



The Printer Working Group

Printer Working Group Plenary Session

February 3, 2015

PWG F2F Meeting

El Segundo, CA (Hosted by Xerox)

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
 - Trusted Computing Group (TCG)
 - Wi-Fi Alliance - Wi-Fi P2P Services
- 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
- 2015 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, February 3
 - 9:00 - 10:15 PWG Plenary
 - 10:15 - 10:30 Break
 - 10:30 - 12:00 Cloud Imaging Model
 - 12:00 - 1:00 Lunch
 - 1:00 - 5:00 IPP - Status, INFRA, SYSTEM
(mid-afternoon break where convenient)

Agenda for the Week



- **Wednesday, February 4**
 - 9:00 - 10:30 Semantic Model - JDFMAP
 - 10:30 - 10:45 Break
 - 10:45 - 12:00 3D Printing BOF
 - 12:00 - 1:00 Lunch
 - 1:00 - 5:00 IPP - IG

Agenda for the Week



- **Thursday, February 5**
 - 9:00 - 10:30 IDS - MFP PP
 - 10:30 - 10:45 Break
 - 10:45 - 12:00 IDS - Model, IAA



2015 PWG Meetings

- April 28-May 1 (Cupertino, CA, Joint PWG/ OpenPrinting, hosted by Apple)
- August 11-13 (Camas, WA, hosted by Sharp)
- November 3-5 (Location TBD, hoping for Eastern US)

2015 Membership



33 Members (30 Voting, 3 Non-Voting)

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

Invoices for 2015 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

- Note: The PWG Chair will not be seeking re-election for another term, so we must have a candidate for this position!
- Voting for officers will be conducted after the August 2015 F2F meeting.

Open Issues



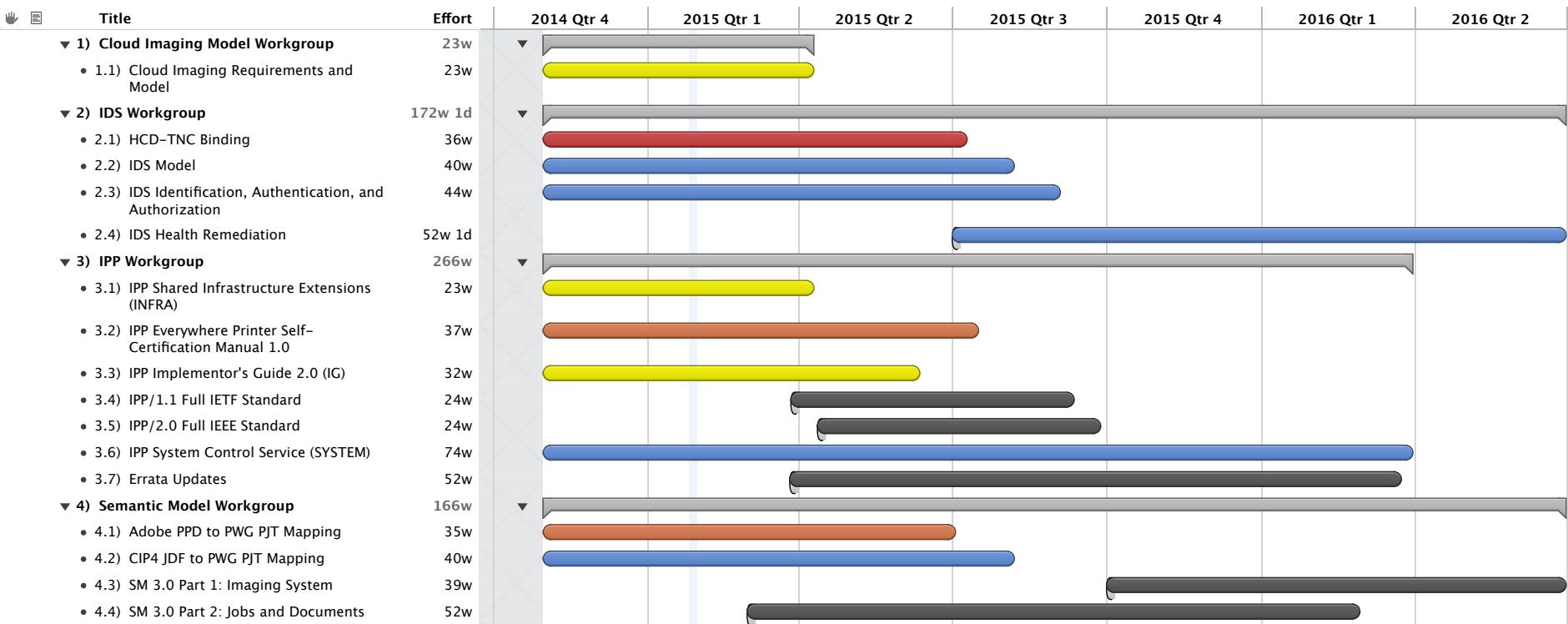
- Semantic Model (SM) WG needs a secretary



