



The Printer Working Group

PWG November 2021 Face-to-Face Plenary

Jeremy Leber, PWG Chair

Smith Kennedy, PWG Vice Chair

November 2, 2021

Plenary Agenda



- Administrivia
- PWG Steering Committee Updates
- PWG Workgroup Status [WG Chairs]
- Liaison Status
- Questions / Next Meeting / Any Other Business

Administrivia



- Welcome and Introductions
- Confirm Minutes Taker
- Review PWG Antitrust Policy, PWG IP Policy and Inappropriate Topics
- Agenda



PWG Antitrust Policy

- "This meeting is being held in accordance with the PWG Antitrust Policy"
 - 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 Member 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.

PWG IP Policy



- "This meeting is being held in accordance with the PWG Intellectual Property Policy"
 - https://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)



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:

- Validity or essentiality of patents or patent claims
- Cost of specific patent use
- Licensing terms or conditions
- Product pricing, territorial restrictions, or market share
- Ongoing litigation or threatened litigation

DO raise an objection if inappropriate topics are discussed

Agenda Overview – Day 1



(All times Eastern Daylight Time)

Tuesday, November 2

- 10:00 – 10:45 PWG Plenary
- 10:45 – 11:00 IPP WG : Status
- 11:00 – 12:00 IPP WG : Prototype Ready: IPP Finishings v3.0,
IPP Encrypted Jobs and Documents v1.0,
IPP Production Printing Extensions v2.0,
IPP Enterprise Printing Extensions v2.0,
Deprecating IPP Print by Reference v1.0
- 12:00 – 12:45 Lunch
- 12:45 – 2:00 IPP WG : Evolution of IPP/2.0 and IPP
Everywhere v2.0

Agenda Overview – Day 2



(All times Eastern Daylight Time)

Wednesday, November 3

- 10:00 – 12:00 IPP WG : IPP Driverless Printing Extensions v2.0
- 12:00 – 12:45 Lunch
- 12:45 – 1:45 IPP WG : 3D Printing Liaison: Status and Guidance
- 1:45 – 2:00 IPP WG : Next Steps

Agenda Overview – Day 3



(All times Eastern Daylight Time)

Thursday, November 4

10:00 – 12:00 IDS WG : Status and Discussion ·
PWG Hardcopy Device Security Guidelines v1.0



The Printer Working Group

Steering Committee Updates



Officers (2021-2023 Term)

- PWG Chair: Jeremy Leber, Lexmark
- PWG Vice Chair: Smith Kennedy, HP Inc.
- PWG Secretary: Ira McDonald, High North

Results of 2021 Officer Elections

- Jeremy and Smith interested in each others' roles
- No other nominees so officers chosen by acclamation

2021 Membership



28 Members

Alan Sukert	 Epson	 Konica Minolta	 Oki Electric Industry Co., Ltd	 Toshiba Business Solutions
 Apple Inc.	 FUJIFILM Business Innovation Corp.	 Kyocera	 PaperCut Software	 Tykodi Consulting Services LLC
 Brother Industries, Ltd.	 Google	 Lakeside Robotics	 Qualcomm	 Xerox
 Canon	 High North, Inc.	 Lexmark	 Ricoh	YSoft
Danny Brennan	 HP Inc.	 Meteor Network	 Synaptics	
directprint.io	 Intel	 Microsoft	Technical Interface Consulting	

2022 Membership Dues Notices coming soon – check billing contacts!

Thank You For Participating!



Thanks to all of you for contributing your
time and efforts to the PWG!



Future Meeting Schedule

2022

- February 8-10 – Virtual
- May 10-12 – Joint PWG/OpenPrinting - Lexington? Sunnyvale?
- August 16-18 – Virtual
- November 15-17 – Virtual
- 2023
 - February 7-9 – Virtual

Contact chair@pwg.org if you are interested in hosting a PWG F2F event



IPP Everywhere™ Certified Printers

- <https://www.pwg.org/ipp/everywhere.html>
- **752** printers now certified!
 - <https://www.pwg.org/printers/>
 - More on the way!
- IPP Everywhere™ Self Certification 1.1 Update 3
 - Released May 17, 2021; approved June 16, 2021
 - Mandatory for certification starting July 1, 2021
 - **IPP Everywhere v1.0 Certifications no longer accepted**
- IPP Everywhere™ Self Certification 1.1 Update 4
 - In development; beta not yet available
- IPP Everywhere v2.0 scoping and requirements in development

Recently Approved



- Best Practices
 - Job Accounting with IPP v1.0
 - <https://ftp.pwg.org/pub/pwg/informational/bp-ippaccounting10-20210205-5199.11.pdf>



