



# The Printer Working Group

## Printer Working Group Plenary Session

April 26, 2016

PWG Face to Face Meeting

Boise, Idaho – Hosted by HP Inc.

Smith Kennedy (HP Inc.)



# Plenary Agenda

- Administrivia
- New Github Organization and Repositories
- PWG Workgroup Status [WG Chairs]
  - Internet Printing Protocol (IPP)
  - Semantic Model (SM)
  - Imaging Device Security (IDS)
- Liaison Status
  - Trusted Computing Group (TCG)
  - DRUPA
- Next Meetings

# Administrivia



- Welcome and Introductions
- Confirm Minutes Taker
- Review PWG Patent Policy
- Agenda for the Week
- Future PWG Meeting Schedule
- 2016 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 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
  - 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 Working Group Meetings



## Do Not Discuss:

- The validity/essentiality of patents/patent claims
- The cost of specific patent use
- Licensing terms or conditions
- Product pricing, territorial restrictions, or market share
- Don't discuss ongoing litigation or threatened litigation

DO formally object if inappropriate topics are discussed

# Agenda Overview



## Tuesday, April 26

9:00 - 10:15	PWG Plenary
10:15 - 10:30	Break
10:30 - 11:00	OpenPrinting Plenary (Ira McDonald)
11:00 - 12:00	CUPS Plenary (Mike Sweet)
12:00 - 1:00	Lunch
1:00 - 2:00	OpenPrinting – cups-filters / Mobile Printing (Till Kamppeter)
2:00 - 2:45	OpenPrinting – Ghostscript / MuPDF (Michael Vrhel)
2:45 - 3:00	Break
3:00 - 4:00	OpenPrinting – Enterprise Printing Experience (Aveek Basu)
4:00 - 5:00	OpenPrinting – Distribution-Independent Printer Driver Packages (Till Kamppeter)



# Agenda Overview



## Wednesday, April 27

9:00 - 12:00	Semantic Model: Status / Schema / JDFMAP / Next Steps
12:00 - 1:00	Lunch
1:00 - 5:00	IPP: Status / System Service

## Thursday, April 28

9:00 - 12:00	IPP: 3D Printing Extensions
12:00 - 1:00	Lunch
1:00 - 3:00	IPP: Finishings 2.1 / Next Steps



# Future PWG Meeting Schedule

- 2016
  - August 23-24: Camas, WA – hosted by Sharp Labs
  - October ??? / November ??? (TBD)
    - Volunteers to host? Choose a “neutral” location?
- Discuss future meeting scheduling

# 2016 Membership



## 29 Members (28 Voting, 1 Non-Voting)

Apple	High North	MWA Intelligence	Technical Interface Consulting (N-V)
Brother Industries	Intel	Nancy Chen	Thinxstream Technologies
Canon	Konica Minolta	Northlake	Toshiba America Business Solutions
Conexant Systems	Kyocera Document Solutions Inc.	Oki Data	Tykodi Consulting Services LLC
Danny Brennan	Lexmark	Qualcomm*	Xerox
Epson	Meteor Network	Ricoh	
Fuji Xerox	Microsoft	Samsung	
HP Inc.	MPI Tech	Sharp Labs	

\* Recently purchased CSR



# PWG Officers (2015-2017 Term)

- PWG Chair: Smith Kennedy, HP Inc.
- PWG Vice-Chair: Alan Sukert, Xerox
- PWG Secretary: Ira McDonald, High North

# Github Organization and Repositories



- Github organization account:
  - <https://github.com/istopwg>
- Web site repository:
  - <https://github.com/istopwg/website>
- Semantic Model Repository
  - <https://github.com/istopwg/pwg-semantic-model>
- IPP Everywhere Self Certification Tools
  - <https://github.com/istopwg/ippeveselfcert>
- IPP Registry
  - <https://github.com/istopwg/ippregistry>



