Internet Printing Protocol Workgroup Meeting Minutes
February 13-14, 2019

Meeting was called to order at approximately 10:00am MT on February 13, 2019 and 11:30am MT on February 14, 2019.

Attendees

Cihan (Kyocera Document Solutions)
Gupta Gyaneshwar (Oki Data)
Sean Kau (Google)
Smith Kennedy (HP)
Jeremy Leber (Lexmark)
Matt Matsutani (Brother)
Ira McDonald (High North)
Michael Sweet (Apple)
Bill Wagner (TIC)
Uli Wehner (Ricoh)
Rick Yardumian (Canon)

Agenda Items

1. IP Policy and Minute Taker
   - http://www.pwg.org/chair/membership_docs/pwg-ip-policy.pdf
   - IP policy accepted, Mike taking minutes
2. Slides
   - https://ftp.pwg.org/pub/pwg/ipp/slides/ipp-wg-agenda-february-19.pdf
   - Slide 4: missing doc object
   - Slide 7: interim or prototype for mfd alerts
   - Slide 9: Fix link for Authentication methods
   - Slide 10:
     - Add MFD Alerts v1.1
     - Q: Include rationale/lessons learned?
       - A: Consensus is yes
     - Q: Where to put the rationale/lessons learned for errata updates?
       - A: Rationale for obsoletion/deprecation go in Changes section, lessons learned should be incorporated in process/policy documents
       - Add forward reference from section 3 (rationale) to changes section
     - Q: How can we apply lessons-learned?
       - A: Incorporate into process/policy documents/updates
       - Smith has been working on a "best practices for developing IPP documents" document - some things might be universal, some are specific to IPP

- - STD 92 has some discussion of naming (xxx-supported, xxx-configured, xxx-default, pluralization, etc.)
  - Develop a cheat sheet for naming, attribute syntax, values
    - names and suffixes
    - type2 keyword vs. enum
    - when to use smi vendor prefix vs. formal value syntax/patterns
  - Maybe start outlining in the istopwg wiki for discussion at future IPP WG concall
  - Q: Should we require formal prototyping for complex new features?
    - Where to draw the line?
    - Currently up to workgroups to decide how much prototyping is necessary to satisfy process requirement - typically all required bits, but that isn't universal
    - No formal prototyping and interoperability requirements for a candidate standard, but interoperability and multiple implementations required for full standard
    - Specs like JPS2 and Production Printing incorporate many different features, hard to say that everything was fully prototyped and understood
  - Q: Should we ask for an intent to implement?
    - A: Most vendors won't pre-announce such things publicly (even for published standards)
    - "Interested in implementing?" (so that it isn't definite)
    - Or anonymous reporting (like we do for prototyping) so that a trusted member could report that "N vendors have expressed an intent to implement".
      - But that might still be challenging
- Slide 12:
  - Q: What about "document-format-details" and job accounting?
    - Recommend using document-metadata instead?
    - Was known to be problematic from the beginning...
    - Will welcome contributions in this area
    - Privacy, interoperability, integrity/authenticity
    - A: Setup a BOF at a future F2F to talk specifically about job accounting and metadata that is needed, helping to manage/support printing issues per OS/application, etc.
  - EU issued GDPR report - 49,000 reports since adoption last year, 256 investigations, 91 fines
- Slide 15:
  - Q: Should we separate the submission process from the cert process?
    - A: Consensus is yes, will unblock the manual and tools updates
    - Stable URL for submissions
    - Possible update of 1.0 tool files to point to the new stable URL

- Action: Mike to file Github issues for IPP Everywhere self-certification tool changes
- Slide 30: Fix link to JPS2v2
- Slide 32: Bad link, missing IPP Document Object v1.1 slide
- Slide 34: Q3 for JPS2 replacement
- Slide 35:
  - MFD Alerts v1.1 stable draft and WG last call in Q1
  - RFC 3996: think more about how to update this
  - IPP Encrypted Jobs and Documents may need to be standards-track, revisit process for adding work to charter

