

Status of IPP

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Printer Working Group

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Introduction



- The Internet Printing Protocol (IPP) working group is a part of The Printer Working Group (PWG), a Program of the IEEE Industry Standards and Technology Organization (ISTO)
- The IPP working group has developed a modern, full featured network printing protocol which is now the industry standard. IPP allows a print client to query a printer for its supported capabilities, features, and parameters to allow the selection of an appropriate printer for each print job. IPP also provides job information prior to, during, and at the end of job processing.
- The IPP working group continues to support current and future work items.

Since April 2010, we...



- Published the second edition of the IPP/2.0 specification, which adds the IPP/2.2 conformance level for high-end/enterprise printing
- Published the IPP: Job and Printer Extensions - Set 2 specification which includes proof print, saved print, and other related operations and extensions (required for IPP/2.2)
- Adopted a charter for the IPP Everywhere project within the working group to define standards to support “driverless” and mobile printing, scanning, facsimile, and other multifunction services
- Began work on IPP Everywhere with 4 key specifications in development and more on the way

- IPP/2.0 is basically a reboot of IPP that brings together all of the approved IPP standards and extensions under new versions of IPP, loosely grouped as follows:
 - 2.0 for small desktop/SOHO printers
 - 2.1 for medium workgroup printers
 - 2.2 for large workgroup/enterprise printers/copiers
- It reinforces several key conformance items from IPP/1.1 that were not always followed:
 - HTTP chunking for streamed print jobs
 - HTTP Upgrade for encrypted print jobs
 - HTTP Expect for early request termination (for authentication)
 - Handling of unsupported attribute values, specifically IPP collections and the “noValue” tag

IPP Everywhere



- IPP Everywhere takes IPP/2.0 and adds requirements necessary to support “driverless” and mobile printing, scanning, facsimile, etc.
- Taking a two-phase approach
 - First phase/edition is for printing only
 - Second phase/edition is for multifunction (print, scan, fax, etc.)
- First phase to be completed by Q1 2012
- Four specifications in the first phase:
 - IPP Everywhere First Edition: umbrella spec
 - IPP: Job and Printer Extensions - Set 3: supply levels, geo-location, identification, Kerberos, media selection, ICC profiles, icons, etc.
 - PWG Raster Format: low-level raster format for all printers
 - IPP over HTTPS Transport Binding and “ipps” URI Scheme: RFC to register the “ipps” URI scheme for secure printing

IPP Everywhere Summary



- Discovery:
 - Bonjour/DNS-SD for local printers
 - LDAP/SLP for printers within an organization
- Transport:
 - IPP/2.0 (of course)
- Document Formats:
 - JPEG for photos
 - PDF for documents on “office” printers
 - PWG Raster for documents on “consumer” printers
 - (“office” and “consumer” are generalizations)

IPP Everywhere Summary



- Job Tickets:
 - copies, finishings, ipp-attribute-fidelity, job-accounting-user-id, job-billing-info, job-mandatory-attributes, job-name, job-password, job-password-encryption, media/media-col, multiple-document-handling, orientation-requested, output-bin, overrides, page-ranges, print-color-mode, print-quality, print-rendering-intent, printer-resolution, sides
- Printer Attributes:
 - media/media-col-ready, media-col-database, printer-geo-location, printer-icc-profiles, printer-icons, printer-mandatory-job-attributes, printer-organization-name, printer-organizational-unit, printer-supply, printer-supply-description, printer-supply-info-uri, printer-uuid

Resources



- IPP Home Page:
 - <http://www.pwg.org/ipp>
- IPP Wiki:
 - <http://pwg-wiki.wikispaces.com/Internet+Printing+Protocol+WG>
- IPP Mailing List:
 - ipp@pwg.org
 - Subscribe: <https://www.pwg.org/mailman/listinfo/ipp>