Printer Working Group

Plenary – October 14, 2009
Cupertino, CA

Plenary Agenda

- Administrivia
  - Introductions
  - Assign Scribe
  - Approve/Modify Agenda
  - Approve Previous Plenary Minutes
  - Review PWG Patent Policy
  - Agenda for the Week
  - PWG Meeting Schedule
  - 2009 Membership (current status)
  - PWG Financial Overview
- New PWG Officers – September 2009 Elections
- Workflow Orchestration Interface [Nancy Chen]
- ISO Print Ticket [Ira McDonald]
- PWG Working Group Status [WG Chairs]
  - IDS (Imaging Device Security)
  - IPP (IPP v2)
  - MFD (Semantic Model)
  - WIMS (DMTF CIM, PMP, Power Management)
- Next Meeting Details

PWG Patent Statement

- PWG standards may include the known use of essential patents and patent applications provided the PWG Chair receives assurance from the patent holder or applicant with respect to patents whose infringement is, or in the case of patent applications, potential future infringement the applicant asserts will be, unavoidable in a compliant implementation of either mandatory or optional portions of the standard. This assurance shall be provided without coercion. This assurance shall be either:

  - a) A general disclaimer to the effect that the patentee will not enforce any of its present or future patent(s) whose use would be required to implement either mandatory or optional portions of the proposed PWG standard against any person or entity complying with the standard; or

  - b) A statement that a license for such implementation will be made available without compensation or under reasonable rates, with reasonable terms and conditions that are demonstrably free of any unfair discrimination.

- The PWG is not in a position to give authoritative or comprehensive information about evidence, validity or scope of patents or similar rights, but it is desirable that any available information should be disclosed. Therefore, all PWG members shall, from the outset, draw PWG's attention to any relevant patents either their own or of other organizations including their Affiliates that are known to the PWG members or any of their Affiliates, although PWG is unable to verify the validity of any such information.

Inappropriate Topics for PWG WG Meetings

- Don't discuss the validity/essentiality of patents/patent claims

- Don't discuss the cost of specific patent use

- Don't discuss licensing terms or conditions

- Don't discuss product pricing, territorial restrictions, or market share

- Don't discuss ongoing litigation or threatened litigation

  ➔ Don't be silent if inappropriate topics are discussed

     … do formally object.

Agenda for the Week

Tue Oct 13

9:00 AM - 12:00 PM	MFD
12:00 PM - 1:15 PM	Lunch
1:15 PM - 5:00 PM	WIMS

Wed Oct 14

9:00 AM - 12:00 PM	MFD
12:00 PM - 1:00 PM	Lunch
1:00 PM - 2:45 PM	Plenary
2:45 PM - 3:00 PM	<break>
3:00 PM - 5:00 PM	IPP

Thu Oct 15

9:00 AM - 12:00 PM	IDS
12:00 PM - 1:15 PM	Lunch
1:15 PM - 3:30 PM	IDS

2009 PWG Meeting Schedule

- Dec 8-10   Austin, TX   (Dell)

    →   Attendee estimate?

2010 PWG Meeting Schedule

- Feb 2-4   Scottsdale, AZ (tentative: MWAi)
- Apr 6-8   (host: TBD)
- Jun 8-10   Rochester, NY (tentative: Xerox)
- Aug 10-12   Bagsværd, Denmark* (MPI Tech)
- Oct 18 (week of) Lexington, KY (Lexmark)
- Dec 7-9   (host: TBD)

→ * Attendees for August? Please do survey:
   http://www.surveymonkey.com/s.aspx?sm=q2v9XcXMx9dmJ0aRfwqIjA_3d_3d

→ We need hosts!!

