The wonderful world of:

LibreOffice
The Document Foundation

Or – How we will fix your office suite

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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
Overview & disclaimer ...

- I am not speaking for the Document Foundation
  - These views are mine, but you're welcome to borrow them.
- LibreOffice is better, and fun too
  - How is it going?
  - What are we doing?
  - Progress so far
  - Release process
- Check the license applies to everyone
- LibreOffice appreciates your help
  - and/or ways to get involved
- Conclusions
What / Why of LibreOffice
Finally “doing it right”
- vendor neutral, no code ownership aggregation
- a real Free Software / hackers project
- Volunteers + RedHat + Novell + Debian + Canonical + Google …
- FSF + OSI support, boycott + Novell support etc.
- Freedesktop hosting
- LGPLv3+ / MPL for new code …

An idea – whose time has finally come …
- a beautiful, Office suite we can be proud of (in due course) backed by a real, open community
- Shipping now on Windows, Mac, GNU / Linux, *BSD etc.
- ODF enables trivial migration with your data …
Why now? just in time delivery ...

ten years after the promise of a foundation …
  - Patience – a virtue, but not an inexhaustible resource.
  - ~unrelated to Oracle – StarDivision had real autonomy
  - please don't hate them, they have hard problems
  - the 'community' has '~failed' them for many years
  - we have great friends & hackers there
  - motivated by a love of freedom, not by hatred
  - LibreOffice gives certainty in a time of uncertainty
The proliferation of web developers is amazing:

- full function off-line == re-write all in Javascript
  - Best of luck with this project: 8 million lines later

- eg. Conference WiFi & 3G is extremely cluttered
  - I would like to show you these slides today
    - but they are on a server I can't get to, no DNS, no signal, no ...

- Rent vs. Buy - cloudness ? – Buy Furcate, Rent Collectors ?

- My Phone is an 80's super-computer anyway …
  - seen my vt220 app ?

- WYSIWYG, page layout ~impossible in a CSS world
- HTML5 / the Canvas may change this … VNC/web etc.
8 months in: how is it going? - extremely well

- 180+ entirely new code contributors with included patches
- 200 active translators, for ~100 languages (in Pootle)
- Initial stable releases: 3.3.0 ... 3.3.2 out 3.3.3 pending
- Development continues apace: 3.4.0 is at Beta5 due for release soon

![Graph showing contributors over time]
What are we doing?

- Pay down the vast technical debt we inherited
  - an ancient and gnarled, 20+yr old beast
  - organic growth, without refactoring, a lack of code review etc.
  - reads (in places) like a Windows device driver ...

- eg. the opt-in approach to lifecycle management:
  - dozens of crashers on exit

Data from IBM of OO.o measurements for writer / symphony, presented at OOoCon10
What are we doing? #2

- Translating the source code:
  - 100k+ LOC of German comments, after 10 years of 'open'
    - Some virtually useless: (CUPS style)
      ```
      // Beschreibung: textuelle Beschreibung ermittelt
      String SwDocStyleSheet::GetDescription(SfxMapUnit eUnit)
      ```
    - Others somewhat more useful:
      ```
      |* Wenn bereits ein passendes Format existiert, so wird dies
      |* zurueckgeliefert.
      |* Ersterstellung MA 22. Sep. 92
      |* Letzte Aenderung JP 08.05.98
      ```
  - And more that are useful (we think)
    - Fantastic “German comment detector” from Miklos
    - Re-uses existing LO code for language detection :-)
  - Are you German? can you read this? ⇒ we need your skills!
What are we doing? #3

- Making it easy to contribute: we welcome change ...
  - Google search: libreoffice easy hacks
  - Post a patch to our (open) mailing list and discuss it
- Creating unit tests (run during build)
- Removing deprecated cruft:
  - VOS library (deprecated for a decade), OS/2 support, use c++ templates not macros, cppcheck bug fixing etc.
  - wasting fewer resources: icons duplication etc.
- Nearly done merging outstanding vendor patch-sets
- Smaller, faster release process:
  - A single 180Mb download (for Windows) with all langs
  - plus on-line help, (in place of a copy per lang)
An example …

- John Lee Castle
  - arrives on list to help debug a (star)basic crash
  - 2 days later – first set of 'warning' patches merged
  - Sadly beaten to the word-count feature, but …
  - digs in bugzilla to find & 1 week later fixes Issue 76852:

    Opened: Wed May 2 12:28:00 +0000 2007

    Run this Basic macro:
    Dim s as single
    s = 999999
    print s ' display : 999999
    s = s+1
    print s ' display : 1  ***** incorrect ***
    s = s+1
    print s ' display : 1.000001E6

    A one line fix !
New Features, distinctive to LibreOffice ...

