Making Graphics Easy to Print

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http://cairographics.org
Linux printing sucks
Linux printing sucks

Google search results for "linux printing sucks"
Linux printing sucks

Web

Google

Results 1 - 10 of about 115 for "linux printing sucks". (0.10 seconds)

Web

Google

Tip: Try removing quotes from your search to get more results.

Your search - "linux printing rules" - did not match any documents.
Linux printing sucks

Sucks-to-rules quotient: ∞
Pieces of the problem

Rendering
- Graphics, text, fonts
- Rasterization
- Formats (PDF, PostScript, etc.)

Plumbing
- Printer discovery, configuration
- Network transfer, queuing
- Format conversion

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Rendering requirements

- Adequate imaging model
- Must match modern application needs
- Consistent display/print output
- Really requires a common API
Prior work

XPrint

- Unified display/print API
- Obsolete imaging model

libgnomeprint

- Separate display and print APIs
- Straddles rendering/plumbing layers
Cairo backends

Unified display/print interface. Supporting:

- X Window System (Render)
- OpenGL (glitz)
- Mac OS X (Quartz)
- In-memory images
- Postscript and PDF

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Cairo imaging model

- Paths, strokes, fills (PostScript)
- Porter/Duff image compositing (PDF, Render)
- Clipping, masking, gradients
Cairo architecture

- Application
- Cairo
- Rendering System
- Output Device
- Font System
- Operating System

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Cairo API example

```c
/* L */
cairo_move_to (cr, 0, 0);
cairo_line_to (cr, 0, 80);
cairo_line_to (cr, 50, 80);

/* C */
cairo_move_to (cr, 110 + 40 * cos (M_PI / 3), 40 + 40 * sin(M_PI / 3));
cairo_arc (cr, 110, 40, 40, M_PI / 3, -M_PI / 3);

/* A */
cairo_move_to (cr, 160, 80);
cairo_curve_to (cr, 160, -30, 210, -30, 210, 80);

cairo_stroke (cr);
```

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Example output

LCA

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PS proof-of-concept

One giant image per page

Pro

- Overcomes PostScript limitations

Cons

- Piggy-backs on image backend
- Output does not scale well
- None too kind to the network
New PDF backend

- First vector-based backend in cairo
- Many thanks to Kristian Høgsberg
Proposed meta-surface

- Cairo operations stored logically
- Enables “real” PostScript backend
- Makes PDF surfaces first-class citizens
- Allows vector-based patterns
Who's playing with cairo?

- Dia
- Evince (xpdf)
- GTK+/Pango
- Mozilla
- Scribus
- Squeak
- Swfdec

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What's happening

- The Great API Shakeup
- Getting things right before 1.0
- Nearly complete (days not weeks)
- Performance work
- Tessellation
- Rasterization
- Composition

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Demonstration

Roadster, by Ian McIntosh

http://linuxadvocate.org/projects/roadster/