Printer Working Group Plenary Session

October 4, 2011

Cupertino, CA

Plenary Agenda

- CWMP BOF (just concluded)
- Administrivia
- Open Issues
- PWG Working Group Status [WG Chairs]
  - Semantic Model (MFD)
  - WIMS
  - IPP (IPPv2 Interop, IPP Everywhere)
  - IDS (Imaging Device Security)
  - Cloud Imaging
- Liaison Status
- Next Meeting Details

Administrivia

- Welcome and Introductions
- Confirm Minutes Taker
- Approve/Modify Agenda
- Approve Previous Plenary Minutes
- Review PWG Patent Policy
- Agenda for the Week
- Future PWG Meeting Schedule
- 2011 Membership
- PWG Officers

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.

PWG Patent Statement

- 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.

PWG Patent Statement

- 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

- Tuesday, October 4
  - 9:00 - 11:00   CWMP BOF
  - 11:00 - 12:00   Plenary
  - 12:00 - 1:00   Lunch
  - 1:00 - 5:00   IPP Everywhere

- Wednesday, October 5
  - 9:00 - 12:00   Cloud Imaging
  - 12:00 - 1:00   Lunch
  - 1:00 - 5:00   Semantic Model

Agenda for the Week

- Thursday, October 6
  - 9:00 - 12:00   IDS
  - 12:00 - 1:00   Lunch
  - 1:00 - 4:00   WIMS

2011 PWG Meeting Schedule

- December 6-8   Austin, TX (hosted by Dell)

2012 PWG Meeting Schedule

- February 7-9   Irvine, CA (hosted by Canon)
- April 3-5   Cupertino, CA (hosted by Apple)
- June 5-7   Webster, NY (hosted by Xerox)
- August 6-8   Redmond, WA (hosted by Microsoft)
- October 2-4   Lexington, KY (hosted by Lexmark)
- December 4-6   Irvine, CA (hosted by Samsung)

2011 Membership

29 Members

Apple	Intel	Oki Data
Brother Industries	Konica Minolta	Ricoh
Canon	Kyocera Mita	Samsung
Danny Brennan	Lexmark	Sharp Labs
Dell	Microsoft	Technical Interface Consulting
Epson	Mocana	Toshiba America Business Solutions
Fenestrae B.V.	MPI Tech	Tykodi Consulting Services LLC
Fuji Xerox	MWA Intelligence	Xerox
High North	NEC Display Solutions, Ltd	Zoran
Hewlett Packard	Northlake	

PWG Officers (2011-2013 Term)

- ## PWG Chair
  - Michael Sweet, Apple

- ## PWG Vice-Chair
  - Nancy Chen, Oki Data

- ## PWG Secretary (NEW!)
  - Ira McDonald, Samsung/High North

Open Issues

- IDS WG needs co-chair and secretary
- Semantic Model (MFD) WG still needs a vice-chair and secretary
- WIMS WG still needs a secretary

PWG Working Group Status

Semantic Model Working Group Status

October, 2011

Cupertino, CA

PWG F2F Meeting

Peter Zehler (Xerox)

Purpose of the effort

- The Semantic Model 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 PrintJobTicket and the SystemControl and FaxIn services.
    - The Print, Scan, Copy and Resource Services and the MFD Model and Common Semantics specifications have been completed.
  - The definition of a framework for the complete MFD model is the objective.

Approved Documents:

- Print Service: Approved January 2004
  - PWG 5105.1: 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
  - PWG 5108.02-2009: 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
  - PWG 5108.03-2009: 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

Approved Documents:

- MFD Common Semantics: Approved April 2011
  - PWG 5108.1: MFD Model and Common Semantics Version 1.00
  - ftp://ftp.pwg.org/pub/pwg/candidates/cs-sm20-mfdmodel10-20110415-5108.1.pdf

- Copy Service: Approved June 2011
  - PWG 5108.04: Copy Service Semantic Model and Service Interface Version 1.00
  - ftp://ftp.pwg.org/pub/pwg/candidates/cs-sm20-copy10-20110610-5108.04.pdf

- MFD Requirements: Approved September 2010
  - Multifunction Device Service Model Requirements
  - ftp://ftp.pwg.org/pub/pwg/informational/req-mfdreq10-20100901.pdf

Approved Documents :

- FaxOut Service : Approved August 2011
  - PWG 5108.05-2011: FaxOut Semantic Model and Service Interface
  - ftp://ftp.pwg.org/pub/pwg/candidates/cs-sm20-faxout10-20110809-5108.05.pdf

