Printer Working Group
Plenary Meeting

Santa Fe, New Mexico
27 August 2002

1 Time and Place

Chairman Harry Lewis convened the PWG Plenary meeting at 8:30 MDT on 27 August at the El Dorado Hotel in Santa Fe, New Mexico. It was one of a set of PWG group meetings held the week of August 26 through August 29, 2000, including:

> Monday morning- IPP-FAX
> Monday afternoon – semantic model
> Tuesday morning – Plenary
> Tuesday afternoon - XHTML-Print
> Wednesday - Print Services Interface
> Thursday – uPnP Imaging

The Plenary meeting was somewhat extended by the review of some IPP issues, and by the consideration of two new working groups.

2 Meeting Attendees

Attendee	Company	Email Address
Acosta, Rod	Agfa/Monotype	rod.acosta@agfamonotype.com
Albright, Shivaun	HP	shivaun_albright@hp.com
Bergman, Ron	Hitachi	Ron.bergman@hitachi-hkis.com
Berkema, Alan	HP	alan-berkema@hp.com
Bigelow, Jim	HP	jim-bigelow@hp.com
Bradshaw, Elliott	Oak	ElliottBradshaw@oaktech.com
Christensen, Jeff	Novell	Christensen@novell.com
Farrell, Lee	Canon	lfarrell@cis.canon.com
Hall, David	HP	dhall@hp.com
Lewis, Harry	IBM	harryl@us.ibm.com
Nagasaka, Fumio	Epson	nagasaka.fumio@exc.epson.co.jp
Seeler, Rick	Adobe	rseeler@adobe.com
Sekine, Hitoshi	Ricoh	Hitoshi@ussj.ricoh.com
Songer, Gail	Peerless	gsonger@peerless.com
Thrasher, Jerry	Lexmark	thrasher@lexmark.com
Tronson, Ted	Novell	ttronson@novell.com
Uchino, Atsushi	Epson	uchino@eitc.epson.com
Ueda, Shigeru	Canon	Used.shigeru@canon.co.jp
Wagner, William	NetSilicon	wwagner@netsilicon.com
Wright, Don	Lexmark	don@lexmark.com
Yang, Yiruo	Epson	yyang@eitc.epson.com
Zehler, Peter	Xerox	pzehler@crt.xerox.com

3 Next Meetings

There is one remaining PWG and associated group meeting scheduled for 2002.

November 4-8	New Orleans, LA

The IEEE-ISTO will be communicating specifics for the November meeting shortly. The tentative schedule for the week was discussed. There were, however, uncertainties with regard to the uPnP meeting and coordination with the uPnP Summit the week before and the uPnP Asian Summit the week after. The resolution of uPnP preferences at the Thursday uPnP imaging meeting resulted in the following schedule of meetings for the November meeting.

Monday 4 Nov:	uPnP Print & Scan
Tuesday 5 Nov:	Plenary/XHMTL
Wednesday 6 Nov:	PSI
Thursday 7 Nov:	Semantic Model
Friday 8 Nov:	UPDF and IFX

Considering meetings for 2003, the previously proposed schedule and locations were slightly modified. They were additional modified on Thursday to avoid the need for Easter Sunday travel for the April meeting.

Novell had offered to host a meeting at Provo; the group thanks Novell and has scheduled the December meeting at Provo. The following schedule is regarded as firm.

Week of	Location
January 20	Maui, Hawaii
April 22 (skip Monday)	Washington, D.C.
July 14	Vancouver B.C.
October 6	N.Y.C.
December 1	Provo, Utah

4 ISTO Bylaw discussion

Don Wright gave an overview of the new ISTO Bylaws, which give member organizations the right to nominate members for the ISTO Board of Directors. A new Participation Agreement was also discussed. Fees for ISTO membership and services remain the same.

Harry Lewis was voted in as the PWG representative to the ISTO nominating committee. A motion was carried for Harry Lewis, as PWG chair, to review and sign the updated member participation agreement.

5 Working Groups Status

The activities in the PWG constituent working groups were briefly reviewed.

