Printer Working Group
Plenary and "2002 Directions" Meeting

October 23 & 24 – San Antonio, Texas

1 Meeting Attendees

The PWG "2002 Directions" meeting followed the uPnP Imaging meeting on 23 October, and some uPnP attendees remained for the PWG discussion. The standard PWG Plenary meeting was on the morning of 24 October, just prior to the IPP-FAX meeting. The following list includes participants in either or both days.

Attendee	Company
Albright, Shivaun	Hewlett Packard
Farrell, Lee	Canon
Fenelon, Mike	Microsoft
Grant, Melinda	Hewlett-Packard
Hao, Janus	SerCom Corp
Harrison, Boyce	Minolta-QMS
Hastings, Thomas	Xerox Corporation
Lewis, Harry	IBM
Ota, Junichi	Ricoh
Pidduck, Patrick	PrinterOn
Pulera, John	Minolta Systems Laboratory
Rowley, Stuart	Kyocera Technology Development
Shults, Gerrie	Hewlett-Packard
Songer, Gail	Netreon
Truonson, Ted	Novell
Uchino, Atsushi	Epson
Wagner, William	NetSilicon
Wang, Christy	SerCom Corp
Whittle, Craig	Sharp
Wright, Don	Lexmark
Yardumian, Rick	Canon
Zehler, Peter	Xerox

2 PWG "2002 Directions"

Harry Lewis opened the "PWG 2002 Directions" meeting on the afternoon of 23 October. The current PWG projects and associated uPnP activities are reaching conclusion. Given the state of the economy and the Office Printing industry, it is appropriate for the PWG to consider how it could best contribute to the health and progress of the industry in the coming year. The meeting was both an introspective analysis of where the PWG has been successful, and industry directions that would benefit from PWG consideration, standardization, review or monitoring.

2.1 Overview

Harry Lewis presented an overview of the PWG relative to the industry and other industry standards and interest groups.

2.1.1 Current PWG Projects

Completed Activities being Maintained

    SNMP

        Printer, Finishing, and Job Monitoring MIBs

    IPP

        Continuing extensions for special purpose printing

Active Working Groups or Activities

    UPDF

        Specification nearing completion

    IPP Fax

        Basic Specifications firming up

    General

        Media Size Names

Potential New Activities

    XHTML-Print

        Provide a "home" for the fairly well established document

2.1.2 Related Printing Industry Efforts and Standard Organizations

    Bluetooth Print SIG

    Microsoft Universal Plug and Play

    Java Print API

    Linux Printing Summit

    MFPA

    Print On Demand Initiative (PODi)

    Universal Printer Pre- PostProcessing Interface (UP3i) (production roll fed printing)protocol and hardware interface

    CIP4 (JDF) XML representation of workflow, digital printing (JDF- Job Definition Format.)

    W3C

    IETF

    IEEE

2.1.3 Related Technology Areas

Networking
     Discovery
     Management
     Security
Web Services
     UDDI,
     WSDL,
     SOAP
Wireless
Color

Scope
     Enterprise
     Wireless / Mobile
     Production
     Digital Press
     Public Access
Operating Systems
     Windows
     Linux
     MAC

2.2 PWG Strengths and Weaknesses

2.2.1 Recent PWG Track Record: IPP "Postmortem"

"Bad"
     Fuzzy end point
     Missing the target
     Firewalls
     Market Acceptance

"Good"
     Industry Acceptance
     Influencing Follow-on's

There was some discussion on this, considering both the IPP and earlier activities including the MIB efforts. Various reasons or excuses were offered, including problems of working with the IETF and problems of getting support from the more popular OS suppliers. However, the consensus was that IPP did not provide a total printing solution - Basics of printing are missing – IPP did not address document format, drivers.

The lessons to be learned were considered to be

- Not completing objectives => PWG must define focused objectives
- Industry and environment changing=> PWG we must respond more rapidly and anticipate changes
- Desktop Printer giving way to more general imaging devices=>PWG must strive to overcome the printer-centric perception of the Group, both internally and externally. Perhaps name change?
- Competing groups=> PWG must cooperate and co-ordinate with other groups to avoid propagation of competing standards
- Marketing Deficiencies=> PWG must better understand users' needs beforehand; PWG must understand how to sell the creation after the fact
- PWG Successes => Success has been in defining semantics
- PWG Deficiencies=> PWG has not provided "Total" solution to the users

2.3 Potential New Project Areas

Establish and maintain Infrastructure components for printing
>   Media size names, finishes, weights, stiffness
>   SLP Template, LDAP schema, Web Services Definitions
>   Defining templates for services (print, rending, OCR, despeckling) as in UDDI
>   Finish MIME Type of document formats
>   IPP Production attributes for color

Device and Usage maintenance and accounting
>   Local and remote (network services)
>   semantic and syntax

Validate and insure interoperability
>   Map Printing on the latest wave of technology –
>   Influence and Integrate Across different technology activities, (e.g., XHML-
Print)

Address Overall solution space
>   IPP complete!
>   IPP FAX off/on ramps
>   Print job credentials for audit trails

2.4 Summary/Conclusion and Immediate Action Items

The areas that should be pursued are:

Web Services (New)
>   Form PWG "Study Group"
>   Solicit Expert opinion regarding role of WSDL
>   Expand scope pf PWG to be *printing* related functions, where *printing* includes
>   *Scan, Document Format transforms, image enhancement, OCR etc.*

Infrastructure Components
>   Media Size names
>   Other Media characteristics
>   LDAP/ SLP
>   MIME registration of document formats

Influence and Integrate across technologies
>   XHTML-Print (w/g candidate)

Immediate Action Items are:

"Universe of Printing" Matrix
Generate a matrix characterizing steps in printing , in different environments verses existing solutions and/or groups addressing new solutions. Patrick Pidduck provided an initial draft of this document to Harry Lewis. Harry and Gail Songer are to do first edit and it will eventually be distributed for general group comments.

