Charter of the PWG

IPP Working Group (WG) Project

IPP Everywhere

Status: Approved
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ftp://ftp.pwg.org/pub/pwg/ipp/charter/ch-ippeverywhere-charter-20110313.pdf

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Problem Statement:

New mobile devices (e.g., cellphones, PDAs, netbooks, etc.) do not follow the traditional use models for printing services. For mobile devices, discovery of available printers and their capabilities is both more difficult than for traditional desktop systems and more important (because of dynamically changing network attachment points).

Printer vendors and software vendors have defined and deployed many different document formats (page description languages) and also dialects of those document formats, increasing the traditional desktop system need for model-specific printer drivers. While there are millions of model-specific printer drivers now available for traditional desktop systems, this printer driver model is clearly not practical for mobile devices.

Multifunction devices supporting network scan, fax, and other imaging services are now common and have similar discovery, driver, and document format issues. Extending the IPP printing model to support these multifunction imaging services and leverage the existing widespread IPP support in multifunction devices is an important long term goal for this project as well.

The goal of the IPP Everywhere project is to develop the following new specifications:

(a) IPP Job and Printer Extensions – Set 3 (JPS3) (wd-ippjobprinterext3v10-yyyymmdd) – define a small set of new IPP Job and Printer operations and attributes to support “driverless” and mobile printing;

(b) IPP over HTTPS Transport Binding and ‘ipps’ URI Scheme (IETF draft-mcdonald-ipps-uri-scheme-xx.txt) – define an IETF ‘ipps’ URI scheme for IPP over HTTPS, designed to always **start** TLS first **before** the HTTP session layer;

(c) Lightweight Directory Access Protocol (LDAP): Schema for Printer Services (IETF draft-mcdonald-ldap-printer-schema-xx.txt) – define an IETF update to RFC 3712, adding new discovery attributes (e.g., geolocation) needed for IPP Everywhere, that includes an updated corresponding SLP Printer Schema and IANA registration form in a normative appendix;

(d) PWG Raster (wd-ippraster10-yyyymmdd) – define a PWG raster document format based on CUPS Raster v2, optimized for streaming and ease of generation and consumption, that includes an IANA MIME type registration appendix;

(e) IPP Everywhere First Edition (wd-ippeve10-yyyymmdd) – define one or more IPP Everywhere printing conformance levels, based on the IPP/2.0 conformance level defined in PWG IPP Version 2.0 Second Edition, that is composed of references to the new IPP printing specs defined above, other IETF and PWG specs, and other public standards documents;

(f) IPP Scan Service (wd-ippscan10-yyyymmdd) – define an IPP Scan service extending IPP/1.1 (RFC 2911), designed to be coherent with the PWG MFD Scan Service, that includes an IANA IPP registration for all new operations and attributes;

(g) IPP System Control Service (wd-ippsystem10-yyyymmdd) – define an IPP System Control service extending IPP Job and Printer Administrative Operations (RFC 3998), designed to be coherent with the PWG MFD System Control Service, that includes an IANA IPP registration for all new operations and attributes;

(h) IPP FaxIn Service (wd-ippfaxin10-yyyymmdd) – define an IPP FaxIn service extending IPP/1.1 (RFC 2911), designed to be coherent with the previous work of the PWG IPP Fax project and the PWG MFD FaxIn Service, that includes an IANA IPP registration for all new operations and attributes;

(i) IPP FaxOut Service (wd-ippfaxout10-yyyymmdd) – define an IPP FaxOut service extending IPP/1.1 (RFC 2911), designed to be coherent with the previous work of the PWG IPP Fax project and the PWG MFD FaxOut Service, that includes an IANA IPP registration for all new operations and attributes; and

(j) IPP Everywhere Second Edition (wd-ippeve20-yyyymmdd) – define one or more IPP Everywhere multifunction conformance levels extending IPP Everywhere First Edition, designed to be coherent with the PWG MFD Model, that is composed of references to the new IPP multifunction specs defined above, other IETF and PWG specs, and other public standards documents.

Out-of-scope:

- OOS-1 New device discovery protocols MUST NOT be defined in the IPP Everywhere project, although new profiles or subsets of existing device discovery protocols are appropriate and may be necessary.
- OOS-2 New device management protocols MUST NOT be defined in the IPP Everywhere project, although new profiles or subsets of existing device management protocols are appropriate and may be necessary.
- OOS-3 New IPP or non-IPP transport protocols MUST NOT be defined in the IPP Everywhere project, although the design of IPP Everywhere MUST NOT preclude future transport extensions.