2009 Membership: 23 members
(as of 8/01/2009)

- ✓ **366 Software** ❖
- ✓ **Apple Inc.** ❖
- ✓ **Canon, Inc.** ❖
- ✓ **Coretronic**
- ✓ **Dell** ❖
- ✗ Epson
- ✓ **Fuji Xerox Co. Ltd.** ❖
- ✓ **Hewlett-Packard** ❖
- ✗ Intermate A/S (Kodak)
- ✓ **InfoPrint Solutions** ❖
- ✗ Konica Minolta
- ✓ **Kyocera Corporation** ❖
- ✓ **Lexmark International** ❖
- ✓ **Microsoft** ❖
- ✓ **MPI Tech** ❖

- ✓ **MWA Intelligence Inc.** ❖
- ✓ **NEC Display Solutions** ❖
- ✓ **Northlake Software, Inc** ❖
- ✓ **Oki Data** ❖
- ✗ Ricoh
- ✓ **Samsung Electronics** ❖
- ✓ **Sharp Labs of America** ❖
- ✗ Sigma-Tel=>Conexant
- ✓ **Toshiba** ❖
- ✓ **Xerox Corporation** ❖
- ✓ **Zoran Imaging Division** ❖
- ✓ **Tykodi Consulting Services LLC.** ❖
- ✓ **Technical Interface Consulting** ❖

- ✓ Indicates 2009 membership paid
- ❖ Indicates Membership Agreement Signed

New PWG Officers (as of Sep 1st)

Chair:　Lee Farrell, Canon

Vice-Chair:　Nancy Chen, Oki Data

Secretary:　Paul Tykodi, TCS

Workflow Orchestration Interface

Nancy Chen

Summary of Discussion Topics

- Workflow Orchestration Interface Standard
- MPSA Liaison

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Background

- Earlier this year some members proposed to work with other standard bodies or special interest groups for development of common interface standard(s) for third-party solutions:

  - Workflow Orchestration Interface Standard

  - Others ?

- MPSA (Managed Print Service Association) Liaison for user requirements and possibly alignment of standards

Workflow Orchestration Interface Standard for MFD - Why

- MFDs have already been required to interact with many types of business solutions today :

  information/document management (e.g. capture, store, archive), managed print service, device management,…

- Currently PWG MFD Semantics and Interface standards plan to cover much of the common data and interface standards required for solution interfaces.

- However, like all business solutions, today MFDs must also be able to interface with the workflow orchestrators which drive automated collaboration and optimized execution of all business processes / solutions.

Workflow Orchestration Interface Standard for MFD - Why

- Many workflow standards exist today which cover common business workflow problems, but

  - ➢ May not solve the problems for solutions that require MFD web service job-specific information in the format required by the standard workflow languages and maybe APIs.

  - ➢ May not support **automated** and **bi-directional** workflow orchestration for interfaces with MFDs.

- Hence the need for defining the common set of MFD semantic and interface standard for workflow orchestration interfaces.

Workflow Orchestration Interface Standard - Objectives

- Cover majority of MFD-related workflow problems for vendors and customers that are not solved by existing standards (at least 80%)

- If needed, collaborate with other related industry organizations such as AIIM (Association for Information and Image Management), OASIS (Organization for Advancement of Structured Information Standards), MPSA (Managed Print Service Association) ? For:
  - Solution / process workflow requirements for MFDs
  - Other workflow orchestration technical /standard conformance – BPEL, WS-Coordination, BPML, XPDL, ...

- Develop MFD common semantics and interface standard for workflow orchestration.

MPSA Liaison - Why

- From device management perspective, if MPSA is to "set standards around MPS (Managed Print Service)", some coordination between MPSA and PWG is desired.

- It has been clarified by the President of MPSA that MPSA will not engage in any project overlapping other organization's effort, and will refer PWG standards to its members/ user community.

- MPSA does seem a good source for vendor-independent user information for PWG.

- MPSA is in its early stage of formation. PWG should start to track its activities and form liaison relationship when necessary.

MPSA Liaison - Objectives

- Collaborate with MPSA for collection of user information for PWG standard development.

- Promote consistency with PWG standard in MPSA standard development, if there is any.

Discussions

- There have been many workflow standards. Which one(s) should MFD workflow interface standard adopt?

- Should PWG start a new working group to develop the MFD workflow interface standard?

- How should PWG coordinate with other related standard groups and communities for the development of the standard?
  - MPSA – initial tracking through free membership
  - AIIM – membership is not free
  - OASIS – membership is not free and expensive
  - Others?

