LibreOffice turns 10 & what’s next.

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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

• The very early beginning
• The OpenOffice Era
• Launching LibreOffice
• Cleaning a giant codebase
• Features – vs. Awareness
• Join us to make the future
After ten years but really 20 years ... or 35 ...
Grown alongside FOSDEM:

20th year of OpenOffice.org too.

- Luckily we have a museum of old code so you can compare!

45th year since Marco Börries releases the first version of StarWriter in 1985
StarWriter Pre-dates MS Office (1985 vs. 1990)

At this stage just a word processor.
Historic Object Orientation mania ...

“Lotus's attempt to copyright words, menus and sequences of events is like someone obtaining a copyright on the sequence in which gears are shifted in a car. ...”

“Unfortunately, Basic is over 20 years old. And you know, in software technology anything that's over 20 years old is prehistoric, just like Teletype terminals or punch cards. A facelift isn't enough.

Let's take the desktop computer revolution to the next stage. What we need are true object-oriented environments.”


Lotus vs. Borland, reprised as Google vs. Oracle?

Time for a throw-away re-write ...

Object Oriented Magic!
Object Oriented programming #2 +1 year

Borland’s - Philippe Kahn:

"Creating the initial "objects" is difficult, especially for programmers who are used to designing the old-fashioned way."

"But ultimately the payoff will be faster, less costly development of new programs and upgrades."

The New York Times (July 26, 1992, Section 3, Page 1)

"If the objects approach is so great, Mr. Gates has said, why are Borland’s Windows products so late?"
Creation of an Object Oriented Toolkit: VCL

Visual Class Libraries

- Object Oriented! → should be awesome!

**Demo** apps sell better so:

- StarOffice 3.0 → in 1995 ...
- A complete redesign of former programs as a cross-platform office suite for Windows, OS/2 and Solaris Sparc
- directly competing with Microsoft Office 95.
- We still have the skeleton and some of this 25+ year old code in LibreOffice today.

*was not there myself, but this is as I heard it ...*
How (not) to Design: 
Look at the screen: what you see is objects!

- Epic Object Oriented blunders:
  - I see a spreadsheet cell! → object
  - I see a paragraph! → object
  - I see a table! → object

- Power ideas:
  - Our file format can just be a recursive serialization of all our objects!!!!
  - Change-tracking makes this too complex: so tack it on the side & mutate the model.

- Oh dear! Oh dear ...
Fixed many of these things in recent time.

- Binfilter → changing object graph ...
  - hideous hack ... removed in LibreOffice 4.0
- Spreadsheets
  - Massive re-factoring for AMD of the Calc core.
  - Sensible, contiguous type span data structures (MDDS)
  - Huge memory reductions, significant performance improvements
    - Thanks to Kohei Yoshida (Collabora)
- Writer
  - Red-lining turned into a view state – not model fiddling festival
  - Thanks to Michael Stahl (CIB) for Munich City.

Top Tip:
try to spot the panaceas of today and critically examine their claims. Hold onto the good.
OpenOffice ... !
The heady days of FLOSS fixing everything!

- 1999:
  - Sun buys StarDivision
  - Marco Open-Sources StarOffice in 2000
  - Dropping E-mail & the desktop for
  - GNOME + Evolution
Attracting developers:

**Top tip:** get a developer to write & even test your build instructions ...

(Not so) helpful dependency graphs:

**Left:** “wow we made things complex” (OpenOffice)

**Right:** “let me help you understand” (LibreOffice)
Development Process ...

Crazy stuff

- Fundamental libraries – change API randomly
- Low-level library authors mail everyone:
  - “I just re-ordered the parameters in:
    ```
    void copyFile(string src, string dest);
    to
    void copyFile(string dest, string src);
    ```
  - “please update all your code !”
- Before moving onto their next master-stroke.

Top tip:
Platform / API churn can rapidly overwhelm the ability of application authors to keep up.

But don’t worry, re-writing in Java, C#, Haskell, Rust, will make everything better ...
Amazing !?

Build tree in a permanent state of brokenness

- Release engineering:
  - Would branch the tree
  - Try to make it build
  - Chase engineers to fix things
  - Merge all of that
  - After a week or so produce a binary snapshot
  - People would re-base their work on that and ... life would continue.

