Collabora LibreOffice The Document Foundation SUSE

Bringing the Notebookbar to Online

Collabora Office

OPENSUSE-LIBREOFFICE CONF'20

2020

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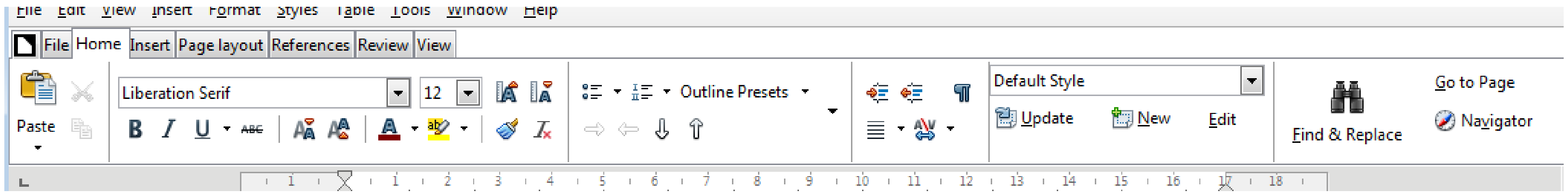
Software Engineer at Collabora Productivity

Includes MySQL LINUX MAGAZINE datto ADMIN Network & Security fedora TUXEDO COMPUTERS .riessapplications Required Magic advanced technology

Notebookbar on the desktop

- Introduced as an experimental feature (GSoC project) in 2016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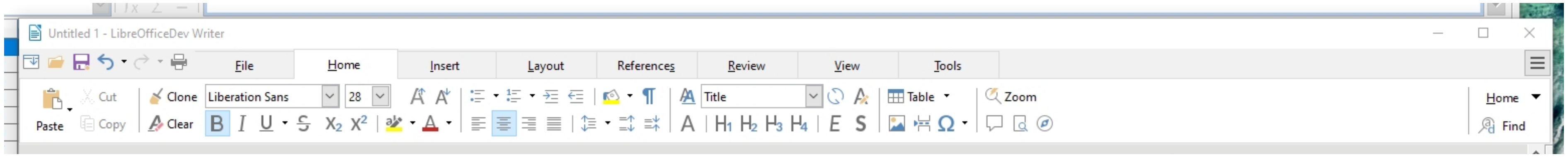
- Polished in next editions by **Kshitij Pathania** (2018) and **Sumit Chauhan** (2019)
- Most of the conceptual work, design and tweaking the look by **Andreas Kainz**
- Released in LibreOffice 6.2 in few variants


Untitled 1 - LibreOfficeDev Writer
File Home Insert Layout References Review View Tools
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28
Title
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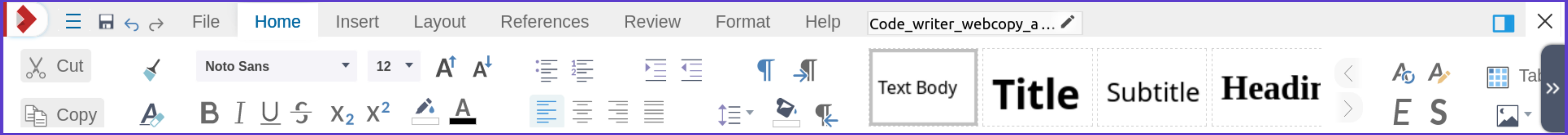
Bringing the Notebookbar to Online

Feature frequently requested by Collabora Office customers.

Collabora Productivity

Notebookbar in CODE 6.4 (Collabora Online Development Edition)



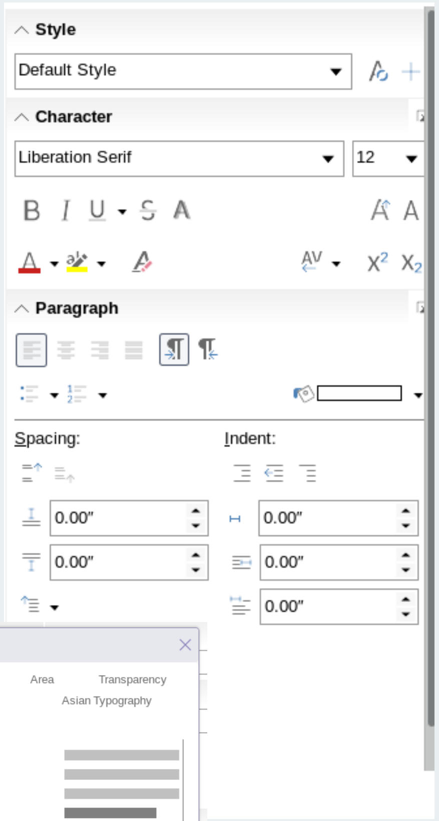
Re-using UI bits from desktop so far

We already had dialogs and the sidebar in Online.

Pixel-based canvas transferred from the server.

