



Lucide

a plugin based document viewer for OS/2 and eCS



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a plugin based document viewer for OS/2 and eCS

- PDF and DjVu
- The History
- From Version 1.21 to 1.3.2
- Plugins / Lucide intern
- The Future



PDF

- Designed for
 - Platform independent reproduction of two dimensional documents
 - Document exchange
 - Text, Images, Vector Graphics
 - AcroForms
 - Security / Signatures
 - Javascript
- Today standard format for documents
- Security



DjVu

- Designed for
 - Large documents (many pages)
 - Compressed in memory, only the part that is visible is decompressed
 - Separation of layers
 - Different quality for every layer



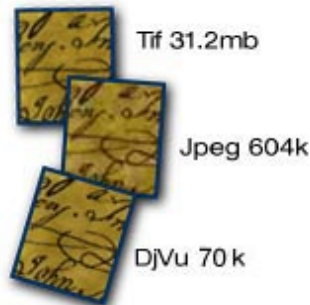


DjVu

- Designed for
 - Scanned documents
 - High quality / high compression
 - “For color document images that contain both text and pictures, DjVu files are typically 5 to 10 times smaller than JPEG at similar quality. For black-and-white pages, DjVu files are typically 10 to 20 times smaller than JPEG and five times smaller than GIF. DjVu files are also about 3 to 8 times smaller than black and white PDF files produced from scanned documents (scanned documents in color are impractical in PDF).”



<http://djvu.org/resources/whatisdjvu.php>





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The History / Part I

- Development started in 2006 as closed source Netlabs project
- Developer:
eros2 (Eugene Romanenko)
- Version 2.21 at the end of 2008



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The History / Part II

- Ticket #48 (2006)
Put in Text in text fields at PDF files
- “We have to wait for Poppler...”
- 2009 Silvan Scherrer asks again;
Mensys contacts eros2 but he dislikes
to work again on Lucide
- After a long discussion and many
mails.....Netlabs/Mensys/SSi
- **Lucide is OpenSource since end of
2009**



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The History / Part III

- **Lucide is OpenSource since end of 2009**
- Silvan Scherrer already had a plan to let dmik work on Lucide
- I did the update of poopler, djvu and jpeg (Dec 2009)
- March 2010 dmik (Dimitry A. Kuminov) starts development
- sponsored by Mensys
- Result: Version 1.3.2



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Version 1.3.2

- kBuild
 - the old build depends on Borland make
 - all build steps are using the same now
 - wpi generation integrated
- OpenWatcom → GCC
 - easier to compile poppler/fonconfig etc.
 - some bugs are found during this change



Version 1.3.2

Poppler

- Poppler 0.10.4 → 0.12.3
 - 0.10.4 Feb 2009
 - Colorized text & patterns
 - Font handling, font selection
 - Many, many bug fixes and optimizations
 -

Version 1.3.2

- Poppler 0.10.4 → 0.12.3

RETURNS POLICY

Please ensure your complete product, including power cables and accessories* is securely boxed before sending to us.
*where applicable

NRN REPAIR SHEET

NRN No.
40225

Ship to:
Numark Alesis Europe LTD.
Unit 9/11
The Chrisly Estate
Aldershot
HAMPSHIRE
GU12 4TX

Customer
END USER - Alex Jones

Customer Reference (if given)

Return Authorised By
Don Smith

Product
M1 Active MK2

Serial Number
A30606046608691

Work Requested
Estimate



Fault Description

TWO SPEAKERS. NEITHER POWERING UP.

Customer Comments

17 June 2009

RETURNS POLICY



Version 1.3.2

- djvulibre 3.5.19 → 3.5.22
- Freetype 2.3.8 → 2.3.11
- GUI fixes
 - Presentation Mode - Maximized
 - Refactored HotKey handling
 - Improved selection handling
 - selection in tables
 - ongoing task for poppler
 - Zoom, Scrolling (ongoing)

Version 1.3.2

- Text input support for PDF documents

| | You | | Spouse | |
|---|---|-----------------------------|------------------------------|-----------------------------|
| | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 1 | 1234 | | | |
| 2 | Hallo | | | |
| 3 | | | | |