Top commit counts in the world: StarDivision Releng
Getting a first build ... a month.

Incredibly pleased to have built OpenOffice!

- With aforementioned, un-tested build instructions
  
  \$ cvs update # ... wait 10 minutes

- Weeks more work to get something working again

Created ooo-build

- Maintain a public set of patches & fixes necessary to compile
  the beast in the 1st instance.
  
  - Built on Frederic Crozat’s work for Mandrake (RIP)

- ~Immediately adopted by ~all Linux distros.
Something you can actually package:

~immediately built a distro / packager community behind ooo-build:

- A day into the build – it is not supposed to fail...
Visited a UK conference, everywhere I went I found frustration ...
Heavy duty / run-away Process ...

MAKE SPECS NOT PEACE SOFTWARE!
Heavy duty / run-away Process ... #2

If You Can't Stop Them, Join Their TEAM™

Held Together with RED TAPE
Lots of things not getting fixed ...
On Contributor License Agreements …

Why barriers to entry can be very costly to erect:

When do you think Fedora dropped their CLA requirement?
Single Vendor Dominance

No one can control more than 30% of the votes in any statutory body of TDF
Cumulative Frustration & Missed Opportunities ...
And yet – some wonderful individuals ...

Many heroic StarDivision individuals went beyond the call of duty to work with, mentor, and try to ease their own internal process pain for 'external' developers.

Many StarDivision guys were friendly, helpful, respectful, understanding, encouraging and pleasant.

However, there were significant issues of corporate / divisional culture.
TDF / LibreOffice

Wonderful logo thanks to Christophe Noack.
LibreOffice: planning it … 26 days to launch

Budapest, Sep 2, 2010
Launching is tough ... call in our collective favours ...

Management from RedHat

Bryan Stevens
EVP & CTO

Jonathan Blandford, Sr. Eng. Mgr

Jan Wildeboer
Evangelist.

Caolan McNamara, Hacker & Hero

Re: ooofuture
ok, we're finally green over here in ... land, I've now (9pm Wed) got the formal go-ahead that ... involvement in LibreOffice ... is approved, something we've been *cough* actually lacking until now, so my ass is now covered again.

One quirk however is:
"RE: press release, we'll do it if google does it"

"After you" ...
"no after you ..." ...

Management from Novell /SUSE

Dr Jeff Jaffe,
Novell CTO

Markus Rex
SVP & GM OPS

Carlos Montero-Luque,
VP Product Mmgt

Guy Lunardi,
Awesome PM

Two professional PR agencies: Italo Vignoli + SitPub
Un-blocking the magic ... ~10 days to launch

Hi Chris & Jeremy,

The slight downer is that to get a ... supporting press release, they require one from Google too [out sourcing your due diligence is great like that ? ;-) - is that something that can fly? we go live 28th September; it seems you're the press release king makers. ...

We have RedHat and Novell management on-board (jrb being CC'd), and are trying to grow that corporate base. We are driving towards a press release [of the form: "we plan to create a real foundation, and here is our source code & Beta binaries"] ...

With such an aggressive timeline, anything that can be done is appreciated. Even without a supporting Google press release, it would be much appreciated to have a Chris DiBona quote, and/or one from Jeremy - who is more acquainted with the details.

Anything with (double) rainbows and ponies mentioned is good I guess and as yet - just some vague commitment to support the growth of the project (as you already do with GSOC) would be great.

... Thanks guys, Michael.
THE FUTURE BELONGS TO THE FEW OF US STILL WILLING TO GET OUR HANDS DIRTY.
Michael and Charles,

It turns out Google can move very quickly when we want to. Here is an approved quote from Google you can attribute to: "Chris DiBona, Open Source Programs Manager, Google Inc."

"The creation of the Document Foundation is a great step forward in encouraging further development of open source office suites. Having a level playing field for all contributors is fundamental in creating a broad and active community around an open source software project.

Google is proud to be a supporter of the Document Foundation and participate in the project."

Thanks a lot, let us know how we can help with the Foundation in future.

Cheers,

Jeremy.

