Integration of VistA into Debian

The effort of Debian Med team to establish Debian in hospitals

Andreas Tille

Debian

Porto Alegre, 05. July 2013

Structure

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History @ LSM 2001, Bordeaux

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What is Debian Med?

practice management system

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Debian Pure Blend for medical care and microbiological research

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

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Debian prepared for medical care

- Debian 7.0 $>$ 20.000 binary 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
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Medical Software sustains inside Debian

- Making Free medical Software a part of Debian
- Some code is upstream dead and only available in Debian
- Several projects with goal to collect medical FLOSS are orphaned
- Debian Med will survive inside Debian even if early protagonists might stop working on it
- Fedora and OpenSuSE recently took over the concept

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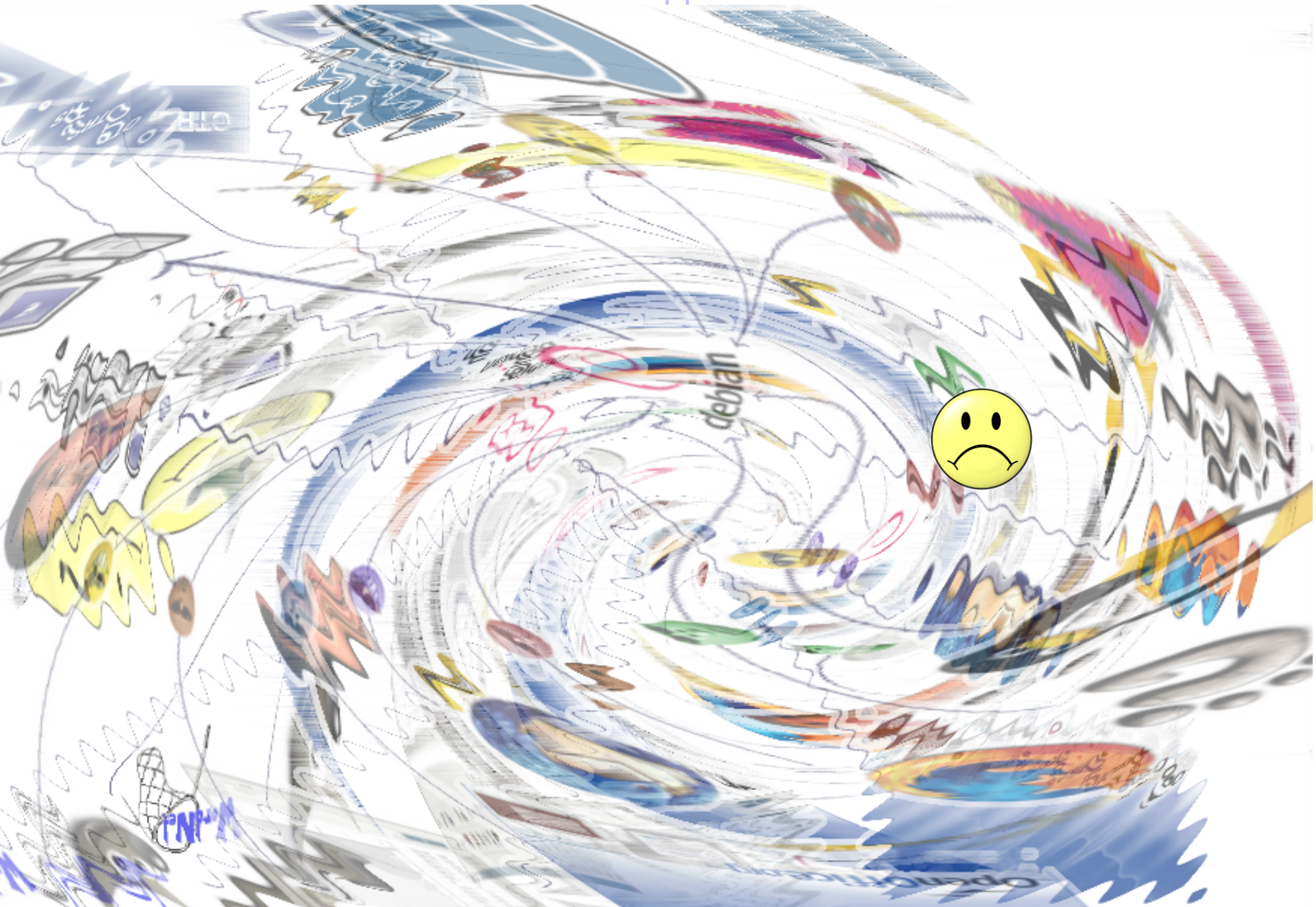
Debian