We send mouse events and receive updates.

We can’t do the same, Notebookbar on desktop has many things we don’t need in Online.



Style

Default Style

Character

Liberation Serif 12

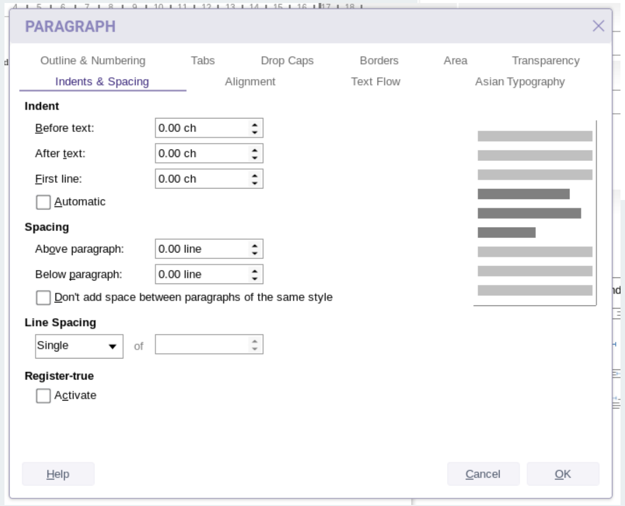
Paragraph

Spacing: Indent:

0.00″ 0.00″

0.00″ 0.00″

0.00″



PARAGRAPH

Outline & Numbering | Tabs | Drop Caps | Borders | Area | Transparency

Indents & Spacing | Alignment | Text Flow | Asian Typography

Indent

Before text: 0.00 ch

After text: 0.00 ch

First line: 0.00 ch

☐ Automatic

Spacing

Above paragraph: 0.00 line

Below paragraph: 0.00 line

☐ Don't add space between paragraphs of the same style

Line Spacing

Single of

Register-true

☐ Activate

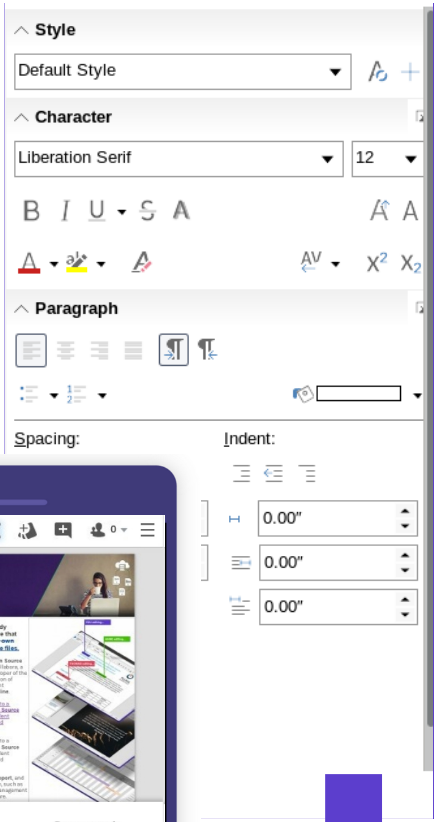
Help Cancel OK

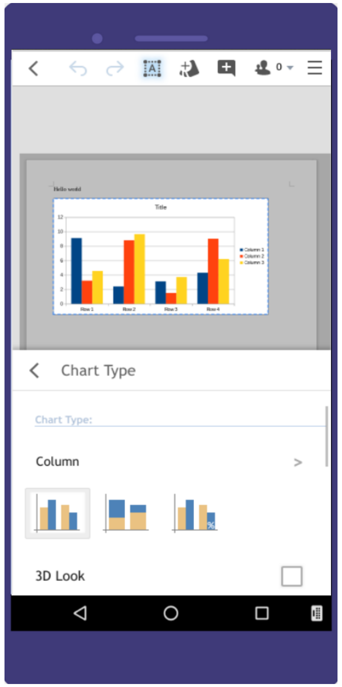
Native controls – sidebar on mobile phones

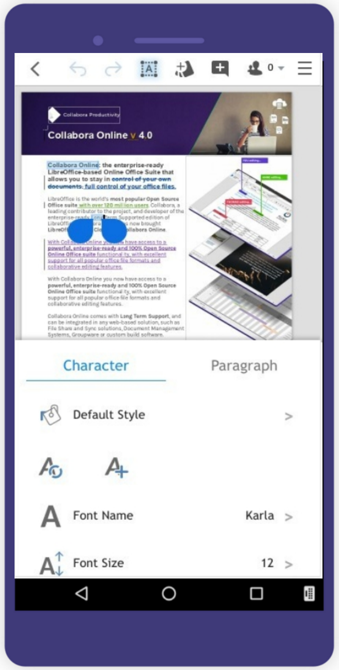
HTML based, better integrated with the rest of UI.

Re-layouted for better user experience.

