



The Printer Working Group

IPP Workgroup Session, Day 1

August 9, 2017

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
 - (but please do read the IP policy above if you haven't done so)



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When	What
11:00 - 11:30	IPP Workgroup Status and Updates
11:30 - 12:00	Lunch Break
12:00 - 2:00	IPP System Service v1.0
2:00 - 3:00	IPP Get-User-Printer-Attributes

August 10, 2017

When	What
10:00 - 11:30	IPP Authentication Methods
11:30 - 12:00	Lunch Break
12:00 - 1:30	IPP Presets
1:30 - 3:00	3D Topics and Next Steps



- 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 (SYSTEM)
 - Michael Sweet (Apple) – IPP System Service (SYSTEM), PWG 3D Print Job Ticket and Associated Capabilities v1.0 (PJT3D)
 - Smith Kennedy (HP Inc.) – Various white papers

Status (1/2)



- **PWG Specifications in development:**
 - PWG 3D Print Job Ticket and Associated Capabilities v1.0 (PJT3D)
 - PWG Formal Vote until Aug 18
 - Mapping of CIP4 JDF to PWG Print Job Ticket (JDFMAP)
 - PWG Formal Vote until Aug 28
 - IPP System Service v1.0 (SYSTEM) - Prototype Draft
- **Recent Candidate Standards:**
 - PWG 5100.1-2017: IPP Finishings 2.1 (FIN)
 - PWG 5100.20-2016: IPP Everywhere Printer Self-Certification Manual v1.0 (SELFCERT)
 - PWG 5100.21-2017: IPP 3D Printing Extensions v1.0 (3D)
- **Recent IETF RFCs:**
 - RFC 8010: Internet Printing Protocol/1.1: Encoding and Transport
 - RFC 8011: Internet Printing Protocol/1.1: Model and Semantics



- 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>
 - 89 printers currently listed (almost doubled since May 2017)
 - 1.0 self-certification tools update released in October 2016
- IPP Sample Code:
 - Github repository:
 - <https://github.com/istopwg/ippsample>
 - Fork of CUPS code includes ipppfind, ippproxy, ippserver, ipptool, ippptransform, and ippptransform3d



IETF IPP/1.1 Updates

- RFCs 8010 and 8011 have been published which replace (obsolete) RFCs 2910, 2911, 3381 (deprecated job progress attributes), and 3382 (collection attribute syntax)
- Published RFCs:
 - <http://tools.ietf.org/html/rfc8010>
 - <http://tools.ietf.org/html/rfc8011>
 - **Pending:** Advance RFC 8010 and 8011 to IETF Internet Standard through status change
 - IESG process described in RFCs 2026 and 6410
- Proposed schedule:
 - Request IESG change of status ASAP



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 1 of self-certification tools on October 28th, 2016
- Planning future 1.1 errata update for manual and tools in 2017:
 - More tests (Cancel-My-Jobs, Close-Job, Identify-Printer)
 - Other necessary changes that are not simple bug fixes in the tools/submission portal
- Proposed Schedule:
 - 1.0 Update 2 - Q4 2017
 - 1.1 errata update: Q4 2017 / Q1 2018



IPP System Service (SYSTEM)

- Current prototype draft at:
 - <http://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippssystem10-20170719-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
- Additional discussion:
 - How to allow Users to discover/query resources (Get-Resources is admin only)
- Proposed Schedule:
 - Stable draft in Q4 2017



IPP Get-User-Printer-Attributes

- Current white paper at:
 - <http://ftp.pwg.org/pub/pwg/ipp/whitepaper/tb-userop-20170801-rev.pdf>
- **Get-User-Printer-Attributes Operation**
 - Provides a Get-Printer-Attributes response filtered by the most authenticated user
 - Useful for things like limiting which users can print in color, use a particular letterhead, etc.
 - Clients that support the operation will only show available print options to the user instead of reporting an error (or having the options silently overridden by the Printer) when the user submits the job
 - Needed because Get-Printer-Attributes is not defined as an authenticated operation (so no clients support it), nor does it include the "most authenticated user identity" as a filter criteria (which isn't something we can expose using "printer-get-attributes-supported")
- **Additional discussion:**
 - Should this be a standards-track specification instead of a white paper?



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IPP Workgroup Session, Day 2

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Agenda



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IPP Authentication Methods

- Current white paper:
 - <http://ftp.pwg.org/pub/pwg/ipp/whitepaper/tb-ippauth-20170803.pdf>
- Provides an overview of how HTTP authentication methods are used with IPP
 - Currently HTTP Basic, HTTP Digest, HTTP Bearer (OAuth), HTTP Negotiate (Kerberos)
 - Maybe HTTP MutualAuth and others in the future



- Current white paper:
 - <http://ftp.pwg.org/pub/pwg/ipp/whitepaper/tb-ipp-preset-20170728.pdf>
- "job-presets-supported" and "job-triggers-supported" Printer Description attributes
- Provides named presets (sets of Job Template attributes)
- Provides a way for Clients to know that selection of one Job Template attribute value should also select others, e.g., selecting 4x6 media should also trigger "print-quality" getting set to 'high'.
- Additional discussion:
 - Using IPP System Service Job Template resources with Job Presets?
 - Saving/exporting Client-side presets to Printer using Set-Printer-Attributes?



