

Debian Med

Integrated software environment for all medical purposes
based on Debian GNU/Linux

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Debian

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Structure

- 1 What is Debian Med
- 2 Realisation
- 3 Debian Med for service providers

Motivation

- Free Software in medicine not widely established yet
 - Some subareas well covered
 - Medical data processing more than just practice and patient management
 - Preclinical research of microbiology and genetics as well as medical imaging
- Pool of existing free medical software

Profile of the envisaged user

- Focus on medicine not computers
- Unreasonable effort to install upstream programs
- No interest in administration
- Interest reduced onto free *medical* software
- Easy usage
- Security and confidence
- Native-language documentation and interface

Customising Debian

- Debian > 20000 packages
- Focus on *medical subset* of those packages
- Packaging and integrating other medical software
- Easy installation and configuration
- Maintaining a general infrastructure for medical users
- General overview about free medical software
- Propagate the idea of Free Software in medicine
- Completely integrated into Debian - **no fork**



Basic ideas

*Do not make a separate distribution but
make Debian fit for medical care*

*No development of medical software - just
smooth integration of third-party software*

*Debian-Developer = missing link between
upstream author and user*

Debian - adaptable for any purpose?

- Developed by more than 1000 volunteers
- Flexible, not bound on commercial interest
- Strict rules (policy) glue all things together
- Common interest of each individual developer:
Get the best operating system for himself.
- Some developers work in the field of medicine
- In contrast to employees of companies every single Debian developer has the freedom and ability to realize his vision
- Every developer is able to influence the development of Debian - he just has to *do* it.

Do-O-Cracy = "The doer decides"

Packages for Microbiology

BioPerl Collection of Perl modules featuring computational methods routinely used in bioinformatics

BioPython Python tools for development of applications for computational molecular biology which address the needs of current and future work in bioinformatics.

BioSQUID Library of C code functions for sequence analysis including a number of small utility programs to convert, show statistics, manipulate and do other functions on sequence files.

BLAST2 Official NCBI version #2 of this standard program for nucleotide and protein sequence alignment.

more than 60 other packages

Packages for medical imaging

CTN *Central Test Node*: DICOM implementation which was designed to be used at the RSNA (Radiological Society of North America) annual meetings to foster cooperative demonstrations.

CTSim Interactive computed tomography simulator. CTSim has very educational trace modes for viewing the data collection simulation as well as the reconstruction.

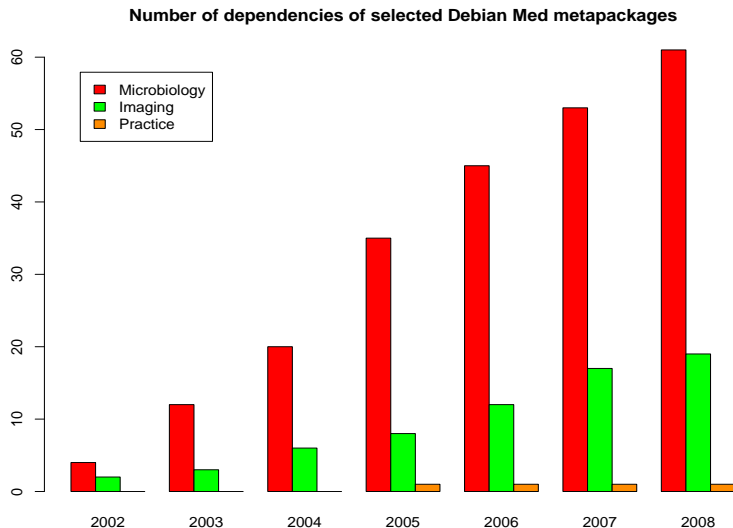
DCMTK DICOM-toolkit: collection of libraries and applications implementing large parts the DICOM standard for medical image communication. It includes software for examining, constructing and converting DICOM image files, . . .

more than 20 other packages

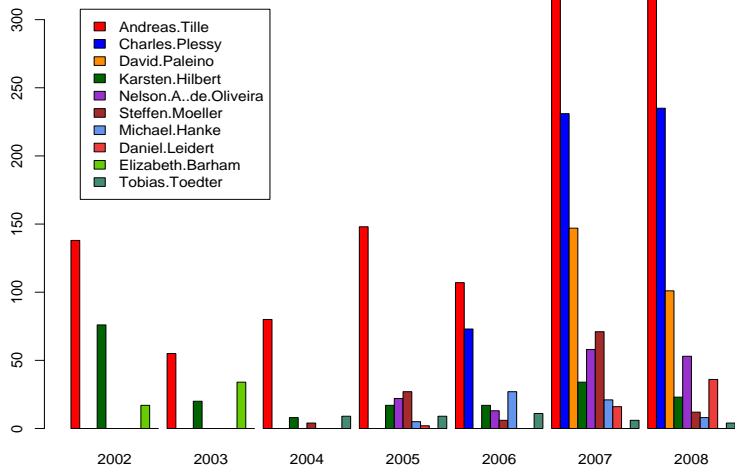
Packages medical practice

- GNUmed
 - Practice management with focus on medical documentation
 - Internationalised
- Currently only client packaged
- Server following soon
- There are many alternative projects → dissipation
- GNUmed seems quite suitable for Debian Med
- Others might follow

Selected metapackages of Debian Med



Top 10 posters on debian-med@lists.debian.org



Top 10 preconditions about Debian Med

- 1 Debian Med is a practice management system *itself*
- 2 Is only interesting for doctors
- 3 Not interesting for micro-biologists / medical physicists
- 4 Should be installed by health care professionals
- 5 Debian-Maintainer are programming software for doctors
- 6 Debian Med does not need supporter
- 7 Can be used on SuSE Linux
- 8 Medical software can not be free
- 9 Debian Med is just ready
- 10 Debian Med is the philosophers stone

Service providing using Debian Med

- Need for commercial support
- Needs specific knowledge of medicine computer scientists
- Business model: Service providing for medical Free Software
 - Software free of charge
 - Merits for
 - Consulting
 - Installation
 - Support
 - Updates

Prospectus

- There are good requisites in Debian
- Needed: High quality Open Source applications for medicine to be integrated into Debian
- Further increase of interest of developers and users and getting them involved in the project
- Base for service providers in health care
- Turning Debian into the distribution of choice for people working in the field of medicine because there is best support for free medical software

This talk can be found at
<http://people.debian.org/~tille/talks/>
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