



LibreOffice
The Document Foundation



ROME
CONFERENCE

GSoC Panel 2017

The LibreOffice GSoC season 2017 has
concluded
Here's the results!

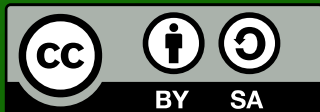
ROME | October 12th 2017

The GSoC 2017 roster

- **Aleksas Pantechovskis**
QuarkXPress import filter
Fridrich Strba, David Tardon
- **Gautam Prajapati**
Improve LibreOffice for Android
Tomaž Vajngerl, Miklos Vajna
- **Grzegorz Araminowicz**
Improve SmartArt import in LibreOffice
Thorsten Behrens, Jan Holesovsky
- **Aditya Dewan**
LibreOffice Online improvements
Pranav Kant, Jan Holesovsky, Michael Meeks
- **Azorpid**
Migrating from legacy Parser to FastParser
Michael Meeks, Markus Mohrhard
- **Varun Dhall**
Replace EditEngine binary clipboard with ODF filter
Michael Stahl, Eike Rathke
- **Muhammet Kara**
Revamp the Customization Dialog
Heiko Tietze, Katarina Behrens
- **Ximeng Zu**
Solving Bugs for the Android Viewer
Tomaž Vajngerl, Miklos Vajna
- **Akshay Deep**
Usability of Special Characters
Thorsten Behrens, Heiko Tietze, Samuel Mehrbrodt

Aditya Dewan

LibreOffice Online improvements



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What we have accomplished

- Compressed file serving
 - Secure
 - Fast
- Follow User/Editor
 - Similar to Google Hangouts
 - Useful for meetings
- More analytics for the administrator
 - CPU load, network activity
- Ruler
 - Interactive, adjustable horizontal ruler
- Saving a file with a new name “Save as”
 - Not available yet
 - Basic level implementation complete for the client side, but file hosts (owncloud/nextcloud) need to be configured.

Demonstration

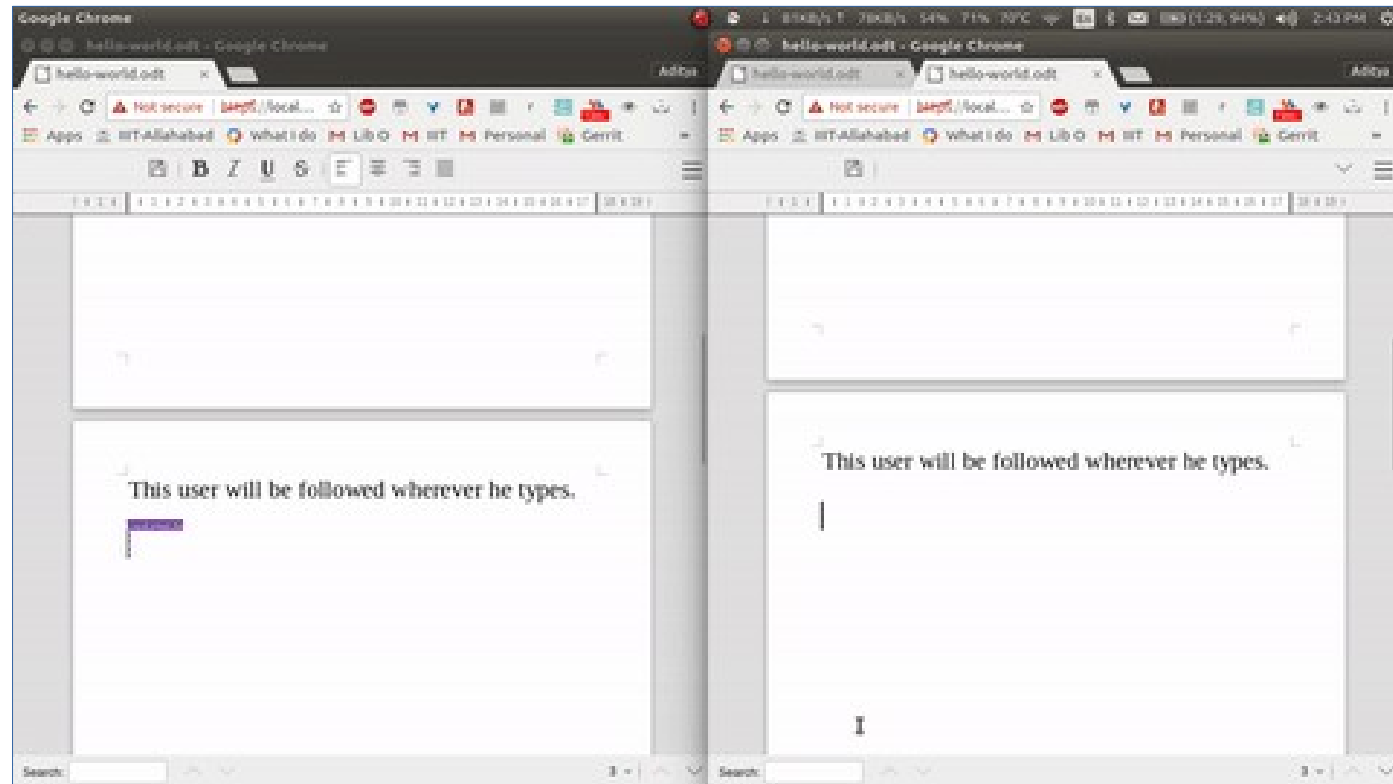
Compressed file serving

- Safe, secure
- Fast

 bundle.js /loleaflet/e78d9a0d	200 OK	script	loleaflet.html?file_p... Parser	522 KB 2.2 MB
 w2ui.min.js /loleaflet/e78d9a0d/toolbar	200 OK	script	loleaflet.html?file_p... Parser	70.2 KB 292 KB
 toolbar.js /loleaflet/e78d9a0d/toolbar	200 OK	script	loleaflet.html?file_p... Parser	13.2 KB 59.4 KB

