



Calc & Impress Tiled Rendering

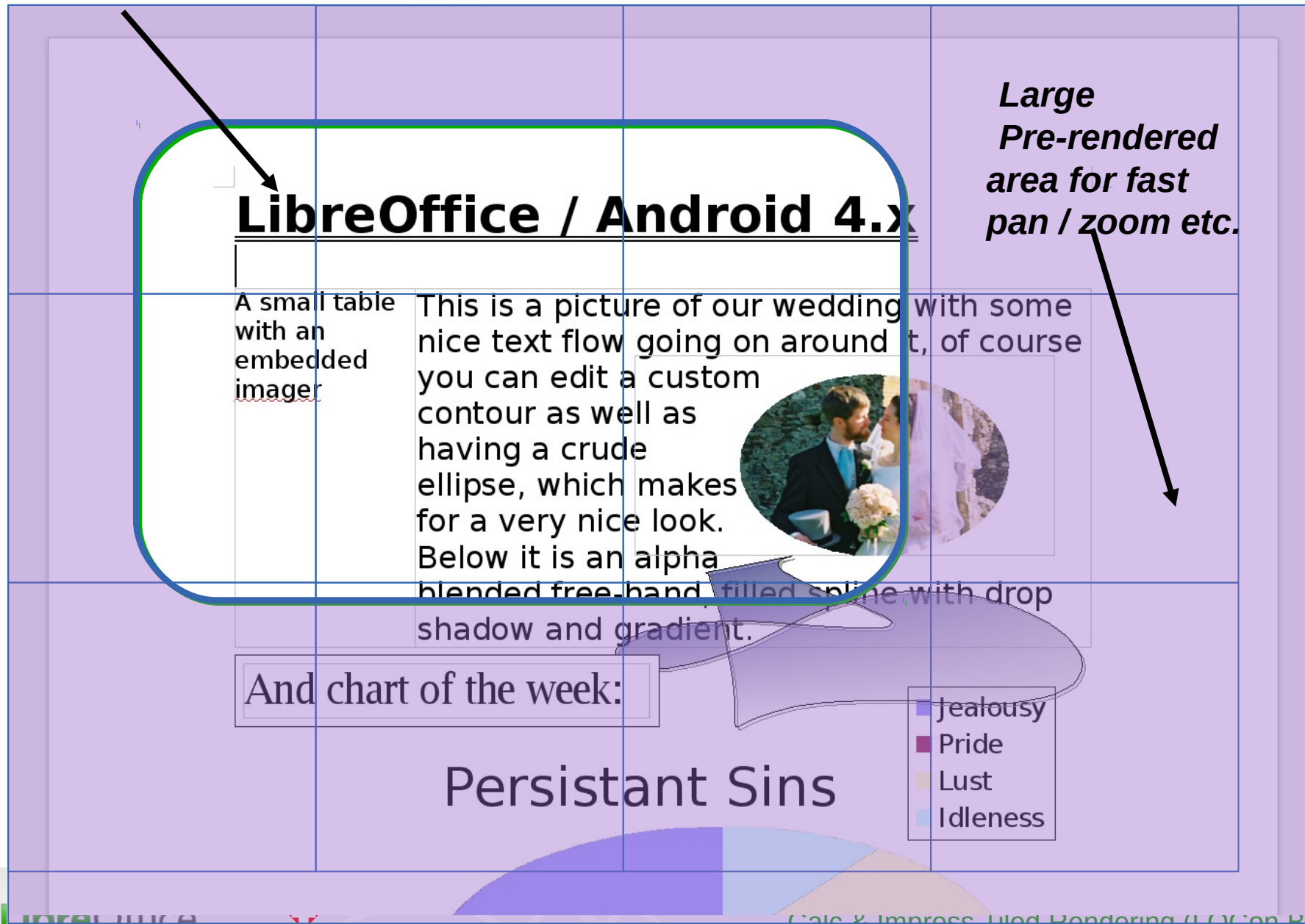
- Andrzej Hunt

Fast Tiled Rendering in textures

Kindly stolen from Michael Meeks



Tablet display



Why Tiled Rendering



- ▼ Useful for:
 - ▼ **Mobile Usage** (smooth scrolling/zooming).
 - ▼ External usage, **GTK+(/Qt?)** integration.
- ▼ Tiled Rendering in:
 - ▼ Firefox for Android (“Fennec”)
 - ▼ Possibly some iOS apps? (At least for our iOS tiled viewer.)
 - ▼ ...

