Internet Printing Project Meeting Minutes
December 3, 1997
Los Angeles, CA

The meeting started on December 3, 1997 at 8:30 AM led by Carl-Uno Manros.
These minutes were recorded by Don Wright. The attendees were:

- Randy Turner - Sharp
- Ron Bergman - DataProducts
- Peter Zehler - Xerox
- Lee Farrell - Canon
- Philip Thambidurai - Okidata
- Bob Pentecost - HP
- Don Wright - Lexmark
- Keith Carter - IBM
- Steve Zilles - Adobe
- Roger deBry - IBM
- Tom Hastings - Xerox
- Scott Isaacson - Novell
- Carl-Uno Manros - Xerox
- Dave Kellerman - NorthLake
- Stuart Rowley - Kyocera
- Bill Wagner - DPI/Osicom
- Bob Herriot - Sun
- Chuck Adams - Tektronix
- Henrik Holst - I-Data
- Frank Zhao - Panasonic
- Yuji Susalai - Japan Computer Industry
- Atsushi Uchino - Seiko-Epson
- Rick Yardumian - Xerox
- Xavier Riley - Xerox
- Gary Roberts - Ricoh
- Dale Wick - TrueSpectra
- Mike Moldovan - Genoa Technology
- Gary James - Genoa Technology
- Jun Fujisawa - Canon
- Harry Lewis - IBM
- Kevin Osborn - Sun (JavaSoft)

Carl-Uno Manros reviewed the agenda for the day and dealt with the administrivia
of the meeting.

ISSUES

Scott Isaacson started off the meeting by going through the issues list which is
posted on the server as ftp://ftp.pwg.org/pub/pwg/ipp/new_MOD/ipp-issues.pdf

M01) Versioning rules for major/minor revisions - resolved per the suggested
changes in "ipp-section-15-3-norev.doc" (posted on the server.) Private
extensions do not cause the major/minor versions to change. Only changes to the
documents (protocol and model) cause a change to the versions. Implementations
shall accept all request with the same major version and any minor version.
Fidelity will control the behavior should unknown attribute or operations be
encountered from a different minor version.

-- Add statements in the versioning section
        * Not reassign objects between versions
        * Each major version will state what prior versions are to be supported

M02) Issues concerning groups in operations:
        - What should a printer do if an operation contains an unexpected group?
              ** see proposed new 15.3.3.1
        - What should a printer do if the correct groups are present but in the
              wrong order?

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                    ** see proposed new 15.3.3.1
            - If Get-Attributes is returning no job/printer attributes, what does
                    it return?
                    ** Clients should send the group tag even if there are no
                            attributes.
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The general philosophy should be to be conservative in what is sent and liberal
in what is accepted. Overall for groups and attributes, group tags may be
included with no attributes or the group tags can be omitted. Therefore
receivers of data shall accept both.

M03) Return not supported operation attributes in Get-Attributes operation.
        ** Not an issue because all the operation attributes are mandatory but
            allow for the group to show no support for extensions

M04) Moving job-k-octets, job-impressions, compression and job-media-sheets to
become optional operations attributes?
        ** These operation attributes get mapped into job description attributes.
            Now all job-template attributes are affected by fidelity. Section
            3.1.1 of the model document needs to be updated to reflect these
            changes.

M05) Keep document-format as operation attribute
        ** Yes

M06) See issues M04

M07) Upper bounds
        ** See "ipp-min-max" on the server. Generally, attributes will be
            sized by type but on an attribute by attribute basis, special
            cases will be dealt with.

M08) Granularity of error messages? This has been addressed in the latest
        version.

M09) Semantics of unsupported and supported. This has been addressed in the
        latest version.

M10) Statement that validation is attribute specific. This has been generally
        fixed in the latest version.

M11) Add semantics to section 3.1.5.2 about requesting-user-name operation
        attribute.
        ** Bob Herriot will write up some clarifying language for this
            section. Remove the requirement for creating a unique name if
            one is not provided. The name does not have to be unique.

M12) Add (1:MAX) to limit in section 3.2.6.1 of the model.
        ** OK

M13) We will remove "copies-collated-*"

M14) Change SHOULD to SHALL in section 4.1.9
        ** Both SHOULDs need to be changed to SHALLs in this section.

M15) Why is "attributes-natural-languages" special?
        ** When a client submits something and specifies the language it is used
            as a "post-it". We will change the following:

            natural-language   -> generated-natural-language-default
            natural-language-supported -> generated-natural-language-supported

        We will add the -default to "charset" and "document-format"

M16) Semantics of multiple-document-handling (section 4.2.4)
        ** Not resolved for Version 1.
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M17) Semantics of Page-ranges attribute (section 4.2.7) Change to specify non-
      overlapping ranges provided in ascending order.
M18) Fixed in "ipp-section-15-3-norev.doc"

M19) No

M20) Conformance Language for natural-language
      ** Optional for object to support

M21) Conformance Language for media-ready
      ** Optional

M22) What status code is returned when printer is "accepting jobs" is false?
      ** Add an error code "server error - not accepting jobs" will be added/

M23) Semantics of server-error-version-not-supported need clarification
      ** See changes suggested in "ipp-model-last-call-comments-th.doc"

M24) Semantic changes needed in 15.3
      ** See "ipp-section-15-3-norev.doc"  The series of checks provided in
          this new section are semantic examples and not conformance
          requirements.  Some implementations may be softer and allow
          some non-conforming operations/attribute.  Some of the semantics
          and interactions contained in the section are important but are
          not found elsewhere.

