

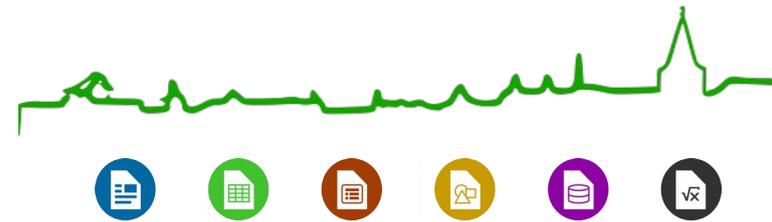
Aarhus 2015 CONFERENCE



Google Summer of Code 2015 Student's Panel

- ▾ Students and Mentors



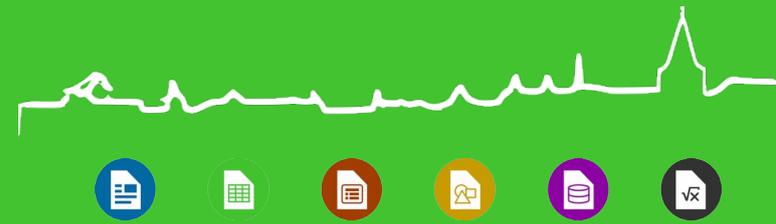


GsoC Projects 2015

Improve the sidebar
Improving Automated Error Checking
Expert Config dialog rework
Haskell UNO Binding
Draw Textbox Chaining
Rolling update for LibreOffice
Gtktilviewer for GNOME-Documents
Cleanup drawing units in Calc
Improve CMIS UX
More and Better Tests



Aarhus 2015 CONFERENCE



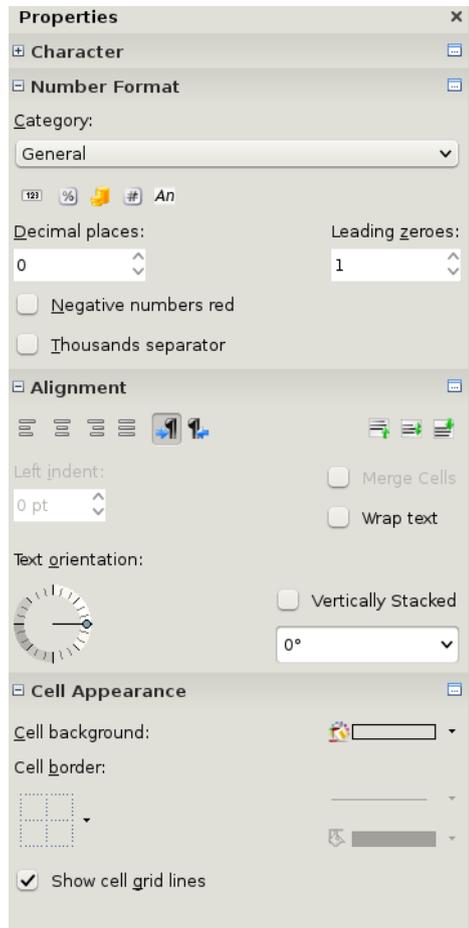
GSoC 2015

Review of sidebar and its functionality

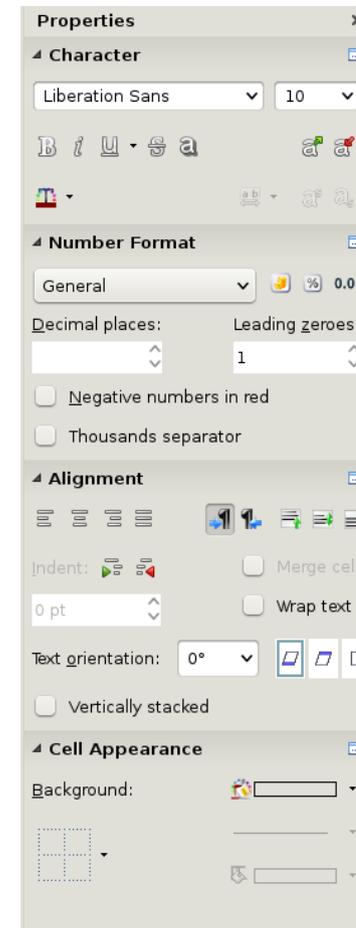
- ▼ by Rishabh Kumar
- ▼ mentors: Katarina Behrens, Yousuf Philip



Rearrange Calc properties panel



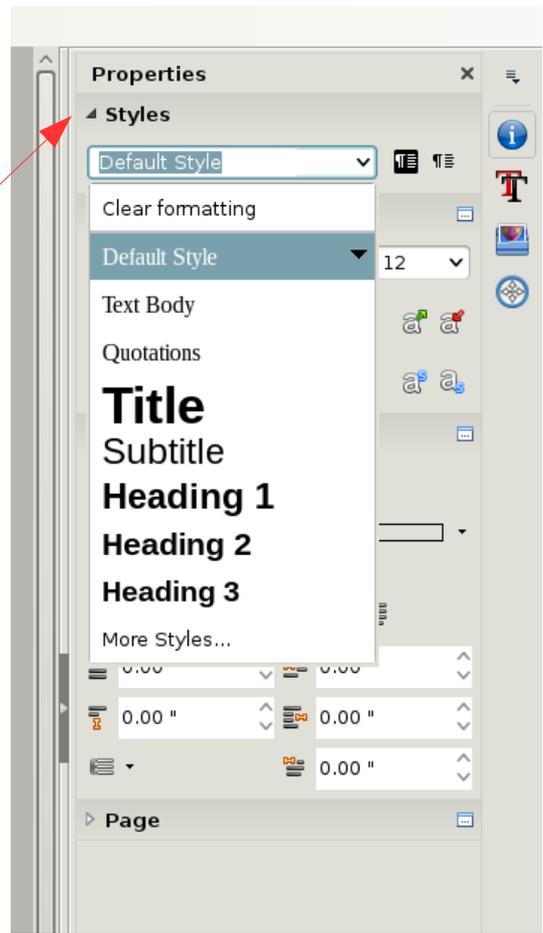
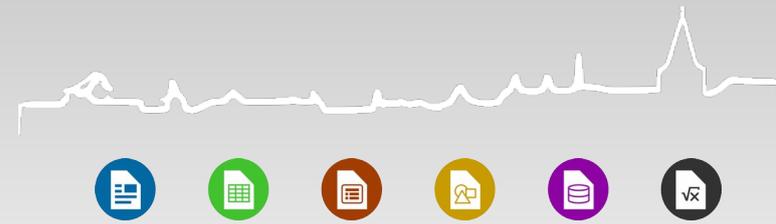
before



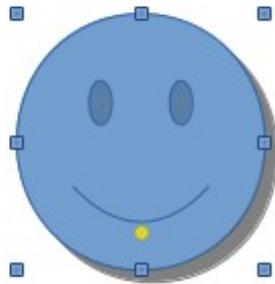
after



Styles panel for Writer



Shadow panel for Impress/Draw



Area

Fill: Color

Transparency: None

0%

Shadow

Enable

Angle: 315°

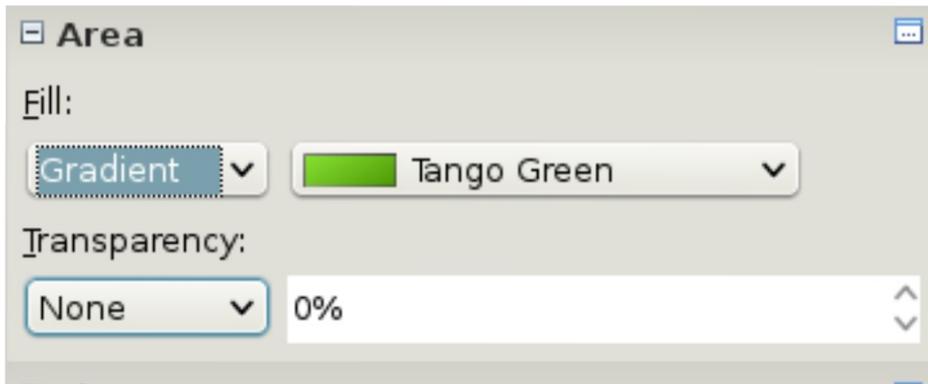
Distance: 6 pt

Transparency: 0%

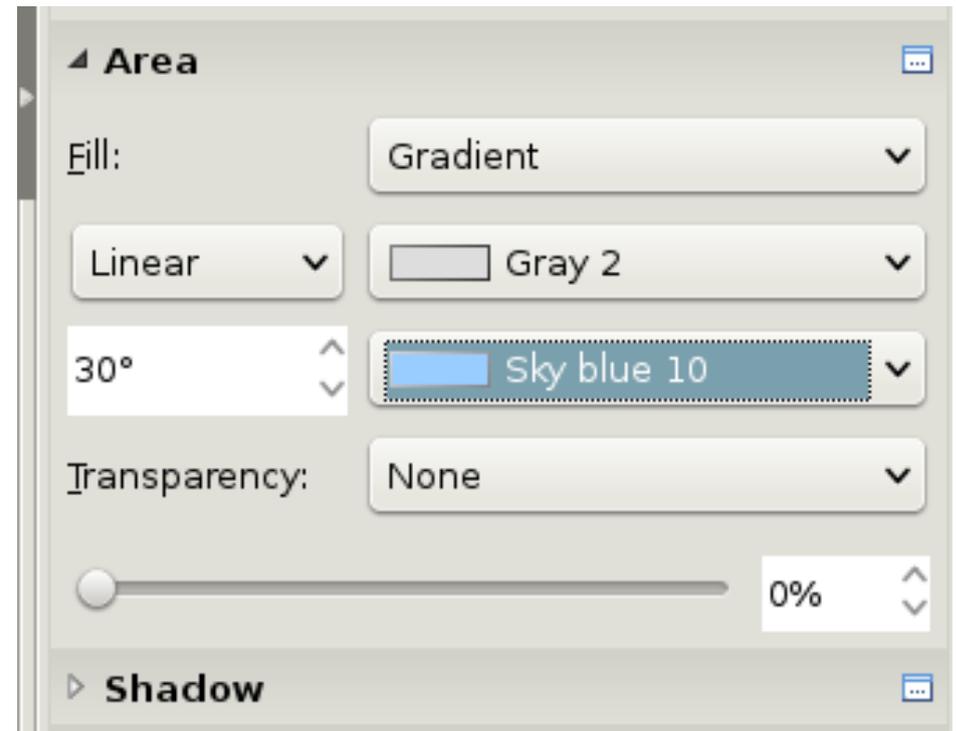
Color: Gray 6



Improve area panel



before



after



Improve line panel



Line ⋮

Width:

