Packaging OpenOffice.org

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Agenda

- About the speaker

- Why create packages for OpenOffice.org?

- OpenOffice.org in Debian

- Packging concepts

- Supporting the packages

- Links

- Questions

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Chris Halls

- Debian developer and packager of OpenOffice.org

- Tools project developer

- Trading systems developer in Frankfurt, Germany

Why package OpenOffice.org ?

Current packaging

- Uses 2 stage install: setup -net and workstation setup
  - Confusing for users; many frustrated users and bug reports
  - This problem will be solved in next generation installer, but not in 1.0/ 1.1

- Needs to be installable on any system without additional dependencies
  - Provides versions of all libraries used

Distro packages 1

- Setup -net already done by packager

- Wrapper script to perform workstation setup automatically

- Install to standard system locations

- Uses native package system
    - Distribution same as other programs
    - Upgrades easier to perform

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- Improve system integration

  - Menu icons

  - Documentation

  - Meet File Hierarchy Standard

  - Libfreetype and other libraries

- Meet licensing requirements

  - libgpc

  - Java

- Add patches that are not yet in official version

Available Packages

- Standard install sets
  - Linux i386 / PPC
  - Windows
  - Solaris

- Custom-made packages
  - Linux
    - Debian
    - Mandrake
    - Gentoo
    - Red Hat
    - Knoppix
  - FreeBSD
  - Mac OSX

  - More...

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OpenOffice.org in Debian

OOo in Debian – team

- ## Jan-Hendrik Palic
  - Powerpc port and Gnome

- ## Rene Engelhard
  - i386 and dictionary packages

- ## Chris Halls
  - i386 and packaging scripts

- ## Gerard Tonn
  - S390 port

  - Peter Novodvorsky – original packages
  - Martin Quinson – language pack concept
  - LarstiQ – additional documentation
  - Many other contributors and testers...

The Debian project

http://www.debian.org

- Free operating system
  - Linux kernel, ongoing work on Hurd
  - Many architectures

- 9000 packages

- Independent volunteer developers (around 1000)

- Three active suites: stable (Woody), testing, unstable

OOo in Debian

- 3 active ports
  - i386 – Chris & Rene
  - powerpc – Jan
  - s390 – Gerhard Tonn
    - Alpha? - Jan

- First OOo packages October 2001 – Peter Novodvorsky

Openoffice (0.638c-1) unstable; urgency=low

 * Initial release.

-- Peter Novodvorsky <nidd@debian.org> Tue, 23 Oct 2001 02:26:50 +0300

Debian package structure

- openoffice.org

- openoffice.org-bin

- openoffice.org-debian-files

- openoffice.org-l10n-<lang>

- openoffice.org-help-<lang>

- openoffice.org-spellcheck-<lang>

Debian modifications

- Installation
  - setup -net already performed
  - Wrapper script for user installation and automatic user interface language selection

- Global configuration settings in /etc/openoffice
  - autoresponse.conf, dictionary.lst, psprint.conf, sofficerc, openoffice.conf

Integration with Debian

- Global desktop integration for all users for KDE and Gnome desktops.

- Menu entries for all window managers that support the Debian 'menu' package.

- Add paths for fonts to OOo font path.
  - Defoma fonts
    - Standard font package format
    - Includes msttcorefonts for MS TrueType fonts
  - Several other popular font packages to be found in Debian.

Integration with Debian libraries

- Libfreetype – newer version, better font rendering

- Libstlport

- Libodbc and libsane in /usr/lib

- compiled with gcc 3.0 on Woody and 3.2 for unstable

- Todo (needs support in config_office source)
  - Libdb, zlib, nas, ...

Added features

- s390 architecture support

- Automatic user interface language selection
  - e.g. LANG=pt_BR openoffice

- Extra documentation specific to Debian
  - README
  - manpages

The Debian archive

- Debian Free Software Guidelines (DFSG)
  - All source for software freely available
  - May be redistributed
  - License must not be specific to Debian

- Debian Main
  - Software must be DFSG-free and can only depend on software also in main
  - Build dependencies must also be available in main

Contrib & non-free

- Contrib

  - Must be DFSG-free but may depend upon, or build using non DFSG-free software

  - Is not an official part of Debian, although infrastructure is provided to support users.

  - OpenOffice.org is in contrib because it build-depends on Java.