Checkboxes

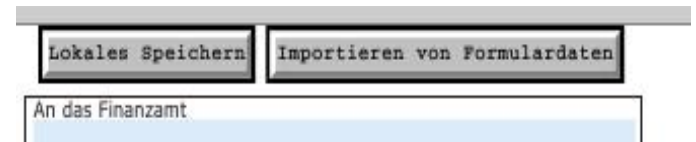
Entry Fields

Version 1.3.2

- Text input support for PDF documents

- Push Buttons

- Visible but not working
 - no javascript support in poppler)



- Radio Buttons, Combo Buttons and Lists not supported (at the moment)



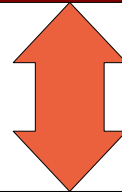
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The Architecture

Lucide GUI



PluginManger (SOM)

DjVu Plugin



PDF Plugin



GBM Plugin



The Architecture

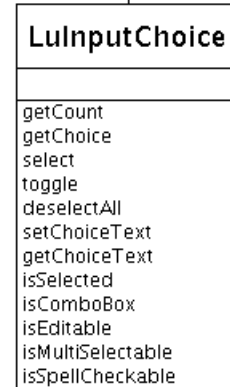
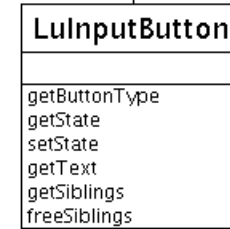
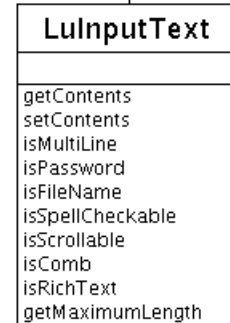
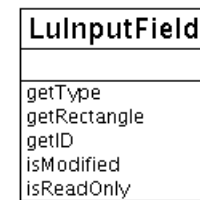
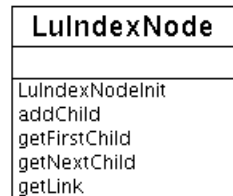
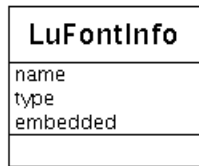
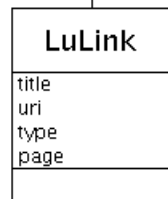
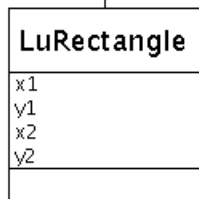
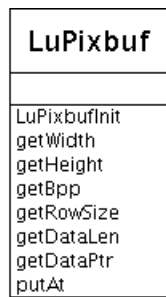
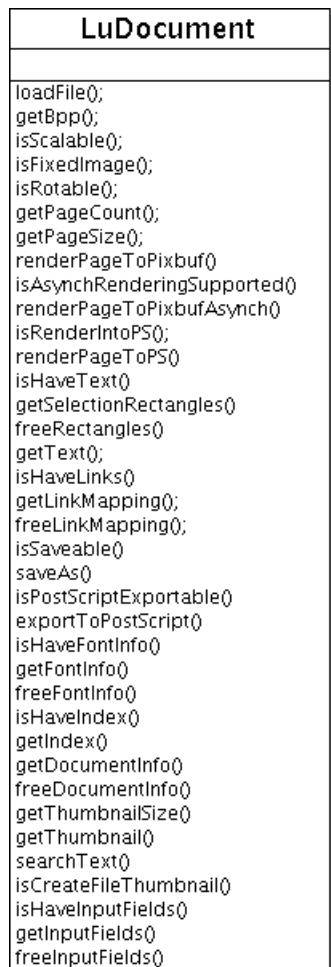
- Plugin Manager
 - Load all plugins
 - Associates the right plugin with a file
 - Selection based on file extension
 - If no matching plugin found, then try to find one by signature
 - Every plugin (can) define a signature
 - Calls the constructor of the plugin