Color: 

Transparency: 0% ⌵

Style: Continuous ⌵

Arow: - none - ⌵

- none - ⌵

Comer style: Rounded ⌵ Cap style: Flat ⌵

Line ⋮

⌵ ⌵ ⌵

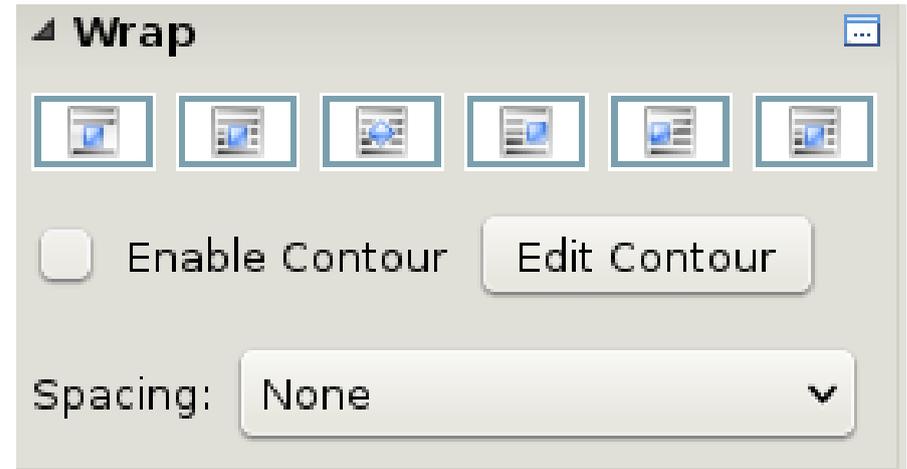
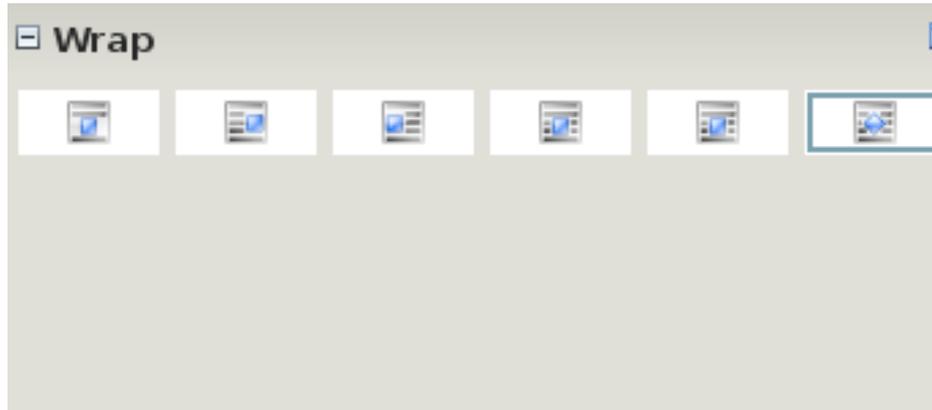
Width:

Color: 

Transparency: 0% ⌵



New controls in Wrap panel



Work in progress



- ▼ Slide background panel
- ▼ Page format panel
- ▼ Improved custom animation panel



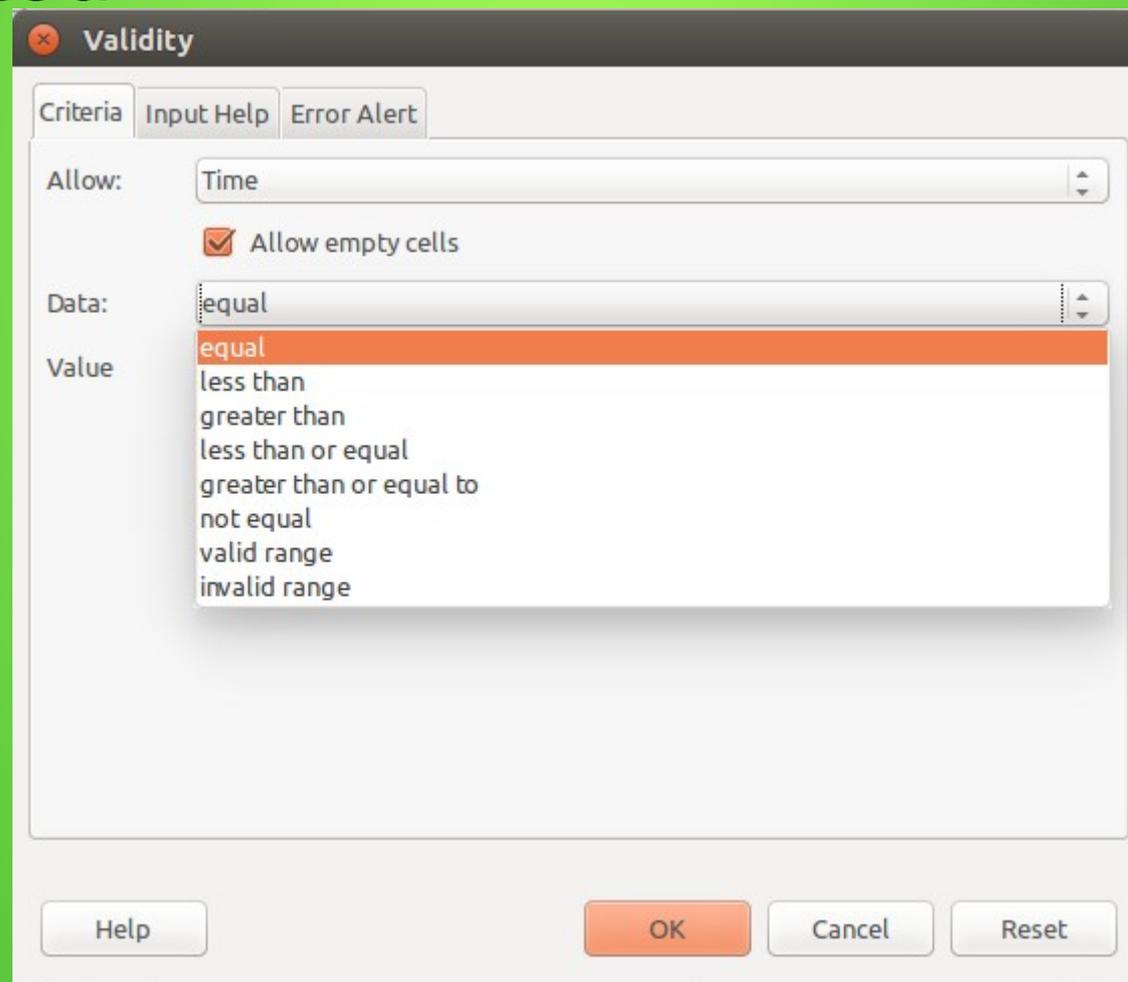
Improved Automated Error Checking

Student: Benjamin Ni

Mentors: Markus Mohrhard, Katarina Behrens

Motivation

- Validity / error checking features available, but limited



Discontinuous Formula Groups

- Rationale: identify formula errors, especially in large spreadsheets

	A	B	C	D	E	F
1		1	'=B1	1		
2		2	'=B2	2		
3		3	'=B3	3		
4		4	'=B3	3		
5		5	'=B4	4		
6		6	'=B5	5		
7		7	'=B6	6		
8		8	'=B7	7		
9		9	'=B8	8		
10		10	'=B9	9		
11						
12		Column D Subtotal		48		
13						
14						
15						
16						
17						

Discontinuous Formula Groups

- Implementation:
 - FormulaGroupIterator to count number of formula groups on spreadsheet
 - Currently prints number of formula groups in Statistics dialog
 - Can be integrated into a formula group checking mode, that could alert user in changes of formula groups count due to a user action (e.g. cut-paste)

Subformulae in Formula Wizard

- Rationale:
 - Offers quick and easy glance of formula structure
 - Easily identify root cause of errors

	A	B	C
1		Credit	
2	A	50.25	
3	B	72.33	
4	C	14.62	
5	D	1.18	
6			
7		Debit	
8	X	12.28	
9	Y	19.29	
10	Z	144.76	
11			
12			
13		Total	
14	Net	=SUM(B2:B5)-SUM(B8:B11)	
15			
16			
17			
18			

Function Wizard

Functions Structure SUM Function result 138.38

Returns the sum of all arguments.

number 1 (required)

Number 1, number 2, ... are 1 to 30 arguments whose

number 1 *fx* B2:B5

number 2 *fx*

number 3 *fx*

number 4 *fx*

Subformulae in Formula Wizard

The screenshot shows the Microsoft Excel interface with the Formula Wizard dialog box open. The spreadsheet in the background has the following data:

	A	B
44	C	14.62
45	D	1.18
46	E	50.25
47	F	4.22
48	G	194.41
49	H	60.92
50	I	13.37
51	J	42.35
52	K	66.27
53	L	90.89
54	M	3.56
55	N	37.78
56	O	327.66
57	P	90.19
58	Q	38.55
59	R	250.25
60	S	61.95
61		
62		Total
63	Net	#NAME?
64		
65		
66		
67		
68		

The Formula Wizard dialog box is titled "Function Wizard" and shows the "SUM" function. The "Function result" is 908.8. The "Structure" pane shows the following subformulae:

- SUM = 908.8
 - B2:B20 = {50.25;72.33;14}
- SUM = #NAME?
 - B22:B40 = {50.25;72.33;1}
- SUM = 1471
 - B42:B60 = {50.25;72.33;1}

The "number 1" field is set to B2:B20. The "Formula" field contains the formula: `=SUM(B2:B20)+SUM(B22:B40)+SUM(B42:B60)`. The "Result" field shows `#NAME?`.