- Non-free

  - Contains software that does not meet the Debian Free Software Guidelines

  - Also not official part of Debian; not available on all distributed CD-ROMs

Non DFSG-free components

- OOo cannot be included in Debian main until all non-free dependencies and build-dependencies are removed:

    - Gpc library - Support for 3D shaded objects

    - LZW compression of GIFs, needed for 'save to html/web' features

    - Java runtime support. Currently the packages must still be built with the blackdown JDK.

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DFSG and GPC library

- General polygon clipping library

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- May not be used without special permission.

- Liblgpc is in non-free section - implementation replaced by stubs
  - Certain polygons can not be printed

- Progress has been made towards replacing the code

DFSG and LZW patented code

- LZW compression code is used to create GIFs in 'Save to Web'

- In Debian, the file is removed from the source tarball and replaced by a stub implementation, so 'Save to web' does not work

- The patent has already expired in the US and will expire in Europe later this year.

DFSG and Java

- Officecfg, several optional modules need supported JDK to build

- Sun/Blackdown JDKs are not DFSG-free:

```
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NOTE: In addition to the licensing terms given below
redistribution from Blackdown and Debian online archives is
permitted.
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Working around Java

- Java support not mandatory
  - Java applet support
  - Modules written in Java using office SDK
  - 1.1 includes accessibility modules that need Java

- Red Hat created a gcj replacement
  - Used by Mandrake, but not Debian
  - 'replacement' is a set of scripts and hacks
    - Officecfg XML transformations replaced by a shell script
    - Other Java classes are empty stubs just to keep the build system happy

Improving the Java situation

- Add support for additional JDKs
  - e.g. Kaffe
    - Not all APIs supported

- Modularise the OOo build
  - core components built without non-free JDK usage
    - Suitable for unrestricted distribution -> Debian main
  - Other components built later
    - Non-free build dependency -> Debian contrib

Packaging OOo

- Current packaging system

  - Build full installation set for English

  - Generate only setup.ins for other languages

  - Perform network install before creating packages

  - Use wrapper script to perform user install

- Future installation project

  - Use native installer

  - Modifications to scp project

  - RPM-only

Language packs

- Concept

- Language packs

- Wrapper modifications

- Problems

- Pt-PT

Libraries integration

- stlport and the gcc transition
  - 1.0 Build system needed hacking to support gcc-3.2
    - Now fixed in 1.0.2 and later

- Libfreetype
  - Cause of various bugs