In Progress Documents:

- ## Print Job Ticket: (Work in Progress)
  - PWG Print Job Ticket and Associated Capabilities – September 23, 2011 Interim Draft
  - ftp://ftp.pwg.org/pub/pwg/mfd/wd/wd-sm20-printjobticket10-20110923.pdf

- ## FaxIn Service: (Work in Progress)
  - FaxIn Service: Semantic Model and Service Interface – July 27, 2011 Interim Draft
  - ftp://ftp.pwg.org/pub/pwg/mfd/wd/wd-mfdfaxinmodel10-20110727.pdf

- ## System Control Service: (Work in Progress)
  - MFD System Object and System Control Service Semantics – September 25, 2011 Interim Draft
  - ftp://ftp.pwg.org/pub/pwg/mfd/wd/wd-mfdsystemcontrolservicemodel10-20110925.pdf

In Progress Documents

- Schema Status:
  - Named version (v1.27) published for MFD Model and Common Semantics
  - Latest (v1.145) Up to date with In Progress specifications
    - JPS3 included except for section 6 "Additional Semantics for Existing Operations"
    - IDS Security schema being updated but has not yet been linked to any Semantic Model elements.

Remaining Services

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

Next Steps

- Complete the work on the Print Job Ticket and Associated Capabilities specification

- Complete the work on System Service and FaxIn specifications

- Update the MFD Model and Common Semantics Version 1.0 to be the PWG Semantic Model Specification Version 2.0

- We need people to step up as editors of remaining service specifications. The MFD specification reduces the amount of work to produce a service specification. The current Copy specification and FaxOut specification can be used as templates.

More Info/How to participate

- We welcome more participation from member companies
- The group maintains a Web Page for Semantic Model that includes links to the latest documents, schema and a browsable version of the schema
  - http://www.pwg.org/mfd

More Info/How to participate

- Information on subscribing to the Semantic Model mailing list is available at <https://www.pwg.org/mailman/listinfo/mfd>

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

Workgroup for Imaging Management Solutions (WIMS/PMP) Status

October 4, 2011

Cupertino, CA

PWG F2F Meeting

Introduction

- **What WIMS is Doing**
  - Supporting the existing IETF and PWG Printer and related MIB documents (PMP, FIN, JMP) including the advancement, extension and expansion of these standards.
  - 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 interfaces.
  - Considering Hardcopy Device (MFD) management aspects in the light of changing usage, operational and security environments.
  - Coordinating Hardcopy Device and Service management aspects with the model, protocol and security efforts of other PWG Working Groups.
  - Correlating Hardcopy Device management aspects with other Device and Service management standards.

- **What WIMS is NOT Doing**
  - Addressing the delivery of Hardcopy services.
  - Defining a management service or protocol.
  - Dealing with security issues other than observing security requirements imposed on the management of Hardcopy Devices or Services by IDS, IEEE2600 or other applicable security group.

Officers & Editors

- Co-Chairs:
  - Bill Wagner (Technical Interface Consulting)
  - Danny M. Brennan (GTS Services Delivery)
- Secretary:
  - NONE
- Document Editors:
  - Ira McDonald (High North/Samsung)
  - Rick Landau [CIM Printer Profile]

Activities and Status

- Set up process and procedure for PWG Imaging Power Management MIB (PWG Candidate Standard 5106.5-2011) compatibility demonstration.
  - Survey had three respondents.
  - Alternate approach, similar to IPP 2/x demo, is proposed.
  - No intention of advancing spec from candidate standard to standard at this time.

- MFD Alerts document current nearing WG last call, but statement of prototype is required.
  - Since specification defines both MIB and IPP conformance requirements, prototype for each of the two bindings is desired.

- CIM Printing Updates and Printer Profile activity is reactivated.