The Printer Working Group

PWG Workgroup Status

Work In Progress



Planned

Interim

Prototype

Prototyped

Stable



The Printer Working Group

Semantic Model Workgroup Status

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 WG Officers

- SM WG Chair:
 - Daniel Manchala (Xerox)
- SM WG Vice-Chair
 - Paul Tykodi (TCS)
- SM WG Secretary:
 - TBD (volunteers needed)
- SM WG Document Editors:
 - Nancy Chen - CWMP Printer Data Model
 - Jeremy Leber (Lexmark) - SM3
 - Daniel Manchala (Xerox) - SM3, SM3 Schema
 - Ira McDonald (High North) – CWMP Printer Data Model, JDFMAP
 - Michael Sweet (Apple) - PPDMAP
 - Paul Tykodi (TCS) - SM3, AFPMAP



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
 - CIP4 JDF to PWG PJT mapping (JDFMAP)
 - Completed most of the elements in the table (except for some complex mappings)
 - Adobe PPD to PWG PJT mapping (PPDMAP)
 - Issue stable draft and advance to PWG Last Call
- Semantic Model 3.0
 - Part 1: Imaging System
 - Includes general model, system object, services, and subunits
 - Part 2: Jobs and Documents
 - Includes capabilities and job/document tickets, receipts, and status
 - Add Transform Use Cases
 - Subscriptions and Notifications

Schema Status



- Named version (v1.180) published for PWG Print Job Ticket and Associated Capabilities
- Latest (v2.904) Up to date with In Progress specifications
 - Cloud Imaging Model extensions (WIP – WSDL operations needs update)



On-hold and Potential Documents

- **On-hold Documents**

- CWMP Printer Data Model
- Mapping of MSPS to PWG PJT (MSPSMAP)

- **Potential Documents**

- Subject to volunteers to be Editors
- AFPMAP (AFPMAP MOD:CA-P and IPDS to PWG PJT)
- Service Integration with Workflow Environments v1.0
 - Using PWG SM Services in workflow environments, this document will describe how to combine PWG Semantic Model services in order to support workflow and job transfer solutions.



More Info/How to participate

- We welcome participation from all interested parties
- SM Web Page:
 - <http://www.pwg.org/sm>
- Subscribe to the SM3 mailing list:
 - <https://www.pwg.org/mailman/listinfo/sm3>
 - sm3@pwg.org
- SM WG holds bi-weekly phone conferences announced on the SM3 mailing list
 - Next conference call is February 23, 2015 at 2pm ET
 - Conference calls on same weeks as Cloud conference calls
 - Conference calls on opposite weeks of IDS conference calls



