

# The Printer Working Group

Printer Working Group Plenary Session

November 4, 2014

PWG F2F Meeting

Waltham, MA (Hosted by Conexant)

Michael Sweet (Apple)

### Plenary Agenda



- Administrivia
- Open Issues
- PWG Workgroup Status [WG Chairs]
  - Semantic Model (SM)
  - Internet Printing Protocol (IPP)
  - Imaging Device Security (IDS)
  - Cloud Imaging Model (Cloud)
- Liaison Status
  - AFP Consortium AFPMAP
  - CIP4 JDFMAP
  - TCG News
  - Wi-Fi Alliance Wi-Fi P2P Services
  - W3C CSS Print Job Ticket
- 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
- 2014 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.





- 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, November 4

```
9:00 - 10:15 PWG Plenary
10:15 - 10:45 How to Write a PWG Document
10:45 - 11:00 Break
11:00 - 12:00 Cloud/IPPINFRA - Prototyping and Q&A
12:00 - 1:00 Lunch
1:00 - 5:00 IPP - Finishings 2.0, Printer Self-Certification, Scan Service, System Control Service (mid-afternoon break where convenient)
```



### Agenda for the Week

Wednesday, November 5

• 9:00 - 12:00 Semantic Model - JDFMAP, SM 3.0 (mid-morning break as convenient)

• 12:00 - 1:00 Lunch

• 1:00 - 5:00 IDS - MFP PP Status, Model, IAA



## Proposed 2015 PWG Meetings

- February 3-5 (El Segundo, CA, hosted by Xerox)
- April 28-May 1 (Cupertino, CA, Joint PWG/ OpenPrinting, hosted by Apple)
- August 11-13 (Camas, WA, hosted by Sharp)
- November 3-5 (Location TBD, hoping for Eastern US)





#### 34 Members (31 Voting, 3 Non-Voting)

Apple	ezeep	Meteor Network	Samsung
Brother Industries	Fenestrae B.V.	Microsoft	Sharp Labs
Canon	Fuji Xerox	MPI Tech	Technical Interface Consulting (N-V)
Conexant Systems	Hewlett Packard	MWA Intelligence	Thinxtream Technologies
CSR	High North	Nancy Chen	Toshiba America Business Solutions
Danny Brennan	Intel	Northlake	Tykodi Consulting Services LLC
Daniel Dressler (N-V)	Konica Minolta	Oki Data	Xerox
Digital Imaging Technologies	Kyocera Document Solutions Inc.	PageTech (N-V)	
Epson	Lexmark	Ricoh	

Invoices for 2015 Dues Have Been Sent



## PWG Officers (2013-2015 Term)

- PWG Chair: Michael Sweet, Apple
- PWG Vice-Chair: Nancy Chen
- PWG Secretary: Ira McDonald, High North





Semantic Model (SM) WG needs a secretary

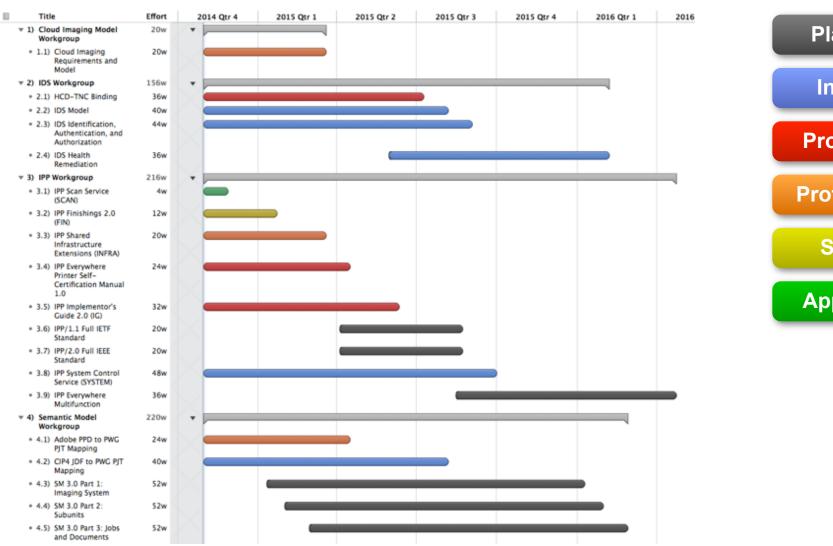


# The Printer Working Group

**PWG Workgroup Status** 







Planned

Interim

**Prototype** 

**Prototyped** 

Stable

**Approved** 



# The Printer Working Group

Semantic Model Workgroup Status Daniel Manchala (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 Imaging System. The Objectives are:
  - The definition of a framework for the complete Imaging Semantic Model.
  - Drive to a standard semantic definition for an Imaging System's Subunits, Services, Jobs and Documents.
  - Agreement on the semantics of their attributes, operations and parameters.