# The Printer Working Group

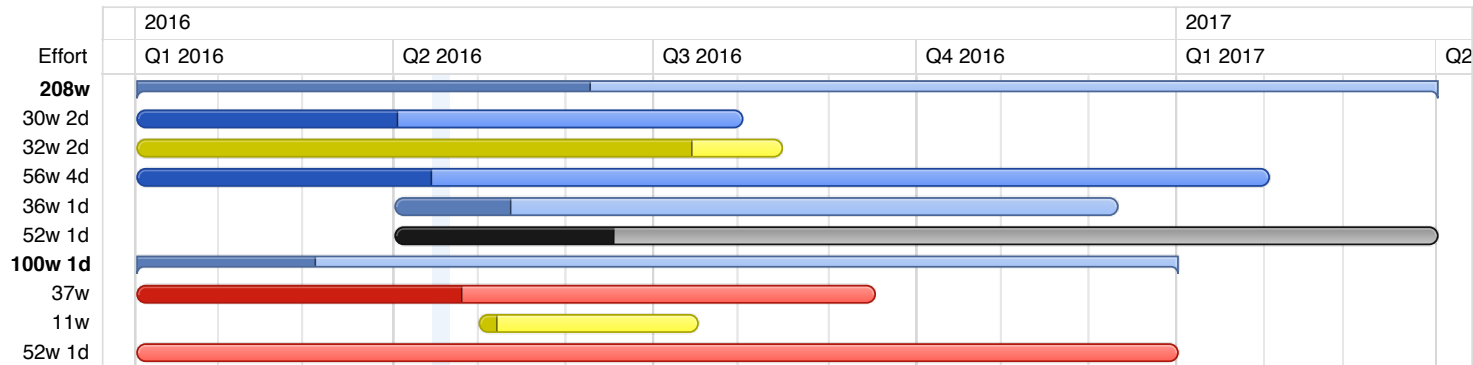
## PWG Workgroup Status

# Work In Progress



Task

- **1) IPP Workgroup**
  - 1.1) IPP System Service (SYSTEM) 30w 2d
  - 1.2) IETF IPP/1.1 Proposed Standard 32w 2d
  - 1.3) IPP 3D Printing Extensions (3D) 56w 4d
  - 1.4) Finishings 2.1 36w 1d
  - 1.5) Errata Updates 52w 1d
- **2) Semantic Model Workgroup 100w 1d**
  - 2.1) CIP4 JDF to PWG PJT Mapping 37w
  - 2.2) Semantic Model v2 Release 11w
  - 2.3) Semantic Model v3 52w 1d



Planned

Interim

Prototype

Prototyped

Stable



# The Printer Working Group

## IPP Workgroup Status

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





# IPP WG: Charter

- Current charter:
  - <http://ftp.pwg.org/pub/pwg/ipp/charter/ch-ipp-charter-20151225.pdf>
- The Internet Printing Protocol (IPP) workgroup is chartered with the maintenance of IPP, the IETF IPP registry, and support for new clients, network architectures (Cloud, SDN), service bindings for MFDs and Imaging Systems, and emerging technologies such as 3D Printing
- In addition, we maintain the IETF Finisher MIB, Job MIB, and Printer MIB registries, and handle synchronization with changes in IPP



# 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 System Service (SYSTEM), IETF IPP/1.1
  - Michael Sweet (Apple) – IPP System Service (SYSTEM), IETF IPP/1.1, IPP 3D Printing Extensions
  - Smith Kennedy (HP Inc.) – IPP Finishings 2.1



# IPP WG: Status (1/3)

- IETF RFCs in development:
  - IETF IPP/1.1: Encoding and Transport (obsoletes RFC 2910/3382)
    - Stable Draft, AD Sponsor
  - IETF IPP/1.1: Model and Semantics (obsoletes RFC 2911/3381/3382)
    - Stable Draft, AD Sponsor
- PWG Specifications in development:
  - IPP 3D Printing Extensions (3D) - Interim Draft
  - IPP System Service (SYSTEM) - Interim Draft
  - IPP Finishings 2.1 (FIN) - Interim Draft



