The Printer Working Group

Joint Cloud/IPP Workgroup Session

November 4, 2014

PWG F2F Meeting

Waltham, MA (hosted by Conexant)

IPP WG Meeting Agenda

November 4, 2014

When	What
11:00 - 12:00	Cloud Model Prototype Experience with IPP Shared Infrastructure Extensions (INFRA)
12:00 - 1:00	Lunch
1:00 - 1:15	IPP Workgroup Status
1:15 - 1:45	IPP Scan Service Formal Vote Review
1:45 - 3:00	IPP Finishings 2.0 (FIN) Last Call Review
3:00 - 3:15	Break
3:15 - 4:45	Cloud/IPP System Control Service
4:45 - 5:00	Next Steps

Cloud Imaging Model WG Officers

- Chair: Ron Nevo (Samsung)
- Vice Chair: Bill Wagner (TIC)
- Secretary: Michael Sweet (Apple)
- Document Editors
  - Bill Wagner (TIC): Editor
  - Ron Nevo (Samsung): Editor

Cloud Imaging Model WG Status

- Cloud Imaging Model specification at prototype status
  - Have been waiting on prototype experience for IPP INFRA
- The Cloud Imaging Model Workgroup charter identifies no further projects.

Cloud Imaging Model

- Current prototype draft:
  - http://ftp.pwg.org/pub/pwg/cloud/wd/wd-cloudimagingmodel10-20141028.pdf
- Proposed schedule:
  - Stable draft and WG last call Q4 2014

IPP Shared Infrastructure Extensions (INFRA)

- Current prototype draft:
  - http://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippsix10-20140226-rev.pdf
- Apple has prototyped
  - Some minor issues found
- Proposed schedule:
  - Stable draft and WG Last Call Q4 2014
  - PWG Last Call Q1 2015
  - PWG Formal Vote Q1/Q2 2015

Apple Prototype Experience

- Implemented both Proxy and Infrastructure Printer
  - All required attributes, values, and operations
  - plus proposed Deregister-Output-Device
- Some issues during implementation and testing:
  - No way to provide resource files - icons, ICC profiles, etc.
  - No way to do registration
    - but works with a printer-uri that is obtained separately
    - Output Device is "registered" by using the Update-Output-Device-Attributes operation
  - No way to do de-registration
    - This is more of an issue for fan-out configurations - no way to remove an output device from the Infrastructure Printer

Proposals

- Editorial: Add a list of attributes - hard to navigate with current text, and some attributes should not be reported by the Proxy

- Resources: Add a way to "upload" printer-icc-profiles and printer-icons values (and any other printer-resident resources)

- Registration: Add a new Register-Output-Device operation corresponding to the existing Cloud Imaging Model RegisterSystem operation

- Deregistration: Add a new Deregister-Output-Device operation corresponding to the existing Cloud Imaging Model DeregisterSystem operation

Resource Proposal

- Add some Infrastructure Printer attributes:
  - "printer-resource-directory-uri (uri)" - specifies a HTTP or HTTPS URI that can be used to upload resource files using PUT requests or delete resource files using DELETE requests
  - "printer-resource-k-octets-available (integer(0:MAX))" - specifies resource storage availability
  - "printer-resource-k-octets-used (integer(0:MAX))" - specifies kilobytes of resources that have been used
- Issues:
  - HTTP authentication can limit to proxy user, but how to limit to output devices that have been registered?
  - Also, for fan-out how to avoid/prevent name collisions?
    - Provide separate "printer-resource-directory-uri" values, filtered on "output-device-uuid"?

Registration Proposal

- Add Register-Output-Device operation to the IPP System Control Service specification
  - That's the level we need to create or get an existing set of "printer-uri" values for different types of services

  OR

- Defer Register-Output-Device to an update of IPP INFRA for multifunction
  - The extension can apply specifically to IPP System Control Service implementations

  OR

- Add Register-Output-Device operation as an Infrastructure Printer operation that can potentially return a different "printer-uri" value

- Add Deregister-Output-Device operation to Infrastructure Printer
  - Just removes the output device from the service

    AND

- Add Deregister-Output-Device operation to IPP System Control Service
  - Removes the output device from all services

