



Foomatic 4.0

Till Kamppeter
OpenPrinting Manager, The Linux Foundation



- " **On Foomatic there were no major changes done for several years**
 - " **There are many changes in the printing infrastructure**
 - PostScript as print job format will be replaced by PDF
 - CUPS got new functionality, especially custom option settings
 - Automatic printer driver download from the OpenPrinting web site
 - " **There are some ideas/TODOs to make Foomatic better**
 - DTD/XSD for the XML database, can change database format
 - Auto-generate printer XML entries from PPD files
 - Easy way to turn user-contributed printer entries into official Foomatic entries
- => A lot of new features/changes**
- => Foomatic 4.0**



PDF replaces PostScript as print job format

" **On the Printing Summit in Atlanta (April 2006) it was agreed on to replace PostScript by PDF as standard print job format**

- PDF is a common web format for printable documents
- Platform-independent
- Portable
- Easy post-processing due to easy page separation (N-up, booklets, scaling, selected pages, ...)
- Easy color management support
- Easy high color depth support (> 8 bits per channel)
- Easy transparency support
- Smaller files
- Linux workflow gets closer to Mac OS X



PDF replaces PostScript as print job format

" Implementation

- The OpenPrinting Japan working group has already developed CUPS filters: **pdftopdf**, **imagetopdf**, **pdftoopvp** (<http://sourceforge.jp/projects/opfc>, SVN repositories)
- **pdftoraster** and **pdftoijs** missing
- In KDE 4.0 it is already started to let applications output print jobs as PDF
- Ghostscript: Built-in drivers need to be modularized
- **Foomatic**
 - **foomatic-rip** is the universal filter used by most drivers, but accepts only PostScript as input. All the following functionality is also needed for the PDF workflow:
 - **foomatic-rip** reads embedded option settings from PostScript stream
 - **foomatic-rip** embeds settings into PostScript stream
 - **foomatic-rip** precedes output stream with PDL commands
 - **foomatic-rip** supports page overrides
 - Database/PPDs should be able to hold more than one command line per driver, for alternative renderers (Ghostscript understands PDF transparently, so old command lines even work)



Support for all CUPS Functionality

- " **CUPS 1.2 added functionality which is not yet supported by Foomatic:**
 - Custom options: Numerical, string, password, ... Foomatic should be compatible with CUPS here, so GUIs do not need to support two methods
 - Multi-language PPDs: Internationalization of Foomatic-generated PPDs
- " **Coders/sponsors needed!**



Automatic driver download fom OpenPrinting

" **This is almost complete. Only things to add are**

- Supply full license text to be shown before download
- Support for auxiliary files/plugin-ins (ex.: closed-source module for a free software core driver)



More points to improve Foomatic

- " **DTD/XSD for the XML database, can change database format**
 - Clear definition of the structure of Foomatic XML file
 - Automatic checks whether XML files are correct, on OpenPrinting, in XML editors, ...
 - Better display of the files in XML editors and viewers
- " **Auto-generate printer XML entries from PPD files**
 - Many manufacturer-contributed PPDs have no printer XML entry, make one automatically to let the printer appear on the OpenPrinting web site
- " **Easy way to turn user-contributed printer entries into official Foomatic entries**
 - Users have contributed lots of printer entries. An efficient way to get them into the Foomatic database is needed.



Questions?