and GNOME ...

What we're doing apart and together

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“Stand at the crossroads and look; ask for the ancient paths, ask where the good way is, and walk in it, and you will find rest for your souls...” - Jeremiah 6:16
The messages in a nutshell ...

- LibreOffice growth & execution
  - improvements for developers
  - improvements for users
- LibreOffice / GNOME integration
  - current state & plans
- LibreOffice relevance / future ...
- Conclusions
LibreOffice: more devs needed

*perhaps this rings a bell ...*
Including new contributors ...

Steadily diversifying and growing the team ...
New guys since we launched

Number of distinct code committers active in each month

- Tata Consultancy Services
- SUSE
- SIL
- RedHat
- Oracle
- Nou & Off
- New Contributors
- Munich
- Linagora
- Lanedo
- Known contributors
- Intel
- IBM
- Funky
- Collabora
- CodeWeavers
- CodeThink
- Canonical
- Bobiciel
- Assigned
- ALTA
Reliable out-of-master builds ...

Lots of big / fast / ccache enabled tinderbox slaves.

All major platforms

Building & uploading binaries as well for QA.

Thanks to Norbert Thiebaud Bytemark & more
Easy Hacks and patch submission

- Easy hacks page
  - Generated from simple whiteboard annotation in bugzilla
  - changes welcome!
  - *Thanks to Bjoern Michaelsen* (Canonical) and others.

- Gerrit - https://gerrit.libreoffice.org
  - Magic to turns an openID account (eg. Gmail)
  - Into no-ask git commit / push access to gerrit
  - Submit to patch queue backed by mailing-list
  - Code inclusion is: git fetch / cherry-pick FETCH_HEAD
  - Test build integration on it's way.

  *Thanks to Norbert Thiebaud, Bjoern Michaelsen, David Ostrovsky*
Translating German Comments

- Makes things **significantly** easier for non-Germans...
- ~26k lines done - ~26k to go > 50%...
- If you read German – please help
- Lots of comment translators distracted by code hacking...

**Detected lines of German comment**

With thanks to (recent translators):
- Luc Castermans
- Philipp Riemer
- Julien Nabet
- Tomaž Vajngerl
- Jesso Clarence – Murugan
- Florian Reisinger
- Sebastian Spaeth
- Philipp Weissenbacher
- and many more!
Removing totally unused code ...

- Shrinking the LibreOffice's bloat footprint
- making real progress … 5000+ methods to ~200
- One year of unused methods work:

With thanks to
Caolan McNamara
Michael Stahl
(Redhat)

And particularly:
Noel Grandin

For working to complete the last two-hundred by porting away from custom templates to STL.
Using a standard make tool (gnumake)

- Ongoing work to kill 'dmake'
  - Faster, more standard & hack-able
  - Huge parallelism possible for builds on big-iron.
  - Enables library merging → one monster lib.

With thanks to
David Tardon
(RedHat)
Matúš Kukan
David Ostrovsky
Pierre-Eric
Pelloux-Prayer
(Lanedo)
and more ...

GNUmake vs. dmake by module count

0 50 100 150 200 250
3.3.0 3.4.0 3.5.0 3.6.0 master

<table>
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GNUmake
GNUmake
Dmake
Dmake
LibreOffice 3.6: more end-user love
Unit testing for quality ...

- Improved quality through unit testing
- Coverage & number of tests increasing rapidly
- security regressions, document layout, formulae calcs etc.

Count of types of gnumake enabled unit tests
(each runs a battery of tests)

With many thanks to
Markus Mohrhard
(above)
Artur Dorda
Daniel Bankstone
(GSOC)
Kohei Yoshida
Miklos Vjana
(SUSE)
Caolan McNamara
Michael Stahl
(Redhat)
And many more
Who got tired of fixing
The same bugs ...
3.6 new feature selection ...

Corel Draw import (to ODF)
Fridrich Strba (SUSE)

New Impress master-pages
Design team (several)
3.6 new features #2 ... (calc)

Calc: In-cell color bars
*Markus Mohrhard*

Calc: Ergonomic improvements
*Kohei Yoshida* (SUSE)

Calc: much improved CSV import
*Eike Rathke* (RedHat)
3.6 new features #3 … Writer

As-you-type live wordcount in writer
Muhammad Haggag

MS Word smartart import
Miklos Vjana (SUSE)

Much improved image scaling
Tomaž Vajngerl

Sample SmartArt LibreOffice?
And more features & fixes ...

- Pick the right display for projecting slides *(me)*
- Add widescreen formats for slides (Rob Snelders)
- Basic IDE improvements *(Bence Tomcsik)*
- Update recent-documents more regularly *(Muhammad Haggag)*
- Allow edits on 'read only' documents *(Stephan Bergmann: RedHat)*
- X errorbars in scatter & bar charts *(Rafael Dominguez)*
- New spreadsheet functions *(Regina Henschel, Winfried Donkers)*
- Improved sheet naming *(Albert Thuswaldner)*
- Lots of UI work *(Mirek Mazel, Stefan Knorr, Jan Holesovsky)*
- Many new translations
- Hundreds of bug fixes
- And many more features & hackers that can't be listed ...
Everyone's help with brand building much appreciated
LibreOffice and GNOME ...
Integration & work with GNOME

- Schedule synchronization (for distros)
  - LibreOffice 3.6.2 – October 7th
  - GNOME 3.6.1 – October 15th
  - Ubuntu Q.Q – October 18th
  - Fedora 18 – November 6th
  - ie. getting the best versions into users' hands ASAP

- Pluggable technology re-use
  - Gnome-VFS or gio, Gconf, d-bus – screensaver hold-off API
  - Evolution libebook / addressbook & send-mail integration
  - All windows are GtkWindows, glib mainloop integration
  - Gtk+ file dialog & GtkPrint integration
  - Telepathy integration – coming ...
gtk+ integration

- `gtk+2` or `gtk+3` (or KDE3, 4, Trinity, raw-X)… **run-time** pluggable
- Lots of new `gtk2+` integration fixes (**Ruslan Kabatsayev**)
- Background rendering (cf. gradient), menu separators, tab prelight, lines & frames etc.

