Collabora & LibreOffice
Working together to make Open Source rock

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
C O L L A B O R A

- >140 staff, Cambridge & Montreal
- our parent company – 16 years old
- Leading Open Source Consultancy
- Parent company of:

Collabora Productivity

- Spun out of SUSE in 2013
- 32 staff
- 8 years old
- Focused fully on Office
Collabora’s mission:

Make Open Source ROCK

Shared mission / raison d’etre:

- Make Open Source rock
- This is the goal of our shareholders

What does that mean?

- We re-invest your support into FLOSS software, including LibreOffice, and into our partners
- All our code is open
- We do have to make money to re-invest

We are not for sale
Examples:

- Semiconductor
- Automotive
- Digital Signage
- OEM
Collabora’s Productivity subsidiary ...
What we sell:

Collabora Online

Develop, support, maintain, sustain

- Built on LibreOffice Technology
- Highly scalable, interoperable, collaborative editing, in your browser
- Service Level Agreement, L3 support
- Product Management interaction
- Go-to market via partners

Collabora Office

Branded version of LibreOffice

- Foundation for Online
- Annual release eg. CO 2021.06
- PC / Mac / Linux

Collabora

Consultancy & Support services

- Bespoke consultancy or
- Pre-paid, fixed-price L3 bug-packs
Partners, OEMs, hosters – to market

FLOSS

- Anyone can install a Docker image & claim to be an expert
- It’s cheap to do this badly, many save by not contributing

Collabora Partners

- Committed to integrating COOL
- Committed to ensuring that users pay to support both the partner & up-stream development
- We work hard to enable smart people to integrate Document freedom into their products & offerings

And many more 230 partners to choose from
Support in your language, near you

Contact me to become a partner

Or checkout our Partner List if you’re interested

Integration and commercial support in 58 countries
CODE
Collabora Online Development Edition
Free, unsupported

Test It Now

Collabora for SMBs
Supported Version up-to 99 users
17€/user per year
Buy Now

Collabora for Enterprises
Supported Version
Solution catered to your needs
Request Offer

- On-premise
- Rolling, unsupported
- For test/home users only (unstable)
- Price: Free

- On-premise
- Up-to 99 users
- LTS
- SLA
- Signed Security Updates
- Maintenance – Fixes and improvements over lifetime
- Access to our Customer Portal (Documentation = Support)
- Price: 17€ or USD 18 per user/year

- On-premise
- Volume discounts
- LTS
- SLA
- Signed Security Updates
- Maintenance – Fixes and improvements over lifetime
- Access to our Customer Portal (Documentation = Support)
- Roadmap: Product management interaction and input
- Complete support during integration process
- Customization
- Desktop Version
- Support for Mobile Devices
- Price: Personalized offer catered to your needs

https://www.collaboraoffice.com/subscriptions/
Improving the awesome LibreOffice Technology

that we all build on - a few examples

pleased to contribute to core alongside the community
Improving Rendering & APIs ...

Skia rendering

- New, modern, cross-platform, accelerated rendering backend as default
- Mac: thanks to LibreOffice Vanilla / Mac buyers
- Windows: thanks to AMD & Luboš Luňák
Apple / ARM64 / M1 port ...

Porting
- Bought the dev-kit (rental), set it up for Tor

A new ARM64 ABI to bridge
- built on Stephan @ RedHat's ARM64 work

Lots of dependencies to patch
- Still no Java - write once, run?

Thanks to
- Tor Lillqvist for the work
- LibreOffice Vanilla buyers in Apple App-store
  - our only serious Mac customers
Selling convenience ... a debate.

All sides agree we should always provide LibreOffice for free download @ TDF

We should (somehow):

Ship LibreOffice for ~10 $ in app-stores
- DRM stops users from sharing S/W but
- We can charge a sin tax (an app price)
- This gives ~15% to the DRM/App-store owner but ...
- This gives us 70% to invest in creating improved feature/function, and 15% as cash donated to TDF
- Improved feature/function will drive adoption goals and meet our development goals.

Or Ship LibreOffice for zero $ in app-stores
- TDF’s goals around user adoption overrides our goals around development for this
- Better to have less income & development as a project in order to drive increased adoption & convenience for users
  - A small part of that comes back via donations.
- Convenient DRM app-store updates may cut into TDF’s visits & donations – but worthwhile for adoption.
- Non-paying users become future community members who will improve feature/function which will drive our development goals.

