Asia/Pacific Activities

OpenPrinting Asia/Pacific Regional Group

OPFC
(OpenPrinting Framework Consortium)

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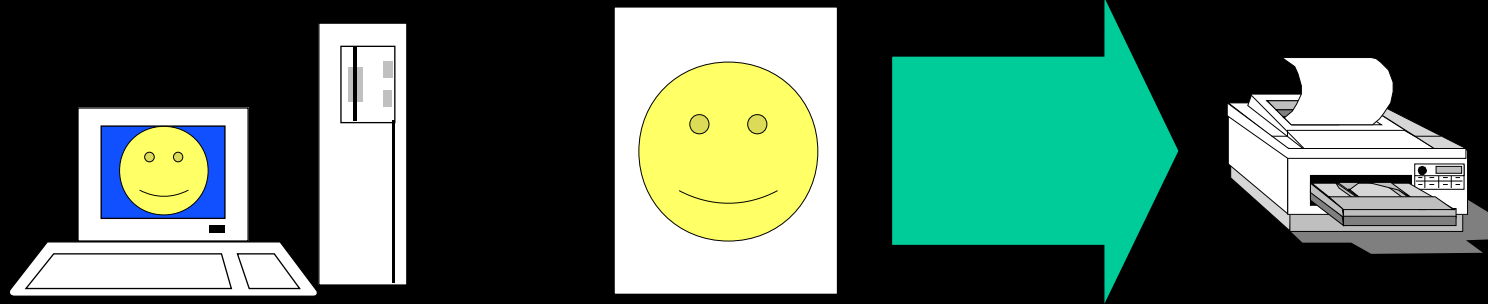# Vector Printer Driver API (OPVP)

Vector Printer Driver API (OPVP)

- A Printer Driver API supporting high level graphics functions

  - Vector drawing API, such as drawing lines, bezier curves, rectangles, bitmap images, etc..

- Renderer (such as poppler and Ghostscript) calls a driver via the API, then driver generates printer command data
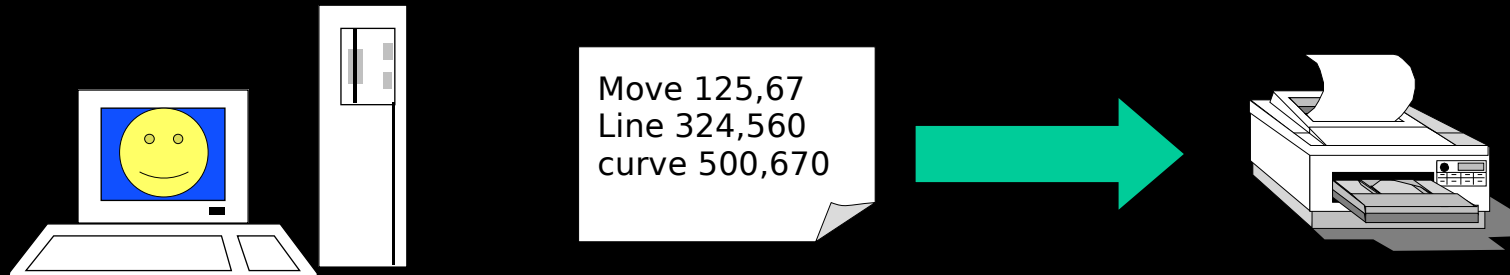
OPVP: Raster vs. Vector

Raster Driver

- API is simple
- Large size printing data, slow printing
- Obvious bottleneck with color/high resolution printing

A4, 600dpi, RGB 24bits = 100MB!

Vector Driver

- Small size printing data, high speed printing
- API is more complex than raster driver

Move 125,67
Line 324,560
curve 500,670

3 circles and 1 bezier curve and fill = under 1 KB

OPVP: Information Site

OPVP: Information Site (Cont,)

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OPVP: Now and Then

- Version 0.2 – current spec.

  - API Spec. - released in 2003

  - HP PCL5, Canon, Epson, and NEC Drivers have been released so far

  - Integrated in many distros as "opvp" driver with ESP GS

  - CUPS PDF filter "pdftoopvp" in 2006

- Version 1.0 – upcoming spec.

  - Current status: RC5 (almost done!)

    - ftp://ftp.pwg.org/pub/pwg/fsg/vector/pdapi-spec-1.0rc5.odt

  - Implementation – opvp based on 1.0 is in beta status

    - Several vendors are already implemented drivers and testing ... so far so good!

OPVP: Compatibility

- New "opvp" code for Ghostscript supports both 0.2 and 1.0 driver

    - Automatically detects the API version exported by each printer driver

    - Automatically changes the API calling sequence according to the API version

    - Then both the opvp 0.2 compliant printer driver and the opvp 1.0 compliant printer driver work under the new opvp 1.0 code w/o any modifications!

- Sample driver "opvpnull" are already updated for 1.0

- Driver feasibility test has almost finished (6 months)

    - Soon available at http://opfc.sourceforge.jp

Appendix

OPVP: Changes from 0.2 to 1.0

- RC5 Spec

  - ftp://ftp.pwg.org/pub/pwg/fsg/vector/pdapi-spec-1.0rc5.odt

- Chages

  - ftp://ftp.pwg.org/pub/pwg/fsg/vector/pdapi-changes-0.2to1.0rc5.odt

  - Naming conventions

    - "OPVP" prefixes for macros and "opvp" prefixes for function names

  - API modifications

    - Include API version to opvpOpenPrinter()

    - opvpAbortJob() function is added.

    - Raster Operation functions are deleted and replaced with the MASK operation.

    - Tentative "text" functions are deleted.

  - Improve and clarify descriptions over all