Other Questions / Comments

ISO Print Ticket

Ira McDonald

PWG Working Group Status

PWG Plenary Status Report
IDS Working Group

October 14, 2009

Cupertino, CA, PWG F2F Meeting

Joe Murdock (Sharp)

Brian Smithson (Ricoh)

Purpose of the effort

- The industry is moving beyond basic authentication for access to corporate networks to a more detailed assessment of the "health" of devices before allowing them to access the network.
  - Examples of what's being measured for PC Clients:
    - OS Type, Version, Patch Level
    - Anti-virus Type, Version, Definition Level, Is Active

- Hardcopy Devices attach to networks, but there's no standard set of metrics that is used to assess an HCD.
  - As a result, HCDs are treated as an exception and are allowed to attach to the network based solely on a MAC address.

- Our goal is to provide the metrics and mechanisms that allow HCDs to fully participate in assessment-protected networks.

Purpose of the effort

- The IDS working group is chartered to enable Hardcopy Device support in the network assessment protocols that measure and assess the health of client computers and other devices that are attached to enterprise networks.

- The group will define a set of common assessment attributes for Hardcopy Devices and will liaison with the specific network assessment protocol efforts to include Hardcopy Device support in these protocols where necessary.

- In the future, the IDS WG charter may be revised to allow the working group to deal with other types of Imaging Devices (Network Projectors, Displays, etc.) in network assessment protocols or other security-related work items.

Work Items for the WG

- What We're Doing
  - We are defining a standard set of metrics that can be measured or assessed in Hardcopy Devices to gauge if they should be granted access to a network.

  - Current targets are MS NAP and IETF NEA.

  - We are defining example "bindings" for how these metrics are used in the individual network assessment protocols.

- What We're NOT Doing
  - We are NOT defining any new assessment protocols, nor assessment extensions to existing authentication protocols.

  - We are NOT endorsing any of the competing network assessment protocols (TNC, NAC, NAP, NEA). Our goal is to enable Hardcopy Devices to participate in any/all of them.

Administration

- IDS WG Chairs
  - Joe Murdock (Sharp)
  - Brian Smithson (Ricoh)

- IDS WG Secretary:
  - Lee Farrell (Canon)

- IDS WG Document Editors:
  - HCD-ATR: Jerry Thrasher (Lexmark)
  - HCD-NAP: Joe Murdock (Sharp), Brian Smithson (Ricoh)
  - HCD-NEA: Randy Turner (Amalfi)

Current Status

- [HCD Assessments Attributes document](#) was developed and it is in stable condition now.

- [HCD-NAP Binding Document](#) under development.
  - Target completion date of Q4 2009 (?).

- [HCD-NEA Binding Document](#) has been started.
  - Target completion date of Q1 2010 (?).

- Recent/ongoing discussions with assessment protocol designers (Microsoft/NEA) to finalize and endorse the IDS Binding documents.

- There is an issue about how to deploy HCD NAP in practice: how can we get MS's SHV to recognize and apply HCD_ATR?

Next steps

- Address final comments on attributes specification.
- Review and implement action items from the F2F Meeting with Microsoft NAP group - in Redmond 8/17/2009
- Finish NAP binding specification – (Q4 2009?)
- Develop NEA binding specification – (Q1 2010?)
- Seek approval/adoption w.r.t. assessment protocol vendors.
- Possible interop (?)
- Address deployment issues
  - How to securely populate and update SHVs with HCD attributes and base values from vendors?
  - Should we first target the MS SCCM SHV by defining HCD responses that do not require SHV changes?
- Address remediation issues.
  - Should remediation mechanisms be vendor-specific? Or HCD-industry specific? Or can it be solved in a general way?

PWG Plenary Status Report
IPP Working Group

14 October 2009

Cupertino, CA - PWG F2F Meeting

IPP WG Officers

- IPP WG Chair:
  Paul Tykodi (TCS)

- IPP WG Secretary:
  Michael Sweet (Apple)

- IPP WG Document Editors:
  Tom Hastings (formerly Xerox) – IPP PP Set 2
  Ira McDonald (High North) – IPP Version 2.0
  Mike Sweet (Apple) – IPP Version 2.0

IPP WG Current Status

- IPP Version 2.0 First Edition
  - PWG Candidate Standard – defines IPP/2.0 and IPP/2.1
  - ftp://ftp.pwg.org/pub/pwg/candidates/cs-ipp20-20090731-5100.10.pdf

