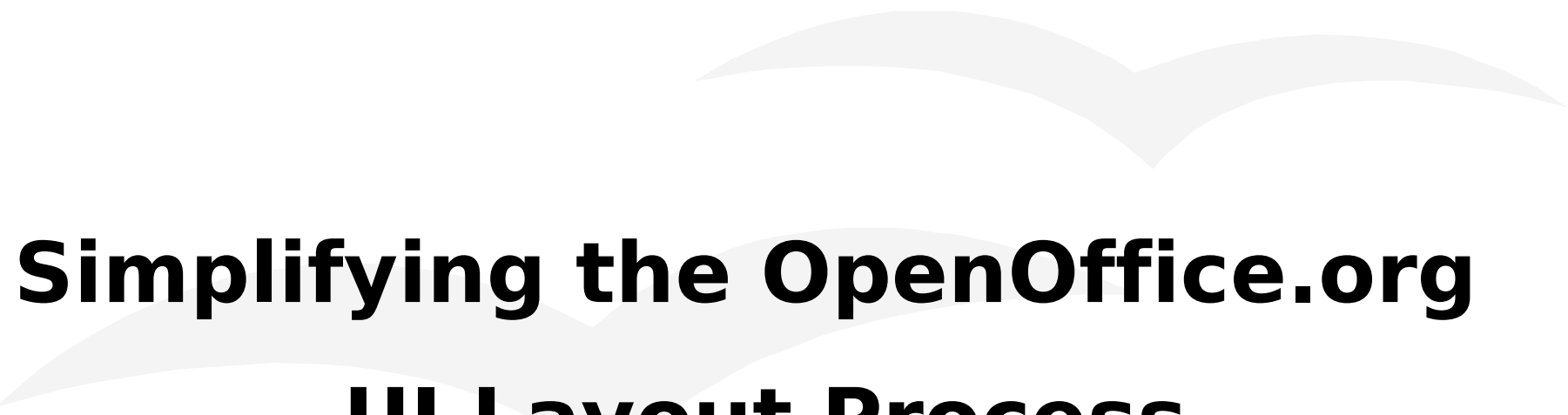




OOoCon 2004 - Berlin



Simplifying the OpenOffice.org UI Layout Process

Dan Williams – Red Hat, Inc.



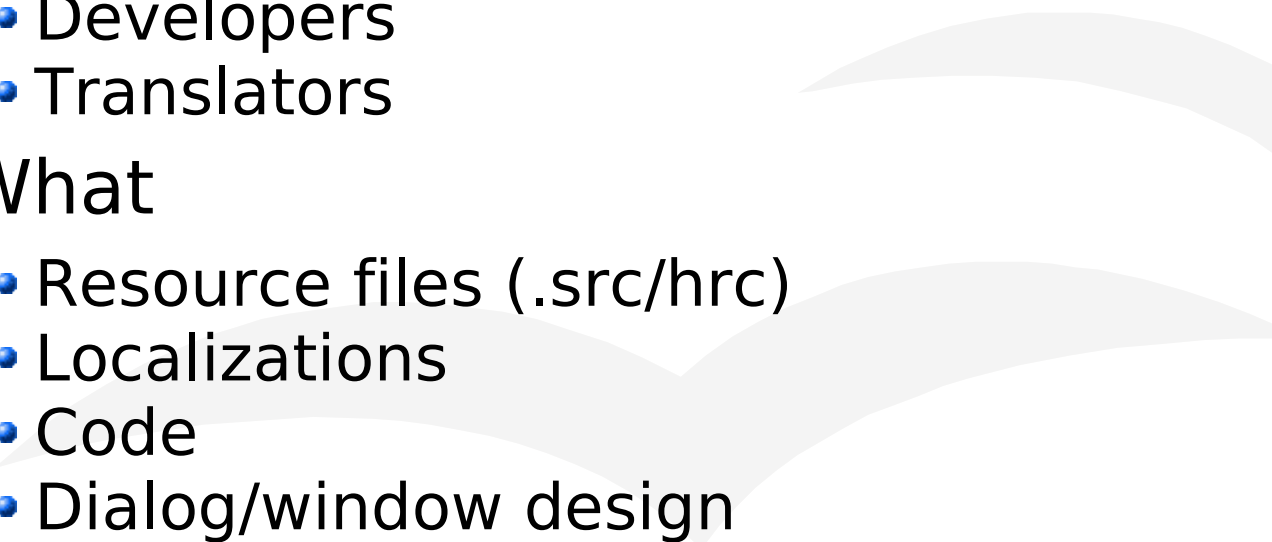


What does that mean?

