

The ongoing story of Online

How we got to here ... & where to go?

by Michael Meeks

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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



Online & LibreOffice - pre-history ...

StarPortal ~2000+ somewhen.

- ActiveX control running in IE talking to a Sun Server!
- Lots of UNO-ness to make it work, proprietary headless backend too.

May 2006 - Add vigra and supporting libs to OOo (i65904)

- Thorsten Behrens @ StarDivision → "The only client today is module basebmp, which provides a software rasterizer."
 - 27 files changed, 6078 insertions(+)
- Basebmp lasts a decade to Jan 2016 → Caolan re-wrote to Cairo; still there in Apache OpenOffice

June 2007 - make svp plugin opensource (i78931) - philipp.lohmann

- "StarOffice has a headless plugin for the Unix versions, which we now want to relicense as LGPL to avoid duplicating efforts started by cmc."
- Triggered by: vcl/unx/headless → started by Caolan @ RedHat (i76958)
- Adds basebmp and much more ... in VCL alone:
 - 143 files changed, 12096 insertions(+), 388 deletions(-)





Online & LibreOffice - created ...

September 2010 → announce the idea of TDF

October 2011 \rightarrow Paris conference ...

 Amazing amount of hackery from me @ SUSE to get a first gtk3 port working ... Cairo rendering, damage tracking, clipping: a sample git commit:

"gtk3: extensive X-orcisms performed, with some horrendous cut/paste code looks like the wild-west, needs incremental cleanup & re-factoring"

Demo to potential Gov't investor → no taker.

The SUSE era!







1st LibreOffice conference October 2011 My slides:



Cloud Office ... technologies ...

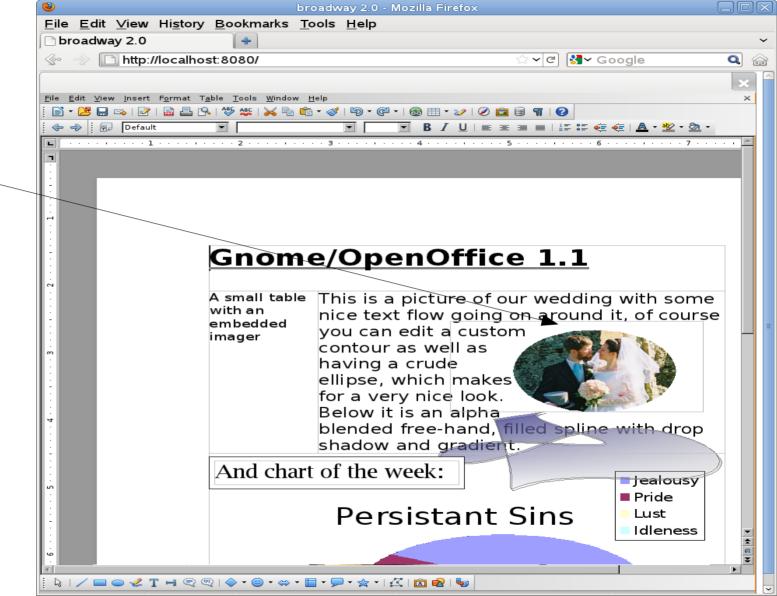


- Uses gtk+ 3's / broadway backend to render (via some javascript shims) in the browser:
 - All intelligence and rendering on the 'server' app.
 - ▼ broadway.js < 3k LOC ...
 </p>
- Still a prototype
 - rendering performance improving, but lumpy in places.
- This approach allows a full-feature experience
 - ie. complex text-layout, large, complex spreadsheets, WYSIWYG (eg. edit your footnotes on the page), VBA macros, Pivot Tables etc.

Example:

Custom contoured picture, with text fill

Does that look familiar?



LibreOffice On-Line conclusions ...

- It is a prototype ... cannot deploy it today
 - basic (prototype) functionality will be in 3.5 (Feb.)
 - server resource usage is not yet optimal, no hosted slashdot-proof PoC ...
- Code is all in public git:
 - git clone git://anongit.freedesktop.org/libreoffice/core
 - git checkout feature/gtk3; configure; make install
 - export GDK_BACKEND=broadway ...
- ▼ Firefox 4 (with websockets enabled): grab a FF sticker!
- Thanks to Alex Laarson of RedHat for: gtk+ / broadway

Quite possibly gtk+ broadway still works today.