    OR

- Update IPP INFRA after IPP System Control Service for the amended behavior

The Printer Working Group

Lunch

IPP WG Officers

- IPP WG Co-Chairs:
  - Paul Tykodi (TCS)
  - Ira McDonald (High North)
- IPP WG Secretary:
  - Michael Sweet (Apple)
- IPP WG Document Editors:
  - Ira McDonald (High North) – IPP Shared Infrastructure Extensions (INFRA), IPP System Control Service (SYSTEM), IPP over HTTPS Transport Binding and "ipps" URI Scheme, LDAP Schema for Printer Services
  - Michael Sweet (Apple) – IPP Shared Infrastructure Extensions (INFRA), IPP System Control Service (SYSTEM), IPP over HTTPS Transport Binding and "ipps" URI Scheme, LDAP Schema for Printer Services, IPP Finishings 2.0 (FIN)
  - Smith Kennedy (HP) - IPP Implementor's Guide 2.0 (IG)
  - Peter Zehler (parc) - IPP Scan Service (SCAN)

- IETF RFCs in development:
  - IETF IPP over HTTPS Transport Binding and "ipps" URI Scheme
    - IETF Last Call until 11/25/14
  - IETF LDAP Schema for Printer Services (updates RFC 3712)
    - IETF RFC Editor's Queue

- PWG Specifications in development:
  - IPP Everywhere Printer Self-Certification Manual 1.0 (SELFCERT)
    - Prototype Draft
  - IPP Finishings 2.0 (FIN)   - Stable Draft
    (PWG Last Call Complete)
  - IPP Implementors Guide 2.0 (IG)   - Prototype Draft
  - IPP Scan Service (SCAN)   - Stable Draft
    (PWG Formal Vote Complete)
  - IPP Shared Infrastructure Extensions (INFRA)
    - Prototype Draft
  - IPP System Control Service (SYSTEM)
    - Interim Draft

- Recent Candidate Standards:
  - PWG 5100.15-2014: IPP FaxOut Service (errata)
  - PWG 5100.17-2014: IPP Scan Service (SCAN)
- Updated IPP WG charter:
  - http://link-to-charter
- Up-to-date pending IANA registrations online:
  - http://www.pwg.org/ipp/ipp-registrations.xml
  - Continue to maintain this in parallel for new specifications
    - PWG version includes draft specifications that have reached prototype status
  - Also pending errata for PWG 5100.9 and 5107.3 to correct xxx-error usage (per WG mailing list discussion)
    - Explain issues and update registry for IANA Printer MIB (ASN.1 comments)
    - Update IANA IPP registry for keywords that do not require "-error" on the end

IPP Everywhere Printer Self-Certification Status

- Current prototype draft and tools:
    - http://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippeveselfcert10-20148026.pdf
    - http://www.pwg.org/ipp/ (for tools)
- Need beta test feedback, i.e., guinea pigs!

IPP Scan Service (SCAN)

- PWG Formal Vote ended September 18, 2014
- Current draft for review at:
  - http://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippscan10-20141030.pdf
- Review final editorial changes:
  - Get-Next-Document-Images renamed to Get-Next-Document-Data
    - "get-next-image-wait-mode" renamed to "document-data-wait"
    - "next-image-get-interval" renamed to "document-data-get-interval"
  - Clarifications on multiple document support (multiple image files vs. a single, multi-page PDF file)
  - Lots of formatting changes, capitalized terms, adding of missing references, missing attribute, etc.

IPP Finishings 2.0 (FIN)

- PWG Last Call completed September 12, 2014
  - http://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippfinishings20-20140701.pdf
  - http://ftp.pwg.org/pub/pwg/ipp/wd/lcrc-ippfinishings20.txt
  - 11 members responded with 82 comments
  - 6 pending comments for review
  - 64 comments accepted
  - 12 comments rejected
- Last Call review draft posted October 24, 2012
  - http://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippfinishings20-20141024.docx
  - http://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippfinishings20-20141024.pdf
  - http://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippfinishings20-20141024-rev.pdf
- Proposed Schedule:
  - PWG Formal Vote Q4 2014

- IM1. Coating.CoatingType - Maybe import JDF coating types?
  - Editor Comment: Looks like the only coating types that cannot be directly mapped now are "Aqueous" (whatever that is) and "Protective" (again, no definition...) No objection to adding them as long as we can define them.
- Jim Mekis (from CIP4) responded with:
  - ... The most commonly coating types requested by customers today are UV coatings (Ultra Violet cured polymers) which provide higher durability, and aqueous coatings that are viewed as "greener" and typically more easily recycled at end-of-life. Both types of overall coating protect the printed image as well as the substrate. ...
  - Protective then maps to the existing 'archival'
  - Do we want to provide an 'aqueous' type, or just focus on the functionality provided, i.e., protective/archival coating of some type?