WEB services
The primary subject of the next PWG meeting is to be WEB services, including the creation of a PWG study group to evaluate impact on *printing,* marketing considerations, functional requirements, etc. The objective is to get one or more experts on the subject to provide presentations and background information at the next meeting.

3   Plenary Meeting: Officers, Meeting Schedule, Etc.

Harry Lewis opened the PWG Plenary meeting at 8:30, 24 October. The new PWG officers, including Harry Lewis, Chairman; Lee Farrell, Vice Chairman; and Bill Wagner, Secretary, have been phased in. Several PWG working groups are at the point of submitting documents for PWG approval. The question of the precise procedure for this came up and is a point that must be resolved. The intention is to have voting at the next plenary session.

The December PWG meeting is cancelled. The next PWG meeting will be held January/February 2002, with the exact date and location to be determined. The Hawaii venue was dropped in favor of a West Coast location in deference to the current austerity modes in the industry. As a result of the "Directions" discussion, Harry proposed the following schedule outline.

Date	Location
Jan/Feb	L.A., Las Vegas, Phoenix
April	Boston (Oak)
June	Chicago
August	Seattle
October	New Orleans
November	L.A.

4   Working Group Status Reports

Each of the Project Chairs (or appointed spokesperson) provided a brief status of the individual PWG projects. Harry Lewis presented a summary of the "2001 Directions" meeting held the previous evening.

4.1 IPP Fax

To clarify the situation, Paul Moore is no longer the Chair of the IPP Fax group. The working group is proceeding with document review, being guided by the by the document editors John Pulera and Tom Hastings. There remains good participation.

Tom Hastings reported that the IPP Fax Protocol, IPP GET, and IFX UIF documents are down to a few issues. Hope to wrap up soon, followed by a Last Call of the IPP Fax documents.

It was the intent of the working group to leverage the TIFF license Adobe has given IETF. Adobe has offered to work with the PWG to resolve licensing issues. However, the Adobe position on TIFF licensing relative to the extensions defined by the I-FAX working group of the IETF must be resolved before the IFF-FAX group can proceed. It is the group's understanding that the last IFAX extensions to TIFF, which are due in November, will include all that the IPP_FAX group needs. The group will monitor the progress of the license issue between Adobe and the IETF. If a resolution does not appear forthcoming, an alternate format will be considered.

In an associated area, the application/vnd.pwg-multiplexed MIME type has been defined. Harry Lewis will register this with IANA **UPDF**

Norbert Schade, acting group chair for UPDF was not present for the Plenary. Harry Lewis provided the following report on the 22 October UPDF Meeting.

The UPDF Specification is basically complete and is in Working Group "Last Call". The intent is to publish v1 at the April meeting, which is to be held in the Boston Area, sponsored by Oak.

Granite Systems Demonstrated a Windows UPD-based driver GUI
PrinterON is considering a PDA interface
IBM is applying UDPF to Linux command-line interface

The implementers are converting the UPDF information to a platform or vendor specific binary format for rapid execution rather than parsing the UPDF XML on the fly.

Right now, there is more focus on Device Description vs. Command Sequences.

The Composite features design completed, including "QuickSets" and User Group Administration.

The UPDF group is wondering about the need for security, authentication etc. as part of overall driver installation scheme.

4.3 MIBs

Ron Bergman submitted the following status in absentia:

Both the Printer MIB and the Finishing MIB internet drafts have been updated since the Toronto meeting. The Printer MIB is now at -09 and was last updated on August 30, 2001. The Finisher MIB is at -12 and was last updated on October 1, 2001. Both documents have had two reviews by the IETF and all comments have either resulted in document changes or reasons provided why no changes are necessary. Bert Wijnen has requested the reviewers to look at the final documents. This was to have started last week. Ron will monitor the progress with the area coordinator until they are submitted to the IESG.

4.4   Media Sizes

The Media Names specification has gone through working group last call and is ready for voting. According to the PWG Process Document, this is to be a member vote initiated by the working group chairman. The intent is to vote on this at the next plenary meeting. The PWG Chairman will send out the necessary notices.

4.5   "2002 Directions"

Harry Lewis gave a summary of the "2002 Directions" meeting held on 23 October. This is covered in these notes by the summary in Section 2. The PWG is soliciting suggestions for additional printing/imaging standardization tasks.

4.6   IPP

There was no specific report on IPP activities. However, in line with the "2002 Directions", several items related to the increased use of IPP were identified for further discussion, perhaps at the next PWG meeting. These included:

- SSDP IPP Advertisements
- IPP-Link to presentation page
- Novell – IPP Diver Download
- Dissemination of information on features supported by available IPP clients

5   Remaining Items

The meeting concluded with addition discussion on directions and schedule. The gist of these discussions are included in sections 2 and 3.