3D Printing Liaison Topics

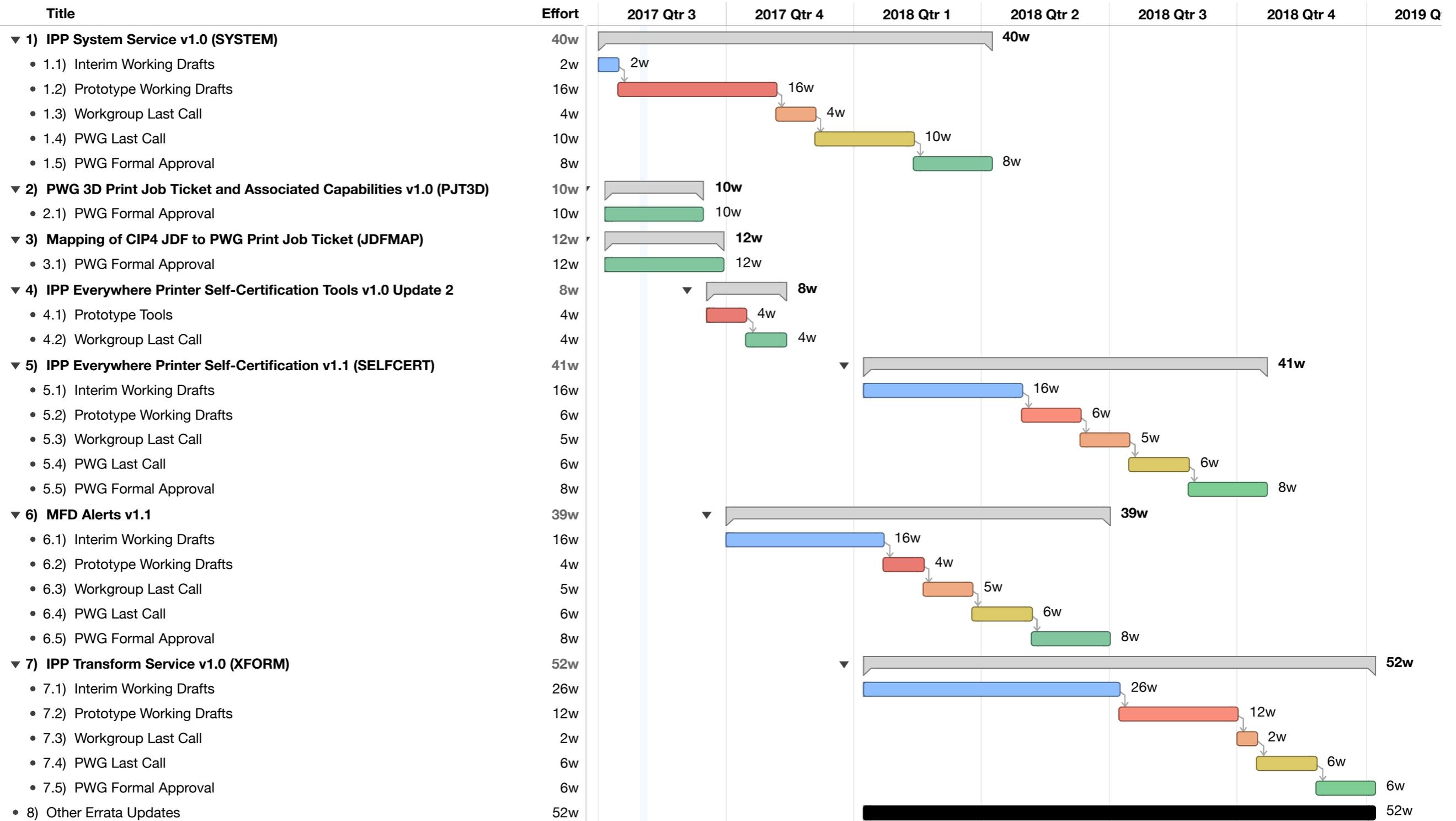
- See Plenary slides for status
- Discuss any 3D issues that came up during the Plenary that need to be discussed in the IPP workgroup...



The Printer Working Group

Next Steps

Next Steps





Next Steps

- Advance IPP/1.1 to IETF Internet Standard
 - Request change of status
- PWG 3D Print Job Ticket and Associated Capabilities v1.0 (Mike)
 - Complete formal vote (August 18, 2017)
- Mapping CIP4 JDF to PWG Print Job Ticket (Ira/Rick)
 - Complete formal vote (August 28, 2017)
- IPP System Service (Ira/Mike)
 - Stable working draft in Q4 2017
- IPP Everywhere Printer Self-Certification v1.0 Update 2 (Mike/Smith)
 - Beta in Q4 2017
- IPP Everywhere Printer Self-Certification Manual v1.1 (Mike/Smith)
 - Interim working draft in Q4 2017 / Q1 2018
- MFD Alerts v1.1 (Ira/Mike - Errata Update)
 - Initial working draft in Q4 2017
- IPP Transform Service v1.0 (Ira/Paul)
 - Initial working draft in Q1 2018



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 bi-weekly phone conferences announced on the IPP mailing list
 - Next conference calls scheduled for Thursday, August 17, 2017 and August 31, 2017 at 3pm ET