PWG MFD Working Group Teleconference Meeting Minutes
July 23, 2009

Attendees:

Nancy Chen,	Oki Data
Ira McDonald,	High North, Inc.
Bill Wagner,	TIC
Peter Zehler	Xerox

1. **Identify Minute Taker –** Nancy Chen

2. **Approval of minutes from last face-to-face meeting:** ftp://ftp.pwg.org/pub/pwg/mfd/minutes/ pwg-ftf-mfd-minutes-20090624-25.pdf

   No objection to the minutes.

3. **PWG process**
   Attendees were informed that the meeting is held in accord with the PWG Intellectual Property Policy. There was no objection.

4. **Agenda bashing**
   No changes to the agenda were suggested.

5. **Overview of recent schema changes**
   Pete showed the root of the updated schema, and he noted there is also a "pwgdeprecated.xsd" file for us to track what are the changes from the existing IPP/PWG Semantics v1.
   - Right now the root is the Server. The endpoints of communication are the individual Services and the System. The question is whether the System should be the root?
     - Ira noted in DMTF model, System is the parent of everything which contains protocols, logical devices, services,…, etc.
     - System provides overall operations for MFD and should be the root. SystemConfiguration is the Subunits that represent the actual instances of the Subunits. Important to note is that ConditionTable in SystemStatus represents general alerts/notifications; at Service level, the ConditionTable only shows the conditions that affect that Service. Many elements are the positive roll-up of Services. Agents and Managers should also be under the System.
     - The original Server as the root, came from the DPA model that has a Server that contains a print service. Now the DPA Server should be renamed to System to be consistent with the modern standard models such as DMTF CIM's ComputerSystem.
     - Conclusion: Pete will move System to be the root.
   - Pete reported that in the Schema he now has moved many common properties from ServiceDescription and ServiceStatus of Print Service into the ImagingService base class. He will continue to discuss and determine other necessary moves.
     - One suggestion is to have a System-specific Description and Status, but define the common ServiceDescription and ServiceStatus for the Services. Another comment is that elements that are not applicable should be distinguishable from that are optional in a Service.

- Pete will define SystemDescription, SystemStatus, SystemCapabilities, and define only those common elements across all services in the base classes of ServiceDescription, ServiceStatus, and ServiceCapabilities. The same change will be done for Subunits as the next step.

6. Discuss MFD Model and Overall Semantics - Interim Draft. (validate Bill's issues raised in email below before update of draft)

1) The "Print" service, following the IPP model, contained many more elements under Description and Status than any other service. Many of these elements appeared applicable to the MFD as a whole (and therefore would appear under System) and/or perhaps to each individual service. Many of these elements have now been put into the ServiceDescription and ServiceStatus general groups.

   a) Do those elements which have been put in the general groups reasonably apply to all services as well as to the system and, if so, what is the relationship between System values and Service values? (i.e., is the System value the default or the overriding value..or does it apply only to system-specific instances)

   This was discussed previously in the Schema change overview. Pete is in the process of defining new SystemDescription/Status/Capabilities, and the base classes of ServiceDescription/Status/Capabilities. Each Service has its service-specific values for the elements, should not use the values in System as default.

   b) Do any of the other Print Service specific elements also apply (with the appropriate service name) to the system and/or the general services element group? (e.g., MultipleDocumentJobsSupported, MultipleOperationTimeOut, MultipleOperationTimeoutAction" /, PrinterDetailedStatusMessages, PrinterMessageFromOperator, PrinterMoreInfo, PrinterMoreInfoManufacturer, PrinterSettableElementsSupported", ReferenceUriSchemesSupported, RepertoiresSupported, ResourcesSupported, UserDefinedValuesSupported, etc.)

   Pete will walk through all elements in System and Services and propose a straw-man model for System elements and Service elements, along with the rules for roll-up.

2) In response to a question about the "relationships" diagram within MFD (and indeed, the Functional Overview of a Multifunction Device discussion),
   Pete responded:

   "When discussing Services within an MFD, that maps to Services under Server. When we discuss Subunits within an MFD, that maps to SystemConfigurations within System. It looks as though there is some inconsistency as to what element represents the MFD in the schema. I am not sure how this should be resolved. I believe there are transport endpoints at which network services are available. For the individual MFD Services (e.g. Print, Scan) the schema element XxxService (e.g. Server.Services.PrintServices.PrintService) represents the active object. For the MFD as a whole the Schema element Server.System represents the

active object. I have begun defining a Web Service for the MFD as a whole. It seems to me that this inconsistency should be discussed this Thursday."

Consensus: We already agreed to change Server to System that contains Subunits and Services… The diagram of object relationship within MFD will be updated accordingly. The Overall document should clearly state it's a MFD System model, not a MFD Model.

3) The schema has included EM EmailIn and EmailOut as services for some time, but we never included them in the Services interface diagram that Pete drew up some time ago. Ira has explained that these are not restricted to communicating images and therefore not subject to inclusion in the overall FaxIn and FaxOut services. However, it is not clear to me that these are MFD services any more than HTTP, FTP and PSTN are MFD services. I would like some consensus that these are MFD services and what makes them MFD services, and how to include them in the Services Interface Diagram.
    - The updated Schema still has EmailIn and EmailOut for the following reasons:
        - FaxIn and FaxOut have requirement for document format (= image, can not be RIPed). EmailIn and EmailOut do not have the same requirement.
        - EmailIn and EmailOut have been services for many vendors' existing products (e.g. HP, Canon, Xerox, Sharp, Samsung, KM), offering digital sending as an EmailOut service that takes a scanned image and distributes it to the network via email. EmailIn takes a document emailed in and stores with Dublin Core metadata/prints/fax/transform the file. HTTP, FTP,… only move files, do not provide document metadata at all.

4) I have been restructuring the Overall document and am having difficulty following a reasonable hierarchical structure while still keeping the detailed elements descriptions at least close to each other. This is my current organization. I would appreciate some discussion.

    1 Introduction

    2 MFD Model

    2.1 The MFD Semantic Model

    2.2 The System

    2.3 The MFD Services

    2.4 Service Document Interfaces

    2.5 Functional Overview of a Multifunction Device

    3 MFD Model Concepts

    3.1 Jobs, Documents, Tickets and Templates

    3.2 Documents, Regions and Images

3.3 Coordinate Systems

3.4 Job and JobTicketLifecycle

3.5 DataTypes

4 Service Theory of Operation, Operations and States

4.1 General Service Sequence of Operation

4.2 Service, Job and Document States

4.3 Service Operations

5 Service Model Component Elements

5.1 JobTable

5.2 DefaultJobTicket

5.3 ServiceConfiguration - Subunits

5.4 ServiceCapabilities

5.5 ServiceStatus

6 Imaging Job Model

6.1 JobReceipt

6.2 JobStatus

6.3 JobTicket

7 Document Model

7.1 Document Receipt

7.2 Document Status

7.3 DocumentTicket

8 The System Model

8.1 The System Model Elements

8.2 System Operations

Ira would like the System model defined before Services in the outline. We ran out of time to discuss this item further.

7. Next Steps

- Pete to update the Schema, and coordinate with Bill for Overall spec changes.
- Bill felt he has to start all over for the Overall spec. He expressed his desire to have other people to step up for the editors of the Overall document.
- Next teleconference is in two weeks on August 6, Thursday, 3pm EDT.