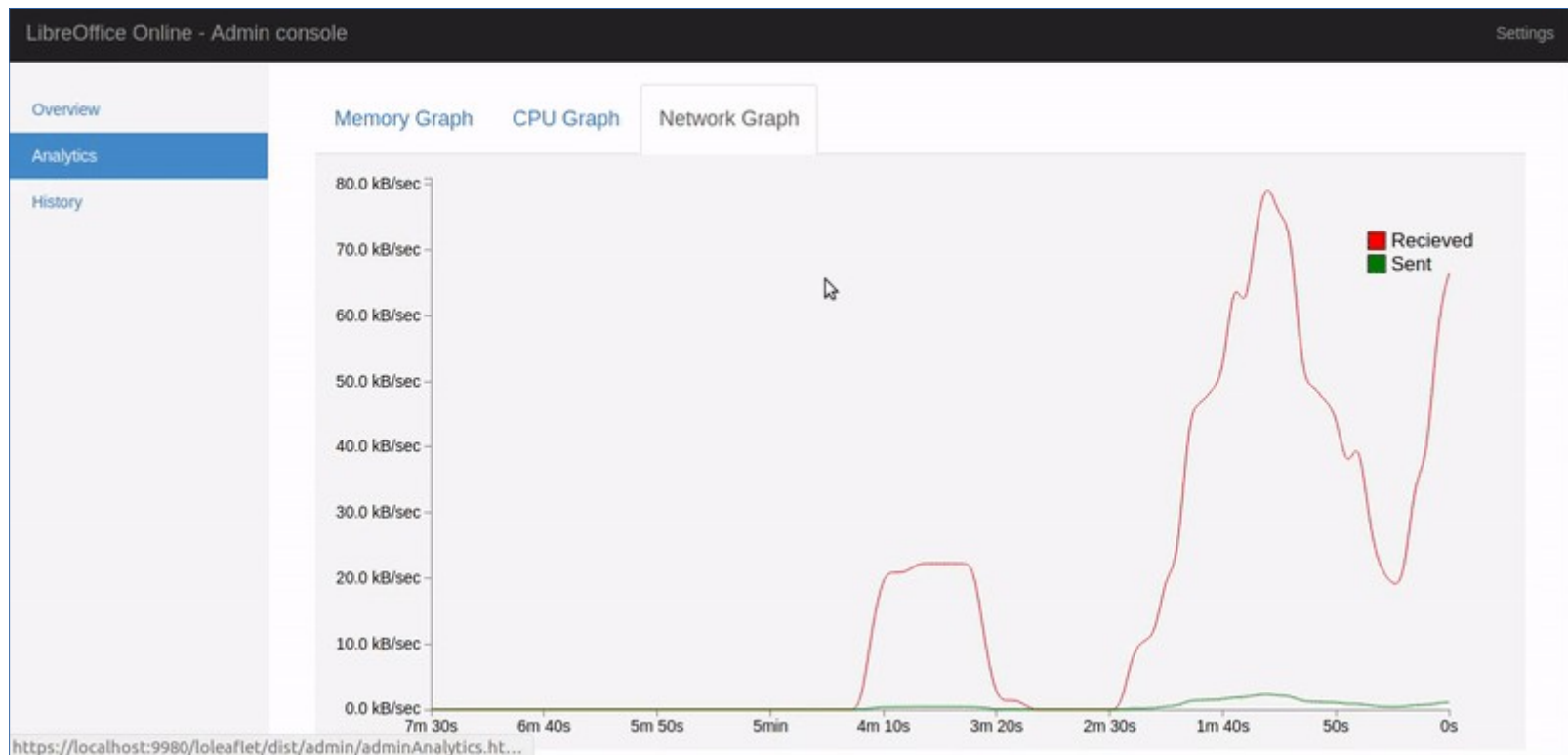
Follow user/editor

- Similar to Google Hangouts
- Useful for meetings/note taking



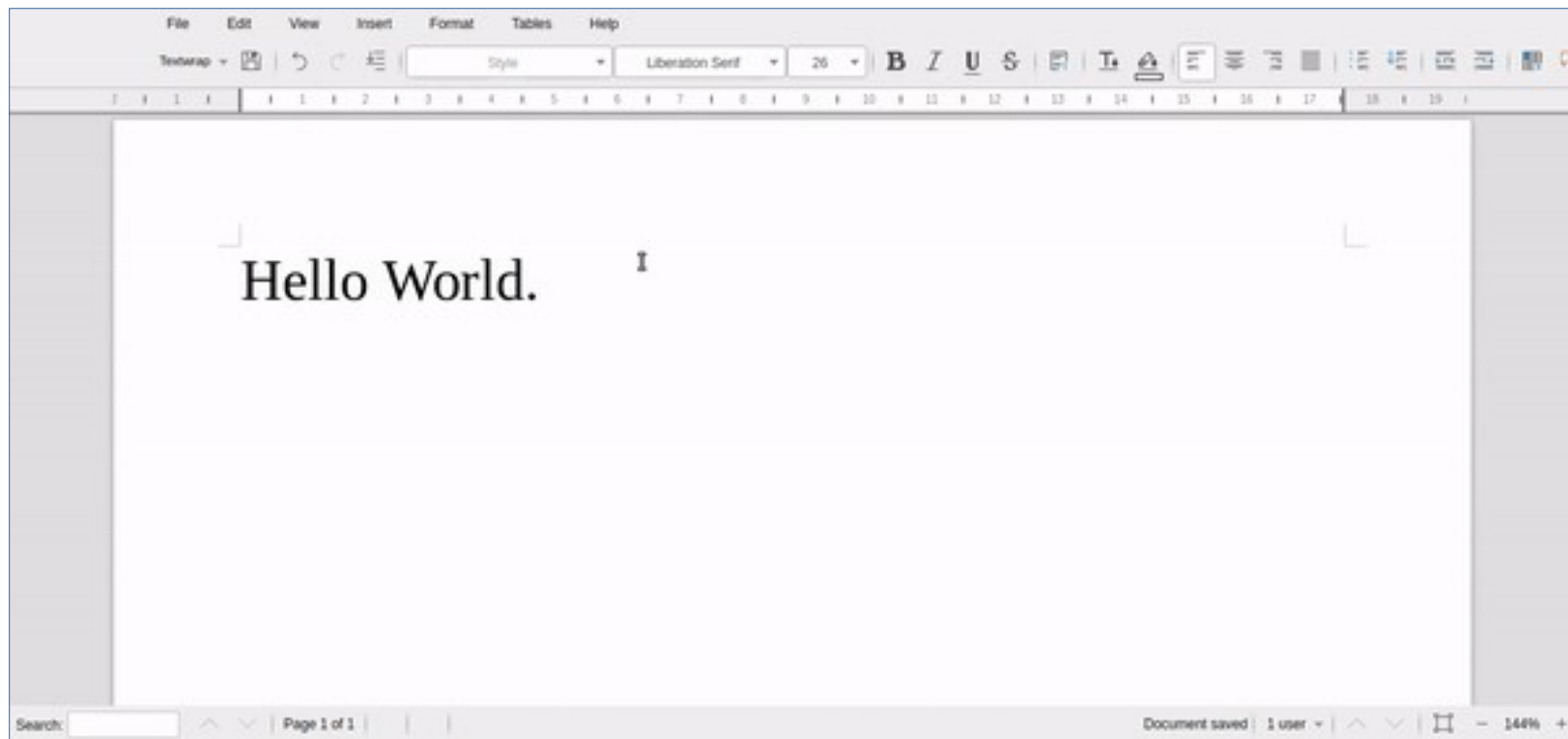
More analytics

- CPU/Network load
- Better looking graphs



Ruler

- Interactive horizontal ruler. User can easily see and change rulers.
- Can be easily extended to support ruler first-line indent, paragraph indent, and tab spaces.



Work left to do

- Ruler
 - The ruler has some minor bugs.
 - Extend it to support first-line indent, paragraph indent, and tab spaces.
 - Vertical Ruler, maybe?
- ‘Save as’
 - Current implementation is rudimentary
 - Develop support for ‘save-as’ in file hosting/sharing services, like Owncloud/Nextcloud.

Varun Dhall

Replace EditEngine binary clipboard with ODF filter



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Agenda

- Goals of the project
 - EditEngine before GSoC
- How I achieved the goals?
 - GSoC coding overview
- Achievements
 - Success after GSoC

Goals of the project

- Replace the legacy StarOffice format using SfxItemPool binary serialization with the ODF filter for copy/paste operations
- Add new unit tests for copy/paste to prevent regressions
- Remove un-used SfxItemPool binary serialization from all the modules with-in the LO source code

How I achieved the goals?

- Wrote few unit tests that uses legacy format for copy/paste operations
- Added an identifier `SotClipboardFormatId::EDITENGINE_ODF_TEXT_FLAT` for new clipboard format