Projects on GitHub

- PWG on GitHub:
 - <https://github.com/istopwg>
- IPP Sample Code
 - <https://github.com/istopwg/ippsample>
- IPP Everywhere Self Certification Tools
 - <https://github.com/istopwg/ippeveselfcert>
- IPP Registry
 - <https://github.com/istopwg/ipregistry>
- PWG Books:
 - <https://github.com/istopwg/pwg-books>



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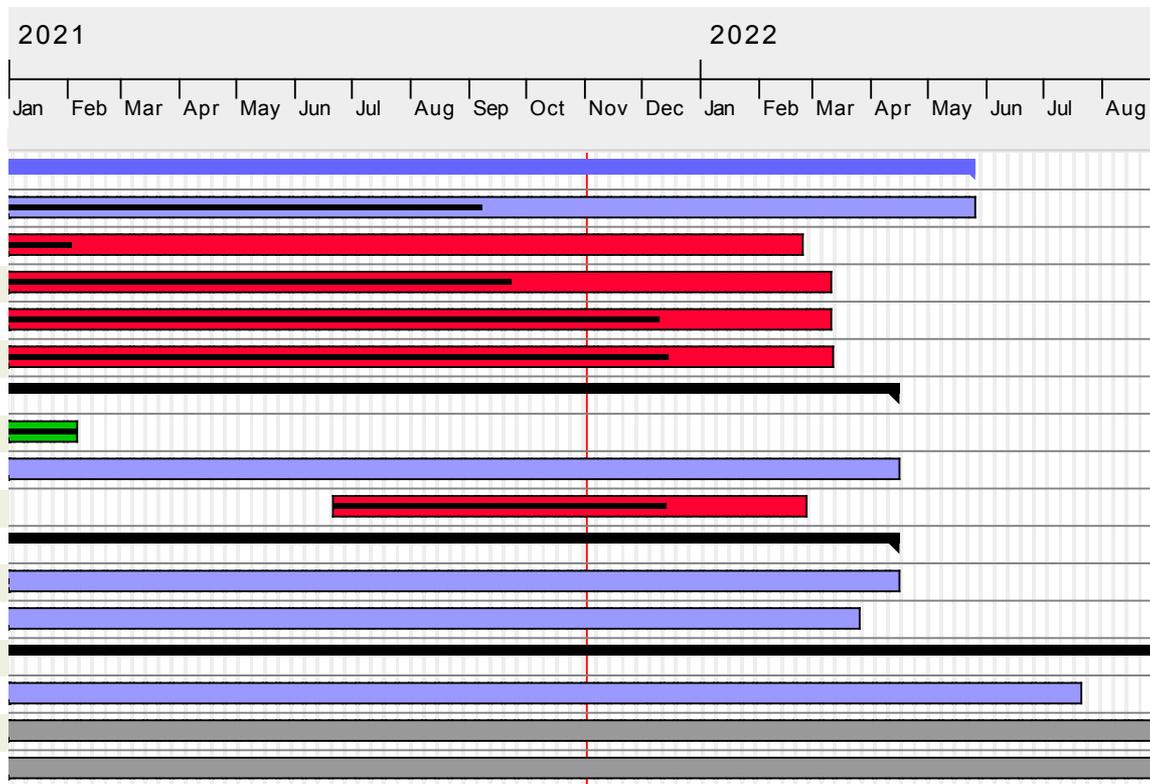
Workgroup Status

Work In Progress



Name

- IPP Workgroup
 - IPP Driverless Printing Extensions v2.0
 - IPP Encrypted Jobs and Documents v1.0
 - IPP Enterprise Printing Extensions v2.0
 - IPP Finishings 3.0
 - IPP Production Printing Extensions v2.0
 - IPP Registrations / White Papers
 - Job Accounting with IPP v1.0
 - INFRA Cloud Proxy Registration v1.0
 - Deprecating IPP Print by Reference v1.0
 - IDS Workgroup
 - HCD cPP v1.0
 - PWG HCD Security Guidelines v1.0
 - PWG ...
 - Process 4.0
 - New Comm. Infrastructure
 - PWG Design Principles



Planned

Interim

Prototype

Stable

Approved



The Printer Working Group

IDS Workgroup Status

Alan Sukert



IDS WG: Officers

- IDS WG Chair:
 - Alan Sukert
- IDS WG Vice-Chair
 - TBD
- IDS WG Secretary:
 - Alan Sukert
- IDS WG Document Editors:
 - Ira – HCD Security Guidelines



