



The Printer Working Group

Printer Working Group Plenary Session

May 13, 2014

PWG F2F Meeting

Cupertino, CA

Michael Sweet (Apple)



Plenary Agenda

- Administrivia
- Open Issues
- PWG Workgroup Status [WG Chairs]
 - Semantic Model (SM)
 - Internet Printing Protocol (IPP)
 - Imaging Device Security (IDS)
 - Cloud Imaging Model (Cloud)
- Liaison Status
 - AFP Consortium - AFPMAP
 - BBF - CWMP
 - CIP4 - JDFMAP
 - TCG News
 - Future: Mopria, W3C, Wi-Fi Alliance?
- Next Meeting Details

Administrivia



- Welcome and Introductions
- Confirm Minutes Taker
- Approve/Modify Agenda
- Approve Previous Plenary Minutes
- Review PWG Patent Policy
- Agenda for the Week
- Future PWG Meeting Schedule
- 2014 Membership
- PWG Officers



PWG Patent Statement

- PWG standards may include the known use of essential patents and patent applications provided the PWG Chair receives assurance from the patent holder or applicant with respect to patents whose infringement is, or in the case of patent applications, potential future infringement the applicant asserts will be, unavoidable in a compliant implementation of either mandatory or optional portions of the standard. This assurance shall be provided without coercion.

PWG Patent Statement



- This assurance shall be either:
 - a) A general disclaimer to the effect that the patentee will not enforce any of its present or future patent(s) whose use would be required to implement either mandatory or optional portions of the proposed PWG standard against any person or entity complying with the standard; or
 - b) A statement that a license for such implementation will be made available without compensation or under reasonable rates, with reasonable terms and conditions that are demonstrably free of any unfair discrimination.



PWG Patent Statement

- The PWG is not in a position to give authoritative or comprehensive information about evidence, validity or scope of patents or similar rights, but it is desirable that any available information should be disclosed. Therefore, all PWG members shall, from the outset, draw PWG's attention to any relevant patents either their own or of other organizations including their Affiliates that are known to the PWG members or any of their Affiliates, although PWG is unable to verify the validity of any such information.

Inappropriate Topics for PWG Meetings



- Don't discuss the validity/essentiality of patents/patent claims
- Don't discuss the cost of specific patent use
- Don't discuss licensing terms or conditions
- Don't discuss product pricing, territorial restrictions, or market share
- Don't discuss ongoing litigation or threatened litigation
 - Don't be silent if inappropriate topics are discussed
 - ...do formally object.



Agenda for the Week

- **Tuesday, May 13**
 - 9:00 - 10:00 PWG Plenary
 - 10:00 - 10:15 Break
 - 10:15 - 12:00 Cloud Imaging Model
 - 12:00 - 1:00 Lunch
 - 1:00 - 2:00 Cloud Imaging Model (con't)
 - 2:00 - 2:15 Break
 - 2:15 - 5:00 IPP - IPPSIX and Implementor's Guide 2.0
- **Wednesday, May 14**
 - 9:00 - 12:00 Semantic Model - JDFMAP
 - 12:00 - 1:00 Lunch
 - 1:00 - 5:00 Semantic Model - SM 3.0
- **Thursday, May 15**
 - 9:00 - 12:00 IPP - Self-Certification, Scan, Finishings 2.0
 - 12:00 - 1:00 Lunch
 - 1:00 - 5:00 Imaging Device Security

2014 PWG Meetings



- August 12-15 in Toronto, ON (Hilton Garden Inn)
 - Joint PWG-OpenPrinting meeting
- November 4-6 in Waltham, MA (hosted by Conexant Systems, Inc.)

