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

openSUSE

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

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 …

Why now ? just in time delivery ...

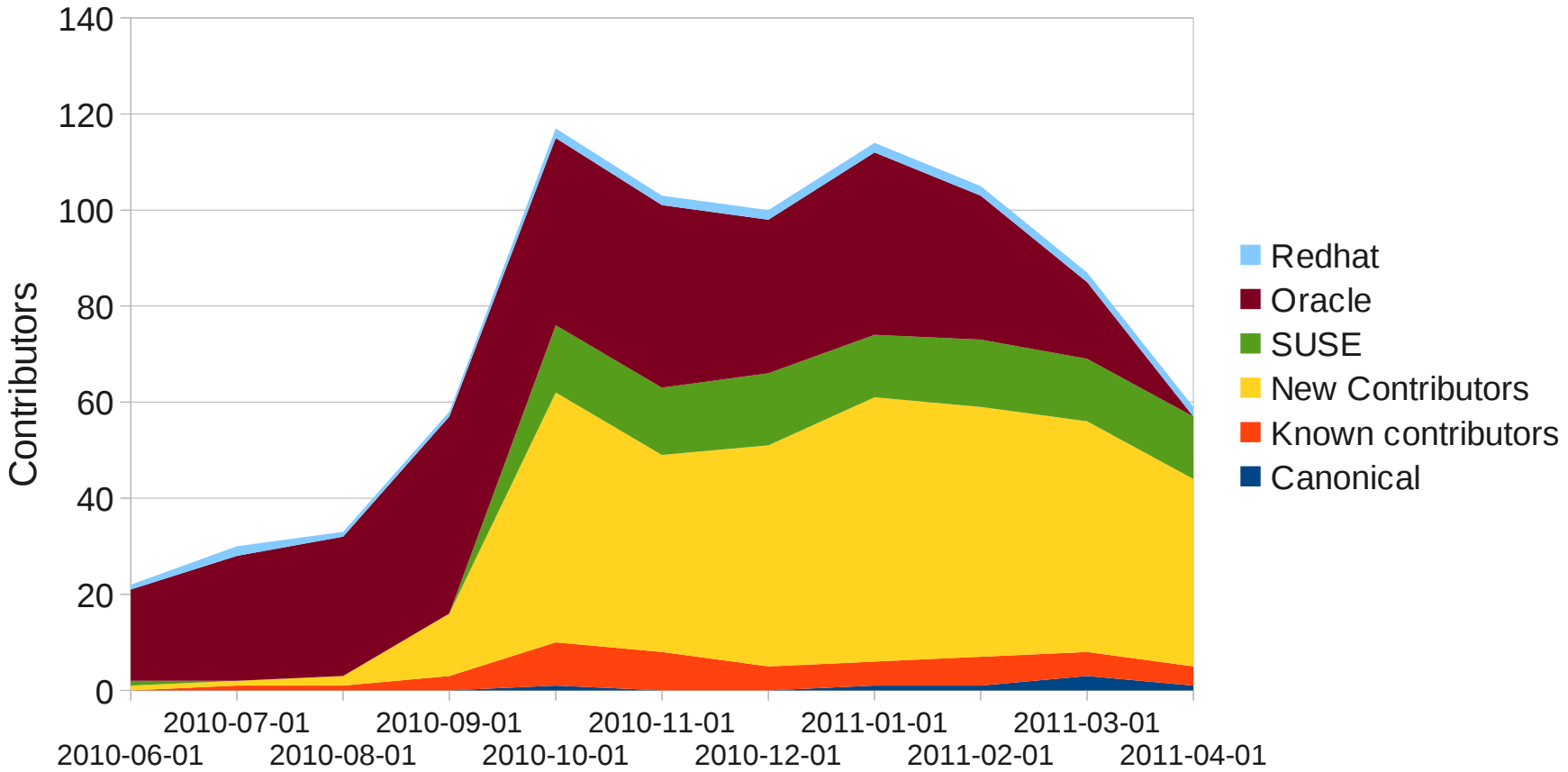
- ten years after the promise of a foundation …
  - Patience – a virtue, but not an inexhaustible resource.
- ~unrelated to Oracle – StarDivision had real autonomy
  - please don't hate them, they have hard problems
  - the 'community' has '~failed' them for many years
  - we have great friends & hackers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

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.

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

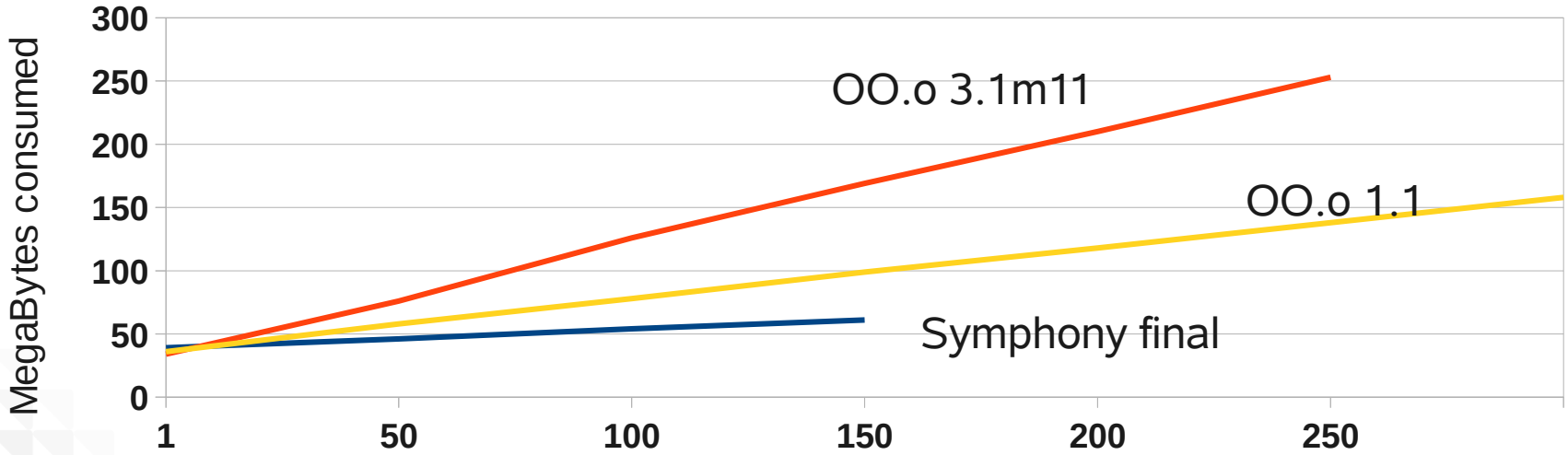
- **180+ entirely new code contributors with included patches**
- **200 active translators, for ~100 languages (in Pootle)**
- **Initial stable releases: 3.3.0 … 3.3.2 out 3.3.3 pending**
  - Development continues apace: 3.4.0 is at Beta5 due for release soon