- Modified various **EditEngine**'s clipboard methods which initialize the import/export filter code
- Made few adjustments to **xmloff** for allowing the format replacement
- Modified the application's code (Draw/Impress/Calc) to use the new copy/paste format
- Made some tweaks to fix the text selection and hyperlinks during copy/paste
- Removed all the un-used binary serialization code

Achievements

- StarOffice format is not used anymore for copy/paste operations
- Text is copied with proper selection using EditEngine ODF format
- SfxItemPool serialization is not used anywhere outside Table Auto-Formats
- Removed over 7000+ lines of un-used binary serialization code

Ximeng Zu

Solving Bugs for the Android Viewer



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New features

- General

- Ability to load password-protected documents tdf#89175
- Ability to insert pictures from taking photos, choosing local images, downloading cloud images (Google photos, Dropbox, etc.) with an option to compress the image or not tdf#106370 (not merged yet)
- Developer Mode for sending UNO commands in the app (not merged yet)
- Double tap zoom in and out

- Writer

- Page number on screen tdf#96764

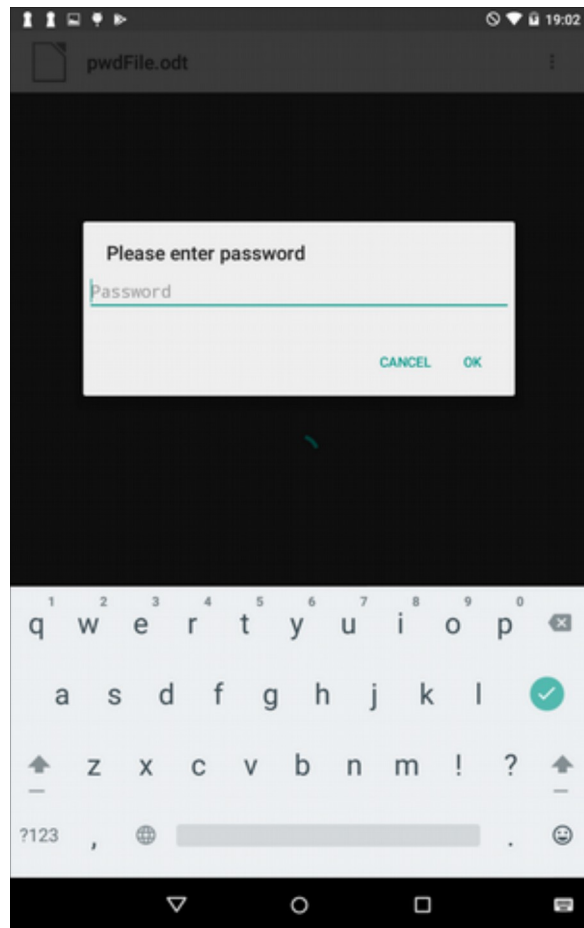
- Calc

- Interactive Calc UI with row/column headers
- Header related functions e.g. insert/delete/hide/show/optimal width or height
- Address and formula bars (not merged yet)

