



The Printer Working Group

Semantic Model Working Group

Thursday, Aug 8, 2013

Camas, WA

Daniel Manchala (Xerox)



SM Meeting Agenda (Thu)

Session (9:00-12:00 PM PST)

- Status of current specifications and schema
- W3C Forum paper
- Mike Sweet / Paul Tykodi / Bill Wagner to present paper at W3C.
- CWMP Printer Data Model (Standards track paper by Ira / Nancy)
- Charter: What specifications needs to be done (Paul Tykodi)
- SM 3.0
 - AddHardCopyDocument
 - What should we name this as ? (SM 2.0 or SM 3.0)
 - Harmonize Word and HTML versions of the Schema
 - Tool to use for viewing or working on Schema
 - Copy Service



Semantic Model Meeting Logistics

- The documents and schema used are available from the SM page <<http://www.pwg.org/mfd>>
- The phone bridge and WebEx will be the same as used throughout the meeting
- Officers
 - Daniel Manchala (Xerox) – Chair
 - Paul Tykodi (TCS) – Vice Chair
 - Secretary (need to fill this position)



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>



Approved Documents

MFD Common Semantics: *Approved April 2011*

- PWG5108.01-2011:
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*

- PWG5108.04-2011:
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 Service Semantic Model and Service Interface Version 1.0
- <ftp://ftp.pwg.org/pub/pwg/candidates/cs-sm20-faxout10-20110809-5108.05.pdf>

System Control Service: *Approved February 2012*

- PWG 5108.06-2011:
System Object and System Control Service Semantics Version 1.0
- <ftp://ftp.pwg.org/pub/pwg/candidates/cs-sm20-system10-20120217-5108.06.pdf>

Print Job Ticket: *Approved August 2012*

- PWG 5108.07-2012:
PWG Print Job Ticket and Associated Capabilities Version 1.0
- <ftp://ftp.pwg.org/pub/pwg/candidates/cs-sm20-pjt10-20120813-5108.07.pdf>



In Progress Documents

Transform Service

Semantic Model and Service Interface – August 7, 2012 Interim Draft

<ftp://ftp.pwg.org/pub/pwg/mfd/wd/wd-mfdtransformmodel01-20120807.pdf>

Mapping Related Standards

Mapping Related Standards to PWG PJT v1.0

Semantic Model / MFD Charter

Revise the Semantic Model/MFD charter



Schema Status

- Named version (v1.180) published for Print Job Ticket and Associated Capabilities
- Latest (v1.185) Up to date with In Progress specifications
 - Transform Service (mostly complete for 1.0)
 - FaxIn Service (up to date)
 - FaxOut Service (up to date)
 - Cloud Print extensions (WIP – WSDL operations needs update)



Remaining Projects

- Projects planned to be addressed after the current activities are complete. (Subject to volunteers to be Editors)
 - Transform Service
 - Semantic Model v3.0 (Print, Scan, Copy, FaxIn, FaxOut, EmailIn, EmailOut, Transform will be merged from previous models)
 - Resource Service
 - Job Ticket Model
 - Service Integration with Workflow Environments v1.0
 - Mapping Standard v2.0 (DMTF-CIM, AFP & MODCA)
 - CWMP



Next Steps

- Appoint Secretary of Semantic Model Working Group
- Complete Last Call and Formal Vote on
 - Transform Service: Semantic Model and Service Interface
- Continue Mapping activity
 - Mapping related standards to PWG PJT V1.0 (PJTMAP) – last call and formal vote.
 - Create V2.0 of the mapping document with additional standards.
- Web Services binding of Cloud Imaging Model
 - Maybe as part of SM v3.0
- Update the “MFD Model and Common Semantics Version 1.0” to be the PWG Semantic Model Specification Version 3.0
 - 1.0: Print Service
 - 2.0: Extended it for other MFD Services
 - 3.0: Add complete imaging systems and workflow



Hardcopy Documents

- One common last call comment was concerning the conditionally required hardcopy document support
 - SM FaxOut 1.0 makes them unconditionally required
 - IPP FaxOut relaxed this to conditionally required for printers with scanners
- Having hardcopy document support is important:
 - Mobile devices are increasingly used as the primary UI for MFDs
 - FaxOut often makes use of hardcopy documents to capture signatures, etc.
- IPP FaxOut supports a richer version of SM FaxOut's `AddFaxOutHardcopyDocument`
 - SM has `InputSource`
 - IPP has `input-attributes` (collection) with `input-color-mode`, `input-media`, `input-orientation-requested`, `input-quality`, `input-resolution`, `input-sides`, and `input-source`
 - IPP version based on SM Copy Service 1.0