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 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 ? #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:

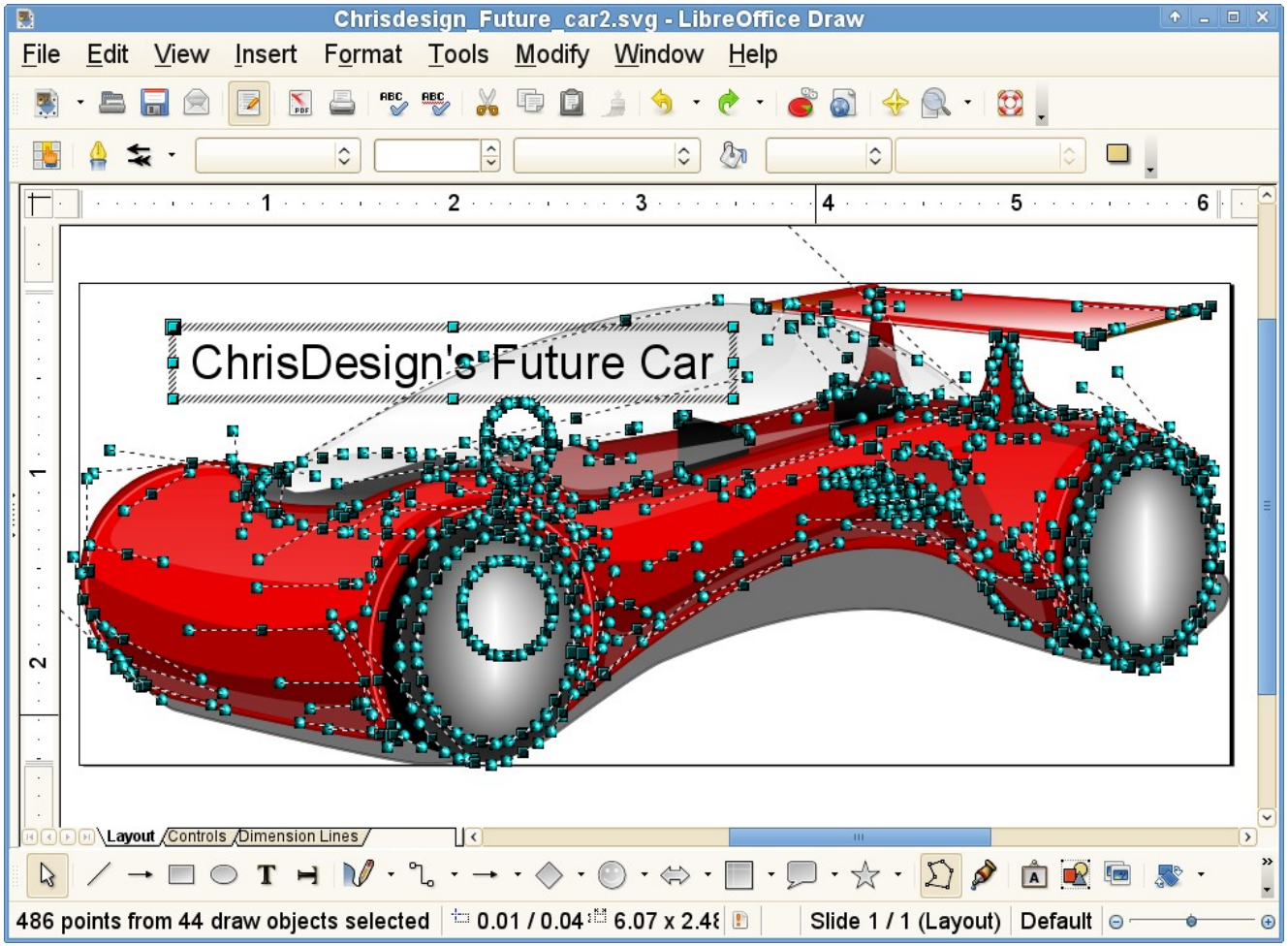
```
Opened: Wed May 2 12:28:00 +0000 2007

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 !

