Joint Cloud/IPP Workgroup Session
November 4, 2014
PWG F2F Meeting
Waltham, MA (hosted by Conexant)
## IPP WG Meeting Agenda

### November 4, 2014

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

• Proposed schedule:
  • Stable draft and WG last call Q4 2014
IPP Shared Infrastructure Extensions (INFRA)

- Current prototype draft:

- 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
Deregistration Proposal

- 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
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)
IPP WG Status (1/2)

- 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 (SELCERT)
    - 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
IPP WG Status (2/2)

- 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://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:
- 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
  - 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

- 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?
IPP Finishings 2.0 (FIN)

- 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.
- Based on the Wikipedia article, there are at least 12 “standard” hole positions and sizes
IPP Finishings 2.0 (FIN)

- 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 ..."
Break
IPP System Control Service

• Current interim draft at:

• Continue review of this draft at section 5.5

• Proposed Schedule:
  • Prototype draft in Q1/Q2 2015
Next Steps
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 WG Next Steps (2/2)

- 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
IPP WG Info / Participation

- 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.
Cloud Imaging Model WG Participation

- We welcome participation from all interested parties
- Cloud Imaging Working Group Web page
- 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