Liberating Open Office development

LibreOffice
The Document Foundation

Or – *How we will fix your office suite*

Michael Meeks
michael.meeks@novell.com

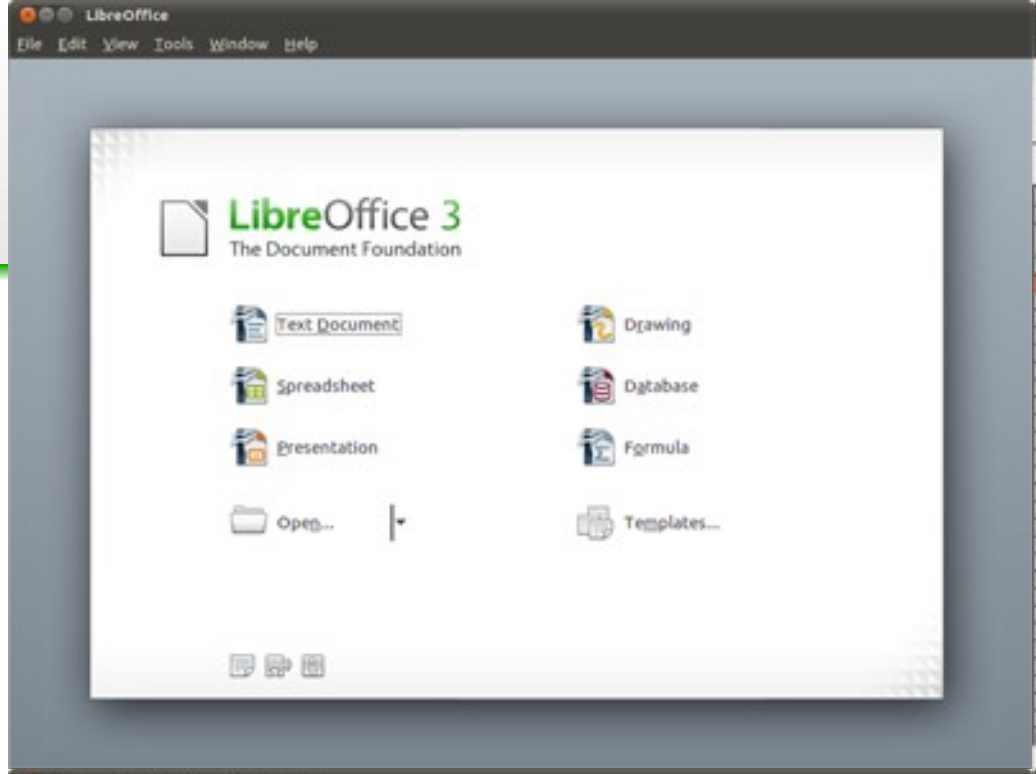
openSUSE

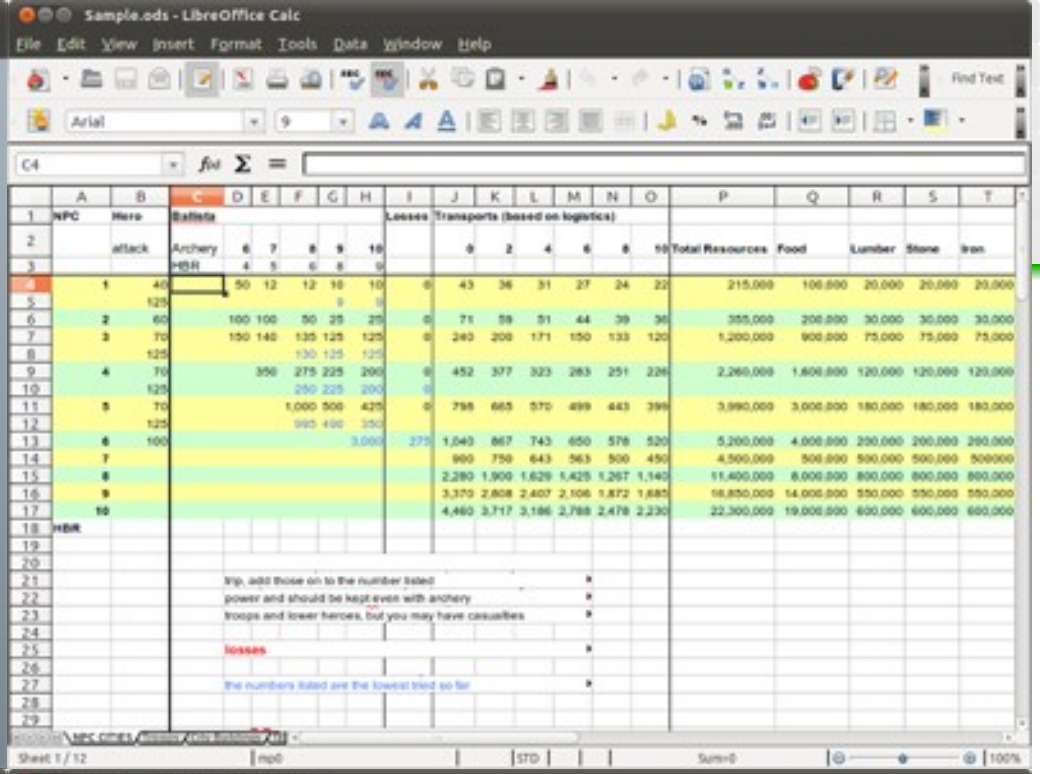
"Stand at the crossroads and look; ask for the ancient paths, ask where the good way is, and walk in it, and you will find rest for your souls..." - Jeremiah 6:16

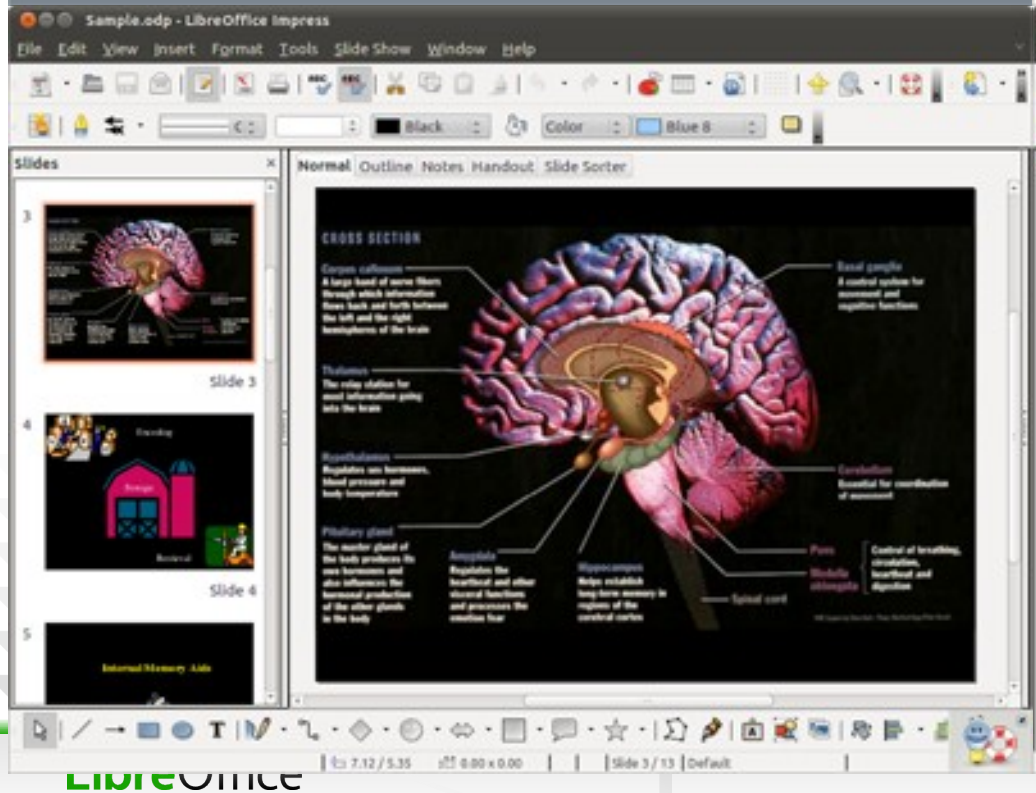
Overview & disclaimer ...