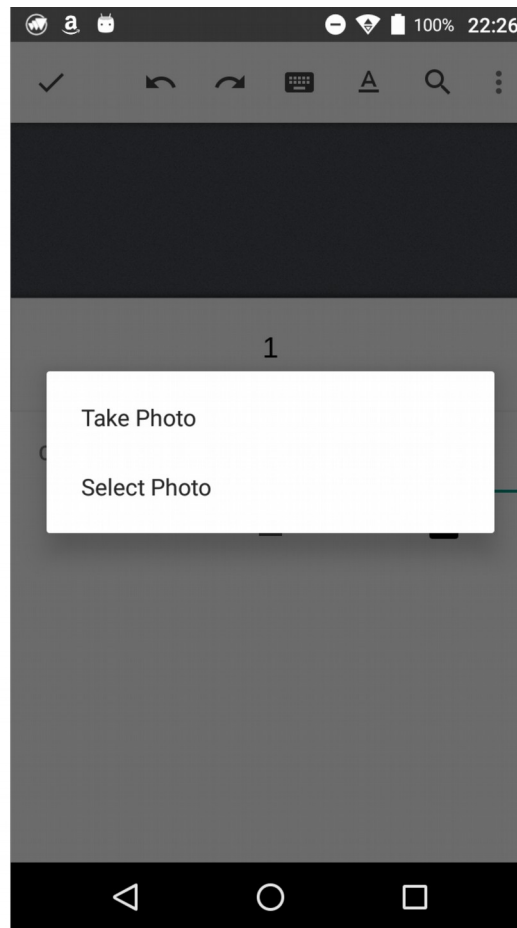
- Impress

- Presentation Mode

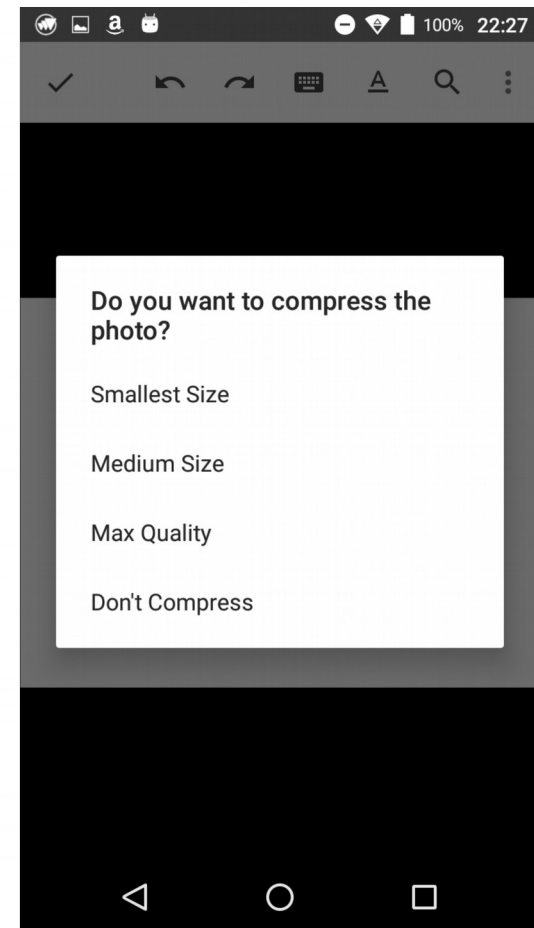
New features - General