Unit Feature

- Check for unit consistency in formulae
 - Cells can be assigned units
 - Mathematical operations on cell values must make sense
- To be moved to ScInterpreter
 - Use of new FormulaToken class to encode unit



Rework the Expert Configuration dialog

Mihaly Palenik

Very old style

LibreOffice 4.2

Preferences

Preference Name	Property	Type	Value
/org.openoffice.FirstStartWizard/TabPage/Registration/RegistrationOptions/org.openoffice.FirstSt	Visible	boolean	true
/org.openoffice.FirstStartWizard/TabPage/Registration/RegistrationOptions/org.openoffice.FirstSt	Visible	boolean	true
/org.openoffice.FirstStartWizard/TabPage/Registration/RegistrationOptions/org.openoffice.FirstSt	Visible	boolean	true
/org.openoffice.FirstStartWizard/TabPage/Registration/RegistrationOptions/org.openoffice.FirstSt	Visible	boolean	true
/org.openoffice.Inet/Settings	oolnetFTPProxyName	string	
/org.openoffice.Inet/Settings	oolnetFTPProxyPort	void	
/org.openoffice.Inet/Settings	oolnetHTTPProxyName	string	
/org.openoffice.Inet/Settings	oolnetHTTPProxyPort	void	
/org.openoffice.Inet/Settings	oolnetHTTPSProxyName	string	
/org.openoffice.Inet/Settings	oolnetHTTPSProxyPort	void	
/org.openoffice.Inet/Settings	oolnetNoProxy	string	
/org.openoffice.Inet/Settings	oolnetProxyType	long	1
/org.openoffice.Interaction/InteractionHandlers/org.openoffice.Interaction:InteractionHandlerImple	Propagation	string	named-and-derived
/org.openoffice.Interaction/InteractionHandlers/org.openoffice.Interaction:InteractionHandlerImple	ServiceName	string	com.sun.star.filter.pdfexport.
/org.openoffice.Interaction/InteractionHandlers/org.openoffice.Interaction:InteractionHandlerImple	Propagation	string	named-and-derived
/org.openoffice.Interaction/InteractionHandlers/org.openoffice.Interaction:InteractionHandlerImple	Propagation	string	named-and-derived
/org.openoffice.Interaction/InteractionHandlers/org.openoffice.Interaction:InteractionHandlerImple	Propagation	string	named-and-derived
/org.openoffice.Interaction/InteractionHandlers/org.openoffice.Interaction:InteractionHandlerImple	ServiceName	string	com.sun.star.comp.dbaccess.
/org.openoffice.LDAP/UserDirectory	Mapping	void	
/org.openoffice.LDAP/UserDirectory	SearchPassword	void	
/org.openoffice.LDAP/UserDirectory	SearchUser	void	
/org.openoffice.LDAP/UserDirectory/ServerDefinition	BaseDN	void	
/org.openoffice.LDAP/UserDirectory/ServerDefinition	Port	long	389
/org.openoffice.LDAP/UserDirectory/ServerDefinition	Server	void	
/org.openoffice.LDAP/UserDirectory	UserObjectClass	void	
/org.openoffice.LDAP/UserDirectory	UserUniqueAttribute	void	
/org.openoffice.Office.Accelerators/PrimaryKeys/Global/org.openoffice.Office.Accelerators:Key['A_MC	Command	string	.uno:SelectAll
/org.openoffice.Office.Accelerators/PrimaryKeys/Global/org.openoffice.Office.Accelerators:Key['B_MC	Command	void	
/org.openoffice.Office.Accelerators/PrimaryKeys/Global/org.openoffice.Office.Accelerators:Key['B_MC	Command	void	
/org.openoffice.Office.Accelerators/PrimaryKeys/Global/org.openoffice.Office.Accelerators:Key['C_MC	Command	string	.uno:Copy
/org.openoffice.Office.Accelerators/PrimaryKeys/Global/org.openoffice.Office.Accelerators:Key['DELE	Command	string	.uno>Delete
/org.openoffice.Office.Accelerators/PrimaryKeys/Global/org.openoffice.Office.Accelerators:Key['E_MC	Command	void	
/org.openoffice.Office.Accelerators/PrimaryKeys/Global/org.openoffice.Office.Accelerators:Key['F11_I	Command	string	.uno:MacroDialog

Edit

Reset

OK

Cancel

Help

• Old style

Expert Configuration

Search

Preference Name	Property	Type	Value
/org.openoffice.VCL/Settings/org.openoffice.VCL:ConfigurableSettings['WM']	ShouldSwitchWorkspace	string	false
/org.openoffice.VCL/Settings/org.openoffice.VCL:ConfigurableSettings['Menu']	SuppressAccelerators	string	false
/org.openoffice.VCL/Settings/org.openoffice.VCL:ConfigurableSettings['Transfer']	SelectionTimeout	string	3
/org.openoffice.VCL/Settings/org.openoffice.VCL:ConfigurableSettings['PrintDialog']	Collate	string	true
/org.openoffice.VCL/Settings/org.openoffice.VCL:ConfigurableSettings['PrintDialog']	CollateBox	string	Default
/org.openoffice.VCL/Settings/org.openoffice.VCL:ConfigurableSettings['Accessibility']	EnableATToolSupport	string	false
/org.openoffice.VCL/Settings/org.openoffice.VCL:ConfigurableSettings['DesktopManagen	DisablePrinting	string	false
/org.openoffice.VCL/DefaultFonts/org.openoffice.VCL:LocalizedDefaultFonts['am']	UI_SANS	string	Nyala;Abyssinica
/org.openoffice.VCL/DefaultFonts/org.openoffice.VCL:LocalizedDefaultFonts['am']	CTL_TEXT	string	Nyala;Abyssinica
/org.openoffice.VCL/DefaultFonts/org.openoffice.VCL:LocalizedDefaultFonts['am']	CTL_DISPLAY	string	Nyala;Abyssinica
/org.openoffice.VCL/DefaultFonts/org.openoffice.VCL:LocalizedDefaultFonts['am']	CTL_HEADING	string	Nyala;Abyssinica
/org.openoffice.VCL/DefaultFonts/org.openoffice.VCL:LocalizedDefaultFonts['am']	SANS_UNICODE	string	Nyala;Abyssinica
/org.openoffice.VCL/DefaultFonts/org.openoffice.VCL:LocalizedDefaultFonts['am']	CTL_SPREADSHEET	string	Nyala;Abyssinica
/org.openoffice.VCL/DefaultFonts/org.openoffice.VCL:LocalizedDefaultFonts['am']	CTL_PRESENTATION	string	Nyala;Abyssinica
/org.openoffice.VCL/DefaultFonts/org.openoffice.VCL:LocalizedDefaultFonts['ar']	UI_SANS	string	Tahoma;Traditi
/org.openoffice.VCL/DefaultFonts/org.openoffice.VCL:LocalizedDefaultFonts['ar']	CTL_TEXT	string	Tahoma;Lucida
/org.openoffice.VCL/DefaultFonts/org.openoffice.VCL:LocalizedDefaultFonts['ar']	CTL_DISPLAY	string	Tahoma;Lucida
/org.openoffice.VCL/DefaultFonts/org.openoffice.VCL:LocalizedDefaultFonts['ar']	CTL_HEADING	string	Tahoma;Lucida
/org.openoffice.VCL/DefaultFonts/org.openoffice.VCL:LocalizedDefaultFonts['ar']	SANS_UNICODE	string	Tahoma;Lucida
/org.openoffice.VCL/DefaultFonts/org.openoffice.VCL:LocalizedDefaultFonts['ar']	CTL_SPREADSHEET	string	Tahoma;Lucida
/org.openoffice.VCL/DefaultFonts/org.openoffice.VCL:LocalizedDefaultFonts['ar']	CTL_PRESENTATION	string	Tahoma;Lucida
/org.openoffice.VCL/DefaultFonts/org.openoffice.VCL:LocalizedDefaultFonts['as']	UI_SANS	string	Lohit Assamese
/org.openoffice.VCL/DefaultFonts/org.openoffice.VCL:LocalizedDefaultFonts['as']	CTL_TEXT	string	Lohit Assamese
/org.openoffice.VCL/DefaultFonts/org.openoffice.VCL:LocalizedDefaultFonts['as']	CTL_DISPLAY	string	Lohit Assamese
/org.openoffice.VCL/DefaultFonts/org.openoffice.VCL:LocalizedDefaultFonts['as']	CTL_HEADING	string	Lohit Assamese
/org.openoffice.VCL/DefaultFonts/org.openoffice.VCL:LocalizedDefaultFonts['as']	CTL_SPREADSHEET	string	Lohit Assamese
/org.openoffice.VCL/DefaultFonts/org.openoffice.VCL:LocalizedDefaultFonts['as']	CTL_PRESENTATION	string	Lohit Assamese

Help Edit Reset OK Cancel

Problem and ideas

- ▼ Lot of configuration entries
- ▼ Slow with a11y
- ▼ Load dynamically
- ▼ Ideas
 - ▼ Load which visible
 - ▼ Tree view

Final result

Expert Configuration

Search

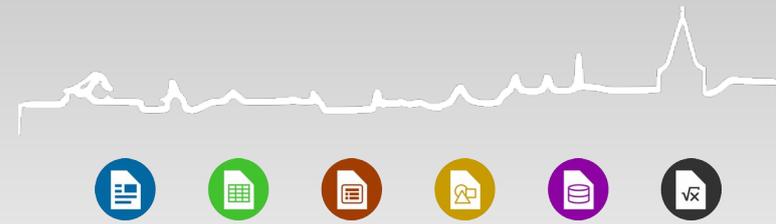
Preference Name	Property	Type	Value
UserDirectory	Mapping	void	
UserDirectory	SearchUser	string	f
UserDirectory	SearchPassword	void	
UserDirectory	UserObjectClass	void	
ServerDefinition	Port	long	389
ServerDefinition	BaseDN	void	
ServerDefinition	Server	void	
UserDirectory	UserUniqueAttribute	void	
org.openoffice.Setup			
org.openoffice.System			
org.openoffice.Office.UI			
org.openoffice.ucb.Store			
ContentProperties			
vnd.sun.star.hier://com.sun.star.ucb.DefaultHierarchyDataSource/templates/en-U!			
vnd.sun.star.hier://com.sun.star.ucb.DefaultHierarchyDataSource/templates/en-U!			
Values			
TargetDirURL			
com.sun.star.ucb.DefaultHierarchyDataSource/templates/en-US/My%20Terr	State	long	0
com.sun.star.ucb.DefaultHierarchyDataSource/templates/en-US/My%20Terr	Value	string	\$(brandbaseur
com.sun.star.ucb.DefaultHierarchyDataSource/templates/en-US/My%20Terr	Handle	long	-1
com.sun.star.ucb.DefaultHierarchyDataSource/templates/en-US/My%20Terr	Attributes	long	129
vnd.sun.star.hier://com.sun.star.ucb.DefaultHierarchyDataSource/templates/en-U!			