- IPP Printer State Extensions (PSX)
  - PWG Candidate Standard – IPP Printer/Finisher alerts
  - ftp://ftp.pwg.org/pub/pwg/candidates/cs-ippstate10-20090731-5100.9.pdf

IPP WG Current Status

- IPP Production Printing Set 2
  - Prototype Draft – extends IPP Production Printing Set 1
  - Resubmit-Job, Cancel-Jobs, job save, proof print, etc.
  - ftp://ftp.pwg.org/pub/pwg/ipp/wd/wd-ippprodprintext10-v8-20091008-rev.pdf
- IPP Version 2.0 Project Charter
  - PWG SC Approved – adds IPP Production Printing Set2
  - ftp://ftp.pwg.org/pub/pwg/ipp/charter/ch-ippv2-20090819.pdf

IPP WG Next Steps

- IPP Production Printing Set 2
  - Revise Prototype Draft per review at October F2F
  - Prototype at Xerox (or elsewhere)
  - PWG Last Call in Q1 2010 (w/ IPP Version 2.0 2nd Ed)
- IPP Version 2.0 Second Edition
  - Initial draft in Q4 2009 – add IPP/2.2 (Prod Print)
  - Include all IETF and PWG IPP extension specs
  - PWG Last Call in Q1 2010 (w/ IPP Prod Print Set2)
- IPP 2.0/2.1/2.2 Interoperability Testing
  - Interoperability event in Q3/Q4 2010
- IPP Everywhere
  - BOF at PWG F2F in February 2010 (Mike Sweet)

IPP WG Info / Participation

- We welcome participation from all interested parties
- IPP Working Group web page
    http://www.pwg.org/ipp/index.html
- Subscribe to the IPP mailing list
    http://www.pwg.org/mailhelp.html
- IPP WG holds bi-weekly phone conferences announced on the IPP mailing list

PWG Plenary Status Report
MFD Working Group

October, 2009
Cupertino, CA PWG F2F Meeting

Purpose of the effort

The MFD working group is concerned with the modeling of imaging services and subunits that comprise a network connected Multifunction Device. The Objectives are:

- Drive to a standard semantic definition for an MFD's Subunits, Services, Jobs and Documents.
    - Agreement on the semantics of their attributes, operations and parameters.
- Currently being addressed are an overall MFD specification, Copy Service and FaxOut Service.
    - The Print, Scan and Resource Services have been completed
- The definition of a framework for the complete model is an objective.

Approved Documents:

Print Service: *Approved January 2004*

- PWG5105.1
  PWG Semantic Model Specification Version 1.00
- ftp://ftp.pwg.org/pub/pwg/candidates/cs-sm10-20040120-5105.1.pdf

Scan Service: *Approved April 2009*

- PWG5108.02-2009:
  Network Scan Service Semantic Model and Service Interface Version 1.0
- ftp://ftp.pwg.org/pub/pwg/candidates/cs-sm20-scan10-20090410-5108.02.pdf

Resource Service: Approved July 2009

- PWG5108.03-2009
  Network Resource Service Semantic Model and Service Interface Version 1.0
- ftp://ftp.pwg.org/pub/pwg/candidates/cs-sm20-resource10-20090703-5108.03.pdf

In Progress Documents:

MFD Model and Overall Semantics:

- MFD Model and Overall Semantics - September 22, 2009 Interim Draft
- ftp://ftp.pwg.org/pub/pwg/mfd/wd/wd-mfdoverallmod10-20090922.pdf

Copy Service:

- Copy Service: Semantic Model and Service Interface - October 7, 2009 Interim Draft
- ftp://ftp.pwg.org/pub/pwg/mfd/wd/wd-mfdcopymodel10-20091007.pdf

FaxOut Service:

- FaxOut Service:
     Semantic Model and Service Interface – September 9, 2009 Interim Draft
- ftp://ftp.pwg.org/pub/pwg/mfd/wd/wd-mfdfaxoutmodel10-20090909.pdf

Schema Status:

- Copy Service is now included in schema
- A straw man version of Power has been added under SystemDescription

Remaining Services

- Services planned to be addressed after the current Services are complete. (Subject to change based on group consensus)
  - FaxIn Service
  - EmailIn Service
  - EmailOut Service
  - Transform Service