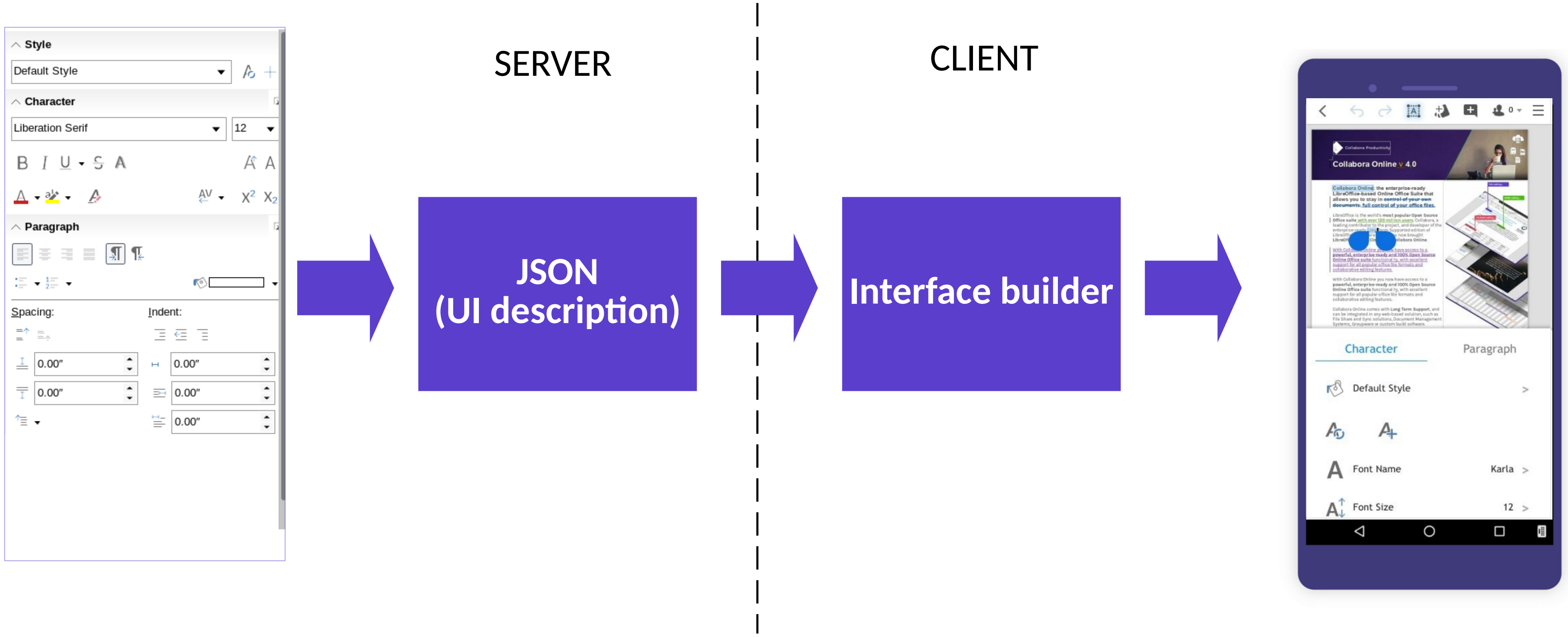
My next talk with technical details about re-using sidebar on mobile phones will take place on **17 October**.







How native controls are built

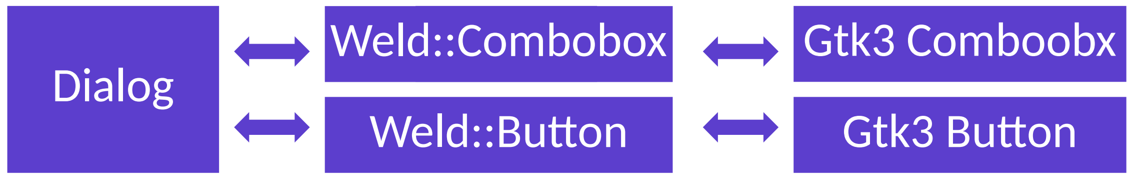


Reaction on user input

- When user performs any action send control type and event data eg. **selected position 3** in the **listbox** with id ‘**X**’
- Sever does the same change and renders the new JSON which is sent back to the client

Welding in vcl

- Way to use native controls on desktop, implemented by Caolán McNamara
- Currently gtk3 only implementation
- Adds an abstraction level which is a bridge between native UI and LibreOffice dialogs code



Welding in vcl

Advantages of using welded wrappers

- We receive information about every modification of a control
- We can inform parent dialog about input performed by user eg. mouse press

