Printer Working Group
Austin, Texas
December 6/7, 1995

Attendees:

Jay Martin - Underscore
Don Wright - Lexmark
Mike Timperman - Lexmark
Tom Hasting - Xerox
Hyong Kim - Samsung
Shigenaka Kanemitsu - Kyocera
Jeff Dunham - HP
Atsushi Yuki - Kyocera
Harry Lewis - IBM Pennant
Steve Zilles - Adobe
Raymond Lutz - Cognisys
Randy Turner - Sharp
Robert Lee - Apple
Ron Bergman - Dataproducts
Craig Whittle - Novell
Pat Hill - Dazel (Wednesday Only)
Binnur Al-Kazily - HP
Bob Pentecost - HP
Jeff Slater - Cyberzone
Bill Wagner - DPI
Tony Summers - AHA (Thursday Only)

The meeting began at 8:30 AM.

The group briefly discussed the next meeting. A concern was raised as to whether there would be enough time to review the material if the meeting was held in conjunction with the IEEE meetings in Fort Lauderdale the week of Jan. 22.

The group decided all documents greater than 5 pages must be posted to the server at least 5 days in advance. Exceptions will be at the discretion of the group by a majority vote.

Tom Hasting discussed his proposal to split the MIB into two documents, one consisting only of the textual conventions and the other having the objects. A concern was raised by Steve Zilles that having the MIB split into multiple documents would make it more difficult for someone new to the printer MIB to be able to find all the material necessary. To implement the printer MIB would require getting MIB-II, Host Resources MIB, the Printer textual conventions MIB and the Printer MIB itself. Even if we decide to not to split the current MIB into 2 parts, we will keep the current textual conventions at the front the document and move any others that are added or in the middle of the MIB to the front. The enums will be sorted by type with type 1 first and then type 2 & 3 intermixed. Binnur will contact the "powers that be" as to their opinion on splitting into two MIBs.

Introductions of all attendees were done.

The group discussed the issue of moving the MIB to draft status based upon HP's and Lexmark's MIB implementation. HP and Lexmark will report what testing was done to verify compliance of their products with the MIB. An issue was raised as to whether the Genoa and/or IWL test suites tested "user interesting events" such as cover open or out-of-paper. Binnur will contact Genoa and IWL as to the coverage of their products.

Harry Lewis reported that the status of the MIF is considered by the DMTF to be closed based upon release V.8.4 of the MIF.

Jay Martin presented the *Simple Event Notification Service Environment* (SENSE) proposal to the working group. The material was previously posted to the PMI mailing list on 11/28/95. The group discussed the proposal and clarified some of the concepts. Jay will be producing a FAQ about the proposal so that everyone can come up to speed on some of the details of the SENSE proposal. The group is in consensus that the ad hoc group should continue its work by providing a draft specification based on the requirements documents with a couple of scenarios included in the document. Jay will post the requirements document to the reflector.

The group adjourned at 11:55 for lunch.

The meeting resumed at 1:15.

This afternoon discussion started off with a discussion of the problem that current MIBs are written to SMI v2 even though most of the management stations support SMI v1. No resolution of this issue was achieved. Discussion will continue on the e-mail reflector.

Next, the group began discussion of alerts led by Harry Lewis. Harry present a list of proposed additions to the alert code list. A derivative discussion on binary versus single events and the associated traps (again.) The issue discussed was whether the trailing edge of a single event should cause a trap when that entry was removed from the alert table. Harry Lewis proposed allowing trapping on the trailing edge to be able to discover when a binary event was cleared.

The group agreed not to adopt the addition of the group general errors proposed by Harry and to continue to use the existing method of "other" and "unknown" how to deal with unspecified errors in a group. The eventual editor preparing the draft version of the RFC will clarify how this is to be done.

Tom Hastings and Harry Lewis will work to "boil down" the alert codes and develop a generic alert enumeration proposal that reduces the number of alert codes. Tom Hastings previous proposal in this area. Previous implementers of RFC1759 will investigate with their developers how deprecating many of these alert codes would affect them.

Tom Hastings reviewed his proposal of Oct 25, 1995 which proposed some changes to the way the MIB handled alerts. This material will be a starting point for the work he and Harry Lewis will be doing as described above. Tom and Harry will also be working on defining a way to handle the trailing edge of binary events including a potential new-name for "simple" events.

The group discussion the open issues related to channels and interfaces. The issue of whether RFC1759 should follow changes made in MIB-II relative to interfaces. The answer according to Binnur's contacts are that we must. We will use the "Evolution of the Interfaces Group of MIB-II (RFC1573) for the next version of the printer MIB.