Objectives:

- OBJ-1 Use the existing IPP/2.0 conformance level as basis of IPP Everywhere for mobile clients and network printers.
- OBJ-2 Select a small set of REQUIRED device discovery protocols for IPP Everywhere for network printers.
- OBJ-3 Select a small set of REQUIRED document formats for IPP Everywhere for network printers, choosing existing document formats when possible (i.e., trying to avoid (re)defining document formats).
- OBJ-4 Optimize for small memory and resource footprints for IPP Everywhere mobile clients and network printers.
- OBJ-5 Design to allow for future extensions for other protocol bindings (e.g., Web Services) for IPP Everywhere.
- OBJ-6 Design to allow the use of vendor-neutral generic print drivers (e.g., one per document format) by IPP Everywhere mobile clients.

- OBJ-7 Define a new 'ipps' URI scheme to support IPP over HTTPS for IPP Everywhere.
- OBJ-8 Define support (e.g., IPP Printer attributes and/or operations) for access to industry standard SNMP MIBs (e.g., prtMarkerSuppliesTable in RFC 3805) needed for IPP Everywhere.

Milestones:

Charter Stage:

- CH-1 Initial working draft of IPP Everywhere Charter – February 2010 – DONE
- CH-2 Stable working draft of IPP Everywhere Charter – April 2010 – DONE
- CH-3 PWG Approval via Formal Vote of IPP Everywhere Charter – July 2010 – DONE
- CH-4 Stable working draft of IPP Everywhere Charter w/ IPP JPS3 – September 2010 – DONE
- CH-5 PWG Approval via PWG SC of IPP Everywhere Charter w/ IPP JPS3 – September 2010
- CH-6 Stable working draft of IPP Everywhere Charter w/ IPP over HTTPS, LDAP Printer, PWG Raster, IPP Scan, IPP System Control, and IPP FaxIn/Out – February 2011 – DONE
- CH-7 PWG Approval via PWG SC of IPP Everywhere Charter w/ IPP over HTTPS, LDAP Printer, PWG Raster, IPP Scan, IPP System Control, and IPP FaxIn/Out – March 2011 – DONE

Definition Stage:

- JPS3-1 Initial working draft of IPP JPS3 – Q1 2011 – DONE
- URI-1 Initial working draft of IPP over HTTPS and 'ipps' URI Scheme – Q3 2010 – DONE
- LDAP-1 Initial working draft of updated LDAP Printer Schema – Q2 2011
- RAS-1 Initial working draft of PWG Raster – Q4 2010 – DONE
- EVEPRT-1 Initial working draft of IPP Everywhere First Edition (printing) – Q2 2011
- SCAN-1 Initial working draft of IPP Scan – Q2 2011
- JPS3-2 Prototype working draft of IPP JPS3 – Q3 2011
- URI-2 IESG Last Call of IPP over HTTPS and 'ipps' URI Scheme – Q3 2011
- LDAP-2 IESG Last Call of LDAP Printer Schema – Q1 2012
- RAS-2 Prototype working draft of PWG Raster – Q3 2011EVEPRT-2 Prototype working draft of IPP Everywhere First Edition (printing) – Q4 2011
- SYS-1 Initial working draft of IPP System Control – Q1 2012
- FAXIN-1 Initial working draft of IPP FaxIn – Q1 2012
- FAXOUT-1 Initial working draft of IPP FaxOut – Q1 2012
- SCAN-2 Prototype working draft of IPP Scan – Q1 2012
- EVEMFD-1 Initial working draft of IPP Everywhere Second Edition (multifunction) – Q2 2012
- SYS-2 Prototype working draft of IPP System Control – Q2 2012
- FAXIN-2 Prototype working draft of IPP FaxIn – Q3 2012
- FAXOUT-2 Prototype working draft of IPP FaxOut – Q3 2012
- EVEMFD-2 Prototype working draft of IPP Everywhere Second Edition (multifunction) – Q4 2012

Implementation Stage:

- INTEROP-1 Interoperability testing of IPP Everywhere v1.0 implementations – Q2 2012
- INTEROP-2 Interoperability testing of IPP Everywhere v2.0 implementations – Q2 2013