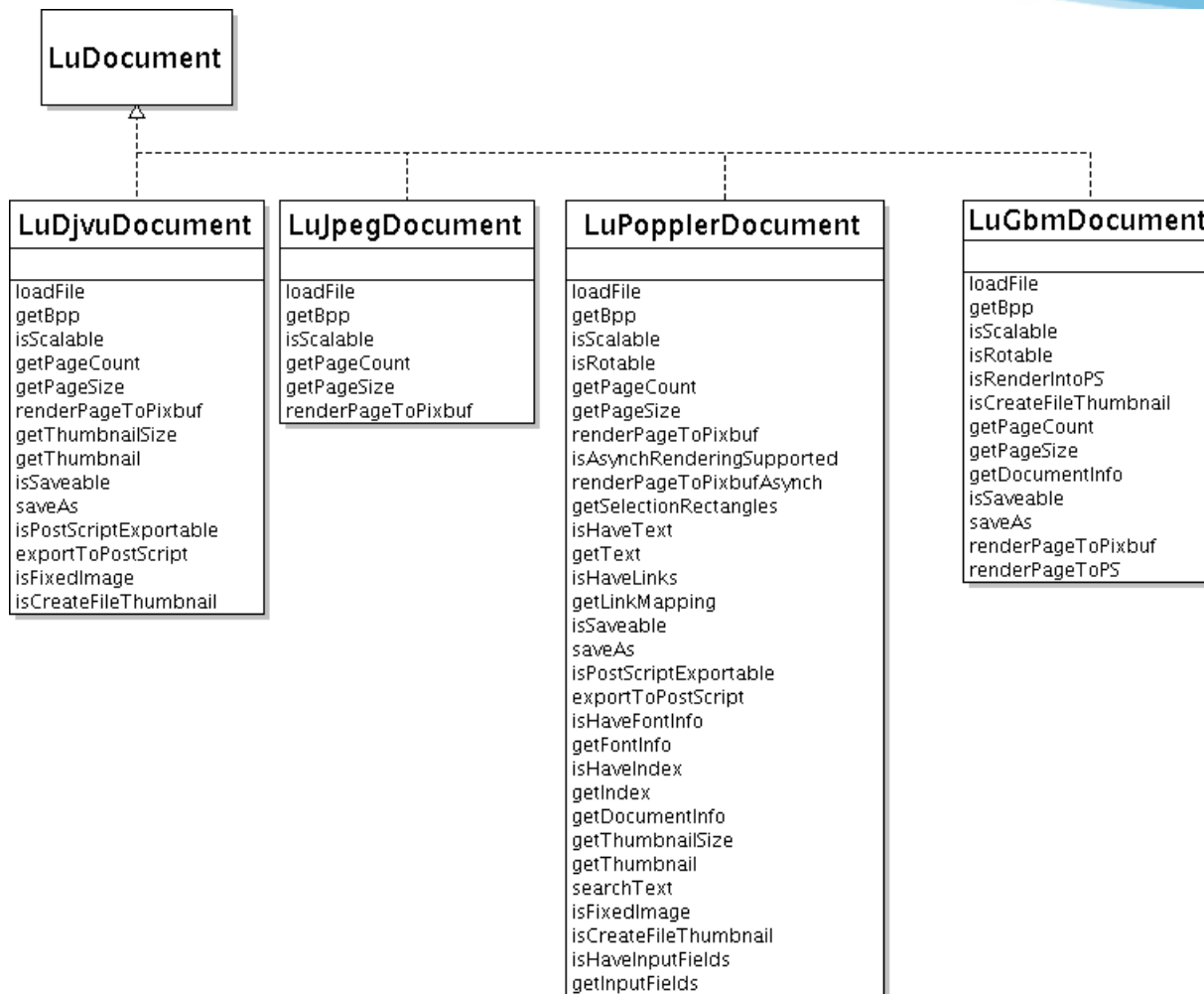
The Architecture

- SOM (System Object Model)
 - the infrastructure for the Plugin Object Model
 - one DLL for every module
 - late binding (method resolution at load time)
 - versioning

