PWG MFD Working Group Face-to-Face Meeting Minutes
At Oki Data, Mt. Laurel, NJ
April 27-28, 2009

April 27 Monday –

1. **Attendees**:

Nancy Chen,	Okidata
Lee Farrell,	Canon
Ira McDonald*,	High North Inc.
Joe Murdock	Sharp
Harry Lewis	InfoPrint
Glen Petrie*,	Epson
Jerry Thrasher,	Lexmark
Bill Wagner,	TIC
Dave Whitehead,	Lexmark
Peter Zehler,	Xerox

   *Phone-in attendee

2. **Introduction & PWG IP Policy :**
   Peter Zehler, the MFD Working Group Chairman reminded attendees the meeting is being
   conducted in accord with the PWG IP policy. No objection.

3. **Minutes Taker Assigned: Nancy Chen**

4. **Agenda:**
   There was no objection to the agenda below:
   1:00-1:15 : Introductions, Assign Minute Taker(s)
   1:15-1:30 : Scan Service Vote Results, Namespace & Next steps
   1:30-1:45 : Resource Service status
   1:45-2:30 : MFD Discussion
   2:30-2:45 : Break
   2:45-?:?? : MFD Discussion continuation

   We agreed to review the Resource Service spec page by page as a discussion forum for the PWG
   Last Call. This will bring the quorum of review members to >30% required by PWG process;
   otherwise the Last Call period must be extended if such quorum is not reached at the end of the
   period (May 13th).

5. **Scan Service Vote Results, Namespace & Next steps**
   (1) Vote Results:
   - 22 eligible members for vote
     - 9 Yes votes
     - 1 Abstain
   - Formal Approval requires

- o At least 25% of eligible members vote (6) – **has been met**
- o YES votes by at least 66% of votes (excluding abstentions) with no Strong Opposition (6) –**has been met**
- o YES votes by at least 80% of votes (excluding abstentions) with Strong Opposition – **does not apply**
- o At least 50% of votes (including abstentions) are YES (5) - **has been met**
- **The spec has passed approval vote.**

(2) Namespace:
- The PWG semantic namespace is published as: http://www.pwg.org/schemas/2009/4/sm which points to a web page that contains web links to the Service specifications (currently only Scan Service Candidate Standard specification numbered PWG5108.02-2009), Service WSDL and Service Operation message Schema (currently only Scan Service WSDL and Schema), and the root of PWG Semantic Schema ZIP file version 1.70 used for the Services. The file name for the Scan spec is ftp://ftp.pwg.org/pub/pwg/candidates/cs-sm20-scan-20090410-5108.02.pdf (.doc).
- The namespace needs to be registered with PWG. **AI: SC to update PWG name policy and add a section for XML namespace.** Same as what had done for PSI before. The Latest PWG namespace in Scan Service WSDL file is 2009/5 version.
- MFD WG web page at pwg.org has been updated to include links to all the WG latest documents (currently include Overall modeling, Print /Scan/ Resource/ FaxOut services) and PWG Semantic Schema/WSDL/XML files. **AI: Pete to update these links to point to the latest document files (Candidate Standard file for Scan Service).**

6. **Resource Service Specification Last Call Review Comments**
   (Last Call draft: ftp://ftp.pwg.org/pub/pwg/mfd/wd/wd-mfdresourcemodel10-20090417.pdf)
   - Change the title of the spec to wd-mfd-resource10-2009.
   - Change the format of the Table of Content to a common style.
   - Change the Copyright foot note and line 27 to include 2009 and cover the actual years this spec has spanned.
   - Strike "local or enterprise network connected" on line 188. Whether the service is locally resident in MFD or a network connected MFD is implementation dependent.
   - On line 207, replace Form with Logo. Form is not necessarily an image, could be a digitally created PDF document and stored by a user then used by Resource Service.
   - On line 206, replace "official corporate Logo" with "Form for document production".
   - Executable Resource should be addressed in the Security Consideration section as regarding how to securely distributing, storing executable resources. Our security consideration section should be comparable to IETF specs that always address the actual security threats. Ira will propose the text for this. Implementation that store Executable category Resource must implement strong access control to executable resources. Currently any user can store and retrieve a resource. We should limit these operations to only authorized users. Add text in operation section to state that all basic resource service operations are limited to authorized users only. Administrative operations are limited to administrators only. It's implementation dependent as to how to determine who are authorized users with various levels of accesses to different categories of resources. Similar text needs to be added in the Security Consideration section.