M25) Occurrences of HTTP in Model document
      ** The references to HTTP will be removed from the MODEL document.

M26) Internationalization clarifications
      ** Section 7: add classification of various text attributes and their
          source and interaction of language and charset with them.
      ** Revisited M15 and change to natural-language-configured.  Scott
          will take a work item to clarify this.

M27) Align our syntax descriptions with <draft-iesg-iana-considerations-01.txt>
      ** Carl-Uno Manros and Steve Zilles will explore this with our area
          directors.


P01) Do we want to define and mandate a client-specified transaction ID.
      ** Yes, it will follow the version number in the protocol, it will be
          mandatory and will be 4 bytes and the range 0 -> (2^31)-1

P02) Does text on the Network Byte Order (protocol, sect 3) need improvement?
      ** Bob Herriot will fix.

P03) We need a better description of how HTTP chunking is done by IPP.
      ** Bob Herriot will add some text about this and reference the HTTP/1.1
          document as a reference for people implementing both IPP and
          HTTP.
      ** Some additional areas needing clarification were identified and will
          be written up by several people and added to the protocol
          document as "hints" or "implications of IPP over HTTP"

P04) Do we need to refine CompoundValue?
      ** We have removed CV and replaced it with two new tags called
          "localized-text" and "localized-name"  This will be written up in
          the next version of the document.

I02) Revise definition of Application/IPP so it can be run over other
              transports.
      **This will be fixed in the documents.

P05) OK

P06) A long discussion ensued over the idea of using a special marker to

        indicate the end of the header and also indicating that there is or isn't
        more data.
        ** Resolution: Rename the "data" tag to be called the "end-of-header",
                "end-of-attributes" or "end-of-parsing" tag that indicates the end
                of the IPP header.

GENOA
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A presentation was made by Gary James from Genoa Technology about what Genoa is
doing testing protocols.  A discussion followed about how Genoa would do an IPP
test suite.  Genoa has looked at the IPP protocol and they are in the process of
making a business decision to prioritize the various other projects they are
investigating.  They currently plan to do an IPP test suite and are trying to
decide when to do it.  They expect a decision by early '98.

ADOBE
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Steve Zilles made a presentation on some work on Job Tickets that is being done
by Adobe.  Version 1.0 of the Job Ticket specification was completed on October
6th.  The document is available on the Adobe Web site in the developer's area in
the tech notes area as tech note #5620.

ISSUES
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P07) Wording has been changed.

P08) Remove the issue statement from the section.

P09) Bob Herriot will add some additional examples in this section.

P10) When does the IPP server rejects an operation?
        ** Randy has an action item to write up.  The suggested tests listed in
                the new 15.3 section says not to quite checking early, i.e. when
                the first error is found.

P11) OK, Bob will incorporate new wording into the protocol document based upon
        wording from Carl-Uno.

P12) Port numbers for IPP?
        ** Carl-Uno will request an IPP and an IPP/TLS port.

S01) Accept Randy Turner's text

S02) Accept Randy Turner's text

S03) Make "digest authentication" optional
        ** Yes, IPP will defer to the HTTP/1.1 security requirements.

S04) Security terminology
        ** Leave the wording as is.

S05) Move security to earlier in the document.
        ** According to the IETF, Section 8 is suppose to be the security
                section.  We will add a forward reference earlier in the
                document pointing to sect. 8.

D01) Alignment of IPP with Service Location Protocol Printer Scheme.
        ** Scott Isaacson will coordinate with the SRVLOC people.

I01) Parameters for application/octet-stream MIME type.
        ** Application/octet-stream does not support CHARSET, OK -- no action.

I03) Register document formats as MIME media types
        ** Action item for Tom Hastings to post a list of what will be registered

and what will not to the mailing list.  He will provided a
deadline for comments back to him.

I04) Register application/ipp with IANA
     ** Action item for Carl-Uno to do this after Ira MacDonald posts the text
          to the mailing list.


Scott Isaacson reviewed the changes made at the Boulder meeting that were
reflected into the "last call" document.  The following caused additional
discussion and/or decisions:

1) We will remove the "0" value of number-up and be silent on the embellishment
     issue relating to number up.

2) A discussion was held about issue of time.  We decided to leave the time
     attributes as currently defined.


DOCUMENTS
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After the IETF meeting in Washington DC, we will send the resultant documents to
the mailing list first and everyone should do a quick review before sending we
send them to the IESG as the last call document. We expect to do this before the
end of the year.  The Rationale and Mapping documents may need some updates
based upon today's work before going out to the IESG for last call.  The
Requirements document will go as is to the IESG for last call.


The meeting was adjourned at 5:30 PM PST.