Bingo ... unlocked everything.
Have a name - but no logo! 6 days to launch

Beautiful in its simplicity cf. Wikipedia's Logo page example

[ooofuture] Proposal Christoph1 (was: Re: Artwork)
This evening I tried a lot of different designs, e.g. using the current "dove" (see the Wiki), … Well, I ended up with something different that might be weird - but I like it and it seems to fit to our naming and mission statement (but don't trust me at the moment, because I am really tired).

... Question to all: Do you think its suitable in general? If it just requires some tiny changes … then this can be easily achieved. And if you want to add some critique, then please feel free to help me to improve it. I'm not experienced in graphics design, although I know some requirements / pitfalls due to my day job.

Thanks to Christophe Noack
Website / Domain Names / Builds ...

Windows & Linux Builds produced by SUSE
- Petr Mladek, Fridrich Strba, Thorsten Behrens
Synchronized secretly to MirrorBrain network
- Thanks to Dr. Peter Pöml & friends
Infra setup / Domain registrations etc.
- Thanks to Alex Werner & Florian Effenberger
Website & PR / Marketing
- Guy Lunardi, Michael, Charles Schultz, Italo +++
OpenOffice.org community members launch the Document Foundation

Other Supporters

• **FSF President** Richard Stallman welcomed LibreOffice release ...

• "Viva la LibreOffice", said Guy Lunardi, product management Director at **Novell**

• Jan Wildeboer ... **Red Hat** is proud to join this effort".

• Mark Shuttleworth ... the **Ubuntu** Project will be pleased to ship LibreOffice ... in future releases
More lined up goodwill:

Other supporters:

- Simon Phipps, a Director of the Open Source Initiative. "We welcome The Document Foundation initiative and look forward to the innovation it is able to drive ..."

- "We welcome the LibreOffice project to the free software community ...” says Stormy Peters, Executive Director of the GNOME Foundation.

- Patrick Luby, of NeoOffice says "I am happy to see a new, independent LibreOffice foundation"

- “… BrOffice.org and The Document Foundation share the same values and objectives and we are more than happy to be part of it.”, says Claudio Filho

- Tons more ... collected a vast page listing supporters ...
Looks familiar?...
Technical wins: under the hood
Volunteers!
Engineering Steering Committee ...

Talking & ensure everyone is heard

Many large FLOSS projects fight tooth & nail
- Module ‘maintainers’ Rampant waste & re-writing
- Bickering, and passive aggression.

Whole team are peers ... no-one ‘owns’ modules
- Respect input from local experts: of course!

Calls live transcribed to reduce English listening needs
- Avoids the “Confused IRC wait-fest” problem.

Using Email to Resolve Conflicts Is a Reliable Way of Making Everything Worse
GNUmake → 1 make to build ~10k wide

Completed re-write of legacy perl + dmake build system ...

Thanks to Bjoern Michaelsen & team.

“LibreOffice is now ridiculously easy to build”

Karl Fogel – (now working on “Producing OSS” (v2) ...)
Security: Coverity ... score 0.00

Excellent static checker.
Systematic load crash testing: 100k+ files
Systematic save crash testing: 100k+ files
Quality German Comment Translation: 6.5 years ...

Detected lines of German comment
Unit testing – don’t fix the same bug twice or more.

Growth in unit tests over time

count of various CPPUNIT macros

Asserts
Tests
Callgrind based automated performance testing.
Built-in crash-reporting: nailing the worst bugs ...
Code quality improvement...

New tools find new bugs – and over time that reduces

Google: OSS-Fuzz
Active code committer count per month ...

Committers by Affiliation vs. time

- SUSE's successful spin-out of Collabora Productivity
- CIB get involved
- Sun to Oracle, to the exit
Commits (pre-git in 2010 ~unreliable)
Native-language communities

Weblate stats:
- **145** used languages - ~**119** shipping.
- **4605** users
- **404532** translations made

Many thanks to so many for their hard work translating!
Meeting up to plot the future!
FOSDEM – firm but gentle community steerage:

Doing the right thing.
Cakes, Hack-fests, a 1st joint conf. with SUSE
LibreOffice Conferences: Paris 2011

Thanks to La Cantine and IRILL
LibreOffice Conferences: Berlin 2012

Thanks to German Federal Ministry of Economics and Technology.
LibreOffice Conferences: Milan 2013