Online & LibreOffice - TDF setup...

Feb 2012 → FOSDEM – shows gtk-broadway + **Android** hacks.

- Tor Lillqvist did much of the heavy-lifting work here.
- I was up incredibly late hacking together with Kendy
 - night before trying to get Android working ...

LibreOffice in a browser & on Android - pre-dates TDF ...

Feb 2012 → TDF founded

The SUSE era ...







LibreOfficeKit ...

My vision:

- Make LibreOffice really easy to consume & re-use
- UNO great for scripting not easy to re-use.
- A header-only C library with C++ wrapper

Author: michael.meeks@suse.com

Date: Tue Mar 5 13:16:36 2013

+0000

liblibo: create initial liblibreoffice.

Subsequently renamed to LibreOfficeKit



Used initially for 'locony'

- High-speed file-format conversion
- In-process, rather than remote-UNO to manage soffice binary.

LibreOffice exposes magic entry point:

• libreofficekit_hook (_2) - we dlsym and pull it out.





FOSDEM: Feb 2012 ...



A glimpse into the future:

"In the future, Cloud computing will be the only choice"

"Successful businesses may soon have no chief executive, no headquarters, and no IT infrastructure"

The Telegraph inverviewing Nick Martindale

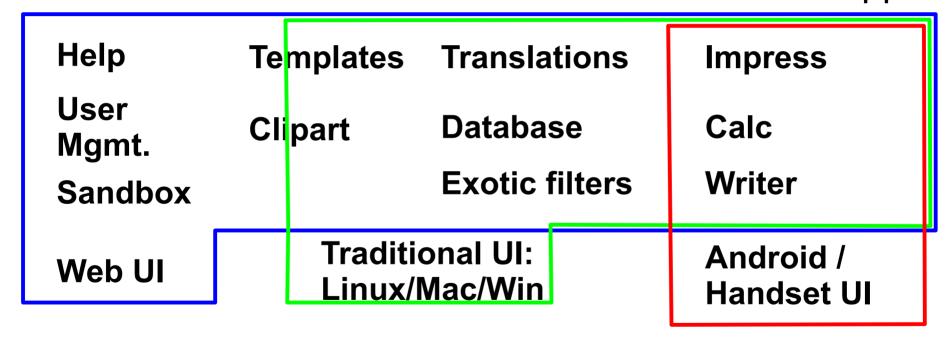
a FOSDEM 2012 slide ...

Not a terribly new idea:

"Every kingdom divided against itself will be **ruined**, and every city or household divided against itself **will not stand**" -Matthew 12 ~30AD

A design that re-uses code ...

Cut one feature to share the rest: the off-line web app



• 95% of code shared, most featureful is the web app!

Show me the code!

- Shipping out of the box in LibreOffice 3.5
 - Work continues on master; -plenty- to fix.
- ▼ To use a modern browser ie. v7 websockets
 - you need master gtk3+
 - or an update to openSUSE 12.1
- Otherwise that's it:
 - ¬ git clone git://anongit.freedesktop.org/libreoffice/core
- Hacking help very much appreciated
 - Plenty of VCL/gtk3/rendering bugs
 - no browser required.

unit tests running ...



Online & LibreOffice - Collabora ...

Sep 2013 → Collabora spun out of SUSE ...

Other teams suspect having too much fun mobile / web hackery ...

"Finally free! ...
to do exactly what our customers want"

Oct 2013 → CloudOn signed up: "mobile support"

- CloudOn brought Microsoft Office to the iPad etc. ...
 - When that went south: LibreOffice!

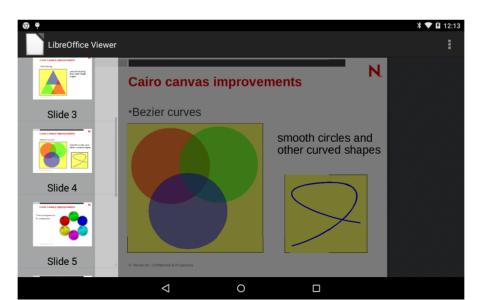




Online & LibreOffice - Smoose ...

