DMTF Printer Management Working Group
Arlington, VA (Washington DC)
April 26, 1994 - April 27, 1994

The meeting began at 8:40AM, Eastern time.

Attendees:

Joel Gyllenskog - Hewlett-Packard
Steve Zilles - Adobe
Randy Turner - QMS
Koji Tashiro - NEC Technologies
Andy Davidson - Tektronix
Bill Wagner - DPI
Rakesh Mahajan - Canon
Ron Smith - TI
Stan McConnell - XEROX
Mike Timperman - Lexmark
Don Wright - Lexmark

"RFC 1543 - Instructions for RFC Authors" describes the formatting and layout of RFCs.

There was a discussion on what the various objects would be used for and who would be using them. Discussion focused on the imageable area object and whether it should be provided by interpreter or for the whole machine.

DISCUSSION OF OPEN ISSUES

The following issues are being tracked for closure.

1) Is the media group optional?
    - Leave MediaExtended as optional, media information in the InputTable will remain mandatory.
2) Will the MIB/MIF support multiple consoles?
    - No, do with private extensions, a single "console" that contains the data for all the consoles, or some other means.
3) Is General Printer a table?

- No, support Virtual printers through some other means such as private extensions, etc.

4) How does "character set" tie into "channel"?
   - There was no identified need to tie character set to channels. Character Set is more closely tied to the interpreter or console and those objects are tied to localization and character set settings.
5) Static versus dynamic - how efficient will this be?
   - Because there is no distinction between static and dynamic information in SNMP, the printer must implement all the information so the agent can report it.
6) The MIB/MIF consist of 58 objects - is that too many?
   - OPEN --- Defer for final review.
7) Should we endorse some type of interlock method for all the writable objects?
   - OPEN --- One of the reasons it remains open is that there is no defined method for this function for DMTF.
8) Should we use separate community names or additional index to support multiple printers being managed through a printer server?
   - Use community names with predictable "numbering" for each device. Randy Turner (QMS) will write up a proposal for inclusion in the RFC.
9) Should paper size be writable?
   - Yes, to tell a printer that can't detect paper size what size paper is loaded.
10) Should units be writable?
   - Yes, but manufacturers may choose to only implement R/O access. Persistence across power cycles may vary from manufacturer to manufacturer.
11) Should size units be only in millimeters?
   - No, but we will reduce the number of units wherever possible.
12) How should out of range sets be handled - reject or snap to the nearest?
   - Snap to the nearest integer and reject an invalid ENUM. The data returned in the SNMP packet will indicate the value of the integer snapped to.
13) Are "Input - dimensions extended" mandatory?
   - This will remain at best optional; possibly could be removed.
14) In what units is printable area reported?
   - .0001 inches or .001 mm

Adjourned for lunch at 12:10PM
Resumed at 1:15PM

15) Should media type be a string or an enum?
   - String, recommend using ISO DPA, ISO SPDL names where possible.
16) How do we associate media with inputs, outputs with finishers, etc?
   - Input: The only media that is described is the media in an input tray and it is described there.
   - Outputs: OPEN - Harry Lewis to make a proposal

17) Do margins (or imageable area) need to be PDL specific?
    - No, but this object may not be needed.
18) Does "other" have a meaning for objects which normally have an integer value?
    - Yes - potential meanings are defined with the object where it applies.
19) Is "unknown" the same as "uninitialized" and if not how do you tell the difference?
    - Possibly, if the object's value is "unknown" failing when attempting to write to it means the object is truly unknown. If writing is successful, the object's value was just unitialized.
20) Should default interpreter be by channel or overall?
    - OVERALL. There is a hierarchy used to determine the interpreter:
        1) If contained in the datastream, used that interpreter
        2) Otherwise use the default for the channel
        3) Otherwise use the default for the interpreters
        4) Otherwise the default interpreter is undefined or manufacturer specific
21) How do we handle the "parallel in, serial out" channel?
    - Ignore it
22) Is "console width" "string width" or "screen width"?
    - Closed by addressing issue #23.
23) Is "number of lines" and "number of characters" of the console mean physically or logical?
    - They refer to the physical size of the console.
24) Which strings are localized and controlled by "current localization?"
    - Spec has been updated to reflect which strings are localized by CurrentLocalization, which strings are localized by ConsoleLocalization and which strings are not localized. String not specifically stated to be localized should not be localized as that data may be used to make decisions.
25) Do we need an "ID" object for each table "index?"
    - OPEN
26) Are all consoles using the same language?
    - We only support one console.
27) Should we enable or disable a channel as a whole or provide a way to selectively enable and disable "data" and "control" flows on a channel?
    - No convincing argument for separation of control and data. Therefore, the answer is no.
28) Is the consistent use of 1,2 (for enums) and -1, -2 (for integers) to represent "other" and "unknown" consistent with SNMP "tradition?"
    - There is a tradition of having certain distinguished values but those values often vary from RFC to RFC. Consistent of use of these values within the PRINTER MIB should be OK.

