



®

OpenPrinting

– Joint PWG/OP Summit

OpenPrinting Plenary – 17 May 2022

Ira McDonald (High North) – OP Chair

Till Kamppeter (Canonical) – OP Manager

OP Plenary Agenda



- **Administrivia**
- **Linux Markets and Distributions**
- **OpenPrinting Highlights 2021**
- **OpenPrinting GSoC 2021**
- **OpenPrinting Highlights 2022**
- **OpenPrinting GSoC 2022**
- **OpenPrinting Next Steps**

Administrivia



- **Welcome and Introductions**
- **Confirm Minutes Taker**
- **Review PWG Antitrust Policy**
- **Review PWG IP Policy**
- **Review PWG Patent Policy**
- **OpenPrinting 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:

- The validity/essentiality of patents/patent claims
- The cost of specific patent use
- Licensing terms or conditions
- Product pricing, territorial restrictions, or market share
- Don't discuss ongoing litigation or threatened litigation

DO raise an objection if inappropriate topics are discussed

OP Agenda Overview – Tuesday



(All times are US Eastern Daylight Time)

Tuesday – 17 May 2021 – Day 1

11:00 – 12:00 OpenPrinting Plenary

12:00 – 12:45 Break / Lunch

12:45 – 1:30 OpenPrinting: GSoC Project Updates

1:30 – 2:30 OpenPrinting: Status of Ghostscript / MuPDF

2:30 – 3:00 Break

3:00 – 4:00 OpenPrinting: Status of Chrome OS Printing

OP Agenda Overview – Wednesday



(All times are US Eastern Daylight Time)

Wednesday – 18 May 2021 – Day 2

10:00 – 11:00 CUPS Plenary

11:00 – 12:00 OpenPrinting: Retro-Fitting Printer Applications

12:00 – 12:45 Break / Lunch

12:45 – 1:45 OpenPrinting: cups-filters, CUPS SNAP, Printer Applications, Driverless Scanning



Linux Markets and Distributions

- **Linux Internet public server market share in May 2021**
 - 38% Linux / 20% Windows / 43% other/unknown
 - https://w3techs.com/technologies/overview/operating_system
 - <https://w3techs.com/technologies/details/os-unix>
- **Linux Web Server market share in May 2021**
 - 38% Linux / 20% Windows / 42% other/unknown
 - <https://w3techs.com/technologies/comparison/os-linux,os-windows>
- **Linux mobile OS market share in May 2022**
 - 72% Android / 27% iOS / 1% other/unknown
 - <http://gs.statcounter.com/os-market-share/mobile/worldwide>
- **Linux distributions popularity on Distro Watch in 2022**
 - Mint, Manjaro, Ubuntu, Debian, Fedora, openSUSE, CentOS
 - <https://distrowatch.com/dwres.php?resource=popularity>

OpenPrinting Highlights 2021– 1 of 3



OpenPrinting celebrates 20 years of printing with free software!

- <https://linuxplumbersconf.org/event/7/contributions/748/attachments/681/1265/20-Years-on-Printing-with-Free-Software.pdf>

CUPS OpenPrinting

- See CUPS Plenary presentation tomorrow
- Developers – Mike Sweet and Linux community
- Releases – v2.3.3op1 (20 November 2020) and v2.3.3op2 (1 February 2021)
- Ubuntu 21.04 (22 April 2021) shipped with CUPS v2.3.3op2
- Development is approaching CUPS v2.4.x
- CUPS Snap uses GIT master of OpenPrinting CUPS

CUPS Filters Highlights

- See CUPS Filters presentation tomorrow
- Developers – Till Kamppeter and Linux community
- Releases – v1.27.5 (5 June 2020) thru v1.28.8 (25 March 2021)
- Ubuntu 21.04 (22 April 2021) shipped with CUPS Filters v1.28.8



OpenPrinting Highlights 2021– 2 of 3

PAPPL (Printer Application)

- See PAPPL presentations tomorrow
- Developers – Mike Sweet and Linux community
- Releases – v1.0.0 (11 December 2020) thru v1.0.3 (21 April 2021)

PostScript Printer Application

- See PAPPL presentations tomorrow
- Developers – Till Kamppeter and Linux community
- Started on 26 October 2020
- <https://lists.linuxfoundation.org/pipermail/printing-architecture/2020/003899.html>
- Mostly complete – a few PAPPL features are still pending

CUPS Snap (Printing Stack Snap)

- See CUPS Snap presentation tomorrow
- Developers – Till Kamppeter and Linux community
- CUPS Snap project started in October 2017
- <https://github.com/OpenPrinting/cups-snap>
- CUPS Snap is now in Snap Store
- <https://snapcraft.io/cups>

OpenPrinting Highlights 2021– 3 of 3



Driverless

- See CUPS Filters presentation tomorrow
- Nidhi Jain, LFMP 2020 added IPP FaxOut support

IPP over USB

- See CUPS Filters presentation tomorrow
- ippusbxd discontinued
- ipp-usb replaces ippusbxd in most Linux distributions
- Google Chrome OS has its own IPP-over-USB daemon in Rust

Scanning

- See CUPS Filters presentation tomorrow
- Mopria just published eSCL specification in April 2021
- sane-airscan supports eSCL / WSD
 - Not integrated w/ IPP Scan Service or IPP System Service
- Scan integration w/ the IPP ecosystem is an open topic