- The Problem: The Pain of creating new user interface elements and localizations
 - Dialogs
 - Windows
 - Forms/Controls/etc...
 - Localizations
- The Fix
 - New resource format (affects translations)
 - GUI dialog editor
 - Layout-based user interface



Who and What is Involved

- Who
 - Visual designers/Interaction Engineers
 - Developers
 - Translators
 - What
 - Resource files (.src/hrc)
 - Localizations
 - Code
 - Dialog/window design
- 



New Dialog Design

- Current Process

- Sketch the dialog on paper
- Mock it up in Photoshop/Illustrator/whatever
- Write a .src/.hrc file
- Code it, run it
- Spacing sucks, fix .src file
- Rebuild, re-run
- Button size too big, fix .src file
- Rebuild, re-run
- ...

- Why this sucks

- Too many people involved
- Much wasted effort, inefficient
- Hard to prototype changes
- Hard to localize
- Pain to make changes later, rebuild required



Utopia

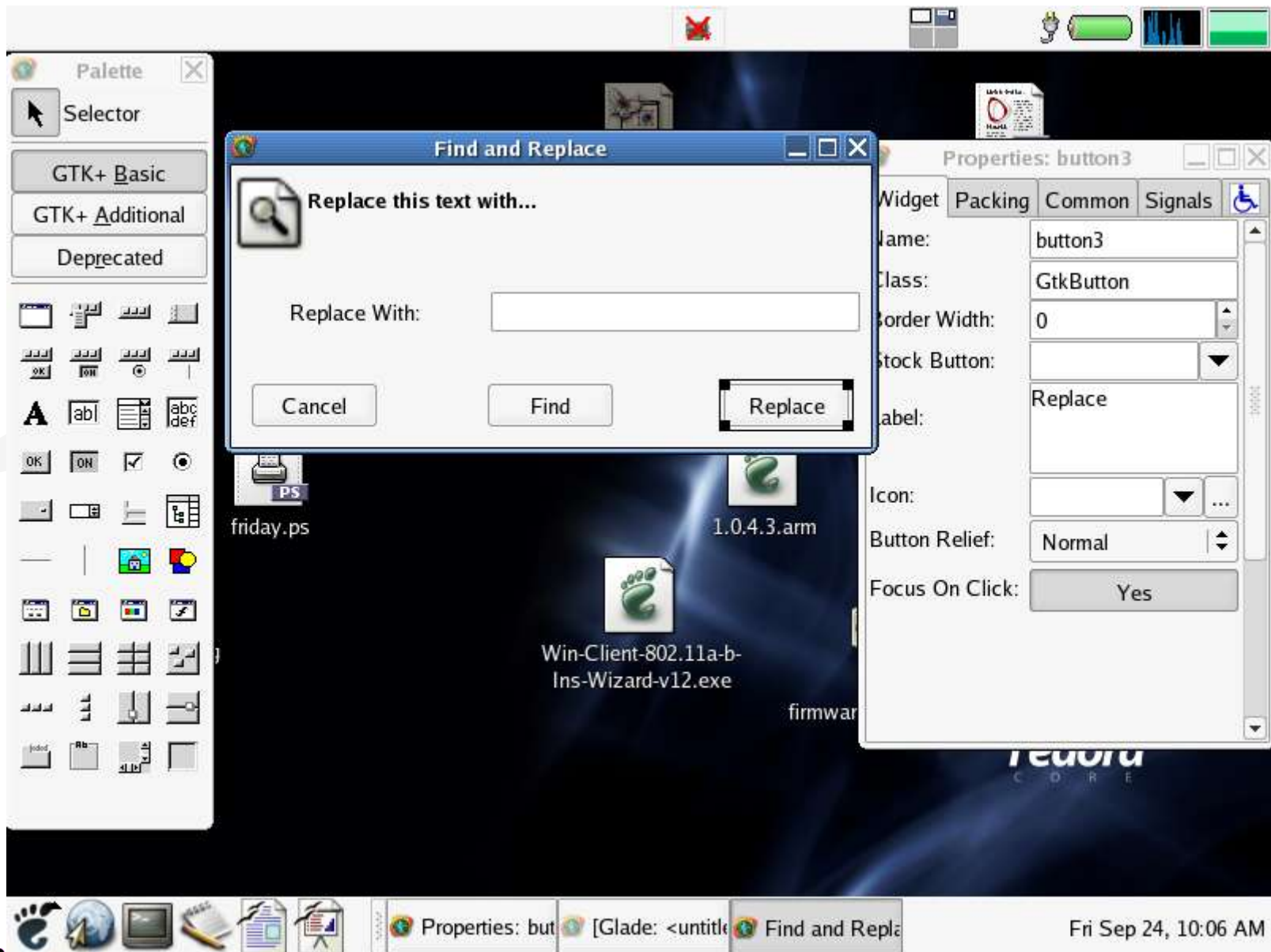
- Prototype in a GUI builder (think Glade, Qt Designer)
- Make it look really really cool and usable
- Save it
- Code it
- Run OOo, dialog needs modifications
- *Directly* modify resource source file in the GUI builder
- Relaunch OOo (no rebuild required)
- Bonus: Same process for localization