Help Edit Reset OK Cancel

New problems

- ▼ Search
 - ▼ Use preferences box's entries
 - ▼ Old name/new name
- ▼ Alternating row

```
▲ org.openoffice.ucb.Store
  ▲ ContentProperties
    ▲ vnd.sun.star.hier://com.sun.star.ucb.DefaultHierarchyDataSource/templates/en-U!
      ▲ Values
        ▲ TargetDirURL
          com.sun.star.ucb.DefaultHierarchyDataSource/templates/en-US/My%20Ter
          com.sun.star.ucb.DefaultHierarchyDataSource/templates/en-US/My%20Ter
          com.sun.star.ucb.DefaultHierarchyDataSource/templates/en-US/My%20Ter
          com.sun.star.ucb.DefaultHierarchyDataSource/templates/en-US/My%20Ter
```



Using the UNO API from Haskell

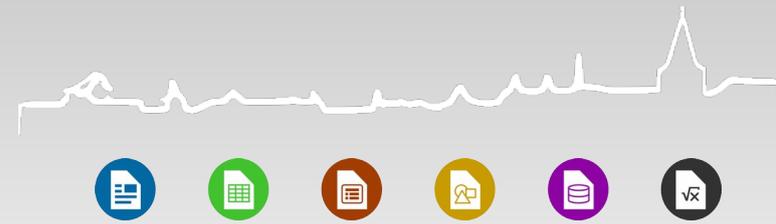


Participant: Jorge Mendes

Mentors: Michael Stahl, Stephan Bergmann



Haskell vs. UNO



Haskell

- ▼ Purely-functional programming language
- ▼ Statically typed
- ▼ Lazy evaluation
- ▼ Concurrency-friendly
- ▼ Many 3rd-party packages

UNO

- ▼ Universal Network Objects
- ▼ Component model in LibreOffice
- ▼ Relies on services and interfaces
- ▼ Existing bindings for:
 - ▼ C++, Java, and Python



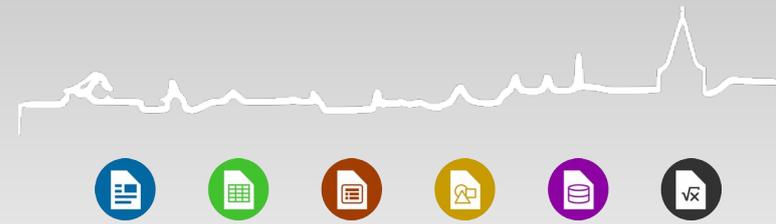
Developing Programs



- ▼ Based on Cabal
 - ▼ “Common Architecture for Building Applications and Libraries”
- ▼ Requires modifying the usual package configuration process
 - ▼ add generation of required API code
- ▼ Development purely in Haskell
 - ▼ current version requires some Foreign Function Interface (FFI) code for features not yet implemented
- ▼ Simple steps to create a new UNO program:
 - ▼ create a new Cabal package
 - ▼ add the Haskell UNO binding as a dependency
 - ▼ create the program in Haskell !



Haskell UNO Binding



We have:

- ▶ API code generator
 - ▶ because of the static type system
- ▶ Binding package
 - ▶ bootstrapping
 - ▶ type marshalling
- ▶ Examples
 - ▶ macro expander
 - ▶ document loader
 - ▶ swriter

```
1 module Main where
2
3 import Data.Text (Text)
4 import Foreign
5
6 import UNO
7
8 import Com.Sun.Star.Uno
9 import Com.Sun.Star.Uno.XComponentContext
10 import Com.Sun.Star.Bridge.XUnoUrlResolver
11 import Com.Sun.Star.Bridge.UnoUrlResolver
12 import Com.Sun.Star.Bridge.XPropertySet
13 import Com.Sun.Star.Container.XIndexAccess
14 import Com.Sun.Star.Frame.Desktop
15 import Com.Sun.Star.Frame.XComponentLoader
16 import Com.Sun.Star.Lang.XMultiServiceFactory
17 import Com.Sun.Star.Text
18 import Com.Sun.Star.Text.XSimpleText
19 import Com.Sun.Star.Text.XText
20 import Com.Sun.Star.Text.XTextCursor
21 import Com.Sun.Star.Text.XTextDocument
22
23 main :: IO ()
24 main = do
25   xLocalContext <- mkReference . castPtr >>< unoBootstrap
26   xContext <- connect xLocalContext
27   xTextDocument <- openWriter xContext
28   insertText xTextDocument
29
30 sConnectionString :: Text
31 sConnectionString = "uno:socket,host=localhost,port=2003;urp;StarOffice.ServiceManager"
32
33 connect :: Reference XComponentContext -> IO (Reference XComponentContext)
34 connect xLocalContext = do
35   oUnoUrlResolver <- unoUrlResolverCreate xLocalContext
36   xUnoUrlResolver <- queryInterface oUnoUrlResolver
37   xInterface <- resolve xUnoUrlResolver sConnectionString
38   xPropertySet <- queryInterface xInterface
39   aXComponentContext <- getPropertyValue xPropertySet "DefaultContext"
40   fromAnyIO aXComponentContext
41
42 openWriter :: Reference XComponentContext -> IO (Reference XTextDocument)
43 openWriter xContext = do
44   xMultiComponentFactory <- getServiceManager xContext
45   xComponentLoader <- queryInterface >>< desktopCreate xContext
46   xComponent <- loadComponentFromURL xComponentLoader "private:factory/swriter" " _blank" 0 nullPtr
47   queryInterface xComponent
48
49 insertText :: Reference XTextDocument -> IO ()
50 insertText xTextDocument = do
51   xText <- queryInterface >>< getText xTextDocument
52   xTextCursor <- queryInterface >>< createTextCursor xText
53   insertString xText xTextCursor "This is the first line of the newly created text document...\n" False
54   insertString xText xTextCursor "... and this is the second one.\n" False
```

Available at:

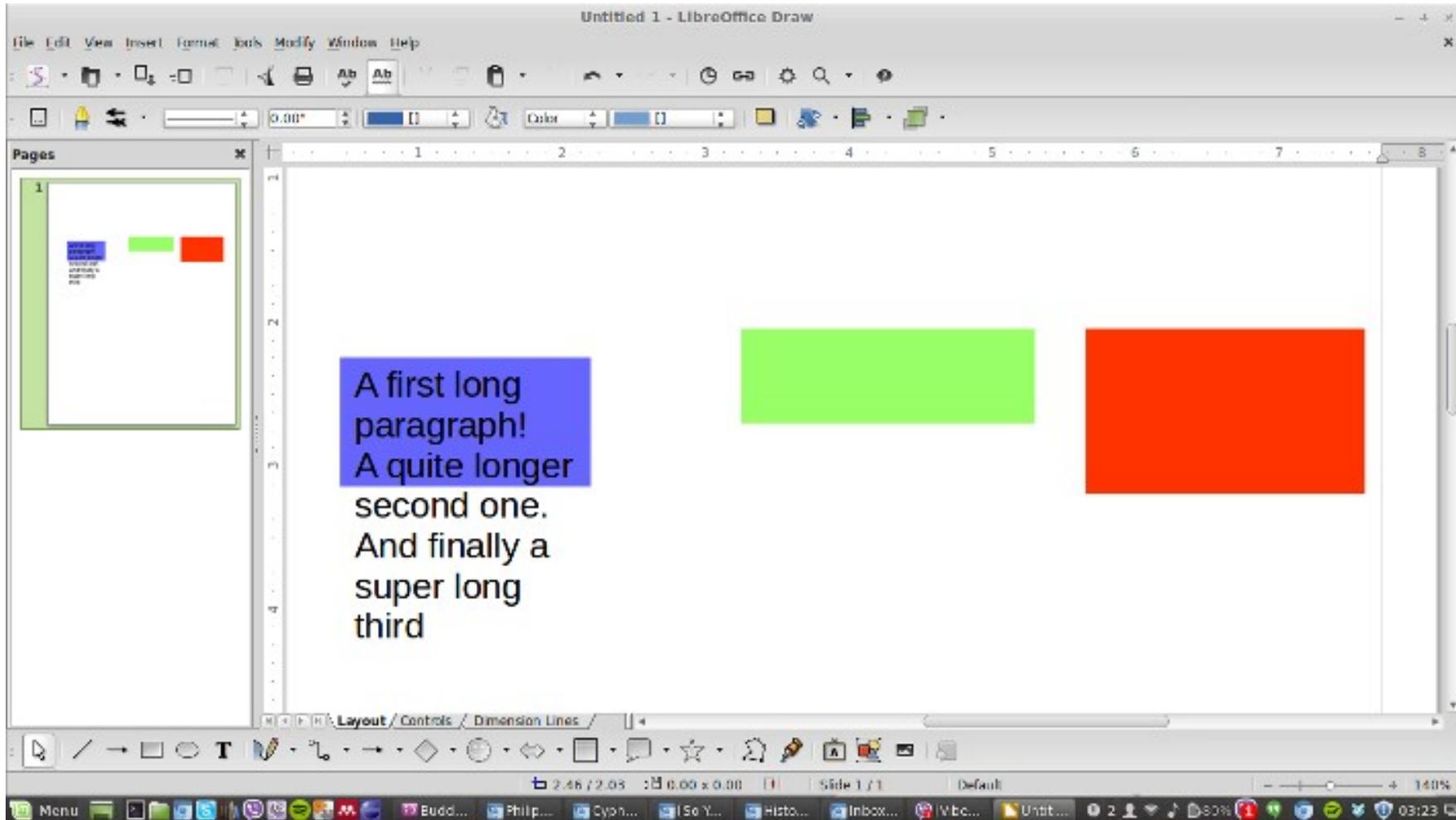
<https://github.com/jorgecunhamendes/haskell-uno-binding>