Thanks to The University of Milan
LibreOffice Conferences: Bern 2014

Thanks to University of Bern & Matthias Stürmer
LibreOffice Conferences: Aarhus 2015

Thanks to: Leif Lohdahl & the Aarhus municipality
LibreOffice Conferences: Brno 2016

Thanks to: RedHat, OpenAlt & Brno University of Technology
LibreOffice Conferences: Rome 2017

Thanks to: Italo Vignoli, Sonia Montegiove & team, and the City of Rome
LibreOffice Conferences: Tirana 2018

Thanks to: Jona Azizaj & team, and OFICINA
LibreOffice Conferences: Almería 2019

Thanks to: Víctor Suárez, Ismael Olea & University of Almería
Next conference: Nuremberg 2020
Z-Bau
Oct. 13 – 16
Sheer depth of new features
VBA
GStreamer multimedia ...
Correct
Custom
Shapes
SmartArt fallbacks ...

- Something to start with
- Cleanup
- Fix bugs
- Add features and fix more bugs
- All this to get LibreOffice 3.5!
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Huge RTF improvements

Same document in
LibreOffice 3.6
Thanks to Lanedo.
CMIS
Collabora Productivity

Arbitrary XML into Calc

XML Source

Source file
file:///home/kyoshida/Documents/xml2/styles.xml

Map to document

ns0:document-styles
  @ns0:version
  ns0:font-face-decls
    ns1:font-face
      @ns1:name
      @ns1:family
      @ns1:font-family
      @ns1:font-family-generic
      @ns1:font-pitch
  ns0:styles
    ns1:default-style
      @ns1:family
    ns1:paragraph-properties
      @ns1:tab-stop-distance
    ns1:text-properties
      @ns1:font-name

Mapped cell
### Calc: Conditional formatting ...

<table>
<thead>
<tr>
<th></th>
<th>Name</th>
<th>Score A</th>
<th>Score B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Mary</td>
<td>16.38%</td>
<td>65.98%</td>
</tr>
<tr>
<td>3</td>
<td>Bob</td>
<td>22.35%</td>
<td>32.36%</td>
</tr>
<tr>
<td>4</td>
<td>Abdul</td>
<td>22.61%</td>
<td>13.90%</td>
</tr>
<tr>
<td>5</td>
<td>Holly</td>
<td>49.00%</td>
<td>77.50%</td>
</tr>
<tr>
<td>6</td>
<td>Oak</td>
<td>17.57%</td>
<td>18.98%</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Many thanks to:
Markus Mohrhard & Stefan 'Astron' Knorr
Stock option pricing formulae
This is just a test

- And item
- And again

More text

Blabla
Blabla
Blabla
Blabla

Android Remote
Andrzej Hunt
Thanks to Artur Dryomo

Connection failed

Make sure you enabled remote control. Go to "Tools → Options → LibreOffice Impress → General" in LibreOffice Impress.

You should enable experimental features at "Tools → Options → LibreOffice → Advanced" as well.
I'm not sure if I'm missing something but what should be a simple task just doesn't want to work. I'm trying to add a drop shadow to a UIView in iOS 6. I'm using storyboards and auto layout. I'm drawing the
LibreLogo – Laszlo Nemeth
Improved / faster image scaling:

OLD:

NEW:
Funky OLE object dragging fixed.

Right to Left! ...
Template & style previews ...
Widget Layout ...
Re-work all UI to use XML/glade files & layout.

Thanks to Caolan (RedHat) for an epic re-work.
Native platform widgets ... (like WxWidgets)

CSS animations & theming that you cannot see.
Unity menu integration
GNOME 3 style app menu ...
Personas

LibreOffice 4.0 can use Firefox Personas!

In LibreOffice 4.0, choose Tools → Options... → Personalization → Select Persona:
Chart: new trend lines ...