3. IPP 3D Printing Extensions v1.1
   - https://ftp.pwg.org/pub/pwg/ipp/wd/wd-ipp3d11-20190201-rev.pdf
   - Stable draft
   - IPP WG Last ends February 15, 2019

4. PWG Safe G-Code Subset for 3D Printing
   - https://ftp.pwg.org/pub/pwg/ipp/wd/wd-pwgsafegcode10-20190117-rev.pdf
   - Stable draft
   - PWG Last Call ends February 28, 2019

5. IPP System Service
   - https://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippsystem10-20190219-rev.pdf
   - Q: Add resource-natural-language attribute?
     - A: Yes
   - Section 6.2.2:
     - Q: notify-resource-id or resource-id?
       - A: notify-resource-id
   - Section 6.2.3.1 (Create-Resource Request)
     - Line 1882: Add max length of resource-version octetString (64?)
   - Section 7.8.8 (resource-signature)
     - Add "(MAX)" to syntax.
   - Global: RFC8011 -> STD92

6. IPP Authentication Methods
   - https://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippauth-20190117-rev.pdf
   - Stable draft
   - PWG Last Call ends February 28, 2019

7. IPP Job and Printer Extensions Set 2 v2.0
   - https://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippjobprinterext2v20-20190214-rev.pdf
   - https://ftp.pwg.org/pub/pwg/ipp/slides/IPP-Job-Storage-v2-20190214.pdf
   - Section 1:
     - Need to make most attributes/operations REQUIRED or CONDITIONALLY REQUIRED
     - Maybe use a "REQUIRED" table and "RECOMMENDED" table, with notes for anything conditionally required
     - Chair feedback: specs should mostly have required/conditionally required attributes/operations
     - For now a single table with notes, later we can break things out
     - Most of these attributes/operations are targeted at "enterprise"

- printer features
  - Table 2: Remove Reprocess-Job from table
- Section 2.1:
  - RFC2119 -> BCP14
  - Add reference to IPP Registration Policy for DEPRECATED and OBSOLETE
  - Action: Mike to add DEPRECATED and OBSOLETE terms to other errata documents
- Section 2.4:
  - Make sure terms are italicized
  - Replace first sentence with "This document extends the IPP Job life cycle defined in Internet Printing Protocol/1.1 [STD92]."
  - Figure 1: Redo to be a more faithful reproduction of STD92's figure 3, text needs to be larger, add annotations where needed to highlight states/transitions
- Section 2.5:
  - Don't include conformance words for the "xxx Feature" terms (we'll put the conformance where those attributes are defined)
  - Drop "Restart-Job" mention in Job Creation operations
  - Reprocess-Job is DEPRECATED.
  - Drop "Feature" from the terms (or substitute Capability if needed)
- Section 3.2.4:
  - Wordsmith this section.
- Section 3.3:
  - Add authentication and authorization failure exceptions
  - Storage full?
  - Job retention out of policy (i.e. "retain indefinitely" not allowed by "until the end of the month" is ok)
- Section 3.4:
  - Add implementation specific stuff like how authentication/ authorization is done at the printer
  - UI
- Section 3.5:
  - Make more generic (copy existing specs)
- Q: Is a stored job different from a retained job?
  - A: Slides...
- Section 4:
  - Title: "Extended IPP Job Model"
  - This specification extends the IPP Job Model [STD92] for ..."
  - Subsections for each of the capabilities
  - One *short* section at end for pdl-override-supported (better than attempted with precedence for attributes over PDL)
- Section 4.3:
  - Drop "OPTIONAL Feature"
  - Use "will", "can", or other declaratives instead of "MUST" and "MAY" and other conformance words
  - Q: Saved Job == indefinitely Retained Job?