#### Semantic Model WG Officers

- SM WG Chair:
  - Daniel Manchala (Xerox)
- SM WG Vice-Chair
  - Paul Tykodi (TCS)
- SM WG Secretary:
  - TBD (volunteers needed)
- SM WG Document Editors:
  - Nancy Chen CWMP Printer Data Model
  - Jeremy Leber (Lexmark) SM3
  - Daniel Manchala (Xerox) SM3, SM3 Schema
  - Ira McDonald (High North) CWMP Printer Data Model, JDFMAP
  - Michael Sweet (Apple) PPDMAP
  - Paul Tykodi (TCS) SM3, AFPMAP
  - Bill Wagner (TIC) SM3
  - Rick Yardumian (Canon) JDFMAP

### Approved Documents:

- Multifunction Device Service Model Requirements (September 1, 2010)
- PWG 5105.1-2004: PWG Semantic Model Specification Version 1.00
- PWG 5108.1-2011: MFD Model and Common Semantics Version 1.00
- PWG 5108.02-2009: Network Scan Service Semantic Model and Service Interface Version 1.0
- PWG 5108.03-2009: Network Resource Service Semantic Model and Service Interface Version 1.0
- PWG 5108.04-2011: Copy Service Semantic Model and Service Interface Version 1.00
- PWG 5108.05-2011: FaxOut Semantic Model and Service Interface
- PWG 5108.06-2011: System Object and System Control Service Semantics Version 1.0
- PWG 5108.07-2012: PWG Print Job Ticket and Associated Capabilities Version 1.0





- Mapping Related Standards
  - CIP4 JDF to PWG PJT mapping (JDFMAP)
    - Completed most of the elements in the table (except for some complex mappings)
  - Adobe PPD to PWG PJT mapping (PPDMAP)
    - Issue stable draft and advance to PWG Last Call
- Semantic Model 3.0
  - Part 1: Imaging System
  - Part 2: Subunits
  - Part 3: Jobs and Documents
  - Add Transform Use Cases
  - Subscriptions and Notifications

#### Schema Status

- Named version (v1.180) published for PWG Print Job Ticket and Associated Capabilities
- Latest (v2.904) Up to date with In Progress specifications
  - Cloud Print extensions (WIP WSDL operations needs update)



#### On-hold and Potential Documents

#### On-hold Documents

- CWMP Printer Data Model
- Mapping of MSPS to PWG PJT (MSPSMAP)

#### Potential Documents

- Subject to volunteers to be Editors
- AFPMAP (AFPMAP MOD:CA-P and IPDS to PWG PJT)
- Service Integration with Workflow Environments v1.0
  - Using PWG SM Services in workflow environments, this document will describe how to combine PWG Semantic Model services in order to support workflow and job transfer solutions.

## More Info/How to participate

- We welcome participation from all interested parties
- SM Web Page:
  - http://www.pwg.org/sm
- Subscribe to the SM3 mailing list:
  - https://www.pwg.org/mailman/listinfo/sm3
  - sm3@pwg.org
- SM WG holds bi-weekly phone conferences announced on the SM3 mailing list
  - Next conference call is December 1, 2014 at 2pm ET
  - Conference calls on same weeks as Cloud conference calls
  - Conference calls on opposite weeks of IDS conference calls



# The Printer Working Group

IPP Workgroup Status
Paul Tykodi (TCS), Ira McDonald (High North)





- 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 Shared Infrastructure Extensions (IPPINFRA), IPP System Control Service, IPP over HTTPS Transport Binding and "ipps" URI Scheme, LDAP Schema for Printer Services
  - Michael Sweet (Apple) IPP Shared Infrastructure Extensions (IPPINFRA), IPP System Control Service, IPP over HTTPS Transport Binding and "ipps" URI Scheme, LDAP Schema for Printer Services, IPP Finishings 2.0 (FIN)
  - Smith Kennedy (HP) IPP Implementor's Guide 2.0 (IG)
  - Peter Zehler (Xerox) IPP Scan Service (Scan)