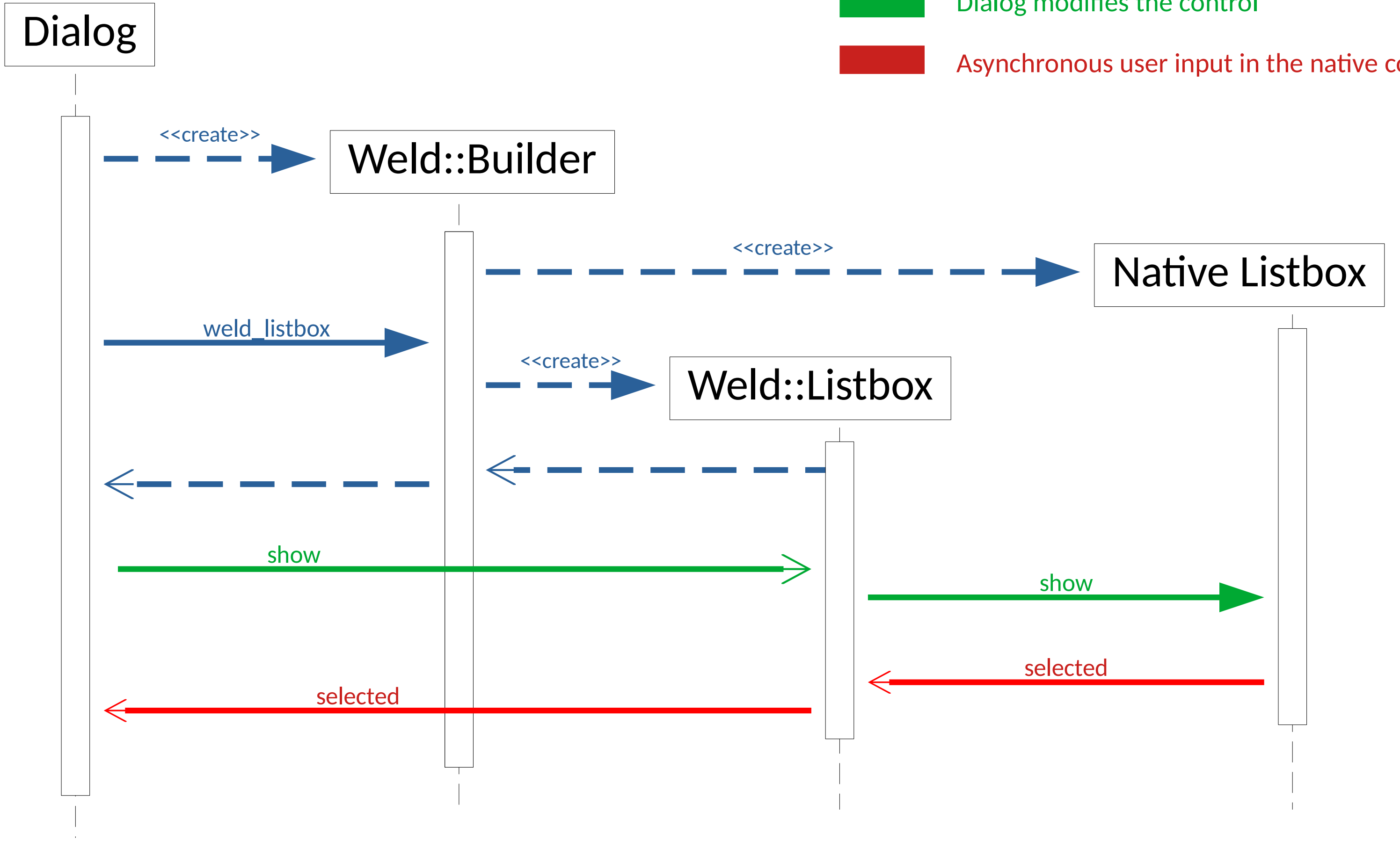
```
namespace weld
{

class VCL_DLLPUBLIC Widget
{
protected:
    …
    Link<const MouseEvent&, bool> m_aMousePressHdl;
    …

public:
    virtual void set_sensitive(bool sensitive) = 0;
    virtual bool get_sensitive() const = 0;
    virtual void show() = 0;
    virtual void hide() = 0;

…
    virtual void connect_mouse_press(…)
```