More Info/How to participate

- We welcome participation from PWG member companies and input from the 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

IPP Working Group Status

October 4, 2011

Cupertino, CA

PWG F2F Meeting

IPP WG Officers

- **IPP WG Co-Chairs:**
  - Paul Tykodi (TCS)
  - Ira McDonald (High North)

- **IPP WG Secretary:**
  - Michael Sweet (Apple)

- **IPP WG Document Editors:**
  - Ira McDonald (High North) – IPP Version 2.0, IPP Everywhere 1.0, IPP JPS3, IPP Scan, IPP over HTTPS Transport Binding and "ipps" URI Scheme, LDAP Schema for Printer Services v2, PWG Character Repertoire Supported Registration
  - Michael Sweet (Apple) – IPP Version 2.0, IPP Everywhere 1.0, IPP JPS3, PWG Media Standardized Names, PWG Raster, IPP over HTTPS Transport Binding and "ipps" URI Scheme, LDAP Schema for Printer Services v2, IPP FaxOut Service

IPP WG Status

- Several IPP Everywhere specs in development:
  - IPP Everywhere 1.0 (EVEPRT)
  - IPP: Job and Printer Extensions - Set 3 (JPS3)
  - IETF IPP over HTTPS Transport Binding and "ipps" URI Scheme
  - IETF LDAP Schema for Printer Services v2
  - PWG Media Standardized Names 2.0 (MSN2)
  - PWG Raster
  - IPP Scan Service
  - IPP FaxOut Service
- Up-to-date pending IANA registrations online:
  - http://www.pwg.org/ipp/ipp-registrations.xml (+ .txt)
  - Will maintain this in parallel for new specifications
  - Also have some MIB registrations pending
- Need minor charter update for MSN2 and title tweaks

IPP Interoperability Event

- During the August 2011 F2F we decided the IPP/2.0 interoperability event will be virtual using the CUPS ipptool program and conformance test files

- September 28, 2011 release of ipptool covers:
  - All required operations and attributes for IPP/2.0
  - Partial coverage of operations and attributes for IPP/2.1
  - Basic testing for existence of IPP/2.2 operations and attributes

- Future update to include tests for undefined attribute and group tags, plus additions to IPP/2.1 and IPP/2.2 tests

- Test results to be sent to Mike Sweet (msweet@apple.com) for presentation at Februrary 2012 F2F
  - May provide preliminary results at December 2011 F2F

IPP WG Info / Participation

- We welcome participation from all interested parties
- IPP Working Group web page
  - http://www.pwg.org/ipp/index.html
- IPP Working Group wiki
  - http://pwg-wiki.wikispaces.com/IPP
- 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
  - Next conference call is October 17, 2011 at 1pm (EST)

IDS Working Group Status

October 4, 2011

Cupertino, CA

PWG F2F Meeting

Joe Murdock (Sharp)

Purpose of the effort

- Hardcopy device have security and access considerations that are not addressed within current hardcopy standards. These considerations should be addressed in a manner common to all hardcopy devices:

  - Hardcopy Devices are currently allowed unfettered access to and storage of secure and controlled documents. There is no standard for controlling document access and defining usage behavior for protecting secure documents.

  - Hardcopy Devices are providing services to mobile devices running different operating system with different methods to consume Hardcopy service. Hardcopy Devices are extending their services as "cloud" resources, and consuming resources from the "cloud". There is no standard or recommended methodology for authenticating and securing the mobile and hardcopy device, their services or the users consuming those services.

  - Hardcopy Devices are providing and consuming services outside of the traditional concept of a local user on a physical device. There are currently no standards or recommendation for controlling or validating access to these services.

  - 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. 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 and provide secure, controlled access to documents and hardcopy services regardless of location or consumer.

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.
  - We are providing recommendations for identifying and authenticating Hard Copy and mobile devices, services and users in a global workspace.
  - We are defining standard attributes and values for authorizing Hard Copy Devices, their services and users in a global workspace
  - We are defining a set of standard security attributes to be associated with mobile and remote imaging jobs, users, services and devices
  - We are defining common log formats and values to facilitate automated log analysis.

- **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.
  - We are NOT defining any new security protocols.

Administration

- **IDS WG Chair**
  - Joe Murdock (Sharp)
- **IDS WG Vice-Chair**
  - IDS is looking for a new Vice Chair
- **IDS WG Secretary:**
  - IDS is looking for a new Secretary
- **IDS WG Document Editors:**
  - HCD-ATR: Jerry Thrasher (Lexmark)
  - HCD-NAP: Joe Murdock (Sharp), Brian Smithson (Ricoh)
  - HCD-TNC: Ira McDonald (Samsung)
  - HCD NAC Business Case: Joe Murdock (Sharp)
  - IDS-Model: Joe Murdock (Sharp), Ira McDonald (Samsung), Ron Nevo (Samsung)
  - HCD-HR: Joe Murdock (Sharp)
  - HCD-NAP-SCCM: Joe Murdock (Sharp)
  - IDS-Log: Mike Sweet (Apple)
  - IDS-IAA: Joe Murdock (Sharp)