Debian Med focusses on Health Care applications



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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

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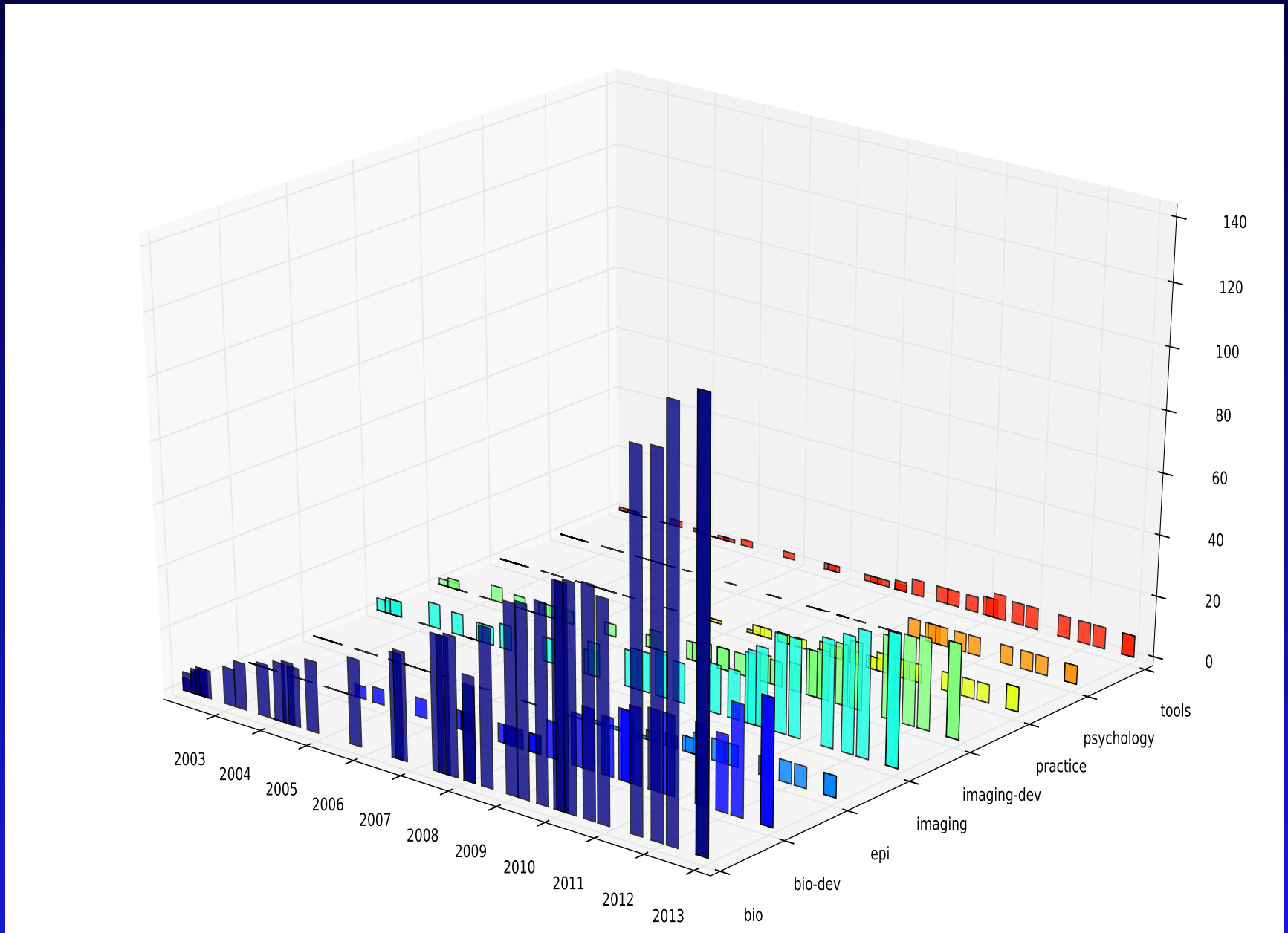
Selected metapackages of Debian Med