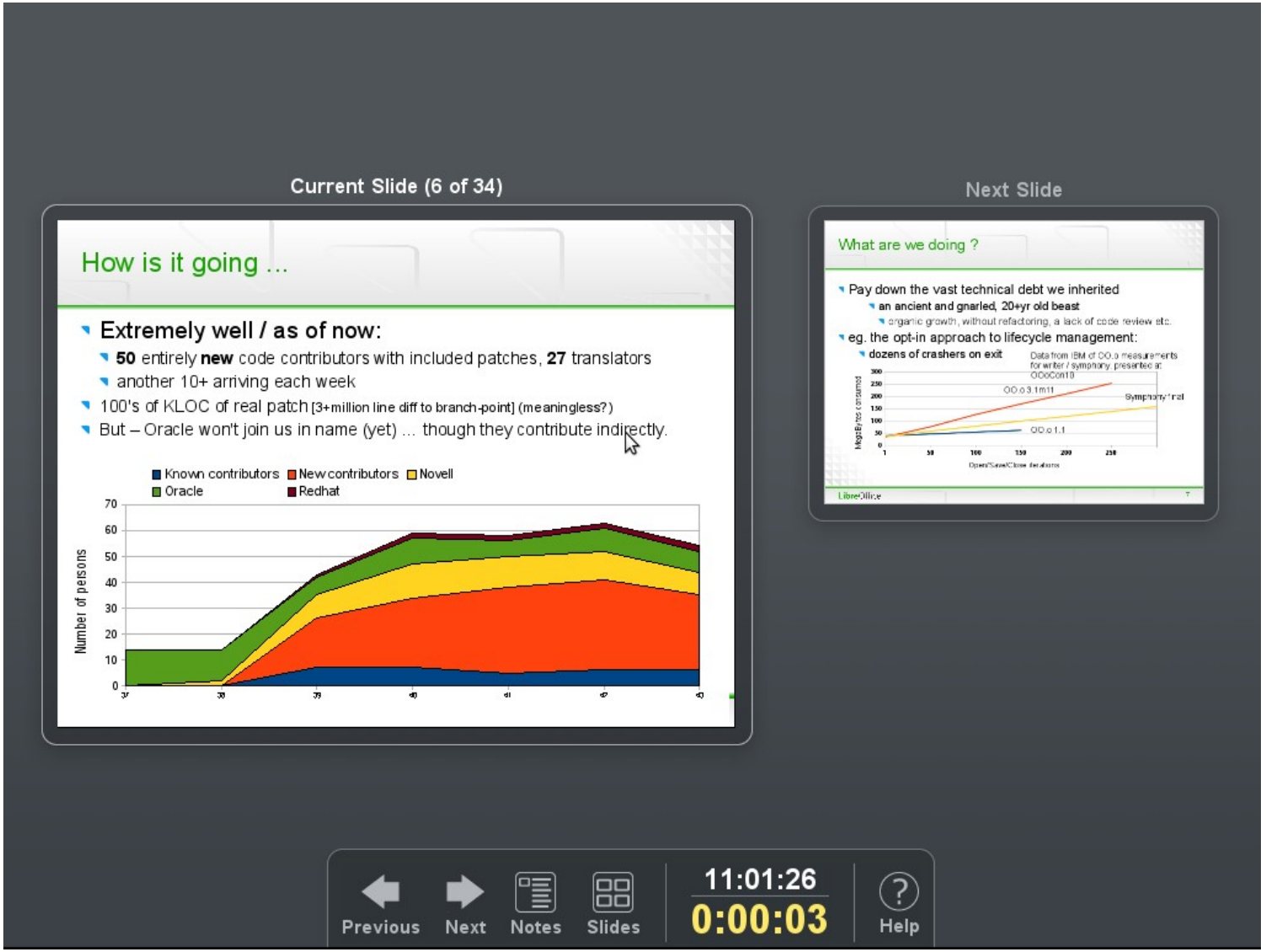
New Features, distinctive to LibreOffice ...

Or: *why should I choose LibreOffice ?*



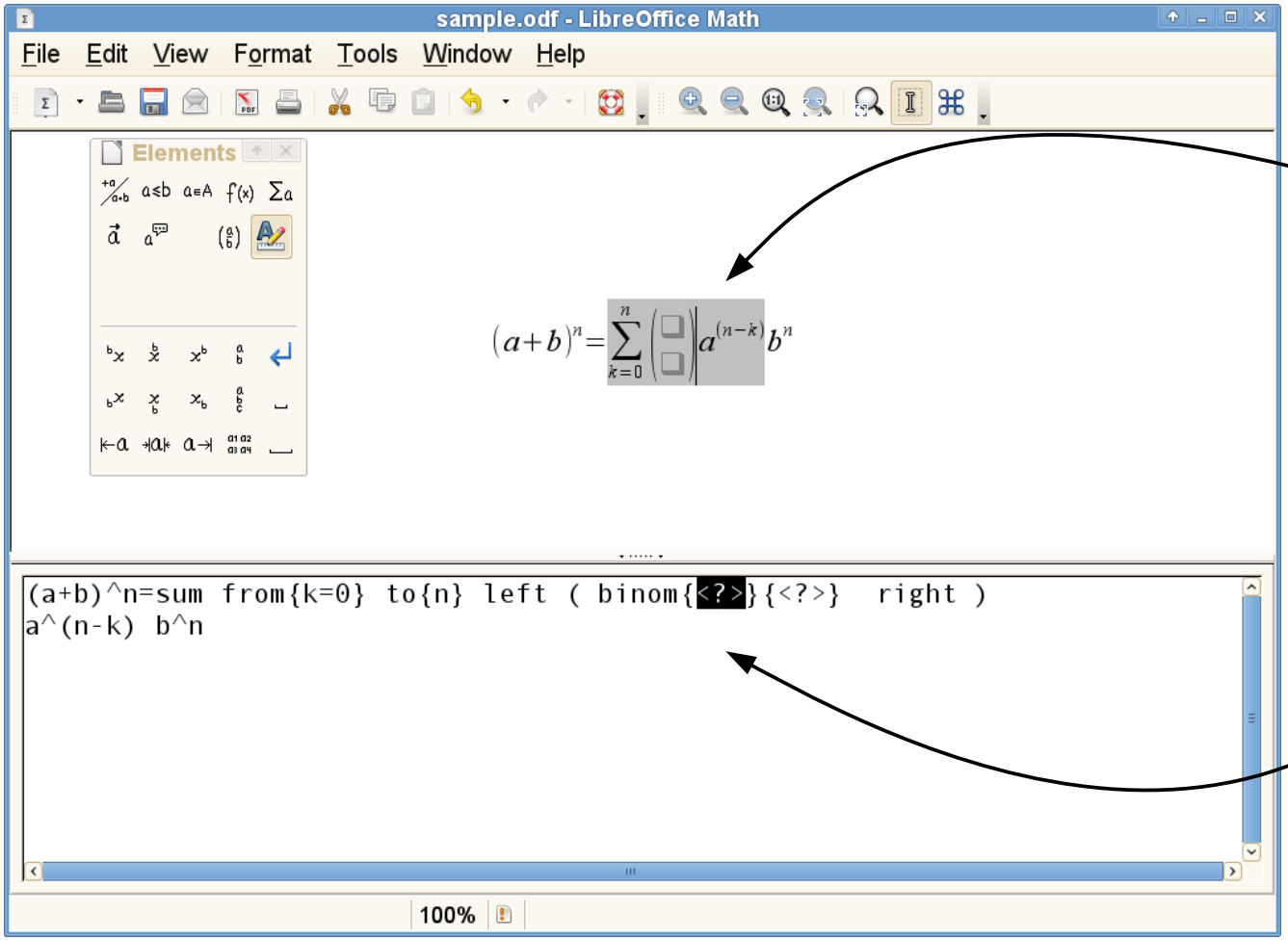
New Features, distinctive to LibreOffice … #2

Bundling **existing**, useful extensions – instead of burying them …



New Features, distinctive to LibreOffice … #3