2014 Membership



36 Members

Apple	Epson	Lexmark	QualityLogic, Inc.
Brother Industries	ezeep	Meteor Network	Ricoh
Canon	Fenestrae B.V.	Microsoft	Samsung
Conexant Systems	Fuji Xerox	MPI Tech	Sharp Labs
CSR	Hewlett Packard	MWA Intelligence	Technical Interface Consulting (N-V)
Danny Brennan	High North	Nancy Chen	Thinxstream Technologies
Daniel Dressler (N-V)	Intel	Northlake	Toshiba America Business Solutions
Dell	Konica Minolta	Oki Data	Tykodi Consulting Services LLC
Digital Imaging Technologies	Kyocera Document Solutions Inc.	PageTech (N-V)	Xerox

Invoices for 2014 Dues Have Been Sent



PWG Officers (2013-2015 Term)

- PWG Chair: Michael Sweet, Apple
- PWG Vice-Chair: Nancy Chen
- PWG Secretary: Ira McDonald, High North
- PWG Webmaster: Currently Unfilled
 - Michael Sweet temporarily serving in this capacity

Open Issues



- Semantic Model (SM) WG needs a secretary
- PWG needs a webmaster
- PWG web site update
- PWG white paper policy for new work



PWG Web Site/Server Updates

- We will be rolling out some web site/server updates over the next several months:
 - Appearance changes for the new PWG logo
 - Content management system with blog, comments, web site accounts, etc.
 - New email aliases for PWG and WG officers + spam reporting
- Work being done by Michael Sweet and Daniel Dressler
- Future updates to include:
 - Registration of IPP Everywhere Self-Certification results
 - Issue tracker for reporting of errata/issues in specifications
 - Surveys, polls, meeting calendar
- The old PWG Wikispaces, Survey Monkey, and Google calendar accounts will be closed out ASAP



PWG White Paper Policy

- The PWG Steering Committee has adopted a new white paper policy:
 - <http://ftp.pwg.org/pub/pwg/general/process/pwg-white-policy-20140505.txt>
 - <http://ftp.pwg.org/pub/pwg/general/templates/white-template-20140505.docx>
- The policy requires all new work to have a white paper and go through formal approval (PWG Vote)



The Printer Working Group

PWG Workgroup Status



The Printer Working Group

Semantic Model Workgroup Status

May 13, 2014

PWG F2F Meeting

Cupertino, CA

Daniel Manchala (Xerox)



Purpose of the effort

- The Semantic Model working group is concerned with the modeling of imaging services and subunits that comprise a network connected Imaging System. The Objectives are:
 - The definition of a framework for the complete Imaging Semantic Model.
 - Drive to a standard semantic definition for an Imaging System's Subunits, Services, Jobs and Documents.
 - Agreement on the semantics of their attributes, operations and parameters.



Semantic Model 3.0 WG Officers

- SM3 WG Chair:
 - Daniel Manchala (Xerox)
- SM3 WG Vice-Chair
 - Paul Tykodi (TCS)
- SM3 WG Secretary:
 - TBD (volunteers needed)
- SM3 WG Document Editors:
 - Nancy Chen - CWMP Printer Data Model
 - Daniel Manchala (Xerox) - SM3, SM3 Schema
 - Ira McDonald (High North) – CWMP Printer Data Model
 - Paul Tykodi (TCS) - SM3, Mapping
 - Bill Wagner (TIC) - SM3



Approved Documents:

- Multifunction Device Service Model Requirements (September 1, 2010)
- PWG 5105.1-2004: PWG Semantic Model Specification Version 1.00
- PWG 5108.1-2011: MFD Model and Common Semantics Version 1.00
- PWG 5108.02-2009: Network Scan Service Semantic Model and Service Interface Version 1.0
- PWG 5108.03-2009: Network Resource Service Semantic Model and Service Interface Version 1.0
- PWG 5108.04-2011: Copy Service Semantic Model and Service Interface Version 1.00
- PWG 5108.05-2011: FaxOut Semantic Model and Service Interface
- PWG 5108.06-2011: System Object and System Control Service Semantics Version 1.0
- PWG 5108.07-2012: PWG Print Job Ticket and Associated Capabilities Version 1.0