May 2014 → Smoose funds LibreOffice Viewer Application for Android

- Mozilla Fennec / LibreOfficeKit tiled rendering (cf. CloudOn)
- "SUSE provided a key foundation of cross-platform support, with Google Summer of Code contributions from Andrzej Hunt and Ian Billet, along with improvements from Igalia S.L., and core components by Mozilla Corporation."









Online & LibreOffice - TDF ...

Dec 2014 → TDF funds Android Editing work (Eur 84k)

- A tender to: "develop the base framework for an Android version of LibreOffice with basic editing capabilities".
 - Extending LibreOfficeKit API with editing events.

Jan 2015 → CloudOn acquired by DropBox & exits LibreOffice ...





LibreOfficeKit - UI users ...

June 2015



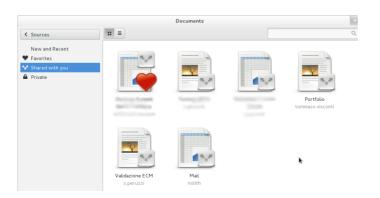
Viewing arbitrary documents ...

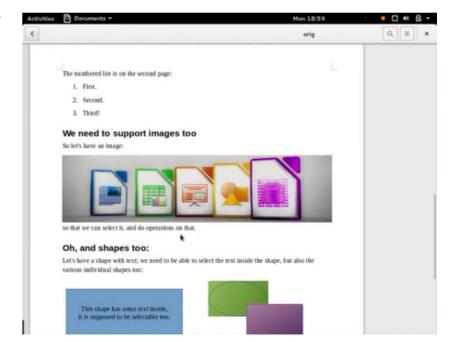
Initial preview from Pranav @ Collabora

Author: Andrzej Hunt <andrzej.hunt@collabora.com>
Date: Thu Jun 12 17:38:10 2014 +0100
Implement LibreOfficeKit gtk+ viewer widget.

Very basic, but works.

GNOME Documents...









Online & LibreOffice - IceWarp ...

March 2015 → IceWarp

- Investment into creating alternatives → LibreOffice Online
 - "IceWarp and Collabora will work alongside over a thousand existing LibreOffice contributors to implement the whole online editing portion of the software, including the server-side provided by LibreOffice, and the client front-end based on HTML5 technology."
- IceWarp → exited LibreOffice Jan 2017

Dec 2015 → ownCloud – partnership around CODE/COOL



July 2016 → Nextcloud - partnership





Online & LibreOffice - Progress

Nov 2016 - CODE 2.0

- Collaborative Editing!...
 - ownCloud, Nextcloud, Pydio supporting ...

Dec 2017 - CODE 3.0

- Brings full-feature (pixel based) dialogs to the web client
 - "Format → Paragraph" etc.

Feb 2019 - CODE 4.0

HiDPI support, prettier-toolbars, shape insert/edit, basic mobile support





Online & LibreOffice - iOS

Nov 2019 - Collabora Office on iOS

- First version of mobile / tablet UX for iOS
- For the first time there is a free / open source office suite available on iOS: Collabora Office, thanks to the efforts led by Adfinis SyGroup and Collabora.
- re-built from scratch with Online

Mar 2019 - Unipoll

- Becomes clear existing thread-heavy model is un-debuggable & un-maintainable.
- I have to substantially re-write this on the brink of release.
 Now 1 thread per doc in coolwsd, and Kit.





Online & LibreOffice - Android

Dec 2019 - CODE 4.2

 Sidebar chart functions, formula wizard, new theming, icons, in-line table editing handles, TOC support

Dec 2019 - Collabora Office for Android (Beta)

- Shared / responsive UI with Online & iOS versions
- Based on a completely refreshed approach:
 - no Fennec, little Java, a Web-view to a local coolwsd as per iOS





Online & LibreOffice - android app#1

Dec 2020 - TDF Android app dropped from Google Play

- On 01/04/2020 10:04, Mike Saunders wrote:
 - > As you probably know, we quietly removed LibreOffice Viewer from the
 - > Play Store before Christmas, as its reviews were really bad and it
 - > hadn't been updated since April 2018. We talked about is here on the
 - > mailing list, but didn't make a big public communication about it.

Since had some maintenance:

- Android/ since Dec 2020 → 128 commits
- 118 Michael Weghorn ...





