Meeting Minute from PWG Semantic Model meeting

February 20 2007

1. Participants

Note that this list may be incomplete.

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Yuichi Niwa	Ricoh (BMLinkS Chair)	
Paul Danbold	Apple	
Shigeru Ueda	Canon	
Glen Petrie	Epson	
Takeshi Nakamura	Kyocera Mita	
Ole Skov	MPI Tech	
Chris Story	Ricoh	

2. PWG SM Discussion Overview

After lunch, Pete Zehler led a very informal [and slow] design discussion about the Semantic Model expansion. The current XML Schema work for "sketching out" for a multifunction device(MFD) has provided an initial framework for the inclusion of MFDs in the next version of the PWG Semantic Model.

The next step in this work is to flesh out the specific services (e.g. Scan, FaxIn, FaxOut, Copy) In order to flesh out these services it will be necessary to describe the attributes of the service and the Jobs and Documents they process. Of course we do not have the bandwidth to specify them all at once so we will need to decide what services have priority. Print has already been done. Scan seems a likely candidate since printing

and/or scanning are involved in some of the other MFP Services. Microsoft has published the WS-Scan specification that covers both the protocol and data model. Perhaps we can start with the data model for the Service/Job/Document used in WS-Scan. Mike Fenelon will check with Microsoft if that will be possible.

3. Operation Inheritance

One of the first questions to the group was whether all Services would have a Pause and Resume? The goal was to identify the set of operations that would be common to *all* Services. This would determine whether the operations could be inherited from a general Service class—or whether they need to be defined in each of the specific service(s).

After some discussion, it was noted that any operation with input or output parameters (other than an ID), or a return value other than success/fail would probably not be useful for a base class of Service. This led the group to decide that several of the operations should not be common.

- Common operations (abstracted from IPP)
    - Enable
    - Disable
    - Pause
    - Resume
    - HoldJob
    - ReleaseJob
    - CancelJob
    - PromoteJob
    - Restart
    - Shutdown
    - Startup
    - Deactivate
    - Activate
    - PauseAfterCurrentJob
    - HoldNewJobs
    - ReleaseNewJobs
    - RestartJob
    - ReprocessJob

- Service Specific Operations (abstracted from IPP)
    - CreateJob
    - SendDocument
    - SendUri
    - CloseJob
    - ValidateJob
    - GetJobs
    - GetJobElements
    - GetServiceElements