The Printer Working Group

IPP Workgroup Status

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 (INFRA), IPP System Service, IPP over HTTPS Transport Binding and “ipps” URI Scheme, LDAP Schema for Printer Services
 - Michael Sweet (Apple) – IPP Shared Infrastructure Extensions (INFRA), IPP System Service, IPP over HTTPS Transport Binding and “ipps” URI Scheme, LDAP Schema for Printer Services
 - Smith Kennedy (HP) - IPP Implementor’s Guide 2.0 (IG)



IPP WG Status (1/2)

- IETF RFCs in development:
 - IETF IPP over HTTPS Transport Binding and “ipps” URI Scheme
 - IETF + IANA Approved, RFC Editor’s Queue
 - IETF LDAP Schema for Printer Services (updates RFC 3712)
 - IETF + IANA Approved, (Mike/Ira Update Needed)
- PWG Specifications in development:
 - IPP Everywhere Printer Self-Certification Manual 1.0 (SELFCERT)
 - Prototype Draft
 - IPP Implementors Guide 2.0 (IG) - Stable Draft
 - IPP Shared Infrastructure Extensions (INFRA)
 - Stable Draft (In PWG Last Call)
 - IPP System Service (SYSTEM) - Interim Draft



IPP WG Status (2/2)

- Recent Candidate Standards:
 - PWG 5100.15-2014: IPP FaxOut Service (errata)
 - PWG 5100.17-2014: IPP Scan Service (SCAN)
 - PWG 5100.1-2014: IPP Finishings 2.0 (FIN)
- 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
 - Also pending errata for PWG 5100.9 and 5107.3 to correct xxx-error usage (per WG mailing list discussion)
 - Explain issues and update registry for IANA Printer MIB (ASN.1 comments)
 - Update IANA IPP registry for keywords that do not require "-error" on the end



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 March 2 and 16, 2015 at 3pm ET
 - Held on opposite weeks of Cloud Imaging Model WG
 - Held on same weeks of Imaging Device Security WG



The Printer Working Group

IDS Workgroup Status

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): IDS-Model
IDS-IAA
 - Alan Sukert (Xerox): IDS-IAA



Approved Candidate Standards

- PWG 5110.1-2014
 - HCD-Attributes
- PWG 5110.2-2013
 - HCD-NAP
- PWG 5110.3-2013
 - PWG-LOG Common Log



Current Document Status

- Updated IDS Charter approved
- HCD-TNC Binding Document
 - Reopened for revision to use TNC “batch” headers
 - Prototype draft completion date Q2, 2015
- IDS-Model Common Requirements
 - Define core IDS security model and integrate into SM3
 - Security Actors, Objects, Roles, and Types
 - Security Ticket XML Schema
 - Security operations (WSDL)
 - Prototype draft completion date Q2, 2015
- IDS-IAA specification - phase 1
 - Phase 1 - Initial version to address Actor and Object privileges and permissions
 - Prototype draft completion date Q3, 2015

Pending Documents



- IDS Health Remediation
 - Prototype draft completion TBD



Next Steps

- IDS TNC Binding
 - Reopened for revision to use TNC “batch” headers
- Model specification
 - Finalize Actor and Object roles
 - Complete documentation of Security Ticket top-level elements
- IDS Identification, Authentication and Authorization specification
 - Phase 1 - Definition of core set of Policy Attributes
 - Access control values
- MFP Technical Community - monitor progress of Protection Profile work
- Resume IDS Health Remediation

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 holds bi-weekly conference calls on Mondays at 11:00AM PT/2:00PM ET
 - Next teleconference February 16, 2015
 - Conference calls on same weeks as IPP conference calls
 - Conference calls on opposite weeks of SM conference calls



The Printer Working Group

Cloud Imaging Model Workgroup Status

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

- Stable draft at:
 - <http://ftp.pwg.org/pub/pwg/cloud/wd/wd-cloudimagingmodel10-20150122.pdf>
- Schedule
 - Current Draft is at Stable level and in PWG Last Call
 - PWG Last Call ends February 23, 2015
- Next Steps
 - When PWG Last Call is complete and comments are resolved, the specification will be put up for PWG Formal Vote
 - 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 further projects 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
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The Printer Working Group

