

# Internet Printing Protocol Workgroup Meeting Minutes December 14, 2016

Meeting was called to order at approximately 1:00pm ET on December 14, 2016.

## Attendees

Ira McDonald (High North)  
Mike Sweet (Apple)  
Paul Tykodi (TCS)  
Bill Wagner (TIC)

## Agenda Items

1. IP Policy and Minute Taker
  - IP policy accepted, Smith taking minutes
2. Review previous minutes:
  - <http://ftp.pwg.org/pub/pwg/ipp/minutes/ippv2-concall-minutes-20161130.pdf>
  - Approved as posted
3. Status of various IPP documents (Ira/Mike/Smith)
  - IETF IPP/1.1 Updates (Mike/Ira)
    - <https://www.rfc-editor.org/authors/rfc8010.txt>
    - <https://www.rfc-editor.org/authors/rfc8011.txt>
    - Changes for new IETF Proposed Standards
    - Alexey Melnikov (IETF ART AD) as AD sponsor on 06/02/16
    - RFC2910bis & RFC 2911bis - IETF Approved as Proposed Standards!
    - Working w/ RFC Editor on RFC 8010 and RFC 8011
    - Mike sent updated XML drafts to RFC Editor on 11/29/16
    - Working on a few registry tweaks for RFC 8010
    - Schedule - IPP/1.1 RFCs published in Q4 2016
  - Status of IPP Finishings 2.1 (Smith)
    - <http://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippfinishings21-20161109-rev.pdf>
    - Stable draft
    - Reviewed by IPP WG at Virtual F2F on 11/14/16
    - PWG Last Call ended on 12/12/16 - quorum achieved!
    - Schedule - PWG Formal Vote in Q1 2017
4. Review of IPP 3D Printing Extensions (Mike)
  - <http://ftp.pwg.org/pub/pwg/ipp/wd/wd-ipp3d10-20161213-rev.pdf>
  - <http://ftp.pwg.org/pub/pwg/ipp/wd/lcrr-ipp3d10.txt>
  - Stable draft
  - Reviewed by IPP WG at Virtual F2F on 11/14/16
  - PWG Last Call ended on 12/12/16 - quorum achieved!

- LCRC comments and responses on 12/13/16
  - Deferring review until January 11 meeting to allow more members to participate
  - Schedule - PWG Formal Vote in Q1 2017
5. Review of IPP System Service (Ira/Mike)
- <http://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippsystem10-20161211-rev.pdf>
  - Interim draft
  - Reviewed by IPP WG on 11/30/16
  - Schedule - Prototype draft in Q1 2017
  - Section 4.6:
    - Line 644: "an allocation scope" instead of "a scope of allocation"
  - Section 5.10:
    - Line 887 (note 1): Duplicate "the" in '... MUST support the the "requesting-user-vcard"...'
  - Section 6.1.2:
    - Line 914: Subscription typo (missing s)
  - Global: Remove unnecessary references from request/response attributes in operation definitions.
    - Like in 6.2.1.2 and 6.2.2.2
  - Section 6.2.5 (Install-Resource):
    - Line 1420-1422: If the Resource object's "resource-state" is not 'available' or the "resource-state-reasons" includes 'install-requested', then the System MUST ...
    - Line 1423: "The System MUST validate ANY Resource signature supplied in a previous Send-Resource-Data operation ..."
    - Lines 1425-1426: Break out ETSI and IETF as examples for validation, add NIST and EU validation as well. (MUST validate, but no conformance requirement for a particular signature/validation technology)
    - Line 1428: Start new paragraph before "The System MUST...", add "If accepted, the System ..." to the start
    - Line 1434: Reorder system-state discussion.
  - Global: Make sure state changes in operation descriptions are not buried
  - Section 6.2.5.1:
    - Line 1440: Missing period at end of sentence.
  - Section 6.2.5.2:
    - The System returns the following attributes in response to the Install-Resource request
  - Global: Clean up responses to be "the System returns ..." (no conformance requirements about returning a response, just for the attributes/values returned)
  - Section 6.2.6:
    - "If the Resource object's "resource-state" is not 'pending'" (nothing more needed)
    - Make same sorts of changes here for validation as in 6.2.5
    - Split state change into separate paragraph, "if accepted", etc.
  - Section 6.2.6.1:

- For future discussion: do we want "resource-format" in Send-Resource-Data (like Send-Document)? And remove from Create-Resource?
  - Needs more thought - implementation considerations for validation and accounting/access control/resource restrictions
  - HTTP PUT includes MIME media type
  - Create-Job doesn't allow document-format, so Create-Resource shouldn't?
    - But still need resource-type up front...
    - and then Create-Resource could return the supported resource-format values for a given type?
- Section 7.1.11:
  - Q: Does resource-signature override embedded signature(s)?
    - A: Effectively yes, can be used to provide alternate signature if the embedded signature has been invalidated (compromised keys, CA, algorithm, etc.)
  - Need to define precedence, also what to do if signatures invalidated after installation, etc.
    - Lots of security considerations here, need to tread carefully...
- Add signature validation to security considerations
  - Usual references.
  - Don't reject simply because certificate has expired - as long as signature was generated prior to expiration that should be OK unless the certificate/keys/algorithms have been compromised, etc.
- What about "encrypted" resources?
  - Mention in security considerations, but require that such encryption needs to be transparent to IPP operations (just passing blob of data)
  - No operation to read resources from system, just reference installed resources (encryption is an implementation detail)
  - Encryption of data in transit covered by TLS
- Global: Double-check for obsoleted RFCs (3381 and 3382)

## Next Steps / Open Actions

- Next IPP WG conference calls January 11 and 25, 2017 at 1pm ET
- Review PWG Last Call comments for both IPP Finishings 2.1 and IPP 3D Printing Extensions
- Action: Mike to look at document template to fix level 3 headings which are not bold (ONGOING - template was correct, Mike will look at the System Service document instead)
- Action: Mike to supply updated resource object life cycle figure to Ira (DONE - Ira grabbed a hi-res version)
- 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)