- $f(x) = 1.2128887617x + 1.6753878411$
  - $R^2 = 0.9793696631$

- $f(x) = 1.3409047561x$
  - $R^2 = 0.9644697712$

- $f(x) = 0.0036323x^3 - 0.063232566x^2 + 1.56867395x + 1.87474795$
  - $R^2 = 0.99419944$

- $f(x) = 0.02226661x^2 + 0.78613946x + 2.97227263$
  - $R^2 = 0.98818991$
Character border: format one or more characters with a border. Character border: format one or more characters with a border. Character border: format one or more characters with a border. Character border: format one or more characters with a border. Character border: format one or more characters with a border. Character border: add border around selected text.
Sifr / Colibre & many other new icon sets ...
New, pretty start screen ...
Better Windows integration ...

Plus group-policy mgmt & lockdown
Firebird, native C++ database (de Java-ize)
Calc: Lightning OpenCL calculation

Thanks to Jagan Lokanatha, Kismat Singh, Kohei Yoshida, Markus Mohrhard, Matus Kukan
LibreOffice 5.0
Formula wizard improvements

Function Wizard

<table>
<thead>
<tr>
<th>Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>\text{ABS} = 25</td>
</tr>
<tr>
<td>\text{PRODUCT} = -25</td>
</tr>
<tr>
<td>\text{SUM} = -5</td>
</tr>
<tr>
<td>\text{SUM} = 5</td>
</tr>
<tr>
<td>\text{C1:C4} = (-1;2;-4;8)</td>
</tr>
</tbody>
</table>

PRODUCT

Multiplies the arguments.

Number 1 (required)

Number 1, number 2, ... are 1 to 30 arguments to be multiplied and a result returned.

Number 1 \text{SUM(B1:B4)}
Number 2 \text{SUM(C1:C4)}
Number 3
Number 4

Formula

\(=\text{ABS(PRODUCT(SUM(B1:B4),SUM(C1:C4)))}\)

Result 25
Calc – multi-threading fun ...

re-calculating 100k formulae on 1m doubles

Seconds to calculate

Thread count

Meeks/Linux
Ryzen/Win10
Statistics dialog

Regression dialog

Data
Variable 1 range: 
Variable 2 range: 
Results to: 

Grouped by
- Columns
- Rows

Output Regression Types
- Linear Regression
- Logarithmic Regression
- Power Regression

Help | OK | Cancel
Impress: Prettier mode switching ...
Sidebar Improvements ... 

Before on the left, after on the right. 
Thanks to: Rishabh Kumar (GSoC), Yousuf Philips, Katarina Behrens (CIB)
Transition preview & presenter console re-work.

Switch views / re-start-timer etc. Bundling the console ...
Thanks to: Emmanuel Gil Peyrot (Collabora), Tomaž Vajngerl (Collabora)
A flat trend may not be a sign of health.
Open High Priority Regressions...
Reasonably flat regressions ...
Fridrich Strba & David Tardon

An extension of our ODF message:
This is Header:

This document is created using Lotus Wordpro release 5.6 for Windows.

The page margins are top and bottom are 1.5 cm, left and right are 2.5 cm. The page size is A4 in portrait.

This line is bold
This line is italicized
This line is underlined
This line is struck-through
This line is superscript
This line is subscript
This line has borders and red background color

This line is centered align.
The indent of this line is 2 cm
This line spacing is double

The default font is Times New Roman 12.
This line is Times New Roman 16
This line is Courier New.
This text is green
This is a 5x5 table:

<table>
<thead>
<tr>
<th>row</th>
<th>column</th>
</tr>
</thead>
<tbody>
<tr>
<td>row2</td>
<td>column2</td>
</tr>
</tbody>
</table>
next next to the golfer graphic
AbiWord 2.0 - The Next Step
(Toward World Domination)
Martin Sevior and Dominic Lachowicz

New features in 2.0
AbiWord 2.0 has many new features not present in the 1.0 release. There are also improvements to the AbiWord User Interface and those that increase the Word Processing document toolset. The following table lists the new Word Processing features and the file formats the feature is supported by. Of course all features are supported by the AbiWord native XML file format.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Imported from</th>
<th>Exported to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Footnotes</td>
<td>RTF, MS Word, WordPerfect</td>
<td>RTF, LaTeX</td>
</tr>
<tr>
<td>Endnotes</td>
<td>RTF, MS Word, WordPerfect</td>
<td>RTF, LaTeX</td>
</tr>
<tr>
<td>Revision Marks</td>
<td>RTF, MS Word, WordPerfect</td>
<td>RTF, LaTeX</td>
</tr>
<tr>
<td>MailMerge</td>
<td>RTF, MS Word, WordPerfect</td>
<td>RTF, LaTeX</td>
</tr>
</tbody>
</table>