Currently ~1 million users / developer
New indexing exporter

Writer.IndexingExporterFilter

- Generates XML with source annotations
- Allows locating search results in the document easily.
- Easy to connect to Apache Solr

Provide rich document contextual search:

- Thanks to:

previous paragraph
this is a test string
this is another test string
next paragraph

search string
result rectangle
Performance

The necessity of time

- Online provides a real, economic incentive to optimize the software
  - Can make it faster, better, & more beautiful

Lots of goodness – from Online

- Cached sidebar panels for fast switch
- Fast dashed line rendering
- Faster image scaling & caching
- Faster writer invalidation & render
- Calc – faster positioning / layout

Lots of core optimization

- Improved font caching to speed up text rendering
- Improved swapping & memory consumption of graphics
- Faster slide-rendering by image pre-fetching
- Faster opening times of XLSX, DOCX, anything zipped
- And many many more ...
Performance: typing fast ...

- Customer: “we tested it with eight people doing random typing”
- Profiled this use-case; it is/was slow
  - The mis-spelling squiggly-line (cf. wrong language setting?) ...
    - an unfeasible amount of CPU ~90% of rendering time
    - A most beautiful sub-divided, AA b-spline but ... ~2 pixels high mostly

- Mashing the keyboard a pathological case: we’re still working on improving
  - Test your speed here
- Consider Calc with lots of mis-spelling
-  
  Sdf sadf kjh lksdhfk
  slkdfhkasdh flksjdh

Mashing the keyboard as a test
~10x as bad as reality
**X-ray**

**Built-in X-ray like document inspection**

- Shipping in LibreOffice 7.2
- Learn the extensive UNO API & see how your document is structured
  - Easily write & debug your UNO scripts

**Thanks to:**

- TDF donors for funding this!
- TDF Board & Exec. – for getting tendering ~unstuck
- *Tomaž Vajngerl and Gülşah Köse for implementing it.*
He heard quiet steps behind him. That didn't bode well. Who could be following him this late at night and in this deadbeat part of town? And at this particular moment, just after he pulled off the big time and was making off with the greenbacks. Was there another crook who'd had the same idea, and was now watching him and waiting for a chance to grab the fruit of his labor? Or did the steps behind him mean that one of many law officers in town was on to him and just waiting to pounce and snap those cuffs on his wrists? He nervously looked all around. Suddenly he saw the alley. Like lightning he darted off to the left and disappeared between the two warehouses almost falling over the trash can lying in the middle of the sidewalk. He tried to nervously tap his way along in the inky darkness and suddenly stiffened: it was a dead-end; he would have to go back the way he had come. The sound of muffled footsteps froze the black outline of a figure coming...
User Experience: prettier & easier ...

Shared underlying fontwork sidebar technology

Mapped to mobile
UX: style previews in notebookbar

Familiar style previews in writer

Sharing code with COOL’s notebookbar
HUD

Heads Up Display

- Quikee’s hack-week project.
- `<shift>-<esc>`

He heard quiet steps that night and in this dead-big time and was melted. He liked his idea, and was now walking steps behind him making the breath pounce and snap the alley. Like lightning, he was falling over the trash along in the inky darkness the way he had come. Then he ran around the corner. He was trying to make himself dripping with sweat next to him, with a%

Could this be the hat...
PPTX interop. wins

Headers / footers and various fields round-tripping nicely

(for a large science org. in Geneva)
Shape text interop. wins

eg. multi-column text layout in impress
btLr text frame supporti

An introduction to multi-column text boxes in Impress,

Draw, and elsewhere :-)
Bibliography Improvements

Toolips on bibliography references:

**Heading 1**
- This will have a bibliography reference [ARJ00].
- This is a second reference [LOD01].
- This is a third reference [LOD02].