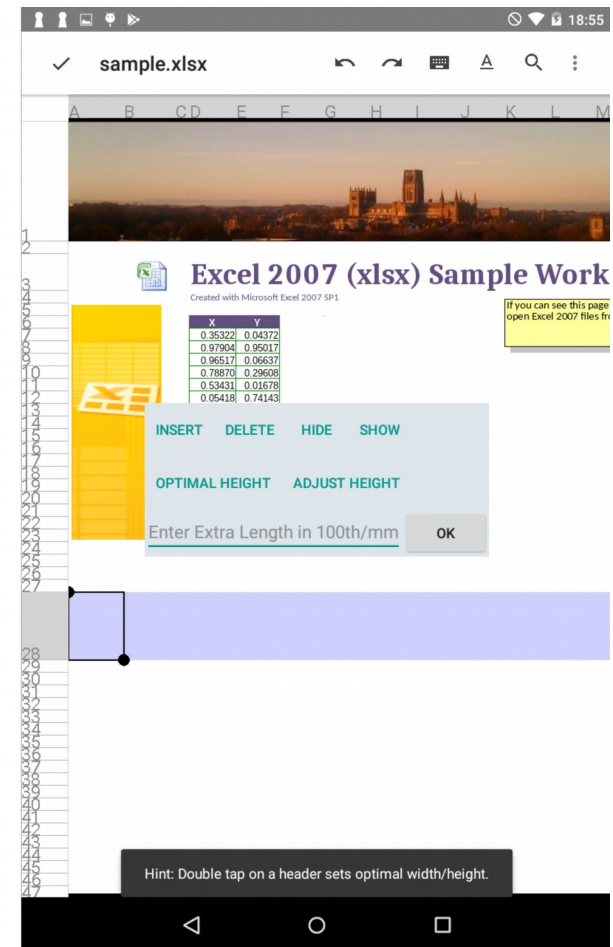
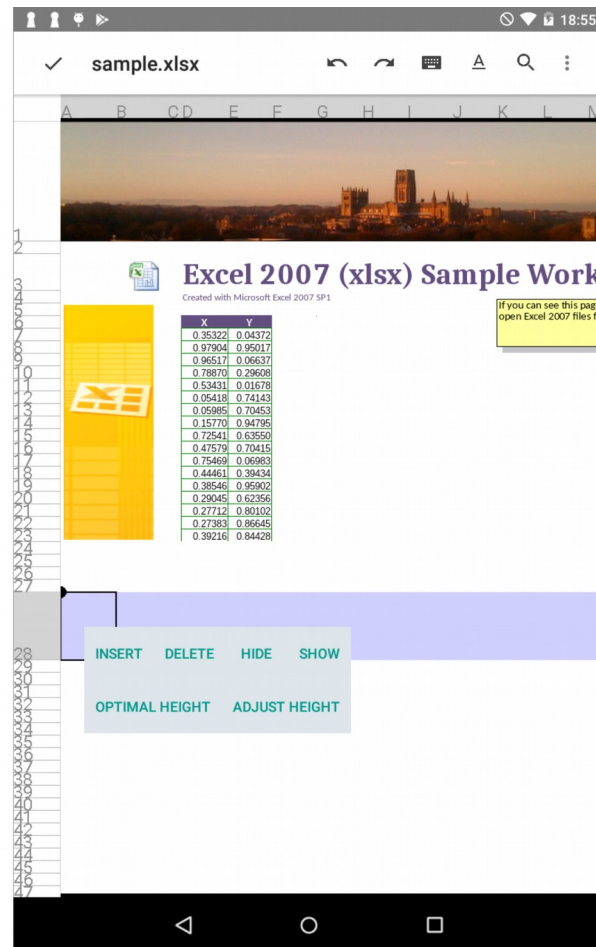
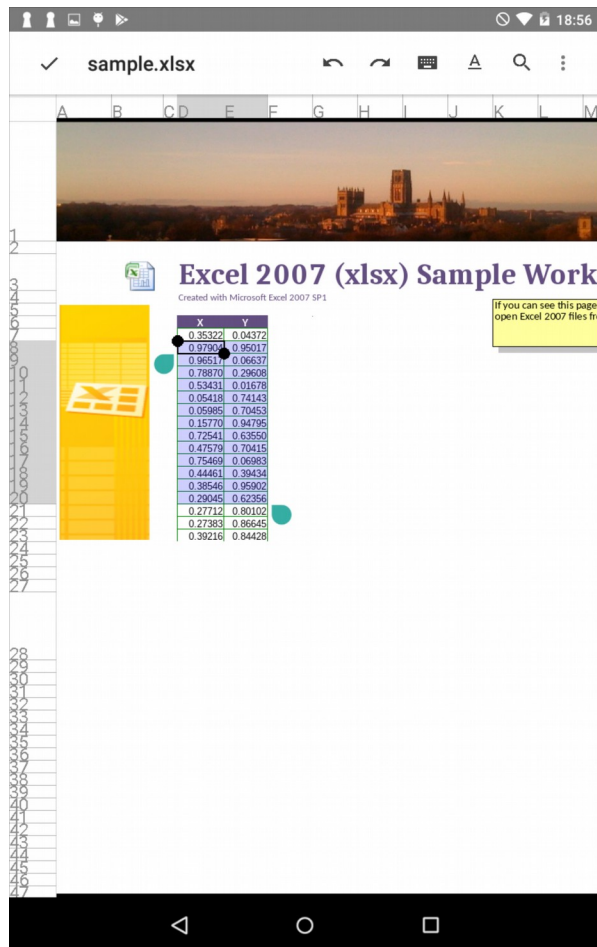
Password-protected documents support