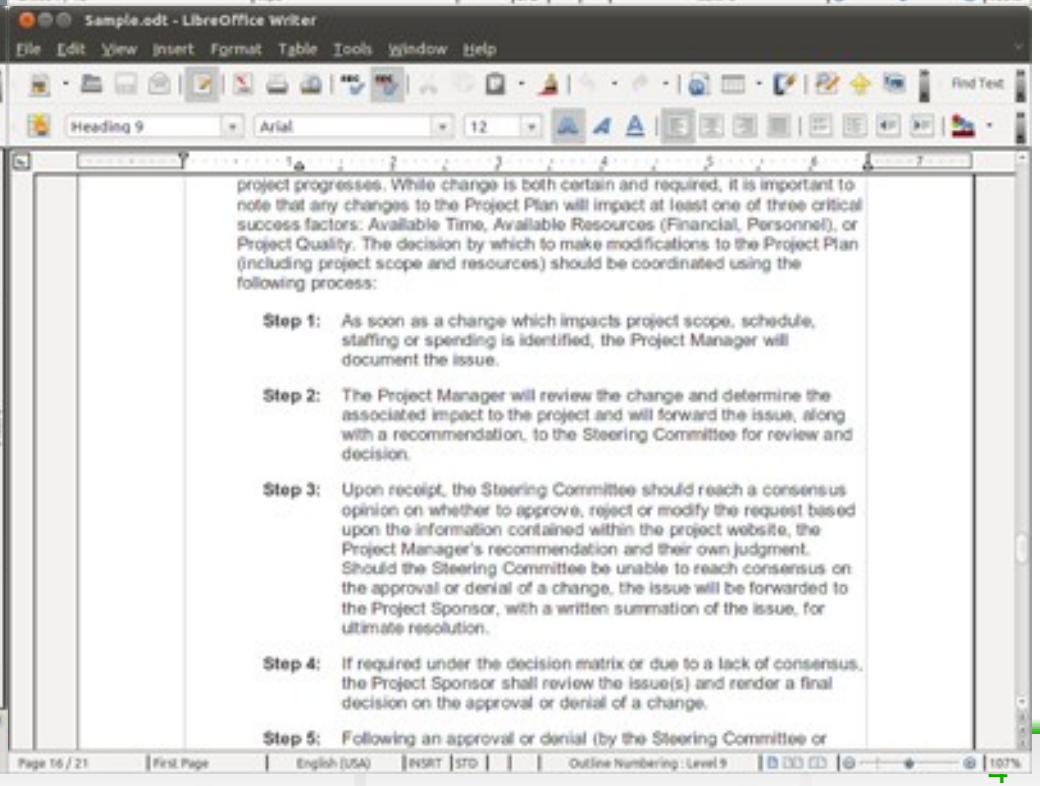
- I am not speaking for the Document Foundation
  - These views are mine, but you're welcome to borrow them.
- LibreOffice is better, and fun too
  - How is it going ?
  - What are we doing ?
  - Progress so far
  - Release process
- Check the license applies to **everyone**
- LibreOffice appreciates your help
  - and/or ways to get involved
- Conclusions

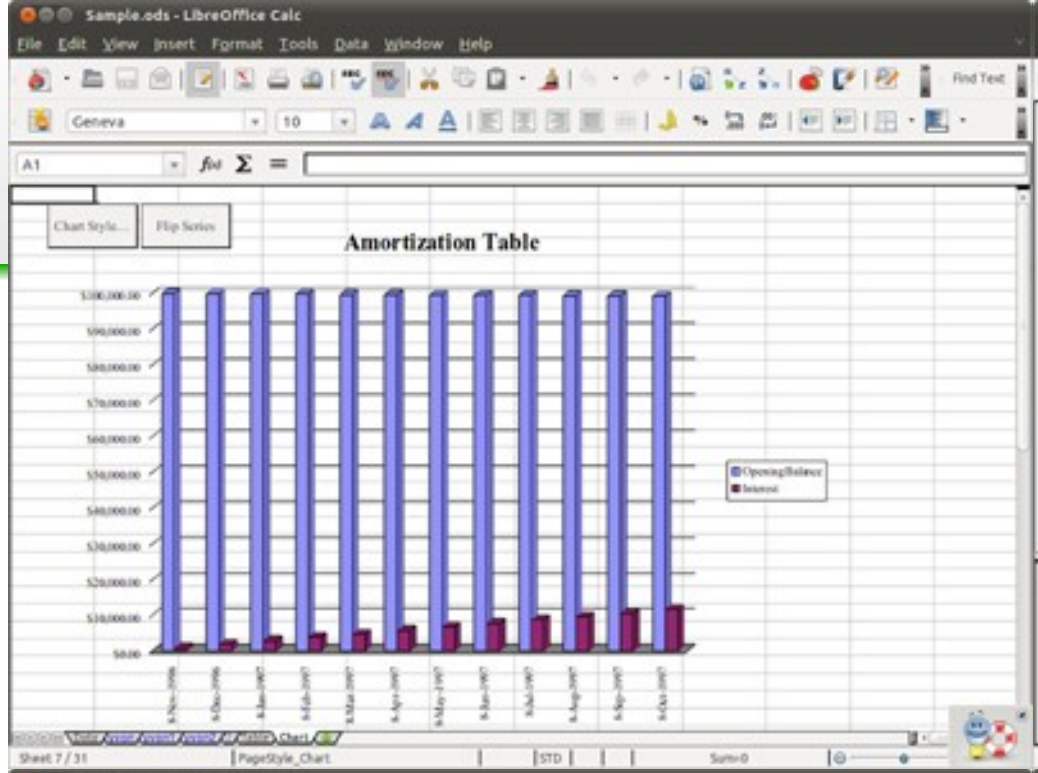
What / Why of LibreOffice

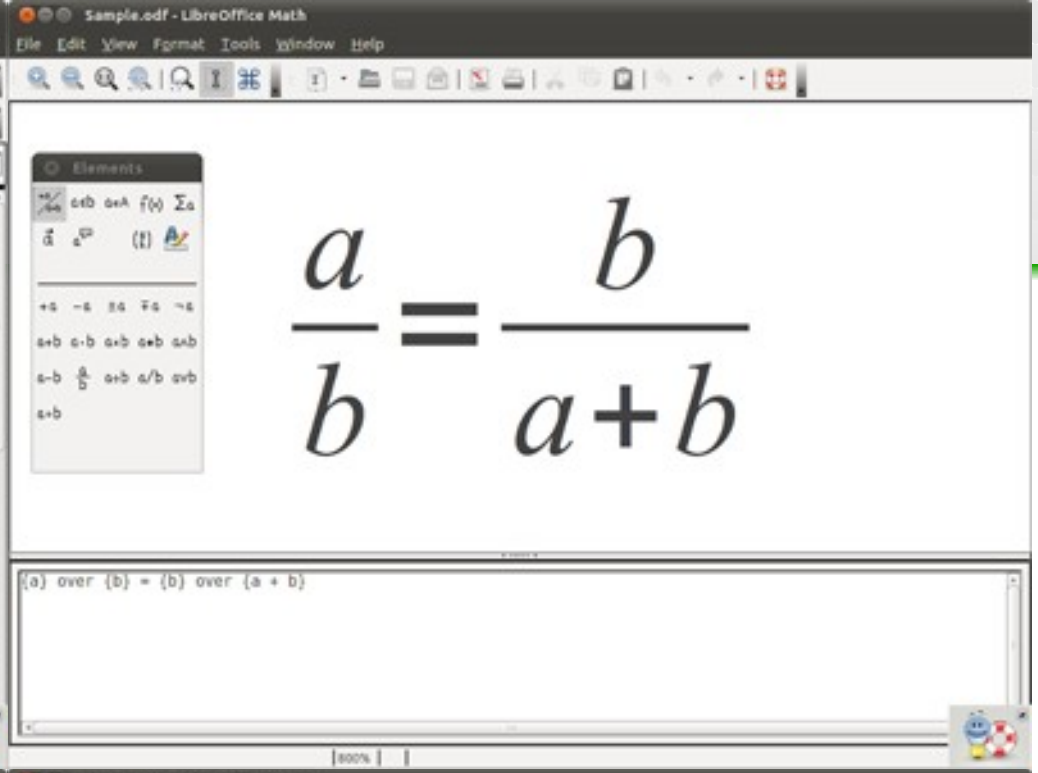

LibreOffice
File Edit View Tools Window Help
LibreOffice 3
The Document Foundation
Text Document
Spreadsheet
Presentation
Open...
Drawing
Database
Formula
Templates...