- The statement on Line 1151-52 should start a new paragraph.
- Delete "if so is required" on line 1144.
- Line 242 – 243: delete. The limitation is not applicable any more.
- Section 3.3 Rationale should be Section 4 Requirement and is followed the Section 4.1 Rationale for Resource Service Specification, Section 4.2 Out of Scope for Resource Service Model, Section 4.3 Model Mapping Convention.
- Line 244 'The protection of Resource from unauthorized access, disclosure, and alteration…' should be in the scope of Security consideration. However it's implementation is out of scope.
  - Add "The mechanism for" at the beginning of the sentence, and strike wording about security site policy.
- Figure 1 – Provide a sentence before the figure to introduce the diagram. Globally change Get/PutResource operations to Retrieve/StoreResource in the spec and Schema/WSDL, republish the Schema files and update associated Schema diagrams. The diagram needs to be cleaned up – numbers for the multiplicity relationship does not align well with the line.
- Line 295 – the applicable subunits for Resource Service should include not only Storages, but also optionally include consoles, interfaces, input/output channels, and processors. Currently processors is not modeled in MFD, needs to be added. Processors should be modeled after hrDeviceProcessor in the MIB. It is modeled in CIM and hrDeviceProcessor has been implemented by several printer vendors.
  - Pete to create processor subunit to be modeled after hrDeviceProcessor in Printer MIB.
- Line 352 – Storages is a Schema element that is a collection of different instance of Storage which maybe of different storage type. In semantic model spec convention, only the Storage element should be described.
- Line 349 – delete "only the subunit Storages is applicable to Resource Service".
- Section 6 – Need to add other applicable subunit descriptions.
- Section 7 – Line 818, client discovery of Resource Service should not be addressed; a Resource Service could be pre-configured instead of being discovered. Change the sentence on line 817-818 to 'user uses a local or remote resource client to interact with a selected Resource Service'.
- Section 7 – Line 781, Service discovery is out of scope in this spec; it's specific to Web Service binding. Remove the verbiage around service discovery, registration in this spec and also in the MFD overall model spec.
- Global change - Remove quotes from element names.
- Line 909 – change 'SHOULD' to 'MUST'. Add 'the authorized user identity' at the end of the list of filters. 'User identity' the most trusted user of the protocol.
- Line 925 – MTOM is web service specific, should belong in binding spec. Add '(e.g. MTOM [REF])' to the previous sentence as an example for a binary-safe transport mechanism. And delete this sentence.
- Globally replace 'SHALL' with 'MUST'
- Line 996 – Delete 'Note:'. Take the 'empty' out of the Note; state that 'the request MUST be a success return or a fault.
- In Section 7.2 add 'Each request or response message of an administrative operation may contain vendor extended parameters.' Remove all 'Notes' in the section. For response of an

operation, state that 'the request MUST be a success return or a fault.' And strike the rest of the text.

- Section 8.1 – Line 1068 typo "inter-operate'.
- Section 10 – Internationalization should add reference to RFC 2277 "IETF Policy on Character Sets and Languages" for resource service generated strings.
- Section 11 – Security Considerations.
  - o Resource Repository is out of scope. Remove any security consideration for Repository.
  - o Search globally to remove Resource Repository.
    - ▪ Figure 1 – Resource Repository should be changed to 'resource storage location'. Change 'Hosted Resource Service' to 'Remote Resource Service'.
    - ▪ Remove Resource Repository from Terminology.
    - ▪ Add 'the metadata describing a resource storage location' to Out of Scope section.
  - o Change 'End user' to 'user'.
  - o Globally replace 'repository' with 'storage location'.
  - o Strike lines 1135-1138, 1140-1144.
  - o Should not call out a specific secure transmission protocol requirement such as HTTPS in an abstract spec. Replace with "one or more secure communication protocol".
  - o Strike lines 1149-1150.
  - o Remove anything about signing and encryption. Add 'digital signing and encryption methods for Resources' Resource Service' in Out of Scope section.
  - o Move Section 11.3 to Out of Scope section.
- Remove Shah Bhatti from contributor list. Add Joe Murdock.

April 28, Tuesday –

1. Attendees:

Nancy Chen,	Okidata
Lee Farrell,	Canon
Mike Fenelon	Microsoft
Ira McDonald*,	High North Inc.
Joe Murdock	Sharp
Harry Lewis	InfoPrint
Glen Petrie*,	Epson
Jerry Thrasher,	Lexmark
Bill Wagner,	TIC
Dave Whitehead,	Lexmark
Peter Zehler,	Xerox

*Phone-in attendee

2. Introduction & PWG IP Policy :
Peter Zehler, the MFD Working Group Chairman reminded attendees the meeting is being conducted in accord with the PWG IP policy. No objection.

