



The Printer Working Group

IPP Workgroup Session, Day 1

April 17, 2019

PWG IP Policy



- "This meeting is being held in accordance with the PWG Intellectual Property Policy"
 - http://www.pwg.org/chair/membership_docs/pwg-ip-policy.pdf
- TL;DR: Anything you say in a PWG meeting or email to a PWG address can be used in a PWG standard
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April 17, 2019 (Eastern Daylight Time)

When	What
09:00 - 09:30	IPP WG: Status
09:30 - 10:15	IPP WG: 3D Printing Topics
10:15 - 10:30	Break
10:30 - 12:00	IPP WG: System Service + Demo
12:00 - 13:00	Lunch
13:00 - 14:00	IPP WG: IPP Everywhere v1.1
14:00 - 15:00	IPP WG: Job Accounting BOF
15:00 - 15:15	Break
15:15 - 17:00	IPP WG: Offspring of JPS2 - Job Storage



April 18, 2019 (Eastern Daylight Time)

When	What
09:00 - 11:00	IDS WG: Status and Discussion
11:00 - 12:15	IPP WG: Encrypted Jobs and Documents
12:15 - 12:30	IPP WG: Next Steps
12:30 - 13:30	Lunch



- Current charter:
 - <http://ftp.pwg.org/pub/pwg/ipp/charter/ch-ipp-charter-20170615.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 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, MFD Alerts v1.1
 - Michael Sweet (Apple) – IPP Encrypted Jobs and Documents, IPP Everywhere v1.1, IPP Everywhere Printer Self-Certification Manual v1.1, IPP Job Extensions v2.0, IPP System Service
 - Smith Kennedy (HP Inc.) – IPP Encrypted Jobs and Documents, IPP Enterprise Printing Extensions v2.0 (EPE)

Status (1/2)



- PWG Specifications in development:
 - IPP Everywhere v1.1 - Stable Draft
 - IPP Everywhere Printer Self-Certification Manual v1.1 - Prototype Draft
 - IPP Job Extensions v2.0 - Prototype Draft
 - IPP Enterprise Printing Extensions v2.0 - Initial Draft
 - IPP System Service v1.0 - Prototype Draft
 - MFD Alerts v1.1 - Interim Draft
- IPP Best Practice in development:
 - IPP Encrypted Jobs and Documents - Interim Draft



- 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:
 - <https://www.pwg.org/printers>
 - 365 printers currently listed
 - Second 1.0 self-certification tools update released in October 2017
 - Third 1.0 self-certification tools update released in November 2018
- IPP Sample Code:
 - Github repository:
 - <https://github.com/istopwg/ippsample>
 - Fork of CUPS code includes ipppfind, ippproxy, ippserver, ipptool, ippptransform, and ippptransform3d



3D Printing Topics

- Work to get wide adoption of IPP 3D v1.1 and PWG Safe G-Code Subset v1.0
 - Reach out to vendors - point to IPP sample code
 - Both local printing and cloud
 - Can we develop a GUI client prototype?
- Concrete printing
 - Material types
 - Determine whether other material properties are needed (additives, amount of water, etc.)
 - Other print ticket properties needed?
- Liaisons (next slide)



3D Liaison Discussions

- ASTM Committee F42 on Additive Manufacturing Technologies
 - <https://www.astm.org/COMMITTEE/F42.htm>
- ISO/IEC JTC 1 WG 12 3D Printing and Scanning eCommittee
 - <https://isotc.iso.org/livelink/livelink?func=ll&objId=19905763&objAction=browse&viewType=1>
 - Participation in the ISO initiative is currently via the INCITS Ad Hoc.
- 3D PDF Consortium
 - <https://www.3dpdfconsortium.org>
- 3D Concrete Printing Standards Development
 - NIST
 - ACI
 - ASTM
- 3MF Consortium
 - <https://www.3mf.io>



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Break



IPP System Service (SYSTEM)

- Current prototype draft at:
 - <https://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippssystem10-20190130-rev.pdf>
- Combines and implements a concrete IPP binding of the following abstract Semantic Model 2.0 services and objects:
 - PWG 5108.06: System Object and System Control Service
 - PWG 5108.03: Network Resource Service
 - PWG 5109.1: Cloud Imaging Requirements and Model
- Almost all required attributes and operations have been prototyped in the ippsample project
- Proposed Schedule:
 - Stable draft in Q2 2019



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IPP System Service

Demo of ippsample Prototype



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Lunch Break

Resuming at 1:00pm EDT



IPP Everywhere v1.1

- Stable draft of core specification:
 - <https://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippeve11-20190128-rev.pdf>
- Prototype draft of manual:
 - <https://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippeveselfcert11-20180704-rev.pdf>
- Beta tools nearing completion:
 - <https://github.com/istopwg/ippeveselfcert>
- New JSON-based portal:
 - <https://beta.pwg.org/printers>
- Submission tool for new JSON-based portal
 - Will also provide as a standalone download for companies using the 1.0 self-cert tools
- Proposed schedule:
 - Stable drafts and beta tools Q2 2019



IPP Everywhere Self-Certification

- Resources:
 - <http://www.pwg.org/ipp/everywhere.html> (for tools/info)
 - <https://www.pwg.org/ippeveselfcert> (submission form)
 - <http://www.pwg.org/printers> (printer list)
 - <https://github.com/istopwg/ippeveselfcert> (Github repo)
- Released v1.0 Update 3 of self-certification tools on November 9th, 2018
 - Fixes all known issues in v1.0 tools
 - v1.0 is tracking CUPS 2.2.x (current stable branch)
- v1.1 self-certifications tools on track for Q2 2019
 - Includes new JSON submission tool
 - v1.1 tracks CUPS 2.3.x (current development branch)



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IPP Everywhere v1.1
Self-Certification Tools Demo



Job Accounting BOF

- What are the use cases?
- What are the requirements?
- How do we want to address GDPR and other privacy regulations?
- How do we want to address the validity of the accounting information?
- What do we need to add to IPP?



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Break

Resuming at 3:15pm EDT



Offspring of JPS2 - Job Storage (BOF)

- What are the use cases?
- What are the requirements?
- How do we want to address GDPR and other privacy regulations?
- What do we need to add to IPP?



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IPP Workgroup Session, Day 2

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IPP Encrypted Jobs and Documents

- Interim draft:
 - <https://ftp.pwg.org/pub/pwg/ipp/wd/wd-ipptrustnoone10-20190131-rev.pdf>
- Proposed schedule:
 - Prototype draft Q3 2019



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Next Steps



Next Steps

- IPP Encrypted Jobs and Documents (Mike/Smith)
 - Prototype draft in Q3 2019?
- IPP Enterprise Printing Extensions v2.0 (Smith)
 - Prototype draft in Q3 2019?
- IPP Everywhere and Self-Certification v1.1 (Mike/Smith)
 - Stable working drafts/beta tools in Q2 2019
- IPP Job Extensions v2.0 (Mike)
 - Stable draft and IPP WG Last Call in Q2 2019
- IPP System Service (Ira/Mike)
 - Stable working draft and IPP WG Last Call in Q2 2019



More Information

- We welcome participation from all interested parties
- IPP Working Group web page
 - <https://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 scheduled for Thursday, April 25, 2018 and May 9, 2019 at 3pm ET