Experimental features, not perfect, but a taster: **In-line formula editing …**



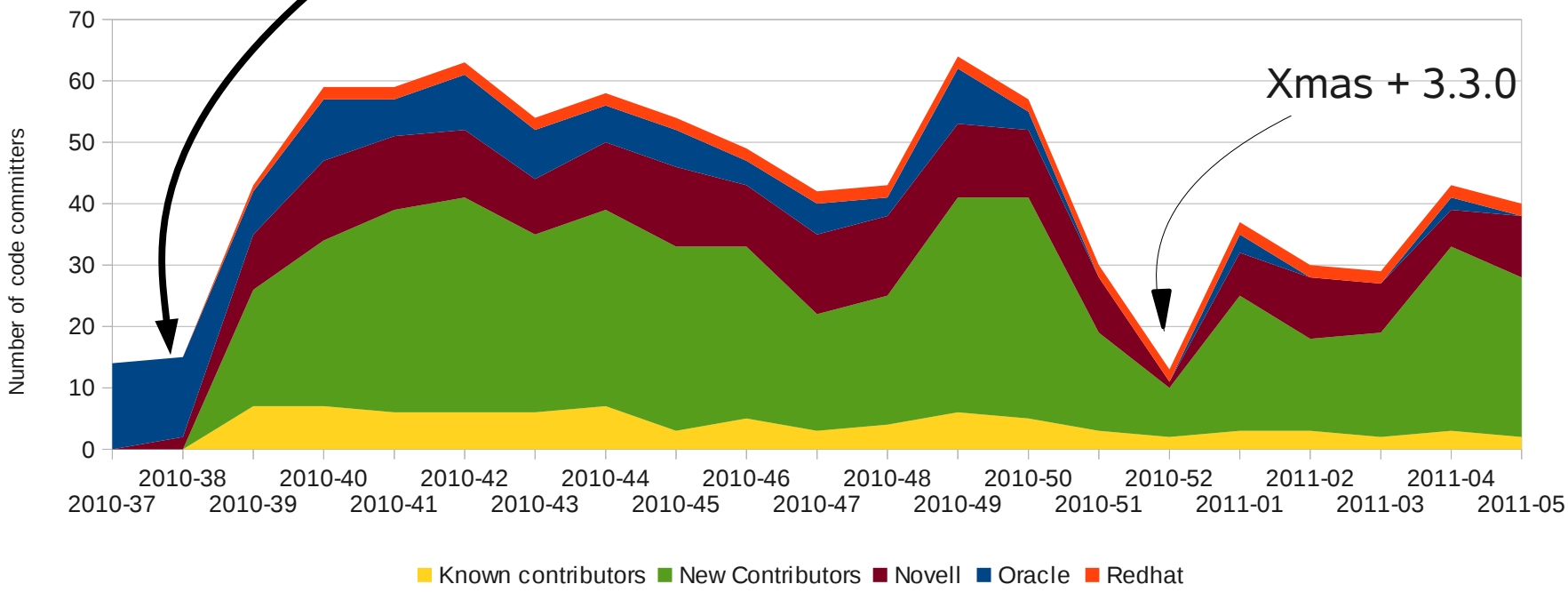
Click and edit here:

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 ?



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

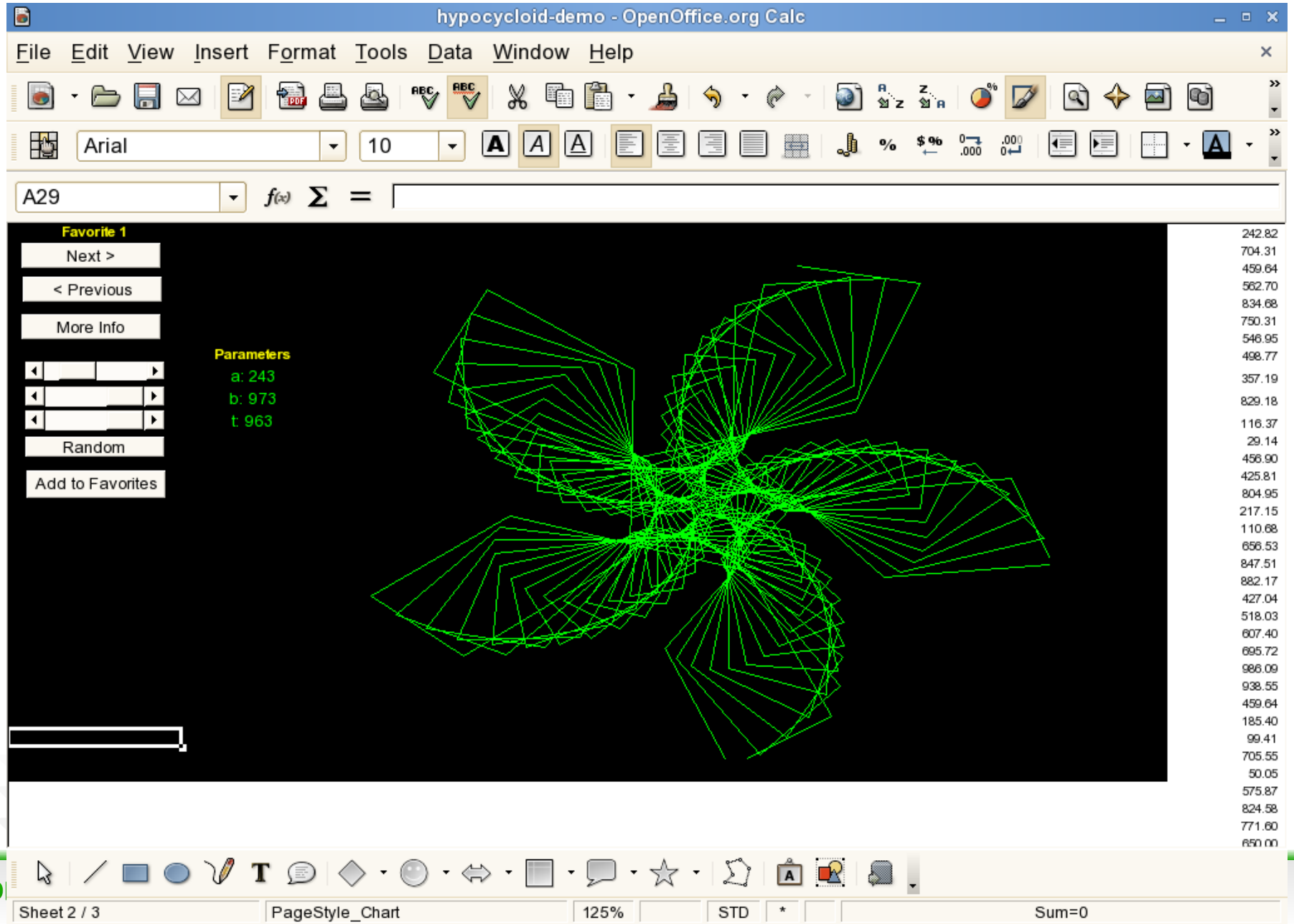