#### **IPP WG Status**



- IETF RFCs in development:
  - IETF IPP over HTTPS Transport Binding and "ipps" URI Scheme
     IETF Last Call until 11/25/14
  - IETF LDAP Schema for Printer Services (updates RFC 3712)
     IETF RFC Editor's Queue
- PWG Specifications in development:
  - IPP Everywhere Printer Self-Certification Manual 1.0
    - Prototype Draft
    - IPP Finishings 2.0
    - IPP Implementors Guide 2.0
    - IPP Scan Service

- Stable Draft (PWG Last Call Complete)
- Prototype Draft
- Stable Draft (PWG Formal Vote Complete)
- IPP Shared Infrastructure Extensions (IPPINFRA)
  - Prototype Draft
- IPP System Control Service (SYSTEM)
  - Interim Draft

### **IPP WG Status**



- Recent Candidate Standards:
  - PWG 5100.15-2014: IPP FaxOut Service (errata)
- Up-to-date pending IANA registrations online:
  - http://www.pwg.org/ipp/ipp-registrations.xml
  - Continue to maintain this in parallel for new specifications
    - PWG version includes draft specifications that have reached prototype status
  - Also pending errata for PWG 5100.9 and 5107.3 to correct xxx-error usage (per WG mailing list discussion)
    - Explain issues and update registry for IANA Printer MIB (ASN.1 comments)
    - Update IANA IPP registry for keywords that do not require "-error" on the end

## 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
  - https://www.pwg.org/mailman/listinfo/ipp
- IPP WG holds bi-weekly phone conferences announced on the IPP mailing list
  - Next conference calls November 17, 2014 and December 1, 2014 at 3pm ET
  - Held on opposite weeks of Cloud Imaging Model WG
  - Held on same weeks of Imaging Device Security WG



# The Printer Working Group

**IDS Workgroup Status** 

Joe Murdock (Sharp), Alan Sukert (Xerox)

## Purpose of the effort

- IDS is investigating and defining standards for addressing general security attributes for imaging devices and services. Our general goals are to:
  - Define standard metrics and protocol bindings to assess the health of Hardcopy Devices to gauge if they should be granted access to a network.
  - Define a set of standard security and policy attributes and values for authorizing Hard Copy Devices, their services and users in a global workspace
  - Provide a general security model for other PWG standards to reference
- IDS is also providing a path for vendors to review and contribute to the definition of new Common Criteria MFP Protection Profiles

#### Officers



- Chair:
  - Joe Murdock (Sharp Labs)
- Vice-Chair:
  - Alan Sukert (Xerox)
- Secretary:
  - Alan Sukert (Xerox)
- Document Editors:

Ira McDonald (High North): HCD-TNC

**IDS-Model** 

Joe Murdock (Sharp Labs): IDS-Model

IDS-IAA

Alan Sukert (Xerox): IDS-IAA



### Approved Candidate Standards

- PWG 5110.1-2014
  - HCD-Attributes
- PWG 5110.2-2013
  - HCD-NAP
- PWG 5110.3-2013
  - PWG-LOG Common Log

#### **Current Document Status**

- HCD-TNC Binding Document
  - Need prototype implementation
- IDS-Model Common Requirements
  - Define core IDS security model and integrate into SM3
    - Security Actors, Objects, Roles, and Types
    - Security Ticket XML Schema
    - Security operations (WSDL)
  - Prototype draft completion date Q1, 2015
- IDS-IAA specification phase 1
  - Phase 1 Initial version to address Actor and Object privileges and permissions
  - Prototype draft completion date Q2, 2015





- IDS Health Remediation
  - Prototype draft completion TBD

### Next Steps



- IDS TNC Binding
  - NEED A PROTOTYPE!!!
    - A partial implementation to indicate understanding is acceptable
    - Anonymous prototype announcements are allowed
- IDS Model specification
  - Finalize Actor and Object roles
  - Complete documentation of Security Ticket top-level elements
- IDS Identification, Authentication and Authorization specification
  - Phase 1 Definition of core set of Policy Attributes
    - Access control values
- MFP Technical Community monitor progress of Protection Profile work
- Review and Update IDS Charter
- Resume IDS Health Remediation





- We welcome participation from PWG member companies and input from the user community
- The group maintains a Web Page for IDS update:
  - http://www.pwg.org/ids/index.html
- To subscribe to the IDS mailing list, go to:
  - https://www.pwg.org/mailman/listinfo/ids
- The group holds bi-weekly conference calls on Mondays at 11:00AM PST/2:00PM EST
  - Next teleconference November 17, 2014
  - Conference calls on same weeks as IPP conference calls
  - Conference calls on opposite weeks of SM conference calls





