



®

OpenPrinting

– Joint PWG/OP Summit

OpenPrinting Plenary – 4 May 2021

Ira McDonald (High North) – OP Chair

Till Kamppeter (Canonical) – OP Manager

OP Plenary Agenda



- **Administrivia**
- **Linux Markets and Distributions**
- **OpenPrinting Highlights 2020**
- **OpenPrinting GSoC / GSoD / LFMP 2020**
- **OpenPrinting Highlights 2021**
- **OpenPrinting GSoC / GSoD / LFMP 2021**
- **OpenPrinting New Look**
- **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 – 4 May 2021 – Day 1

11:00 – 12:00 OpenPrinting Plenary

12:00 – 12:45 Break / Lunch

12:45 – 1:30 OpenPrinting: GSoC, GSoD, LFMP 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 – 5 May 2021 – Day 2

10:00 – 11:00 CUPS Plenary

11:00 – 12:00 OpenPrinting: Printer Applications

12:00 – 12:45 Break / Lunch

12:45 – 2:15 OpenPrinting: cups-filters, Driverless Scanning, CUPS SNAP, IPP over USB, Avahi

Linux Markets and Distributions



- **Linux Internet public server market share in May 2020**
 - 44% Linux / 25% Windows / 31% other/unknown
 - https://w3techs.com/technologies/overview/operating_system
- **Linux Web Server market share in May 2020**
 - 43% Linux / 25% Windows / 32% other/unknown
 - <https://w3techs.com/technologies/comparison/os-linux.os-windows>
- **Linux mobile OS market share in May 2020**
 - 72% Android / 27% iOS / 1% other/unknown
 - <http://gs.statcounter.com/os-market-share/mobile/worldwide>
- **Linux distributions popularity on Distro Watch in 2020**
 - Manjaro, Mint, Ubuntu, Debian, Fedora, openSUSE, CentOS
 - <https://distrowatch.com/dwres.php?resource=popularity>



OP Highlights since Joint PWG/OP F2F in May 2019

- **Linux Plumbers – Lisbon, Portugal – 9-11 September 2019**
 - OP Micro Conference
 - Speakers: Aveek Basu, Till Kamppeter, Rithvik Patibandla
 - https://www.youtube.com/watch?v=0c_JaX4G7Zc
- **OP Mini Summit – Mandi, India – 19 November 2019**
 - Indian Institute of Technology – recruiting for OP and GSoC
 - <http://www.iitmandi.ac.in/>
- **Linux Foundation Members Summit 2020 – canceled due to COVID-19**
 - OP proposal was accepted
 - Speakers: Aveek Basu and Till Kamppeter
 - <https://events.linuxfoundation.org/lf-member-summit/>
- **OP New Website – fully functional**
 - <https://openprinting.github.io>



CUPS Filters Highlights

- **Developers – Till Kamppeter and Linux community**
- **Releases – v1.22.5 (7 April 2019) thru v1.27.4 (9 April 2020)**
- **Ubuntu 20.04 (23 April 2020) – Driverless Printing enhancements**
- **cupsbrowsed – clustering, PPDs only local, DNS-SD enhancements**
- **libcupsfilters – get-printer-attributes enhancements**
- **filters – pdftoraster to stable Poppler APIs, zero-page input, scaling**

OP Driverless Scanning support in Linux

- **Developers – Till Kamppeter and Linux community**
- **Mostly for MFPs – put SANE under the hood**
- **Integrate several proprietary scan technologies**
- **Future direction is Scanner Application Snap**



OP CUPS Filters – the future

- **CUPS in a Snap – CUPS, cups-filters, cupsbrowsed, GS, QPDF**
 - complete CUPS printing stack in a Snap
 - no support for classic drivers
 - first production release possibly before Ubuntu 20.10
- **Printer Applications (PAPPL) – Mike will discuss**
 - legacy driver conversions / replacements
- **IPP-over-USB – ippusbxd versus ipp-usb (Go) – Till will discuss**
 - compatibility and functionality issues
- **Avahi – patch for DNS-SD advertising local services accepted**
 - needed for Printer Applications and IPP-over-USB



OP in GSoC 2020

- **Student recruitment process started in fall 2019**
 - Recruitment started long before GSoC
 - Screened many students from different universities
- **Accepted student projects announced on 4 May 2020**