FUD around Free-Software licensing & practise ...

- 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 …

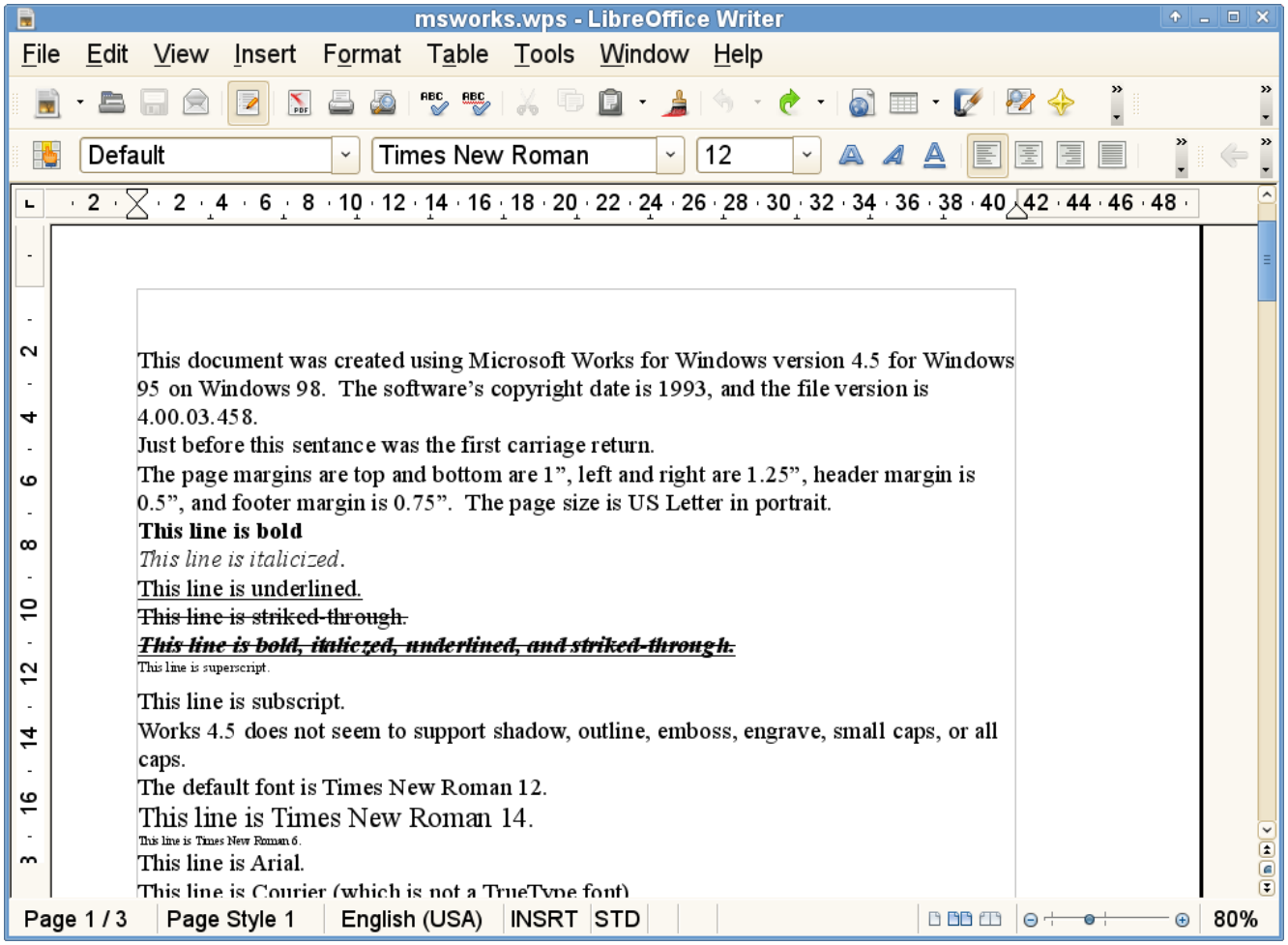


Can you: mirror / translate ...

- 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

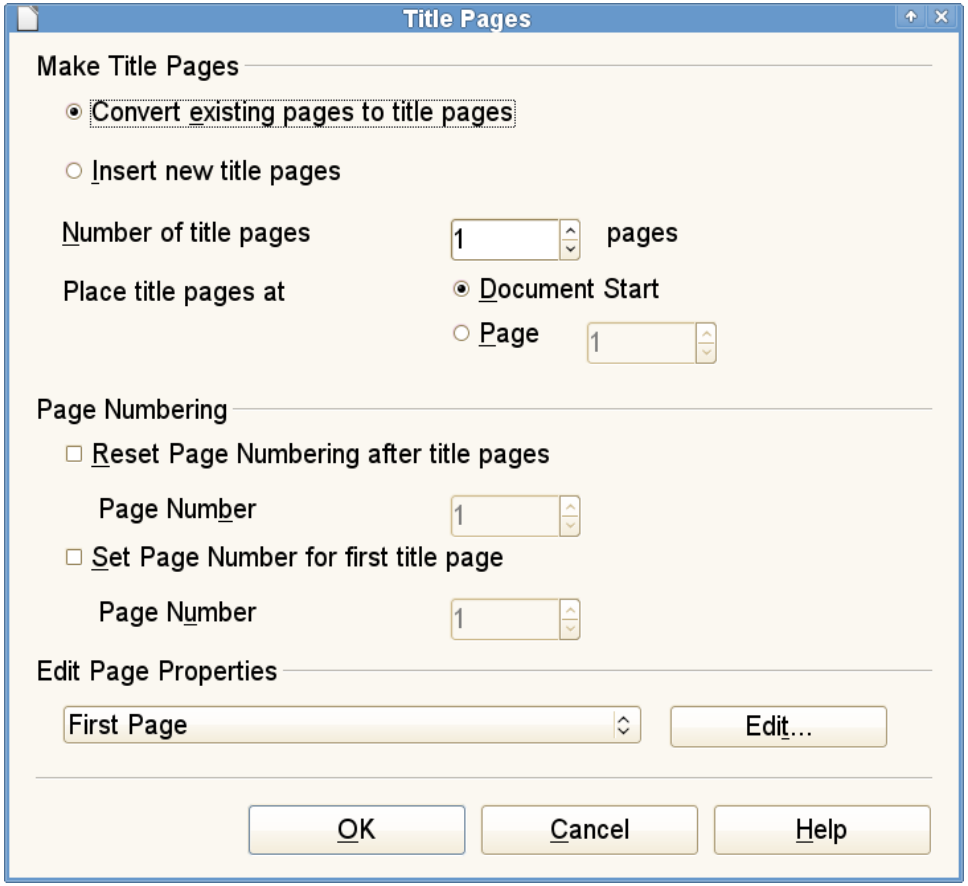
