WIMS Working Group

2009-02-16 Face-to-Face Meeting Minutes

1. Attendees

Lee Farrell	Canon
Rick Landau	Dell
Glen Petrie	Epson
Ira McDonald	High North
Harry Lewis	InfoPrint
Jerry Thrasher	Lexmark
Dave Whitehead	Lexmark
Ole Skov	MPI
Nancy Chen	Oki Data
Brian Smithson	Ricoh
Bill Wagner	TIC
Pete Zehler	Xerox

On Monday morning, Bill Wagner led the Web-based Imaging Management System (WIMS) Working Group meeting.

2. Minutes Taker

Lee Farrell

3. PWG Operational Policy

It was noted that all attendees should be aware that the meeting is conducted under the PWG Membership and Intellectual Property rules. There were no objections.

4. WIMS/CIM Status

Bill gave the current status on project activities:

- A revised charter, reflecting the incorporation of the PWG MIB WG activities, was developed and has been approved by the PWG Steering Committee (ftp://ftp.pwg.org/pub/pwg/wims/charter/ch-wims-charter30-20090202.pdf)
- Final Print Device Schema will be in CIM 2.21 release, due out in February.
- The enumeration for WS-Print as a Printer MIB PrtChannelTypeTC has been registered with IANA
- Ira is working on the update of Print Service Schema, based on IPP semantics and following the considerations of the IPPV2 WG
- Rick is continuing with the Proxy CIM Provider prototype implementation. Code implementing the essence of the CIM to MIB to CIM translation will be complete first quarter 2009

5. Dell CIM Provider Prototype

Bill reminded the group that Rick Landau is continuing with his development of the Proxy CIM Provider prototype implementation. The primary purposes of this prototype are to:

- Validate the updated Printer CIM Schema
- Provide one implementation of the CIM Schema to help advance the new elements from the experimental state

Rick Landau presented slides giving further detail on the Status of the Proxy Printer Provider Prototype. [ftp://ftp.pwg.org/pub/pwg/wims/cim/PWG-F2F-200902-WIMS-CIM-WG-session-00.pdf]

He identified the two recently implemented Association classes:

- CIM_PrinterComponent for mandatory subsystems of printer: input tray output tray, marker, etc.
- CIM_ConcreteComponent for optional subsystems: supply, interlock, etc.

Rick explained that an Association class contains "references" to other classes, expressing a relationship between two classes

- Reference = list of key properties of the class that uniquely identify an instance
- For CIM_Printer, the key is the concatenation of four properties
- For most other classes, the only key is InstanceID
  - Concatenation of manufacturer name, device type, device description, device name, instance number, etc.
  - All these properties must be retrieved from live instances of other classes
  - But instances don't exist until they are asked for

He provided some detail on how Associations are different

- Substantive classes are derived from SNMP tables: one instance of class per row of table
- Associations have one instance per combination of instances of two other classes
- Most associations relate all instances of one class to all of another
  - AssociatedPrintSupply and AssociatedPrintInterpreter limit instances to specific relationships
  - Need to select only the proper instances

Rick identified some tasks that still remain to do:

- Finish Association classes
  - UseOfLog and LogManagesRecord
  - AssociatedPrintSupply and AssociatedPrintInterpreter
- CIM_Printer properties
  - Including many inherited from parents
  - Particularly locale and array properties

He identified some minor shortcomings of the prototype:

- Handles only a single printer
  - Affects few places, isolated
- Fixed geometry of tables
  - Okay for all classes but PrintAlertRecords, which come and go (must [re-]assess them every time they are examined)
  - Easy to fix
- No caching of SNMP data
  - Practical implementation needs to optimize network access: discover read-only data once only
  - Network access is well-centralized, easy to slide in a caching mechanism

Rick noted that he does not plan to work on Finisher in the foreseeable future.