The Table feature in AbiWord is very powerful. Cells within tables can be merged either horizontally or vertically via an easy-to-use non-modal dialog. Rows and Columns can be adjusted interactively by dragging ruler controls or table line. There is also a powerful automatic table insert widget which allows tables to be inserted at arbitrary depth.
Apple Keynote import

Since version 4.2, LibreOffice can import Apple Keynote presentations.
This is a preview release: we can import many parts of the content, but details (like formatting :-)) are often lost.
Anyway, the main author of the code believes in the "release early, release often" idea :-)}
Since version 5.1, LibreOffice can import Apple Keynote 6 presentations.

This is the first release: we can import many parts of the content, but details (like formatting) are sometimes lost.

Anyway, the main author of the code believes in the "release early, release often" idea.
Thanks to Fridrich Strba Valek Filippov

Includes the un-released Visio 2013 format.
Microsoft Publisher import thanks to

Brennan Vincent (GSOC)
Valek Filippov
Fridrich Strba
Ignoring tons of post 2016 features ...
Online / Cloud integrations
Alfresco

Alfresco connector available thanks to Arawa & Magenta

- Implemented in Java
EGroupware

Connector available thanks to eGroupware from their repository

- https://github.com/EGroupware/collabora
- Implemented in PHP + JavaScript
- To match their integration needs, we have
  - Improved the printing in Firefox
  - Updated dockerfiles
Connector available thanks to Kolab themselves.

- [https://git.kolab.org/source/wopi/](https://git.kolab.org/source/wopi/)
- To match their integration, we had to expose various functionality via `postMessage`
  - Like closing all the views from the master view, downloading or printing
https://github.com/nextcloud/richdocuments

- Implemented in PHP and JavaScript
- Many features in the Online were implemented to match Nextcloud's integration needs, like:
  - Specification of avatars in CheckFileInfo
  - Support for templates – TemplateSource in CheckFileInfo
  - /hosting/capabilities – for early check of whether a particular version supports some features or not
  - And many more...
ownCloud

- https://github.com/owncloud/richdocuments
- Implemented in PHP and JavaScript
- To match their integration needs, we are improving Watermarking substantially
  - So that each user in a document can have a different, dedicated watermark
Pydio

Available thanks to Pydio

- Implemented in PHP and JavaScript
- To match their integration needs, we had to extend what characters can be used in the access_token
Roove

Connector implemented by SoftDistribution

- For their integration, we had to improve Save as and full-screen handling of presentations.
Mattermost
Why show you all that?

because we’re engineers

just make a better mouse-trap ...!
Took 5 years to overtake OpenOffice.org’s Google Trend

- Software Features, Quality, UX, all hugely better but ...
- Still serving ~250,000 downloads per week to disappointed users.
You think it is about the code ....

Really Branding, Trademark, Ecosystem

- Almost more important ...
- Economics drives almost ~everything

Invest Where?

Larger Return

Smaller Return

Companies

Volunteers

Web interest to Companies

% 2018

% 2019

0.12%
LibreOffice downloads @ 0.8 - 1.2m/week+

LibreOffice Downloads per Week

Week 1 to Week 51 from 2016 to 2020.
Grateful to our generous donors for funding infra
The Future ...
Who can predict the future?

Listen to our users & visionaries:

• “Everything will move to the web / Online !”
• “I’m thrilled with my native Chrome-book LibreOffice!”
• “I want to collaborate on my mobile Phone !”
• “I want to load & edit docs even off-line”
• “I want to chat & collaborate live, on-line with no network” ... (!?)

Working closely with others ...
Need smart people to help us create the future

• An Artificial Intelligence
  of stunning subtlety,
  of conversational brilliance
• That can understand what you’re doing
• And can suggest cool new things to do.
• “Trained on Documents” (TM)
The easy to predict Future ...

already done pending release
What is Collabora Online?

