

Printer Driver Validation

OpenPrinting Summit 2009

San Francisco, CA

April 8-10, 2009

Glen Petrie

Senior Software Architect
Epson Imaging Technology Center
2580 Orchard Parkway, Suite 200
San Jose, California 95131
glen.petrie@eitc.epson.com
408.576.4131

Printer Driver Validation (PDV)

- What is PDV?
 - Self-Validation by Driver Developer
 - No Certification by Distro's or Central Organization (LSB, OP)
 - Distro's or Central Organization (LSB, OP) can also perform Self-Validation
 - Includes Driver Packages and PPDs
- What is PDV Not?
 - Validation of Distro Print Path (App -> ? -> ? -> ? -> Driver)
 - Validation of Print Transform Applications (PS/PDF -> Image, ...)
 - Validation of Print Managers (LPR, CUPS, ...)
 - Validation of Application Printing (GIMP, OpenOffice, ...)
- What is Needed?
 - Test/Testing Criteria
 - What is being tested.
 - Test/Testing Procedure
 - How to test.
 - Validation Result Summary Submission
 - How to deliver the results, drivers and PPDs
 - Will exceptions be allowed?
 - What are they? What are the exception parameters?

These would be Print System/Solution Validation - Done by Distro's

PDV: What is Being Tested

- Driver Package
 - [yes] Installation
 - [yes] Interfacing from/with CUPS
 - [yes] Interfacing from/with Applications
 - [yes] Interfacing from/with Transform Applications
 - [yes] Driver Back-Ends
 - [tbd] “Standard” Print Capability
 - [no] Print Quality – *Too Subjective*
 - [no] Printing Performance – *Too Subjective*

- PPD
 - [yes] PPD Base Attributes
 - [yes] CUPS PPD Extension Attributes
 - [yes] CPD PPD Extension Attributes

PDV: What Else Might Be Tested

- Driver Package – Print Capability
 - [] Support Min Set of Media Sizes
 - [] Letter [] A4 [] B4 [] 4x6 [] CD/DVD [] ???
 - Exception: Not Limited by printer carriage / media-handler.
 - [] Support Min Set of Media Types
 - [] Plain [] Matte [] Fine Art [] Photo [] ???
 - [] Support Min Set of Print Quality
 - [] Draft [] Normal [] High
 - [] Margin Setting
 - [] Driver Supplied Preview Image
 - [] Status Monitoring
 - []
- PPD
 - [] CPD Predefine Modes
 - [] Text [] Web [] Doc [] Image [] Photo [] CD/DVD [] ???

PDV: How to Test - Drivers

- Test Print Data
 - Images, Simple Text, Complex Text, PostScript, PDF, Web Page, Mix Content

- Scripts
 - Install Driver
 - Update/Replace Driver
 - Un-Install Driver
 - Exercise Printing Min Features:
 - Via CUPS
 - Via Ghostscript
 - Via OpenPrinting Application (TBD)
 - Exercise Printing Status Monitor
 - Via CUPS
 - Via Ghostscript
 - Via OpenPrinting Application (TBD)

PDV: How to Test – PPDs

- Use Existing OpenPrinting Submission Procedure and System.

PDV: How to Deliver Results

- The output of the Script File provide a ZIP file with
 - Identification File
 - Developer Identification and Company
 - Printer(s) Supported by Driver and PPD
 - Text File of Driver and PPD Test Result
 - Driver under test - May be limited to Binaries only
 - PPD under test
 - ICC Profile(s) under test (if any)
 - Document for Driver (if any)
 - Exception Document (if any)

PDV: Exceptions to Document

Exception Data Need by Script to Perform Testing

Example – Final / Correct List To Be Determined.

- **Printer Only Supports**
(Some/Most content below could be obtain from PPD file)
 - Photo Printing Only
 - Black Only Printer
 - Specific Media Sizes Only
 - Specific Media Weights Only
- No Printer / Driver Specific ICC Profile
- No Status Monitoring Support
- To Be Determined.