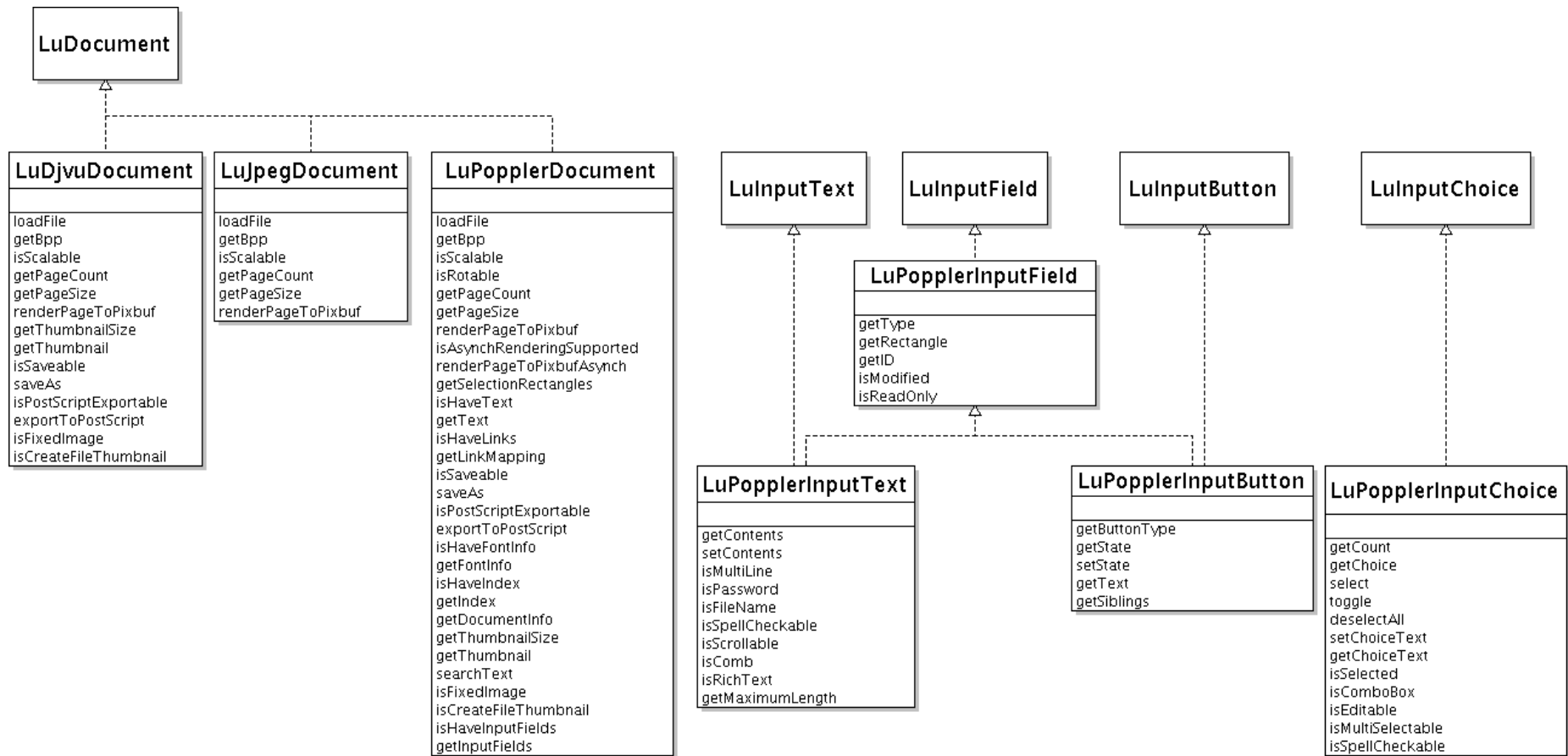
The Model inside



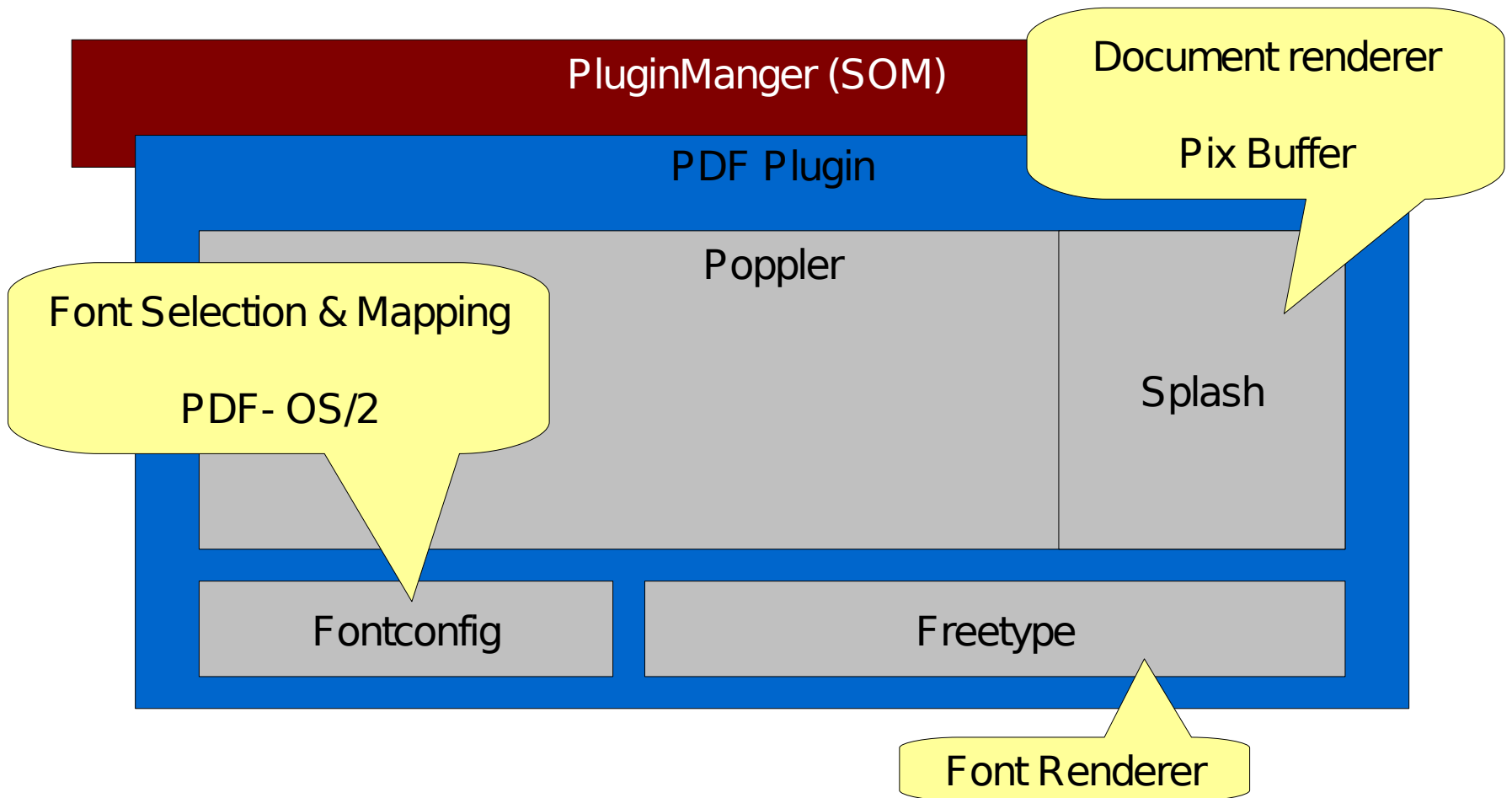
The Model inside



The Model inside



Poppler internals





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The Future

- Lucide is OpenSource
 - so the future is in YOUR hands
 - Enough work available
- As far as I know
 - Mensys supports (parts) of the future development

The Future

- Lucide is OpenSource
 - I'm not a developer...
 - everyone can be a tester
 - collect test documents
 - write manual test plan (SVN access is really easy with SmartSVN)
 - fill bug reports
 - **Every Developer needs your Feedback!**



The Future

- And for programmers
 - contact Silvan Scherrer
 - he coordinates the work
 - Look at trac
- Major issues
 - Printing (Milestone 1.4 in trac)
 - GUI improvements
 - Zoom, Scroll, Mouse
 - Selection, Copy&Paste
 - Popup Menu



The Future

- Major issues
 - Sync with poppler
 - Many interesting things
 - Fontconfig
 - Use the same than Firefox?
 - Build a more intelligent one (like poppler on Windows)
 - Or only fix the issues with finding the right font





The Future

- Many more things on the list
 - <http://svn.netlabs.org/lucide/report/3>
- Again: We need your Feedback!



Thank you

Thank you for your attention.

Are there any questions?



Thank you

*Thank
You*

- Mensys/SSI
- Netlabs
- Eugene Romanenko
- Dimitry A. Kuminov
- Silvan Scherrer
- all supporters