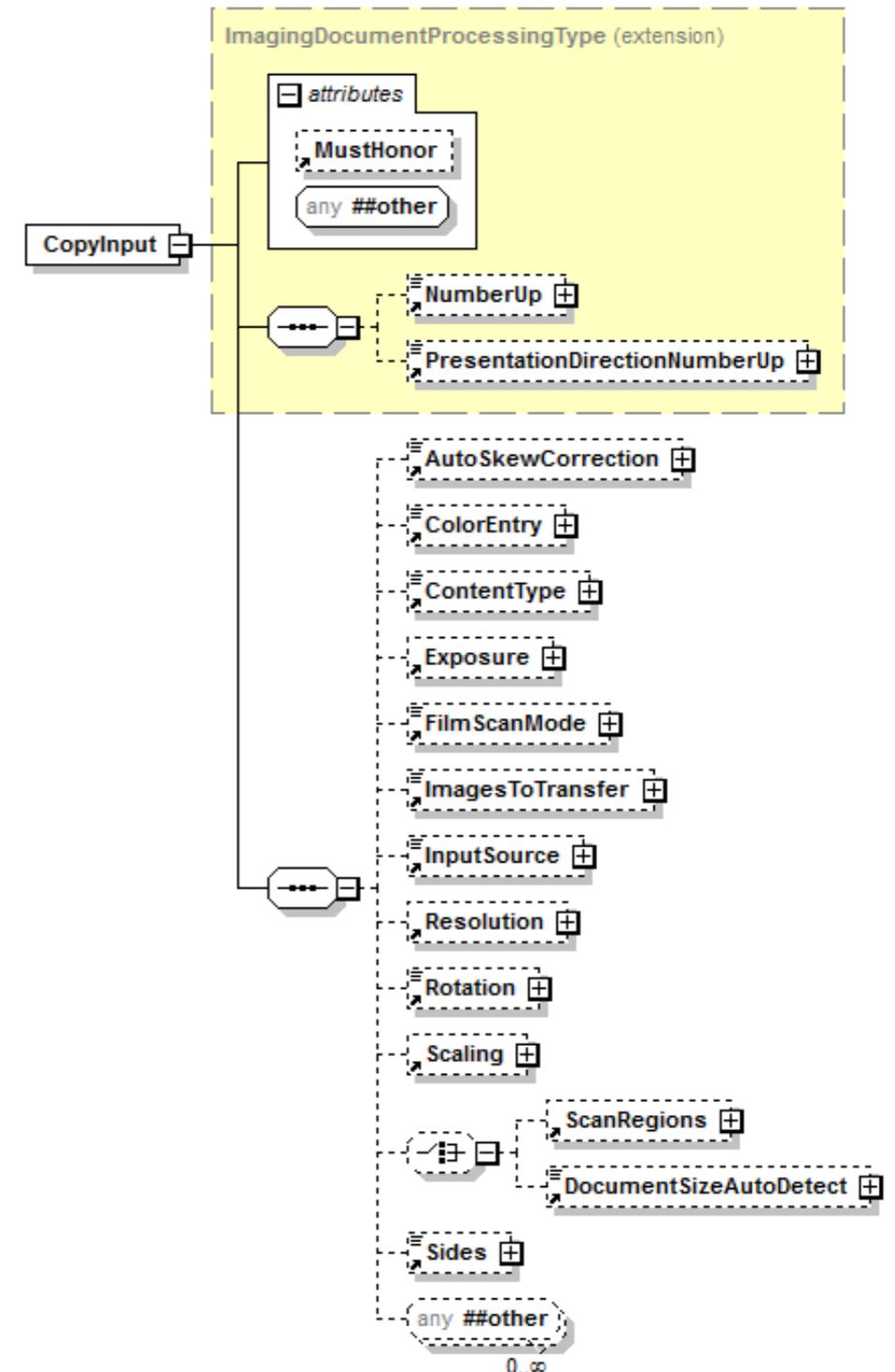
Hardcopy Documents

- What is a hardcopy document?
 - An ordered collection of scanned images representing the sides of physical sheets of media.
- How is a hardcopy document (object) created?
 - Using the Add<service>HardcopyDocument (SM) or Send-Hardcopy-Document (IPP) operation with an existing Job as the target
- What format does a hardcopy document use?
 - This is implementation-defined. In fact, a hardcopy document may never exist as a whole file but might be streamed from the scanner, much like digital documents submitted using the Send<service>Document or Send<service>Uri operations may stream document data to the service.
- What elements/attributes are used to create hardcopy document objects?
 - SM Copy Service has a list (next slide)