IDS: Current Status

- IDS Charter updated to reflect development of HCD Security Guidelines by Ira
- Focus now is on Common Criteria HCD Protection Profiles (PPs), HCD Security Guidelines and Hardcopy Device security standards
 - IDS Charter updated to focus the IDS WG on outreach with standards bodies involved in HCD security issues.
 - Monitoring development of Hardcopy Device collaborative PP (cPP) / Supporting Document (SD)
 - Looking at initiating interface with other standards efforts related to hardcopy devices
 - IDS WG Meetings
 - Since last IDS F2F on August 19th, IDS WG Meetings held on Sep 30th, Oct 14th and 28th
 - Next IDS WG Meeting scheduled for November 11th



IDS: Current Status

- IDS focus is now on Common Criteria HCD Protection Profiles and other HCD-related Security Standards
 - HCD international Technical Committee (iTC) Meetings:
 - HCD iTC holds weekly HCD iTC Meetings; goal is to develop, review and publish an HCD cPP/SD v1.0 by 2Q 2022
 - Will discuss the results of the weekly HCD iTC Meetings held since last IDS F2F in Aug 2021 and the current HCD cPP/SD v1.0 status at the IDS F2F Session on Thursday November 4th
- Developing HCD Security Guidelines to provide guidance on current HCD security technology and security issues
 - Will review the latest status at the IDS F2F session
- IDS Session will also discuss the ENISA Cryptographic Certification (EUCC) and the status of the planned updates to ISO/IEC 15408, the Common Criteria standard
- The review of current status of HCD-related standards efforts of the Trusted Computing Group (TCG) and Internet Engineering Task Force (IETF) normally done during the Plenary Session was done at the 10/28/21 IDS Working Group Meeting; minutes of that meeting can be found at <https://ftp.pwg.org/pub/pwg/ids/minutes/IDS-call-minutes-20211028.pdf>



IDS WG: More Information

- We welcome participation from all interested parties
- IDS Working Group web page
 - <https://www.pwg.org/ids/>
- Subscribe to the IDS mailing list
 - <https://www.pwg.org/mailman/listinfo/ids>
- IDS WG holds bi-weekly meetings via WebEx announced on the IDS mailing list
 - Next meeting is scheduled for Thursday, Nov 11, 2021 at 3pm ET



The Printer Working Group

IPP Workgroup Status

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

Charter



- Current charter:
 - <https://ftp.pwg.org/pub/pwg/ipp/charter/ch-ipp-charter-20210409.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



- IPP WG Co-Chairs:
 - Paul Tykodi (TCS)
 - Ira McDonald (High North)
- IPP WG Secretary:
 - Michael Sweet (Lakeside Robotics)
- IPP WG Document Editors:
 - Michael Sweet (Lakeside Robotics) – Deprecating IPP Print by Reference, Internet Printing Protocol/2.x Fourth Edition, IPP Encrypted Jobs and Documents v1.0, IPP Everywhere v2.0, IPP Production Printing Extensions v2.0
 - Smith Kennedy (HP Inc.) – IPP Driverless Printing Extensions v2.0, IPP Encrypted Jobs and Documents v1.0, IPP Enterprise Printing Extensions v2.0, IPP Finishings v3.0

Status (1/3)



- PWG Specifications in development:
 - Internet Printing Protocol/2.x Fourth Edition - Interim
 - IPP Driverless Printing Extensions v2.0 - Interim
 - IPP Encrypted Jobs and Documents v1.0 - Prototype
 - IPP Enterprise Printing Extensions v2.0 - Prototype
 - IPP Everywhere™ v2.0 - Initial
 - IPP Finishings v3.0 - Prototype
 - IPP Production Printing Extensions v2.0 - Prototype
- IPP Registrations in development:
 - Deprecating IPP Print by Reference - Interim
- Recently published:
 - PWG 5199.11-2021: Job Accounting with IPP v1.0

Status (2/3)



- Up-to-date pending IANA registrations online:
 - <https://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>
 - ~~725~~ **752** printers currently listed from HP and Lexmark
 - 1.1 self-certification tools update 3 approved June 2021
 - *Update 4 in progress*
- IPP Sample Code:
 - Github repository:
 - <https://github.com/istopwg/ippsample>
 - Fork of CUPS code includes ipp3dprinter, ippeveprinter, ippfind, ippproxy, ippserver, ipptool, ipptransform, and ipptransform3d
 - **Add docker updates**

Status (3/3)



- Pending Errata:

- PWG 5100.5-2019 (Document Object v1.1): 4 issues
- PWG 5100.6-2003 (Page Overrides v1.0): 2 issues
- PWG 5100.7-2019 (Job Extensions v2.0): 5 issues
- PWG 5100.8-2003 ("-actuals" v1.0): 1 issue
- PWG 5100.9-2009 (Printer State Extensions v1.0): 2 issues
- PWG 5100.15-2014 (FaxOut v1.0): 2 issues
- PWG 5100.18-2015 (Infrastructure Extensions v1.0): 6 issues
- PWG 5100.19-2015 (Implementor's Guide v2.0): 6 issues
- PWG 5100.22-2019 (System Service v1.0): 2 issues
- PWG 5107.3-2019 (MFD Alerts v1.1): 1 issue