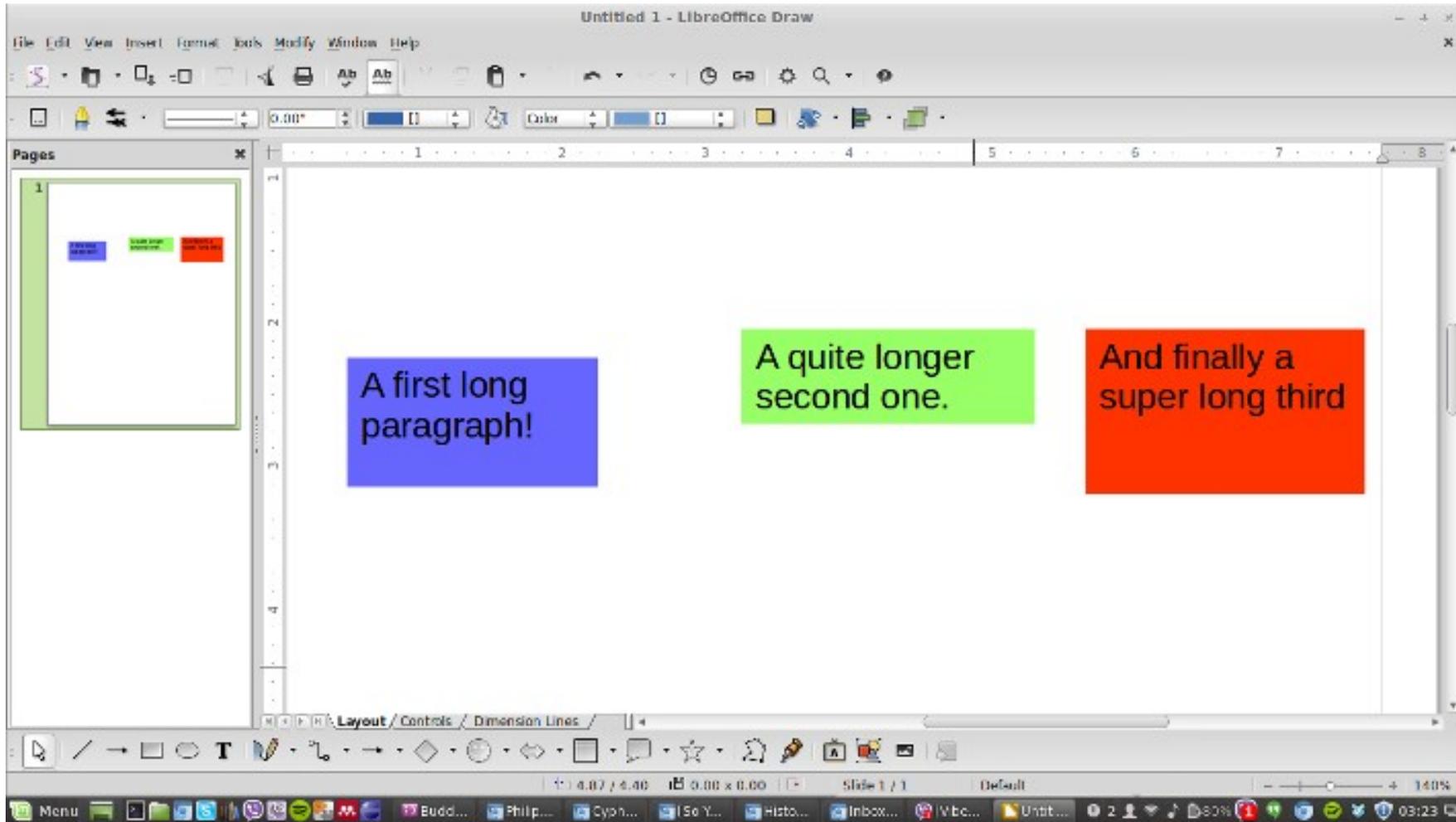
Flow of Text from Box to Box in Draw

Matteo Campanelli

Going from here...



... to here



Status of the feature (pre-GsoC15)

- **NOTE:**

- this year's work is a continuation of what I started during GSoC14.

- **Status *before* GSoC 2014:**

- Writer had its own fancy version of text flow (and still does: no Writer feature was harmed during the making of this project!)
- It had been a feature request for Draw since OpenOffice times.

- **Status *after* GSoC 2014:**

- Basic prototype: could transfer overflowing paragraphs to next box.
- Too "stiff" to be used:
 - Could not transfer single words, only whole paragraphs (plus: user must get out of the box first)
 - No other semi-basic feature (more on this later).

- **That was last year. And this year??**

Demo 1 - Let's have a look (status at GSoC15 midterm)

Main desired features

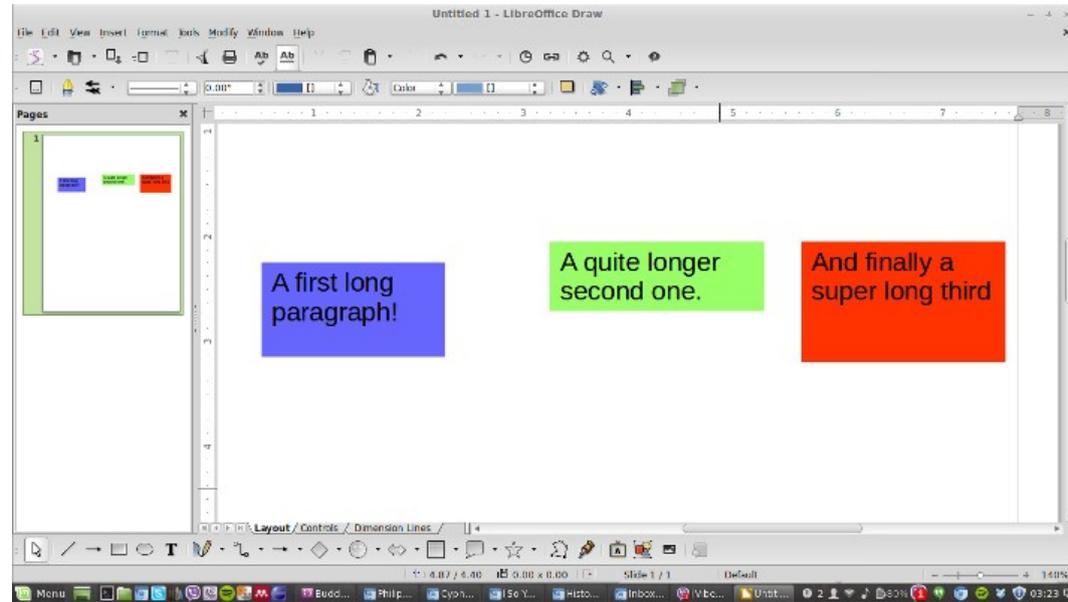
- **Transfer of text while editing** #15
 - Also: cursor motion. #15
- **Transfer of text after box is resized** #15
- **Handling of underflow of text** #15
 - (i.e. what if you get some space in 2nd box?)
- **Recursive transfer** #14
 - (i.e. what if 2nd box is not enough?)
- **Support of Cutting/Pasting** #14
- **Load box chain structure from file** #15
- **Undo/Redo support** :(
- **GUI** :(

Legend:

#14 - Feature appeared after GsoC 14.

#15 - Feature appeared after GsoC 15.

:(- Feature still absent.



Current state of the project

- **This year: code rewritten to be modular and non-invasive.**
 - (Last year's code smelled of frustration and desperate experiments. Also, rum.)
- **Almost all features from previous slide are there.**
 - ...but some of them stopped working (after merging to master last week).

Demo 2 - Some other cool stuff (also lovely fresh bugs)

Conclusions

- **Thanks to mentors**

- Thorsten & Fridrich were fundamental, both morally and technically.

- **The project is almost there:**

- A few FIXME-s after merging
- We still lack Undo/Redo support
 - Anyone with editeng/svx experience wanna help?

Reuse Mozilla's rolling update mechanism for LibreOffice

Nathan Yee

- Currently the update just checks, and offers new download
- The project included:
 - Stripping down the Mozilla update code & integrating it with LibreOffice
 - To build & use .mar's
 - Building the .mar themselves
 - Update the update mechanism to actually use it
- https://wiki.documentfoundation.org/Development/Online_Update