Hyperlinks in bibliographies:

[BAM00]

Bibliography


Ctrl-click to open hyperlink: https://people.collabora.com/~vmiklos/test.pdf

Thanks to TUBITAK & Muhammet Kara & Miklos Vajna
Visible digital PDF signatures in draw

Thanks to:

Ministerie van Defensie

Digitally signed by:
Xmlsecurity RSA Test example Alice
Date: 07/17/2020

Digitally signed by:
Xmlsecurity RSA Test example Bob
Date: 07/17/2020
Custom Geometry & image effects

Before

After

Thanks to Gülşah Köse
## Interop: cached field results

Ensuring your field contents (in grey) stick

<table>
<thead>
<tr>
<th>Sunday</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12:30AM-2:30AM Cecil birthday</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
</tr>
</tbody>
</table>
Gutter Margins – for Taiwan and others

Very useful for Government binding standards

1. Define the size of the gutter margin

2. Choose the position of the gutter margin

3. A preview of the gutter margin's size and position is rendered in the dialog

Pick a supplier that contributes
Why show contributions?

Clearly many contribute to LibreOffice, volunteers do amazing things

Some differentiate from competitors with proprietary value adds

- We want to encourage customers to select a supplier based on competence proven by contribution

As TDF wrestles to work out who pays & for what...

- Helpful to remember how paying customers drive our mission
MIMO – a clean bespoke office

Five supported branches for French Ministries

- All now in public git
  - distro/mimo/mimo-<version>
- based on one of:
  - 5.4.7.2, 6.1, 6.2, 6.4 & 7.0
- Large volume of security fix back-porting to bring up-to-scratch: up to ~160 patches to the oldest branch
- Several fixes: eg. utf-8 in xml names (liborcus)

Thanks for choosing a contributor for support

- And to community for making the case
Collabora Online
LibreOffice’s in-browser collaboration
Last year’s improvements
Performance & Profiling / Support & Debugging

Performance → just getting started: 30 minute talk on Friday in 1 slide

- More client-side rendering & lower CPU / network bandwidth
- Javascript madness calmed down
  - Batch processing of websocket messages
    - Don’t rerender a frame for many messages: tile at a time [!]
  - Much improved tile encoding – reducing client GC hangs
- JS / faster grid-line rendering
- Async save → don’t wait for EFSS / object-store to store the file
- Building out our end-to-end profiling framework
  - JS ↔ Server ↔ Document in a single view.
Bringing Draw to Online: Fontwork
Bringing Draw to Online: Connectors ... Shapes, Glue points, Connectors
Precise control of anchoring & text flow vs. images

Accurately position anchor-points for images to control layout & reflow.

Collabora Online is the powerful LibreOffice-based on-premise online office, that supports all major document, spreadsheet and presentation formats, and which you can integrate into your own infrastructure. It provides you with collaborative, WYSIWYG editing, a rich feature set, accessibility support, and full format support. That is provided as an online service. You install, manage and upgrade on your own servers, giving you full digital sovereignty over your documents.
http://sdk.collaboraonline.com – opened up our docs
Hacker Heroes – thank you!

Non-Collabora people who have contributed code

Alan Verdugo, Alexandru Vlăduțu, Andrea Gelmini, andreas kainz, Ayhan Yalçınsoy, Bayram Çiçek, bgbenzer, Buğra Kurt, Çağrı Gökçe, codewithvk, corleone77, dilaverdemirel, Emil Velikov, Gabriel Masei, Gleb Popov, Gökhan Karabulut, Guy Lunardi, Hannah Meeks, ihristova11, Jan Dageförde, Jerzy Drozdz, Jetsadakorn, Kandarp Patel, Martin Hoffmann, Michael Weghorn, M.-Kupriyanov, Mücahid Aydin, NickWingate, Nicolas Christener, Pelin Kuran, Serkan Danışan, Shubham Goyal, Siddharth, Thomas Koch, umutbayramoglu, Yunus Bulut, Yusuf Keten, 22shubh22
The l10n Heroes – thank you!