- **gtk+3**
- an improving prototype **thanks to:**
  **Cosimo Cecchi**
- `gtk/broadway` goodness
- Requires thread hooks / locking
UI / design re-use

- Tango icon theme
  - Updated to Mango / gnome-icon-theme for 3.6
  - Default artwork set across several platforms:
    - Win / Mac / GNOME
- **Thanks** for the great work here!

- Existing VCL widget set – utterly awful.
  - toolkit layout support coming *(Caolan McNamara RedHat)*
  - re-using glade for dialog design / layout
  - will require lots of dialog code re-working / cleanup as we go.
  - a next-big-thing initiative ...
Alfresco / Sharepoint integration

- The other way: re-use libCMIS in GNOME – GIO backend etc.
- unpleasant check-out / check-in needs a good pattern ...
Future integration bits ...

- Lots of interest in re-using LibreOffice' rendering core
  - Android / iOS, efficient web-office viewer
  - GNOME / Documents

- liblibreoffice
  - ripped out rendering core
  - exposing all our crazy filter goodness to 'Documents'
  - in-doc meta-data extraction / editing (?)
  - editing / touch support behind an input abstraction ...
    - scope for an Epiphany style simpler native UI

- Indexing helpers to replace tracker's built-in
  - performance work to get up / down quicker.
- Harfbuzz integration underway *(Khaled Hosney)*
LibreOffice future & relevance

or a selection of features we're working on for 3.7 / 4.0
Proprietary → ODF continues
Wordperfect, Works, Visio, Corel Draw ...

Microsoft Publisher import thanks to
Brennan Vincent (GSOC)
Valek Filippov
Fridrich Strba
Thanks to Rafael Dominguez (GSOC) & Design team

Making template selection and search prettier & simpler.
Calc scalability / number crunch ...

- Drug-bust on the internal calc data structures
- Reduced memory size
- Threading / block dependencies
- Much faster calculation
- Thanks to Kohei Yoshida (SUSE)
Android & mobile platforms
(something in your pocket)
Who did all of this?

- I'm a fraud! The real work & glory should be addressed to: Tor Lillqvist's hours of toil
- Why do it? - futures ...

windows 1.00 android 0.10

The man himself ...

Thanks to:
http://trends.google.com/
LibreOffice / Android

A small table with an embedded drawing.

This is a picture of our wedding with some nice text flow going on around it, of course you can edit a custom contour as well as having a crude ellipse, which makes for a very nice look. Below it is an alpha blended free-hand, filled spline with drop shadow and gradient.

The UI is not ideal even for a desktop. This is a proof of porting / concept hack not the headline
Iain Billett's GSOC project

- an android viewer app ...
- with a document collection manager / shell
Pages are rendered to textures by something like a 'liblibreoffice'.

The Java native app renders textures / page numbnnails etc.
Android remote control ...

- Thanks to Andrzej J. R. Hunt (and GSOC)
- Use your smart-phone as a powerful remote control
- see your notes
- switch slides
- up-load your slides?
Android remote control...

- Pretty slide sorter / selector
- Clock / count-down etc.
- Potential future work
  - accelerometer / laser pointer?
  - fuse with viewer code to allow projection from a tablet?
- Should ship in 3.7/4.0

Let's think...
Interactive Collaboration
with a rare view of our architecture
Not quite the amusing: class ModelViewController { ... };

Actual simplified internals diagram
So what can we do?

- Make some hard up-front design decisions:
  - Ordering is King
    - It doesn't matter what you do but always do everything, everywhere in the same order, on every client – and we will have consistent documents.
  - Interactive conflicts can be dealt with by users as they occur: both edit the same cell, and see who wins ...
Collaboration prototype design:

By no means perfect but functional.
Some consequences ….

- Constraints:
  - cell editing is applied asynchronously …
  - eg. enter “foo” in A1
    - edit sent to the IM bus
  - user moves to another cell
    - apply all messages from IM bus in order
    - “foo” entered into A1 …
  - Potential latency issue

- Implementable is feasible in linear time
- No blue-sky monster re-work necessary …

- **DEMO – Thanks to:**
  - Matus Kukan (GSOC), Will Thompson (Collabora), Eike Rathke (RedHat), Michael Meeks (SUSE)
Conclusions ...
LibreOffice & GNOME Conclusions

- LibreOffice is growing & executing
  - Improving for developers: still lots to do …
  - Improving for users: still a long way to go …
- LibreOffice works well with GNOME
  - We want to integrate better with all our platforms
- LibreOffice has ambitious future plans
  - We need new hackers to accelerate them …
- Thanks for all of your help and support !
  - we rely on you, to prove the power of Freedom with us.
  - to get people **excited** about Free Software they use …
- Please do get involved and help us …

  Oh, that my words were recorded, that they were written on a scroll, that they were inscribed with an iron tool on lead, or engraved in rock for ever! I know that my Redeemer lives, and that in the end he will stand upon the earth. And though this body has been destroyed yet in my flesh I will see God, I myself will see him, with my own eyes - I and not another. How my heart yearns within me. - Job 19: 23-27