He then referenced the content of some captured output files in ftp://ftp.pwg.org/pub/pwg/wims/cim/ProxyProviderSampleFiles-WIMS-CIM-mtg-20090216.zip:

- Subsystem classes
- Association classes

Specifically, he reviewed the following files:

- test-EnumerateAllClasses.log
  - He noted several of the items that are not yet implemented (NYI), including some of the functions that are not enumerated and calc names that are not assigned.
  - CIM_Printer.TimeOfLastReset is not supported.
  - He explained the interpretation of CIM_Printer.RecordFormat
- test-EnumerateAssociations.log
  - Several of the association relationships were explained

There were no questions on the material.

6. Update on DMTF CIM Class efforts

Bill explained that the original Printer CIM Schema included elements that more properly belong under Print Service. However, they could not be deprecated in the update of Printer until they were relocated into Print Service.

He said that Ira is aligning the Printer Service elements with IPP, considering the elements that have been selected for IPP 2.0 by the IPP WG. This also includes Media Names.

Rick explained that there is a new process in DMTF (that is being established) for what allows a class to go “final”. The new rule will be something like experimental and final schema, but a driving force in the progress to final will be the presence of a “profile.” If the “profile” must go final, then all the classes in the profile also go to final.

7. Futures Discussion

Related to Rick's comments on a "profile," Bill explained that the group could develop a CIM Network Printer Profile. He explained that the Network Printer is modeled as a "Computer System", with the defined "Printer" being a system device within it. The Printer Profile would tie in other, already established schema:

- Network port
- IP endpoint
- DHCP client
- DNS client
- Software identity
- Power management

Other PWG efforts will define information that we should capture in a profile:

- Power Management: CIM already has done modeling
- IDS: What attributes are critical to have available for CIM instrumentation or for security scans?

Bill also noted that the Printer Profile will act as basis for MFP Profile.

Is there a customer demand for CIM Management? Although currently there is no CIM-based management application for Printers, Rick believes that the development of a Printer Profile will facilitate the creation (and demand) of management applications. He says that the SNMP trap approach (all different that exists today is just not sufficient.

Bill expressed concern that there might not be sufficient demand to have Printer vendors justify the allocation of resources to work on the development of the Profile.

Both Ira and Rick indicated a "strong possibility" of their being able to provide some level of effort to work on the creation of a Printer Profile.

Ira noted that there is [probably] an abundance of proprietary Web Services.

Another possible work topic for the group that is currently under consideration is the definition and standardization of Hardcopy Imaging Device Power Management Elements:

- Consensus at last F2F is that this is of highest interest
- A BOF is planned to consider committed interest, scope, objectives
- Intent is to defined management elements, that is semantics of power management that may be applied to various transport mechanisms (including walkup)
- Many factors of regulation and compatibility apply, as well as unique power and use characteristics of hardcopy imaging equipment
- Binding to some mechanism (probably SNMP) would be necessary to allow prototypes for verification or specification clarity and workability
- Prototyping necessary to allow advancement to PWG candidate standard

Bill also raised the Printer Port Monitor MIB as yet another possible work topic:

- Extensively implemented both in OS and in Devices
- Opportunity to get first full PWG standard
- Variations in implementation may be because of some lack of clarity in Spec
- Potential that PPM MIB be expanded to address MFP services, not just Print
- Potential Actions
  - update spec
  - interoperability testing
  - advance PPM to PWG standard

Ira anticipates that he will need to write an update of the Port Monitor MIB to address some of the ambiguity that exists in the current document.

And the last item suggested for possible future work is expanding management considerations to MFDs:

- MFD WG is developing semantics for the imaging services associated with Multifunction Devices
- Distinction necessary between System/Service orientation of Semantic Model effort which considers subunits primarily in terms of the capabilities they have to execute service functions; and management orientation which is concerned with the configuration, maintenance serviceability and utilization statistics of the device and its components.
- Some overlap in:
  - Identification of capabilities
  - Selection of configuration
  - Use counters

8. Wrapup

Bill summarized the discussion of future WIMS activity:

- Proxy Provider is proceeding. End of first quarter likely
- Power Management BOF
- Update of Port Monitor MIB
- Network Printer Profile

WIMS meeting adjourned.