Insert pictures of photos

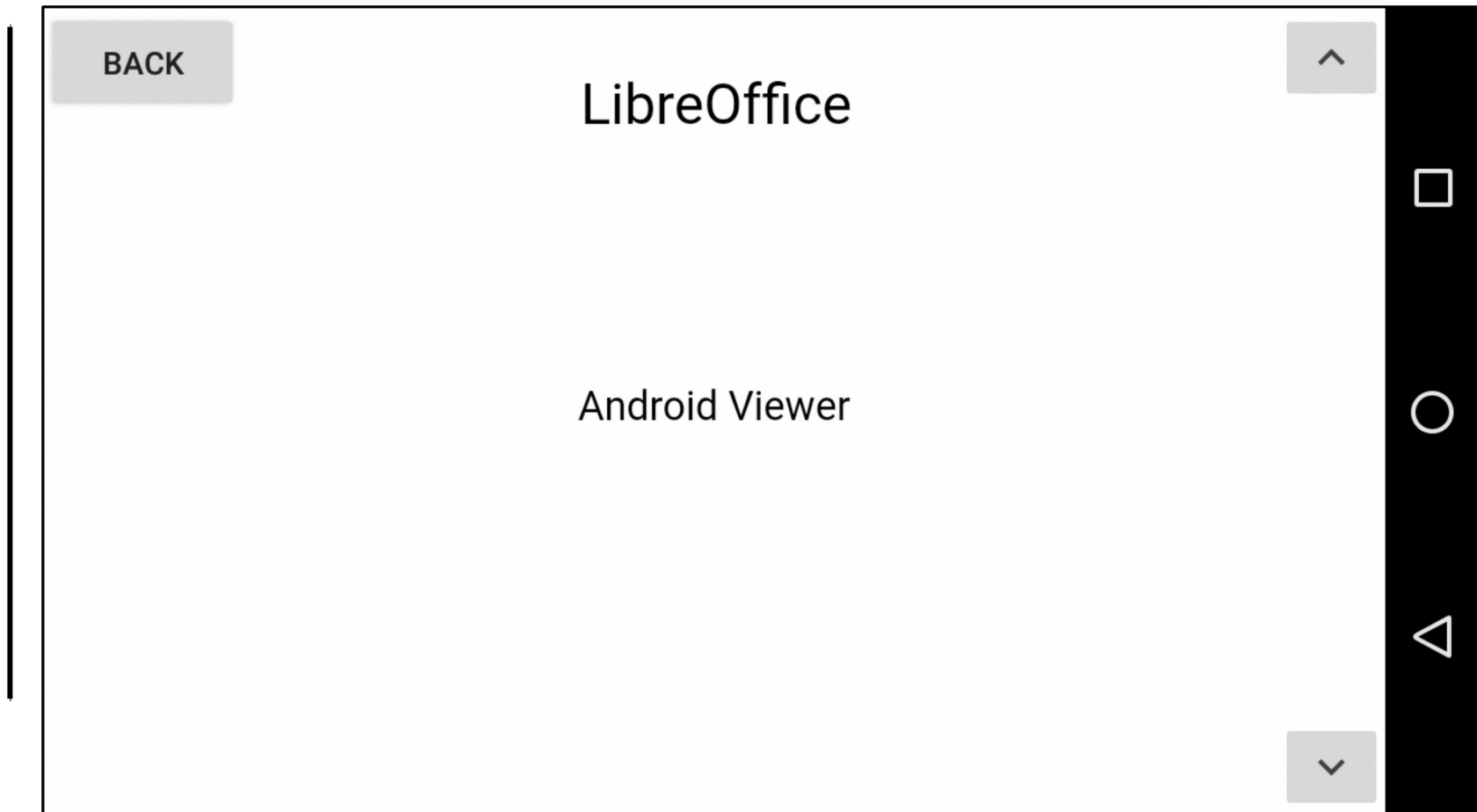


New features - Calc



Interactive Calc UI with headers and buttons

New features - Impress



Presentation Mode

Solved bugs and other patches

- 1. Top part unreachable with soft keyboard open: <https://gerrit.libreoffice.org/35721>
- 2. Fix typo: inticator -> indicator: <https://gerrit.libreoffice.org/36103>
- 3. Fix typo: 'forgeround' in multiple files: <https://gerrit.libreoffice.org/36154>
- 4. Restrict zoom to page width: <https://gerrit.libreoffice.org/35308>
- 5. Android Viewer doesn't focus on the word you search: <https://gerrit.libreoffice.org/35715>
- 6. Android Viewer does not show page count: <https://gerrit.libreoffice.org/36178/>
- 7. Android Viewer does not switch edit mode to view: <https://gerrit.libreoffice.org/36541>
- 8. Disable 'parts' in text documents: <https://gerrit.libreoffice.org/36538>
- 9. Fix appbar invisible on lower version: <https://gerrit.libreoffice.org/36950>
- 10. Fix behavior of double tap zoom in and out: <https://gerrit.libreoffice.org/37046>
- 11. Update zoom constraints with device rotate: <https://gerrit.libreoffice.org/37847>
- 12. Fix windowSoftInputMode: <https://gerrit.libreoffice.org/40686>
- 13. Fix "Even internal links are treated as hyperlinks": <https://gerrit.libreoffice.org/40947>
- 14. Correct typo of class name: <https://gerrit.libreoffice.org/39832>
- 15. Fix crash after save dialog: <https://gerrit.libreoffice.org/39847>
- 16. Correct LOK Enums: <https://gerrit.libreoffice.org/39831>
- 17. Add LOKit Enums to Document.java: <https://gerrit.libreoffice.org/39375>
- 18. appbar invisible on lower version: <https://gerrit.libreoffice.org/36950>
- 19. Clean up util func with Calc dev: <https://gerrit.libreoffice.org/41372>
- 20. Calc cannot zoom due DPI fixed to 96 (work in progress): <https://gerrit.libreoffice.org/40697>

Azorpid

Migrating from legacy Parser to FastParser



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Agenda

- Purpose
 - Move from XParser to XFastParser
- Why FastParser is Better?
 - Multi-threading, tokenization.
- What we have done so far
 - Moving all the contexts in sc/, threaded unzipping
- Statistics
- Future Plans

