that are known to work properly alone and together with others as well.
- Programs that do not affect audio, should not be affected by the LAW-installation.



THE SET OF APPS:

- Ardour (HD-recorder, wave arranger/editor)
- MusE (sequencer)
- Hydrogen (drum sequencer)
- SND, Rezound, mhw (wave editors)
- AMS (soft synth and LADSPA-host)
- ZynaddSubFX, Amsynth (soft synths)
- Specimen (sampler)
- SWAMI (soundfont editor/player)
- Jamin (masterFX)

CONCLUSION : LINUX IS BETTER

- More flexibility
- More development
- More freedom