Documents + Spreadsheets + Slides

- Viewing and Collaborative editing
- Excellent interoperability with Microsoft formats
- DOCX, DOC, RTF, XLSX, XLS, PPTX, PPT
- Many other import filters / Viewing for
  - PDF, Visio, Publisher ...
- Powerful WYSIWYG rendering

On-premise Integration with your EFSS.
Architecture – a bet on CPU threads & network ...

collaboraonline.com
What is Collabora Online?

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**Excellent Interoperability** with Microsoft formats

- DOCX, DOC, RTF, XLSX, XLS, PPTX, PPT
  
  Many other import filters / Viewing for
  
  - PDF, Visio, Publisher...

  Powerful WYSIWYG rendering

**On-premise** Integration with your EFSS.

Architecture – a bet on CPU threads & network...

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Click to add Title

Click to add Text

Click to add Text

Collaboraonline.com
Click to edit the title text format

Click to edit the outline text format

- Second Outline Level
  - Third Outline Level
    Fourth Outline Level
    Fifth Outline Level
    Sixth Outline Level
    Seventh Outline Level
    Eighth Outline Level
    Ninth Outline Level

collaboraonline.com
Huge international LibreOffice project

Great team partners & Collabora experts for Collabora Online
Many more wins: eg. touch resizing handles, URL popup

Get it at the Univation App Center

The easiest way to install CODE for a quick tryout is to download it as a virtual appliance from the Univation App Center. This appliance contains the Collabora Online Development Edition, and the additional software you need to get you up and running in minutes. You can choose between two types of integration, CODE + Nextcloud or CODE + ownCloud. Each appliance is available in four formats: KVM, Virtuozzo, and VMware ESXi.

Grab CODE docker image from Docker Hub

The collabora/code Docker image can be installed to any x86-64 host (e.g., on Linux and Windows 10), and it is fully configurable. For more information about setup and configuration for deployment, please read the CODE Docker page. If you want to try it out quickly, you can set up CODE docker image with file sharing integration in less than 5 minutes in a very basic way, following these instructions: quick tryout with ownCloud or quick tryout with Nextcloud.
Collabora Office Mobile

bring LibreOffice to Android & iOS
Collabora Productivity

Collabora Online, the enterprise-ready LibreOffice-based online office suite, is now available to anyone with the latest web browser. Collabora is leading the revolution in the project management domain by providing a rich, full-featured, collaborative online editor for LibreOffice in the Cloud.

Collabora Online comes with the powerful toolset of LibreOffice and offers full control of your offline files. Collabora Online enables real-time collaboration, document editing, and sharing with team members from anywhere in the world. It supports major Office formats and is compatible with the widely used LibreOffice/Office suite.

Benefits:
- Scalable and fast
- Designed for teams
- Full control over your offline files
- Compatible with major Office formats

Shape editing:

4 week project timeline

<table>
<thead>
<tr>
<th>EMPLOYEE</th>
<th>research rainforest</th>
<th>complete sketches</th>
</tr>
</thead>
<tbody>
<tr>
<td>kai</td>
<td>collect supplies for presentation</td>
<td></td>
</tr>
<tr>
<td>luka</td>
<td></td>
<td></td>
</tr>
<tr>
<td>jenny</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Week 1

- 11/20/19
- Collect supplies for presentation

Week 2

- 11/26/19
- Complete sketches

Completely re-written mobile UX: one-handed use
Collabora Productivity

Chart Type

Chart Type:

Column

3D Look

Shape editing

Slide

Layouts

Format:

Screen 4:3

Orientation:

Landscape

Background:
Native iOS version for tablets ... with Adfinis
Get involved:
We paid the technical debt ... what’s next?

Easy Hacks:

- A great way to get involved ...

Paid down much of the technical debt

- Lots more things to be done [!]

User Experience

- Tons of paper-cuts, significant wins & good things to do
- Also – Documentation: to keep up with that!
Conclusions & Questions ...

- Did what we had to to make this code-base survive & thrive.
- Thank you to all the many, many people I didn’t name for their amazing contributions.
- Help Guard our Digital Sovereignty

- We need your help!
  - Challenging & fulfilling work
  - Join the LibreOffice team

- We rely on your support!
  - Thank you for it!

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