4. Initial Value Job vs xxx-supported

One of the differences between WS-Print and the PWG Semantic model was the representation for the defaults for a Job. WS-Print has reintroduced the DPA concept of an "Initial Value Job" (i.e. DefaultPrintTicket). In short it is an instance of a job without any documents. This values form the "Initial Value Job" will be used for any unspecified values in a new job submitted by a client. We need to decide whether we should maintain consistency with the current PWG model or embrace the "Initial Value Job" concept. Note that the current PWG xxx-suported nomenclature addresses only processing elements of a job. Description elements are not included. The group decided it should continue with the PWG convention. This applies not only to the xxx-default, but also to the xxx-supported and xxx-ready.
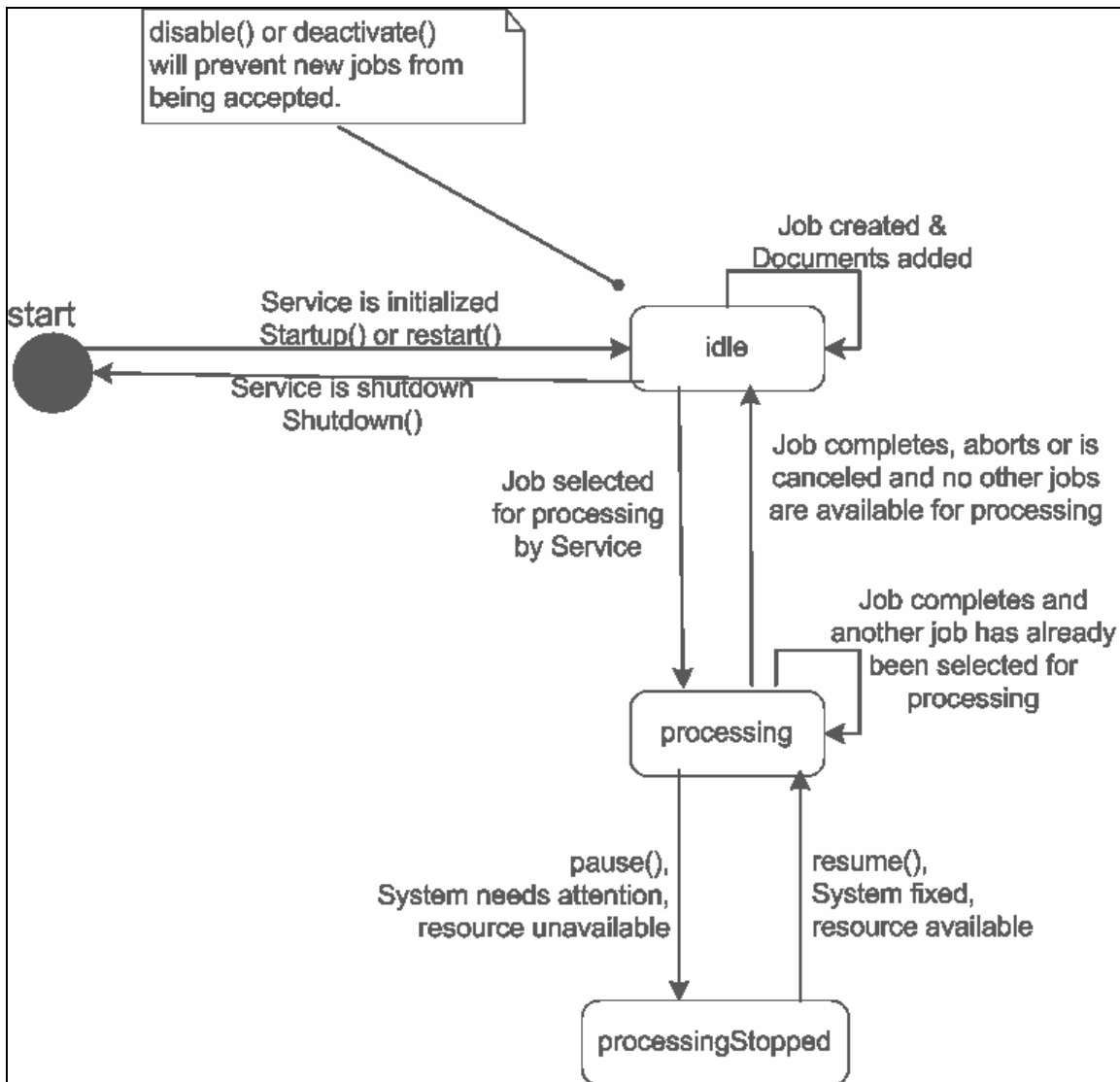
5. State Transition Discussion

Currently the schema for the Semantic Model v2 is attempting to define a base class for an Imaging Service and Imaging Job. The assumption is that the various Services and their Jobs would inherit from the Imaging base class.

This discussion focused on whether the state transition diagrams for the Print Service and Print Job can be abstracted to cover all of the Imaging Services and their Jobs.

## 5.1.	Service State Transition diagram

After some discussion, the group decided to adopt the state transition model from Print. Below is the Service state diagram based on the PWG Semantic Model v1 state transition diagram.   The print centric information has been generalized.