OP in GSoC 2021 – Recruitment and Projects

- **Student recruitment process started in late 2020**
 - **Recruitment hampered by COVID-19 pandemic travel restrictions**
 - **GSoC 2021 projects approximately half hours of GSoC 2020 projects**
- **Accepted student projects announced on 17 May 2021**

GSoC 2021 – Timeline Highlights

- **29 January 2021 – Organization Applications Open – LF applied**
- **19 February 2021 – Organization Application Deadline**
- **9 March 2021 – Organizations Announced – LF accepted**
- **29 March 2021 to 13 April 2021 – Student Applications – 4 OP projects**
- **17 May 2021 – Student Projects Announced**
- **7 June 2021 to 16 August 2021 – Coding**
- **31 August 2021 – Results Announced**



CUPS OpenPrinting

- See CUPS Plenary presentation tomorrow
- Developers – Mike Sweet, Zdenek Dohnal, and Linux community
- Latest Release – v2.4.1 (27 January 2022)
- Ubuntu 22.04 LTS (21 April 2022) shipped with CUPS v2.4.1
- CUPS Snap uses GIT master of OpenPrinting CUPS

<https://github.com/OpenPrinting/cups-snap>

<https://snapcraft.io/cups>

CUPS Filters Highlights

- See CUPS Filters presentation tomorrow
- Developers – Till Kamppeter and Linux community
- Latest Release – v1.28.15 (11 April 2022)
- Ubuntu 22.04 LTS (21 April 2022) shipped with CUPS Filters v1.28.15
- CUPS Filters v2.0 is coming

<https://github.com/OpenPrinting/cups-filters/releases/tag/1.28.15>



PAPPL (Printer Application)

- See Printer Applications presentation tomorrow
- Developers – Mike Sweet and Linux community
- Latest Release – v1.2.0 (15 May 2022)
<https://github.com/michaelsweet/pappl/releases/tag/v1.2.0>

PostScript Printer Application

- See Printer Applications presentation tomorrow
- Developers – Till Kamppeter and Linux community
- PostScript Printer Application is now in Snap Store
<https://github.com/OpenPrinting/ps-printer-app>
<https://snapcraft.io/ps-printer-app>

Ghostscript Printer Application

- See Printer Applications presentation tomorrow
- Developers – Till Kamppeter and Linux community
- Ghostscript Printer Application is now in Snap Store
<https://github.com/OpenPrinting/ghostscript-printer-app>
<https://snapcraft.io/ghostscript-printer-app>

OpenPrinting Highlights 2022– 3 of 4



Gutenprint Printer Application

- See Printer Applications presentation tomorrow
- Developers – Till Kamppeter and Linux community
- Gutenprint Printer Application is now in Snap Store
<https://github.com/OpenPrinting/gutenprint-printer-app>
<https://snapcraft.io/gutenprint-printer-app>

HPLIP Printer Application

- See Printer Applications presentation tomorrow
- Developers – Till Kamppeter and Linux community
- HPLIP Printer Application is now in Snap Store
<https://github.com/OpenPrinting/hplip-printer-app>
<https://snapcraft.io/hplip-printer-app>

Retro-Fitting Printer Applications

- See Retro-Fitting Printer Applications presentation tomorrow
- Developers – Till Kamppeter and Linux community
<https://github.com/OpenPrinting/pappl-retrofit>



Driverless Printing

- See CUPS Filters and Printer Applications presentation tomorrow
- Driverless Printing is now available on all major OS platforms

IPP over USB

- See CUPS Filters presentation tomorrow
- ippusbxd discontinued
- ipp-usb replaces ippusbxd in most Linux distributions
- Google Chrome OS has its own IPP-over-USB daemon in Rust

Driverless Scanning

- See CUPS Filters and Driverless Scanning presentation tomorrow
- Driverless Scanning is a GSoC 2022 project

OpenPrinting

Google Summer of Code 2022



OP in GSoC 2022 – Recruitment and Projects

- **Student recruitment process started in late 2021**
 - Recruitment hampered by COVID-19 pandemic travel restrictions
 - GSoC 2022 contributors do not have to be students
- **Accepted contributor projects announced on 20 May 2022**

GSoC 2022 – Timeline Highlights

- **7 February 2022 – Organization Applications Open – LF applied**
- **21 February 2022 – Organization Application Deadline**
- **7 March 2022 – Organizations Announced – LF accepted**
- **4-19 April 2022 – Contributor Applications – 8 OP projects**
- **20 May 2022 – Contributor Projects Announced**
- **13 June 2022 to 12 September 2022 – Coding (standard period)**
- **20 September 2022 – Results Announced (standard period)**
- **12 September 2022 to 13 November 2022 – Coding (extended period)**
- **28 November 2022 – Results Announced (extended period)**



Call for Participation

- **OP is cost-effective for printer vendor support of Linux & UNIX**

PWG and OP Collaboration

- **OP CUPS development and evolution**
- **OP CUPS Filters v2.0 development and evolution**
- **OP GSoC implementations of PWG IPP specs**
- **OP Driverless Printing and Driverless Scanning development**

OP monthly teleconferences on Tuesdays

- **Tuesday 7 June 2022 1-2pm US EDT (F2F review/GSoC status)**
- **Tuesday 5 July 2022 1-2pm US EDT (GSoC status)**
- **Tuesday 9 August 2022 1-2pm US EDT (GSoC status)**

Other Questions / Comments