### The Printer Working Group

Cloud Imaging Model Workgroup Status Ron Nevo (Samsung), Bill Wagner (TIC)

#### Introduction



- The intent of the Cloud Imaging Model Working Group is to develop a model for providing Imaging Services via a Cloud Imaging System in a way consistent with the PWG Semantic Model.
- The current PWG Cloud Imaging Model contends that the operations interface between a User Client and a Cloud Imaging Service is no different than that between a User Client and any networked Imaging Service, with the exception of asynchronous notification capability (if any).
- However, Cloud Imaging Services often must interface with out-of-cloud end devices (e.g., printers, scanners) to which direct access is blocked by a firewall. The PWG Model identifies a Local Imaging System Proxy intermediate agent and defines a new set of operations from Proxy to Cloud Service.

#### Officers and Contributors

- Chair: Ron Nevo (Samsung)
- Vice Chair: Bill Wagner (TIC)
- Secretary: Michael Sweet (Apple)
- Document Editors:
  - Bill Wagner (TIC): Editor
  - Ron Nevo (Samsung): Editor

# PWG TM

#### Status of Requirements and Model

#### Draft at:

http://ftp.pwg.org/pub/pwg/cloud/wd/wd-cloudimagingmodel10-20141028.pdf

#### Schedule

- Current Draft is at Prototype Draft level, nominally complete but subject to review and correction
- Advance to Stable level, working group last call, and PWG Last Call requires notice of prototyping of the model binding by either the IPP or SM WG.
- It is anticipated that IPP INFRA interoperability testing and specification Last Call will be completed by Q4 2014, and that the Cloud Imaging Requirements and Model Specification may then be advanced to stable state, submitted to WG and then PWG Last Call, and then voted on.

#### Next Steps

- On receiving prototype notice on IPP INFRA with prototype comments, draft will be updated and advanced to Stable level and subjected to WG last call.
- Working Group approved draft is submitted to PWG Last Call, and Last Call comments are resolved prior to putting the specification up for PWG Vote.
- When the Cloud Model specification is approved, the Cloud Model information will be transferred to the Semantic Model WG for inclusion into SM3.
- The Cloud Imaging Model Workgroup Charter identifies no further projects. beyond this Requirements and Model specification.

# PWG TM

### Cloud Imaging WG Participation

- We welcome participation from all interested parties
- Cloud Imaging Workgroup Web page
  - http://www.pwg.org/cloud/index.html
- 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 December 1, 2014 at 3 pm (ET)
  - Conference calls on same weeks as SM conference calls
  - Conference calls on opposite weeks of IPP conference calls



### The Printer Working Group

Liaison Status

#### AFP Consortium - AFPMAP

- Paul Tykodi created a small portion of the proposed MO:DCA-P and IPDS mappings to the PWG PJT
- These mappings were reviewed at the AFP Consortium's meeting in October 2013
- The AFP Consortium is now considering two approaches:
  - Do a full mapping document (AFPMAP) with the PWG Semantic Model WG
  - Extend the AFP model to support multiple job ticket formats, including PWG PJT

#### CIP4 - JDFMAP



- In October 2011, PWG started developing mappings of Adobe PPD, CIP4 JDF, and MS Print Schema to PWG PJT
- CIP4 officers agreed in December 2013 to establish a liaison with PWG, with JDFMAP spec to be developed in the PWG SM WG with reviews and contributions from CIP4 members for tricky and complex mappings
- Rainer Prosi (CIP4 CTO) attended the PWG F2F meetings in February 2014 and May 2014 and an ongoing series of PWG SM WG special conference calls reviewing the JDFMAP spec
- Ira McDonald (High North) and Rick Yardumian (Canon) have been updating the JDFMAP spec as work continues
- Prototype draft expected in Q1 2015

