

Internet Printing Protocol Workgroup Meeting Minutes November 14-15, 2016

Meeting was called to order at approximately 1:30pm MT on November 15, 2016.

Attendees

Smith Kennedy (HP)
Jeremy Leber (Lexmark)
Ira McDonald (High North)
Jeremy Reitz (Xerox)
Mike Scrutton (Adobe)
Mike Sweet (Apple)
Paul Tykodi (TCS)
Bill Wagner (TIC)
Craig Whittle (Sharp)
Rick Yardumian (Canon)

Agenda Items

1. IP Policy and Minute Taker
 - IP policy accepted, Smith taking minutes
2. IPP Finishings 2.1
 - <http://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippfinishings21-20161109.pdf>
 - Q: Do a formal vote or call for objections?
 - A: finisher-supplies attributes are conditionally required, consensus to do a formal vote
 - Schedule:
 - PWG Last Call starting today, ending December 12th
 - Action: Mike to post PWG Last Call for IPP Finishings 2.1
 - PWG Formal Vote in January 2017 after process approval by PWG SC
3. IPP Everywhere Printer Self-Certification
 - Q: Do we need an IPP Everywhere 1.1 update?
 - A: Not necessary at this time.
 - Q: Do we still want a WS-Discovery tool?
 - A: Probably not since we don't have any clients implementing it
 - Craig is volunteering to help out with the tools and/or documents
 - Wireshark IPP improvements in 2.3.0 development branch; automated builds available here:
 - <https://www.wireshark.org/download/automated/>
 - Action: Mike to add link to Wireshark from the IPP WG page
4. IPP 3D Printing Extensions
 - <http://ftp.pwg.org/pub/pwg/ipp/wd/wd-ipp3d10-20160824-rev.pdf>
 - No comments, no feedback on prototype experience.

- Schedule:
 - Stable draft today, consensus is to skip WG Last Call
 - PWG Last Call starting today, ending December 12th
 - Action: Mike to post PWG Last Call for IPP 3D Printing Extensions
 - PWG Formal Vote in January 2017 after process approval by PWG SC
- Comments from Semantic Model meeting:
 - Ranges, discrete values, or both for material-xxx-supported?
 - Filament is manufactured in specific sizes, may not need ranges
 - Also see discussion of material-diameter tolerances
 - Discrete values can be listed as a range with the same lower and upper bounds in Semantic Model, keep as integer | rangeOfInteger in IPP.
 - What about tolerances for material-diameter?
 - Useful for controlling output quality since large tolerances can lead to less accurate printing (printer extrudes a volume of material by advancing a length of filament - actual volume depends on diameter of filament that was extruded...)
 - Need to talk about this in IPP WG, maybe a last call comment...
 - New "material-diameter-tolerance (integer(0:MAX))" member attribute for "materials-col" to define the tolerance of the loaded/preset/requested material
 - "job-constraints-supported" and "job-resolvers-supported" are currently required but a printer may not have any constraints - needs to be removed from Table 5.

5. IPP System Service

- <http://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippsystem10-20161101-rev.pdf>
- Q: date-time-at-canceled/installed, change names?
 - A: No, but define semantics of -at-canceled to include aborted, like date-time-at-completed for jobs
- Q: What about executable resources for Jobs or Printers?
 - A: Say something about support for executable resources being implementation-defined.
- Q: Expose allocation count in "resource-use-count" attribute?
 - A: Yes, add "resource-use-count (integer(0:MAX))"
- Q: What about executable resources, do they get canceled automatically?
 - A: Need to define lifecycle
 - Install-Resource with a new version, the old version reverts to the 'available' state after successful installation.
- Resource Life Cycle Diagram:
 - Add Note 2 (for 'installed') about state going back to 'available' when a new version of the resource is installed.
- Resource Metadata Requirements:
 - Need to document metadata and validation requirements