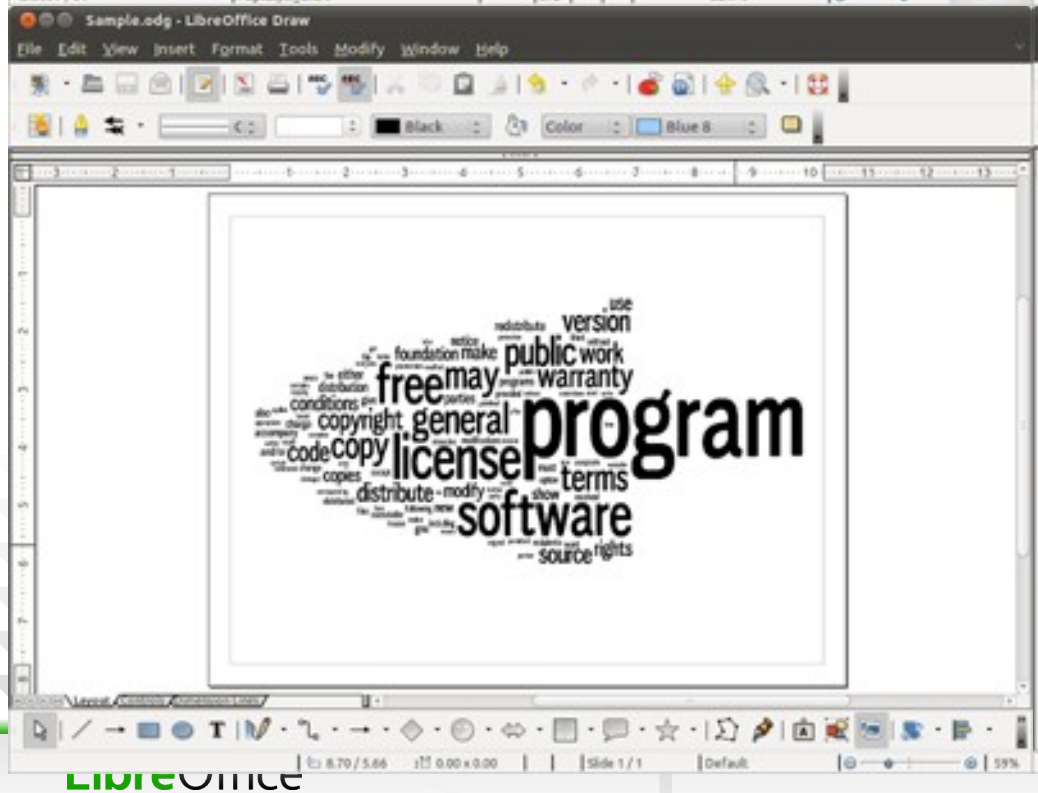

Sample.ods - LibreOffice Calc
File Edit View Insert Format Tools Data Window Help

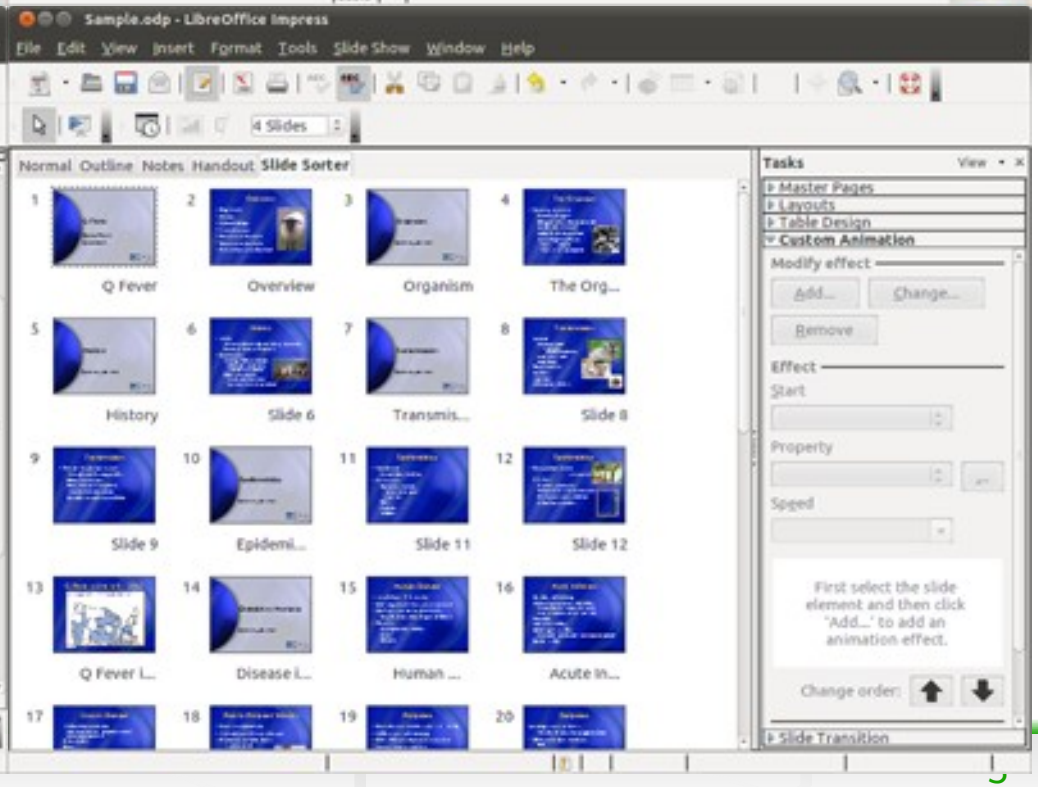

Sample.odp - LibreOffice Impress
File Edit View Insert Format Tools Slide Show Window Help
Slides
Normal Outline Notes Handout Slide Sorter
CROSS SECTION
Slide 3
Slide 4


Sample.odt - LibreOffice Writer
File Edit View Insert Format Table Tools Window Help
project progresses. While change is both certain and required, it is important to note that any changes to the Project Plan will impact at least one of three critical success factors: Available Time, Available Resources (Financial, Personnel), or Project Quality. The decision by which to make modifications to the Project Plan (including project scope and resources) should be coordinated using the following process:
Step 1: As soon as a change which impacts project scope, schedule, staffing or spending is identified, the Project Manager will document the issue.
Step 2: The Project Manager will review the change and determine the associated impact to the project and will forward the issue, along with a recommendation, to the Steering Committee for review and decision.
Step 3: Upon receipt, the Steering Committee should reach a consensus opinion on whether to approve, reject or modify the request based upon the information contained within the project website, the Project Manager's recommendation and their own judgment. Should the Steering Committee be unable to reach consensus on the approval or denial of a change, the issue will be forwarded to the Project Sponsor, with a written summation of the issue, for ultimate resolution.
Step 4: If required under the decision matrix or due to a lack of consensus, the Project Sponsor shall review the issue(s) and render a final decision on the approval or denial of a change.
Step 5: Following an approval or denial (by the Steering Committee or


Sample.ods - LibreOffice Calc
Amortization Table


Sample.odf - LibreOffice Math
{a} over {b} = {b} over {a + b}


Sample.odg - LibreOffice Draw
program
license
software
free
may
public
warranty
general
copyright
code
copy
distribute
modify
terms
version

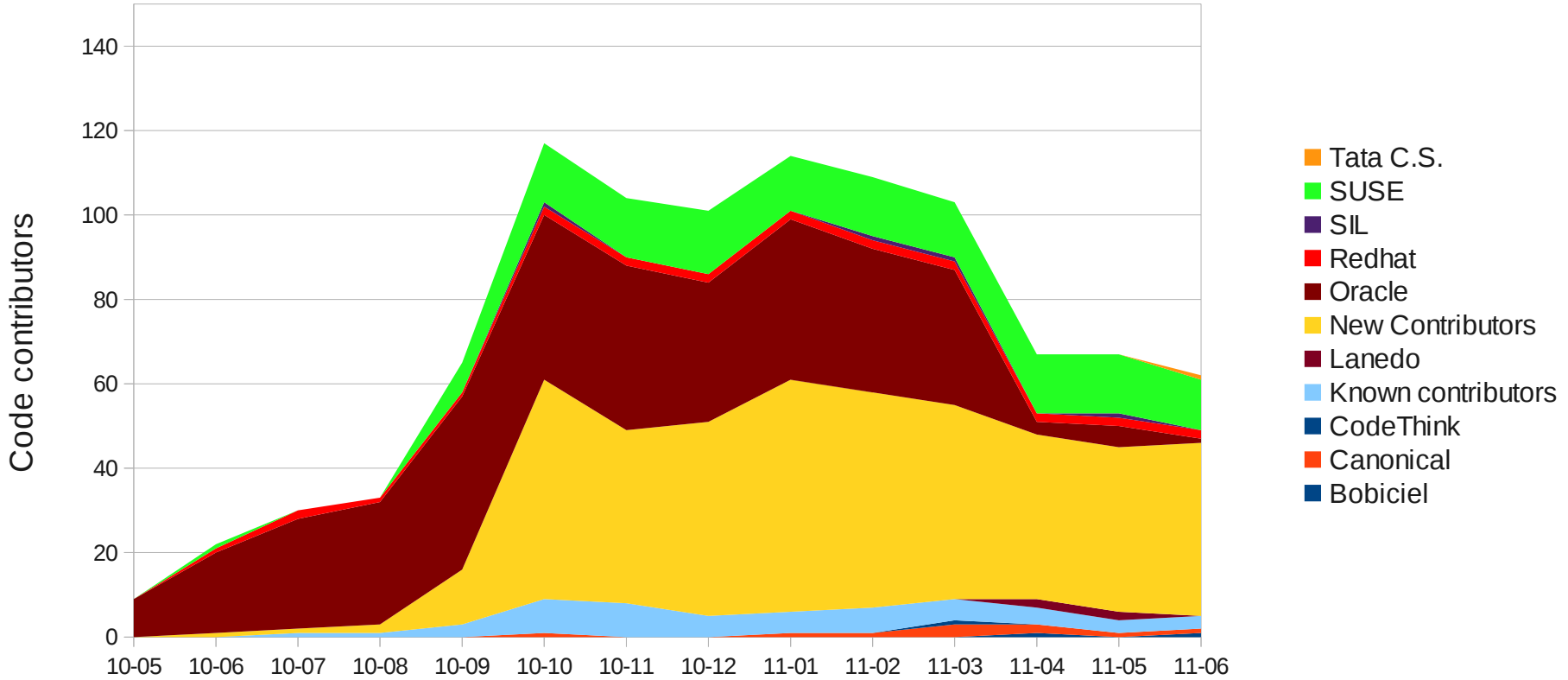

Sample.odp - LibreOffice Impress
Normal Outline Notes Handout Slide Sorter
Tasks
Custom Animation

