

AGNULA/DeMuDi - Towards GNU/Linux audio and music

Free Ekanayaka

¹Media Innovation Unit – Firenze Tecnologia

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Contents

1 Background

- Using Free Software for audio and music
- Make it easier with AGNULA

2 Development

- Basing on Debian
- Customization

3 State of art

- Installer
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4 Next steps

- Infrastructure
- User support
- Quality assurance

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The advantages

- GNU/Linux is nowadays suitable for works of medium entity
- Provides flexible and inter-operational tools
- Is constantly growing
- Has a friendly and factual community
- Stimulates experimentation

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Some accessibility issues

- Fast evolving application domain
- Informations are generally not systematized
- Documentation is often difficult to find
- Mailing lists, HOWTOs, tricks and recipes spread all around

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A little bit of history

- European project for fostering the use of Free Software in the audio domain
- Funded until April 2005
- Currently supported by Media Innovation Unit
- Some former partners (KTH, IRCAM) are contributing with a server and a mirror

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The AGNULA/Libre Music project

- Deals with contents and creations
- More on this tomorrow!

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The AGNULA/DeMuDi project

- Deals with tools
- A GNU/Linux distribution based on Debian
- Entirely composed of Free Software
- Dedicated to professional audio research and work

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Social and political values

- Red Hat, SuSE and Mandrake are developed and maintained by companies
- Choices are primary influenced by market
- Debian is an association of individuals
- From the “Social Contract”
 - Debian Will Remain 100% Free Software
 - We Will Give Back to the Free Software Community
 - We Won't Hide Problems
 - Our Priorities are Our Users and Free Software

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Technological benefits

- Packaging system
- More than one thousand maintainers
- Community support
- Easy installation
- Easy upgrades
- Bug tracking system
- Stability

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Concept of Custom Debian Distribution

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- The tradeoff of flexibility is complexity
- How to make more accessible a certain subset of Debian
- A CDD is a specialization of Debian, not a distribution itself

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AGNULA/DeMuDi as a CDD

- Concerns only with distribution
- A comfortable way to install Debian for audio and music purposes
- Applications are developed by third parties (“upstream”)
- Contributes in hunting bugs (both Debian and upstream)
- Acts as a “bridge” between users (especially newbies) and developers

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Easiness

- Self-contained installable CD-ROM ISO image
- Simplified and semi-automatic Debian installer
- Prototype live CD version for testing and demoing

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Hardware detection

- Reliable PCI sound cards detection and ALSA configuration
- Robust X window configuration

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Package collections

- Focus is on audio and sound applications
- Wide selection of the best audio software available
- Grouped in tasks (DSP, Midi, Notation, Recording, etc.)

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Architecture

- Automatic tuning through Cfengine scripts
- Low-latency kernel (currently 2.6.12 plus Ingo's patches)
- Linux security modules
- Realtime IRQ scripts
- ALSA drivers
- Jack Audio Connection Kit
- LADSPA plugins

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User interface

- **Intuitive menu tree**
- Light window manager (Fluxbox)
- Artwork (boot splash, skeleton homes, themes)

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Web site

- **Currently based on Plone**
- Difficult to maintain
- New version based on Trac
- Wiki-oriented and integrated with the development

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Build system

- Daily ISO images
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Mailing list

- DeMuDi is often perceived as a different distribution than Debian
- Such attitude conflicts with the concept of CDD and its advantages
- Every issue concerning DeMuDi is actually concerning Debian
- Debian mailing lists let get in touch with a much larger community
- Examples:
 - <http://lists.debian.org/debian-user/>
 - <http://lists.debian.org/debian-multimedia/>

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Issue tracking

- Currently based on GForge
- Probably overkill for DeMuDi
- Not integrated with the web site
- Will be replaced by Trac

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Debian Multimedia

- An official Debian sub-project
- Currently simply a mailing list
- No web page published to describe the project
- Activity not very intense, but it is constant in time

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Goals

- A quality assurance team dealing with audio inside Debian
- Track a well defined set of packages
- Provide bleeding-edge applications
- Test packages and look for possible bugs
- Discuss design and interface issues
- Maintain a FAQ

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