- MS10. Section 5.1.1: Do we want to stick with "one or more staples" for edge-stitch-xxx? Seems like it should be at least two or more? This came from RFC 2911 and the original 5100.1 so not sure.
- RFC 2911 text:
  - '9' 'edge-stitch': Bind the document(s) with one or more staples (wire stitches) along one edge. The exact number and placement of the staples is implementation and/or site-defined.

- SK3. Page 21, Lines 523-546 : Are there standard locations for each of these for different media sizes? If so, where are these defined? It seems the definitions should be referenced here.
  - Per IPP WG conference call discussion, ISO 838 appears to define the standard locations for 2-hole punching, there is also a Wikipedia article on the subject.
    - http://en.wikipedia.org/wiki/Hole_punch
  - Based on the Wikipedia article, there are at least 12 "standard" hole positions and sizes

- WW3. The distinction between the terms "document, Document, copy, hardcopy document, set, (and perhaps a few others) as used in this specification should be made more clear with (perhaps) repeated definitions here and consistent use in the text. [remaining comment omitted for brevity...[

  - Initial resolution is to define Document and Set from RFC 3381. Set is then used whenever that semantic is intended, with hardcopy output or sheet used when the finishing operation can be applied to the Set as a whole or to individual sheets. There remains an outstanding issue for the baling-when member attribute (5.2.2.2) - do we need it, if so do we want all of the current values?

  - "baling-when" values are: 'after-copies', 'after-documents', 'after-job'
    - 'after-copies' should be 'after-set'
    - 'after-documents' doesn't make sense since "multiple-document-handling" defines this behavior
    - 'after-job' makes some sense (bale all sets at end of job)

- WW5. 3.2 The use cases all refer to indicating finishing intent "after initiating a print action". This might be mistaken for action being initiated at the Printer which, although it is somewhat clarified by the subsequent statement that the person "submits the print request". Could the "After initiating a print action" phase be dropped?
  - This has been the pattern used in many of the recent IPP specifications; will discuss replacing with "Using software on her Client device, Jane ..."

The Printer Working Group

Break

IPP System Control Service

- Current interim draft at:
  - http://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippsystem10-20141102-rev.pdf
- Continue review of this draft at section 5.5
- Proposed Schedule:
  - Prototype draft in Q1/Q2 2015

Next Steps

IPP WG Next Steps

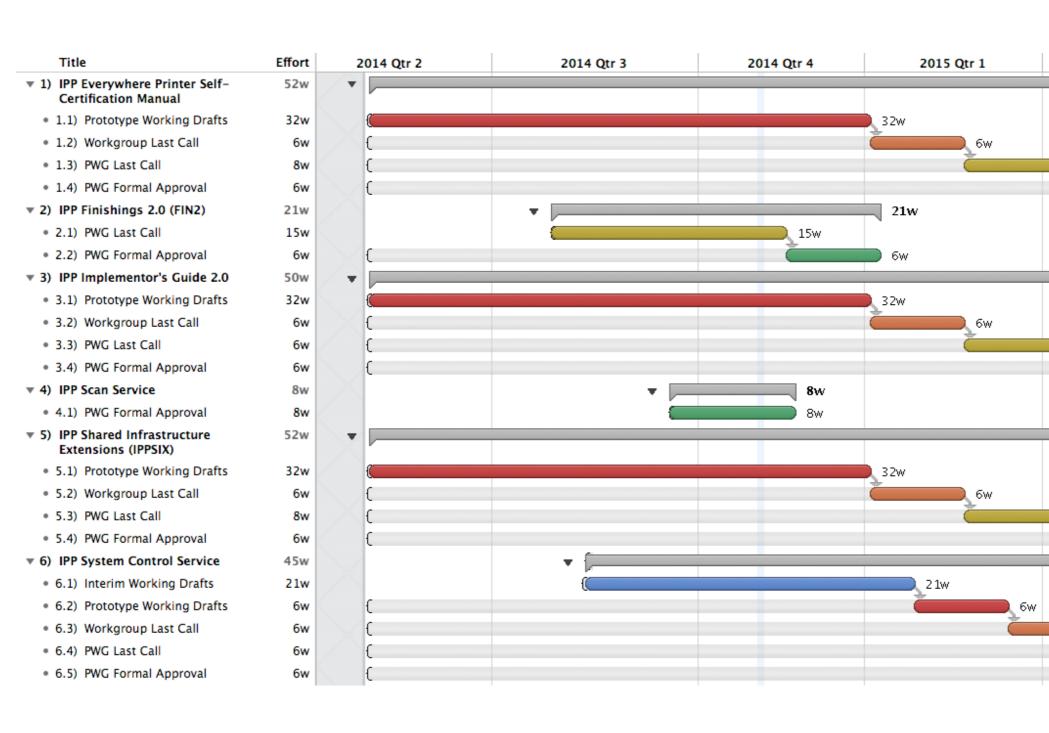| Title	Effort	2014 Qtr 2	2014 Qtr 3	2014 Qtr 4	2015 Qtr 1	2015 Qtr 2	2015
1) IPP Everywhere Printer Self-Certification Manual	52w						52w
1.1) Prototype Working Drafts	32w			32w			
1.2) Workgroup Last Call	6w				6w		
1.3) PWG Last Call	8w				8w		
1.4) PWG Formal Approval	6w					6w	
2) IPP Finishings 2.0 (FIN2)	21w			21w			
2.1) PWG Last Call	15w			15w			
2.2) PWG Formal Approval	6w			6w			
3) IPP Implementor's Guide 2.0	50w					50w	
3.1) Prototype Working Drafts	32w			32w			
3.2) Workgroup Last Call	6w				6w		
3.3) PWG Last Call	6w				6w		
3.4) PWG Formal Approval	6w					6w	
4) IPP Scan Service	8w		8w				
4.1) PWG Formal Approval	8w		8w				
5) IPP Shared Infrastructure Extensions (IPPSIX)	52w					52w	
5.1) Prototype Working Drafts	32w			32w			
5.2) Workgroup Last Call	6w				6w		
5.3) PWG Last Call	8w				8w		
5.4) PWG Formal Approval	6w					6w	
6) IPP System Control Service	45w						45w
6.1) Interim Working Drafts	21w			21w			
6.2) Prototype Working Drafts	6w				6w		
6.3) Workgroup Last Call	6w				6w		
6.4) PWG Last Call	6w					6w	
6.5) PWG Formal Approval	6w					6w	

