PWG Plenary Status Report WIMS/CIM Working Group

October, 2008

Purpose of the effort

The WIMS working group is concerned with the management of imaging services and devices via the Web. The Objectives are:

- Continuing support and update of the protocols and specifications produced by the working group.

- Prototyping updated and upgraded DMTF/CIM printing classes in anticipation of this forming the basis for imaging service and device management over the Web.

- Eventual update of existing and generation of new DMTF/CIM classes for Print Services and eventually Multifunction Devices and Services.

- Monitoring other standards activities relating to Web-base management of Imaging Systems

Work Items for the WG

- **What We're Doing**
  - Providing an Imaging Service/Device basis for management by Web Services, operating through the DMTF CIM mechanism.
  - Update, Create and Prototype DMTF/CIM Printing MOFs, generated as part of the work register agreement between the PWG and the DMTF and with the objective of ensuring printing management via a Web Services approach using CIM

- **What We're NOT Doing**
  - We are no longer defining a Imaging management service or protocol.
  - We are not involved in the extension or updating of Imaging Management protocols or protocols used for management, such as the Printer MIB over SNMP or the management aspects of IPP.

Current Activities

- The CIM Printer model and Imaging Counter model are both complete. All CRs have been approved for inclusion in CIM Schema v2.20.

- Ira has started work 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. Ira has supplied enum mapping information and several others have provided MIB walks from various printers for debugging and exercising the prototype.

Print Services CIM Schema

- ➢ Existing CIM structure includes several classes beyond Printer. One of these is Print Service.

- ➢ Current Print Service is minimal and does not follow the PWG Semantic Model (which is largely evolved from IPP)

- ➢ Original Printer CIM Schema included elements that more properly belong under Print Service. However update of Printer could not eliminate them until they were relocated in Print Service.

- ➢ Ira is aligning Printer Service elements with "mandatory" elements selected for IPP 2.0 by IPP2.0 WG (plus Media Names)

Dell CIM Provider Prototype Status

➢ **Classes:** The core provider can now Get and Enumerate instances of Printer, PrintInterlock, PrintInputTray, PrintOutputTray, PrintAlertRecord, PrintChannel, PrintInterpreter, PrintMediaPath, PrintMarker. Association classes next.

➢ **Properties:** Almost all the properties are filled in for Interlock and InputTray. Only the easy algorithmic properties are done for other classes, such as direct mappings, constants, nulls, Basis properties, AvailabilityStatus, CriticalStatus, NoncriticalStatus, InstanceID, Name, Description, Caption.

➢ **Operations:** It can now Get any instance by key, and can Enumerate all instances of any substantive class.

➢ **Limitations**
  • One printer at a time
  • Currently operates from MIB dump files rather than talking SNMP to real printers.

Prototyping Observations

- In reviewing the MIB Walks, some observations were made that affect the CIM provider implementation and probably affect other management applications.
    - Non-support of the extended input group (and to a lesser extent, the extended output group)
    - Enclosing string values in single or double quotation marks.
    - Few devices support the optional groups in Printer MIB.
    - It was also noted that some printers don't implement some basic SNMP variables such as sysName.

- Although some of these practices are not in violation of RFC3805, they do interfere with the usability of management applications. It was suggested that a Printing MIBs FAQ might be a good way to publicize these and other MIB pitfalls.

Evolve into "Imaging Equipment and Services Management" WG?

- **Assuming responsibilities of PWG MIB WG?**
  - ➢ The PWG MIB WG has a continuing maintenance function for support of existing MIBs, and the PWG should ensure that this is covered.
  - ➢ Despite our interest in Web Services, SNMP will be the predominant imaging equipment management mechanism for the foreseeable future.
  - ➢ WIMS-CIM is concerned with Management, as distinguished from protocols or semantics for utilization of functions (e.g., job delivery).
  - ➢ We have done MIBs as an extension of the management element definitions for Web Services.

- **Begin effort on standard MFD Devices MIBs?**

Next Steps

- Prototyping of the SNMP to CIM Provider continues.

- Proceed with the CIM effort to Print Service.

- Results of discussion at the WIMS WG F2F

More Info/How to participate

- ➢ **We welcome more participation from member companies**
  - ❖ Element Selection
  - ❖ MOF Evaluation/Proofing
  - ❖ Change Request Generation
- ➢ **The group maintains a Web Page and separate WIKI pages for WIMS and for CIM update**
  - http://www.pwg.org/wims/index.html
  - http://pwg-wiki.wikispaces.com/WIMS
  - http://pwg-wiki.wikispaces.com/WIMS-CIM
- ➢ **Subscribe to the WIMS mailing list by sending an e-mail to majordomo@pwg.org with a blank subject line and a message:**
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