Welding in vcl

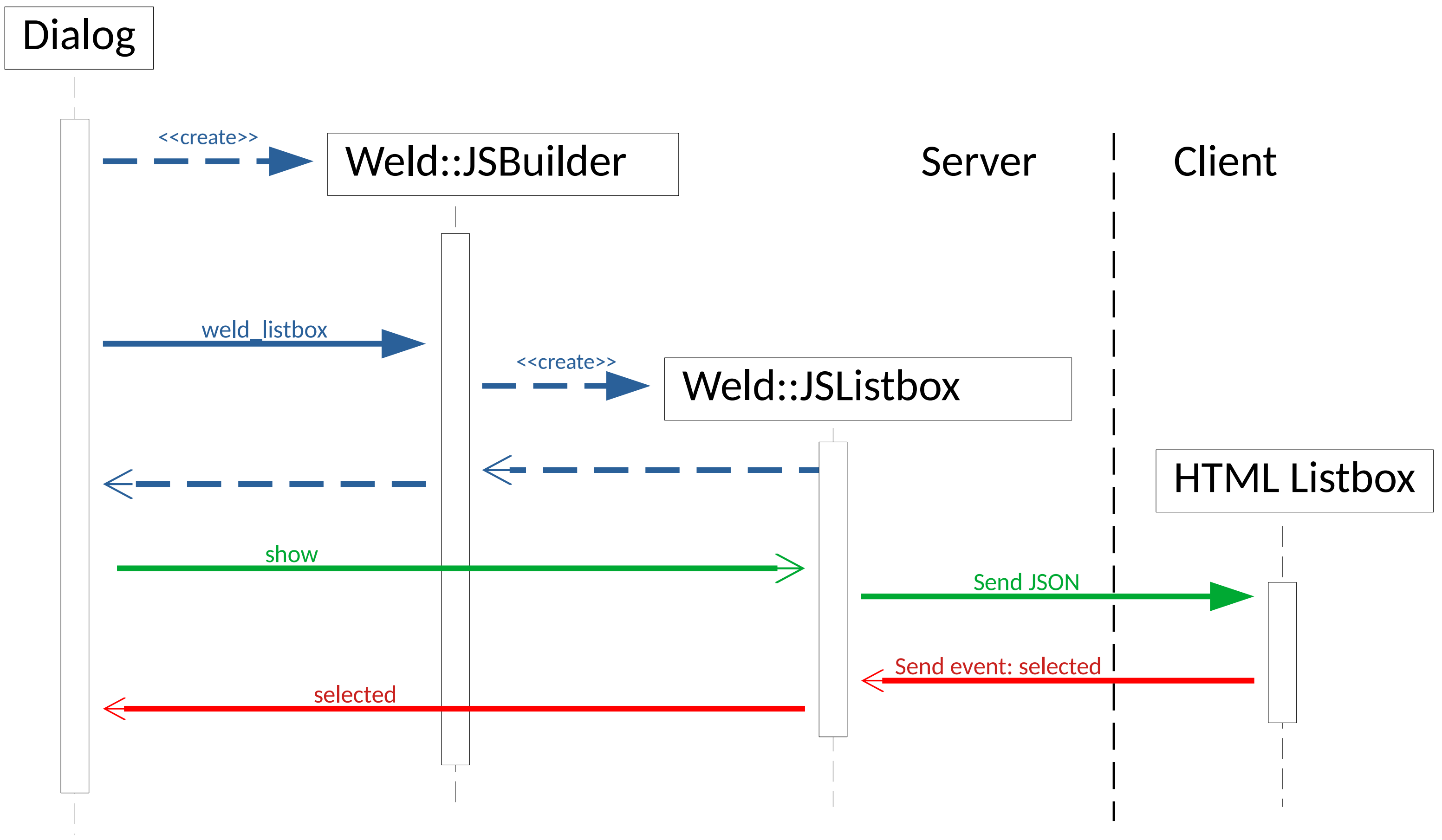
🟦 Building

🟩 Dialog modifies the control

🟥 Asynchronous user input in the native control

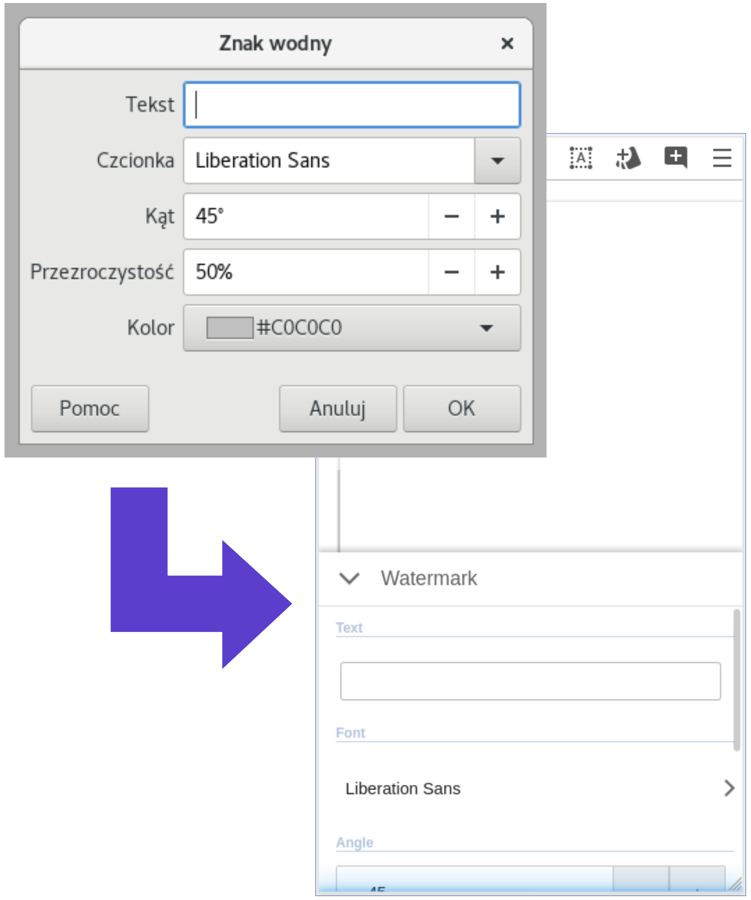


Using welding in online



Dialogs on mobile using welded widgets

- Code in **vcl/jsdialog**
- Implemented weld::Builder and control wrappers
- JSInstanceBuilder is injected only for few dialogs we want in online, only on mobile devices.
- Wrappers send JSON on control change
- **vcl/jsdialog/executor.cxx** code executes commands received from a client eg. when something is selected in a listbox



Znak wodny

Tekst	
Czcionka	Liberation Sans
Kąt	45°
Przezroczystość	50%
Kolor	#C0C0C0

Introducing Notebookbar in online

Core part:

- **NotebookBar** control only creates container (vcl/control/notebookbar.cxx)
- Sfx2 part creates **WeldedTabbedNotebookbar** in the container
- **WeldedTabbedNotebookbar** creates **JSInstanceBuilder** and welds the **TabControl**
- Notebookbar is not fully welded but it is enough to switch tabs
- Code moved to sfx2 where we have more information about current view so we can manage notebookbar creation per view