What is LibreOffice / The Document Foundation

- 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 …

11 months in: how is it going ? - extremely well

- **205+ entirely new code contributors with included patches**
- **200+ active translators, for ~100 languages (in Pootle)**
- **Two stable branches: 3.3.3 and 3.4.2 – 7 stable releases in 10 months**
  - Development continues apace: 3.5.0 due early Feb 2012



A taste of what we're doing:

- Translating the source code:
  - 100k+ LOC of German comments, after 10 years of 'open'
    - *Some virtually useless: (CUPS style)*

```
//    Beschreibung:   textuelle Beschreibung ermittel
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 ? #2

- 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.
- ~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 in practise ...

- 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
```

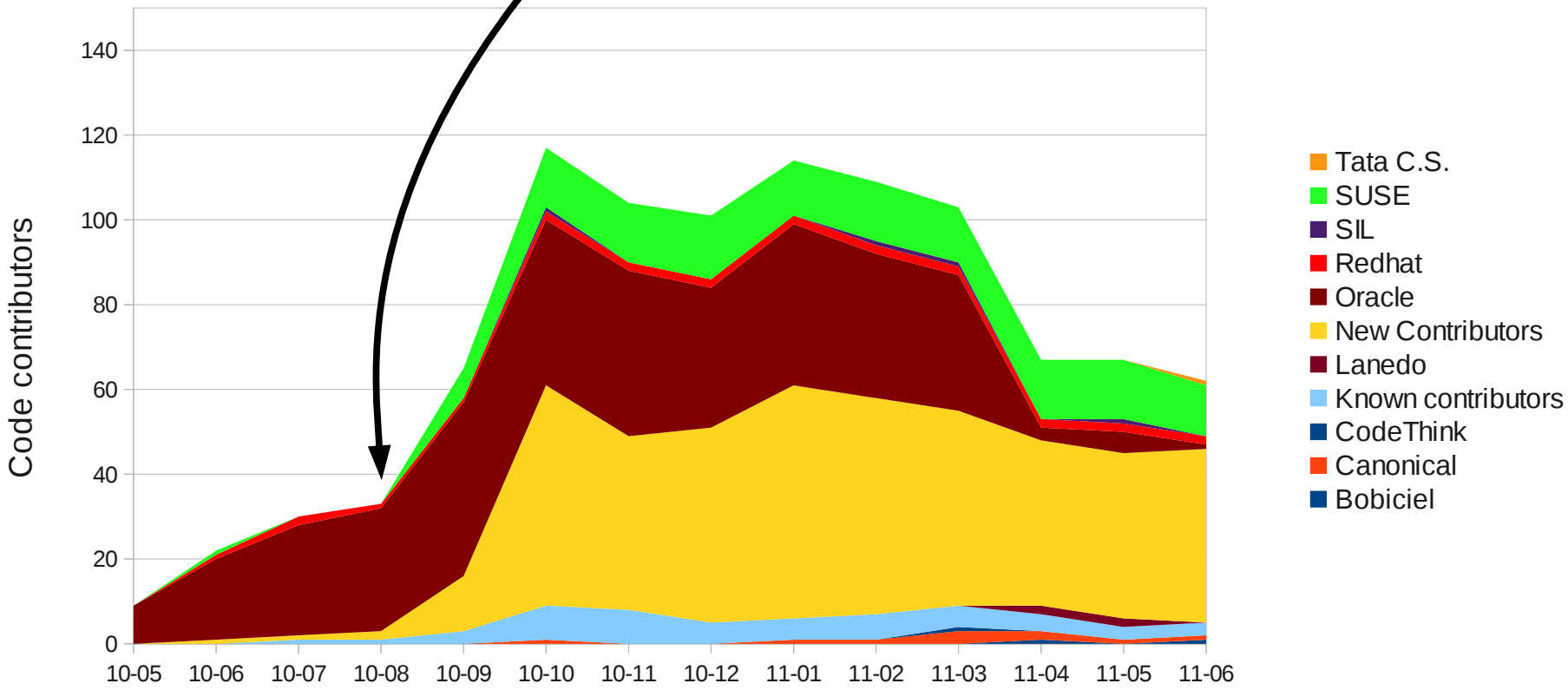
A one line fix !

What are others doing ?

- Oracle + IBM
  - Contributed OpenOffice.org : brand etc. to Apache
- Apache: *(a reasonable home for new projects ...)*
  - Announced intention June 1st
  - Agreed to form incubator project: June 13th
- Progress:
  - much promised code available soon ...
  - mailing list / web-site up / intense discussion ...
  - 70+ *committers*, some of whom have written code.
  - re-write copy-left bits, svn not git, abandon freedom lovers, reply-to-mangling, submit to 'mentoring' etc.

Spot the launch date ...

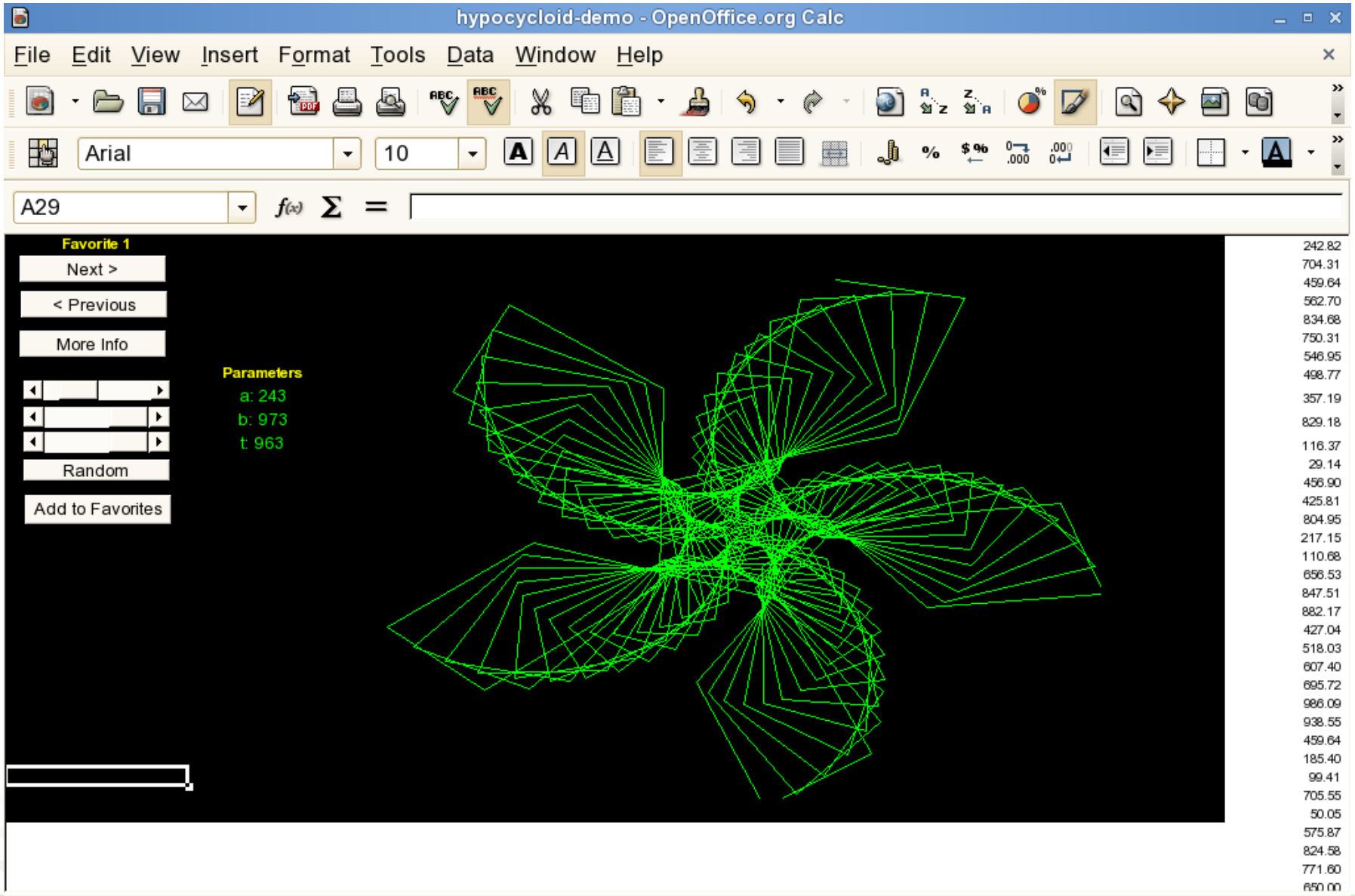
Day #1 nearly same code
Is it just an 'easy hacks' page ?