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2   **3. Minutes Taker Assigned: Nancy Chen**
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4   **4. Agenda :**
5   1:00-1:10 : Introductions, Assign Minute Taker(s)
6   1:10-2:15 : MFD Discussion continuation
7   2:15-2:30 : Break
8   2:30-4:30: MFD Discussion continuation or FaxOut Discussion
9   4:30-5:00: Next Steps
10
11   No objection to the proposed agenda.
12
13 **5. Review the Draft of MFD Overall Semantic Model**
14   (document file: ftp://ftp.pwg.org/pub/pwg/mfd/wd/wd-mfdoverallmod10-20090422.pdf)
15   • Need to globally replace '..' with '.'.
16   • Should XML Schema diagram be generated from the same program?
17   • Eliminate 'Global Resource', 'Resource Repository' from Terminology
18   • Model Concept:
19   o Figure 2 – Top level Elements of PWG Semantic Model Schema: the notes for Server
20   object is not applicable any more. Pete to remove the note from the schema.
21   o Members are called for reviewing Section 2.4 – 2.6 to determine whether these texts
22   culled from Scan Service spec are general enough and clear.
23   o Section 2.7.2 Content Coordinate System.
24   ▪ Figure 7 – Service Scanning coordinate :
25   • Need to define the height and width as the dimension for the Scan Region,
26   not for the entire platen; Scan Region is the Content Region for Scan
27   Service.
28   • In Print, the margin defines the coordinate system. Margin defines how far
29   from the edge of media the marker will able to mark. Origin of the margin
30   defines the maximum Content Region of the media and the origin of the
31   Content Region defines the area not excluded by the margin. Origin
32   defines the corner of the media, not the corner of the platen. For Print, the
33   origin of the content is the northwest corner of the media. Origin defines
34   the maximum content area.
35   o Section 2.5 Jobs, Documents, Tickets, Templates – The template relationship diagram
36   should reference Section 2.8 Job and JobTicket Lifecycle in which the relationship
37   between Job, Job Ticket, and Template is described.
38   o Section 2.8 Job, JobTicket Lifecycle – Process flow diagram should not be used for the
39   discussion of JobTicket lifecycle.
40   o Section 2.9 Subunits –
41   ▪ Processor subunit will be modeled.
42   ▪ Subunits in each service are used by, but not contained in the Service. Therefore
43   they are not modeled as inherited and extended from the set subunits common to
44   all services. Diagrams or texts describing such inheritance relationship should be
45   removed.

- Table 2 MFD Subunits – Column 2 describing the services applicable for a subunit should be removed. This should be described in individual service specs.
- Keyword values should be removed from the table describing the elements of each subunit. Provide references where these keywords are described (the namespace and the schema file).
- 'any' element in each subunit should be 'other' as vendor's extension point.
- There should be a general comment that states that there are extension points throughout the hierarchy of the schema of MFD model that serve as vendor's extension point for each group/element.
  - o Section 3 Service Theory of Operation, Operations and States –
    - Table 21 State Chance by Operation – Typo in the title : change 'Chance' to 'Change'.
    - Figure 30 Document State Transition Diagram– diagram may be enhanced.
    - Table 23 Common MFD Interface Requests and Responses –
      - Change Request or Response 'Arguments' to 'Parameters'.
      - Add a footnote to Validate<service>JobTicket to explain that this operation is named Validate<service>Job in Scan and Print services, but the semantic is the same.
      - In the description of Validate<service> JobTicket, explain that Validate<service> Job is the alias of this operation.
      - Section 3.3.2.9 Restart – Job History data SHOULD be preserved, instead of MUST. Job History is optional for implementation.
  - o Section 4 Service Model Component Elements –
    - Currently there is no DocumentDescription attribute in JobTicket in order to describe the metadata of a document for a job. There are only JobDescription, JobProcessing, and DocumentProcessing attributes in JobTicket. Only if you implemented Document submission operations, then you will be able to add DocumentDescription in DocumentTicket. You can provide metadata of a document in JobDescription otherwise.
    - All the capability elements have some elements inherited from Imaging super class, some are service specific. It should state that the inheritance is from ALL elements of Imaging super class, not just common elements of Imaging super class. There is no need to identify which elements in the capability is inherited from Imaging super class.
    - Table 28 Document Processing Capabilities – DocumentDigitalSignature is not of list of URI Schemes data type.
    - XXXExtensionPattern is a keyword used to represent vendor's extension keyword pattern used to extend the existing set of keywords. Bill will add this explanation in the documemt.
    - Line 1529 – 'State' should not be capitalized.
  - o Section 7 System –
    - Table 45 ServiceSupported and ServiceDeviceSupported Elements
      - Add ServiceType and define ServiceType WellKownValue
      - Add DeviceType and define DeviceType WellKownValue
    - System Interfaces should be changed to System Operations
      - Remove all operations which target a specific job.

- The following operations are appropriate for the System:
  - o Startup<service>Service - Required
  - o Shutdown<service>Service - Optional
  - o DisableAllServices – Optional
  - o EnableAllServices – Optional
  - o PauseAllServices - Optional
  - o ResumeAllService – Optional
- Table 43 - what is the state of the system
  - Need a roll-up algorithm from all individual service states. If all services are stopped/down/idle, the system is stopped/down/idle. If one service is processing, the system is processing. The system state can be a complex element that contains the collection of states of all services hosted on MFD. The roll-up state represents the best state of all service states.
  - Misssing StateReasons.

6. Next Steps

- Xerox has requested Copy Service as the next to be defined in MFD Working Group. This requires the MFD Overall Model document to be completed first.
- Complete the description of FaxIn, FaxOut, EmailIn, EmailOut, Transform services that need to be defined in the MFD Overall document.
- Plan to complete Copy and FaxOut services this year.
- Peter to fix the Scan Service specification file name on the PWG MFD web page.
- Need volunteer co-editor for MFD Working Group.
- Close Resource Service Last Call on May 13th, and prepare comments/resolutions review at the next teleconference.
- Next teleconference is on May 14, 2009, Thursday, 3pm EDT.