Online & LibreOffice - Board vote

[board-discuss] Public agenda for TDF board meeting on Friday, May 22nd at 1300 Berlin time (UTC+2)

- Inform/Discuss: Ecosystem & Sustainability (Michael & Thorsten, All 15min)
 - Board wants to be more transparent about decisions
 - that is good, but we need to publish more data.
 - please listen, absorb everything we say will be in the minutes or published later:
 - questions / challenges possible at the end.
 - subsequently picked up by theregister (in an unfortunate way)
- Voting on proposal of Paolo: (Paolo, Board members 15 minutes)





Why buy COOL in 2020-05

Common to Collabora Office:

Support, SLA, Product Management etc.

LibreOffice Online & CODE → remind large users

This is an unsupported version of LibreOffice
Online. To avoid the impression that it is
suitable for deployment in enterprises, this
message appears when more than 10
documents or 20 connections are in use
concurrently

MORE INFORMATION AND SUPPORT

Access to stable Binaries - cf. RedHat Enterprise Linux

Were LibreOffice Online dev snapshot images – but not stable.

Docker images & docker img. build instructions

Collabora install/setup/scaling documentation





Online & LibreOffice - Paolo's vote:

"Enable the infrastructure team to **deliver** the following **packages with TDF and LibreOffice branding**:

- docker images
- ownCloud connector (from which we have already got confirmation of acceptance) for LOOL
- once that is in place I will ask NextCloud for the opportunity to do the same
- Univention marketplace packages for LOOL
- all packages and connectors will be maintained and updated on a monthly basis unless urgent patches/bug fixes are required sooner
- the **latest stable** version of LOOL code will be used to build the images







Advice from "Open Sources"

Bob Young - Founder of RedHat (sold for \$34 billion)

"How Do You Make Money in Free Software":

"No one expects it to be easy to make money in free software. While making money with free software is a challenge, the challenge is not necessarily greater than with proprietary software. In fact you make money in free software exactly the same way you do it in proprietary software: by building a great product, marketing it with skill and imagination, looking after your customers, and thereby building a brand that stands for quality and customer service."





Marketing & Branding is key

The basics:

- Marketing generates Leads → Sales sell to Leads → Money ... → make FLOSS
- Lead flow is fundamental to business
- Hunting / Marketing also possible:
 - conferences, direct-mail, etc. → don't work well.
 read more in my epic on vendor neutral marketing

Marketing vs. our code as "Free as in Beer"

 Using the very well known community brand is excessively hard.





Online & LibreOffice - Paolo's vote:

"Enable the infrastructure team to deliver the following packages with TDF and LibreOffice branding

...

- LibreOffice branded documentation/help files should be created to make it as easy as possible to install docker images/Univention packages
- TDF's LOOL packages will be free and supported only by the community.
 No paid/support options will be made available by TDF
- In the download page it will be made clear that if LOOL is used in enterprise environment support options are available through the members of TDF's ecosystem
- At a later stage eventual limitations in terms of concurrent users/documents will be discussed."

Vote pulled at the last minute ... explanations for that differ.





Marketing plan ...

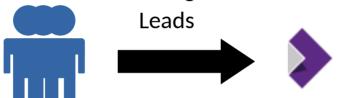
2020: Online commits

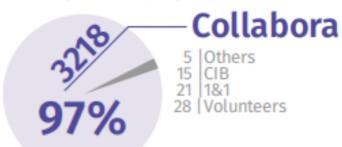
By affiliation (last year)

Before doing this: create a marketing plan

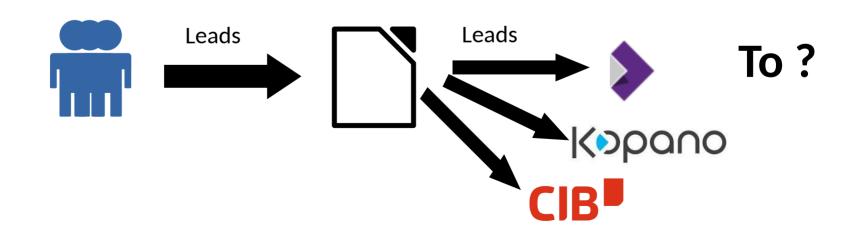
Reasonable idea \rightarrow if TDF crushes lead flow

Idea: replace it with something





From





What will Kopano contribute to Libre-Office Online?