Liaison Status

TCG News (1/3)



- Next TCG Members Meeting
 - 23-27 February 2015 - San Diego, CA - Ira will attend in person
- TPM Software Stack (TSS)
 - Scope: C-language low/high-level APIs to TPM 2.0 (discrete/firmware)
 - TCG TSS System Level API 2.0 (low) – published 26 January 2016
 - http://www.trustedcomputinggroup.org/resources/tss_system_level_api_and_tpm_command_transmission_interface_specification
 - Public review: TSS Feature API 2.0 (high) – ended 6 January 2015
 - http://www.trustedcomputinggroup.org/resources/tss_feature_api_specification
- Embedded Systems (EmSys)
 - Scope: Auto, IoT, SmartGrid, Financial, Medical, Industrial Ctrl
 - Vehicle Services and IoT Subgroups - TPM 2.0, use cases, frameworks
 - TPM 2.0 Auto Thin Profile – public review ended 29 December 2014
 - http://www.trustedcomputinggroup.org/resources/tcg_tpm_20_library_profile_for_automotivethin



- PC Client
 - TCG PC Client TPM 2.0 Profile – published 26 January 2015
 - http://www.trustedcomputinggroup.org/resources/pc_client_platform_tpm_profile_ptp_specification
- Mobile Platform (MPWG)
 - Scope: Mobile tablets, phones, PDAs, eBook readers, etc.
 - TCG formal liaison with Mobey Forum (mobile banking, biometrics)
 - TCG TPM 2.0 Mobile Reference Arch – published 16 December 2014
 - http://www.trustedcomputinggroup.org/resources/tpm_20_mobile_reference_architecture_specification
 - TCG TPM 2.0 Mobile CRB Interface – published 16 December 2014
 - http://www.trustedcomputinggroup.org/resources/tpm_20_mobile_command_response_buffer_interface_specification
 - Public Review: TPM 2.0 Mobile Common Profile - pending for Feb 2015

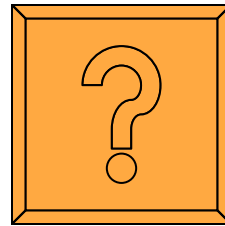


- Trusted Mobility Solutions (TMS)
 - Scope: enterprise, medical, banking, virtualization, mobile mgmt
 - TCG formal liaison with Mobey Forum (mobile banking, biometrics)
 - TCG pending formal liaisons with Open Mobile Alliance (device mgmt), ETSI (NFV on phones/servers), 3GPP (integrity), SCF (base stations)
 - TMS BYOD Use Cases – published October 2013
 - http://www.trustedcomputinggroup.org/resources/tms_use_cases_bring_your_own_device_byod
- Trusted Multi-tenant Infrastructure (TMI)
 - Scope: Trusted Cloud/SDN end-to-end reference models
 - TCG TMI Reference Model – published December 2013
 - http://www.trustedcomputinggroup.org/resources/trusted_multitenant_infrastructure_reference_framework
 - TCG TMI Use Cases – published December 2013
 - http://www.trustedcomputinggroup.org/resources/tcg_trusted_multitenant_infrastructure_use_cases



- The Wi-Fi Alliance published a set of new specifications for Wi-Fi Peer-to-Peer (P2P) services in 2014
- The specifications define discovery, transport, and file formats for services using a Wi-Fi Direct connection
 - Collectively called the Application Service Protocol (“ASP”) v1.0
- The Wi-Fi P2P Services Print specification defines a profile of IPP/2.0 that is 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...)
- New work for 2015 expands on ASP 1.0

Other Questions / Comments



Next PWG Meeting



- April 28 - May 1 (Cupertino, CA, hosted by Apple)

Thank You!



- Thank you Xerox for hosting this meeting!