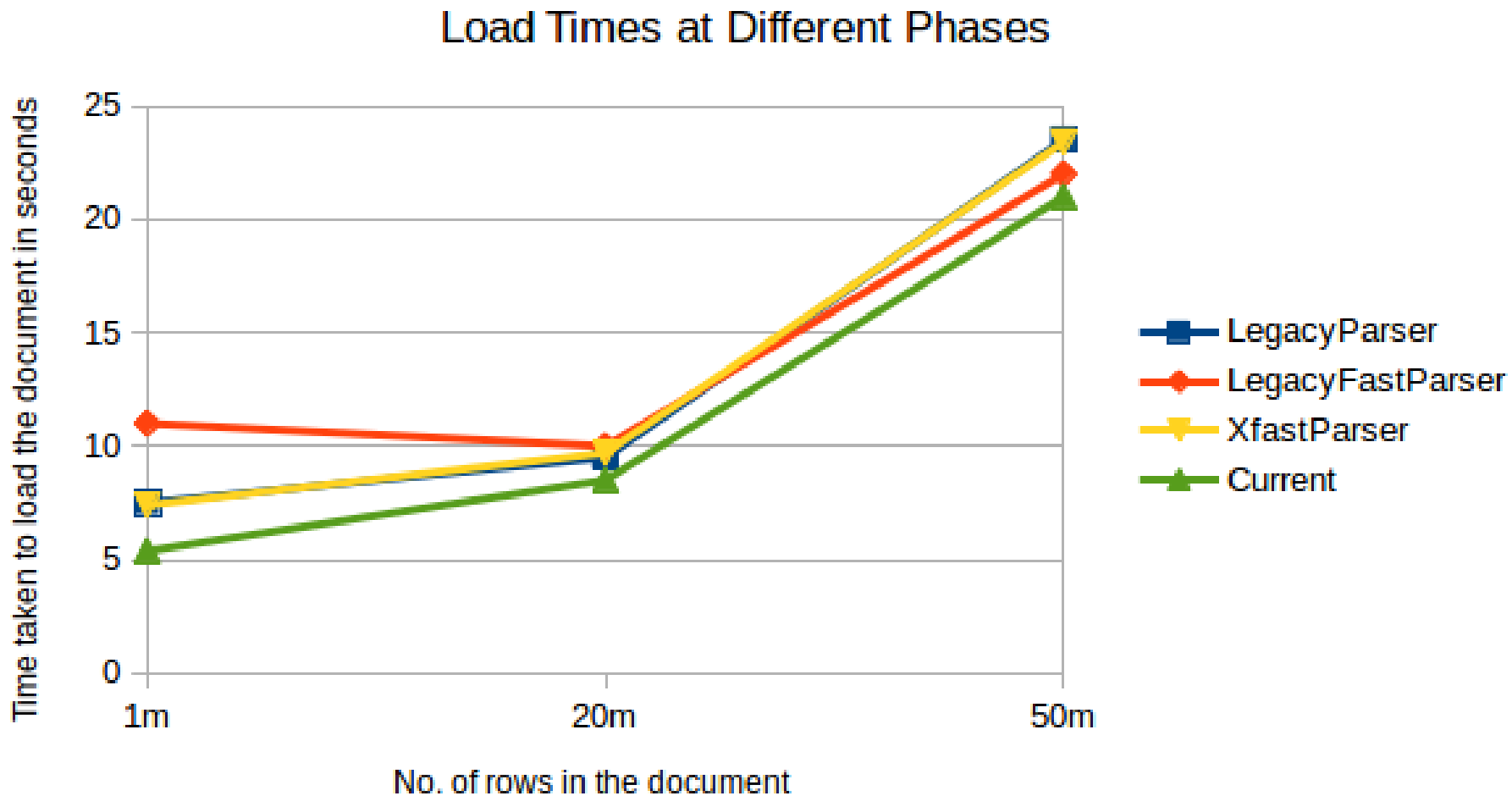
FastParser vs Legacy Parser

- Parsing in one thread and processing in the other.
- Tokenized
- Handles contexts.
- Single threaded
- String based.
- No concept of contexts.

What we've done so far?

- Wrapper that uses FastParser internally and implements legacy DocumentHandler.
- All the xml import filters uses SvXMLImport as base class for parsing and SvXMLImportContext as base context.
- Made SvXMLImport to function like a FastParser Wrapper with SvXMLImportContext working as Intermediary handler that detokenize the elements to strings.
- Moved most of the contexts in sc/ xml filters to fast contexts that uses tokens.
- Seperated unzipping/reading into a different thread.
- Fixed sync issues during unzipping.

Statistics



Future Plans

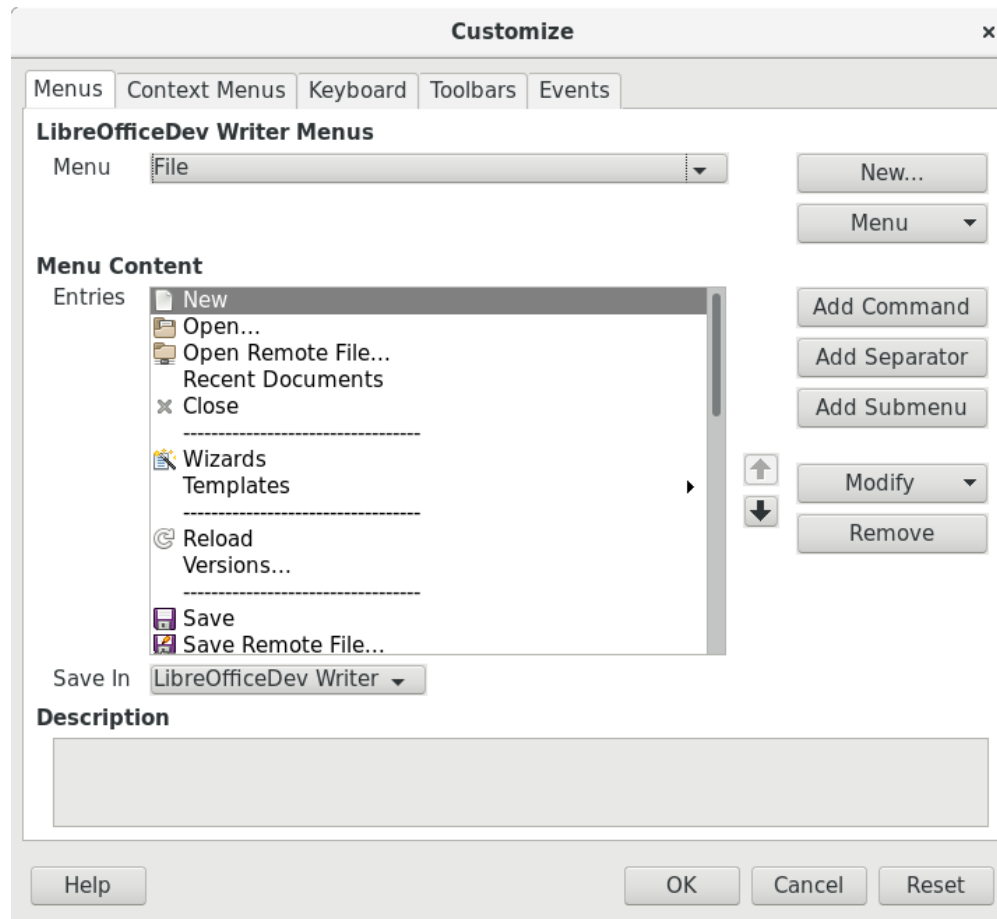
- Working on moving Meta Context which is used across different modules (sw, starmath, sd, etc).
- This should make it easier to just pick any context from those modules and convert them to taken based contexts.
- There are some subtle differences in the way FastParser tokenizes attributes and the way it is done in the existing contexts. Need to address them.
- Study the effect of buffer size on load times used in unzipping thread.
- Study why smaller files have more speed wins compared to the bigger files.