- But avoid DRM
 - For example, code signatures and format/data validation for executable resources, just format/data validation for non-executable resources.
 - Point people to guidance on proper ways to do validation
- Section 4.6
 - Resource use count and persistence:
 - Use count is 0 unless allocated explicitly for a Printer or Job, or for executable software/firmware that is running on the System
 - Rewrite as persistent until canceled or aborted by System, use count reflects allocation to Jobs, Printers, or the System
 - Talk about what happens when a resource is cancelled ("busy" resources get the 'cancel-requested' keyword added to "resource-state-reasons")
- Section 5.6:
 - Add something about Job-scope resources (just the first item from the printer list, reworded for jobs)
- Section 6.1.5.1:
 - Reword requested-attributes: "The Client SHOULD only supply and the System MUST only support requests for any Printer attributes that are listed ..."
- Section 6.1.6.1:
 - Update as "system-uri" (uri) or "printer-uri" (uri): The Client MUST supply either the "system-uri" or "printer-uri" and the Server MUST support both the "system-uri" and "printer-uri" operation attributes which specify the target System or Printer for the operation.
- Section 6.2.1:
 - Move resource info to section 4, add back reference for resource history.
- Section 6.2.2:
 - Line 1268 (and other places): Replace "Resource for use" with just "Resource"
 - Lines 1269-1270: will either change "resource-state" to 'installed' or add 'install-requested' to "resource-state-reasons".
 - Add Job-scope resource note (basically note 1)
 - Lines 1286-1287: Add Subscription Template group(s) to Create-Resource request to create Resource-scope Subscription objects, in addition to Create-Resource-Subscription(s)
- Section 6.2.???: (Create-Printer)
 - Add support for Subscription Template groups to create Subscription objects associated with printer at time of creation
- Section 6.2.5 (Install-Resource):
 - Executable resources MUST and other resources SHOULD have an associated cryptographic signature to allow the System to validate the content and origin of the resource.
 - Maybe add subsections on resource validation in section 4.x, back

- reference it here.
- Section 6.2.6 (Send-Resource-Data):
 - SHOULD perform validation of the resource data, including the presence and correct formatting of any cryptographic signature in the resource data.
 - Maybe add subsections on resource validation in section 4.x, back reference it here.
- Section 6.2.7:
 - Lines 1381-1382: Dump talk of aborting resources due to a bad set-resource-attributes request.
- Section 7.1.:
 - Line 1655: Need a period.
 - "The following operation attributes apply to the operations defined or extended in this specification."
- Section 7.1.2:
 - Drop reference to Create-Resource (reject redlined text).
 - "specifies a list of "printer-id" values for target ..."
- Section 7.1.9:
 - Mention Allocate-Printer-Resources
 - "specifies a list of "resource-id" values for associated ..."
- Global: look for "specifies a list of" and make sure the list is the correct items
- Section 7.2.11:
 - Fix syntax ("type2" instead of "type 2")
- Global: "type2" instead of "type 2"
- Section 7.2.18:
 - Add "This attribute is semantically analogous to the "printer-mandatory-job-attributes" attribute [REF]."
 - Reword:
 - This REQUIRED System attribute lists the minimum Printer and operation attributes that are required for a successful Create-Printer operation. This attribute MUST include the values 'printer-name' and 'printer-xri-supported' and SHOULD include the recommended attributes in Table 9.
 - Table 9: Drop required attributes and conformance column.
- Q: Do we have "printer-creation-attributes-supported (1setOf type2 keyword)" System Description attribute?
 - A: No, but we should.
 - Semantically analogous to the "job-creation-attributes-supported" Printer Description attribute.
- Section 7.5.3:
 - "SMI number assigned by IANA"
- Section 7.7.1:
 - "when the Resource transitions to the 'canceled' or 'aborted' state."
- Section 7.7.3:
 - "when the Resource transitions to the 'installed' state."
- Section 7.7.8:

- Analogous to "job-state"
 - Global: "resource-state" is analogous to "job-state"
 - Figure 1:
 - Add Note 2 (for 'installed') about state going back to 'available' when a new version of the resource is installed.
 - Section 14.1:
 - Update Finishings 2.0 to 2.1 with a note to update it...
1. Q: What about MFD Alerts MIB registrations?
 - A: Meaning to get to that, high priority to do.
 - Also need some updates to the MFDALERT spec to fix the suffixes to conform to RFC 2911.
 2. Next steps:
 - System service: Prototype draft in Q1 2017
 - Transform service in Q2 2017
 - MFDALERTS errata in Q1 2017

Next Steps / Open Actions

- Next IPP WG conference calls November 30, 2016 and December 14, 2016 at 1pm ET
- Action: Mike to post PWG Last Call for IPP Finishings 2.1 (DONE)
- Action: Mike to add link to Wireshark from the IPP WG page (DONE)
- Action: Mike to post PWG Last Call for IPP 3D Printing Extensions (DONE)
- Action: Mike to send IANA IPP registry updates to Ira (PENDING)
- Action: Mike to add output-bin registration to IANA IPP registry (PENDING)
- Action: Mike to fix registration of job-constraints-supported and job-resolvers-supported to include "resolver-name (name(MAX))" member attribute (PENDING)