October 2017 - Rome

To help establish LibreOffice Online as a standard technology for open enterprises, Kopano has joined The Document Foundation Advisory Board.

We want to do our part in reaching this goal and contribute towards the following areas:

Improved user interaction

We have always tried to ensure that our applications are easy to understand and use. We look forward contributing to LibreOffice Online in this area.

Collabora recruited Kopano – implemented lots of changes for them,

Package access

Kopano's LibreOffice Online installable packages will be easily available for a variety of Linux distributio simple to start using LibreOffice Online and to stay with up to date with the latest version.

For a time they were listed ahead of Collabora in the TDF Online page.

Sharing experience

By joining the Advisory Board of The Document Foundation, Kopano will offer experience and insights n improve the presence of LibreOffice Online.

no sustained contribution.



Marketing Plan ...

Sticking points:

- Where do the leads go?
- How do we make that fair ?
- What legal risks does this create for TDF?

When to start doing it?

- Should we see if this works before trying it for Online?
- Or should we just believe it works !?

Try it for LibreOffice Desktop - Moral suasion:

'Home' → 'Personal' → 'Community' - watered down / removed Help→About ...



Destroying business confidence is easy. Creating it is hard.

Imagine you had invested your entire life's earnings here.



Online & LibreOffice - the Move

Sep 2020 - CODE 6.4 - using LibreOffice versioning

Notebookbar, PDF annotations, etc.

1st Oct 2020 → an Online move

This is primarily a change of presentation, that can un-pick a big knot of badness in the LibreOffice community. It is primarily driven by the need for continued investment in Online, in addition to the huge effort that Collabora and our partners have put into the product to date.

In our view it is the best solution for both LibreOffice and Collabora. If the move is handled sensibly we can look forward to a bright and co-operative future.





Why buy COOL post move

Common to Collabora Office:

Support, SLA, Product Management etc.

Access to stable Binaries - cf. RedHat Enterprise Linux vs. Fedora

CODE binaries are publicly available ... COOL not.

Changed to now public:

- Documentation & Docker images
- Binaries that can be used at scale

Lead generation done via brand awareness ...





Online & LibreOffice - the freeze

Dec 2020 1st (+2 months) - LibreOffice Online frozen

- no commits since the Move (or Fork?)
- A split vote Chair's casting vote carried it.



Mar 2022 - Atticization process approved

"The "attic" is a special area of TDF's infrastructure where part of the code/documentation/translations, which is not being actively developed, can be stored."

"A part of the project that is actually present inside the "attic" can be moved back into active development, whenever sufficient interest around the code emerges."

"A sufficient number of developers ... each 5-10 non-trivial commits over the span of at least three months ... Once clearance has been granted, both ESC and BoD will vote etc."





Online & LibreOffice - atticization

ESC 2022-06-02

- "Heads up on Atticization proposal
 - + proposal would be to think about this for a week (Miklos)
 - + formal vote next week."

ESC 2022-06-09

- Discussed security issues, no contributions, clear path to de-atticize etc.
- **ESC vote** (very rare) +9 no concerns, 6 abstain → passed.

July 2022 - Board Decision: Delayed atticization for LibreOffice Online

- "the board resolves to postpone formally atticizing Online for three more months. Unless the de-atticization requirements [1] (3 different developers contributing non-trivially) are fulfilled by then, and/or if necessary binding corporate commitments are not made by 2022-10-01, Online will be automatically moved to the attic."
 - Result of vote: 2 approvals, 3 abstain, 1 disapproval.





Online & LibreOffice - freeofficeonline

Andreas Mantke's

- 2022-06 E-mail "Work on Updated LOOL"
- "freeofficeonline" git repo on github.
- Took Collabora Online repo from June 2022
 - +20 months of feature work from the COOL team
- 1st commit: add "This file is part of the LibreOffice project." to all headers [!]
 - Renamed a number of files COOL → LOOL
 - changed some strings
- Continued to take COOL commits tweak, and merge.

Silliness around breaking iOS / webkit & presentations in core.