Meeting recessed at 5:55 PM.

Meeting resumed at 8:40AM, 4/27/94.

A message from Chris Thomas was sent to the mailing list informing the group about a B-O-F at Interop on Thursday, May 5th, 7-9:30 PM, Las Vegas Hilton Pavillion 4. Don Wright will present the status of the PMI group.

RESUMED WORKING ON ISSUES

29) How should channel relate to underlying layers and to other existing MIBS?
- There is a pointer to the interfaces MIB. While this is not a complete solution, it is sufficient for this implementation.

"A channel is an independent source of print/control data which can be enabled or disabled, is directable to an interpreter, and its output is suitable for the interpreter."

(There was a long discussion on how channels are linked to the underlying layers. This discussion included the issue of how to deal with a WPS printer: where is the channel - within the PC or across the 1284 parallel port to the physical printer? In order to restrict the scope of the work, the group will focus on the physical printer device. Environments like WPS and the SUN printer will fit in the model but the details of that management implementation is up to the manufacturer.)

30) How well does the Host MIB work for the system controller?
- The HOST MIB is probably overkill for a printer but the work needed to get the SNMP community to agree to have new objects in the printer MIB that largely duplicate host MIB objects is too great.

(Is there work in progress to create a MIF which corresponds with the HOST MIB? Since the channel group uses the interfaces table from MIB II, how is this done with DMTF?)

31) How much of the Host MIB is mandatory for the system controller?
-As defined in the Host MIB (RFC1514) particularly hrSystem and hrStorage and hrDevice groups.

32) What is the difference between INTEGER and INTEGER32?
- INTEGER is used for ENUMs and INTEGER32 for values.

33) Do we need and "everything back to OK status" alert?
- No, applications should scan the alert table.

34) Should the console be writable?
- Yes: Addressed by issues #22 and #23 and therefore closed.

35) Should Company names be included in channels? Interpreters?, etc?
- Yes - to exclude them would make some of the names less clear.

36) Should objects in the channel group relate to the ISO seven layer model?
- No attempt will be made to correlate the channels to the ISO model.

37) Should the default orientation be by interpreter or overall?
- Overall only.
38) Should we include an operator panel lock object?
- Yes
39) Is the description field of the alert table localized when inserted in the table or when the table is accessed?
- This is vendor implementation specific. The recommendation of the group was that the best implementation would be to localize when the table is accessed.

Rakesh Mahajan reviewed the work going on in the Multifunction Peripheral Group. He outlined where the group originated. He indicated there was some overlap between that group's work and the Microsoft at Work architecture.

Joel will be generating a draft to be distributed using the IETF mechanism.

The group recessed at 12:00 for lunch.
The group resumed at 1:15PM.

Potential areas for afternoon discussion were identified as:

1) Expanding finishing enums
2) Clear out notes in summary tables
3) Scope of our mission
- needs of driver developers
- fonts, spoolers, print servers, virtual printers
4) x-ray mode (from Canon)
5) Interfaces
6) Referencing other RFCs

CLEANING OUT THE NOTES

1) A stab was made at providing a list of enumerated finisher consumables.
2) Joel will publish with FINISHER as currently defined. Stan McConnell will review and make necessary changes in the next week.
3) Media Path units will remain as scalars outside the table as there was no perceived need to allow it to vary by media path.

All objects will start with "prt". Abbreviations of the groups in the MIB/MIF should be:

General Printer: GP
Input: In

Output: Out
Finisher: Fin
Marker: Mkr
Media Path: MP
Channel: Ch
Console: Con
Interpreter: Intpr
Alert: Alert

Other abbreviations:

CrossFeed: XFeed
Dimension: Dim
Language: Lang
Capacity: Cap
Description: Desc
Default: Dflt

OBJECTS

There are currently (as of these minutes) 88 mandatory and 47 optional objects.

A discussion occurred focused on potential ways to reduce the number of objects to address a potential perceived problem from within the SNMP community.

Printable areas was changed to margins and moved to the marker. It now represents the "safe" printable area taking into consideration the marker, the medium and all interpreters. (92 mandatory, 43 optional (25 Mandatory Read-Write))

Discussion on the issue of synchronization or atomicity.

Host MIB has 85 objects 22 of which are optional.

The meeting was adjourned at 5:30PM.