Current Status

- IDS-Model Common Requirements specification
  - Target completion date Q1, 2012
- HCD-TNC Binding Document is under development.
  - Target completion date of Q1, 2012.
- HCD-HR (Health Remediation) Specification is on hold
  - Target completion date TBD.
- IDS-Log Common Log Specification is under development
  - Target completion date of Q1, 2012.
- IDS-IAA specification is under development
  - Target completion date of Q1, 2012.
- HCD-Attributes specification is under revision
  - Target completion date of Q4, 2011.

Current Activities

- HCD-Attributes (Q4 2011)
  - Normalizing attribute names
- HCD-TNC Binding Specification (Q1 2012)
  - On hold pending HCD-Attributes updates
  - IDS-Model specification (Q1 2012)
- IDS-Log (Q1 2012)
- IDS-IAA (Q1 2012)
- PWG Security Ticket (Q4 2011)
- NIAP partnership (TBD)

More Info/How to participate

- We welcome participation from PWG member companies and input from the user community

- The group maintains a Web Page and separate WIKI pages for IDS update
    - http://www.pwg.org/ids/index.html
    - http://pwg-wiki.wikispaces.com/Imaging+Device+Security+WG

- To subscribe to the IDS mailing list, go to :
    - https://www.pwg.org/mailman/listinfo/ids

- The group hold bi-weekly conference calls on Thursdays at 10:00AM PST/1:00PM EST.

Cloud Imaging WG Status

October 4, 2011

Cupertino, CA

PWG F2F Meeting

Officers

- Chair: Ron Nevo (Samsung)
- Vice Chair: Bill Wagner (TIC)
- Secretary: Michael Sweet (Apple)
- Document Editors:
  - Ira McDonald (High North):Job Ticket Mapping (JDF), Cloud Imaging Model and Requirements, Cloud Print IPP Binding
  - Joe Murdock (Sharp): Cloud Imaging Model and Requirements, Cloud Print SOAP Binding
  - Peter Zehler (Xerox): PWG Job Ticket and Printer Characteristics, Job Ticket Mapping(MSPS), Cloud Imaging Model and Requirements, Cloud Print SOAP Binding
  - Ron Nevo (Samsung): Job Ticket and Printer Characteristics Mapping Best Practices, Cloud Imaging Model and Requirements
  - Michael Sweet (Apple): JobTicket Mapping (PPD), Cloud Imaging Model and Requirements,
  - Justin Hutchins (Microsoft): Job Ticket Mapping (MSPS)

Overview

- The Cloud Imaging Working Group was created in February 2011 to consider support of convenient and full featured imaging services in conjunction with Cloud Computing and other Cloud-based facilities

- The currently approved charter of the working group is at ftp://ftp.pwg.org/pub/pwg/cloud/charter/ch-cloud-charter-20110620.pdf

- Under this charter, the WG is to address Cloud Printing in Phase 1, extending to Cloud Imaging in Phase 2.

- The Phase 1 effort is to produce three documents:
  - Cloud Imaging Model and Requirements
  - Cloud Print Internet Printing Protocol Binding
  - Cloud Print SOAP Binding

- This is a major effort, taking longer than envisioned. It was therefore decided to precede this overall activity with a consideration of how current Cloud Printing implementations might better reflect PWG compatible semantics in the printer characteristics information and Job Ticket aspects.

- Therefore, the Cloud Imaging WG is also considering:
  - Applicability of the PWG Job Ticket and Printer Characterization elements, as derived from the current Semantic Model
  - Mapping Job Tickets and Printer Characterizations for Cloud Printing Services such as Google Cloud Print to the PWG Job Ticket and Printer Characterization elements.

- These considerations require a WG Charter change, and the charter is currently being updated.