Why this helps us

- Make it much easier to modify the OOo User Interface
- Lower the difficulty of developing and experimenting with the OOo UI
- Help attract external talent to make OOo more usable
- Get cool new ideas because its easy to do
- Translations are easier

GUI Builder Example: Glade





Stuff to Change

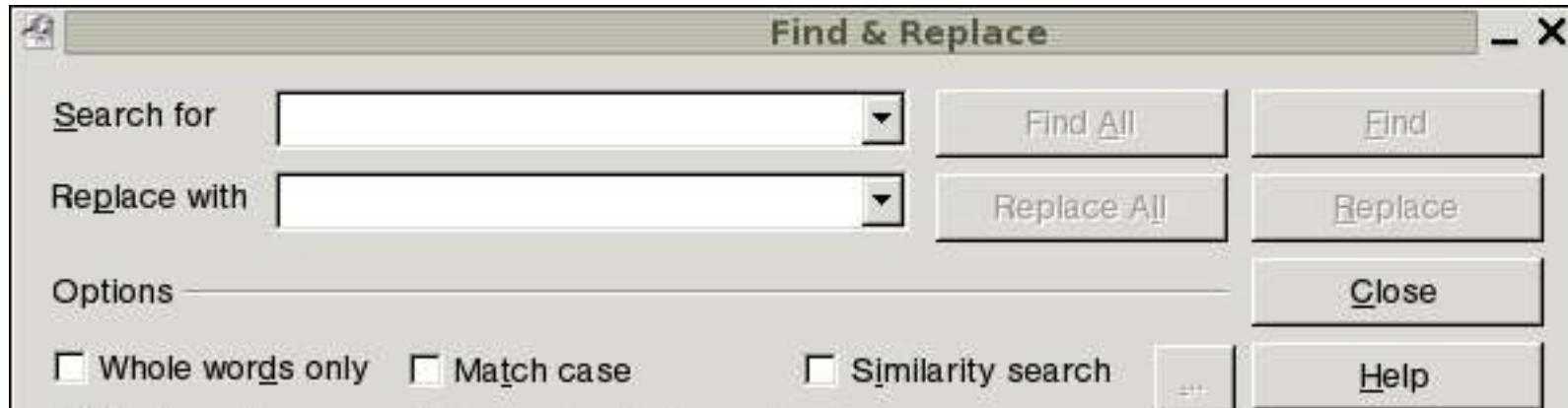
- VCL
 - Make it layout-based
- Resource Manager
 - New resource file format
 - Non-binary
 - Parsed at run-time
 - Localizations in separate files
- Write a GUI builder



Changes to the VCL

- Layout-based
 - Objects are positioned and sized according to their neighbors and the window size
 - GTK+, HTML, Cocoa/Interface Builder, XUL(?)
 - **Resolves visual translation problems**
 - Michael Meeks has already done it, prototype is in ooo-build
 - Simple container model (unlike GTK+)
 - Doesn't need to have a widget hierarchy like GTK+, layout can be independent of the actual widgets
 - Don't need huge numbers of packing properties

