Who the bloody hell cares about Debian?

Stefano Zacchiroli
Debian Project Leader
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FOSDEM 2011
Brussels, Belgium
Debian: once upon a time

Fellow Linuxers,

This is just to announce the imminent completion of a brand-new Linux release, which I’m calling the Debian Linux Release. […]

Ian A Murdock, 16/08/1993

- non-commercial distro, competitive in the OS market
- easy to install
- built collaboratively by volunteer software experts
- 1st major distro developed “openly in the spirit of GNU”
Debian, 17 years later

- ≈ 30’000 binary packages (amd64/sid/main)
- 12 releases
  - Squeeze released . . . yesterday!
- ≈ 900 DDs + 120 DMs + thousands other contributors
- largest n. of ports among mainstream distros
  - 9 in Squeeze (GNU/Linux)
  - + 2 non-Linux ports: GNU/kFreeBSD
  - + debian-ports.org ⊃ GNU/Hurd
- 120 “derivatives” distribution (source: distrowatch.com)
- . . .
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FOSDEM 2011
On the relevance of Debian

1993 — not many distros back then
2011 — *lots* of other distros

openSUSE, Linux Mint, PCLinuxOS, Slackware, Gentoo Linux, CentOS, FreeBSD, Arch, Sabayon, Puppy, Lubuntu, MEPIS, Ultimate, NetBSD, Tiny Core, Zenwalk, CrunchBang, Dreamlinux, Vector, Kubuntu, Maemo, Red Hat, aptosid, Peppermint, PC-BSD, Chakra, Salix, ClearOS, KNOPPIX, Xubuntu, Super OS, BackTrack, gOS, TinyMe, Zentyal, EasyPeasy, Frugalware, Clonezilla, Pardus, Meego, OpenBSD, Quirky, PC/OS, Zorin, Debian, SystemRescue, Element, Unity, SliTaz, Macpup, wattOS, Scientific, Mythbuntu, Slax, DragonFly, Elive, linux-gamers, 64 Studio, Ubuntu, mageia, Nexenta, Parisx, NuTyX, MirBSD, Kongoni, moonOS, LFS, Lunar, Imagineos, Untangle, Fedora, Yellow Dog, aLinux, Yoper, IPFire, BlankOn, Mandriva, PureOS, FreeNAS, Moblin, Linpus, TurboLinux, blackPanther, . . .

Some questions

Who the bloody hell cares about Debian anymore?
Is Debian still relevant?
What is Debian’s role?
On the relevance of Debian

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some of which:

- ... *release* more frequently
- ... *have* more *users*
- ... *innovate* more
- ... *get* more *credit/press/...*
- $YOUR_FAVORITE_DEBIAN_FUD
On the relevance of Debian

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Some questions

- *Who the bloody hell cares about Debian anymore?*
- *Is Debian still relevant?*
- *What is Debian’s role?*
1. Debian does it better
2. Debian: the root of a derivatives ecosystem
3. Distribution pipelines
Debian’s special #1: package quality

“Culture of technical excellence”

- package design: Policy
- package testing: lintian, piuparts, rebuilds (FTBFS), ...
- package maintainers are sw experts
- no 2\textsuperscript{nd} class packages

Debian release mantra

we release when it’s ready
Debian’s special #2: freedom

Firm principles: devs and users bound by the Social Contract

1. promoting the “culture of Free Software” since 1993
2. Free the bottom up

- in its software
  firmware included!
- in its infrastructure
  no non-free web services (for users)
  no non-free services (for developers)

Community awareness, users:

- know
- trust Debian to be faithful to their principles

... all this set a high bar for software freedom advocates

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Debian’s special #3: independence

Debian is an independent project

- no (single) company babysitting us
- living up on:
  1. donations (money & hardware)
  2. gift-economy

... remarkable, among “big” distro players

Debian choices can be trust not to be “profit-driven”
Debian’s special #4: decision making

1. **do-ocracy**

   An individual Developer may make any technical or nontechnical decision with regard to their own work;

   Debian Constitution, §3.3.1.1

2. **democracy**

   Each decision in the Project is made by one or more of the following:
   
   1. The Developers, by way of General Resolution [...]

   Debian Constitution, §2

- reputation follows work, easy to have an impact
- no benevolent dictator, no oligarchy
- no imposed decisions
- by who has money, infrastructure, employees, ...

Who the bloody hell cares about Debian?
Live long and prosper — take #1

- **good:** sw freedom + independence
- **bad:** company-\emph{only} distro market

... one day, their interests \underline{will} clash with ours

- invite others to become more and more independent
1. Debian does it better
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Interlude — derivatives how to

Free Software 101

Freedom #2, to redistribute copies
Freedom #3, to improve the program, and release improvements

When applied to distros: derived distributions, AKA derivatives

How?
1. take existing packages and add extras
2. patch & rebuild packages as needed
3. sync periodically
Derivatives are game changers

Derivatives have changed the way in which distros are made
- derivatives’ focus is on customization
- people power is needed “only” for that

everybody wins (if done properly)
- derivative: massive reuse of packaging work
- “mother” distro: reach out to new public
  - users and contributors
Debian derivatives

Debian: a base for $\approx 120$ derivatives
distrowatch.com

- Linspire, Skolelinux, Liurex, Mint, LiMux, Sidux, gnuLinEx, Grml, MEPIS, Xandros, Ubuntu, Univention, Damn Small Linux, Collax, Euronode, Floppix, Gibraltar, Kanotix, Knoppix, PureOS, gNewSense, 64 Studio, Elive, Freespire, Jolicloud, Kurumin, Maemo, Neopwn, OpenZaurus, Parsix, Xebian, Hackable:1, aptosid, ...