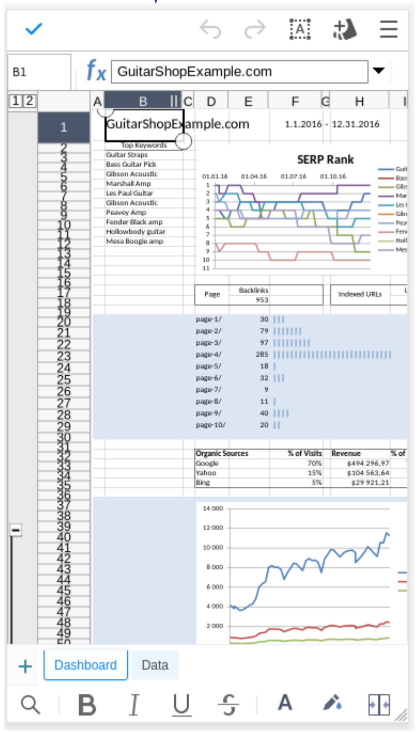
Introducing Notebookbar in online

Online part:

- First problem: we need only part of the classic UI
- Big rework of UI initialization
- Split **Control.Toolbar.js** monster into smaller pieces
- Created **Control.UIManager.js** which builds the UI depending on device and file type

Control.MobileTopBar.js

Control.FormulaBar.js



Control.SheetsBar.js

Control.MobileBottomBar.js

Introducing Notebookbar in online

Online - new files:

- **Control.Notebookbar.js** contains common container code like: resize handling, tabs insertion into menubar
- **Control.NotebookbarWriter.js, Control.NotebookbarCalc.js**

  and **Control.NotebookbarImpress.js** – inherits from **Control.Notebookbar.js,** contain list of available tabs, custom tabs definitions
- **Control.UIManager.js** initializes correct container depending on file opened
- Added switch in the **loolwsd.xml** config to select classic or notebookbar mode

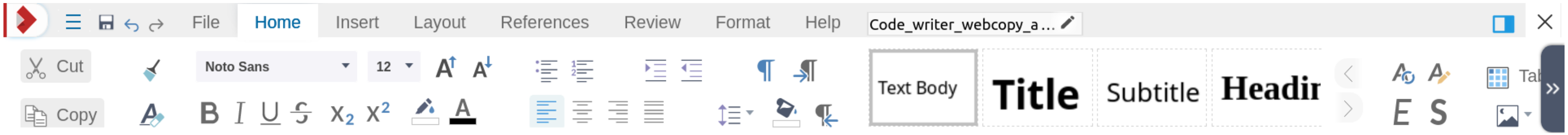
```
<user_interface><mode> notebookbar </mode></user_interface>
```

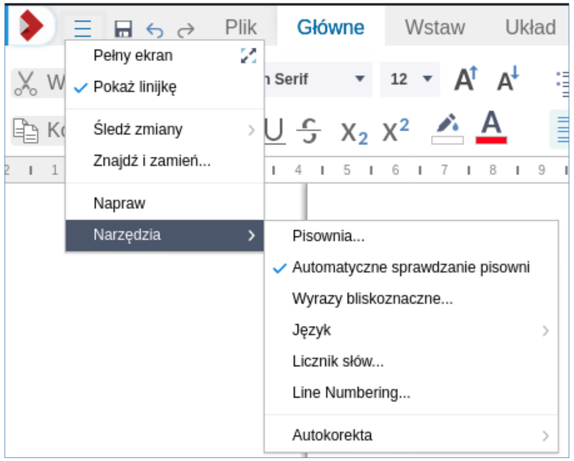
Introducing Notebookbar in online

Online part:

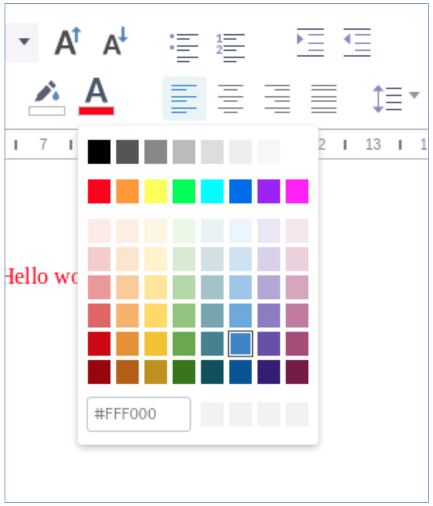
- Based on **Control.JSDialogBuilder.js** created **Control.NotebookbarBuilder.js**
- **NotebookbarBuilder** has redesigned build function which builds the UI horizontally, also using div elements instead of tables
- Ported few custom widgets already present in the toolbars like: style/font selector, insert table popup, conditional formatting popup

Custom widgets and popups in Notebookbar

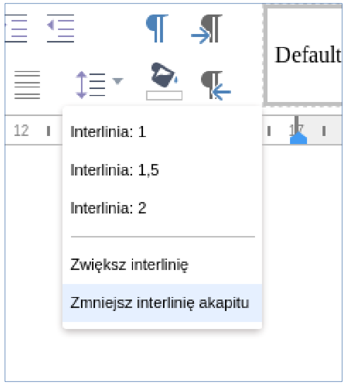