Muhammet Kara

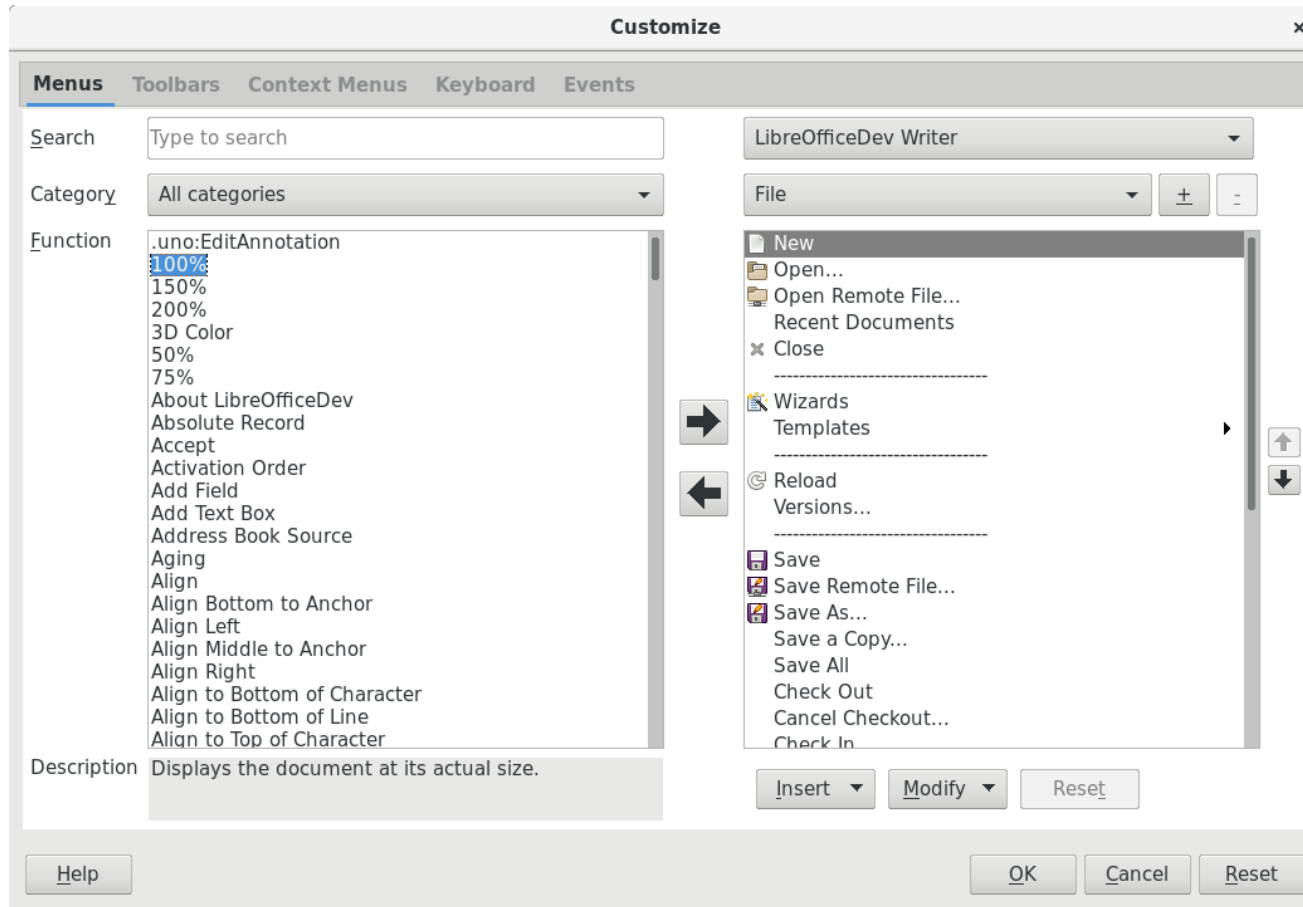
Revamp the Customization Dialog



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Before



After

Initial Goals

- A modern and intuitive design
- Accessibility
- User friendliness
- Ability to search for functions
- Providing a nice workflow with the well-established two-pane design
- Fixing/improving the underlying code

What's Done

- Refactored/restructured some underlying code
- Menu, Toolbar and Context Menu adapted
- Search feature except the Events tab
- Almost all widgets are implemented and functional
- Cosmetic adjustments
- A11y support

What's Left

- Ability to assign styles and macros to UI elements (WiP)
- Function and gear buttons proposed by the design
- Conversion of the Keyboard and the Events tabs
- Bugs arising in the future
- Customize-Dialog meta bug: tdf#103238



More

Gautam Prajapati

Improve LibreOffice for Android



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Agenda

- **Build System before GSoC**
 - LO Android build system before GSoC
- **What did we accomplish?**
 - Things we accomplished during GSoC
- **Individual Goals**
 - Discussion on individual tasks
- **Future Scope**
 - What's more to be done in Android?

Build System before GSoC

- Support up to NDK r13 (Released October 2016)
- Building with *libstdc++* STL & GCC 4.9 toolchain
- Broken Clang toolchain support
- Android being the only platform using *OpenSSL*
- NSS and *libxmlsec* disabled on Android

What did we accomplish?

- Added support for building with NDK r15 (latest stable version)
- Added support for building with Clang toolchain
- Removed GCC support for building LO Android
- Fixed and enabled NSS(Network Security Services) for Android
- Fixed and enabled *libxmlsec* building for Android
- Upgraded from NSS 3.29 to NSS 3.31.1 release

Future Scope

- Switching from *libstdc++* to LLVM's *libc++* STL
- Building LibreOffice Android on MacOS
- Stabilizing and improving the Android Viewer

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