> PWG Semantic model – Peter Zehler
> XHTML-Print - Don Wright
> IPP-FAX Status - Gail Songer
> PSI - Alan Berkema
> Printer MIB Update – Ron Bergman
> IPP Extensions – Peter Zehler and Harry Lewis

5.1 Semantic Model

Voting on the updated charter (ftp://ftp.pwg.org/pub/pwg/Semantic_model/PWG-Semantic-Model-Charter-Proposal.pdf) was completed on 2 August and the charter was approved. The group intends to continue on a fast track, since the effort is primarily to solidify and codify the work done over the past. The FTP site is up (ftp://ftp.pwg.org/pub/pwg/Semantic_model/) and the first draft of the defining document is posted (ftp://ftp.pwg.org/pub/pwg/Semantic_model/). The mailing list is operational (sm@pwg.org) and a phone conference schedule is being set up. The draft and the *.xsd schema documents were discussed at Monday meeting. A revised draft and schema will be available next week along with the schedule for phone conferences.

Current issues include whether Notification and Profiles are to be included in the Model.

5.2 XHTML-Print

The previous XHTML-Print document was reformatted into two documents: the basic XHTML-Print document (http:/www.pwg.org/xhtml-print/HTML-Version/XHTML-Print.html) and the CSS document (http://www.pwg.org/xhtml-print/HTML-Version/CSS-Print.html). There was substantial email activity since the last face-to-face meeting, and these issues will be addressed at the meeting this afternoon.
The objective is to collect comments and get the next version of documents out by early October. That allows a month to review documents in preparation for a page-by-page review at the November fact-to-face meeting.

5.3 IPPFAX

The group is continuing to consider the use of a restricted Adobe PDFx as the basic image description. Discussions over the mailing list and at the Monday meeting continue to deal with the application of PDFx to this application. A primary concern was in the formatting of the code to allow streaming, so that pages may be printed as they are received rather than having to buffer up the entire file. It was observed that this would decrease compression efficiency but would be possible. Implementation to require storage of less than page did not seem practicable.

The possibility of Adobe support versus objections or restrictions was discussed. The Adobe representative suggested that, based on current positions, Adobe would not restrict PDFx interpreters, but may exercise patent rights on certain methods of PDFx encoding. The specific methods by which Adobe may support the use of PDFx, whether by general or specific license or other method, were not known. The future support and likelihood that Adobe would make future PDFx versions available for IPPFAX were unknown.

The fact that the IETF group and much of the industry are continuing with the Adobe-challenged TIFF-FX was discussed. Nevertheless, the consensus of the group was to use PDFx.

Previously outstanding questions of:
       a.   Is IPPFAX intended to be extended to be a general mechanism for Driverless printing?
       b.   How important is the alignment with IFAX? With PSTN Fax?
       c.   What is the IPPFAX Relation to web services?
were not specifically addressed.

5.4 PSI

The PSI activity continues with an aggressive schedule. The published agenda for the face-to-face meeting this week includes review of outstanding issues on the documents and schemas. Weekly phone conferences will proceed with more regularity now that vacation period is over.

The immediate objective is to complete the document descriptions and logical definitions, address the running list of issues, and fold together by November so that generate the SOAP WSDL can be generated. Release .95 should be available in the November time frame.

5.5 MIB

The 14th draft of the revised Printer MIB was submitted in July in response to the comments on the December draft, which was finally reviewed by the IESG personnel in June. One area not addressed in this draft id the need for an IANA considerations section identifying all items needed for support. It can be assumed that there will be at least one more draft with this section.

These revisions have involved no technical changes – just editorial. However, the document looks very different. In addition, Ira created utility to use the IANA library to create a charset TC.

The Finisher MIB is on same track. Ron is looking for closure by the end of this year.

5.6 IPP Extensions

Tom Hastings, the IPP WG editor, reported in absentia:

> The following IPP I-Ds are about to be published as RFCs and their attributes, values, status codes to be published on the IANA under IPP Registrations:
>
> ```
> [RFCIPP1] D. deBry, T. Hastings, R. Herriot, K. Ocke, and P.
> Zehler
> "Internet Printing Protocol (IPP): The 'collection' attribute
> syntax", RFC XXXX, Month Year.
>
> [RFCIPP2] T. Hastings, H. Lewis, and R. Bergman, "Internet
> Printing Protocol (IPP): Job Progress Attributes", RFC XXXX, Month
> Year.
>
> [RFCIPP3] T. Hastings, R. Herriot, C. Kugler, and H. Lewis,
> "Internet Printing Protocol (IPP): Job and Printer Set
> Operations", RFC XXXX, Month Year.
> ```

There remains active discussion of IPP topics on the PWG IPP mail list, and members are encouraged to participate.