Active Documents:

- Mapping Related Standards
 - Mapping of Adobe PostScript Printer Definition (PPD) format to PWG Print Job Ticket v1.0 (PPDMAP)
 - Mapping CIP4 JDF to PWG Print Job Ticket v1.0 (JDFMAP)
- Semantic Model 3.0
 - Review the SM 3.0 sections 1-3
 - Add Transform Use Cases
- Imaging Job Ticket Model 3.0
 - Generalize PWG PJT v1.0 for Imaging System
- CWMP Printer Data Model

Schema Status



- Named version (v1.180) published for PWG Print Job Ticket and Associated Capabilities
- Latest (v2.900) Up to date with In Progress specifications
 - Cloud Print extensions (WIP – WSDL operations needs update)



Potential Projects

- Planned to be addressed after the current documents are complete. (Subject to volunteers to be Editors)
 - Mapping of AFP Consortium MO:DCA-P and IPDS Formats to PWG Print Job Ticket v1.0 (AFPMAP)
 - Mapping of Microsoft MSPS to PWG Print Job Ticket v1.0 (MSPSMAP)
 - Resource Service
 - Service Integration with Workflow Environments v1.0

Next Steps



- Appoint Secretary of Semantic Model Working Group
- Continue Mapping work
- Continue SM3 work



More Info/How to participate

- We welcome participation from all interested parties
- SM3 Web Page:
 - <http://www.pwg.org/sm3>
- Subscribe to the SM3 mailing list:
 - <https://www.pwg.org/mailman/listinfo/sm3>
- SM3 WG holds bi-weekly phone conferences announced on the SM3 mailing list
 - Next conference call is June 9, 2014 at 11am PT



The Printer Working Group

IPP Workgroup Status

May 13, 2014

PWG F2F Meeting

Cupertino, CA

Paul Tykodi (TCS), Ira McDonald (High North)



IPP WG Officers

- IPP WG Co-Chairs:
 - Paul Tykodi (TCS)
 - Ira McDonald (High North)
- IPP WG Secretary:
 - Michael Sweet (Apple)
- IPP WG Document Editors:
 - Ira McDonald (High North) – IPP Shared Infrastructure Extensions (IPPSIX), IPP over HTTPS Transport Binding and “ipps” URI Scheme, LDAP Schema for Printer Services
 - Michael Sweet (Apple) – IPP Shared Infrastructure Extensions (IPPSIX), IPP over HTTPS Transport Binding and “ipps” URI Scheme, LDAP Schema for Printer Services, IPP Finishings 2.0
 - Smith Kennedy (HP) - IPP Implementors Guide 2.0
 - Peter Zehler (Xerox) - IPP Scan Service



- IETF RFCs in development:
 - IETF IPP over HTTPS Transport Binding and “ipps” URI Scheme
 - IETF Apps Area Review
 - IETF LDAP Schema for Printer Services (updates RFC 3712)
 - IETF Apps Area Review
- PWG Specifications in development:
 - IPP Everywhere Self-Certification Manual
 - Prototype Draft
 - IPP Finishings 2.0
 - Prototype Draft
 - IPP Implementors Guide 2.0
 - Interim Draft
 - IPP Scan Service
 - Stable Draft
 - IPP Shared Infrastructure Extensions (IPPSIX)
 - Prototype Draft



- Candidate Standards:
 - PWG 5100.14-2013: IPP Everywhere
 - PWG 5100.15-2013: IPP FaxOut Service (pending errata)
 - PWG 5100.16-2013: IPP Transaction-Based Printing Extensions
- Up-to-date pending IANA registrations online:
 - <http://www.pwg.org/ipp/ipp-registrations.xml>
 - Continue to maintain this in parallel for new specifications
 - PWG version includes draft specifications that have reached prototype status