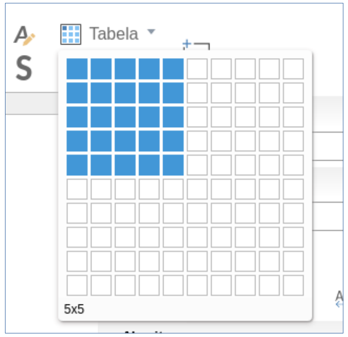
Hamburger menu



Color pickers

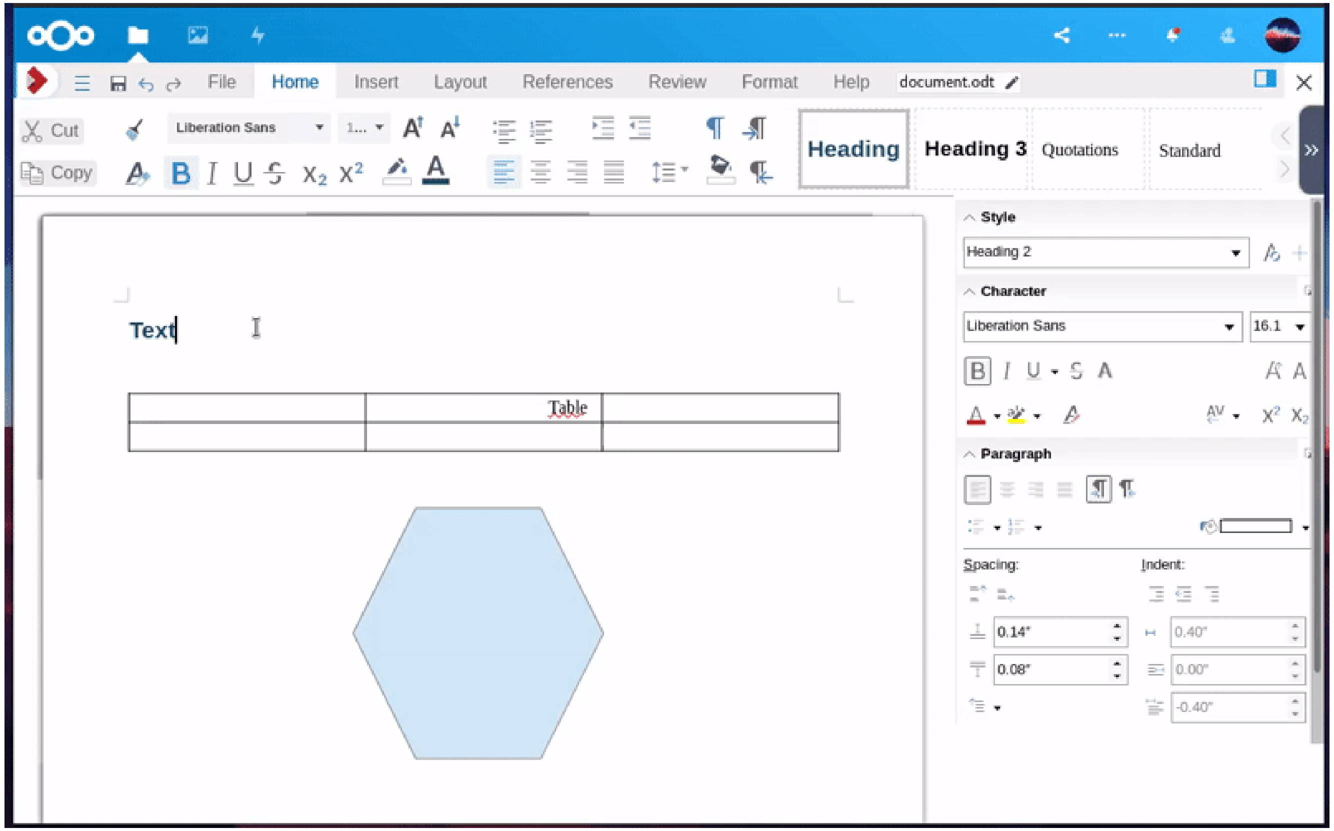


Line spacing dropdown

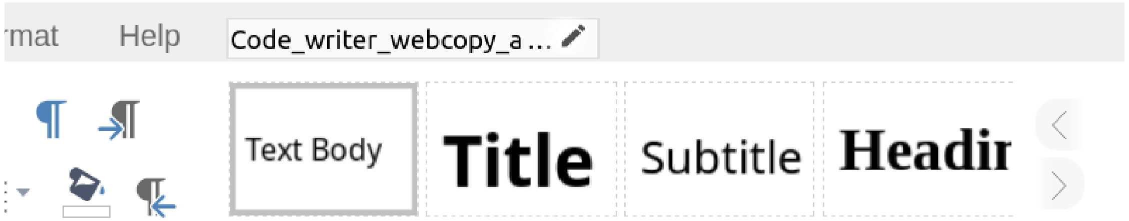


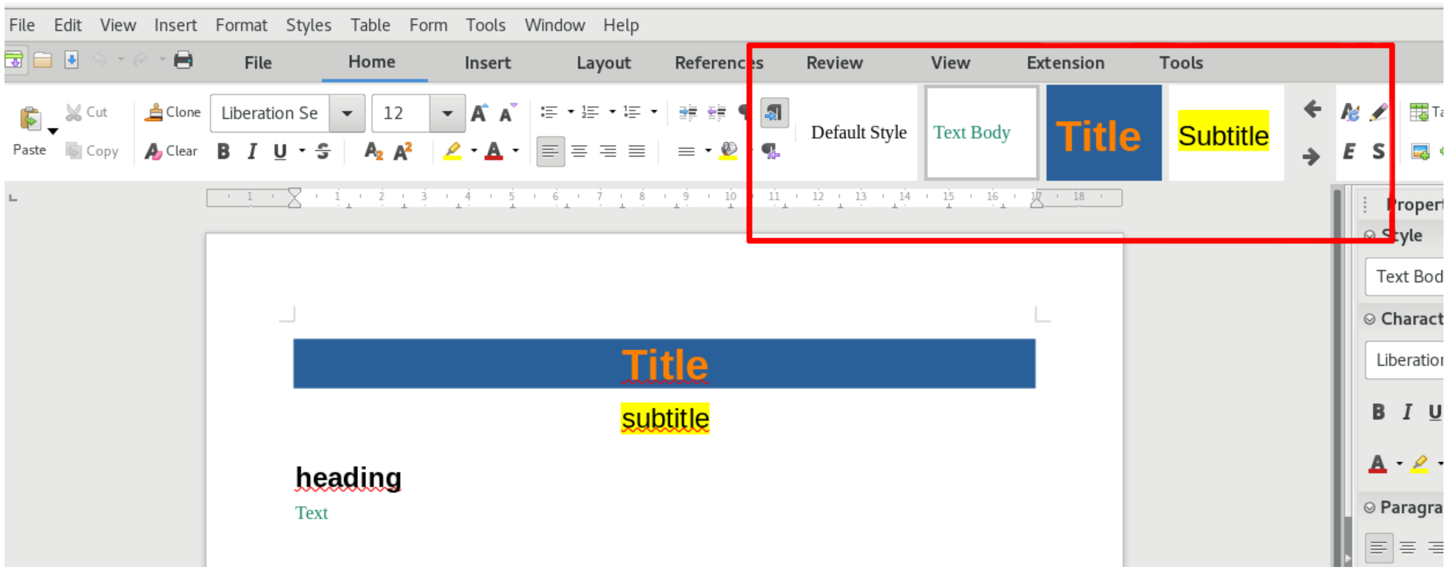
Insert table dropdown

Context handling



Styles preview





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heading
Text

Collabora Productivity

Thank you!

Checkout the CODE 6.4 with notebookbar!

By Szymon Kłos

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