People who have contributed Collabora Online translations

abidin toumi, Adolfo Jayme Barrientos, Akhlak Ahmad, Alexandre Brochand, Allan Nordhøy, Andika Triwidada, Àngels Giménez, Artem, Besnik Bleta, bruh, ButterflyOffire, Cor Nouws, Daniel de Souza Melo, doanmanhduy75, Eugenia Russell, Flávio José de Siqueira Cavalc, george kitsoukakis, Gontzal Manuel Pujana Onaindia, HelaBasa, Hirae, Ihor Hordiichuk, Jeff Huang, J. Lavoie, Joan Montané, Jörn Liebau, K. Herbert, koffevar, kuesji koesnu, liimee, LL Magical, Lukáš Jelínek, Luna Jernberg, Martin Srebotnjak, Masa Murakami, Matthais, Mehmet Sait Gülmez, Michalis, Mike Kaganski, Milo Ivir, Miloš Šrámek, Nathan, Naveen, Nguyen Trung Kien, Nguyen Tuan Anh, Nikita Epifanov, Oğuz Ersen, Oymate, PhD. Ayhan YALÇINSOY, phlostically, Piotr Rudzki, Quentin PAGÈS, Reza Almanda, Rizal Muttaqin, Rob Pearson, Ron Stephen Mathew, SC, sebastiaanveld, Sérgio Morais, ssantos, Stanislav Horáček, Stratos Kostidis, Sveinn í Felli, tamer dab, Tymofii Lytvynenko, Unihuppio, wxf26054, Yaron Shahrabani, Zhou Nan,
COOL days ... replacing our annual partner event

Developer / community day
- All about CODE & how to get involved
- Updates from integrations etc.
- Open to all

Business day
- Case studies of use in the real-world
- Digital Sovereignty for enterprises
- Partner / Customer / invite ...

September 30th

October 1st
Eight years of Collabora Productivity

Open Source, Open First
Commits by Affiliation – last year

12,952 Code commits Aug 2020 – Sep 2021

We need to continue to improve our ecosystem diversity-wise,

Lets ensure that people can build businesses around it

Also celebrate, encourage & credit all contributors

Collabora ~4188
Red Hat ~3581
Others ~3325

TDF:

~5% of our revenue so far this year

~1% last year
Other ways we serve you & contribute ...

Governance
- 2x Board members
- ~1 Membership Committee
- Serve on the ESC

More work – funding time
- Mentoring / GSOC
  - 5/11 mentors this year, 4/7 projects
  - newbie mentoring & review
- Patch review of gerrit commits
- conference content

Funding with cash
- Conference Sponsorship
- Cash from Apple App-store sales ~Eur 8k in last year

Paying for things TDF cannot
- eg. buying community meals at conferences (in normal years)
- Thank-you presents etc.

Every day we tell people about LibreOffice Technology
Thanks to our team(s)
who have worked so hard:

Collabora Committers - last 12 months (37)

- Noel Grandin, Szymon Kłos, Miklos Vajna, Ashod Nakashian, Mike Kaganski, Tor Lillqvist, Tamás Zolnai, Tomaž Vajngerl, Luboš Luňák, Pedro Pinto Silva, Gokay Satır, Dennis Francis, Andras Timar, Henry Castro, Michael Meeks, Pranam Lashkari, Mert Tumer, Justin Luth, Rashesh Padia, Jan Holesovsky, Gülşah Köse, Ezinne Nnamani, Muhammet Kara, Marco Cecchetti, Aron Budea, Sarper Akdemir, Nick Wingate, Thais Vieira, Marc Rodriguez, Cor Nouws, Gopi Krishna Menon, Yunusemre Şentürk, Ivan Stefanenko, Eloy Crespo, Guy Lunardo, Hannah Meeks, William Gathoye

Management / Marketing / Support

- Eloy Crespo → Sales
- Cor Nouws, Marc Rodriguez, Elisa de Castro Guerra, William Gathoye → Marketing
- Tracie Fabb, Julie Wilder, Hannah++... → Biz support
- Philippe Kalaf → applied experience

In bold (left)

- managed to manage a team as well (!)

Please do encourage them.

Consider joining us: Collabora Careers
(some of) the awesome team serving you.

Sorry we can’t be with you this year
Conclusions

- Our FOSS mission applied:
  - make LibreOffice Technology rock.
  - Liberating people’s Documents
- All paid for by our *Customers* & *Partners*
  - can’t do anything without them,
- All done by our staff

- All done alongside the *community*
  - Thank you for making it fun.
- *Branding* is one of our only assets:
  - Leads (& credit) funds the fun.
- *A pleasure* to be able to sponsor the LibreOffice conference.
  - really missing people in person.

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*