# IPP WG: Status (2/3)

- Recent Full Standard:
  - PWG 5100.12-2015: IPP 2.0, 2.1, and 2.2
- Recent Candidate Standards:
  - PWG 5100.20-2016: IPP Everywhere Printer Self-Certification Manual v1.0 (SELFCERT)
  - PWG 5100.19-2015: IPP Implementor's Guide v2.0 (IG)
  - PWG 5100.18-2015: IPP Shared Infrastructure Extensions (INFRA)
- Recent IETF RFCs:
  - RFC 7612: LDAP Schema for Printer Services
  - RFC 7472: IPP over HTTPS Transport Binding and "ipps" URI Scheme



# IPP WG: Status (3/3)

- Up-to-date pending IANA registrations online:
  - <http://www.pwg.org/ipp/ipp-registrations.xml>
  - Continue to maintain this in parallel for new specifications
  - Github repository:
    - <https://github.com/istopwg/ippregistry>
- IPP Everywhere Printer Self-Certifications:
  - Submission page:
    - <https://www.pwg.org/ippeveselfcert>
  - Printer listing page:
    - <https://www.pwg.org/printers>
  - Still waiting for our first submission!
- IPP Sample Code:
  - Github repository:
    - <https://github.com/istopwg/ippsample>
  - Fork of CUPS code includes ippfind, ippproxy, ippserver, and ipptool



# IPP WG: More Information

- 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 weekly phone conferences announced on the IPP mailing list
  - Next conference calls May 9, 2016 at 3pm ET and May 16, 2016 at 4pm ET to discuss 3D Printing



# The Printer Working Group

## Semantic Model Workgroup

Daniel Manchala (Xerox)



# Introduction

- The current Semantic Model workgroup is the latest in a series of PWG workgroups documenting and maintaining the Hard Copy Imaging System model.
- This model defines the semantic elements that constitute the imaging services and subunits of a network connected Imaging System, and the actions that operate on the objects and elements of the model, independent of a specific protocol or network environment.
- By the current workgroup charter, the primary function of the workgroup is to keep the model updated with additions and changes developed by other PWG workgroups, to make the model documentation accessible without the need for special software, and to provide for the review and approval of model updates by the PWG membership.





# Officers and Editors

- Chair:
  - Daniel Manchala (Xerox)
- Vice-Chair:
  - Paul Tykodi (TCS)
- Secretary:
  - Bill Wagner (TIC)
- Document Editors:
  - Daniel Manchala (Xerox) – SM2, SM3 Schema
  - Ira McDonald (High North) – JDFMAP (awaiting prototype)
  - Rick Yardumian (Canon) – JDFMAP (awaiting prototype)



# Project Status

## Active projects in this workgroup

- Mapping CIP4 JDF to PWG Print Job Ticket v1.0 (JDFMAP)
- Update and Finalization of Semantic Model 2
- Creation of Semantic Model 3



# More Info/How to participate

- **We welcome more participation from member companies**
- **Much of the discussion of issues will be on the SM3 mail list. You must subscribe to the list to be able to post to the list. See <http://www.pwg.org/mailman/listinfo/sm3> to subscribe.**
- **The group maintains a Web Page for Semantic Model that includes links to the latest documents, schema and a browse-able version of the schema at <http://www.pwg.org/sm3>**
- **Next conference call: May 16, 2016; 12:00 – 1:00 Pacific Time / 3:00 – 4:00 PM Eastern Time.**

Call-in toll-free number (US/Canada): 1-866-469-3239

Call-in toll number (US/Canada): 1-650-429-3300

Call-in toll number (US/Canada): 1-408-856-9570

<https://ieee-isto.webex.com/ieee-isto/e.php?MTID=m123b376f8d9bdc7d9ff0ff43ed7d1610>



# The Printer Working Group

## IDS Workgroup Status

Alan Sukert (Xerox)



# IDS: Original Charter

- Investigate and define 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
- Provide a path for vendors to review and contribute to the definition of Common Criteria HCD Protection Profiles