Tools & Plumbing <Extra Slide>

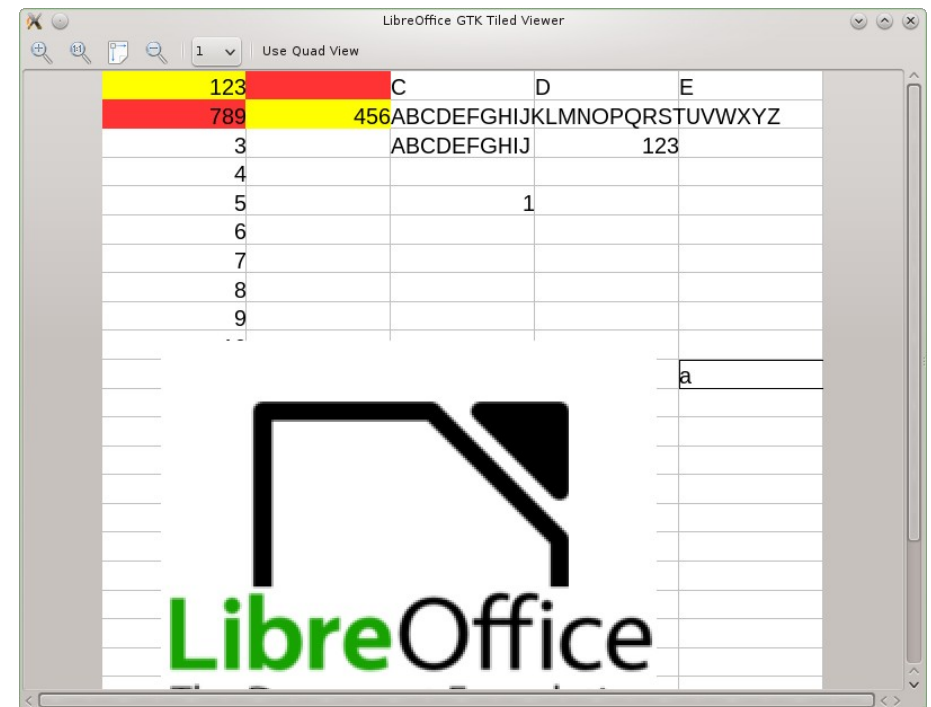


- ▼ Made available via [LibreOfficeKit](#).
 - ▼ And a [LOKDocView GTK+ widget](#).
 - ▼ Widget not useful yet: renders one (huge) tile.
 - ▼ Hopefully *someone* will upgrade it?
 - ▼ [gtktiledviewer](#) using the GTK+ widget also available, run:
 - ▼

```
./instdir/program/gtktiledviewer INSTDIR_PATH/program DOC_PATH
```
- ▼ Unit tests for LOK:
 - ▼ Primarily rendering & tile matching.
 - ▼ Disabled for now: document loading issues on some tinderboxes, not good debug output.
 - ▼ Uncovered issues with the svp vcl backend (i.e. bitmap rendering), and also viewport setup.



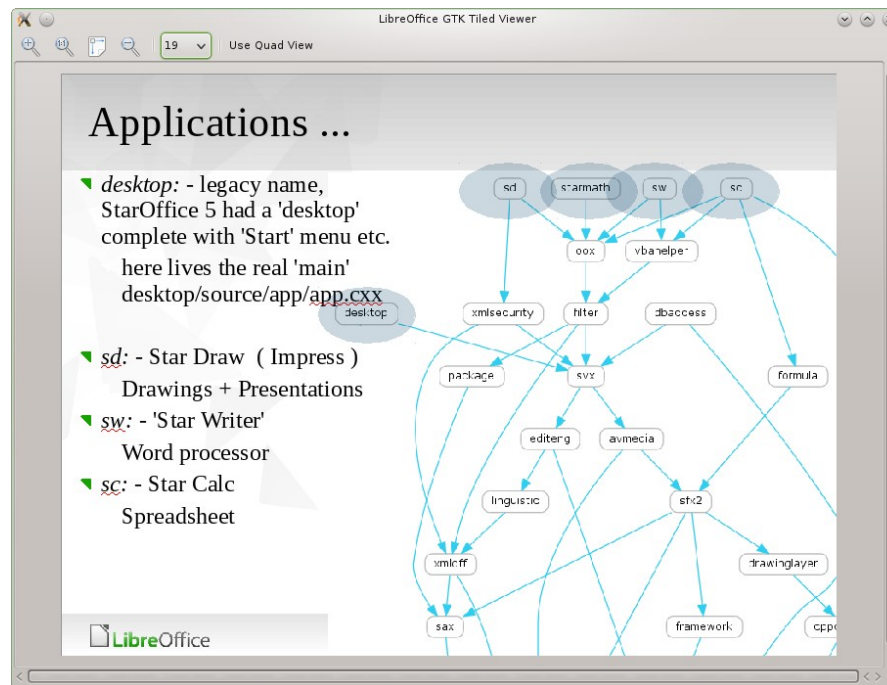
- ▼ Cell / grid rendering:
 - ▼ Assumptions wrt on-screen window & cells aligned to it.
 - ▼ Loss of precision for scaling (multiple lossy multiplications).
 - ▼ Not useable for us.
 - ▼ Various breakage when adapting.
 - ▼ Mostly working now, some features still need adapting.
- ▼ Drawing Layer fortunately quite simple (i.e. more or less what we do for Impress/Draw).
- ▼ Still on (a) branch(es).



Impress (and Draw)



- ▼ Complex design: Slow to understand...
- ▼ But simple to implement (5 lines-ish)
- ▼ **Draw** uses the same code, comes for free :).



Related Work



- ▼ LibreOffice **Android Viewer**: by Collabora, thanks to Smoose:
 - ▼ More from Tomaž **tomorrow** (Thu) @ **3pm**.
 - ▼ Useable: **Writer** and **Impress/Draw**.
 - ▼ **Calc** branch doesn't work yet...