A Layout-based VCL



Find & Replace

Search for

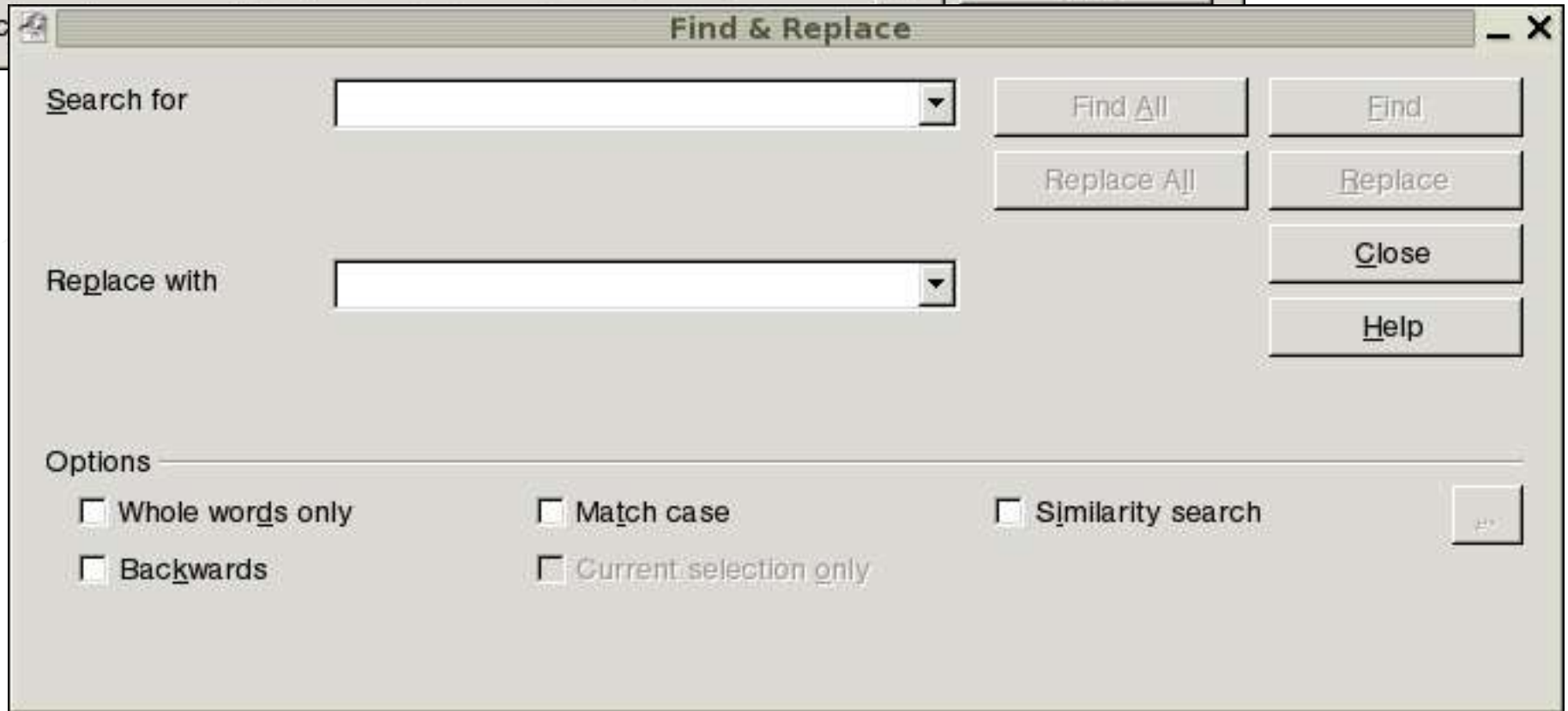
Replace with

Options

Whole words only Match case Similarity search

Backwards

Buttons: Find All, Find, Replace All, Replace, Close, Help



Find & Replace

Search for

Replace with

Options

Whole words only Match case Similarity search

Backwards Current selection only

Buttons: Find All, Find, Replace All, Replace, Close, Help



Resource Manager Changes

- Some things to consider
 - 1 resource file = 1 dialog (or menu)
 - Should be **human readable, non-binary**
 - OOo should parse resource file, **no compilation** required
 - Format choices:
 - XML
 - XUL
 - ???
 - Speed concerns with parsing non-binary formats
 - All resource files in a .zip, like 680 artwork?
 - Translations should not be in resource files
- Conversion should happen in parallel with the current system, 1 dialog at a time



GUI Builder

- We need to write one
- Keep it simple and limited to dialog/menu design
- Code it to the VCL so it runs on all platforms
- Could use existing builders like Glade and XSLT transform their output to bootstrap ourselves



Discussion

- Resource file format
 - XML? XUL? Something else?
 - How to store it on-disk so its fast
 - Keep it simple, preferably no caching or other layers of obfuscation
 - 1 dialog = 1 file?
 - How does this change localization?
- VCL changes & layout
 - Everybody agrees layout is the way to go
- GUI builder
 - Should we write our own (I think so)