

# GSoC Project Updates - 2023

PWG OP Joint Summit  
May 16, 2023



**Open Printing**  
making printing just work

Aveek Basu - Program Manager

# GSoC 2022 Projects

- **GUI for discovering non-driverless printers and finding suitable Printer Applications for them** : Currently, most modern printers are driverless and support IPP printing and are set up automatically with CUPS. Printers that do not do driverless IPP need to be set up manually in the supported Printer Applications. As there will be several different Printer Applications and each one supporting another set of printers it is not trivial for the user to discover available non-IPP-driverless printers and find out which is the Printer Application to use and whether it is already installed. The idea is to create a GUI tool for the user which lists available, non-IPP-driverless printers, local (USB) and network devices and then set up printers in supported Printer Applications. **Contributor:** Mohit Verma
- **Adding CPDB support to existing Print Dialogs** : Print Dialogs are one of the most used features for many people, and it is important that they stay up to date with the current print technologies (like CUPS) and be able to quickly adopt any new such upcoming technology (XYZ Cloud Printing Service). The print technology developers should also be able to fix any bugs as soon as they are found. However, since most Print Dialogs are provided natively by the GUI toolkits (and in some cases applications like LibreOffice and Chrome), this is often not the case. This is because the GUI toolkits themselves are large projects with long release cycles, and they have a lot of other similarly important things to work on. As of current, most GUI toolkits like GTK and QT connect their Print Dialogs directly with the print technologies like CUPS which creates problems for both. **Contributor:** Gaurav Guleria
- **Scanning Support in PAPPL with eSCL Support** : Our task here is to build an eSCL scan interface to the programme so that it can imitate an eSCL scanner. The most prevalent communication protocol for driverless scanning is eSCL, which is also used by AirPrint. eSCL is the HTTP-based protocol that Apple employs for AirScan, which is accessible on all multi-function printers that also support AirPrint and is meant to facilitate scanning from Apple's iOS-enabled mobile devices. The specifications of eSCL are not published, however as an HTTP-based protocol, it was not difficult for the creators of eSCL-related applications to reverse-engineer. With these apps already in place, we will port them to PAPPL and build tests for them. **Contributor:** Rishabh Maheshwari



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- **Converting Braille embosser support into a printer application** : Cups-filters presently supports Braille embossers through a set of PPD files and shell scripts that transform documents into a textual layout, the text into Braille dots, and the Braille dots to braille embosser-specific formats. This must be transferred to the newer CUPS infrastructure, Printer Applications, for long-term maintenance and wide availability. To complete the work, we must first convert the shell script into a C function that can be readily accessed by the printer application. Then we create a new printer application for braille embosser. **Contributor:** Chandresh Soni



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# GSoC 2022 Projects



**Rishabh Maheshwari**

(GSoC-2022)



**Mohit Verma**

(GSoC-2021)



**Gaurav Guleria**

(GSoC-2022)



**Chandresh Soni**

(GSoC-2022)



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# GSoC 2022 Mentors & Admins

- **Till Kamppeter**
  - **Michael Sweet**
  - **Ira McDonald**
  - **Smith Kennedy**
  - **Danny Brennan**
  - **Zdenek Dohnal**
  - **Pranshu Kharkwal**
  - **Solomon Peachy**
- **Deepak Patankar**
  - **Rithvik Patibandla**
  - **Dheeraj Yadav**

Welcome  
**New**  
Mentors !!

- **Admins:**  
Till Kamppeter  
Aveek Basu



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From the students..!!

# Demo Time



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# GSoC 2023 Projects

- **CPDB support for application's print dialogs: Firefox, Chromium, LibreOffice, ...** : Contributor: Kushagra Sharma
- **Sand-Boxed Scanner Application Framework** : Contributor: Akarshan
- **GNOME Control Center: List and handle IPP print services for the New Architecture:** Contributor: Mohit Verma
- **Continuous Integration: Test Programs for libcupsfilters, libpappl-retrofit, libppd, CPDB, CPDB Libs:** Contributor: Pratyush Ranjan
- **Adding support for the new functionality of IPP Everywhere 2.x to libcupsfilters and CPDB:** Contributor: Rudra Gayu
- **Native gutenprint Printer Application:** Contributor: Yuvraj Aseri



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- **Linux Plumbers Conference 2022 (Virtual):**

**Link:** <https://www.youtube.com/@LinuxPlumbersConference/videos>

**Upcoming for 2023:**

Linux Plumbers 23 Website: <https://lpc.events/>

Nov 13 – 15, 2023 America/New\_York timezone



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Ubuntu Summit 2022 - Prague 7-9 Nov 2022



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**Thank You**

**Thank You !!**

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