### TCG News (1/3)

- Next TCG Members Meeting
  - 23-27 February 2015 San Diego, CA
- Trusted Mobility Solutions (TMS)
  - Scope: enterprise, medical, banking, virtualization, mobile mgmt
  - TCG formal liaison with Mobey Forum (mobile banking)
  - TCG pending formal liaison with Open Mobile Alliance (device mgmt)
  - TCG published: TMS BYOD Use Cases October 2013
    - http://www.trustedcomputinggroup.org/resources/ tms\_use\_cases\_\_bring\_your\_own\_device\_byod
- Embedded Systems (EmSys)
  - Scope: Auto, IoT, SmartGrid, Financial, Medical, Industrial Ctrl
  - New IoT Subgroup chartered
  - Public review: TPM 2.0 Auto Thin ends 19 August 2014
    - http://www.trustedcomputinggroup.org/resources/ tcg\_tpm\_20\_library\_profile\_for\_automotivethin





- PC Client
  - Public review: PC Client TPM Profile ended 22 July 2014
    - http://www.trustedcomputinggroup.org/resources/ pc\_client\_platform\_tpm\_profile\_ptp\_specification
- Mobile Platform (MPWG)
  - Scope: Mobile tablets, phones, PDAs, eBook readers, etc.
  - TCG formal liaison with Mobey Forum (mobile banking)
  - Public review: TPM 2.0 Mobile Reference Arch ended 3 June 2014
    - http://www.trustedcomputinggroup.org/resources/ tpm\_20\_mobile\_reference\_architecture\_specification
  - Public review: TPM 2.0 Mobile CRB Interface ended 3 June 2014
    - http://www.trustedcomputinggroup.org/resources/ tpm\_20\_mobile\_command\_response\_buffer\_interface\_specification

### TCG News (3/3)

- Trusted Multi-tenant Infrastructure (TMI)
  - Scope: Trusted Cloud/SDN end-to-end reference models
  - TCG published: TMI Reference Model December 2013
    - http://www.trustedcomputinggroup.org/resources/ trusted multitenant infrastructure reference framework
  - TCG published: TMI Use Cases December 2013
    - http://www.trustedcomputinggroup.org/resources/ tcg\_trusted\_multitenant\_infrastructure\_use\_cases

#### Wi-Fi Alliance



- The Wi-Fi Alliance has published a set of new specifications for Wi-Fi Peer-to-Peer (P2P) services
- The specifications define discovery, transport, and file formats for services using a Wi-Fi Direct connection
  - Collectively called the Application Service Protocol ("ASP") v1.0
- The Wi-Fi P2P Services Print specification defines a profile of IPP/2.0 that is generally a subset of IPP Everywhere
  - 2 streaming raster formats required for Clients, at least one must be supported by a Printer:
    - PWG Raster
    - PDF-based raster format (not the PWG PDF/is profile...)
- New work for 2015 will expand on ASP 1.0

#### W3C - CSS



- The PWG proposed CSS extensions to the W3C that provide both basic-intent and explicit (JDF, PJT, etc.) job tickets in August 2013
  - http://ftp.pwg.org/pub/pwg/general/slides/pwg-w3cproperties-20130823.pdf
- Subsequent discussions with the W3C CSS WG have resulted in a request for a white paper to formalize the proposal
- Paul Tykodi is preparing the white paper



### Other Questions / Comments





#### Next PWG Meeting

February 3-5 (El Segundo, CA, hosted by Xerox)





Thank you Conexant for hosting this meeting!



### The Printer Working Group

How to Write a PWG Document Michael Sweet (Apple)

### Getting Started

- PWG working draft documents are generally distributed and edited as Microsoft Word documents (.docx), with static PDFs for viewing
- Change tracking must be enabled
  - Deleted text should be hidden (shown in change bubbles to the side) rather than struck through inline for readability
- Templates are available on the PWG FTP server and are compatible with:
  - Microsoft Office 2007 and later on Windows
  - Microsoft Office 2011 and later on OS X
  - Office365 on mobile devices (iOS, Android, etc.)
  - LibreOffice 4.3 (line numbering issues)

### The Templates



- Working draft:
  - http://ftp.pwg.org/pub/pwg/general/templates/wdtemplate.dotx
- White paper:
  - http://ftp.pwg.org/pub/pwg/general/templates/whitetemplate.docx
- The main difference between the two is the boilerplate content - the white paper template actually uses the working draft template
- ".docx" is a Word document
  - Template embedded in document
- ".dotx" is a Word template
  - Need to create a new document using the template

## Naming Your Document



- Filenames must not contain spaces
- All working drafts, regardless of type, start with "wd-" and end with the document version and extension, e.g.:
  - wd-document10.docx
- If you are writing a document for a workgroup, use the workgroup abbreviation as a prefix for the name, e.g.:
  - wd-idsdocument10.docx
- If you are writing a document for presentation to the PWG, use your company name or last name followed by a hyphen as a prefix, e.g.:
  - wd-sweet-document10.docx
  - wd-apple-document10.docx

