Minutes of the PWG

Semantic Model & IPP Extensions

Face to Face – October 9, 2003

New York City

Peter Zehler, 10/23/03

Attendees

- ? Lee Farrell, Canon
- ? Harry Lewis, IBM (Secretary)
- ? Ira McDonald, High North (By Phone Conference)
- ? Tom Hastings, Xerox (By Phone Conference)
- ? Fumio Nagasaka, Epson
- ? Hiroshi Shiraku, Fuji Xerox Printing Systems
- ? Jerry Thrasher, Lexmark
- ? Bill Wagner, NetSilicon
- ? Bob Taylor, HP
- ? Yiruo Yang, Epson
- ? Peter Zehler, Xerox   (Committee Chairman)

General

Face to face meeting held at the Grand Hyatt in NYC, October 6, 2003. Meeting took place from 9:00am to 1:00pm.

Agenda
- ? Introductions
- ? Quick status of work in progress
- ? Document reviews (Issues/Comments, Vote, Assign number)
  - o Document Object
  - o Overrides
  - o JobX
- ? Semantic Model & Schema issues discussion
  - o MediaSize, Media, MediaSizeName and MediaKey semantics
  - o Versioning & Namespace issue
  - o Schema Namespace URN vs URL
  - o Keyword Registry
  - o Process for Update of Semantic Model

See below for outcome of agenda items.

Introductions

See Attendees list above.

Quick status of work in progress

The Three IPP extension specifications (JobX, Overrides & Document Object) have completed last call with minimal issues raised. (See below for details) The Semantic Model and associated schema are up to date and will be ready to enter Last Call starting the week following this meeting. (Delayed slightly due to Editors internal commitments)

Document Reviews

In accordance with PWG process the official vote will be announced on the "PWG Announce" and held via email for a period of 10 working days. An appropriate announcement will be sent for the three documents.

The assignment of specification numbers will be done after the successful completion of the vote.

Document Object specification

(ftp://ftp.pwg.org/pub/pwg/ipp/new_DOC/wd-ippdoc10-20030908.pdf)

The editorial comments were fixed. I've included them at the end of this document. The remaining three issues and resolutions are as follows:

```
Page 14, line 430-431:
After a strong conformance statement on the client, the printer is
required to accept a non-conformant client operation..... (should be an
error if the client supplies this attribute in a Doc Creation
operation.. and the Printer should be allowed to flag it..)
```

This is consistent with the spirit of IPP which is that emitters should be constrained and receivers should be forgiving.

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Page 26, line 837-839:
The note that provides guidance for future extensions doesn't belong in
a specification, it belongs in the requirements doc of the future
extension.....it'll get lost in this spec.... (suggest removing the
note)
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We agree that it doesn't belong here but there is no guide for how to define future extensions. We agreed it does not cause any harm here so we will leave it in.

