



# The Printer Working Group

IPP Workgroup Session, Day 1

August 23, 2016

PWG F2F Meeting

Camas, WA (Sharp)



## August 23, 2016

When	What
10:30 - 12:00	IPP Workgroup Status, IPP/1.1 Updates, Proposals, Self-Certification
12:00 - 1:30	Lunch
1:30 - 3:30	IPP System Service (SYSTEM)
3:30 - 5:00	IPP 3D Printing Extensions

## August 24, 2016

When	What
11:15 - 12:00	IPP Finishings 2.1



- 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 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

# Status (1/3)



- IETF RFCs in development:
  - IETF IPP/1.1: Encoding and Transport (obsoletes RFC 2910/3382)
    - IESG Approved,  
RFC Editor's queue
  - IETF IPP/1.1: Model and Semantics (obsoletes RFC 2911/3381/3382)
    - Completed IETF LC
- PWG Specifications in development:
  - IPP 3D Printing Extensions (3D)                      - Prototype Draft
  - IPP System Service (SYSTEM)                        - Interim Draft
  - IPP Finishings 2.1 (FIN)                              - Stable Draft

# 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

# 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

# IETF IPP/1.1 Updates



- Developing two new RFCs to replace (obsolete) RFCs 2910, 2911, 3381 (deprecated job progress attributes), and 3382 (collection attribute syntax)
- Stable drafts:
  - <http://tools.ietf.org/html/draft-sweet-rfc2910bis>
  - <http://tools.ietf.org/html/draft-sweet-rfc2911bis>
  - *Drafts are approved and awaiting publication as IETF Proposed Standards*
  - *RFCs will eventually be advanced to IETF Internet Standard through status change (IETF process)*
- Proposed schedule:
  - RFC Publication - Q3/Q4 2016



# Proposals



- Alternate vendor prefix for keyword names

# Alternate Vendor Prefix for Keyword Names



- Currently RFC 2911bis says to use reverse-DNS prefix on keyword names ('com.example-foo') unless the keyword defines another policy
- During the IPP WG conference call on July 25, 2016, an alternate (shorter) prefix was suggested using SMI Enterprise Numbers
  - <https://www.iana.org/assignments/enterprise-numbers/enterprise-numbers>
- Examples:
  - Hewlett Packard (11): 'smi11-foo'
  - Apple (63): 'smi63-bar'
- SMI Enterprise Numbers are free to get
- Prefix is obviously shorter than the reverse-DNS one
- Thoughts?



# IPP Everywhere Self-Certification

- PWG 5100.20-2016: IPP Everywhere Printer Self-Certification Manual (SELFCERT)
  - <http://ftp.pwg.org/pub/pwg/candidates/cs-ippeveselfcert10-20160219-5100.20.pdf>
- Resources:
  - <http://www.pwg.org/ipp/everywhere.html> (for tools)
  - <https://www.pwg.org/ippeveselfcert> (submission form)
  - <http://www.pwg.org/printers> (printer list)
- Github repository for tools:
  - <https://github.com/istopwg/ippeveselfcert>
- Proposed Schedule:
  - 1.0 tools update: Q3/Q4 2016
  - 1.1 errata update: Q1/Q2 2016



# The Printer Working Group

Lunch Break



# IPP System Service (SYSTEM)

- Current interim draft at:
  - <http://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippssystem10-20160720-rev.pdf>
- Proposed Schedule:
  - Prototype draft in Q4 2016



# IPP 3D Printing Extensions

- Current draft (interim):
  - <http://ftp.pwg.org/pub/pwg/ipp/wd/wd-ipp3d10-2016mdd-rev.pdf>
- Proposed schedule:
  - Stable draft Q3/Q4 2016
- Prototype experience (next slide)