  - Version 2.0.9 not binary compatible with 2.1.x

Tips, tools & resources for packagers

- Ccache – compiler cache
  http://ccache.samba.org

  - Rebuild completely in e.g. 2 hours instead of 10
  - Use by setting PATH or CC="ccache gcc" CXX="ccache gxx" ./configure

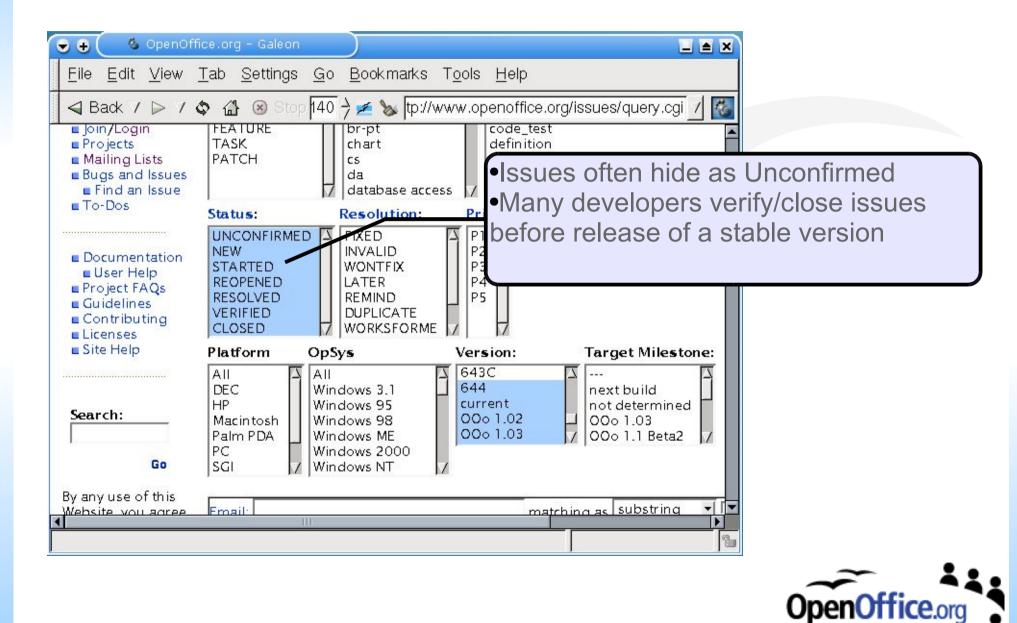- Distcc – distributed compiler
  http://distcc.samba.org

  - Compile OOo on several networked machines at once
  - Can be used in combination with ccache (set CCACHE_PREFIX)

- Issues often hide as Unconfirmed
- Many developers verify/close issues before release of a stable version

IZ queries

Summary is often useless 'bug in my presentation'

Main information from reporter is usually here

Further information, backtraces, developer comments here
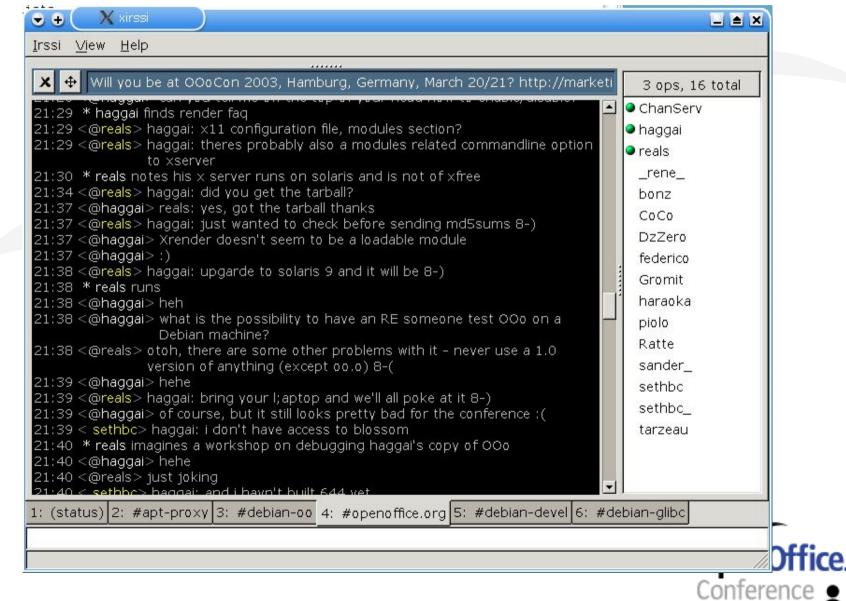
- Bug tracking systems
  - OpenOffice.org IssueZilla
  - Distro bugtracking systems

- Mailing lists
  - Lists at openoffice.org
  - Distro mailing lists

- IRC channel #openoffice.org on irc.freenode.net

Scripts

- Scripts: http://people.debian.org/~halls/openoffice/scripts
  - Various scripts that I use to manage OOo builds
    - getoocvsupdates – Update a working directory from CVS using Ximian Bonsai

CVS packaging repositories

- Debian
  - http://cvs.debian.org/?cvsroot=debian-openoffice

- Mandrake
  - http://cvs.mandrakesoft.com/cgi-bin/cvsweb.cgi/SPECS/OpenOffice.org

- Gentoo
  - http://cvs.gentoo.org/cgi-bin/viewcvs.cgi/gentoo-x86/app-office/openoffice

- FreeBSD
  - http://www.freebsd.org/cgi/cvsweb.cgi/ports/editors/openoffice

Mailing lists for packagers

- OpenOffice.org mailing lists
  - releases@openoffice.org
  - dev@tools.openoffice.org
  - dev@porting.openoffice.org
  - dev@openoffice.org
  - dev@installation.openoffice.org ?

- Distro mailing lists
  - debian-openoffice@lists.debian.org
  - openoffice@freebsd.org

A home for packagers ?

- Packagers don't have a home at the moment.
  You can find them around:
  - dev@porting.openoffice.org
  - dev@tools.openoffice.org
  - dev@openoffice.org
  - IRC (#openoffice.org on irc.freenode.net)

- A mailing list for packagers
  - There has been some discussion on dev@distribution about a new mailing list

Future direction

- Add free JDK support

- Split source up into modular units

- Additional packages
  - Localised help
  - SDK
  - Additional dictionaries

- Package additional lanugages
  - Catalan

- Native installer project

Conclusion

- Packages can improve the end-user experience of Ooo

- Packagers must work around licensing and distribution restrictions

- New concepts such as language packs

- Many resources available, although sometimes hard to find

Links

- OpenOffice.org in Debian
  http://www.linux-debian.de/openoffice

- The Debian project
  http://www.debian.org

- The build tools project
  http://tools.openoffice.org

- Porting project
  http://porting.openoffice.org

Questions?

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