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Page 28 Cancel-Document operation (and line 922)
Question/Comment: What happens to the document DATA when a document is
       cancelled (assuming it's already been sent to the Printer)?
Line 922 should read ....which only cancels the processing of the
       document, and doesn't delete the document object itself.....
But it still says nothing about the document DATA. If the DATA is kept
       after a Cancel Document then there may be a security issue for
       the overly security conscious since this is the only way a client
       can request a document NOT be processed (then the data hangs
       around in the print spool for some unknown time). (Cancel Doc is
       mandatory for Printer, Delete Doc is optional)
If the Data is not kept, what is the mechanism for the reprocess job
       operation if the data is expected to be there?
```

This behavior is exactly as is currently stated in IPP. It is implementation specific to determine how long after a job is cancelled, or reaches a terminating state by other means, to retain the

document data. Any client attempting to "Restart" or "Resubmit" the Job will get an error code if it is not possible. As for the security conscious, there is no way to retrieve document data using IPP. Implementations are free to implement "PurgeJobs", "DeleteDocument" or securely delete the document data once it has been printed.

JobX specification
(ftp://ftp.pwg.org/pub/pwg/ipp/new_JOBX/wd-ippjobx10-20030908.pdf)
The editorial comments were fixed. I've included them at the end of this document.

Overrides specification
(ftp://ftp.pwg.org/pub/pwg/ipp/new_DOC/wd-ippdoc10-20030908.pdf)
There were no comments or issues for this specification..

Semantic Model & Schema issues discussion

There was a discussion around extending the Semantic Model or correcting some oversights. It was agreed that the first version of the Semantic Model should represent the current state. This will allow the specification to move to a Standard at some point after becoming a Candidate Standard. This will be beneficial for incorporating the printing semantics defined in the Semantic Model into other standards efforts.

MediaSize, Media, MediaSizeName and MediaKey semantics
MediaKey is an implementation wide unique key for the MediaCol element.
MediaSize gives the size in the x and y direction in hundredth of a millimeter.
Media allows the specification of media using well known names from PWG5101.1 and extended names that are federated by a vendor's namespace. The values allowed for Media include the values allowed for MediaSizeName as well as legacy and alias names.
MediaSizeName are well know names from PWG5101.1 which are self describing names that have the size in the x and y directions along with the units.
It was noted that IPP allows Media to describe the location of the media such as 'manual-feed-input-tray'. The Semantic Model does not overload the Media element for that use. It was agreed that an element, such as MediaLocation needs to be added to the Semantic Model after the first version is finalized.

Versioning & Namespace issue
The namespaces will NOT include a minor version number. THIS IS A CHANGE FROM THE CURRENT PROCESS. Experience has shown that it is preferable to keep the same namespace for revisions that are compatible. Given the way in which our schemas are written, instance documents from any minor version of the schema will be well formed and valid. The schema will use the XML attribute "version" to declare its specific version number.

Schema Namespace URN vs URL
The namespace will be a URL although applications SHOULD NOT access the document at runtime. The namespace will contain its major version number and interoperability can be assumed with any minor revision. (Note that a Best Practice issue is lurking for namespaces in general revolving around foreign languages)

Keyword Registry
A registry for the Semantic Model and associated Schema exists.

The registry for the Semantic Model is the Semantic Model specification and the referenced specifications and documents.
ftp://ftp.pwg.org/pub/pwg/Semantic-Model/PWG-Semantic-Model-Latest.pdf

The registry for the schema consists of three files. They are the Master List of Semantic Elements and Types, Master List of Media Keywords, and Master List on Non-Media Keywords.
http://www.pwg.org/schemas/sm/latest/MasterListOfPwgSemanticElements.xsd
http://www.pwg.org/schemas/sm/latest/MediaElements.xsd
http://www.pwg.org/schemas/sm/latest/PwgCommon.xsd

Process for Update of Semantic Model
The process will be detailed in a specification. Briefly stated
- ? We will update the Semantic Model and Schema in place (i.e. "Latest")
  - o The version will be X.Yzzz where X is the major version, Y is the approved minor version and zzz is the current revision
- ? Extensions MUST first be semantically defined in a specification, whitepaper, or mail note. NOTE: that only the semantic definition for the element is required. It is not required to specify a protocol mapping for the element. In practice a mapping SHOULD be shown since it only makes sense to extend the model if there is a specific need.
- ? The reference to the semantic definition will be included in the revision of the Working Draft of the Semantic Model.
- ? A new minor version of the specification will be pursed when enough extensions have accumulated. The precise definition of "enough" will be left up to the working group. The objective is to prevent unneeded churn but insure that minor version contain manageable increments of content.
- ? When a minor version of the specification is created, concise definitions (i.e. mail notes) will be collected together into a whitepaper and published in a durable location.

Action items from meeting(all for PZ)
- ? Start official vote on Document Object, JobX and Overrides per PWG process.
- ? Add MediaSize name into schema in MediaCol and perhaps at the DocumentProcessing level also.
- ? Capture need for MediaLocation in Semantic Model someplace (specification?)
- ? Update SM<->IPP mapping section with media location mapping information
- ? Harmonize Semantic Model update process with PWG process (and table in Process document)
- ? Raise issue that 1.0 should be 1 in PSI namespace
- ? Update Semantic Model and Schema and prepare for Last Call on both
- ? Next teleconference will be announced on the SM mailing list

Editorial Comments on Document Object Specification

Cover Page Line 26:
The sentence about listing "all" of the attributes defined in other IPP
specifications is probably not going to be accurate for very long.....if
now..

Page 9, line 311:
The sentence should read.... "The semantics of the "document-
state..."...(missing "the").

Page 9, line 317-320:
This paragraph needs to be reworded to state what the spec. is, not what it's
proposed to be.

Page 13, line 403:
The Job operatations that MUST NOT have any .....
(remove the word "that")

Page 14, line 413:
The semantic of Fidelity on a Job are intended.....
(The "semantics" of Fidelity....)

Page 15, line 446,447,451
The sentence "For example, such Job Template attributes as "job-
priority"...." sounds odd.. (should read "For example, Job Template
attributes such as .....) Same comment for line 447 and 451 "Printer MUST NOT
copy down any..." (should be "Printer MUST NOT copy any Job Level attributes
...")

Page 21, line 653:
..it is only an empty job which is....
(recommend: "it is an empty job that is scheduled and...)

Page 24, line 777:
..Document object was submitted...
(should be: ...Document object is submitted...)

Page 24, line 781:
..The only differences are that the Set-Job-Attributes operation is... (should
be: ..The only difference is that the ...operation is...)

Page 26, line 831,832:
Formatting problem (unnecessary indentation....)

Page 26, line 833:
First sentence worded funny.
(suggest: Most Document Description attributes (see...)are NOT settable,
i.e., they are defined to be READ-ONLY.)

Page 45, line 1258:
First character space on that line is inadvertently highlighted...

Page 48, line 1305, 1309; Page 51, line 1389;
Remove the names of the attribute at the beginning of
the description. It's both unnecessary and inconsistent
with the other attribute descriptions.
(There are other descriptive paragraphs with the same problem..Page 58,59

Page 57, line 1571:
First printed character (') is highlighted for no reason.

Page 65,66,67
Remove highlighted areas...
lines 1776-1778, 1785-1787, 1795-1797, 1830, 1844-1846, 1847-1849. Page 66,
line1828 (PrintBasic: 1.0) is in red....

Page 75, line 2221,2224
Broken reference links.....

Editorial Comments on JobX Specification

Page 13, footnote 5
Operation is partially italicized....(shouldn't be)

Page 34, line 1051
Need a little more informative test explaining what these are in addition
too.....

Page 37, line 1162
the word "PrintBasic:1.0" is in red....