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   - History
   - What is Debian Med
   - Blends
2. Hospital Information Systems
   - How to make a choice
   - The VistA packaging

Debian Med needs a HIS

- VistA was in Debian Med focus from the beginning
- Debian Med needs a HIS system to fullfill its mission
- Complexity of such systems goes beyond the knowledge of a "random" Debian developer
- Precondition: strong connection to upstream developers and users.

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Selecting an appropriate HIS project

Preparation in Debian Med SVN done for:

Vista	Comprehensive software suite for hospitals (U.S. Department of Veterans Affairs)
Care2x	Web based hospital management system (upstream development somehow stalled, unfinished packaging exists but very aged)
GnuHealth	centralised Electronic Medical Record and Hospital Information System (just in Debian experimental)
OpenMRS	enterprise electronic medical record system framework (upstream started with packaging but maintainer left project – stalled)

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There exist a lot more projects in different development states

Cooperation with other projects

- Developer meetings to join forces
- Debian derivatives
- Training of upstream developers in packaging
- Every medical FLOSS project is invited to join the effort

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Training upstream

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- *Mentoring of Month (MoM)*
- Train upstream in Debian packaging according to a strict procedure

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Getting the ball rolling . . .

On Wed, Jan 18, 2012, Luis Ibanez wrote:

Subject: Looking for a Debian packager for FIS-GT.M: Change the History of Healthcare!!

Dear Debian packagers:

> We are looking for one of you to help us change the history of Healthcare

We are working at OSEHRA (http://www.osehra.org/) on building an Open Source environment for VistA, the Electronic Health Records system of the US Department of Veterans Affairs.

VistA is the best proven EHR, and it has been used for the last 30 years at the VA. It currently runs about 170 VA hospitals and about 1,000 ambulatory facilities.

...

Helpful precondition: MoM

On Wed, Thu, 19 Jan 2012, Andreas Tille wrote:

Subject: Happy birthday Debian Med and announcement of MOM

...To ensure that this development of a strong team will continue I would like to propose a new effort I would like to call

"Mentoring Of the Month" (MOM)

In this program I would like to dedicate a part of my spare time to a newcomer (the "student") providing any packaging knowledge I have to enable him working more or less independently on packaging after passing this MOM period. I like to guide the student kindly into all secrets of Debian packaging at the example of a specific program which is in the focus of the Debian Med team. The student is free to pick the package however, ...

Start with the precondition first

- Package *GT.M* (a MUMPS implementation)
- First challenge: You need a GT.M installation to build GT.M (bootstrapping)
- First approach: Build gtm-initial package use this to create gtm-final package
- Second approach: Try to circumvent the bootstrap process by sneaking preprocessed files in
- Final approach: Rewrite the aged build system to something new: cmake enables avoiding the bootstrap process
- Common sprint between GT.M upstream developers and Debian developer brought things forward a lot
- Package is close to ready - some minor issues remaining

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Tackle the final target

- After working hard on GT.M Luis started with VistA
- Main problem: rather organisational how to structure the package(s) for VistA
- Discussion whether to package single modules (in VistA jargon "KIDS")
- Final step for

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- 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
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    - Installation
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Prospectus

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- Base for service providers in health care
- Turning Debian into the distribution of choice for hospitals

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This talk is available at

http://people.debian.org/~tille/talks/

Andreas Tille <tille@debian.org>