LibreOffice needs your help ...

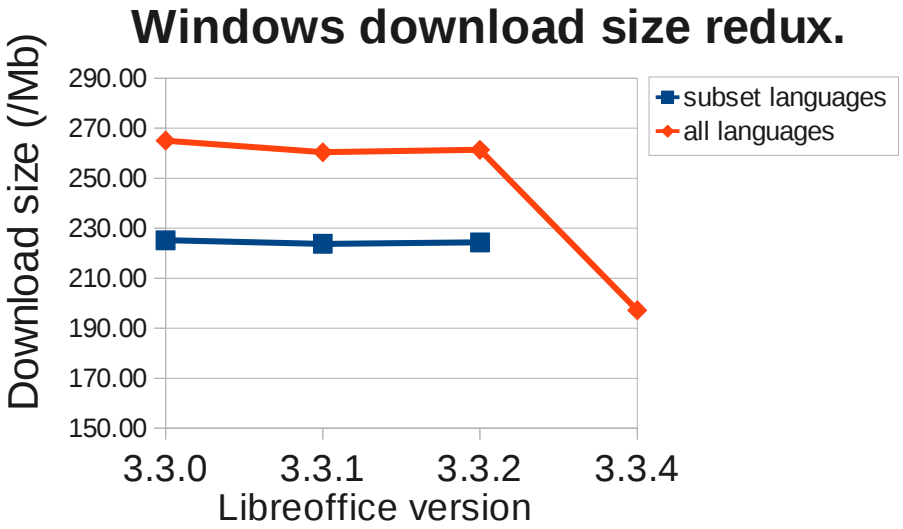
Features, distinctive to LibreOffice …

Migration – sadly much of the corporate world is infected with VBA …



Can you: mirror / translate ...

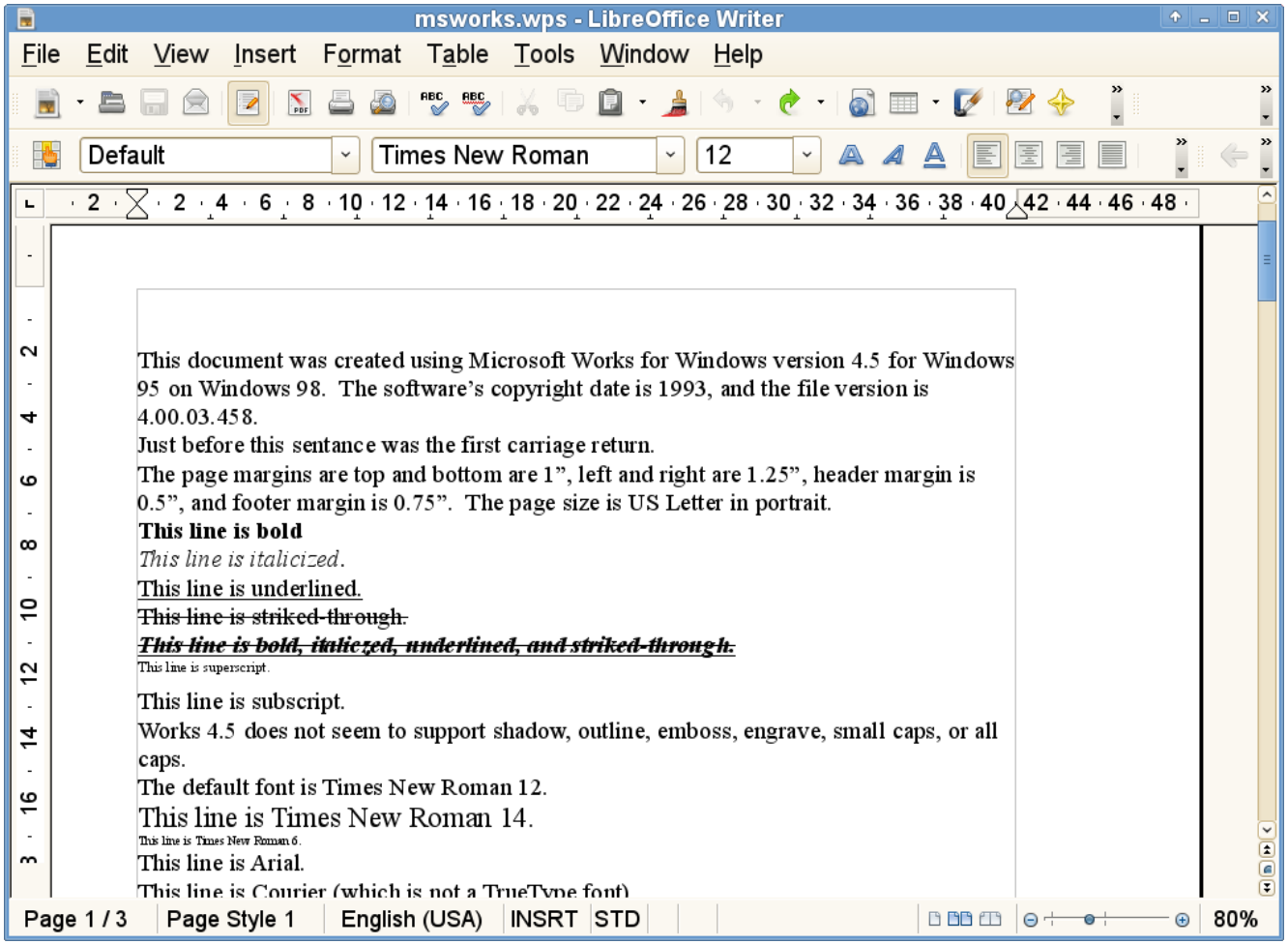
- Mirrors: always room for more...
  - mirrors@documentfoundation.org
  - We are small: sub 10Gb per release vs. 76Gb
    - and getting smaller
    - free up 65Gb on your server ?
  - We use (the excellent) mirrorbrain



- 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

Copy-left Features, distinctive to LibreOffice … #5

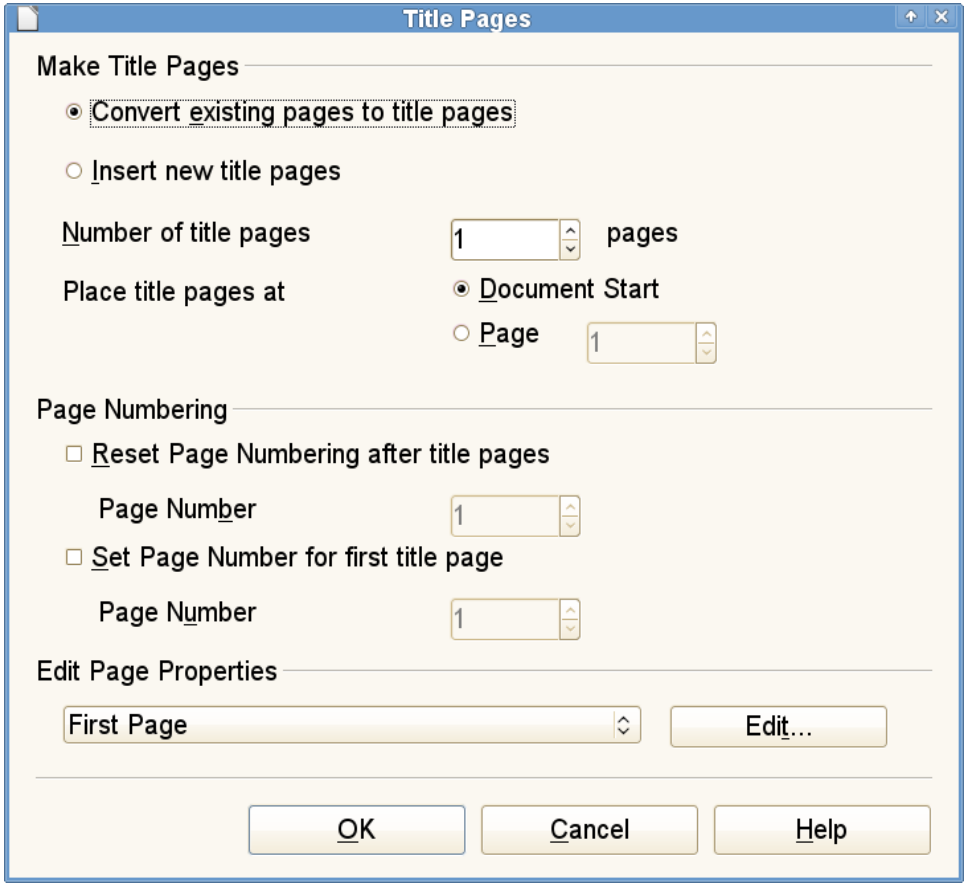
Import your legacy Microsoft Works files – and move to ODF …



