Internet Printing Protocol Workgroup Meeting Minutes
April 26, 2018

Meeting was called to order at approximately 3pm ET on April 26, 2018.

Attendees

Kurt Hunter (Microsoft)
Kris Iverson (Microsoft)
Smith Kennedy (HP)
Ira McDonald (High North)
Chris Rizzo (Xerox)
Michael Sweet (Apple)
Paul Tykodi (TCS)
Bill Wagner (TIC)
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. Review previous minutes
   - https://ftp.pwg.org/pub/pwg/ipp/minutes/ippv2-concall-minutes-20180412.pdf
   - Approved as posted
3. Status of various IPP mailing list notes
   - http://www.pwg.org/archives/ipp/2018/019565.html
     - RFC 8010 section 3.3 question - DEFERRED until after IPP/1.1 Standard
   - http://www.pwg.org/archives/ipp/2018/019572.html
     - Drop 1284 Device ID requirements from IPP Everywhere 1.1 - RESOLVED
   - http://www.pwg.org/archives/ipp/2018/019587.html
     - "ipps" missing from IANA Svc Name and TP Port Number Registry - IN PROGRESS
4. Status of Open Printing WG GSoC 2018 (Ira)
   - http://www.pwg.org/archives/ipp/2018/019511.html
   - DONE - 4 January to 23 January - Mentor organization applications
   - DONE - 23 January - 11 February - GSoC reviews mentor org applications
   - DONE - 12 February - GSoC approves mentoring organizations
   - DONE - 12 February to 12 March - Students discuss GSoC projects
   - DONE - 12 to 27 March - Students apply for GSoC projects
   - DONE - 23 April - GSoC approves projects and Students
   - 14 May - GSoC coding begins

5. Status of AMSC and ISO liaisons w/ PWG (Paul)
   - http://ftp.pwg.org/pub/pwg/general/sc/pwg-sc-call-minutes-20180315.htm
   - See PWG SC minutes of 03/15/18
   - Deferred until Paul returns from AMSC conference
   - OK to use ISO/IEEE standards-track names in PWG specifications
     - Add to F2F discussion: define standard naming convention for material-type
     - Reverse direction requires explicit permission.
6. Review of Safe G-Code (Mike)
   - https://ftp.pwg.org/pub/pwg/ipp/wd/wd-sweet-safe-gcode-20180416-rev.pdf
   - http://www.pwg.org/archives/ipp/2018/019570.html
   - Add a reference to the RepRap G-Code Wiki:
     - http://reprap.org/wiki/G-code
   - Interim draft
   - Comment: relationship between print ticket and pre/post commands should be addressed.
     - Covered in section 5.1
   - Next version: Adopt as IPP WG Best Practice document
   - Q: Do we make this a requirement in IPP 3D v1.1?
     - A: No, g-code is not a long-term solution
     - Probably soften 3MF requirement and list slice format alternatives
   - Q: How does client know what tool numbers to use?
     - A: Generally it will be the materials-col index (starting at 0 instead of 1), but mixing and other printer features might interfere.
     - Needs further discussion.
   - ISO 6983/6943 - took over from ANSI on RS-274
     - Maybe use as a better reference?
   - Q: How does printer know what material is loaded?
     - A: It may not, and we have similar issues in 2D.
     - materials-col-ready is the list of loaded (either auto-detected or manually configured)
     - materials-col-database is the list of supported materials
     - User might choose a material that is not loaded, just as they might choose a media size that is not loaded in a 2D printer
   - Section 4.1:
     - Title: Update since it isn't just nozzle size
   - Section 5.1:
     - Table 2: Add column for typical G-Code commands
   - Section 5.2:
     - Add reference to RFC 8011 for vendor extensions.
   - Q: Can we pause in the middle of a print to insert parts, etc.?
     - A: Think there is a G-code command for it, but there are also proprietary solutions
     - Investigate G-code command and corresponding printer-state-reasons keyword value indicating the printer is asking for the user's attention for a reason other than material-needed

- Talk about this usage
- M commands to pause and display messages?
- Q: Do we want to make MIME media type standards-track or vendor (vnd.) prefix?
    - Certainly can do standards-track, but that might grant too much legitimacy to it
    - Discuss further at F2F
- Q: How long until we can get this referenced in an IPP 3D v1.1?
    - A: Not a short-term goal, but we can point to the adopted best practice and some draft of 1.1.
    - Would like to have something to for printer vendors to look at...
    - Action: Mike to post an initial draft of IPP 3D v1.1
- Schedule - TBD