Import your legacy Microsoft Works files – and move to ODF …



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

- Ultra elite 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 …

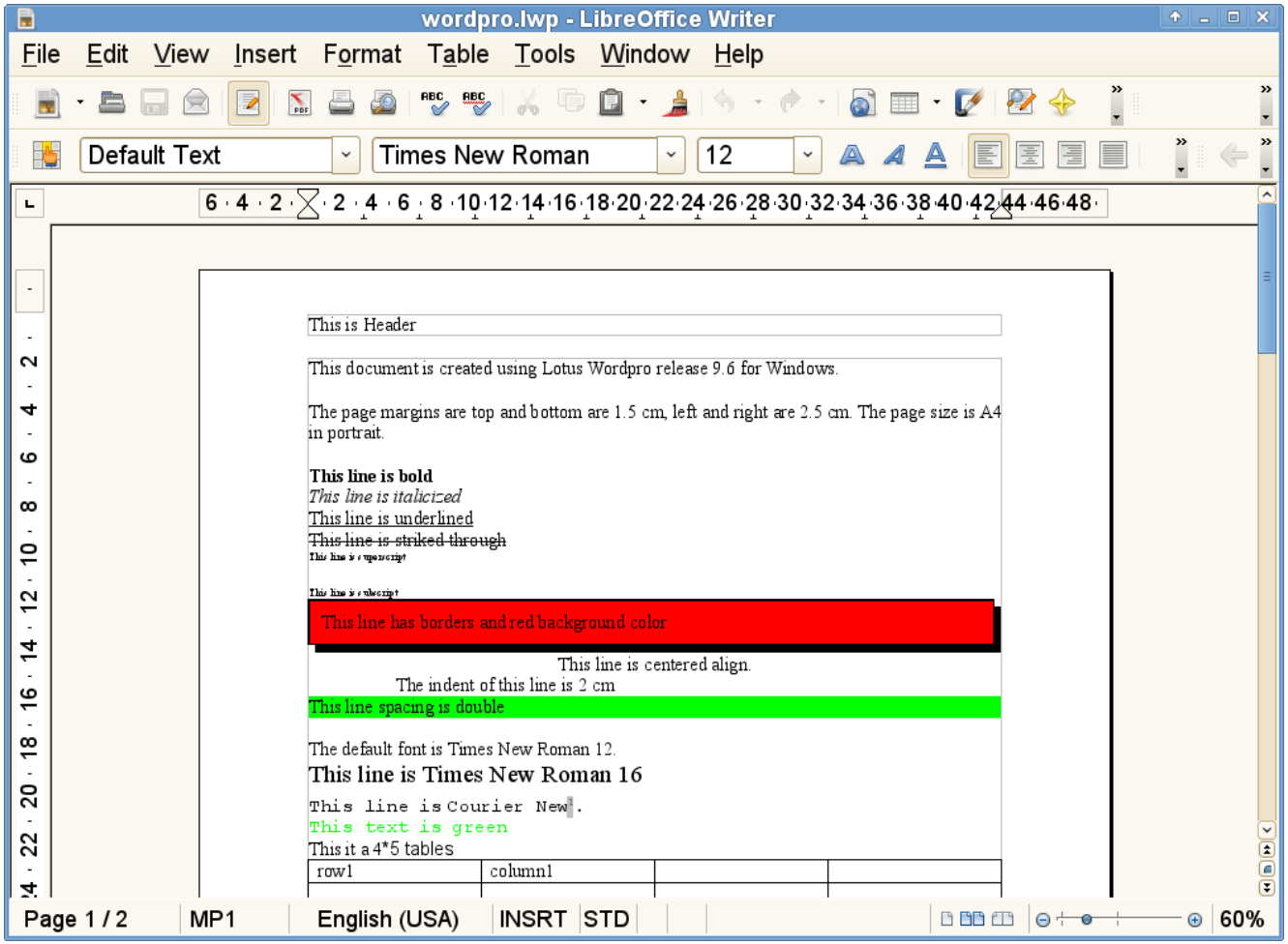
More easy hacks, and something for Germans

- 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: ….
```