# Prototype Experience (Apple)



- TBD



# The Printer Working Group

IPP Workgroup Session, Day 2

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# IPP Finishings 2.1



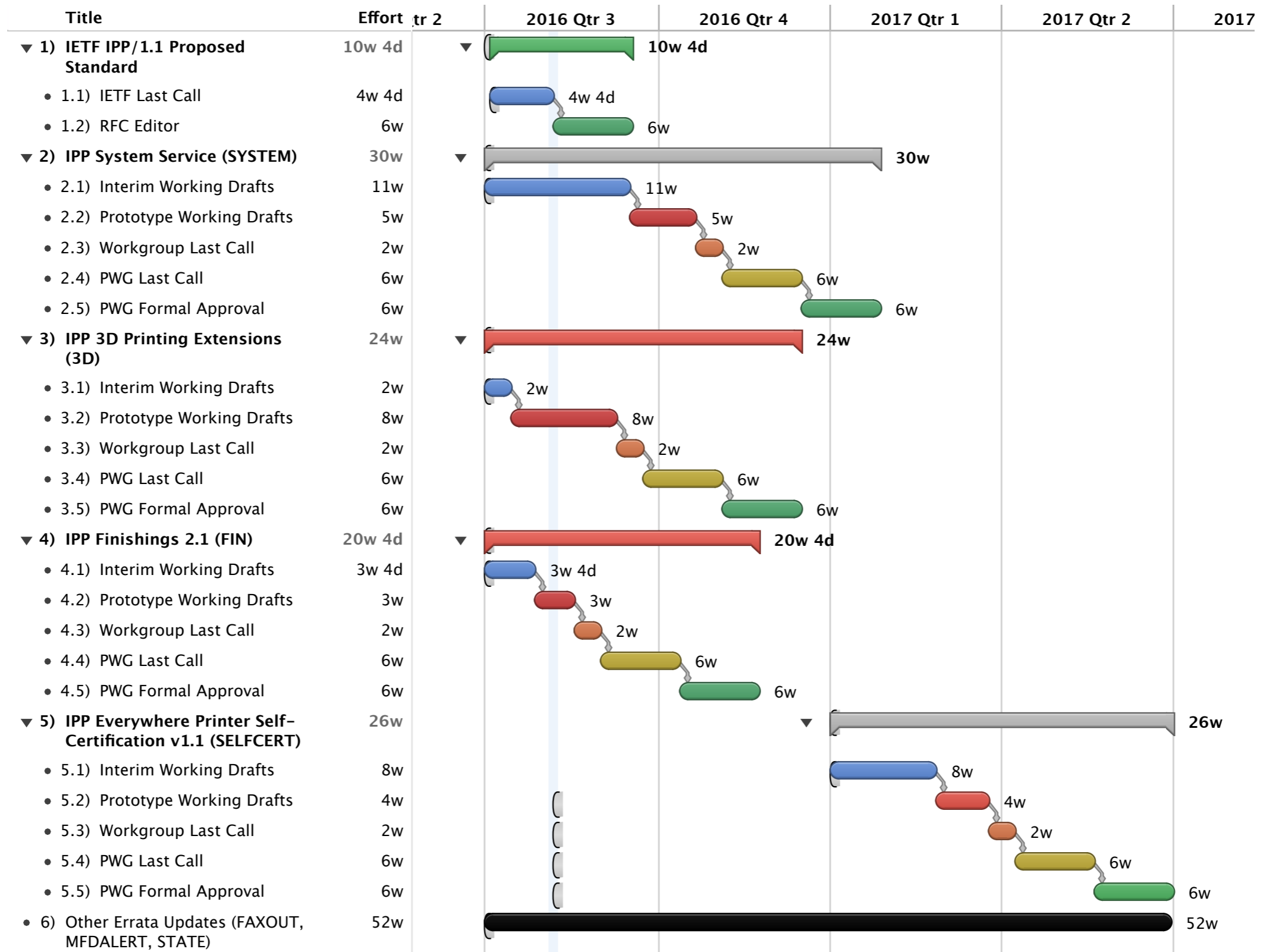
- Current draft (interim draft):
  - <http://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippfinishings21-20160728-rev.pdf>
- Proposed schedule:
  - Stable draft Q3/Q4 2016



# The Printer Working Group

## Next Steps

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# Next Steps

- **Advance IPP/1.1 to IETF Internet Standard**
  - IETF process to advance to Internet Standard once RFCs are published...
- **IPP System Service**
  - Prototype working draft in Q4 2016
- **IPP 3D Printing Extensions**
  - Stable working draft in Q3/Q4 2016
- **IPP Finishings 2.1**
  - Stable working draft in Q3/Q4 2016
- **IPP Everywhere Printer Self-Certification Manual v1.1**
  - Interim working draft in Q1 2017
- **IPP Transform Service v1.0?**
- **Other errata (IPP State, etc.)?**



# 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 September 12, 2016 at 3pm ET and September 19, 2016 at 4pm ET to discuss 3D Printing