Online & LibreOffice - OxOffice

OSSII have long had their own fork of LibreOffice & LOOL

- Good: building their own brand.
- Hard: tracking code-base: checkout/change /create new repo / check-in

Author: <mark>Tor Lillqvist</mark> <tml@collabora.com> Date: Thu Jan 21 14:39:10 2021 +0200

Add caching of tunnelled dialog images

The same cache size is used in server and client. The caches invalidation algorithm. Pass the hash of the pixmap in the windowpaint: message. The client stores dialog images in its The server stores hashes of the images. When the server know client already has an image cached, it sends just its hash a client will use the cached image.

Pass the size of the cache to the client so that we don't hat the the cache size synchronised in two places in the code.

Change-Id: Ie6cbfca79a9ede48fcc115e3acc669b925bb624e Signed-off-by: Tor Lillqvist <tml@collabora.com>

commit cb63bb6bed2492f54a141424fe79e27e4c7964f2

Author: <mark>Tor Lillqvist</mark> <tml@collabora.com> Date: Mon Jan 25 13:35:57 2021 +0200

Log the DEBUG messages from client with LOG_DBG and not to

commit 8195683f03cebaba6789a1b63c1acdbadbda78e7

Author: Firefly <firefly@ossii.com.tw> Date: Sun Sep 5 20:09:08 2021 +0800

Add caching of tunnelled dialog images

Who wrote what?

The same cache size is used in server and client. The caches use the invalidation algorithm. Pass the hash of the pixmap in the windowpaint: message. The client stores dialog images in its cache. The server stores hashes of the images. When the server knows that the client already has an image cached, it sends just its hash and the client will use the cached image.

Pass the size of the cache to the client so that we don't have to keep the the cache size synchronised in two places in the code.

commit f3024b01ace6897155073439ea06695f6b3248d7

Author: Firefly <firefly@ossii.com.tw> Date: Mon Aug 30 14:46:12 2021 +0800

列印或匯出 PDF 檔案時,若 oxool 沒有啟用列印浮水印

才詢問使用者是否加浮水印





Online & LibreOffice - framing...

A maximally unfair & polarizing framing:

- "Collabora 'stole' Online from TDF"
 - Theft metaphor familiar from eg. "Taking the credit"

We invested a fortune in writing FLOSS

- We contributed it & worked together with others
- When pushed into a corner we left: TDF is a community project
 - People need to want to be here.

Lets get real:

- Others take our code, remove our names / credit, contribute little new of value.
- And also try to use the community brand to kill our lead-flow \rightarrow business ...





We did do something useful during COVID!?

What changed with the move:

- Unlimited, easy-to install binary builds: packages, docker images.
- Detailed public setup & install documentation
- Removed this warning:

Collabora helped many schools, universities, companies

 They continue to fund development today → thank you to them! This is an unsupported version of LibreOffice Online. To avoid the impression that it is suitable for deployment in enterprises, this message appears when more than 10 documents or 20 connections are in use concurrently

MORE INFORMATION AND SUPPORT



TDF can & could still help of course [!]



Online & LibreOffice - a footnote ...

Footnote: LibreOffice rocks

In case people got confused, it is worth saying that LibreOffice is an **outstanding piece of software**, produced as part of a wonderful, wide community by some of the best **developers**, **translators**, **documentors**, **etc.** you're likely to ever meet. We see LibreOffice as having as a **bright future** in two ways:

1. as a great, rich desktop & laptop product (as now)

2. as a core LibreOffice technology - provided via LibreOfficeKit and UNO APIs - as a re-usable piece of Office awesomeness that can be built on by other projects and companies like Collabora, CIB, and many others to build new & valuable products.

We commend it to you, if you've not tried before why not: https://www.libreoffice.org/community/get-involved/





LibreOffice Technology ...

Sep 2021 - Italo's:

- "LibreOffice Technology, a FOSS platform for personal productivity"
- An extremely helpful way of presenting the joint synergy & goodness here:

Good community crediting.









Crediting LibreOffice Technology

Help → About

Collabora Online

×



COOLWSD version:

22.05.0.1 (git hash: b1f3c4b5(E))



LOKit version:

built on a great technology base

Collabora Office 22.05.4.1 (git hash: c5df13a)

Served by: openSUSE Leap 15.3 999936f5

JSDialogs:View widgets

Copyright © 2022, Collabora Productivity Limited.