- "Saved Job" is confusing
        - Job may be retained automatically or explicitly using job-retain-until[-time]
        - Maybe "Explicitly Retained Job"?
    - Consensus is to remove job-save-disposition (so all of 4.3)
- Global: job-save-disposition is OBSOLETE
- Section 4.4:
    - Drop "REQUIRED Feature" from title
    - Use "will", "can", or other declaratives instead of "MUST" and "MAY" and other conformance words
    - Reword
    - DEPRECATED Reprocess-Job
    - "Partitioning of Job STATES" (misspelled)
    - Proof Print implicitly retains the Job for an implementation-specific amount of time (maybe add a proof-print-retain-until-configured or something Printer Description attribute) - can be retained explicitly with job-retain-until[-time]
    - Proof Print is a test print of a Job, in preparation for a full run:
        - Test print is done, job complete
        - Review is done offline
        - Approved job starts up fresh on printer
        - Proof prints do not hold up other jobs (i.e other jobs can print between proof and full/production runs)
        - Retention of original job has to happen until the resubmit/reprocess-job
    - In JPS2 v1.0, proof print was the required capability and save disposition was optional
    - In JPS2 v2.0, it looks like Explicitly Retained Jobs are the required capability and proof print is an optional add-on
    - Add a "parent-job-id (integer(1:MAX))" Job Status attribute to copied jobs so that the job history can be linked up (rather than listing N copies of the same job)
        - Amended Semantics for DEPRECATED Reprocess-Job operation to copy original "job-id" value to "parent-job-id"
- Section 4.5:
    - Drop "OPTIONAL Feature" from title
    - Q: Change title to "Explicitly Retained Jobs"?
        - Stored Jobs has a particular semantic - make the job available from the printer control panel for users to pick and print
        - Kind of a "favorite job" - retained job in the completed state that may not have been printed?
    - User experience is that a job is submitted for storage on the printer for later printing (optionally with a password/passcode) from the printer's console
        - Need some way to differentiate between automatically retained jobs and those that have been "saved"

- Slide 7:
    - Job A never enters the Job History phase if stored indefinitely
    - How to tell printer to later remove a stored job?
        - Set-Job-Attributes with job-retain-until='none'?
        - Use case would be for updating/replacing an existing stored job with a new version
    - Q: Is a stored job a retained job, or is it a copy that is in pending-held?
        - pending-held could be released and lost
        - much better to have as a retained job with some annotation
- Section 7.12:
    - Drop "no-delay-output" from list of keywords
    - Fix wording to match semantics
- Ira: What about obsoleting all of JPS2 and publishing this as a new spec with a new number and title?
    - One danger - we've had vendors implement the old overrides spec recently even when the new overrides spec was available for 15 years
    - New working title: "IPP Enterprise Printing Extensions v2.0"
        - Filename: wd-ippenterprise20-yyyymmdd.ext
    - Possibly a set of smaller documents to separate out unrelated functionality?
        - Registrations for simple attributes
- Continue discussions at next IPP WG concall
- Target is Q3 2019 for Prototype draft
8. MFD Alerts v1.1
    - https://ftp.pwg.org/pub/pwg/ipp/wd/wd-pwgmfdalerts11-20190213-rev.pdf
    - Section 7.1:
        - Remove UNICODEXML (no XML/markup used)?
    - Section 10:
        - Remove UNICODEXML reference
    - Next status: stable
    - Ready for IPP WG Last Call
9. IPP Document Object v1.1
    - https://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippdocobject11-2019
    - Add rationale for obsoletion text and references (see first day discussions)
    - Next status: stable
    - Ready for IPP WG Last Call

Next Steps / Open Actions

- Next conference call on February 28, 2019 at 3pm ET
- Action: Mike to add DEPRECATED and OBSOLETE terms to other errata documents
- Action: Mike to start PWG Last Call of IPP Authentication Methods ending Feb 28 (DONE)

- Action: Mike to start IPP WG Last Call of IPP 3D v1.1, ending Friday after PWG Feb F2F (DONE)
- Action: Mike to start PWG Last Call of PWG Safe G-Code ending Feb 28 (DONE)
- Action: Mike to add self-certification discussion slides for Feb F2F (DONE)
- Action: Paul to get a list of common concrete standards that can be shown as example material-type values, maybe other environmental values? (IN PROGRESS - Paul collecting information)
- Action: Paul/Smith to determine whether ISTO needs to do anything to participate in ISO SG12 (IN PROGRESS - waiting on INCITS)
- Action: Smith to follow-up on the 3MF liaison agreement (IN PROGRESS - coordinating with 3MF liaison)