Or: why should I choose LibreOffice?
New Features, distinctive to LibreOffice … #2

Bundling existing, useful extensions – instead of burying them …

Extremely well / as of now:
- 50 entirely new code contributors with included patches, 27 translators
- another 10+ arriving each week
- 100’s of KLOC of real patch (8 million line diff to branch-point) (meaningless?)
- But – Oracle won’t join us in name (yet) … though they contribute indirectly.

![Graphical representation of contributors and their contributions]
New Features, distinctive to LibreOffice … #3

Experimental features, not perfect, but a taster: **in-line formula editing** ...

Click and edit here:

Not just here:

Thanks to Jonas Finneman Jensen, and Luke Dixon ...
Spot the launch date ...

Day #1 nearly same code
Is it just an 'easy hacks' page?

Xmas + 3.3.0

Known contributors
- New Contributors
- Novell
- Oracle
- Redhat
Check the license applies to everyone ...
Vendor neutrality / no assignment of ownership ...

- An emerging subtle threat to software freedom
  - Assigning ownership to companies
  - Not always 'copyright' – sometimes just a public domain contribution, leaving an exclusive corporate owner of the complete work.
  - Often assignment with a fall-back license: perpetual, irrevocable, worldwide, no-charge, royalty-free, unrestricted ... 

- Why should I care?
  - Traditionally people mostly cared about (Free) licenses (good)
  - I will argue that you need to care about others' terms too
    1) Assignment creates a barrier of delay and conflict
    2) It disrupts a delicate hacker / suit-wearer balance
    3) It entrenches corporate control, and excludes competitors
    4) It creates FUD around free-software licenses & practices
But we do have a contributor agreement

The license we use:

A beautiful, fair symmetry:

Inbound == Outbound best in most cases

I am not a Laywer (sadly)

Richard Fontana (RedHat) who is, has a great talk on this:

http://ref.fedorapeople.org/fontana-harmony.html

Legal benefits of greater control sufficiently dubious to not justify harm done to the community by assignment

Contributor Agreements seem to suggest that free software licenses are not good enough for the model.

Ethical concerns: (unequal bargaining power)
LibreOffice needs your help ...
New Features, distinctive to LibreOffice ... #4

Migration – sadly much of the corporate world is infected with VBA ...
Can you: mirror / translate ...

- Mirrors: always room for more...
  - mirrors@documentfoundation.org
- We are small: 11Gb per release vs. 76Gb
  - and getting smaller
  - free up 65Gb on your server?
- We use (the excellent) mirrorbrain

- Translators: l10n@libreoffice.org
- we have a no-language-favoritism policy
  - we bundle all active and completeish translations
- quick release: see the result of your labour in your own lifetime
New Features, distinctive to LibreOffice … #5

Import your legacy Microsoft Works files – and move to ODF …
Can you: hack? libreoffice@lists.freedesktop.org

- Ultra elite programming skill not necessary
- Plenty of entry level problems; cf. Easy Hacks page
- A language you can help with is there:
  - C, C++, Java, Python, Perl, Basic, shell, XSLT, Web* ...
- Tons of new simple tasks, and heavy lifting too
- Lots of easy hacks: (a tiny sample):
  - removing pointless comments
  - porting from Java → python and Java → C++
  - kill 3 of 4 duplicate base64 impls.
  - remove dead / un-called code
  - fix cppcheck warnings
  - remove obsolete macros
  - remove thousands of multi-second sleeps from QA tooling
  - help thread the spreadsheet recalculation engine
  - write unit tests
  - stop battery sapping timer leaks
  - improve localisation tooling
New Features, distinctive to LibreOffice … #?

- Styles are a wonderful, clean way of document markup

- Getting a title page and correct numbering right, was a top writer UI disaster – but then ...
More easy hacks, and something for Germans

- Easy Hacks
  - add a character count (without spaces)
  - find and contribute old Word 1 to Word 5 documents
  - run copy and paste detector and act on results
  - and many many more …

- For Germans … (even with no prior programming experience)
  - We have major source code translation problems

  // CebIT Hack – muss noch optimiert werden!
  // Wenn Sie das lesen koennen, dann haben Sie eine Waschmachine gewonnen!
  // Alles hat ein ende, nur die wurst hat zwei – cf. impl_getMehrWurst
  // Manta-Hack: …. 
Import your legacy Lotus Word Pro files – and move to ODF...
Are you: A user ? room for you too ...