SM CopyInput DocumentProcessing Elements



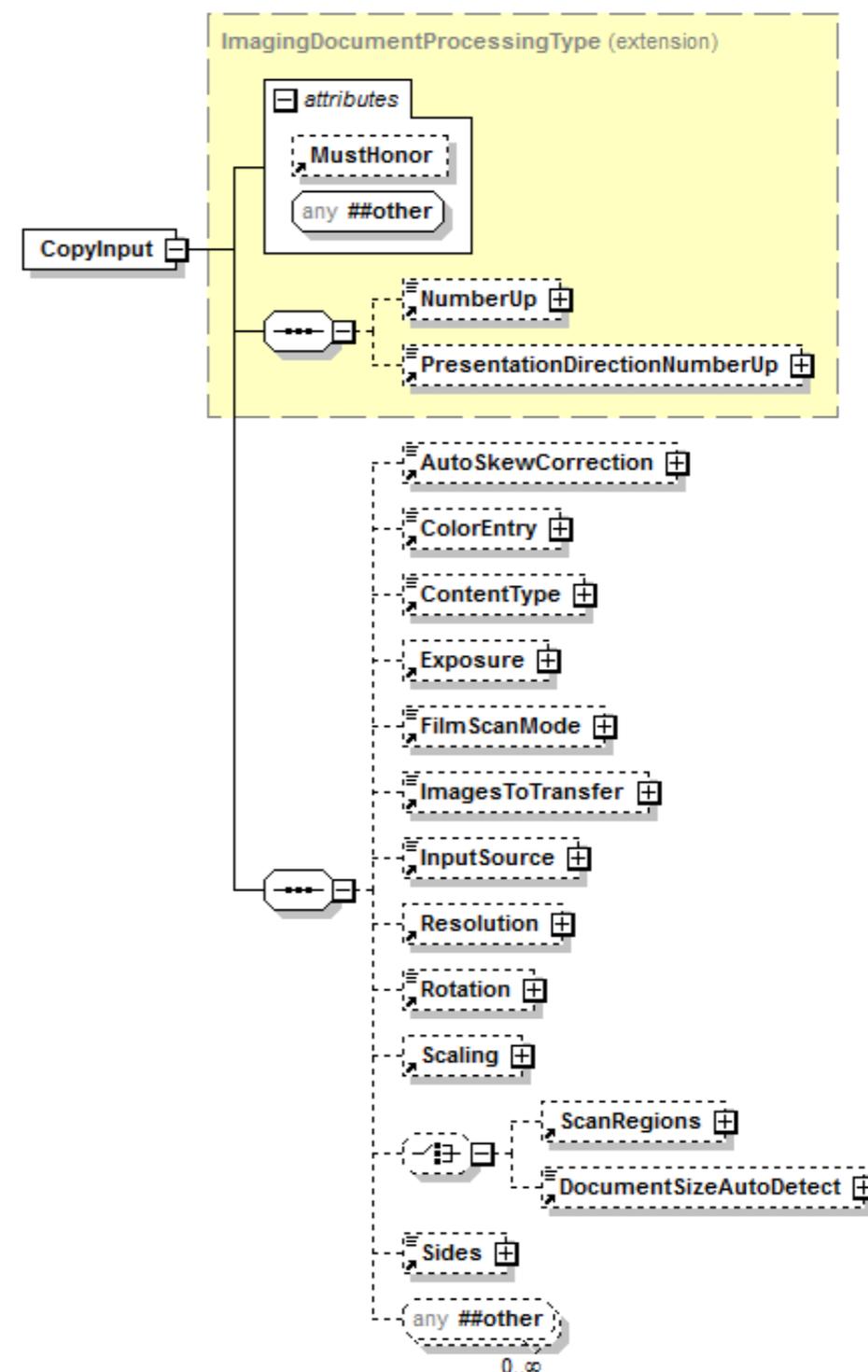
- AutoSkewCorrection = boolean
- ColorEntry = input-color-mode
- ContentType = Auto, Halftone, LineArt, Magazine, Photo, Text, TextAndPhoto
- Exposure = AutoExposure OR Brightness + Contrast + Sharpness
- FilmScanMode = BlackAndWhiteNegativeFilm, ColorNegativeFilm, ColorSlideFilm, NotApplicable
- ImagesToTransfer = integer
- InputSource = input-source
- Resolution = input-resolution
- Rotation = input-orientation-requested
- Scaling = AutoScaling OR ScalingHeight (integer) + ScalingWidth (integer) (percentages)



SM CopyInput DocumentProcessing Elements (con't)



- ScanRegions = list of rectangles
- DocumentSizeAutoDetect = boolean
 - IPP FaxOut uses input-media with standard media size names or 'auto' for auto-detect
- Sides = input-sides
- Not Included in SM CopyInput:
 - Media (input-media), although ScanRegions can be used
 - Quality (input-quality)
- Not Included in SM FaxOut:
 - Everything but InputSource





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.**