#### Uploading Your Document

- Save a copy of your document with the year, month, and day:
  - wd-sweet-document10-20141104.docx
- Save PDF version(s) of your document, too:
  - wd-sweet-document10-20141104.pdf (clean)
  - wd-sweet-document10-20141104-rev.pdf (redlined)
- Upload the document through the PWG.org web site
  - Send an email to <u>webmaster@pwg.org</u> if your account does not have editor privileges





- 1. Start with a template (recommended)
  - This is by far the most trouble-free approach
  - All of the boilerplate content is taken care of
- 2. Copy an existing document into a template
  - Often the simplest way to convert an existing document to the PWG template
  - Avoids mixing the old and new document templates
  - Expect to spend an afternoon/day for full-length documents
- 3. Apply the working draft template to an existing document
  - Can be problematic due to the PWG template using IEEE styles/names and not the base MS template styles/names
  - Need to copy boilerplate content
  - At least as much work as #2, but might be appropriate for some documents

### Template Styles



- Most text uses the "IEEEStds Paragraph" style
- Headings use the "IEEEStds Level N Header" styles
- Lists use the "Bulleted List", "List Paragraph", or "Numbered List" styles
  - Bulleted lists are used to list non-normative items
  - List paragraphs are used to list enumerated or keyword values
  - Numbered lists are used to list normative items (conformance requirements, etc.)
- References use the "PWG Reference" style
  - [reference] *TAB* Author(s), "Title", ...
- Addresses and URLs use the "Address" style
- IANA registrations and other monospace text uses the "Example" style
- Table cells use the "Normal" style

#### Figures and Tables

- Figures can be pasted in and centered
  - Add a figure caption under each figure: "Figure N Title of Figure"
- Tables use the "PWG Table" table style
  - Add a table caption *above* each table: "Table N Title of Table"
  - Make sure that "First Column" is unchecked in the table options
  - On long tables that span multiple pages, make sure to flag the first row as a header row in the table row properties
  - Word creates a full width table by default; adjust the cell widths according to the content and center the table afterwards
- When referencing figures and tables, never write "the figure below shows ..." or "the table above lists ...", but instead insert a cross-reference: "Figure 42 shows ...", "Table 13 lists ...", etc.
  - Makes pagination changes less likely to cause problems

#### References



- All document references use the form "[name]", where "name" is a sequence of uppercase letters, digits, period ("."), and hyphen ("-")
  - OK: [ISO10646], [PWG5100.12], [RFC2911], [W3C-JFIF]
  - Not OK: [ISO 10646], [pwg5100.12], [rfc 2911], [W3C\_jfif]
- Use the full document title the first time you reference a document, then just "[name]" afterwards
- Normative References are things you depend on/require.
   For example, IPP specifications all have a normative reference to RFC 2911 (IPP/1.1 Model and Semantics)
- Informative References are things the provide additional background information, such as white papers, web sites, and examples
- All references are listed at the end of the document

### References (con't)



- For commonly referenced documents, copy them from an existing PWG working draft or published document
- Otherwise, the general format is:

```
[reference] TAB F. Last, F. Last2, ..., "Title of Document", Standard Number, Month Year, URL
```

#### Examples:

```
[ISO10646] "Information technology -- Universal Coded Character Set (UCS)", ISO/IEC 10646:2011
```

[PWG5100.12] R. Bergman, H. Lewis, I. McDonald, M. Sweet, "IPP/ 2.0 Second Edition", PWG 5100.12-2011, February 2011, <a href="http://www.pwg.org/pub/pwg/candidates/cs-ipp20-20110214-5100.12.pdf">http://www.pwg.org/pub/pwg/candidates/cs-ipp20-20110214-5100.12.pdf</a>

#### Demo



### Additional Reading

- PWG.org Participation page:
  - http://www.pwg.org/chair/participating.html
- Microsoft course on Word templates:
  - http://office.microsoft.com/en-ca/training/save-time-withtemplates-RZ010223218.aspx
- Published documents:
  - http://ftp.pwg.org/pub/pwg/candidates
  - http://ftp.pwg.org/pub/pwg/informational
- Current file naming policy (under revision):
  - http://ftp.pwg.org/pub/pwg/general/process/pwg-namespacepolicy-20060112.txt