The group agreed to add USB to the channel table.

Geoff Slater presented an overview of security and job accounting. This document is located on the ftp server in the *snmpmib/ask* directory. The group discussed the applicability and the scope of Geoff's proposals. A lively discussion ensued. The major issue of this discussion centered on security. The majority of the group felt that security was outside the scope of the groups "charter." The group was asked to read Geoff's paper at night and will resume the discussion after reviewing Tom Hasting's papers.

The meeting adjourned for the evening at 6:00 PM.

The meeting resumed at 8:45 AM. on Thursday.

Tom Hastings started off the meeting with a review of the documents *Proposed List of Objects/Attributes for the Printer Job Monitoring MIB/MIF* (ftp://ftp-out.external.hp.com/snmpmib/jobs-mib/job-list.doc) and *Proposed Specification of Objects/Attributes for the Print Job Monitoring MIB/MIF* (ftp://ftp-out.external.hp.com/snmpmib/jobs-mib/job-ext.doc).

Tom reviewed the terminology, models and the list of proposed objects extracted from the DPA standard.

We need to insure that the job monitoring MIB includes all the accounting information provided by IEEE P1284.1

Tom's proposal includes a number of objects relating to identification of the job (job id). The group discussed whether the printer needed to know all the various job ids. The group made some changes to the usage of some of these objects.

The prtGeneralCurrentOperator and prtGeneralServicePerson need to be localized. The eventual editor will need to resolve this issue.

At the next agenda Jay will present the job accounting implementations of CPAP and NPAP.

The group had a discussion on the need for the various objects relating to submission time, processing time, completion time, etc.

There is an open issue on the architecture of the job/document model. Tom will document the model for the next meeting.

"What bothers me about that statement is that I agree with it" said Harry Lewis.

Tom's next review of this material will include a presentation of the assumed accounting model and how the accounting information will be used.

Steve Zilles brought up the open issues from the December meeting including:

- associated resource
- marker supplies used by a job
- job error string

Lunch break was from 12:05 until 1:15.

Binnur thanked Randy Turner for his contribution of a PWG home page located at:

http://www.teleport.com/~rturner/pwg.htm

The group started the afternoon by re-opening the discussion of security. Harry Lewis led the discussion. There was a debate over whether we should defer to the SNMP security efforts, whether we have the technical knowledge to address security, etc.

The group reviewed a couple of objects proposed by Geoff Slater including "Pages to Print", "Status Timer", etc. Geoff, Harry Lewis and Tom Hastings will bring a proposal to the next meeting.

Binnur will develop a draft charter for discussion via e-mail and then discussion at the next meeting.

Ray Lutz began presenting an overview of several of his papers. He began with his paper entitled *Questions relevant to the Printer Working Group regarding the Transportable Document Format.* The group then reviewed *Transportable Document Format Attribute Descriptions* document which contained a comparison of the print attributes from the MIB, LMO, DPA, MFPA, etc.

The PWG then discussed the contents of the Transportable Document Format in regards to printers & printing.

Raymond Lutz brought up the issue of using prtInterpreterLangFamily and prtInterpreterLangLevel for determining the document format handling capabilities of the device. The issues are:

1. prtInterpreterLangLevel syntax is not being standardized among the vendors, which makes it difficult to determine what the interpreter level is from a machine perspective during negotiations. This was a conscious decision that was made in the past by the group.

2. prtInterpreterLangFamily doesn't provide information regarding to all the possible document formats that the interpreter can handle, and/or is backwards compatible with.

Raymond Lutz & Tom Hastings will write up a concrete proposal to define the registry needed for prtInterpreterLangLevel & prtInterpreterLangFamily identification. The group discussed different solutions to this problem:

1) registering the prtInterpreterLangLevel values w/ IANA
2) populating prtInterpreterLangFamily will all the possible interpreter values.

If the group chooses to create new enums for all the interpreters, then the RFC 1759 might need to be clarified to include an interpretation on how to handle the default interpreter.

Raymond Lutz brought up the question of what the meaning of addressability is. During discussions, it was noted that the definition of prtMarkerAddressability might be needed to be clarified, since it doesn't have the word "max" in its definition, unlike prtInterpreterFeedAddressability. This might be an issue for printers that supports different resolutions through a hardware switch, such as IBM. The discussion will be taken to the PMI mailing-list.

The meeting was adjourned at 6:07pm.