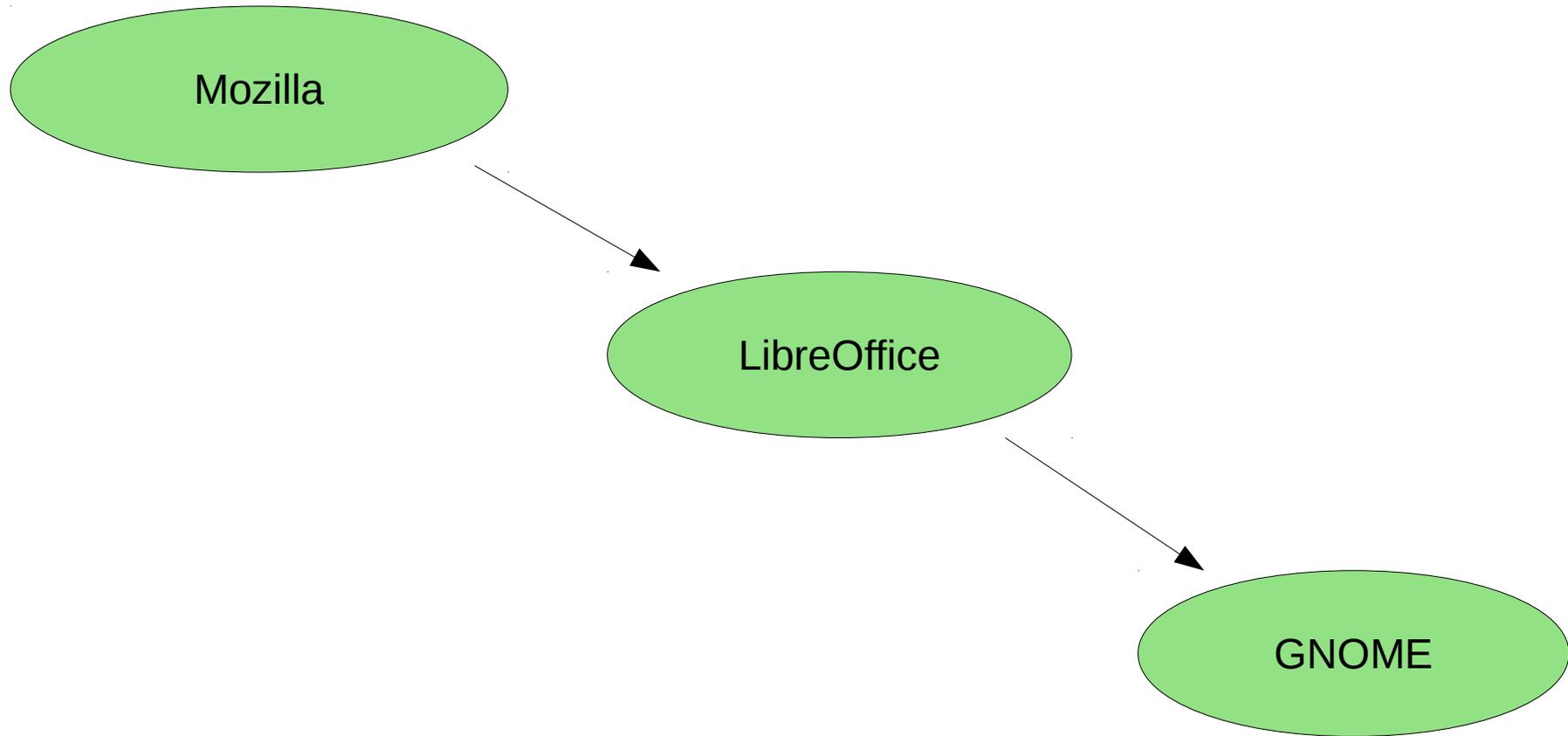




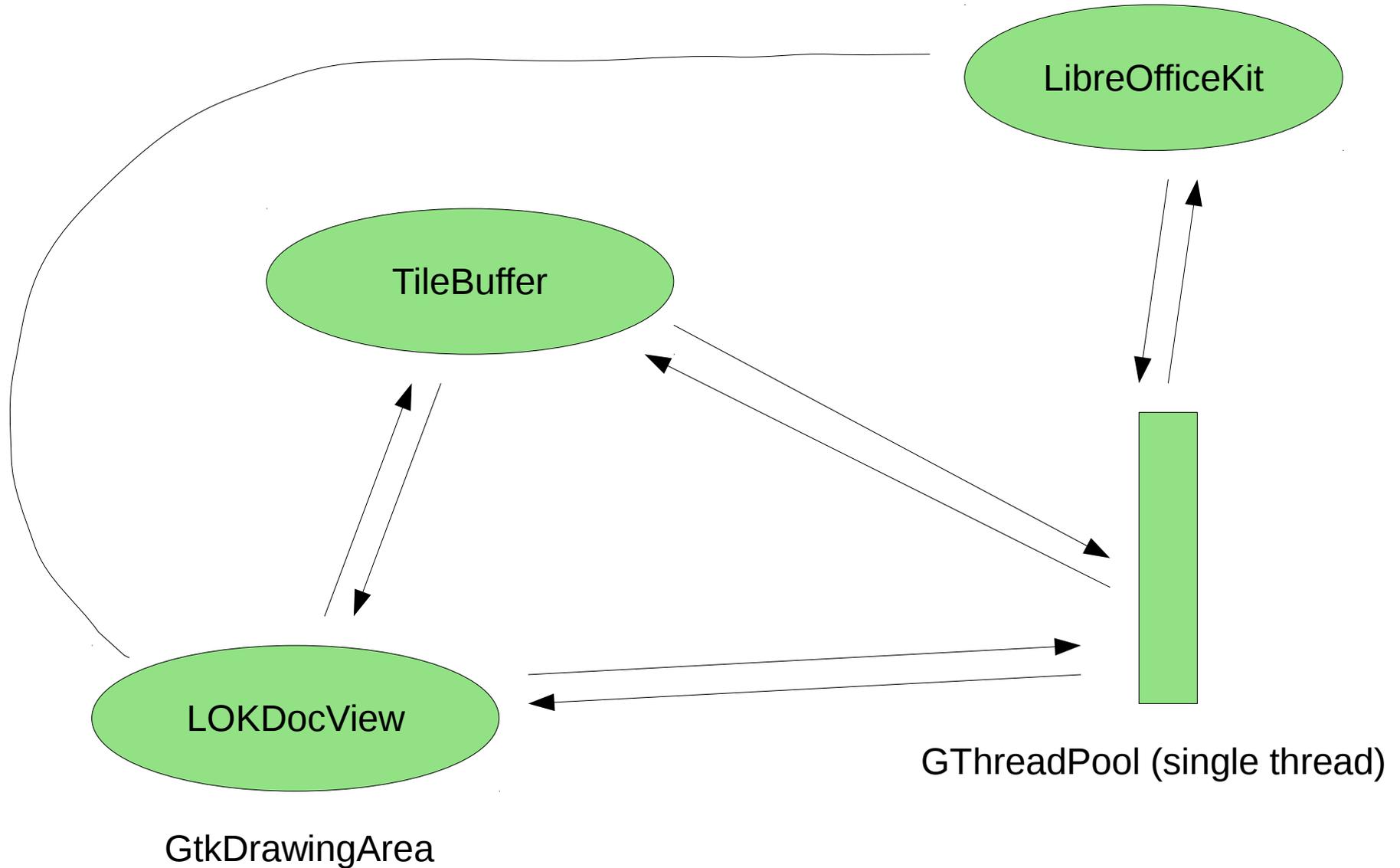
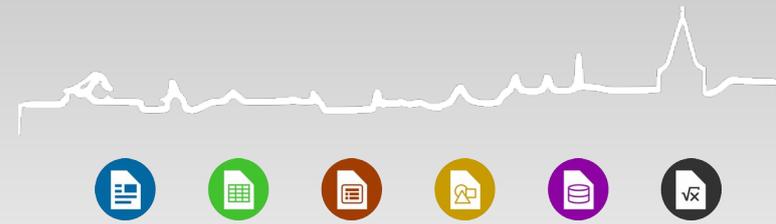
Integrating LO with your applications/gnome-documents

- ▼ Pranav Kant (pranavk)
- ▼ Mentors
 - ▼ Michael Meeks
 - ▼ Miklos Vajna

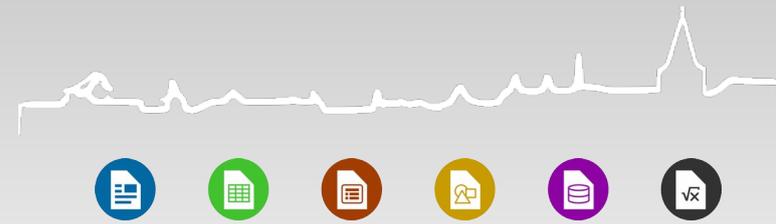
This summer



LOKDocView - Architecture



LOKDocView inside LO tree



- ▼ libreofficekit/
 - ▼ source
 - ▼ gtk
 - ▼ lokdocview.cxx
 - ▼ tilebuffer.cxx
 - ▼ tilebuffer.hxx
 - ▼ qa
 - ▼ gtktiliedviewer
 - ▼ gtktiliedviewer.cxx (test-bed)



Use from any g-i language bindings



Thanks to GObject Introspection

```
// build the application's UI
_testViewer: function () {
    this._window = new Gtk.ApplicationWindow ({
        application: this.application,
        title: "LOK Document Viewer",
        default_height: 600,
        default_width: 800,
    });
    this._sw = new Gtk.ScrolledWindow({ hexexpand: true,
                                        vexexpand: true });
    this._window.add (this._sw);

    this._view = LOKDocView.View.new(inst_path, null, null);
    this._sw.add(this._view);
    this._view.open_document(doc_path);
    this._window.show_all();
}
```

Using from javascript



Cleanup of internal drawing units in Calc

Krisztian Pinter

- Calc rendering is a mess
 - Partially in pixels, partially in logic units (HMM)
- Problem for tiled rendering and UX in general
- The project was to change all the rendering in pixels to logic units



