



Safeguarding the  
Future of Linux  
Through Standards

# **FSG OpenPrinting**

**Free Standards Group**

Safeguarding the Future of Linux through Standards

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## FSG OpenPrinting Goals

- Develop and promote a set of standards that will address the needs of desktop to enterprise-ready printing, including management, reliability, security, scalability, printer feature access and network accessibility.
- Provide cross distribution printer support for Linux and access to full functionality of latest printers and MFPs.
- Reduce development, testing, and support burden for printer manufacturers, distribution vendors and ISV's.
- Do this work in a way that is pragmatic: able to be implemented quickly to the widest market.



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## Specifically, we will deliver:

- A standard DDK (Driver Development Kit) to write portable printer drivers for Linux based on the latest technical standards
- A standardized API that will allow for easy access to printer capabilities through a large variety of Linux applications
- A machine and human readable repository where drivers will be housed and made available for automated updates and installation
- A distribution-independent printer testing and certification program. A certified printer will work on every LSB-certified Linux.



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## Specifically, we will deliver:

- From an end user point of view printing will “just work” on Linux and provide access to the FULL functionality of printer and multi-function device capability for both personal and complex enterprise use



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## Benefits of this approach

- **Printer Manufactures:** Pool resources, reduce testing costs, better customer support, right drivers available.
- **Distribution Vendors:** More printers available on linux, reduced testing efforts, better reliability, easy printing setup for users
- **Software developers/vendors:** Easy integration of printing functionality, common user interface for printing, reduce development costs
- **Desktop environment developers:** Common user interfaces for printing and job handling
- **Core printing system developers:** More reliable workflow, integration of distro-independent drivers, better error handling



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## What needs to be done to make this happen?

- Standardization
  - Driver interfaces and locations
  - Application APIs
- Driver development guides and DDK's
  - Developer guide and associated tools on LSB developer network
- Driver installation and update facility:
  - [linuxprinting.org](http://linuxprinting.org) -> FSG OP database with distribution-independent driver packages
- Assure that printers really "just work"
  - Test and certify printers against LSB 3.2



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## Standardization for drivers

- Renderer (GS, XPDF...)/driver interfaces
  - FSG OpenPrinting Vector (PDAPI)
  - IJS
  - CUPS Raster
- Standardized directories for PPDs and driver files
- Association of drivers with hardware ID
- Machine-readable versioning
- Asian language support



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## Standardization for applications

- APIs to access the printing system
  - De-facto standard: CUPS API
    - Already in every Linux
    - Not available in BSD and Solaris
  - FSG OP standards: PAPI/JTAPI
    - Not yet completely implemented
- GUI APIs
  - KDE 3.x for LSB 3.2
  - GTK 2.10 and Portland for LSB 4.0
- Asian language support



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## Developer tools

- Driver Development Kit (DDK) for writing portable printer drivers for Linux
  - Sources and samples
    - CUPS Raster
    - OpenPrinting Vector (OPVP)
    - IJS
  - PPD generation tools
- Addition of printing related developer material to LSB Developer Network
  - "How to write a portable printer driver for Linux"
  - "How to add printing to your Linux application using the LSB"



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## Repository

- Integration of linuxprinting.org Foomatic database into LSB product directories
  - LSB Certified printers for printers that have gone through the LSB certification program
  - LSB compliant printers for current (community supported) printers that are compliant
- Addition of distribution-independent driver packages to printer database
- All information human- and machine-readable (with API)
- Setup tools of distros can download drivers and driver updates directly from database using API



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## Certification and testing

- Standardized, distribution-independent testing
- FSG certification for printers
- Listing of results in FSG OP database
- Testing performed by: Printer vendors, free software community, third-party services
- Certified printers should “just work” on LSB-certified distributions



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## Important dates/Timeline

- FSG Printing summit (October 2006)
- End of Year: linuxprinting.org integrate with FSG site (look and feel only)
- Q4 06/Q1 07:
  - CUPS API (application), CUPS Raster/OpenPrinting Vector/IJS and FHS printer driver layout added to LSB
  - linuxprinting.org database merged with existing LSB database
  - Usability study on how best to structure our Product directory



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## Important dates/Timeline

- LSB 3.2 (Q2 2007)
  - CUPS API provides access to full printer functionality in LSB applications
  - FHS enhancements provide standard paths for printer drivers and filters
  - LSB Certified Printer program launched, printers added to Product directory, DDK and related driver developer material added to LSB Developer Network



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## How to participate

- Become members of the Free Standards Group at our Silver Level
- Participate in the technical development of the specification
- Write to standard and house PPD's at [Linuxprinting.org](http://Linuxprinting.org)
- Certify your drivers and indicate compliance to customers