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Working with SANE to make IPP scanning a reality

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Printing at today's date has progressed a lot and the world is already utilising the benefits of driverless printing. In today's scenario it is very hard to think of a printer without a scanner. But unfortunately a technology like driverless scanning has yet to see the light of the day. In today's date you cannot think of using a scanner without a scanner driver. We want to discuss more on this and what needs to be done to get rid of this problem.

Version 2.0 and newer of the Internet Printing Protocol (IPP) supports polling the full set of capabilities of a printer and if the printer supports a known Page Description Language (PDL), like PWG Raster, Apple Raster, PCLm, or PDF, it is possible to print without printer-model-specific software (driver) or data (PPD file), so-called "driverless" printing. This concept was introduced for printing from smartphones and IoT devices which do not hold a large collection of printer drivers. Driverless printing is already fully supported under Linux. Standards following this scheme are IPP Everywhere, Apple AirPrint, Mopria, and Wi-Fi Direct Print. As there are many multi-function devices (printer/scanner/copier all-in-one) which use the IPP, the Printing Working Group (PWG) has also worked out a standard for IPP-based scanning, "driverless" scanning, to also allow scanning from a wide range of client devices, independent of which operating systems they are running. Conventional scanners are supported under Linux via the SANE (Scanner Access Now Easy) system and require drivers specific to the different scanner models. Most of them are written based on reverse-engineering due to lack of support by the scanner manufacturers. To get driverless scanning working with the software the users are used to the best solution is to write a SANE module for driverless IPP scanning. This module will then automatically support all IPP scanners, thousands of scanners where many of them do not yet exist. Another application for driverless IPP scanning is sharing local scanners which are accessed with SANE. Instead of the SANE frontend being a UI, either command line or graphical, it could be a daemon which emulates an IPP scanner on the network, executing the client's scan requests on the local scanner.

This way the client only needs to support IPP scanning, no driver for the actual scanner is needed and the client can be of any operating system or device type, including mobile phones, tablets, IoT, e.t.c.

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Presenter: BASU, Aweek

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