# IDS: Officers

- Chair:
  - Alan Sukert (Xerox)
- Vice-Chair:
  - *Currently vacant*
- Secretary:
  - Alan Sukert (Xerox)
- Document Editors:
  - Ira McDonald (High North): HCD-TNC



- The IDS workgroup is currently in “hibernation”
  - Will be revived when needed
- IDS Charter update reflecting “hibernation” status approved by PWG
- PWG Candidate Standard 5110.4-2015: HCD-TNC specification approved by PWG
- The following specifications are being archived:
  - IDS Model
  - IDS Identification, Authentication, and Authorization (IAA)
  - IDS Health Remediation
- New HCD Protection Profile issued Sep 2015
  - No current activity on new or updated HCD Protection Profile



# The Printer Working Group

## Liaison Status





# Trusted Computing Group (TCG)

- **Next TCG Members Meetings**

- 20-24 June 2016 – Vienna, Austria – Ira to call in
- 17-21 October 2016 – Seoul, South Korea – Ira to call in

- **Trusted Mobility Solutions (TMS)** – Ira is co-chair and co-editor

- Scope: enterprise, medical, banking, virtualization, mobile mgmt
- Formal liaisons – ETSI (NFV), Open Mobile Alliance (device mgmt), Global Platform (TEE protected environment), Mobey Forum (banking/payments, biometrics authentication, integrity)
- Proposed formal liaisons – ITU-T (integrity, security, 5G, Cloud)
- Informal liaisons - 3GPP (integrity), Small Cell Forum (integrity)

- **Mobile Platform (MPWG)** – Ira is co-editor

- Scope: mobile phones, PDAs, eBook readers, etc.
- Formal liaisons – Global Platform (TEE), Mobey Forum (banking)
- Multiple Stakeholder Model – TCG approved March 2016
  - [http://www.trustedcomputinggroup.org/wp-content/uploads/Multiple-Stakeholder-Model-v3r36-reference-document\\_public-review.pdf](http://www.trustedcomputinggroup.org/wp-content/uploads/Multiple-Stakeholder-Model-v3r36-reference-document_public-review.pdf)



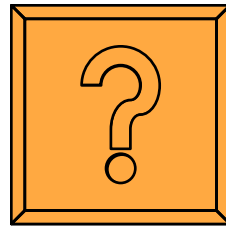
# Current Common Criteria Plans

- New Protection Profile for Hardcopy Devices (PP\_HCD\_V1.0) published September 11, 2015
- IPA working to enable Japanese vendors to evaluate against current HCD PP
- NIAP is addressing interpretations of current HCD PP
- Concerns with current HCD PP:
  - How do address crypto requirements across multiple Schemes
  - Creating “International” reference documents
  - How to address use of SSDs
- IPA and NIAP open to creating an iTC to formulate an HCD cPP
  - Korea very interested; Germany and Sweden interested but not actively engaged
  - Will discuss creation of an HCD cPP among interested Schemes



- **Drupa** – definition per Wikipedia *"The drupa is the largest printing equipment exhibition in the world, held every three years (4 years in the past) Messe Düsseldorf in Düsseldorf, North Rhine-Westphalia, Germany. The word drupa is a portmanteau of the German words druck and papier; print and paper respectively."*
- **3D Printing is an area of Focus for Drupa 2016**
  - Messe Düsseldorf has contracted with 3D fab+print to organize a touchpoint booth highlighting certain 3D industry related tracks
  - The PWG has been accepted as a presenting organization for the 3D fab+print touchpoint
  - The PWG is scheduled to provide a 10 to 15 minute presentation on Saturday June 4<sup>th</sup> at 3:00 PM and Monday June 6<sup>th</sup> at 2:00 PM covering the work being performed by the IPP Working Group on a forthcoming IPP 3D standard at the 3D fab+print touchpoint booth.
  - The PWG presentation will be advertised by both 3D fab+print to the 3D community through their monthly newsletter in April 2016 and through normal Drupa press channels to the existing 2D community

# Other Questions / Comments





# Next PWG Meetings

- August 23-24: Camas, WA – hosted by Sharp Labs
- October ??? / November ??? (TBD)