IPP WG Info / Participation

- We welcome participation from all interested parties
- IPP Working Group web page
 - <http://www.pwg.org/ipp/index.html>
- Subscribe to the IPP mailing list
 - <https://www.pwg.org/mailman/listinfo/ipp>
- IPP WG holds bi-weekly phone conferences announced on the IPP mailing list
 - Next conference calls June 2, 2014 and June 16, 2014 at 3pm ET



The Printer Working Group

IDS Workgroup Status

May 13, 2014

PWG F2F Meeting

Cupertino, CA

Joe Murdock (Sharp), Alan Sukert (Xerox)



Purpose of the effort

- IDS is investigating and defining standards for addressing general security attributes for imaging devices and services. Our general goals are to:
 - Define standard metrics and protocol bindings to assess the health of Hardcopy Devices to gauge if they should be granted access to a network.
 - Define a set of standard security and policy attributes and values for authorizing Hard Copy Devices, their services and users in a global workspace
 - Provide a general security model for other PWG standards to reference
- IDS is also providing a path for vendors to review and contribute to the definition of new Common Criteria MFP Protection Profiles

Officers



- **Chair:**
 - Joe Murdock (Sharp Labs)
- **Vice-Chair:**
 - Alan Sukert (Xerox)
- **Secretary:**
 - Alan Sukert (Xerox)
- **Document Editors:**
 - Ira McDonald (High North): HCD-TNC
IDS-Model
 - Joe Murdock (Sharp Labs): HCD-Remediation
IDS-Model
IDS-IAA



Approved Candidate Standards

- **PWG 5110.1-2014**
 - HCD-Attributes (revised for Correlated Attributes)
 - In Call for Objections
- **PWG 5110.2-2013**
 - HCD-NAP
- **PWG 5110.3-2013**
 - PWG-LOG Common Log



Current Document Status

- HCD-TNC Binding Document
 - Prototype draft completion date Q2, 2014
 - Need prototypes
- IDS-Model Common Requirements
 - Prototype draft completion date Q3, 2014
- IDS-IAA specification
 - Subset addressing privileges and permissions
 - Prototype draft completion date Q4, 2014
- HCD Health Remediation
 - Prototype draft completion date Q1, 2015

Next Steps

- IDS Identification, Authentication and Authorization specification
 - Definition of core set of Policy Attributes
 - Harmonize with TCG TNC specifications
 - Define access control values
 - OASIS XACML Profiles
 - RFC 7061 - XACML XML Media Type
- IDS model specification
- IDS health remediation
 - Integrate with TCG TNC Work Group
- Monitor progress of MFP Technical community on Protection Profile work



Participation

- We welcome participation from PWG member companies and input from the user community
- The group maintains a Web Page for IDS update:
 - <http://www.pwg.org/ids/index.html>
- To subscribe to the IDS mailing list, go to:
 - <https://www.pwg.org/mailman/listinfo/ids>
- The group hold bi-weekly conference calls on Mondays at 11:00AM PST/2:00PM EST
 - Next teleconference June 9, 2014



The Printer Working Group

Cloud Imaging Model Workgroup Status

May 13, 2014

PWG F2F Meeting

Cupertino, CA

Ron Nevo (Samsung), Bill Wagner (TIC)



Introduction

- The intent of the Cloud Imaging Model Working Group is to develop a model for providing Imaging Services via a Cloud Imaging System in a way consistent with the PWG Semantic Model.
- The current PWG Cloud Imaging Model contends that the operations interface between a User Client and a Cloud Imaging Service is no different than that between a User Client and any networked Imaging Service, with the exception of asynchronous notification capability (if any).
- However, Cloud Imaging Services often must interface with out-of-cloud end devices (e.g., printers, scanners) to which direct access is blocked by a firewall. The PWG Model identifies a Local Imaging System Proxy intermediate agent and defines a new set of operations from Proxy to Cloud Service.



