



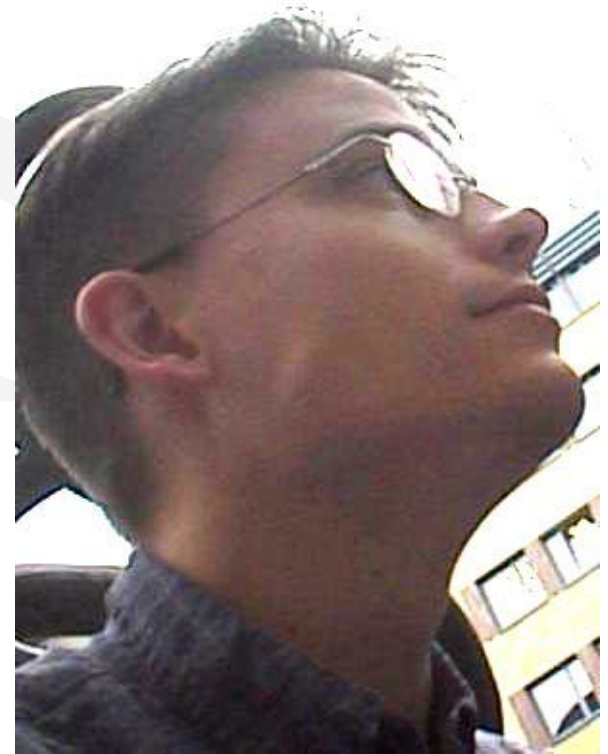
## Packaging OpenOffice.org

**Chris Halls**  
**[halls@debian.org](mailto:halls@debian.org)**

- About the speaker
- Why create packages for OpenOffice.org?
- OpenOffice.org in Debian
- Packging concepts
- Supporting the packages
- Links
- Questions

## 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

- 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...



# 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

- 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>

- 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, sofficer, 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, ...



- 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**
  - 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.

# DFSG and GPC library

- General polygon clipping library

You may not use this software, in whole or in part, in support of any commercial product without the express consent of the author.

- 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.

- Officecfg, several optional modules need supported JDK to build
- Sun/Blackdown JDKs are not DFSG-free:

```
Except as specifically authorized in any Supplemental License  
Terms, you may not make copies of Software, other than a  
single copy of Software for archival purposes
```

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

# 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

- 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)

distcc

# Make friends with IZ

The screenshot shows the OpenOffice.org website interface. The browser window title is "OpenOffice.org - Galeon". The address bar shows the URL "http://www.openoffice.org/issues/query.cgi". The page content includes a navigation menu on the left, a search bar, and a table of issues. The table has columns for Status, Resolution, Platform, OpSys, Version, and Target Milestone. The "Status" column is currently set to "UNCONFIRMED".

Status:	Resolution:	Platform:	OpSys:	Version:	Target Milestone:
UNCONFIRMED	FIXED	All	All	643C	---
NEW	INVALID	DEC	Windows 3.1	644	next build
STARTED	WONTFIX	HP	Windows 95	current	not determined
REOPENED	LATER	Macintosh	Windows 98	OOo 1.02	OOo 1.03
RESOLVED	REMIND	Palm PDA	Windows ME	OOo 1.03	OOo 1.1 Beta2
VERIFIED	DUPLICATE	PC	Windows 2000		
CLOSED	WORKSFORME	SGI	Windows NT		

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

# IZ queries

The screenshot shows the OpenOffice.org issue tracker search interface. The browser window title is "OpenOffice.org - Galeon". The address bar shows "http://www.openoffice.org/issu". The search criteria are as follows:

- Where the field(s) [assigned\_to component everconfirmed] changed. changed to value (optional)
- Summary: [ ]
- A description entry: crash
- URL: [ ]
- Status whiteboard: [ ]
- Keywords: [ ] Any of the listed keywords set

Search filters:

- Comment [ ] contains (case-insensitive) substring [ ]
- Or [ ]
- And [ ] Add another boolean chart

Sort By: Reuse same sort as last time [ ] Subr [ ]