7. Review of IPP F2F Slides (Mike)
    - https://ftp.pwg.org/pub/pwg/ipp/slides/ipp-wg-agenda-may-18d1.pdf
    - http://www.pwg.org/archives/ipp/2018/019592.html
    - Draft for future IPP WG review
    - Update to be three days based on new schedule - IPP 3D on first day, third day becomes compressed.
    - Slides 6. 7: Add IPP 3D v1.1, PWG Save G-Code
    - Slide 17: Update link
    - Slide 38: Add IPP 3D v1.1, material-type naming conventions, slice formats, etc.
    - Slide 44: Update IPP 3D v1.1
    - Slide 45: Drop May 24th, Smith will likely miss June 7, Ira will miss June 21

8. Status of How to Use the Internet Printing Protocol (Mike)
    - http://ftp.pwg.org/pub/pwg/ipp/minutes/ippv2-f2f-minutes-20180207.pdf
    - https://github.com/istopwg/pwg-books
    - IPP WG edits during PWG Virtual F2F on 02/07/18
    - Current HTML draft available in Github repository
    - Schedule - TBD

9. Status of IPP HTTP Authentication whitepaper (Smith)
    - http://ftp.pwg.org/pub/pwg/ipp/whitepaper/tb-ippauth-20180123-rev.pdf
    - Interim draft - PWG Virtual F2F review on 02/08/18
    - Schedule - TBD

10. Status of IPP Encrypted Jobs and Documents
    - https://ftp.pwg.org/pub/pwg/ipp/wd/wd-ipptrustnoone10-20180328-rev.pdf
    - http://www.pwg.org/archives/ipp/2018/019539.html
    - Interim draft - for future IPP WG review
    - Schedule - TBD

11. Status of IPP System Service (Ira/Mike)
    - https://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippsystem10-20180425-rev.pdf
    - https://github.com/istopwg/ippsample/projects/1
    - Prototype draft - for future IPP WG review
    - Prototyping tasks being tracked as a Github project
    - Schedule - prototype in "ippserver" - Stable draft in Q2/Q3 2018

12. Status of IPP Privacy Attributes (Mike)
    - https://ftp.pwg.org/pub/pwg/ipp/registrations/reg-ippprivacy10-20180412.pdf
    - http://www.pwg.org/archives/ipp/2018/019564.html
    - IPP WG Approved on 04/12/18 - PUBLISHED
13. Status of IPP Reprint Password (Smith)
    - https://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippreprintpwd-20180424-rev.pdf
    - http://www.pwg.org/archives/ipp/2018/019586.html
    - Interim draft - for future IPP WG review
    - Schedule - TBD
14. Status of IPP Everywhere Printer Self-Certification 1.0 Update 3
    - http://ftp.pwg.org/pub/pwg/ipp/minutes/ippv2-concall-minutes-20180329.pdf
    - Goals, ipptool and ippfind updates
    - Mike working with ISTO to get updated code signing certificate
    - Schedule: ASAP
15. Status of IPP Everywhere 1.1 (Mike)
    - https://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippeve11-20180417-rev.pdf
    - http://www.pwg.org/archives/ipp/2018/019583.html
    - Interim draft - for future IPP WG review
    - Schedule - Q2/Q3 2018
16. Status of IPP Everywhere 1.1 Self-Certification Manual 1.1
    - https://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippeveselfcert11-20180404-rev.pdf
    - http://www.pwg.org/archives/ipp/2018/019552.html
    - Interim draft - for future IPP WG review
    - Schedule - Q2/Q3 2018

Next Steps / Open Actions

- Next IPP WG conference call on Thursday, May 24 from 3:00-4:30pm ET
- Action: Mike to post an initial draft of IPP 3D v1.1
- Action: Mike to update web site to allow confirmation of issues without assignment (PENDING)
- Action: Mike to post IPP Privacy Attributes registration document with editorial changes (DONE)
- Action: Smith to follow-up on the 3MF liaison agreement (IN PROGRESS - Alexander Auster (Autodesk) will be taking over as the 3MF liaison, Kurt Hunter is shepherding things)
- Action: Mike/Ira to request IESG change of status for RFC 8010/8011 to Internet Standard (PENDING - soon)
- Action: Mike to document ippserver setup on Raspberry Pi for 3D (IN PROGRESS - close to wrapping it up)