New Features, distinctive to LibreOffice … #6

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

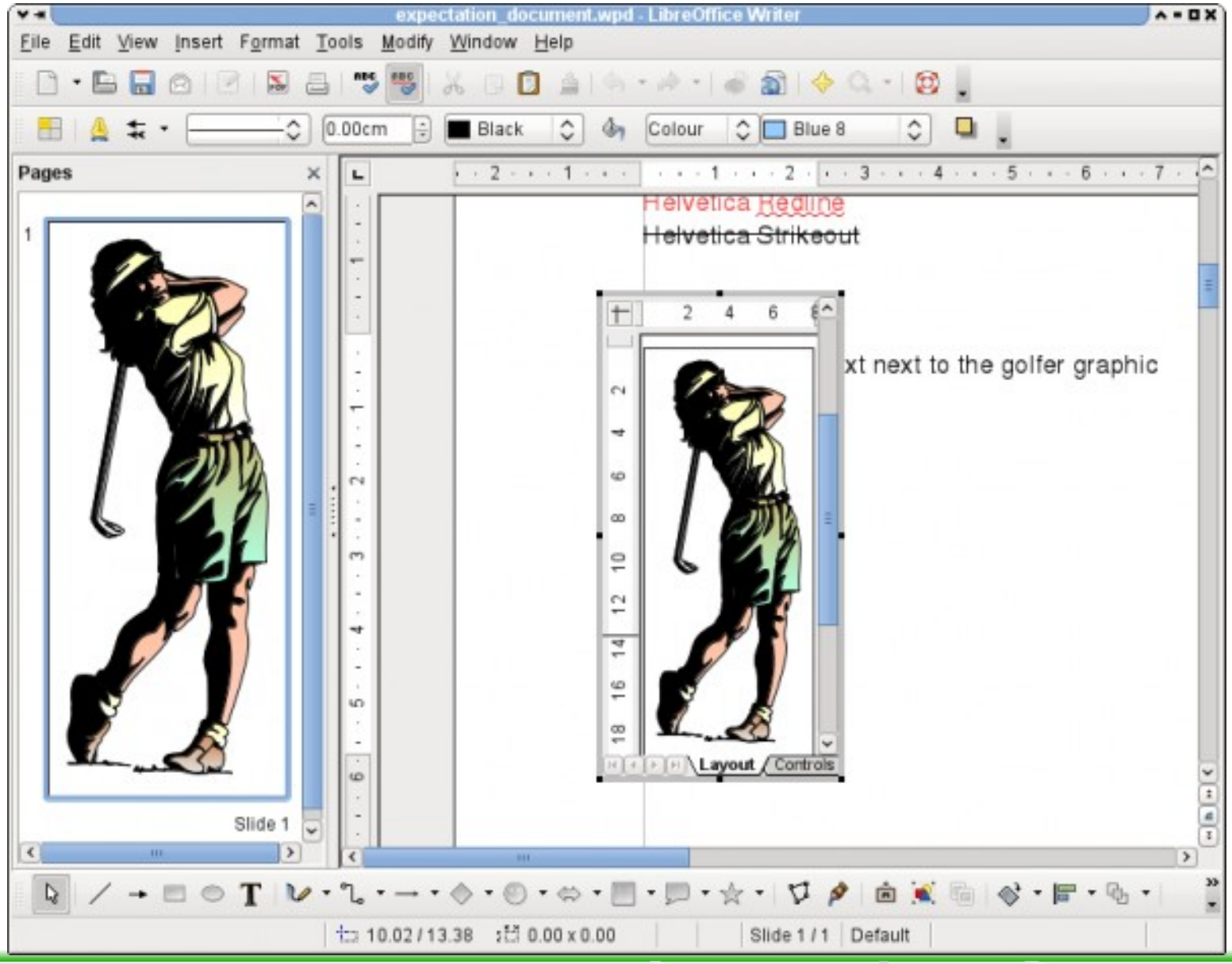


Are you: A user ? room for you too ...

- 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 …

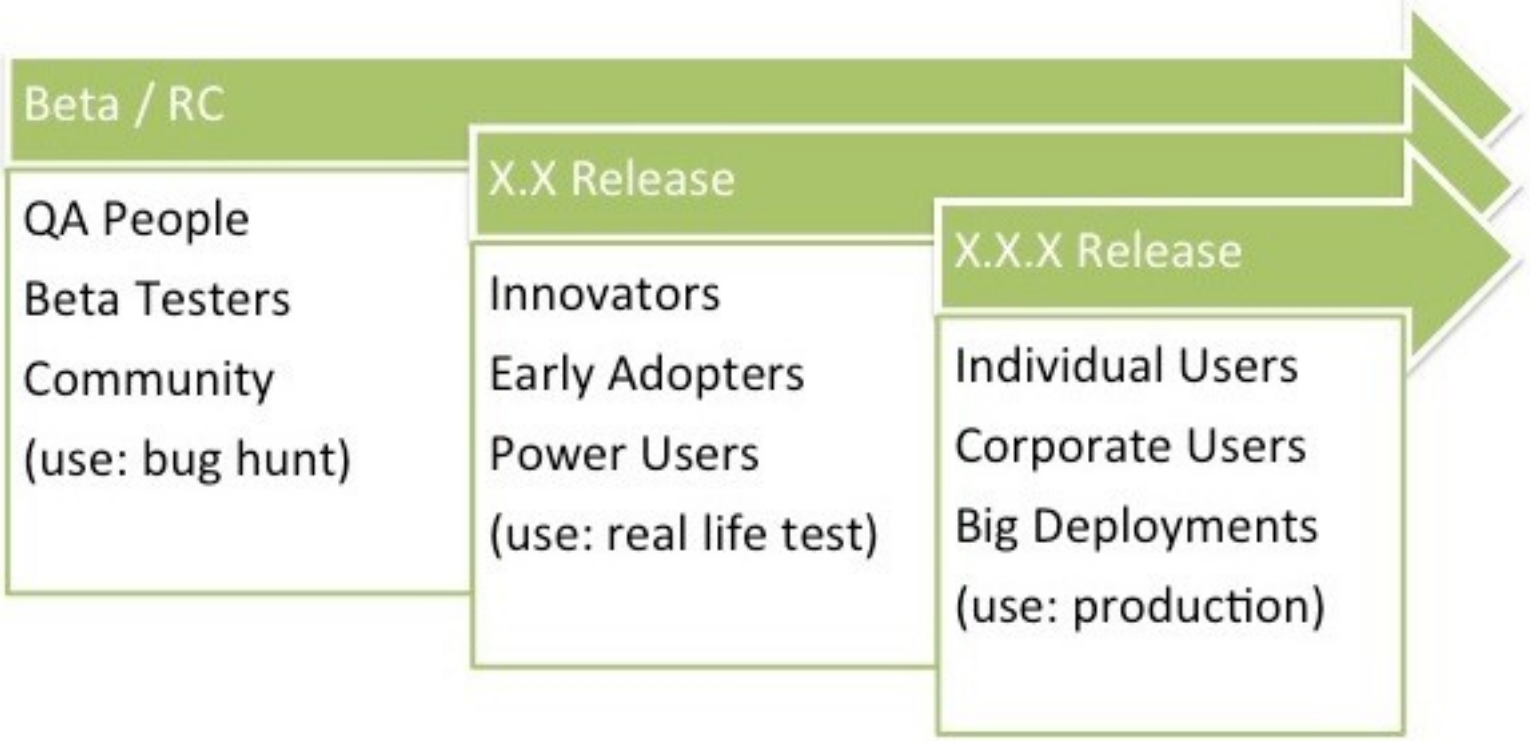


New Features, distinctive to LibreOffice 3.3.0 … #8

Embed real multimedia under linux … with multi-slide audio …

A roadmap to the future …

- A time based, six-monthly release train …
  - synchronised with the Linux distributions cadence
  - ie. 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 ...