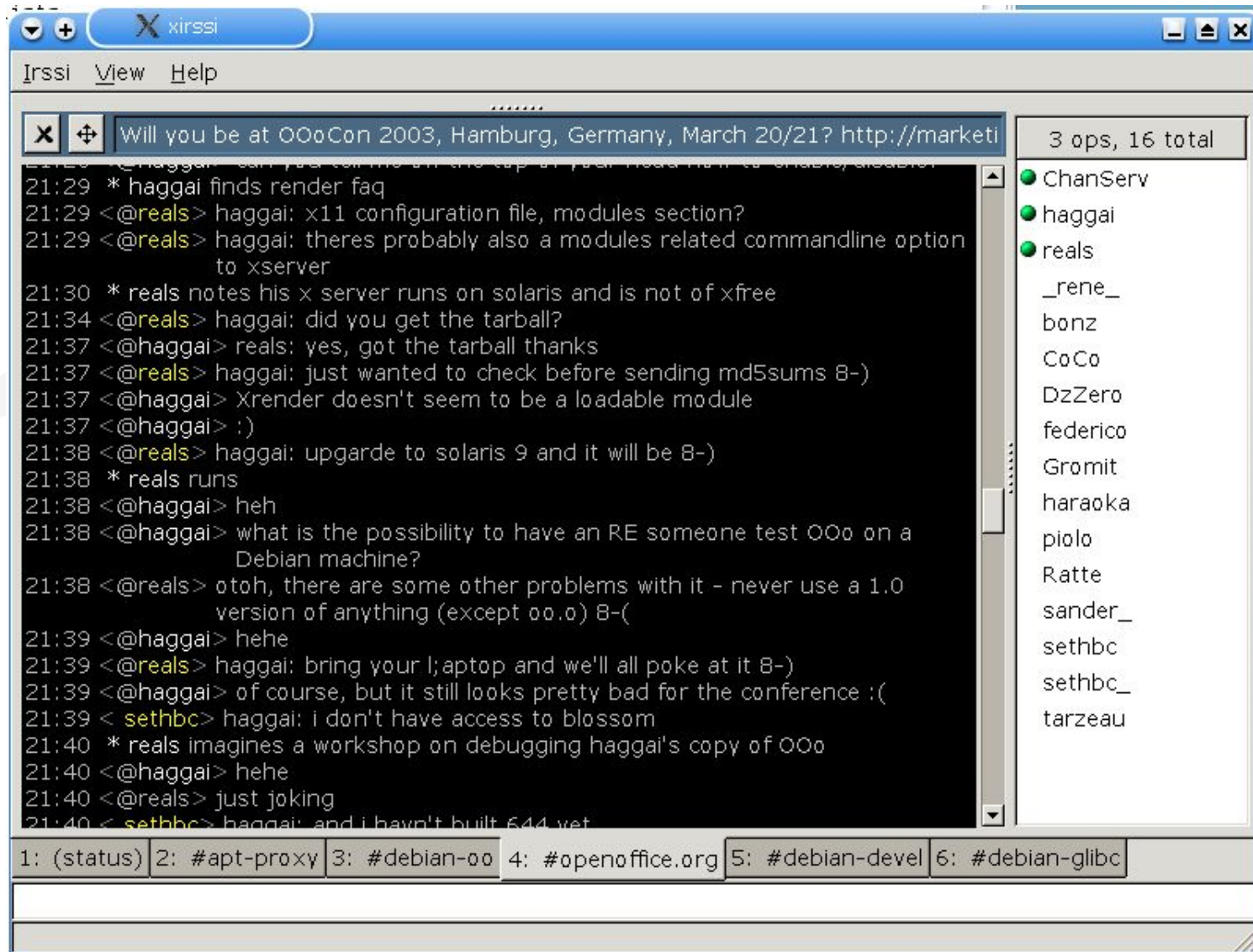
Three callout boxes are present:

- Top right: "Summary is often useless 'bug in my presentation'" (points to the Summary field)
- Middle right: "Main information from reporter is usually here" (points to the A description entry field)
- Bottom right: "Further information, backtraces, developer comments here" (points to the Comment field)



- 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](http://irc.freenode.net)



The screenshot shows the Irssi IRC client interface. The window title is "xirssi". The main chat area displays a conversation between users haggai and reals. The chat history includes:

```
21:29 * haggai finds render faq
21:29 <@reals> haggai: x11 configuration file, modules section?
21:29 <@reals> haggai: theres probably also a modules related commandline option
to xserver
21:30 * reals notes his x server runs on solaris and is not of xfree
21:34 <@reals> haggai: did you get the tarball?
21:37 <@haggai> reals: yes, got the tarball thanks
21:37 <@reals> haggai: just wanted to check before sending md5sums B-)
21:37 <@haggai> Xrender doesn't seem to be a loadable module
21:37 <@haggai> ;)
21:38 <@reals> haggai: upgarde to solaris 9 and it will be B-)
21:38 * reals runs
21:38 <@haggai> heh
21:38 <@haggai> what is the possibility to have an RE someone test OOo on a
Debian machine?
21:38 <@reals> otoh, there are some other problems with it - never use a 1.0
version of anything (except oo.o) B-(
21:39 <@haggai> hehe
21:39 <@reals> haggai: bring your l;aptop and we'll all poke at it B-)
21:39 <@haggai> of course, but it still looks pretty bad for the conference :(
21:39 < sethbc> haggai: i don't have access to blossom
21:40 * reals imagines a workshop on debugging haggai's copy of OOo
21:40 <@haggai> hehe
21:40 <@reals> just joking
21:40 < sethbc> haggai: and i hawn't built 644 yet
```

On the right side, there is a list of channel operators and users. The list shows "3 ops, 16 total" and includes names like ChanServ, haggai, reals, \_rene\_, bonz, CoCo, DzZero, federico, Gromit, haraoka, piolo, Ratte, sander\_, sethbc, sethbc\_, and tarzeau.

At the bottom of the window, there is a tab bar with several tabs: "1: (status)", "2: #apt-proxy", "3: #debian-oo", "4: #openoffice.org", "5: #debian-devel", and "6: #debian-glibc".

- 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](mailto:releases@openoffice.org)
  - [dev@tools.openoffice.org](mailto:dev@tools.openoffice.org)
  - [dev@porting.openoffice.org](mailto:dev@porting.openoffice.org)
  - [dev@openoffice.org](mailto:dev@openoffice.org)
  - [dev@installation.openoffice.org](mailto:dev@installation.openoffice.org) ?
- Distro mailing lists
  - [debian-openoffice@lists.debian.org](mailto:debian-openoffice@lists.debian.org)
  - [openoffice@freebsd.org](mailto: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](mailto:dev@porting.openoffice.org)
  - [dev@tools.openoffice.org](mailto:dev@tools.openoffice.org)
  - [dev@openoffice.org](mailto:dev@openoffice.org)
  - IRC ([#openoffice.org](https://irc.freenode.net) on [irc.freenode.net](https://irc.freenode.net))
- A mailing list for packagers
  - There has been some discussion on [dev@distribution](mailto:dev@distribution) about a new mailing list

- Add free JDK support
- Split source up into modular units
- Additional packages
  - Localised help
  - SDK
  - Additional dictionaries
- Package additional languages
  - Catalan
- Native installer project

- 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



- 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?