GSoC 2020 – Timeline Highlights

- **20 February 2020 – Accepted mentoring organizations announced**
- **31 March 2020 – Student application deadline**
- **4 May 2020 – Accepted student projects announced**
- **1 June 2020 – Coding officially begins**
- **24-31 August 2020 – Final week for coding**
- **8 September 2020 – GSoC 2020 results announced**

OpenPrinting Google Season of Docs 2020



OP in GSoD 2020

- **Bringing open source and technical writer communities together**
- **OP accepted under Linux Foundation umbrella**

GSoD 2020 – Timeline Highlights

- **11 May 2020 – Accepted mentoring organizations announced**
- **9 July 2020 – Technical writer applications deadline**
- **16 August 2020 – Accepted technical writer projects announced**
- **14 September 2020 – Doc development officially begins**
- **30 November to 5 December 2020 – Final week for standard length**
- **6 January 2021 – GSoD 2020 standard length results announced**
- **1-8 March 2021 – Final week for long-running projects**
- **15 March 2021 – GSoD 2020 long-running results announced**



OP in LFMP 2020

- <https://communitybridge.org/>
- <https://www.linuxfoundation.org/en/press-release/linux-foundation-expands-mentorship-program-in-response-to-covid-19/>
- **23 April 2020** – The Linux Foundation announced it's expanding its Mentorship Program in response to COVID-19 with seed funding from Intel. The Program will grow to support interns who have been displaced as a result of the global pandemic and to give individuals an opportunity to reskill for some of the most sought-after, highly paid careers in the world.

OP in LFMP 2020 – Projects

- **IPP Scan** – 2 students made some progress
 - Motivated Mike Sweet to create the PAPPPL scan roadmap
- **IPP FaxOut** – 2 students dropped out in October / November 2020
 - IPP Fax Out done, at least in cups-filters

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>



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 students**
- **17 May 2021 – Student Projects Announced**
- **7 June 2021 to 16 August 2021 – Coding**
- **31 August 2021 – Results Announced**

OpenPrinting Google Season of Docs 2021



OP in GSoD 2021

- **Bringing open source and technical writer communities together**
- **Logistics are much more complicated for organizations than in 2020**
 - Organization has to provide quote for total stipend needed from Google
 - Organization has to recruit and contract technical writer
 - Google pays stipend to organization
 - Organization has to pay technical writer, mentor, materials, etc.

GSoD 2021 – Timeline Highlights

- **19 February 2021 – Organization project applications Open**
- **26 March 2021 – Organization project applications Deadline**
- **16 April 2021 – Google publishes list of accepted project applications**
 - OpenPrinting cups-filters documentation project was not accepted
- **17 May 2021 – Technical writer hiring deadline**
- **16 June 2021 – Organization monthly evaluations on project status**
- **16-30 November 2021 – Final project evaluation and case study**
- **14 December 2021 – Google publishes the GSoD 2021 case studies**



OP in LFMP 2021

- <https://lfx.linuxfoundation.org/#>
- <https://www.linuxfoundation.org/projects>
- The world runs on open source, and projects need more than a version or source control system to scale. The Linux Foundation has evolved a proven methodology to transform projects into category leaders. LFX operationalizes this approach, providing a suite of tools built to facilitate every aspect of open source development.

OP in LFMP 2021 – Projects

- Currently under consideration by OP Steering Committee
- Backfill for shorter GSoC 2021 projects

OpenPrinting New Look



OpenPrinting New Logo



Open Printing

making printing just work

OpenPrinting New Website

- **OpenPrinting Home**
<https://openprinting.github.io>
- **OpenPrinting News**
<https://openprinting.github.io/news/>
- **OpenPrinting Driverless Printing**
<https://openprinting.github.io/driverless/>



Call for Participation

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

PWG and OP Collaboration

- **OP GSoC and LFMP implementations of PWG IPP specs**
- **OP printer setup tool of the future**
 - **List of installed Printer Applications, which printers are set up with them, and buttons leading to their web interfaces**

OP monthly teleconferences on Tuesdays

- **Tuesday 18 May 2021 1-2pm US EDT (F2F review/GSoC status)**
- **Tuesday 8 June 2021 1-2pm US EDT (GSoC status)**
- **Tuesday 6 July 2021 1-2pm US EDT (GSoC status)**

Other Questions / Comments