Why?
- quality & licensing assurances
- solid base system
- huge package base
- the “universal OS”, perfect for customizations
A Debian derivative example: Ubuntu

- started in 2004 by Canonical
- target: desktop
- Debian derivative
- very popular (20x Debian?)
- historical/past correlations
  - main ↔ corporate
  - universe ↔ community
    - heavily customized/forked in main
    - very close to Debian elsewhere

Upstream projects

Debian

Patch

Ubuntu

Data for Lucid Lynx, main + universe picture is courtesy of Lucas Nussbaum

Who the bloody hell cares about Debian?
Drowning in (Debian) derivatives

Not only Ubuntu . . .
rather, a whole tree /of derivatives (of derivatives)* . . .

Debian derivatives ($\approx 120$)
Linspire, Skolelinux, Liurex, Mint, LiMux, Sidux, gnuLinEx, Grml, MEPIS, Xandros, Ubuntu, Univention, Damn Small Linux, Collax, Euronode, Floppix, Gibraltar, Kanotix, Knoppix, PureOS, gNewSense, 64 Studio, Elive, Freespire, Jolicloud, Kurumin, Maemo, Neopwn, OpenZaurus, Parsix, Xebian, Hackable:1, aptosid, . . .

Ubuntu derivatives
Ubuntu Studio, Mythbuntu, ArtistiX, Asturix, Goobuntu, LinuxMCE, nUbuntu, Peppermint, TurnKey Linux, Zenix, . . .

$\texttt{distro}$ derivatives
...

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Ubuntu is probably the most customized derivative

other derivatives: higher no. of unmodified packages

if you are running a Debian derivative, chances are you heavily depend on Debian and on its well-being

yes,

even if your distro hasn’t told you
Outline

1. Debian does it better
2. Debian: the root of a derivatives ecosystem
3. Distribution pipelines

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The distribution pipeline

yesterday...

Upstream

software, fixes

bug reports, patches

Distro

software, fixes

bug reports, patches

Who the bloody hell cares about Debian?
The new distribution pipeline
The new distribution pipeline

That’s wonderful!

- **freedom** spreads
- more **eyeballs** swallow more bugs
- more potential **contributors**
The **new** distribution pipeline

That’s wonderful!

- **freedom spreads**
- more **eyeballs** swallow more bugs
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But.

- should be **sustainable**
- and benefit **Free Software** as a whole

Upstream

```
software, fixes
distro reports, patches
```
Free Software 101 — redux

Free Software is bigger and more important than Debian, Ubuntu, and any other distro or project.

If we care about Free Software, then we should *all*

1. give back, i.e. reduce patch flow viscosity
2. give credit where credit is due

Diagram:

```
  Upstream  ─── bug triage & fwd, thanks! ─── Distro 1 ─── Distro 2 ─── Distro n
  push back, acknowledge                push back, acknowledge                push back, acknowledge
```

Who the bloody hell cares about Debian?
Who the bloody hell cares about Debian?

You should

1. Debian offers a cocktail of pretty rare features;
2. Debian is the root of a huge tree of derivatives;
3. ultimately, Free Software is better served by sharing.

Thanks!

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about the slides:
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Get your favorite Debian derivative into:

- **http://wiki.debian.org/Derivatives/Census**
  let us know your derivative exists, how to contact you, how to find your patches, etc.

- **http://wiki.debian.org/DerivativesFrontDesk**
  discussion place for derivatives, to coordinate changes with Debian and get them “back home”
debian squeeze

... has arrived!

http://wiki.debian.org/ReleasePartySqueeze
Debian is a free operating system (OS) for your computer. An operating system is the set of basic programs and utilities that make your computer run. Debian uses the Linux kernel (the core of an operating system), but most of the basic OS tools come from the GNU project; hence the name GNU/Linux.

Debian GNU/Linux provides more than a pure OS; it comes with over 29000 packages, precompiled software bundled up in a nice format for easy installation on your machine. Read more...

The latest stable release of Debian is 6.0. The last update to this release was made on February 6th, 2011. Read more about available versions of Debian.

Getting Started

- If you'd like to start using Debian, you can easily obtain a copy, and then follow the installation instructions to install it.
- If you're upgrading to the latest stable release from a previous version, please read the release notes before proceeding.
- To get help in using or setting up Debian, see our documentation and support pages.
- Users that speak languages other than English should check the international section.

http://wiki.debian.org/ReleasePartySqueeze