Community Credits

Collabora Online & LibreOffice Technology

Collabora Online is built on the amazing LibreOffice Technology stack,

and many of our community are active contributors to LibreOffice – having created the LibreOfficeKit APIs to enable people to easily re-use the core document editing and rendering technology. Please do read more about LibreOffice Technology

LibreOffice Technology

you can also get a list of credits and contributors to LibreOffice here:

LibreOffice Developers



The people behind the scenes

LibreOffice is created by a very large group of amazing contributors:









Localization: Contributors

Many thanks to all those who have worked on translating Collabora Online, you rock!

Many thanks to all those who have worked on translating LibreOffice!

See all the contributors







Online & LibreOffice - a history

Nov 2021 - CODE 21.11

- Based on LibreOffice 7.1 + back-ports
- Sidebar re-write using JSON description of dialogs
- Async save, much faster multi-user editing,
- New year-based versioning

June 2022 - CODE 22.05

- Based on LibreOffice 7.3 + back-ports
- Released with new formula bar, Delta compression, a11y check, content-controls, jumbo-sheets, spark-lines etc.





Online & LibreOffice - Nextcloud

Nov 2021 - Nextcloud Office

- LibreOffice Technology as default:
- But the highlight of this release is Nextcloud Office, our now standard office suite, developed in collaboration with Collabora Productivity!
- Our goal was to supercharge office in Nextcloud, bringing deeper integration than ever before. We have been working on this with a shared team with Collabora Productivity and Nextcloud Office will be the default office suite in Nextcloud.

Ongoing joint work on UX & improvement





Marketing Plan retrospective

Are you on tdf-internal: you should be:

E-mail: "Marketing Plan – a numerical update"

"So: the interesting question is: what is the impact of that change in sales on the ground? I was curious - since even though the brand change and moral suasion was diluted to something very weak - there were also changes to the LibreOffice website to encourage business-folk to think of using a supported version. Thanks to Mike & Italo for their work there."

"The data is now in; of course enterprise sales cycles take a while - but after a year+ we should see an impact I hope."

"In the relevant time period we haven't significantly changed lots of the variables:"

"I don't notice any change in 2021-02. Nor when 'fresh' became 'still' (and thus Community branded) later that year in 2021-08."

"That's sad."

Not obvious what to do about that ...

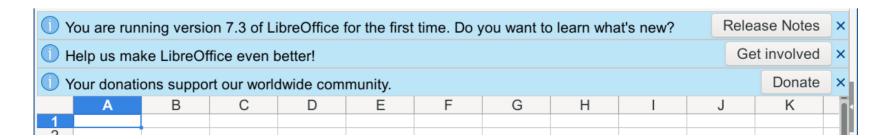


Where to go next?



Improve the status quo:

- Hungry school-kids in Africa need free binaries
 - They can use CODE TDF does.
 - Or: Collabora can support just ask:
 - Educational pricing 25% already
 - joint programme? Go up the chain:
 - Needs hardware and Nextcloud/ownCloud etc.
- Clearly someone needs to pay something \rightarrow how do we mediate / manage that?





Strategic accounts:

eg. a Trustee's local school?

Some process?





A calmer world post-atticization?

Better joint promotion of LibreOffice Technology

- Collabora love LibreOffice Welcome dialogs etc. ... ?
- We like to promote the brand, the technology, tell people about it

Need clear legal rules on that

- Credible, trustworthy & enduring commitments are hard here ...
- Binding future boards is hard boards agreeing is hard etc.

Love the TDF marketing team:

- We can work more closely case studies / etc.
- Collabora is a LibreOffice success story there can be more.





Other thoughts?

Perhaps: A new and more effective marketing plan?

- Do we want to re-open this can of worms?
- Try to persuade the Desktop users that more of them should pay?
 - Use the experience to drive Online development?
- A massive up-hill struggle
 - Not clear the plan works
 - Not clear that TDF is a good foundation to build a business on cf - CIB experience.

Perhaps: Take the hit, badly hurt our developer-base, but ...?

Give Free as in Beer – LibreOffice branded software away! Now!





Thanks & Discussion

"Although we are capable of great acts of kindness, history teaches us that we sometimes need saving from ourselves - from our recklessness or our greed.

God sent into the world a unique person - neither a philosopher nor a general, important though they are, but a Saviour, with the power to forgive." - Elizabeth II, 2011



by Michael Meeks

What in common?: Sun, Oracle, Smoose, SUSE, CloudOn, IceWarp, Kopano