



**The Printer Working Group**

**IPP Workgroup Session**

**November 12, 2024**



# Before We Begin...

- PWG Antitrust Policy:
  - [https://www.pwg.org/chair/membership\\_docs/pwg-antitrust-policy.pdf](https://www.pwg.org/chair/membership_docs/pwg-antitrust-policy.pdf)
  - The IEEE-ISTO Printer Working Group ("PWG") will not become involved in the business decisions of its Members. The PWG strictly complies with applicable antitrust laws. Every PWG meeting attendee shall comply with this policy. The PWG Officers and PWG Workgroup Officers are responsible to ensure that this policy is adhered to in all PWG activities.
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  - TL;DR: Anything you say in a PWG meeting or email to a PWG address can be used in a PWG Document
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- **This meeting is being recorded to assist in preparation of minutes but will not be published**



## November 12, 2024 (US Eastern Standard Time)

| When          | What                        |
|---------------|-----------------------------|
| 10:00 - 11:00 | PWG Plenary                 |
| 11:00 - 12:00 | IPP WG: Status              |
| 12:00 - 12:45 | Lunch Break                 |
| 12:45 - 14:00 | IPP WG: IPP Everywhere v2.0 |

## November 13, 2024 (US Eastern Standard Time)

| When          | What   |
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| 10:00 - 11:30 | IDS WG   |
| 11:30 - 12:00 | IPP WG: IPP Firmware Update Extensions v1.0 (FWUPDATE) |
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| 12:45 - 13:45 | IPP WG: 3D Printing Discussions                        |
| 13:45 - 14:00 | IPP WG: Next Steps                                     |



- Current charter:
  - <https://ftp.pwg.org/pub/pwg/ipp/charter/ch-ipp-charter-20240510.pdf>
- The Internet Printing Protocol (IPP) workgroup is chartered with the maintenance of IPP and the IETF IPP registry, and support for new clients, network architectures (Cloud, SDN), MFD/Imaging service bindings, and emerging technologies such as 3D Printing
- In addition, we maintain the IETF Finisher MIB, Job MIB, and Printer MIB registries, the PWG MIBs, the PWG Semantic Model schema, and handle synchronization with changes in IPP



- **Pending:**

- PWG 5100.6-2003 (IPP Page Overrides v1.0): 2 issues
- PWG 5100.8-2003 (IPP "-actuals" v1.0): 1 issue
- PWG 5100.9-2009 (IPP Printer State Extensions v1.0): 2 issues
- PWG 5100.15-2014 (IPP FaxOut v1.0): 2 issues
- PWG 5100.19-2015 (IPP Implementor's Guide v2.0): 9 issues
- PWG 5107.3-2019 (MFD Alerts v1.1): 1 issue

- **In-Progress:**

- PWG 5100.12-2015 (IPP 2.0, 2.1, and 2.2): 2 issues
- PWG 5100.14-2020 (IPP Everywhere v1.1): 4 issues
- PWG 5100.18-2015 (IPP Shared Infrastructure Extensions v1.0): 8 issues
- PWG 5100.20-2020 (IPP Everywhere v1.1 Self-Cert): 1 issue
- PWG 5100.22-2019 (IPP System Service v1.0): 3 issues



# IPP/2.x Fourth Edition (BASE)

- Stable draft:
  - <https://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippbase23-20240912-rev.pdf>
- PWG Call for Objections ended November 8, 2024
  - Result: XXXX
- Proposed schedule:
  - Publish as PWG Standard 5100.12-2024 in Q4 2024

# Active Working Drafts

- **IPP OAuth Extensions v1.0 (OAUTH)**
  - <https://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippoauth10-20240624-rev.pdf>
  - Stable draft
  - Prototyping in CUPS and PAPPL
  - PWG Last Call Q1 2025
- **IPP Shared Infrastructure Extensions v1.1 (INFRA)**
  - <https://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippinfra11-20240807-rev.pdf>
  - Stable draft
  - Prototyping in PAPPL
  - Needs IPP WG Last Call
- **IPP System Service v1.1 (SERVICE)**
  - <https://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippsystem11-20241011-rev.pdf>
  - Stable draft
  - Prototyping in PAPPL
  - Needs IPP WG Last Call