Officers and Contributors

- Chair: Ron Nevo (Samsung)
- Vice Chair: Bill Wagner (TIC)
- Secretary: Michael Sweet (Apple)
- Document Editors:
 - Bill Wagner (TIC): Editor
 - Ron Nevo (Samsung): Editor



Status of Requirements and Model

- Draft at:
 - <http://ftp.pwg.org/pub/pwg/cloud/wd/wd-cloudimagingmodel10-20140418.pdf>
- Schedule
 - Charter calls for PWG Last Call of Cloud Imaging Requirements and Model specification Q4 2013. This has not been met. However, a Prototype Draft is anticipated by Q2 2014
 - PWG Last Call requires previous notice of prototyping of the model binding by either the IPP or SM WG. Last Call milestone dependent upon binding prototype notice.
 - The WGs have attempted to co-ordinate the Model design and IPPSIX.
 - It is anticipated that IPPSIX interoperability testing and specification Last Call will be completed by Q4 2014, and that the Cloud Imaging Requirements and Model Specification may then be advanced to stable state, submitted to WG and then PWG Last Call, and then voted on.
- Next Steps
 - When the Cloud Model specification is approved, the Cloud Model information will be transferred to the Semantic Model WG for inclusion into SM3
 - The Cloud Imaging Model Workgroup Charter identifies no project beyond this Requirements and Model specification.



Cloud Imaging WG Participation

- We welcome participation from all interested parties
- Cloud Imaging Workgroup Web page
 - <http://www.pwg.org/cloud/index.html>
- Subscribe to the Cloud mailing list
 - <https://www.pwg.org/mailman/listinfo/cloud>
 - cloud@pwg.org
- Cloud Imaging WG holds bi-weekly phone conferences announced on the Cloud mailing list
 - Next conference call is June 9, 2014 at 3 pm (ET)
 - Conferences on opposite weeks of IPP WG calls



The Printer Working Group

Liaison Status



AFP Consortium - AFPMAP

- Paul Tykodi created a small portion of the proposed MO:DCA-P and IPDS mappings to the PWG PJT
- These mappings were reviewed at the AFP Consortium's meeting in October 2013
- The full mapping will be defined in the AFPMAP document produced by the Semantic Model WG
 - Plan is to produce an initial draft version of the mapping for review at the October 2014 meeting
 - Harry Lewis will be managing the work in the AFP Consortium



BBF - CWMP

- PWG developed, prototyped, and demonstrated a standard CWMP Printer Data Model in spring 2012 that is a machine translation of the PWG Semantic Model Print Service
- BBF officers agreed in July 2013 to a formal liaison between the BBF and PWG, with the standard being developed in the PWG SM WG and reviewed for structure and format by the BBF via Thinxstream liaison (member of both BBF and PWG)
- Ira attended the BBF meeting in Atlanta 16-20 September
- Ira presented the benefits of a CWMP Printer Data Model in a BBF plenary session of the Service Providers Action Council (SPAC) on 16 September 2013
- Ira presented the CWMP Printer Data Model to the Broadband Home (BBH) WG later on 16 September 2013
- Robin Mersh (BBF CEO) and Jason Walls (BBH WG co-chair) offered to schedule special review calls as needed

CIP4 - JDFMAP



- PWG started in October 2011 developing mappings of Adobe PPD, CIP4 JDF, and MS Print Schema to PWG PJT
- CIP4 officers agreed in December 2013 to establish a liaison with PWG, with JDFMAP to be developed in the PWG SM WG with review and contributions from CIP4 members for complex mappings
- Rainer Prosi (CIP4 CTO) attended PWG F2F in February 2014 to discuss JDFMAP project and presented slides
- Ira McDonald posted updated JDFMAP spec on 6 April 2014 (separated from the former combined mapping spec)
- Rick Yardumian (Canon) updated JDFMAP spec with full Xpath for all JDF objects in late April 2014 – now posted
- JDFMAP spec to be reviewed in PWG SM WG during PWG F2F in May 2014 (Rainer Prosi plans to attend)