Next Steps

- Work to complete the MFD specification.
  - Delay PWG wide Last Call and Formal Vote until at least one service normatively dependant on this specification reaches Last Call status
- Resume FaxOut work using normative dependencies on MFD specification
- Continue development of Copy Service working draft

More Info/How to participate

- ➢ **We welcome more participation from member companies**

- ➢ **The group maintains a Web Page for MFD That includes links to the latest documents, schema and a browsable version of the schema**

    http://www.pwg.org/mfd/index.html

More Info/How to participate

➢ **Information on subscribing to the MFD mailing list is available at** <**https://www.pwg.org/mailman/listinfo**>

➢ **MFD holds periodic phone conferences, with dates, call numbers and agenda announced on the MFD mail list.**

PWG Plenary Status Report
Workgroup for Imaging Management Solutions

Printer Working Group

Face-to-Face Plenary

October 14, 2009

Apple –Cupertino, CA

Purpose of the effort

- **The WIMS working group is concerned with:**
  - ➢ Supporting the remote management of Hardcopy Imaging devices by the definition of new and the recasting of previously-defined imaging device and service management elements for mapping into standard management semantics and protocols, including but not limited to SNMP, CIM, and Web Services Management
  - ➢ Continuing update and extension of the DMTF/CIM classes concerned with Imaging Devices and Services.
  - ➢ Continuing support and update of the printer-related PWG and IETF published MIB documents
  - ➢ Continuing support and update of the specifications produced by the former PWG MIB Working Group (PMP) as well as by the PWG WIMS Working Group.

Work Items for the WG

- **What We're Doing**

  - Supporting the existing IETF and PWG Printer and related MIB documents, including the potential advancement, extension and expansion of these specifications.

  - Advancing a basic public management elements structure for Hardcopy Services and Devices that draws upon existing structures and that utilizes a set of management elements that is consistent over the various management protocols and methods.

  - Update, Create and Prototype DMTF/CIM Imaging MOFs, with the objective of ensuring Hardcopy Device and Service management via a Web Services approach that is consistent with the basic public management elements structure

- **What We're NOT Doing**

  - We are not addressing the delivery of Hardcopy services.

  - We are not specifically concerned with security issues related to Hardcopy Devices or Services, although management must recognize and accommodate the requirements and constraints demanded by security.

  - We are not defining a management service or protocol.

Current Activities - CIM

➢ Print Service Classes Definition

- Ira has posted the following DMTF MOFs at
  ftp://ftp.pwg.org/pub/pwg/wims/cim/mofinput/ira-20090923.zip
  - CIM_PrintJob.mof -NEW version adds all IPP/1.1 Job attributes
  - CIM_PrintService.mof -NEW version adds IPP/1.1 Printer attributes (description)
  - CIM_PrintServiceCapabilities.mof -NEW Class adds IPP/1.1 Printer attributes (xxx-supported)
  - CIM_PrintServiceSettings.mof -NEW Class adds IPP/1.1 Printer attributes (xxx-default)

- With these additions, the CIM Printing classes support IPP/2.0.

- Remaining tasks for Printer Classes:
  - PrintQueue, PrintSAPand other small classes still need some update.
  - Diagram of the extended CIM Printing classes must be written in Visio and PDF, per DMTF process
  - New CIM Change Requests (CRs) must be written using the DMTF CR template, SeaMonkey or some other HTML editor

Current Activities - CIM

- ➢ **Printer Class Cleanup**
  - ▪ Rick Landau has collected the few minor items remaining to be cleaned up in the printer device classes, and sent the list and recommendations to the WIMS reflector. Ira and Rick will work on drafting the corrections and CRs embodying those corrections

- ➢ **Printer Proxy CIM Provider Related**
  - ▪ Dell has officially notified the DMTF about the implementation of the new printer device classes in the prototype, and that it should count against the quota of two needed to promote the classes from experimental to final.
  - ▪ Rick remains interested in feedback on user's experiences with the CIM Printer Proxy CIM package

Current Activities - PMP

➢ The IEEE1284 Device ID "COMMAND SET" element content has been standardized in a draft by Ira.

➢ Although originally intended as an appendix to the Printer Port Monitor MIB, WIMS requested that this be cast as a separate PWG candidate standard because of the extensive use of this ID set in other protocols.