Improve user experience with CMIS



Szymon Kłós

e-mail: eszkadev@gmail.com

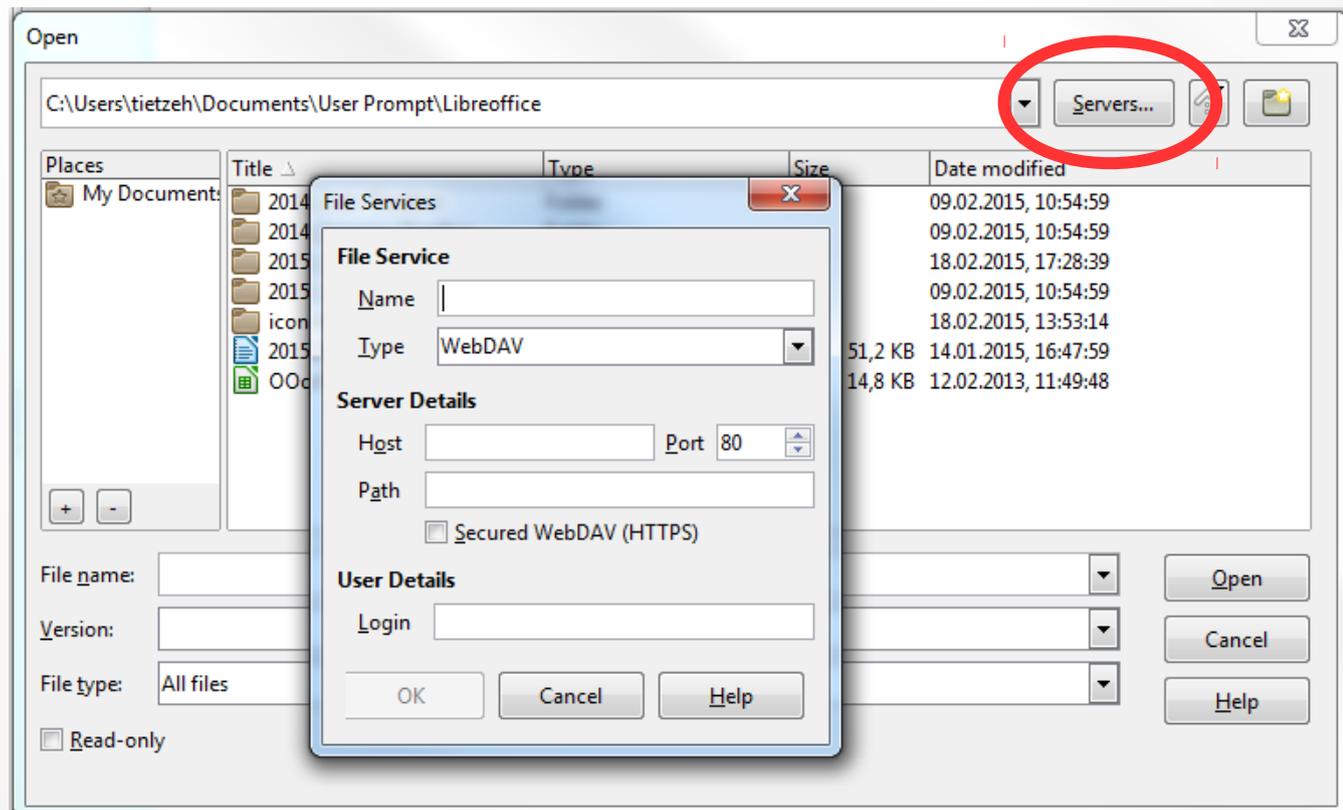
IRC: eszka

mentors: Jan Holesovsky, Cedric Bosdonnat



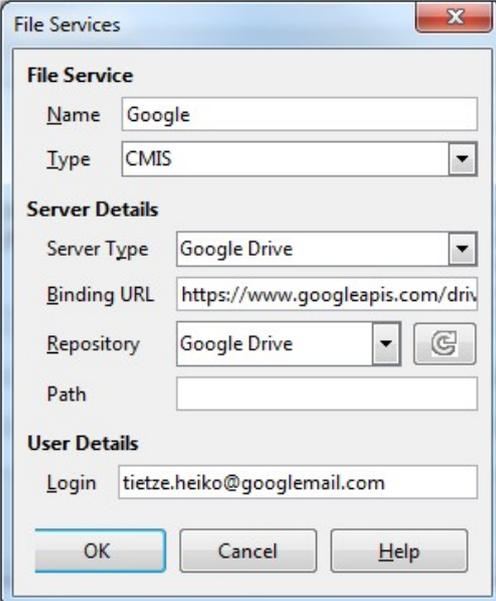
Problems - visibility

- Feature is not visible to the average user
- CMIS is only accessible through LibreOffice's custom file dialogs, which isn't turned on by default



Problems - complexity

- Fields with unchangeable value (binding URL – Gdrive)
- Gdrive needs only user name, but all fields are shown
- Popular CMIS services as subtypes



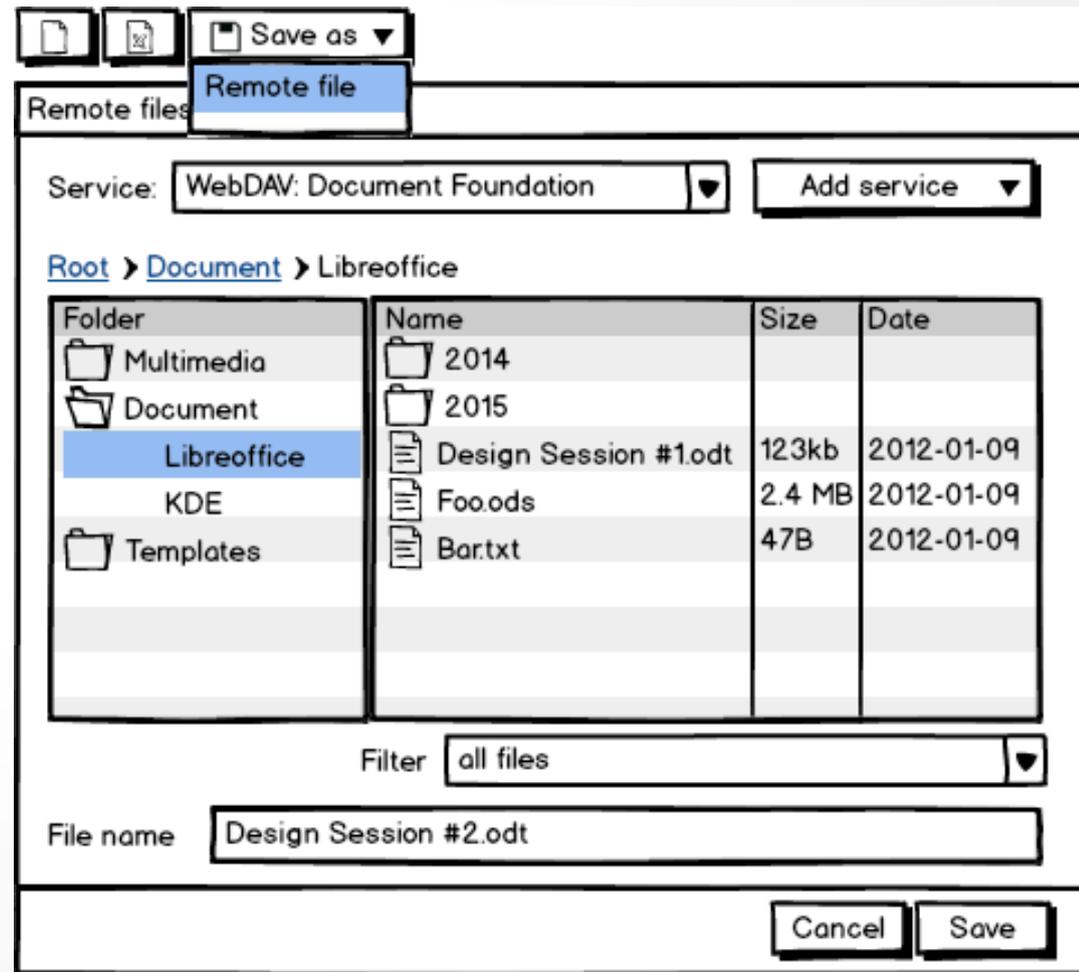
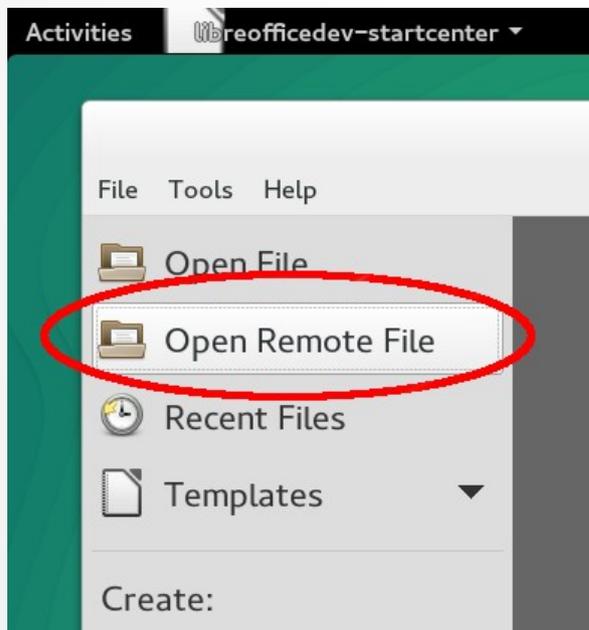
The screenshot shows a 'File Services' dialog box with the following fields and values:

- File Service**
 - Name: Google
 - Type: CMIS
- Server Details**
 - Server Type: Google Drive
 - Binding URL: https://www.googleapis.com/driv
 - Repository: Google Drive
 - Path: (empty)
- User Details**
 - Login: tietze.heiko@googlemail.com

Buttons: OK, Cancel, Help

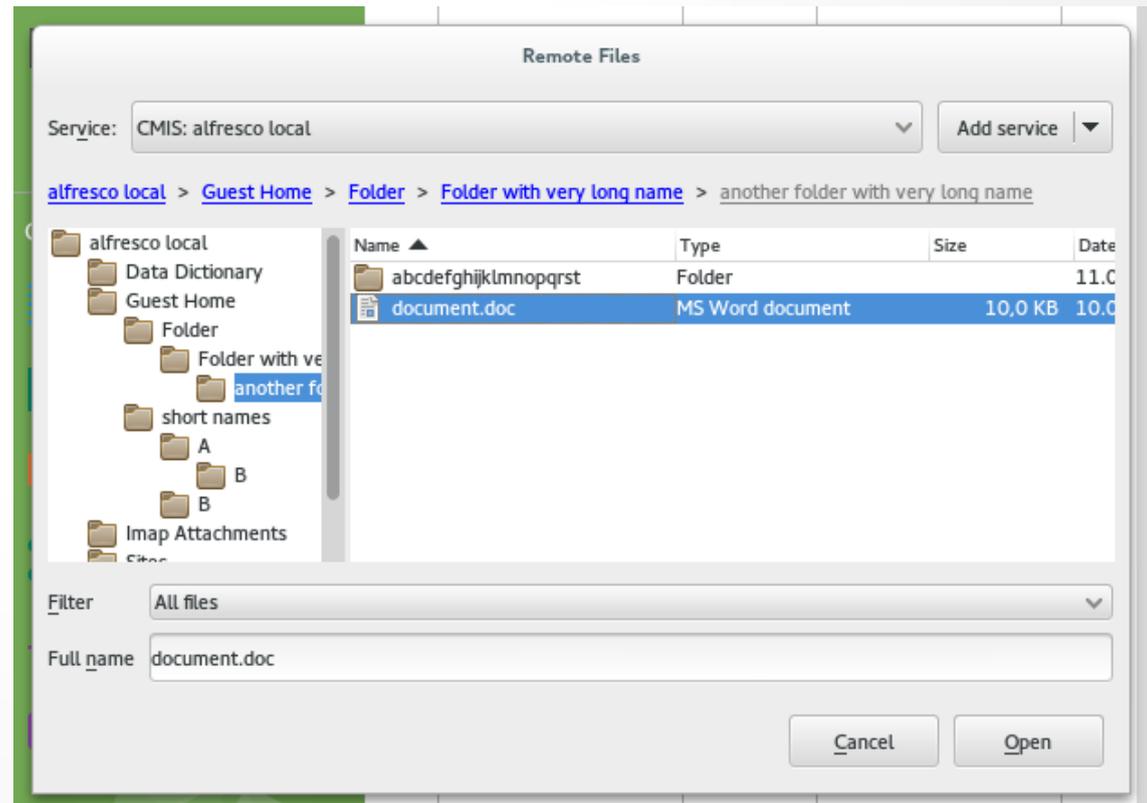
Guidelines

- Access from start center (to promote this)
- New dialog because integration with system's ones is very limited



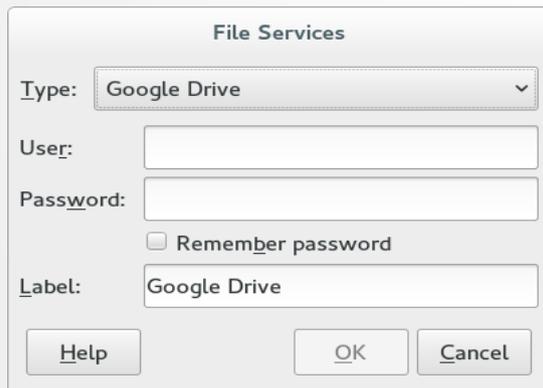
Guidelines – Remote Files Dialog

- Dropdown to select the predefined service that contains of type plus name
- Breadcrumb, folder view, and file list for navigation
- File name with autocompletion