- File good bugs
  - Clear description; not - it doesn't work
  - Things that are obvious to you are not to everyone
  - We have to find the feature ourselves.
- Sample documents: should exist, and be minimal
  - ie. what is the smallest possible bug document
- Bug triage – hunting duplicates, poking 'bad' bugs
- Help us out – we have some wonderful QA guys
- Test team
  - Downloading and testing release candidates
  - Using the latest snapshots, running QA testtool...
New Features, distinctive to LibreOffice … #7

Import much more of your legacy Wordperfect files – and move to ODF …
New Features, distinctive to LibreOffice 3.3.0 … #8
Embed real multimedia under linux … with multi-slide audio …

GStreamer multimedia …
A roadmap to the future …

- A time based, six-monthly release train …
- Synchronised with the Linux distributions cadence
- I.e. a normal Free Software project
- Rapid fire, (monthly) bug-fix release on stable branch
New Features, distinctive to LibreOffice 3.3 … #9

Beautiful mime-type icons …
What is new in 3.4 ...
What's new in 3.4 (coming soon)

A tiny sampling of a big set of improvements … that are LibreOffice specific.

- **.po based translation & pootle**
- Yet smaller (minus 30Mb) downloads (Kálmán „KAMI” Szalai)
- Prettier – document surround shadows (Sébastien Le Ray)
- Graphite2 smart font rendering (Keith Stribley)
- Many calc improvements (mostly Kohei Yoshida)
  - external reference handling, move/copy/sheet dlg (Joost Eekhoorn, Christoph Noack), autofilter per sheet (Markus Mohrhard), sheet local named ranges, multiple subtotal ranges, OLE2 links, many DataPilot fixes, precision drawing objects (Caolán McNamara)
- Improved slide / HTML export (Julien Nabet)
- Unity / menu integration (CodeThink for Canonical: Alberto Ruiz)
- High-speed (C++) flat-ODF support (Peter Jentsch)
- Improved native theme integration (Lucas Baudin)
- Bug fixing and dead code removal and much more (Takeshi Abe)
- Lari (ldi), Mbochi (mdw), Teke-Ibali (tek), Teke-Tyee (tyx), and Vili (vif) languages (Republic of Congo)
New Features, distinctive to LibreOffice 3.4 …

Unity / out of process menu integration …
What's new in 3.4 (coming soon) #2 …

A tiny sampling of a big set of improvements … that are LibreOffice specific.

- Remove export from binfilter (*Pierre-André Jacquod*)
- Nicer mozilla-like ctrl-f 'Find' dialog (*Jan Holesovsky*)
- Color Chart editing (*Rob Snelders*)
- Rotate through case changes (*Bálint Dózsa*)
- Smoother splash/startup/2nd start on Linux (*Michael Meeks*)
- Cleanup inefficient accessible theming (*Chris 'mordocai' Carpenter, Sebastian Spaeth*)
- Remove 150 duplicated redundant 'missing icon' icons to reduce bloat (*Joachim Trémouroux, Andrew C. E. Dent*)
- Remove 624 localized palette files: localize at run-time (*Andras Timar*)
- Bin compatibility layer for old Windows 9x non-unicode APIs (*Jesús Corrius*)
- Cleanup to use STL and boost containers. (*Joseph Powers, Rafael Dominguez*)
- Thousand of incorrectly 'executable' files fixed (*Francisco Saito*)
- Thousands of lines of dead code removed [Writer/Calc/Impress] (*Kayo Hamid*)
- Apologies to many more that I omitted for reasons of space etc.
What we're working on now:

- **Code:**
  - **Bug fixing**
  - gnu-make completion & cross-compile for Windows
  - during-build unit tests & improved QA process
  - new feature work: SmartArt, improved interop
  - moving bottom up … clean code → clean UI → features
  - polish … making it usable and pretty: eg. Ctrl-F to find

- **Governance:**
  - Incorporation – raised Eur100k for foundation
  - [http://wiki.documentfoundation.org/CommunityBylaws](http://wiki.documentfoundation.org/CommunityBylaws)
  - Membership bootstrapping, ESC setup, etc.
Conclusions ...
LibreOffice conclusions ...

- Aspire to a big, diverse, vigorous, vendor neutral, Linux (kernel) like community – *four months to end of 1st year*
- Be ungrateful to corporate controlled projects:
  - positively discriminate, and assist others ...
- Strike a **dis-proportionate** blow for freedom
- LibreOffice will have a **hundred million users**
- get people **excited** about Free Software they use ...
- Try an 'Easy Hack' - get stuck to the tar-baby ...
- Thanks for all of your help and support !
- **we rely on you**, to prove the power of Freedom with 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*