IPP WG Next Steps (1/2)

- IPP Everywhere Printer Self-Certification Manual 1.0
  - Prototype experience (testing) in Q4 2014/Q1 2015
  - Stable draft and WG Last Call in Q1 2015
- IPP Finishings 2.0 (FIN)
  - PWG Formal Approval in Q4 2014/Q1 2015
- IPP Implementor's Guide 2.0 (IG)
  - Review of latest prototype draft at November 17, 2014 conference call
  - Prototype experience in Q1 2015
  - Stable draft and WG Last Call in Q1/Q2 2015
- IPP Shared Infrastructure Extensions (INFRA)
  - Stable draft and WG Last Call in Q4 2014

- IPP System Control Service (Mike/Ira)
  - Prototype working draft in Q2 2015
- Advance IPP/1.1 to Full IETF Standard
  - IPP/1.1 requires a "fast track" IETF WG - investigating what is involved
  - Target IETF Last Call by September 2015 (15 year anniversary of IPP/1.1)
    - If we do it...
- Advance IPP/2.0 to Full IEEE Standard
  - IPP/2.0 just needs PWG Last Call and Formal Vote
  - Target completion by September 2015 (15 year anniversary of IPP/1.1)
- IPP Everywhere Multifunction (Mike/Ira)
  - Initial working draft in Q3 2015

- We welcome participation from all interested parties
- IPP Working Group web page
  - http://www.pwg.org/ipp/index.html
- Subscribe to the IPP mailing list
  - https://www.pwg.org/mailman/listinfo/ipp
- IPP WG holds bi-weekly phone conferences announced on the IPP mailing list
  - Next conference calls November 17, 2014 and December 8, 2014 at 3pm ET (skipping US Thanksgiving week)
  - Held on opposite weeks of Cloud Imaging Model WG
  - Held on same weeks of Imaging Device Security WG

Cloud Imaging Model WG Next Steps

- Update Cloud Imaging Model to stable draft, incorporating prototype experience for IPP INFRA
- WG Last Call Q4 2014
- PWG Last Call Q1 2015
- PWG Formal Vote Q1/Q2 2015
  - When the Cloud Model specification is approved, the Cloud Model information will be transferred to the Semantic Model WG for inclusion into SM3.

- We welcome participation from all interested parties
- Cloud Imaging Working Group Web page
  - http://www.pwg.org/cloud/index.html
- Subscribe to the Cloud mailing list
  - https://www.pwg.org/mailman/listinfo/cloud
  - cloud@pwg.org
- Cloud Imaging WG holds bi-weekly phone conferences announced on the Cloud mailing list
  - Next conference call is December 1, 2014 at 3 pm EDT
  - Conference Calls on same weeks as SM3 conference calls.
  - Conferences on opposite weeks of IPP WG calls