Can you: hack ? libreoffice@lists.freedesktop.org

- Ultra elite progamming 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 re-calculation 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 …

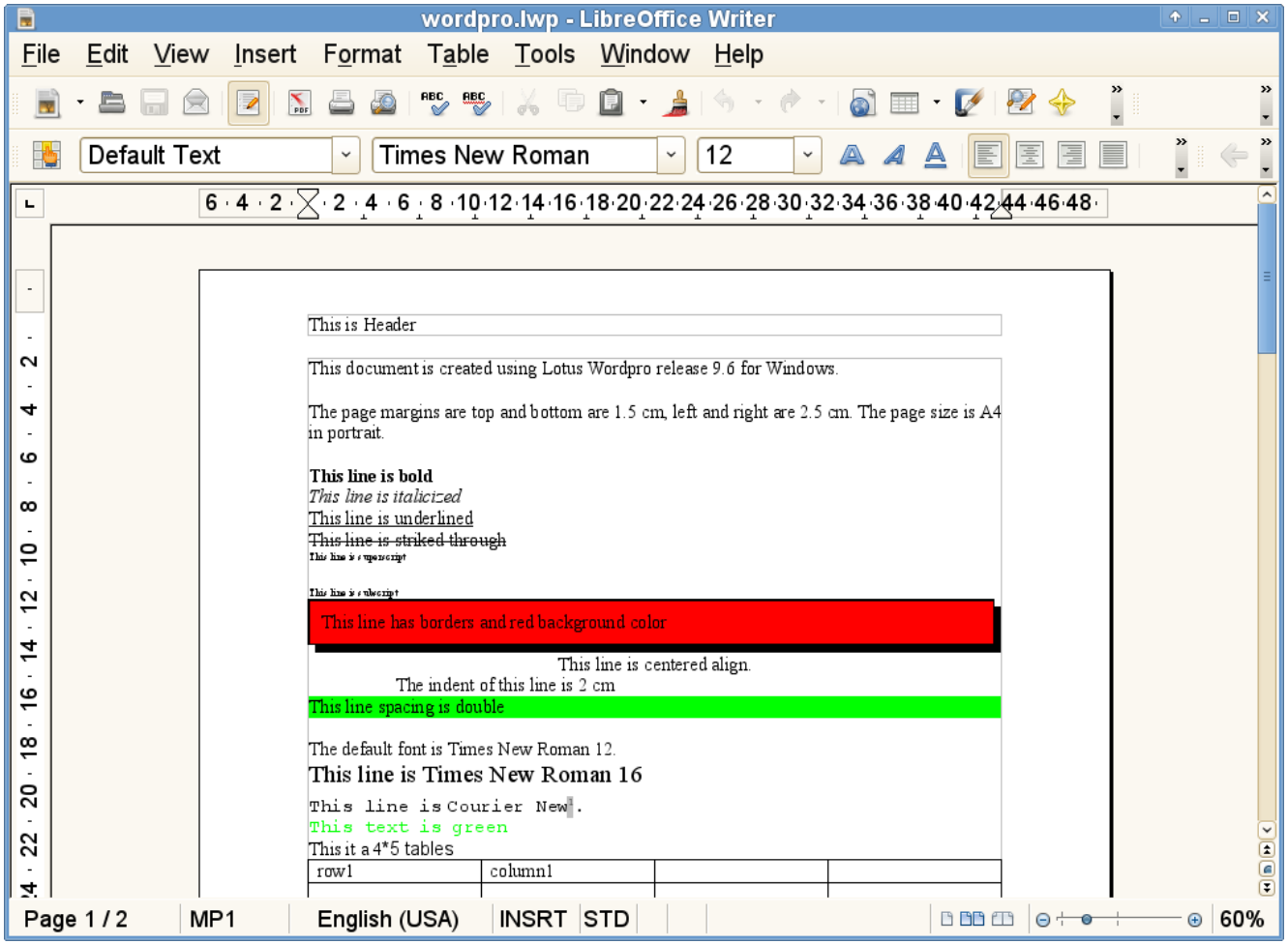
More easy hacks, and something for Germans

