SCREENSHOTTING YOUR WAY THROUGH THE CODEBASE

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SCREENSHOTTING YOUR WAY THROUGH THE CODEBASE

1. WHY SCREENSHOTS, ANYWAY?
2. WHAT HAVE WE DONE AND HOW?
WHY SCREENSHOTS, ANYWAY?
IF ALL ELSE FAILS, READ HELP (F1)
**Menu bar**

When you select an item on the Menu bar, a sub-menu drops down to show commands. You can also customize the Menu bar; see *Chapter 14 Customizing LibreOffice* for more information.

- **File** – contains commands that apply to the entire document; for example, *Open, Save, Wizards, Export as PDF, Print, Digital Signatures*.
- **Edit** – contains commands for editing the document; for example, *Undo, Copy, Changes, Fill, Plug-in*. 

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*Figure 1: Calc main dialog*
JOURNEY THROUGH THE LAYERS OF LEGACY HELP CONTENT

- Help content in „self-invented“ .xhp format
- Tedious, hard-to-maintain and hard-to-extend transformation XHP ➔ XSLT ➔ HTML
- Help-specific images part of icon themes
  - not sustainable for larger amount of graphical content in many languages
- Challenging to insert more complex content (screenshot, image etc.) in an efficient, easily repeatable way
  - for multiple platforms
  - for multiple languages

Date: July 2016
GENERATING SCREENSHOT MUST BE

- Repeatable
- Generate an updated set of screenshots with every new release
- Platform- and environment-specific
  - Different sets of screenshots for different platforms (Linux, Win, Mac) ...
  - ... and different icon sets, themes
- Localizable
- Screenshots to match the locale of the help text
WHAT HAVE WE DONE AND HOW?
OPEN THAT DIALOG!
WAIT - THERE IS A FRAMEWORK OPENING DIALOGS ALREADY ... 

- UI-testing framework based on PyUNO (by Markus Mohrhard)
- Opens dialogs (by dispatching corresponding UNO commands)
- Simulates mouse/keyboard events on misc widgets
- But ...
  - performance issues
  - verbose, fragile code
  - challenging to debug PyUNO
SOLUTION: USE ABSTRACT DIALOG FACTORY

- Open an empty document from cppunit test
- Instantiate abstract dialog factory (contained in Writer/Calc/Impress docshell already)
- Create any (fake) objects the dialog requires in order to open – SfxItems, strings etc.
- Open the dialog
- Use OutputDevice to take a screenshot in .png format
... BUT IT WAS MORE WORK THAN WE EXPECTED

- Fallback to ui-previewer (small C++ binary for previewing LibreOffice .ui files)
- To some extent usable screenshots, but ...
  - Not coping with some custom widgets so well
  - No way to specify input data
- Some dialogs blacklisted, crash with no input
STORE THE SCREENSHOTS

- Results in `/workdir/screenshots` directory
- Directory structure to copy storage of .ui files
  - `/workdir/screenshots/cui/ui/areatabpage/AreaTabPage.png`
- Make them all: `make screenshot`
  - a separate gbuild target
ENHANCE THE HELP TEXTS
GET 'EM IN

→ Copy generated screenshots from `workdir` to a dedicated folder in help repository
→ Extend Perl scripts packaging the images to collect content also from help repository
  → previously only possible for `icon-themes` folder
→ Embed images into help files
  → I ❤ HelpAuthoring extension :P
→ Images implemented as `vnd.libreoffice.image://` URL
  → localization for free (with matching directory structure)
LIVE DEMO
NEXT STEPS
WHAT'S NEXT?

- Improve the annotation process and markup
  - Possibly HelpAuthoring integration
- Automate updating the screenshots
  - for multiple languages
  - for multiple platforms
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THANK YOU!