5.2. Job State Transition Diagram

We had a discussion of the [potential] differences in Job Lifecycles. Although the lifecycle may vary based on implementation (e.g. once an inbound Fax job has been detected and a FaxIn job has been created, will an end user ever see the job in the pending state?) After discussing the current job processing state transition model for Print Jobs is seemed valid to abstract it for all MFD-related jobs.
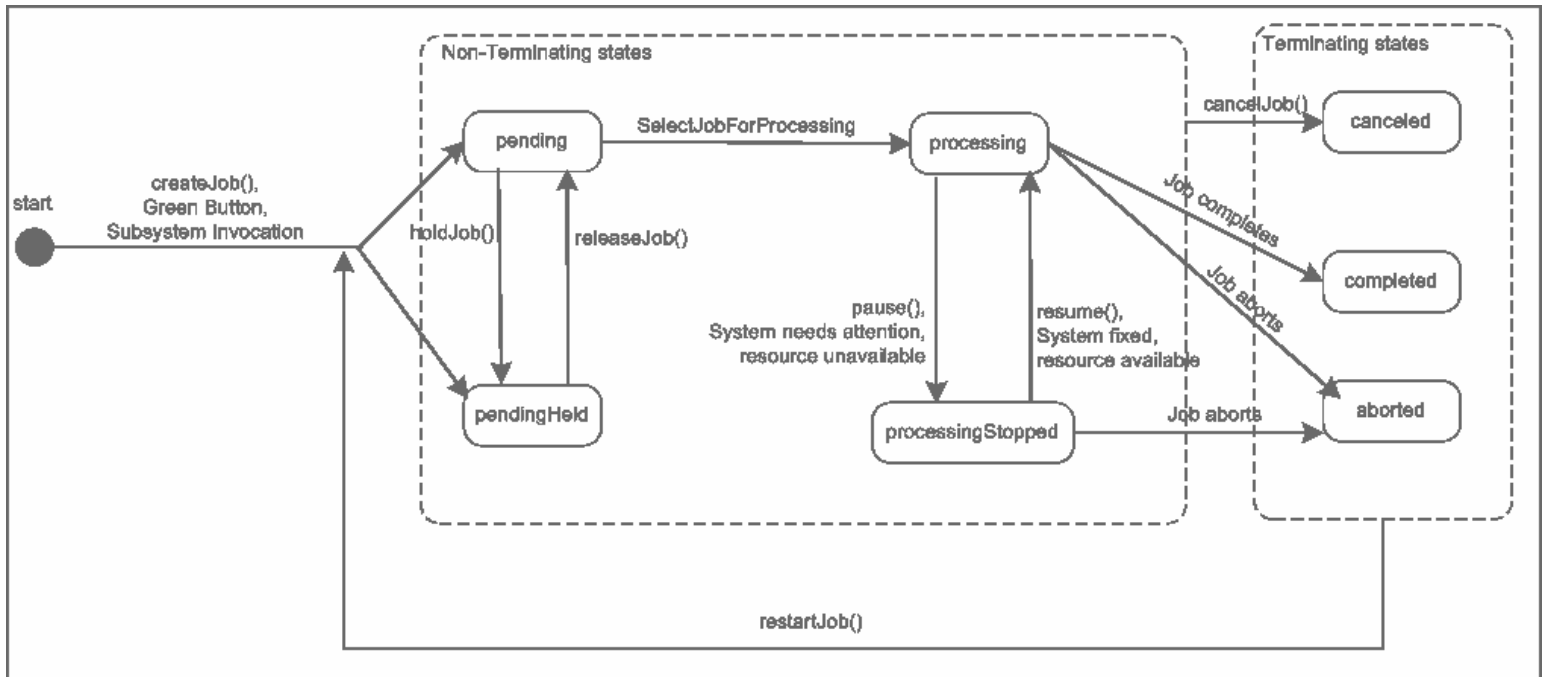
6. FaxIn Service Discussion

As an exercise to work out some assumptions about Job Description Elements, Pete led the group in a more detailed examination of a FaxIn Service and job lifecycle.

This discussion resulted in the following three characteristic lists:

FaxIn Status	FaxIn Processing	FaxIn Description
Creation Time/Date	Media/Input Tray	From phone number
Job ID	Output Tray	From description
State - common for all services	Destination - simple (e.g. Print, Save) - map (more complex e.g. route based on OCR or sender's telephone number)	Size - koctets - impressions
State reasons - new FaxIn specific values may be required		Compression
		Document format
	Print parameters(e.g. copy, sides, priority)	Information from Transmit Terminal ID (TTID) or Remote Terminal ID
		Information may be used to populate some existing elements (e.g. jobName)
		resolution

The exercise seemed to be fairly useful, reinforcing the notion that the state diagram above is applicable (and that some of the Operations would not be).

7. Action Items

- **Mike Fenelon**: Find out if the data model used in WS-Scan can be used as the starting point for the addition of Scan to the PWG Semantic Model. We are interested in the semantics common to Scan Service/Job/Document implementations across the industry.
- **All**: Determine your company's interest in the development of a model for multifunction devices. Pete needs statement of your support (e.g. editor of a specification, contributor to a specification, implementation of a prototype) or that no support will be offered.

8. Next Steps

Then Pete asked a critical question about the commitment and level of interest of the PWG members in moving forward to the "next step".

Is there anyone willing to take on the Editorial role of creating a FaxIn Service specification?
- No one volunteered at the meeting. A few individuals mentioned that they did not have adequate expertise on Fax to take on the responsibility.

Pete will solicit the PWG for their interest in continuing the development of a data model for multifunction devices.