Intended and Potential Publications

- Identified in Charter
  - Cloud Imaging Requirements and Model (define the reference model, terminology, and requirements for Cloud Imaging
  - Cloud Print SOAP Binding
  - Cloud Print Internet Printing Protocol Binding
  - Cloud Multifunction SOAP Binding
  - Cloud Multifunction Internet Printing Protocol Binding

- PWG Job Ticket to MSPS, PPD and JDF Mapping - Best Practices Document
  - Contributors
    - Ron Nevo: Editor
    - Michael Sweet: PPD Mapping
    - Justin Hutchins: MSPS (XPS) elements Mapping
    - Ira McDonald: JDF Mapping
    - Peter Zehler, Ira McDonald: PWG Semantics

- Cloud Imaging is also coordinating PWG Job Ticket and Printer Characteristics considerations with SM Workgroup

Cloud Imaging WG Participation

- We welcome participation from all interested parties
- Cloud Imaging Working Group Web page
  - http://www.pwg.org/cloud/index.html
- Cloud Imaging Working Group Wiki
  - http://pwg-wiki.wikispaces.com/Cloud+Imaging
- Subscribe to the Cloud mailing list
  - https://www.pwg.org/mailman/listinfo/cloud
  - cloud@pwg.org
- Cloud Imaging WG holds bi-weekly phone conferences announced on the Cloud mailing list
  - Next conference call is October 24, 2011 at 1 pm (EDT)
  - Conferences on opposite weeks of IPP WG calls

Liaison Status

AFP Consortium

- The AFP Consortium develops the Advanced Function Presentation architecture used primarily with mainframe computing:
  - http://www.afpcinc.org/
- A new AFP Interchange Set (IS/3) has been defined and provides an object model closer to what we have in the PWG and ISO DPA models

MPSA

- The Managed Print Services Association (MPSA) is an independent non-profit international organization that seeks to develop Managed Print Services (MPS) within the industry through Communications, Collaboration, Education and Best Practices.
  - http://yourmpsa.org/
- The PWG has agreed to provide a series of articles on our activities and concerns for the MPSA to make available to its membership. Each article will have an associated survey to solicit information on what information is of interest to MPS members and on specific issues of importance in PWG activities.

- A formal statement of the liaison agreement between the PWG and MPSA has been approved by both the PWG and MPSA steering committees.

OpenICC - freedesktop.org

- OpenICC has two main goals. The first goal is to work out a common set of settings for color savvy applications to share profiles and settings. The second goal is to bring together those developers in areas like printing, display and desktop applications to work together to make color management end to end work for open source applications.

- The group is tackling color managed printing.

- Discussions on the openicc mailing list are influencing use cases and JPS3 extensions:
  - "printer-icc-profiles" provides device profiles for color proofing
  - 'relative-bpc' keyword value for "print-rendering-intent"
  - May add some recommendations for PDF color handling

- Next major releases of Linux include this stuff.

TCG Overview

- TCG Website
  - http://www.trustedcomputinggroup.org/
- TCG Developer Resources
  - http://www.trustedcomputinggroup.org/developers
- TCG Description
  - The Trusted Computing Group (TCG) is a not-for-profit organization formed to develop, define and promote open, vendor-neutral, industry standards for trusted computing building blocks and software interfaces across multiple platforms
- TCG Membership Levels
  - TCG Promoter ($55,000/year) – voting
  - TCG Contributor ($16,500/year) – voting
  - TCG Adopter ($8,250/year) – non-voting
  - TCG Adopter ($1,000/year) – non-voting small company

TCG Workgroups

- Authentication
- Embedded Systems
- Hardcopy
- Infrastructure
- Mobile Phone
- PC Client
- Server Specific
- Storage
- Trusted Multi-Tenant Infrastructure (TMI)
- Trusted Network Connect (TNC)
- Trusted Platform Module (TPM)
- TCG Software Stack (TSS)
- Virtualized Platform

TCG Embedded Systems WG

- Embedded Systems (EmSys) WG – chartered in May 2011
  - Develop open and vendor neutral architecture, interfaces, and standards framework for embedded systems
- Embedded Systems (EmSys) WG – scope of activities
  - Driven by solution level architecture expertise
  - Develop use cases that include vertical market requirements
  - Identify and document specification requirements
  - Develop necessary extensions to TCG specs per requirements
  - Align requirements to existing or future TCG WG activities
  - Develop architectural framework using TCG standards
  - Develop architectural components, rules, and specs
  - Cooperate with related external standards groups
- Embedded Systems (EmSys) WG
  - Next meeting October 2011 in Hong Kong

Other Questions / Comments
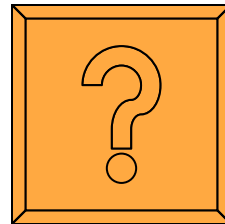
Next PWG Meeting

- December 6-8 in Austin, TX (hosted by Dell)

- Thank you Ricoh for hosting this meeting!