# Other Active Working Drafts

- IPP Encrypted Jobs and Documents v1.0 (TRUSTNOONE)
  - <https://ftp.pwg.org/pub/pwg/ipp/wd/wd-ipptrustnoone10-20210519.pdf>
  - Prototype draft
  - Initial prototyping in CUPS branch, still needs work
- ACME-Based Provisioning of IoT Devices:
  - <https://datatracker.ietf.org/doc/draft-sweet-iot-acme/>
  - Still awaiting decision from IETF Area Directors
  - Mike is continuing discussion with interested parties within IETF





**The Printer Working Group**

**Lunch Break**

November 12, 2024

*IPP workgroup resuming at 12:45pm ET*

# IPP Everywhere v2.0

- IPP Everywhere v2.0 (EVE):
  - <https://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippeve20-20240426-rev.pdf>
  - Prototype draft
- IPP Everywhere Printer Self-Certification Manual v2.0 (EVESELF CERT)
  - <https://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippeveselfcert20-20220510-rev.pdf>
  - Interim draft
  - Still working on new self-certification tools/UI
-



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# Agenda

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# IPP Firmware Update Extensions v1.0 (FWUPDATE)

- Interim draft:
  - <https://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippfwupdate-20241024-rev.pdf>
- Registration for monitoring and managing firmware updates
- Proposed schedule:
  - Prototype draft Q1 2025



# The Printer Working Group

Lunch Break

November 13, 2024

*IPP workgroup resuming at 12:45pm ET*

# 3D Printing and Scanning Discussions

- **Current documents:**
  - PWG 5100.21-2019: IPP 3D Printing Extensions v1.1
  - PWG 5199.5-2017: PWG 3D Print Job Ticket and Associated Capabilities v1.0 (PJT3D)
  - PWG 5199.7-2019: PWG Safe G-Code Subset for 3D Printing v1.0
- **Discussion:**
  - ASTM F42.07.07
  - ICAM 2024
  - VDMA OPC UA
  - Declined Events in 2024



# ASTM F42.07.07

- Need to reach out to Stephan Mansour - Chair of ASTM F42.07.07 - Construction | Co-Convenor of ISO/TC 261/JG 80 for guidance on how to position the proposed PWG webinar recording we are planning to produce on Safe G-Code. How does it support the mission of F42.07.07 and therefore fit into the ASTM F42 - PWG Liaison framework?
  - <https://3dprint.com/309035/astm-f42-iso-tc-261-meetings-the-nitty-gritty-of-additive-manufacturing/>
  - Goal is to set a standard for additive construction to make sure that whatever is printed is safe and stands the test of time.
  - Mansour explained that Standard 52939:2023 is one of the first published under ASTM and ISO together, and that it essentially bridges the gap between traditional construction and AC. Because there aren't any existing standards that define how to certify 3D printed construction elements, they're turning to the standards everyone's already used to in construction, and showing how these can be used to certify 3D printed structures as well.
- Idea - develop IPP 3D tool to help you efficiently use 3D Concrete Printers

- Planning to Attend the ASTM International Conference on Additive Manufacturing (ICAM 2024 – Oct 28-Nov 1, 2024 – Atlanta, GA):
  - IDS - Alan Sukert presentation
  - Possible IPP 3D cloud for secure transmission presentation opportunity
  - Possible Safe G-Code presentation opportunity



- VDMA OPC UA for Additive Manufacturing
  - Report on Joint Working Group 40540 activities



**The Printer Working Group**

**Next Steps**

# Next Steps

- Internet Printing Protocol/2.x Fourth Edition (Mike)
  - PWG Call for Objections in Q1 2025
- IPP OAuth Extensions v1.0 (Mike/Piotr)
  - PWG Last Call in Q3/Q4 2024
- IPP Shared Infrastructure Extensions v1.1 (Mike)
  - Stable draft in Q3/Q4 2024
- IPP System Service v1.1 (Mike)
  - Stable draft in Q3/Q4 2024



# 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, August 29 and September 12, 2024 at 3pm ET