TCG News (1 of 2)

- Next TCG Members Meetings
 - June 23-27, 2014 in Barcelona, Spain
 - October 20-24, 2014 in New Orleans, LA USA
- Embedded Systems (EmSys)
 - Scope: Auto, SmartGrid, Financial, Medical, Industrial Control
 - Public review: TPM 2.0 Automotive Thin – March 2014
 - http://www.trustedcomputinggroup.org/resources/tcg_tpm_20_library_profile_for_automotivethin
- Trusted Mobility Solutions (TMS)
 - Scope: BYOD/CYOD/COPE (enterprise), multi-persona, medical, mobile banking, virtualization, mobile device mgmt
 - TCG formal liaison with Mobey Forum (mobile banking)
 - TCG published: TMS BYOD Use Cases – October 2013
 - http://www.trustedcomputinggroup.org/resources/tms_use_cases__bring_your_own_device_byod



- **Mobile Platform (MPWG)**
 - Scope: Mobile tablets, phones, ebooks, PDAs, etc.
 - Public review: TPM 2.0 Mobile Reference Arch – April 2014
 - http://www.trustedcomputinggroup.org/resources/tpm_20_mobile_reference_architecture_specification
 - Public review: TPM 2.0 Mobile CRB Interface – April 2014
 - http://www.trustedcomputinggroup.org/resources/tpm_20_mobile_command_response_buffer_interface_specification
- **Trusted Multi-tenant Infrastructure (TMI)**
 - Scope: Trusted Cloud/SDN end-to-end reference models
 - TCG published: TMI Reference Model – December 2013
 - http://www.trustedcomputinggroup.org/resources/trusted_multitenant_infrastructure_reference_framework
 - TCG published: TMI Use Cases – December 2013
 - http://www.trustedcomputinggroup.org/resources/tcg_trusted_multitenant_infrastructure_use_cases



W3C - CSS Job Tickets

- The W3C CSS Working Group has requested a proposal for supporting CSS-based print job ticketing
- The PWG previously produced a presentation for the W3C Workshop on Publishing Using the Open Web Platform:
 - <http://ftp.pwg.org/pub/pwg/general/slides/pwg-w3c-properties-20130823.pdf>
 - New "print" CSS properties provide access to the core PWG PJT elements
 - The "print-ticket" CSS property provides a way to specify a job ticket in a specific format, e.g., JDF
- Is there interest within the PWG?
 - If so, should the Semantic Model WG do it?
 - And do we have a volunteer editor to produce a white paper as a starting point?



- The Wi-Fi Alliance is close to publishing new specifications for Wi-Fi Direct-based services
 - “Wi-Fi Direct Services”, or WFDS
- The specifications define discovery, transport, and file formats
- There is a WFDS Print service
 - Generally a subset of IPP Everywhere
 - 2 streaming raster formats required for Clients, at least one must be supported by a Printer:
 - PWG Raster
 - PDF-based raster format (not the PWG PDF/IS profile...)



The Printer Working Group

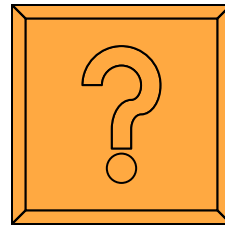
Mopria Alliance Update



Mopria Alliance

- Focus is on mobile printing, scanning, etc.
- Main focus of future liaison:
 - Registration of attributes and values, e.g., new media size names
 - Cooperation on certification efforts, e.g., IPP Everywhere Printer Self-Certification
- Web Site:
 - <http://www.mopria.org/>

Other Questions / Comments





Next PWG Meetings

- August 12-15 in Toronto, ON (Hilton Garden Inn)
 - Joint PWG-OpenPrinting meeting
- November 4-6 in Waltham, MA (hosted by Conexant Systems, Inc.)

Thank You!



- Thank you Apple for hosting this meeting!