5.6.1 Document Object

Peter Zehler led the discussion on the IPP Document object (ftp://ftp.pwg.org/pub/pwg/ipp/new_DOC/document-object-v094.pdf). Tom Hastings had introduced the document document and posed some issues in an August 22 email. As Tom indicated, the document is a response to the PWG Semantic Model addition of a new Document object to the model. It re-uses most of the existing Job attributes for the Document object. IPP is fuzzy on the "document" entity. Some attributes are logically document attributes (default) and some are logically job attributes

This IPP Document Object Specification is intended to give a common semantic model for the Document object for use by IPP (ipp@pwg.org), the PWG Semantic Model (sm@pwg.org), the PWG Print Services Interface (PSI) (ps@pwg.org), and the Free Software Group (FSG) PAPI (printing-spool@freestandards.org) and Job Ticket APIs (`printing-jobticket@freestandards.org`).

Although the specific issues that Tom has presented were not specifically discussed, it was agreed to more forward with this specification as a PWG document with possible later submission to the IETF.

Primary discussion was on how to identify and label attributes that apply to the Job, those that apply to each document, and those which apply to jobs and documents, and to do so in a way that is compatible with existing IPP definitions. Peter Zehler suggested adding a new printer attributes to distinguish between supported attributes which are document applicable, job applicable or both. The values of these attributes would be lists of the job attributes and of the document attributes respectively.

Further discussion of these issues will be on the IPP mailing list.

5.6.2 IPP Job Ticket

Harry Lewis offered a proposal for adding two new IPP job template attributes: one to carry a job ticket and one to reference job ticket. It was observed that there might be a third to identify the type of job ticket.

This is predicated by activities in the Free Software Group (FSG), which has standardized on IPP as the print protocol in conjunction with their Printing APIs for LINUX. However, the IPP attribute supported query/job attribute approach is regarded as too chatty and the group would like IPP to support a job ticket approach. Since there are anticipated to be at least two job ticket types in addition to the JDF ticket proposed, IPP would have to be able to handle job tickets of several formats. There may also be a need to support a capabilities object (a la updf) and a capabilities object reference

The problem of have multiple processing attributes in IPP was brought up, in terms of determining precedence. IPP already must deal with PDF processing attributes as well as the specified job and document attributes. The job ticket would produce still more attribute redundancy. The approach of last specification rules was proposed, but it was unclear that this would produce the desired effect.

The subject of why the FSG should adopt IPP was also discussed, with some suggestion that PSI should be used instead. However, the FSG selected from what was extant and offered, and based printing on CUPS. It seems unlikely to redirect this decision at this point.

At the conclusion of the discussion, Harry suggested that he would coordinate with Peter Zehler and the others continuing to work on IPP enhancements to define a reasonable solution for group consideration.

6   Potential New Activities

6.1   WEB Services Device Management

Harry Lewis suggested that there should be a standardization effort to define improved device management based upon Web services. The advantage of this approach over SNMP is the ability to use a common protocol for platform-independent management applications, both intra and extra enterprise. Further, device management via the Internet would allow:
- Central management services by the manufacturer or supplier
- Well-established equipment leasing services to support small and distributed resource environments as well as large centralized enterprise installations
- Corporate MIS groups to support small branch offices
- Follow the sun support services - 24 hour help desk manned by agents around the globe, each working normal hours

Management includes both monitoring and setting equipment parameters, and potentially providing for firmware updates.

The first task of the groups would be to investigate what other groups have done in the area, including:

- IETF XML- config group
- Progress of an IETF BOF to find a better equipment management approach than the command line interface with home grown parsing tools that appears to be the norm
- W3C activity – device management effort
- OASIS & CIM

Who would be interested?

Elliott Bradshaw
Harry Lewis and
Bill Wagner

offered to do initial work in the area. Initial discussion would be on the PWG reflector. A new mailing list for this effort would be setup and identified on the PWG Announce list.

6.2 FONTS

Elliot Bradshaw from Oak and Rod Acosta from Agfa/Monotype seek to determine if the PWG has interest in extending the semantic model to include fonts. Elliot will send a message to the mailing list.

Submitted by Bill Wagner, NetSilicon, PWG Secretary 3 September 2002