Charter of the PWG

Cloud Imaging Working Group (WG)

Status: PWG Approved
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ftp://ftp.pwg.org/pub/pwg/cloud/charter/ch-cloud-charter-20120315.pdf

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Problem Statement:

Cloud-based applications and solutions are increasingly common, and Cloud-based printing, scanning, and facsimile (collectively called "Cloud Imaging") are emerging in several different forms. Adopting standard protocols and schemas now will help interoperability, speed adoption, and address privacy and security issues involved in Cloud Imaging.

A basic functional model including a Client, Cloud Print Provider, Cloud Print Manager, and Printer was developed in Cloud Printing BOF sessions. This model revealed several new requirements beyond the existing PWG Semantic Model including registration, enumeration/selection, use of late transforms to preserve fidelity, additional notification events, strict privacy and security policies, and reliable logging.

The goal of the Cloud Imaging project is to develop the following new documents to support Cloud-based print and multifunction services using the PWG Semantic Model:

(a) Mapping of MSPS, PPD, and JDF to/from PWG Print Job Ticket and PWG Print Service (CLOUDMAP - wd-cloudmap10-yyyymmdd) - define a PWG Best Practice document that includes: a recommended mapping of PWG Print Job Ticket and PWG Print Service (capabilities and selected description and status elements) [PJT] to and from elements in the Microsoft Print Schema Specification [MSPS], Adobe Postscript Printer Description [PPD], and CIP4 Job Definition Format [JDF]; and a recommended common subset of job ticket elements (by reference to [PJT]) for simple print use cases based on current Cloud Print implementations;

(b) Cloud Print Requirements and Model (CLOUDMODEL - wd-cloudmodel10-yyyymmdd) - define the reference model, terminology, and requirements for Cloud Print services; and

(c) Cloud Multifunction Requirements and Model (CLOUDMFD – wd-cloudmfd10-yyyymmdd) – define the reference model, terminology, and requirements for Cloud Multifunction services.

Out-of-scope:

- OOS-1 Defining Cloud federation interfaces and associated protocols and technologies.

- OOS-2 Defining the interface between the Cloud Imaging Manager and Imaging Device, specifically the interface for device status, job status, and job submission.
- OOS-3 Defining new protocols for authentication, authorization, and access control (AAA), enumeration, transport, notification, or device management.
- OOS-4 Defining new document file formats.
- OOS-5 Defining new abstract job tickets.

Objectives:

- OBJ-1 Generate a PWG Best Practices document that maps the elements in the Microsoft Print Schema Specification [MSPS], Adobe Postscript Printer Description [PPD], and CIP4 Job Definition Format [JDF] to and from the PWG Print Job Ticket and Print Service [PJT] and the equivalent XML Schema elements.
- OBJ-2 Develop requirements and model documents for Cloud Print and Cloud Multifunction based on the previous BOF discussions, including registration, enumeration/selection, the concept of late transforms to preserve fidelity, additional notification events, strict privacy and security policies, and logging.
- OBJ-3 Collaborate w/ IPP WG who will develop IPP binding documents for Cloud Print and Cloud Multifunction services.
- OBJ-4 Collaborate w/ Semantic Model WG who will develop SOAP binding documents for Cloud Print and Cloud Multifunction services with associated XML schemas/WSDL definitions and equivalent informative REST bindings.
- OBJ-5 Cloud Print and Cloud Multifunction models should be compatible with existing cloud computing infrastructure.
- OBJ-6 Cloud Print and Cloud Multifunction models should be scalable from consumer-electronics clients to high-end servers.
- OBJ-7 Cloud Print and Cloud Multifunction models should define requirements for document formats and job tickets to ensure imaging fidelity and interoperability.
- OBJ-8 Cloud Print and Cloud Multifunction models should be compatible with generic imaging clients for common operating systems.

Milestones:

Charter Stage:

- CH-1 Initial working draft of Cloud Imaging Charter – March 2011 – DONE
- CH-2 Stable working draft of Cloud Imaging Charter – March 2011 - DONE
- CH-3 PWG Approval via Formal Vote of Cloud Imaging Charter – June 2011 – DONE
- CH-4 Update Charter and submit for PWG Steering Committee Approval – January 2012 – DONE
- CH-5 Update Charter and submit for PWG Steering Committee Approval – March 2012

Definition Stage:

- CLOUDMAP-1 Initial working draft of Mapping of MSPS, PPD, and JDF to/from PWG Print Job Ticket and PWG Print Service – Q4 2011
- CLOUDMAP-2 PWG Last Call of Mapping of MSPS, PPD, and JDF to/from PWG Print Job Ticket and PWG Print Service – Q3 2012
- CLOUDMODEL-1 Initial working draft of Cloud Print Requirements and Model – Q2 2012
- CLOUDMODEL-2 PWG Last Call of Cloud Print Requirements and Model - Q4 2012
- CLOUDMFD-1 Initial working draft of Cloud Multifunction Requirements and Model – Q1 2013
- CLOUDMFD-2 PWG Last Call of Cloud Multifunction Requirements and Model – Q3 2013

Implementation Stage:

- INTEROP-1 IPP WG interoperability testing of IPP Cloud Print implementations – Q2 2013
- INTEROP-2 SM WG interoperability testing of SOAP Cloud Print implementations – Q2 2013
- INTEROP-3 IPP WG interoperability testing of IPP Cloud Multifunction implementations – Q1 2014
- INTEROP-4 SM WG interoperability testing of SOAP Cloud Multifunction implementations – Q1 2014

References:

[CUPSPPD] M. Sweet, "CUPS PPD Extensions", http://www.cups.org/spec-ppd.html

[JDF] CIP4, "JDF Specification Release 1.4a", December 2009, http://www.cip4.org/menu.php?name=technical_resources

[MSPS] Microsoft, " Microsoft Print Schema Specification Version 1.0", May 2007, http://msdn.microsoft.com/en-us/windows/hardware/gg463385

[PJT] P. Zehler, PWG Semantic Model Print Job Ticket, work-in-progress, ftp://ftp.pwg.org/pub/pwg/mfd/wd/

[PPD] Composed of [TN5003], [TN5645], and [CUPSPPD].

[TN5003] Adobe Systems Incorporated, "PostScript Printer Description File Format Specification Version 4.3", Technical Note #5003, February 1996. http://partners.adobe.com/public/developer/en/ps/5003.PPD_Spec_v4.3.pdf

[TN5645] Adobe Systems Incorporated, "Update to PPD Specification Version 4.3", Technical Note #5645, April 1997, http://partners.adobe.com/public/developer/en/ps/5645.PPD_Update.pdf