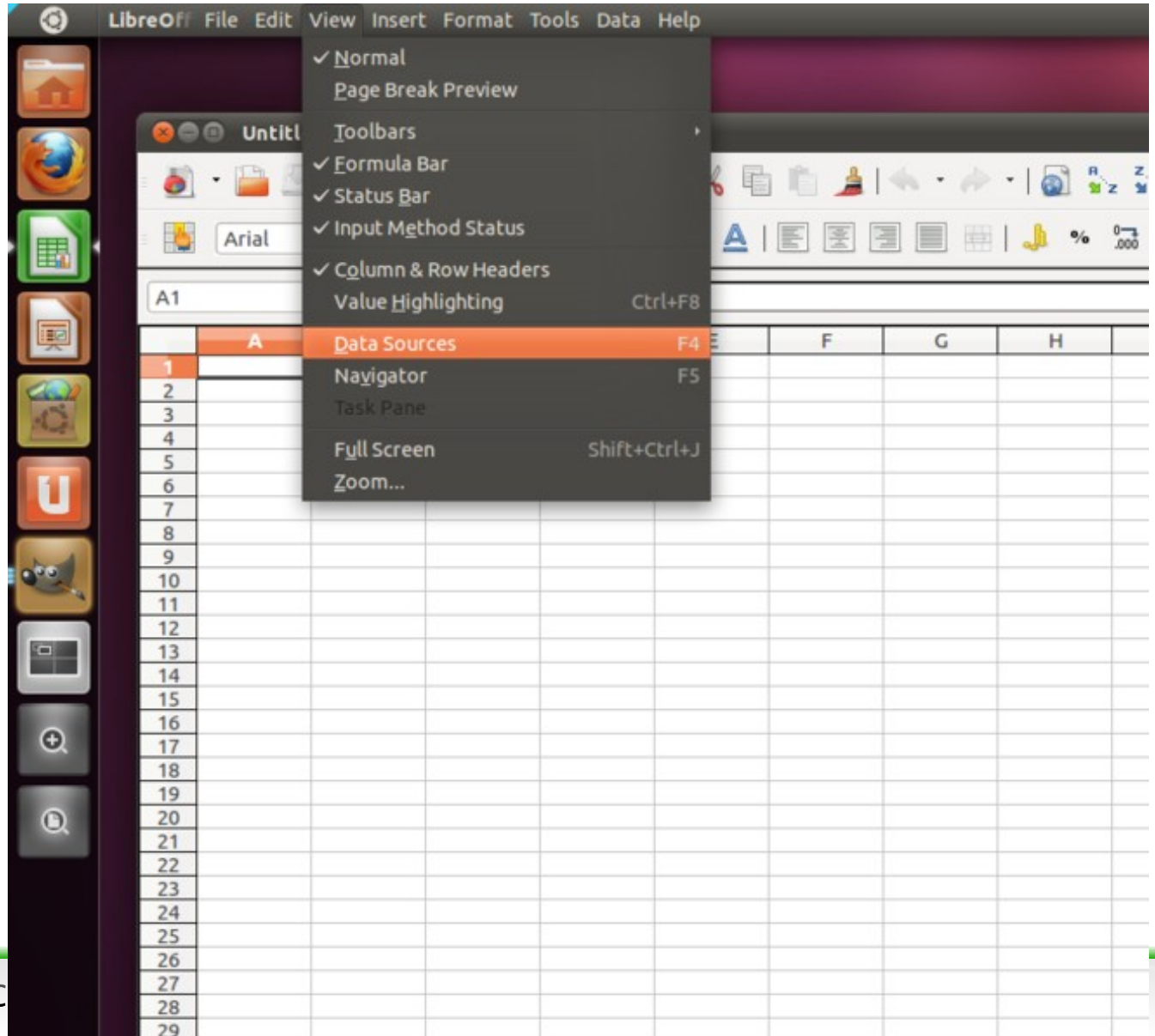
What's new in 3.4 (coming soon)

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 …

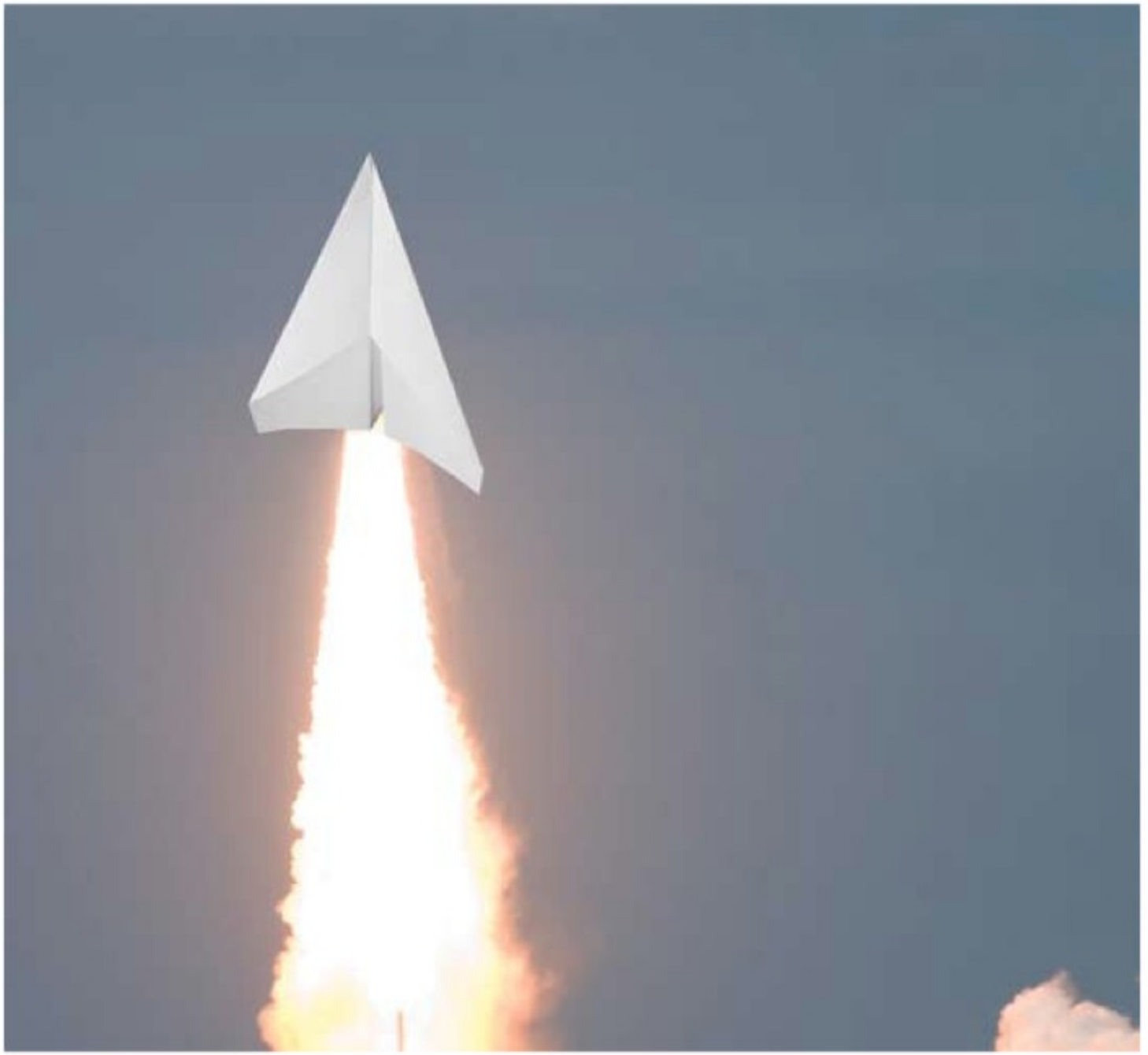
Unity / out of process menu integration …



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
  - 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

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