➢ Ira has posted a draft of this information as a candidate standard at:

> ftp://ftp.pwg.org/pub/pwg/pmp/wd/wd-pmp1284cmdset10-20091001.pdf

➢ Since the basic information has been public for some time in the previous version:

> ftp://ftp.pwg.org/pub/pwg/pmp/white/tb-ppm-1284-cmd-20090803.htm

it is intended to begin WIMS last call now and to start PWG last call to conclude at the December Face-to-Face.

Current Activities - PMP

➢ The IEEE1284 Device Id is a standard element for identifying printing devices, not just in IEEE1284 but in other interfaces and protocols including USB and, via the Port Monitor MIB, Ethernet.

➢ The IEEE 1284 spec identified three necessary keys, MANUFACTURER, COMMAND SET, and MODEL.

➢ Identifying the Command Set is important in understanding how to communicate with the printer. However, there is inconsistency in how information is presented in this field, making automatic identification difficult.

➢ At the request of the PWG, Ira McDonald has proposed a normative appendix to the PWG Printer Port Monitor MIB, standardizing the content of "COMMAND SET" (CMD).

  • ftp://ftp.pwg.org/pub/pwg/pmp/white/tb-ppm-1284-cmd-20090803.htm

➢ WIMS is considering the content and application of this proposal.

Current Activities – Imaging Power Management

➢ Ira McDonald has posted a draft specification of the Imaging Power Elements (an update is expected)

   ftp://ftp.pwg.org/pub/pwg/wims/wd/wd-wimspower10-20090908.pdf

➢ Several issues have arisen, particularly concerning the complexity of the element set and the balance between accommodating the wide range of Imaging Equipment to which it will apply while not having so much optional that it defeats interoperability objectives.

➢ WIMS is soliciting comments, additions, suggestions and general participation of all interested parties in the development of this specification, especially in the Use Cases area. Actual or intended use cases are the best criteria to identify and ascertain the area of applicability for management elements.

➢ A MIB binding of these abstract elements is also being done, with a CIM implementation for Web Services use to follow. Ira has posted an ASN.1 *sketch* (not complete objects) of the Power MIB, based on recent discussions.

   ftp://ftp.pwg.org/pub/pwg/wims/wd/wd-wimspowermib10-20090930.txt

Potential MIB Activities

- **Printer Port Monitor MIB**
  - update spec
  - interoperability testing ?
  - advance PPM to PWG standard ?
- **Identify Printer MIB Problems**
  - MIB will be basis for future WS management. Therefore, MIB problems will delay development and/or restrict effectiveness of WS Imaging Management utilities.
  - Users and Fleet Management Agencies both need to understand some of MIB implementation variations, and should have some place to voice the questions.
- **MFD MIB or MIB extensions?**
  - Many attempts, of varying completeness, started in the past, especially MFD Alerts.
  - MFD group is addressing service semantics; need to address management elements

Next Steps

- Continue with the CIM effort, eventually to include the CIM Printer Profile

- Continue the Hardcopy Imaging Device Power Management Project, including the abstract specification of elements and the Hardcopy Imaging Device Power Management MIB

- Develop Hardcopy Imaging Device Power Management MIB

- Maintain and update existing set of Printer- and MFP-related specifications

- Attempt at increased contact with user community understand needs and identify real use cases.

More Info/How to participate

➢ We welcome more participation from member companies and input from user community

➢ The group maintains a Web Page and separate WIKI pages for WIMS and for CIM update

   http://www.pwg.org/wims/index.html

   http://pwg-wiki.wikispaces.com/WIMS

   http://pwg-wiki.wikispaces.com/WIMS-CIM

➢ To subscribe to the WIMS mailing list, go to :

  https://www.pwg.org/mailman/listinfo/wims

➢ WIMS holds periodic phone conferences. Dates, call numbers and agenda on PWG Google Calendar.

http://www.google.com/calendar/embed?src=istopwg%40gmail.com

Questions/Discussion?

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Next PWG Meeting

December 8-10

Dell

Technical Briefing Room

Between Buildings 2 and 3 (Parmer South 2, 3)

701 E. Parmer Lane

Austin, Texas

Thanks to Apple for Hosting!

- Plenary Adjourned -