- 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: ….
```

Features, distinctive to LibreOffice … (for now)

Import your legacy Lotus Word Pro files – and move to ODF …

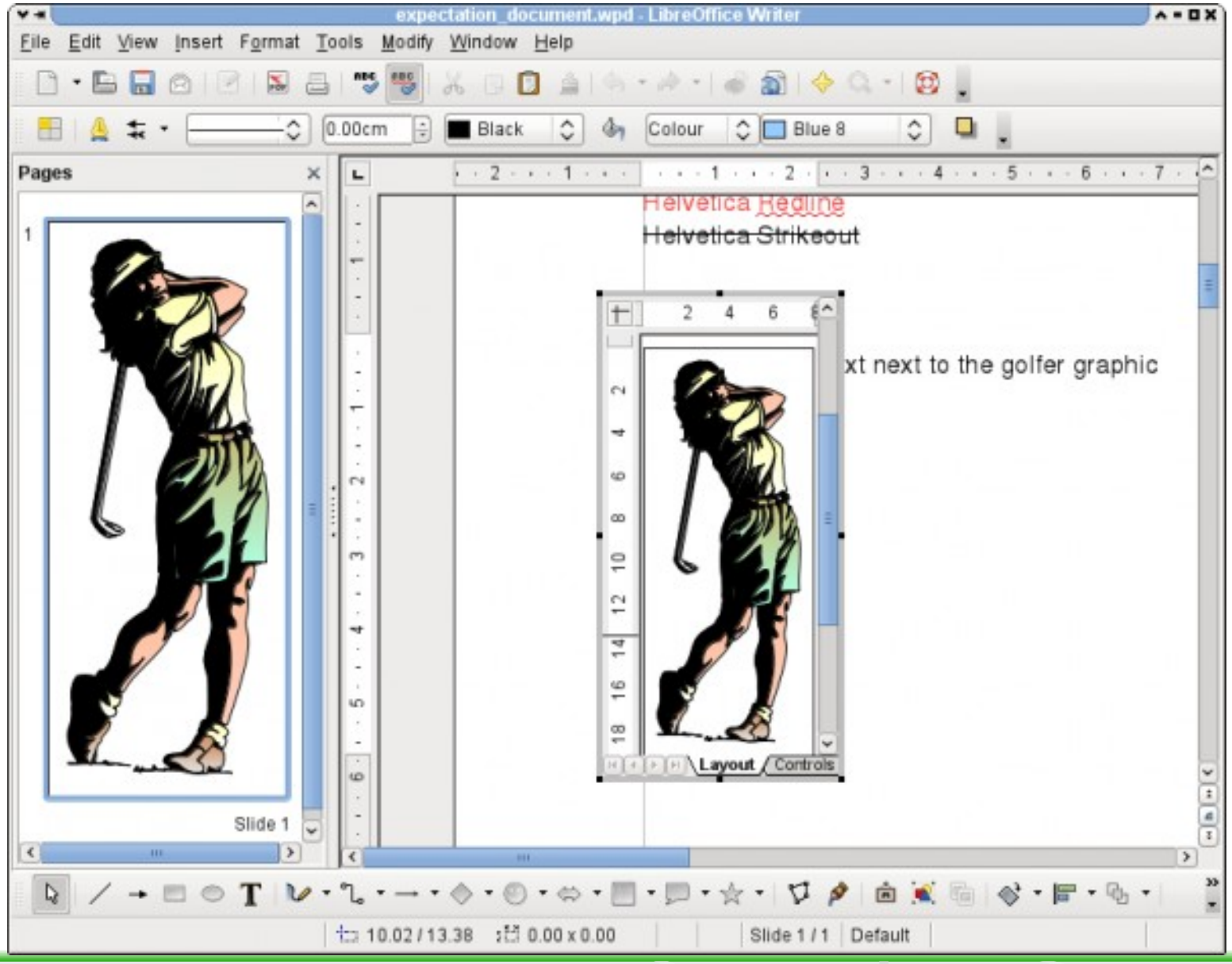


Are you: A user ? room for you too ...

- 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...

Copy-left Features, distinctive to LibreOffice … #7

Import much more of your legacy Wordperfect files – and move to ODF …



A roadmap to the future …

- A **time based**, **six-monthly** release train …
  - **synchronized** with the Linux distributions cadence
  - ie. a normal Free Software project
  - rapid fire, (monthly) bug-fix release on stable branch

LibreOffice Releases

By using a time-based release schedule and maintaining two parallel branches, LibreOffice will always be available both for early adopters and conservative users, with the most appropriate version for each group's specific needs and habits.

3.3 Family	3.3.2		3.3.3			3.3.4					
3.4 Family		3.4.0		3.4.1	3.4.2		3.4.3		3.4.4		
3.5 Family								3.5.0		3.5.1	3.5.2
Developers	daily snapshots of master / self-built versions										
Bleeding Edge	3.3.2	3.4.0		3.4.1			3.4.3	3.5.0		3.5.1	
Stable	3.3.2		3.3.3		3.4.2		3.4.3		3.4.4		3.5.2
Very Stable			3.3.3						3.4.4		
Rock Solid					3.3.3	3.3.4					3.4.4

New in 3.4 ...

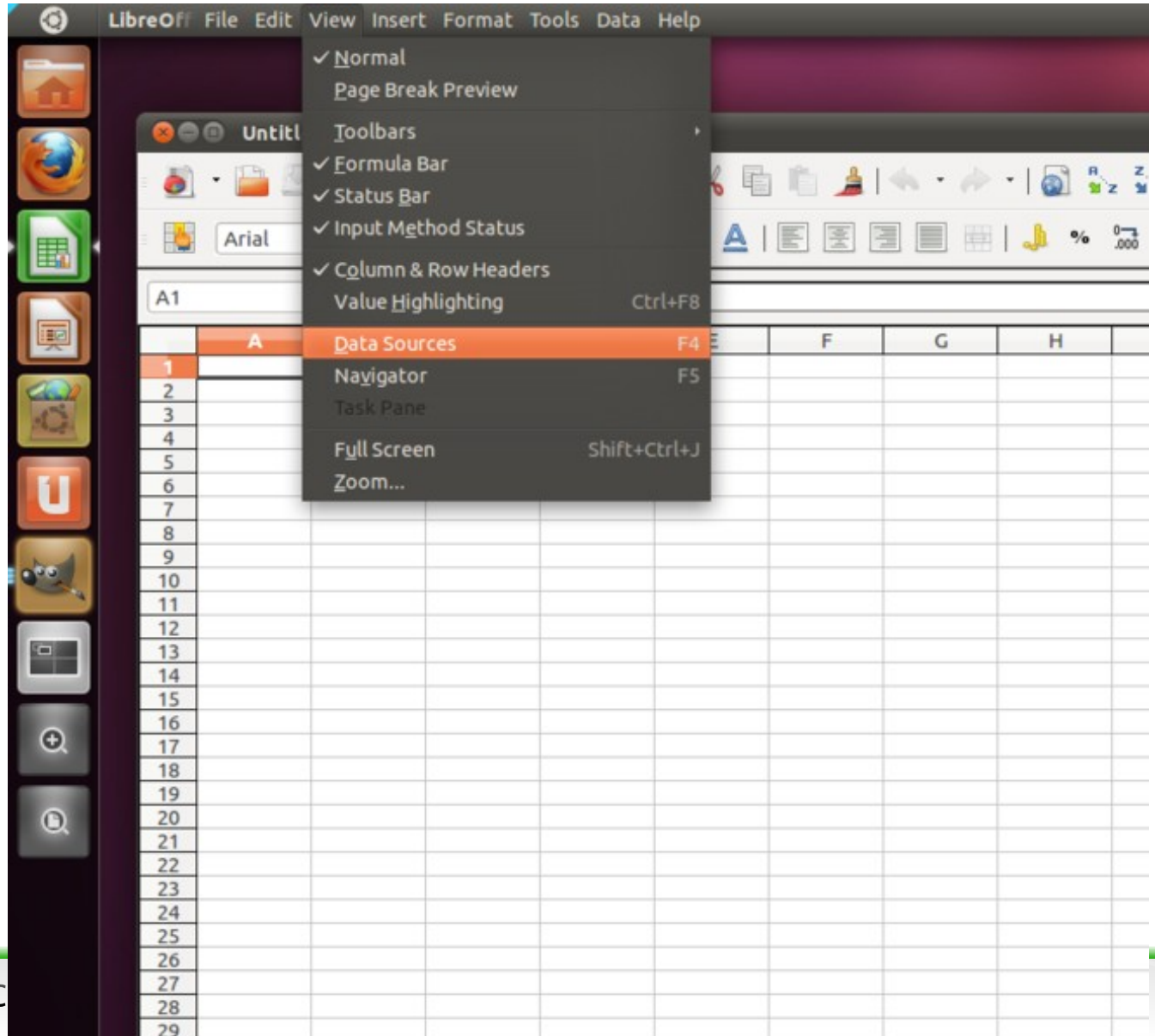
What's new in 3.4 (latest stable)

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 …

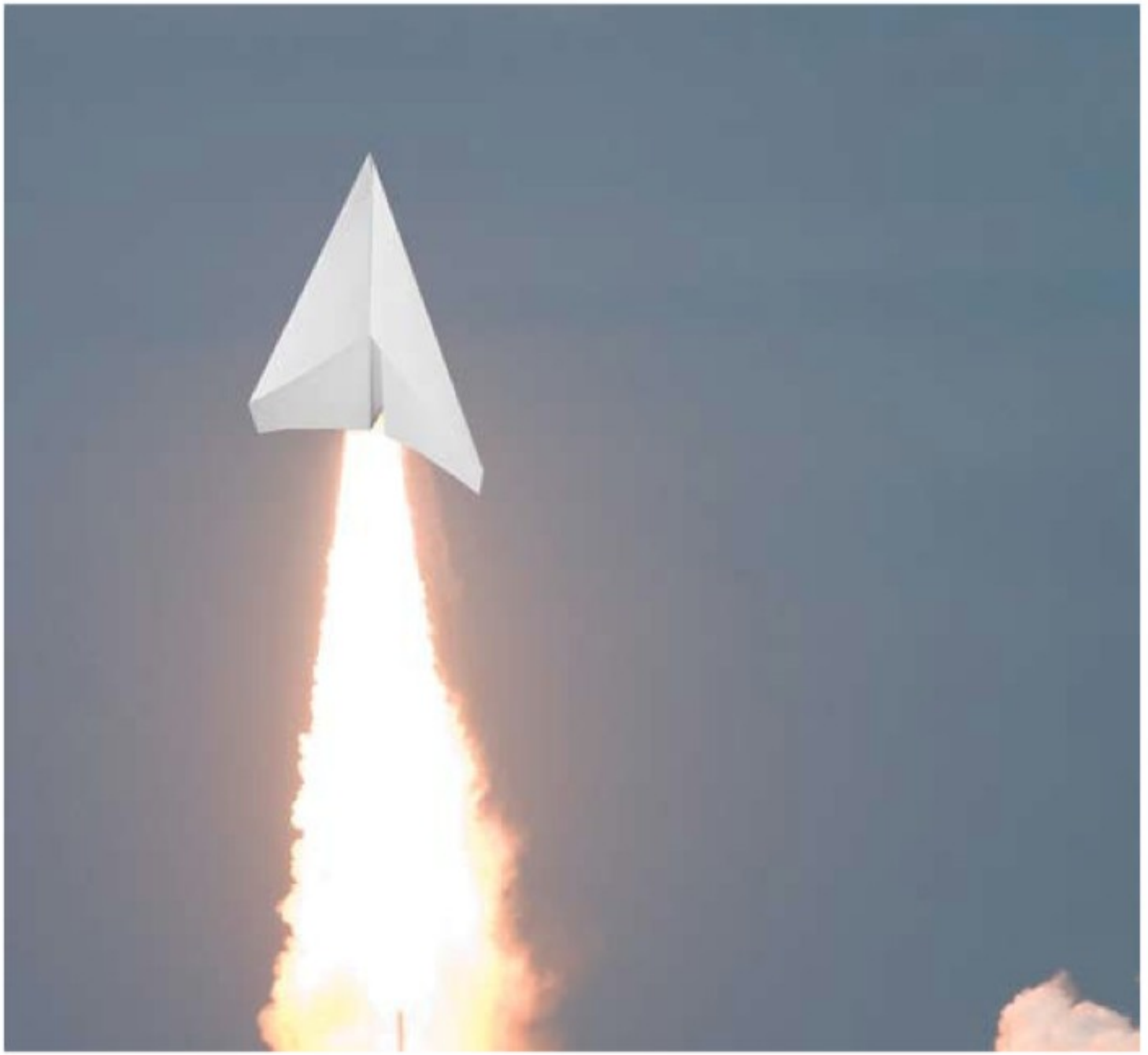
Unity / out of process menu integration … thanks to CodeThink & Canonical.



What's new in 3.4 (latest stable) #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.**



Coming in 3.5 …

Give up now !?!?? – the web will swallow us all ...

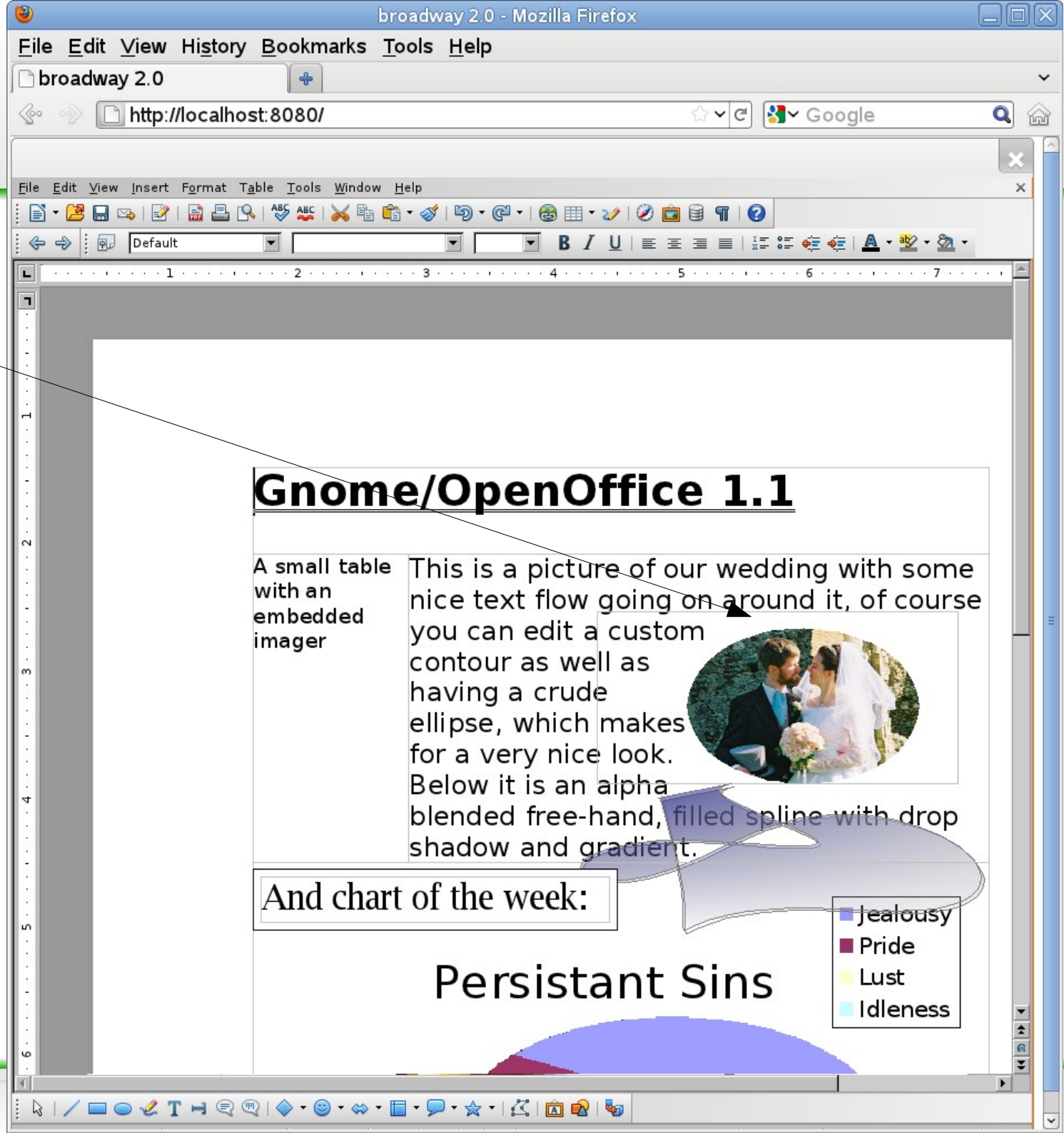
- The proliferation of web developers is amazing:
  - full function off-line == re-write all in Javascript
    - Best of luck with this project: 8 million lines later
  - eg. Conference WiFi & 3G is extremely cluttered
    - I would like to show you these slides today
      - but they are on a server 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.

Cloud Office / HTML5 prototype ...

- Uses gtk+ 3's / broadway backend to render (via some javascript shims) in the browser:
  - All intelligence and rendering on the 'server' app.
- Still a prototype, rendering performance improving
- This approach allows a full-feature experience
  - ie. complex text-layout, large, complex spreadsheets, WYSIWYG (eg. edit your footnotes on the page), VBA macros, Pivot Tables etc.
- Also a number of challenges:
  - Lots of missing pieces in Web APIs that need work ...
    - Printing, scanning, file management, etc. etc.

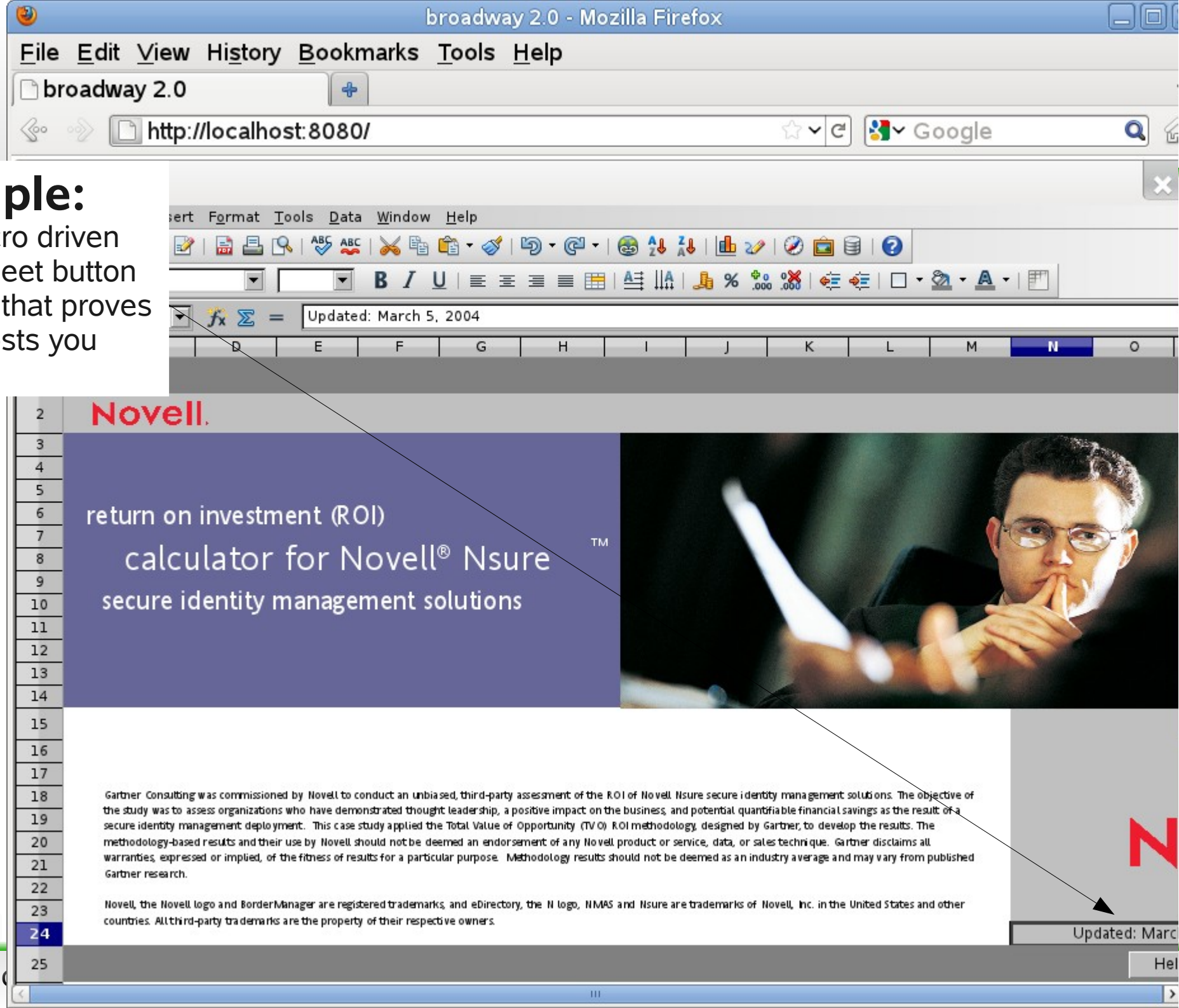
Example:

Custom contoured picture, with text fill



Example:

VBA macro driven spreadsheet button workflow that proves Novell costs you less :-)



What we're working on now:

- Code: *one-git* ...
  - **Bug fixing & Polish**
  - gnu-make completion & cross-compile for Windows
  - during-build unit tests & improved QA process
  - new features: SmartArt, improved interop, layout
  - bottom up … clean code → clean UI → features
- Governance:
  - Incorporation – raised Eur100k for foundation
  - http://wiki.documentfoundation.org/CommunityBylaws
  - 100+ Memberships bootstrapped, ESC / MC setup, etc.
  - **Conference a Paris: 12th – 15th October ...**

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

All text and image content in this document, unless otherwise specified, is licensed under the Creative Commons Attribution-Share Alike 3.0 License. This does not include the LibreOffice name, logo, or icon.