- In-Progress Errata:

- PWG 5100.1-2017 (Finishings v2.1): 3 issues
- PWG 5100.3-2001 (Production Printing): 2 issues
- PWG 5100.11-2010 (JPS2 - Enterprise Printing): 7 issues
- PWG 5100.12-2015 (IPP 2.0, 2.1, and 2.2): 2 issues
- PWG 5100.13-2012 (JPS3 - Driverless Printing): 15 issues



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Liaison Status



Linux Foundation OpenPrinting

- **OpenPrintingGoogle Summer of Code 2021 – Success!**
 - https://ftp.pwg.org/pub/pwg/liaison/openprinting/presentations/GSoC_Updates-PWG_Summit_Aug-2021.pdf
- **OpenPrinting Linux Plumbers Mini-Conference – Success!**
 - <https://www.youtube.com/watch?v=5KogjLb1Hb4>
 - Aveek/Till/Mike/Bhavna were speakers – lively discussions.
- **OpenPrinting CUPS**
 - <https://github.com/OpenPrinting/cups/releases/tag/v2.3.3op2>
 - Current stable release is OP CUPS v2.3.3op2 on 1 February 2021.
 - <https://github.com/OpenPrinting/cups/releases/tag/v2.4b1>
 - Current pre-release is OP CUPS v2.4b1 on 27 October 2021.
- **OpenPrinting CUPS Filters**
 - <https://github.com/OpenPrinting/cups-filters/releases/tag/1.28.10>
 - Current release is OP CUPS Filters v1.28.10 on 17 August 2021.
- **OpenPrinting PAPPL (Printer Application)**
 - <https://github.com/michaelsweet/pappl/releases/tag/v1.1b2>
 - Current release is OP PAPPL v1.2b1 on 24 September 2021.
- **OpenPrinting PostScript, Ghostscript, Gutenprint, HPLIP Printer Apps**
 - <https://github.com/OpenPrinting/ps-printer-app>
 - <https://github.com/OpenPrinting/ghostscript-printer-app>
 - <https://github.com/OpenPrinting/gutenprint-printer-app>
 - <https://github.com/OpenPrinting/hplip-printer-app>
- **OpenPrinting CUPS Legacy Driver Retro-Fitting Printer Applications**
 - <https://github.com/OpenPrinting/pappl-retrofit>



Mopria Alliance

- Mopria Alliance liaison to PWG: Michael Rhines (Qualcomm)
- New 2-year liaison agreement signed April 3, 2020
- Smith presented "PWG State of the Union 2021" at the Fall 2021 Mopria Member Meeting on 2021-10-28
 - <https://ftp.pwg.org/pub/pwg/general/presentations/PWG-2021-State-of-the-Union-20211028.pdf>
 - <https://ftp.pwg.org/pub/pwg/general/presentations/PWG-2021-State-of-the-Union-Summary-20211028.pdf>
- No significant areas of active collaboration between the two groups currently but many opportunities exist



3D / Additive Manufacturing Liaisons

- America Makes & ANSI Additive Manufacturing Standardization Collaborative (AMSC) -
 - <https://www.ansi.org/standards-coordination/collaboratives-activities/additive-manufacturing-collaborative>. The IEEE-ISTO Printer Working Group is participating in the AMSC initiative.
- ASTM Committee F42 on Additive Manufacturing Technologies -
 - <https://www.astm.org/COMMITTEE/F42.htm>
- INCITS Digital Manufacturing Technical Committee -
 - <https://www.incits.org/committees/digitalmanufacturing>
- 3MF Consortium -
 - <https://www.3mf.io>

Other Questions / Comments





Next PWG Face-to-Face Meeting

February 8-10 – Virtual

Monitor pwg-announce@pwg.org or the [PWG meeting page](#) for more info.



The Printer Working Group

Backup

Process Updates



- Process v4.0 in development
 - New draft posted
 - Discussions ongoing
- PWG Policy
 - PWG IPP Registry Policy : 2020-05-18
 - PWG Namespace Policy : 2020-07-20
 - PWG Press Release Review Policy: 2020-09-08
 - PWG Roles and Responsibilities Policy : 2020-09-24
 - PWG Antitrust Policy : 2021-02-01
 - PWG Officer Elections : Draft in review
 - PWG Network Infrastructure : Draft in review