



# *Ink Jet Printing*

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## Linux, MacOS and new PDLs

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# An Engineering perspective

- The future for PDF printing workflows on MacOS X and Linux
- The future for SVG documents and workflow on Linux and the web
- Will the new XPS have traction in these markets
- Document conversion and mediation among these formats



# Artifex Software

Who we are



# Artifex Software

- Engineering Company
- Library, not Applications
- Sell supported licenses
- Development under GPL



# Ghostscript



# Ghostscript

PDL Engine



# Ghostscript

- Conversion
- Rendering
- Postscript, PDF
- PCL/XL, XPS



# Printing

in the Unix tradition



# In the beginning

we had teletypes



# In the beginning was Postscript



# Postscript printers were smart



# Spoolers

just forward application postscript



# Ink Jet Printers

Changed all that



# Ink Jet Printers

- Required host side rasterization
- Spoolers had to do format conversion
- Opened the door to other  
Page Description Languages



# Spoolers

- Early 'lpr' spoolers are replaced
- Spoolers must handle conversion to the printer's native format



# CUPS

- Common Unix Printing System
- Dominant spooler on Linux
- Spooler on MacOS X 10.2 and later
- Open Source



# CUPS

- Job handling tied to Postscript
- PDF gets flattened before rasterization
- Lose colour accuracy, transparency



# PDF Workflow

- Consensus on Linux to move to a PDF-based workflow
- Preserve higher-level drawing model
- More diverse support for PDF
- MacOS X already uses PDF natively



# PDF is the Future

For printing on Linux and MacOS X



# SVG is the Future

For authoring on Linux



# Scalable Vector Graphics

- W3C standard for 2D graphics in XML
- Not controlled by any vendor
- Getting serious effort as an alternative to Adobe Flash on the the Web



# Scalable Vector Graphics

- Native format for Inkscape
- Import/Export for Illustrator



# Scalable Vector Graphics

- Most vector art on Linux is now SVG
- Wikipedia, Open Clip Art, etc.
- Little interest on MacOS X outside the browser



# Microsoft XPS

Will it have traction?



# XPS

- Freely implementable portions similar to SVG, which Linux already has.
- Not compelling over PDF on Mac OS X
- We've seen little general interest in support on Linux and MacOS X.
- Interest will grow with XPS document numbers.



# Page Description Languages

- Confluence XPS, SVG and PDF in their respective ecosystems means conversion will remain an aspect of printing workflow.
- We see mediation between the formats at all levels of the software stack.



# Questions?



# Thank You

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