Debian: 18 anni di software libero, “do-ocracy” e democrazia

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Prelude — the notion of “distribution”

- distributions are meant to ease software management
- key notion: the abstraction of package
- offer coherent collections of software
- killer application: package managers
Outline

1. Debian and Squeeze
2. Specialties
3. Derivatives
4. Contribute

Stefano Zacchirol (Debian)
Fellow Linuxers,

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

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Ian A Murdock, 16/08/1993

*comp.os.linux.development*

- make GNU/Linux **competitive** with commercial OS
- **easy** to install
- built **collaboratively** by software **experts**
- 1st major distro developed “**openly** in the spirit of GNU” FSF-supported for a while
Debian: the operating system

flagship product: Debian stable

- binary distribution
- completely Free (DFSG)
- released every 24 months (≈)
- a dozen architectures
- archive-wide security support (3-3.5 years)

renowned for

port, stability, packaging system,
old hardware support,
documentation, smooth upgrades,
i18n/l10n, the testing suite, runs anywhere, technical policy, package choice, ...
Debian 6.0 “Squeeze” — highlights

- dependency-based boot system (faster, more robust)
- completely Free Linux kernel, firmware included
- GNU/kFreeBSD as technology preview
- improved debian-installer
  - ext4, btrfs
  - ZFS (kFreeBSD)
  - better support for complex setups e.g. LVM + RAID + encryption

get Squeeze
http://deb.li/squeeze
Debian Pure Blends
- DebianEdu, Debian Med, Debian Science, Debian Accessibility, DebiChem, Debian EzGo, Debian GIS, Debian Multimedia, ...
- blends.alioth.debian.org/

new services
- snapshot.debian.org
- backports.debian.org
- squeeze-updates suite (ex-volatile)
- screenshots.debian.net
- ask.debian.net

updates throughout the archive
choice: GNOME, KDE Plasma, Xfce, LXDE, ...
Debian: the Project

Common goal:

Create the best, Free operating system.

- 100% Free Software
- give back
- don’t hide problems
- priorities: users & Free Software

Debian Constitution (1998)
Structures and rules of a Free-Software-compatible democracy

Strong motive to join: ≈ 1’000 volunteers, world-wide
Debian: the Project (cont.)
Outline

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Debian: do-ocracy e democrazia
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Debian: one of a kind?

1993 — not many distros back then
18 years later, *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, GhostBSD, Korgoni, moonOS, LFS, Lunar, Imagineos, Untangle, Fedora, Yellow Dog, aLinux, Yoper, IPFire, BlankOn, Mandriva, PureOS, FreeNAS, Moblin, Linpus, TurboLinux, blackPanther, . . .

with many differences:
- technical choices
- release management
- release schedule
- target user
- community
- support
- packaging system
- user base
- look & feel
- . . .

How is Debian different?
Debian’s special #1: package quality

“Culture of technical excellence”

- **package design**: Policy
  i.e. “how a package should look like”
- **package testing**: lintian, piuparts, archive rebuilds (FTBFS), ...
- package maintainers are **software experts**
- no 2\textsuperscript{nd} class packages, all are equal

**Debian release mantra**

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

Firm principles: developers 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
- users trust Debian not to betray free software principles
- high bar for software freedom advocates
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

... truly remarkable in today “big” distro world

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

1. do-o-cracy

An individual Developer may make any technical or non-technical 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

that means:

- reputation follows work
- no benevolent dictator, no oligarchy
- no imposed decisions by who has money, infrastructure, people, ...

Stefano Zacchirol (Debian)
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 your 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 ≈130 active derivatives — distrowatch.com

- Linspire, Liurex, Mint, LiMux, Sidux, gnuLinEx, Grml, MEPIS, Xandros, Ubuntu, Univention, Damn Small Linux, Collax, Euronode, Floppix, Gibraltar, Kanotix, Knoppix, PureOS, gNewSense, LMDE, 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 (15–20x Debian?)
- historical/past correlations
  - main ↔ corporate
  - universe ↔ community
    - heavily customized/forked in main
    - very close to Debian elsewhere
- sprouting its own derivatives (≈70)
  - ... as Debian *transitive* derivatives

Upstream projects

Debian

Ubuntu

Patch

Data for Lucid Lynx, main + universe picture is courtesy of Lucas Nussbaum
Do you Debian?

- Ubuntu appears to be the most customized Debian derivative
- other derivs. ⇒ much larger amount of *pristine* Debian packages

Linspire, Liurex, Mint, LiMux, Sidux, gnuLinEx, Grml, MEPIS, Xandros, Ubuntu, Univention, Damn Small Linux, Collax, Euronode, Floppix, Gibraltar, Kanotix, Knoppix, PureOS, gNewSense, LMDE, 64 Studio, Elive, Freespire, Jolicloud, Kurumin, Maemo, Neopwn, OpenZaurus, Parsix, Xebian, Hackable:1, aptosid, Ubuntu Studio, Mythbuntu, ArtistiX, Asturix, Goobuntu, LinuxMCE, nUbuntu, Peppermint, TurnKey Linux, Zenix, …

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

*even if your distro hasn’t told you*
The distribution pipeline

yesterday...

Upstream ➔ Distro ➔ User

software, fixes

bug reports, patches

software, fixes

bug reports, patches
The new distribution pipeline

Upstream → Distro 1 → Distro 2 → Distro n

- software, fixes
- bug reports, patches

... today
The *new* distribution pipeline

That’s wonderful!
- freedom spreads
- more eyeballs swallow more bugs
- more potential contributors

But.
- should be sustainable
- to everybody’s benefit
Free Software 101 — redux

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

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

![Diagram showing the flow of upstream changes through distros with arrows indicating give back, bug triage, and acknowledge steps.]

Paragraph: Debian: do-ocracy e democrazia

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Parma, Italy 22 / 28
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even if completely volunteer-driven, Debian uses resources

- **hardware** for essential services
  - archive, buildds, devel. machines, ...
- **money** for hw-related services
  - guarantees, shipments, hosting, ...
- **money to sponsor developer meetings**
  - strengthen the community
  - get work done

**Donations**

- donations: http://www.debian.org/donations
- partners program: http://www.debian.org/partners
Contributing — work with Debian

- test, report, triage, fix bugs
  - reportbug on your Debian
  - http://bugs.debian.org
- translation (it)
  - http://wiki.debian.org/it/DebianWiki
  - http://wiki.debian.org/L10n/Italian
  - http://lists.debian.org/debian-l10n-italian/
- documentation
- help with packaging

http://wiki.debian.org/HelpDebian
Contributing — join Debian

choose your commitment:

package maintainer maintain packages, via sponsoring

Debian Maintainer (DM) upload your own
  ● advocacies required

Debian Project Member (DD) become a Debian “citizen”
  ● http://nm.debian.org
  ● upload access to all the archive for packagers
  ● voting rights
  ● all kinds of contributions are equally welcome!

Zack’s tips for wannabe Debianers

1. choose a team: http://wiki.debian.org/Teams
2. stay on their mailing list and IRC channel
3. triage bugs, test patches, etc. for packagers
4. . . . the rest will come!
Want to know more?

- on the web
  - http://www.debian.org
  - http://wiki.debian.org
- mailing lists: http://lists.debian.org
- IRC (debian-∗ channels on irc.debian.org)
- ask me!
Thanks!

Questions?

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