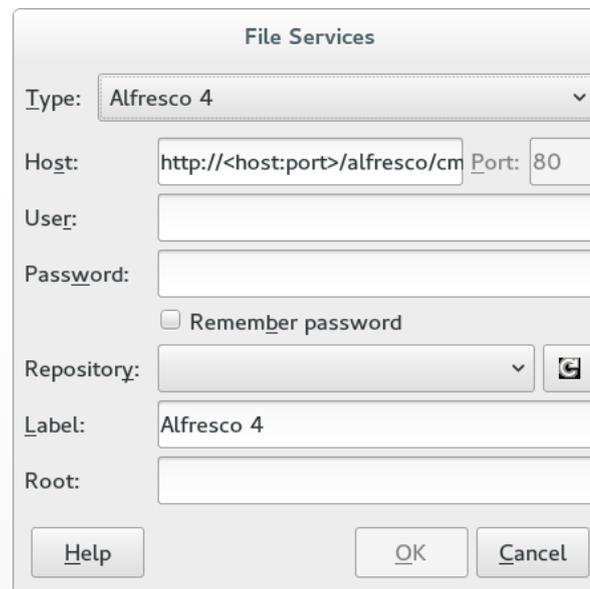


Guidelines – Add service

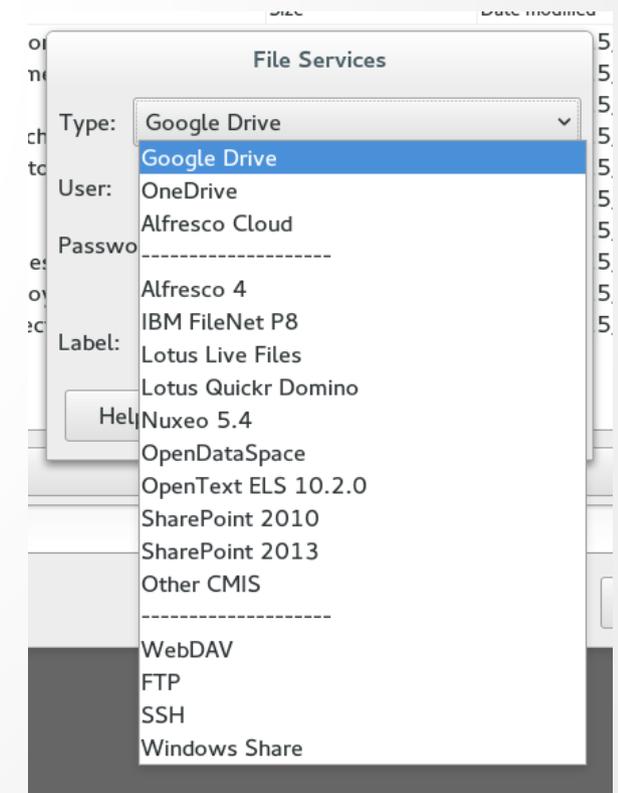
- A selection for the type first
- Types are organized and sorted user-centric
- Dialog's complexity depends on the connection type



The 'File Services' dialog box is shown with the 'Type' dropdown menu set to 'Google Drive'. The 'User' and 'Password' fields are empty. The 'Remember password' checkbox is unchecked. The 'Label' field contains 'Google Drive'. Buttons for 'Help', 'OK', and 'Cancel' are visible at the bottom.



The 'File Services' dialog box is shown with the 'Type' dropdown menu set to 'Alfresco 4'. The 'Host' field contains 'http://<host:port>/alfresco/cm' and the 'Port' field contains '80'. The 'User' and 'Password' fields are empty. The 'Remember password' checkbox is unchecked. The 'Repository' dropdown menu is empty. The 'Label' field contains 'Alfresco 4'. The 'Root' field is empty. Buttons for 'Help', 'OK', and 'Cancel' are visible at the bottom.



The 'File Services' dialog box is shown with the 'Type' dropdown menu open, displaying a list of service types. The 'Type' field is set to 'Google Drive'. The dropdown menu lists the following options: Google Drive (highlighted), OneDrive, Alfresco Cloud, Alfresco 4, IBM FileNet P8, Lotus Live Files, Lotus Quickr Domino, Nuxeo 5.4, OpenDataSpace, OpenText ELS 10.2.0, SharePoint 2010, SharePoint 2013, Other CMIS, WebDAV, FTP, SSH, and Windows Share. Buttons for 'Help', 'OK', and 'Cancel' are visible at the bottom.

Bugs – Failed authorization

- Two caching mechanisms:
 - ucb/cmris session cache
 - SimpleAuthenticationRequest - password storing

Session doesn't exist → SimpleAuthenticationRequest → init session → cache session

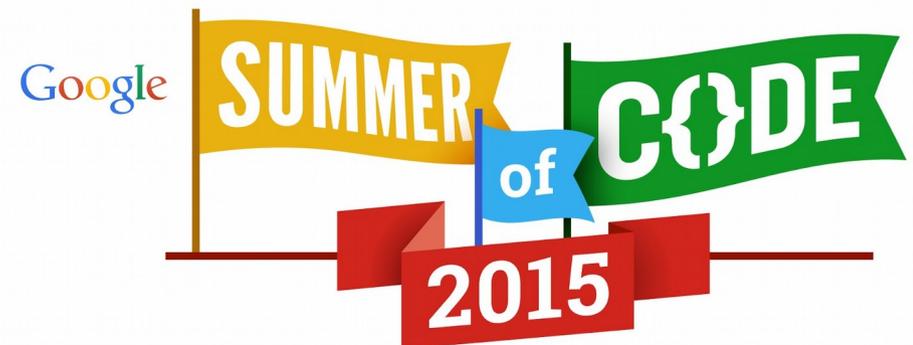
Bugs – Different users, one repo

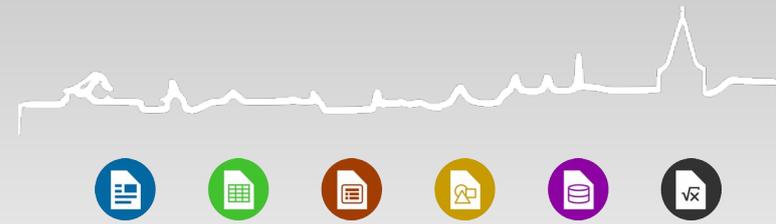
- CMIS session cache:
 - old key: Repo URL
 - new key: Repo URL + user name



More and Better Tests

- ▼ Varun Dhall, GSoCer
- ▼ 2015-09-23





- 1) Introduction
- 2) Goals of the project
- 3) Achievement
- 4) Future Scope

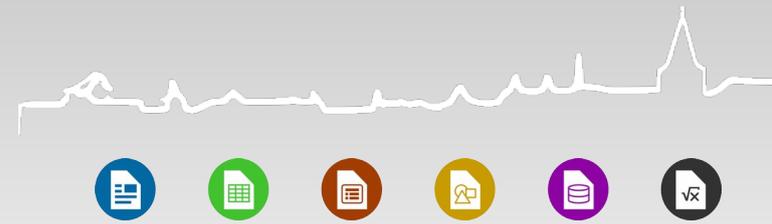




- ▼ I am Varun, a Computer Science and Engineering undergraduate from India
- ▼ I hacked this summer with LibreOffice and it was a great learning experience for me, it was really fun to work on various modules under the guidance of my mentors
- ▼ I got two cool, experienced and supporting mentors for my project :)
 - ▼ Michael Stahl, Red Hat
 - ▼ Bjoern Michaelsen, Canonical

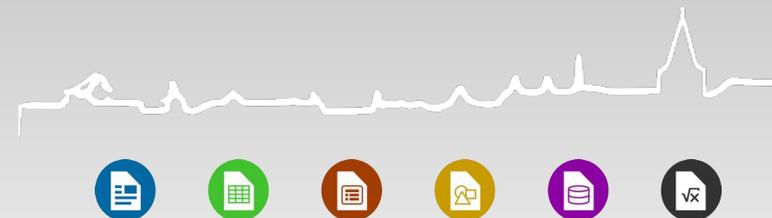


Goals of the Project



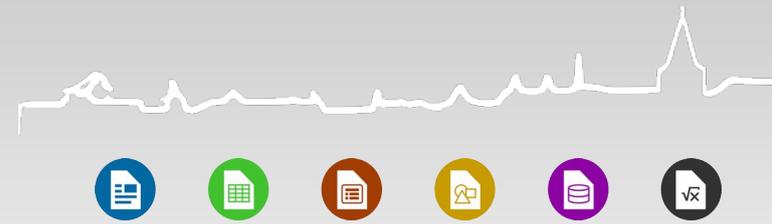
- ▼ Too few unit tests were available in existing codebase for 'Writer' or 'sw/'
- ▼ Old tests were written in Java (JUnit)
 - ▼ its important to write tests in C++ (CPPUnit) to make debugging easier for developers
- ▼ Some old APIs that were no more in use often makes the debugging difficult for developers
- ▼ The count of regression bugs/patches to those bugs was much greater than the number of unit tests available for those bugs
 - ▼ often result in multiple duplicate bugs





- ▼ Added 27 unit tests for regression bugs in Writer
 - ▼ 21 unit tests in `sw/../uiwriter.cxx`
 - ▼ 3 unit tests in `sw/../odfexport.cxx`
 - ▼ 2 unit tests in `sd/../export-tests.cxx`
 - ▼ 1 unit test in `sw/../odfimport.cxx`
- ▼ Added UNO test coverage for `SwXFlatParagraph`, `SwXParagraph`, `SwXTextDefaults` and `SwXTextSearch`
- ▼ Added script to remove thumbnail images from existing `.odt` files, reducing size of test documents





- ▼ As per the discovery of new bugs, new tests will be required from time to time
- ▼ The script written for removing thumbnail images from '.odt' files can be attached to git, to remove the extra data saving bandwidth and million bytes of data
- ▼ Existing tests in Java can be ported to C++
- ▼ Test coverage of existing source files can be increased to uncover hidden flaws(if any)



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- ▶ Thanks a lot for your attention
- ▶ Thank you GOOGLE for sponsoring!!!
- ▶ Thank you mentors for your time & encouragement
- ▶ Spread the word, encourage students to apply next year!



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