SCSI MIB Study Group

January 14, 2002
Marriott Greenspoint, Houston, TX

Attendance

Adaptec	Ron Roberts
Brocade	Bob Snively
	Kha Sin Teow
Compaq	Albert Chang
	Rob Elliott
	Thomas Grieff
	Kyle Walczak
Dallas Semiconductor	Jim Lott
Endl	Ralph Weber
Exabyte	Joe Breher
HP	Marjorie Krueger
IBM/Tivoli	George Penokie
LSI Logic	John Lohmeyer
Ophidian Designs	Edward A. Gardner
StorageTek	Erich Oetting
Sun Microsystems	Ken Moe
Texas Instruments	Paul Aloisi
VERITAS	Roger Cummings

A total of 18 people from 14 companies.

John Lohmeyer called the meeting to order at 9.05am, lead an round of introductions, and created an agenda.

Meeting Summary

1. Marjorie Krueger presented an Introduction to MIBs and the SCSI MIB in particular (document 02-043r0). She noted that the intent of the SCSI MIB is to define the minimum amount to information necessary to represent the "scsiness" of the device, and to use only widely implemented SCSI attributes and features. Nothing should be included in the SCSI MIB that is already found in MIB-II, the Interface MIB, the Entity MIB, or any other standard MIB.
2. The relationship of the SCSI MIB and the Entity MIB was discussed at length. Kha Sin noted that sensors are not presently supported by the Entity MIB, but this is being worked.
3. There was a long discussion about ScsiInstance and relationships between multiple instances. It was clarified that any relationships can be discovered via attributes like portName, which is the same as the Port Name that is used in certain SCSI commands, but this is the function of a Management Application, and not the agent. Bob Snively asked if ScsiInstance was a private

definition of all or part of agent's scope, and not the scope of its surrounding elements, and was told that was correct.

4. The definition of the TxPortDevName was questioned, and the asnwer given that thjis is the same as the device name referenced in George Penokie's "Names, Addresses,Identifiers" proposal (T10/01-084).

5. The definition of the VendorVersion attribute in ScsiInstance rather than ScsiDevice was questioned. The definition was not known from memory by anybody present, and so the questioner was asked to reference the description in the MIB.

6. A question was asked regarding statistics being mandatory to implement. A number of people expressed a preference for only including statistics that were widely used in current and pending implementations, and making them mandatory.

7. The definition of ScsiDevicePortNumber was questioned, and a suggestion that this be renamed to ScsiDeviceNumberOfPorts for clarity (and consistency with ScsiTgtDevNumberOfLUs)

8. Comments were made on Port Names and Identifiers being shown as attributes of ScsiInitiatorPort and ScsiTargetPort, rather than of ScsiPort. Bob Snively asked if this was to allow different names to be used depending on the role of the port (Initiators and Target), and was told this was so and this usage is supported in iSCSI. Comments were made about modifications to SAM-2 to make it clear that this was acceptable.

9. The need for more than one SCSILUIdentifier per LU was questioned, and George Penokie replied that VPD Page 83 already supported more than one identifier.

10. Ed Gardner raised the issue of a bridge device (e.g. an iSCSI to FC converter), and contended that the structure of the model a ScsiLunMap to be associated with a ScsiLogicalUnit that aggregates to a different ScsiTargetDevice. Marjorie was not sure that this was true, and in any case felt that if true it was unintentional, but said that the MIB team would discuss this and consider the usage it it was reasonable.

11. The question of a single LU presenting multiple LUNs to the same Initiator was raised, and generated much discussion. A configuration was created where a dual-ported device is connected to dual-ported target behind a bridge, in which it was contended a separate LUN would be generated for each "path" to the device. George Penokie contended that this was dependent of where the device was accessed from, and noted that use of a LUN map is not mandatory - a simple Target could not look at authorized Initiators and use a default LUN instead. Ed Gardner contended there were two different situations depending on which of the ScsiLogicalUnit to SCSILUNMap, or ScsiLUIdentifier to ScsiLogicalUnit, aggregations "comes first". Marjorie commented that the present structure has multiple LUNMap entries for each Logical Unit, but not multiple Logical Units for the same LUNMap. Ed Gardner suggested two things: a) Get rid of LUIndex, and use LUN instead; b) Determine if the relationship is 1 to 1 or 1 to Many.

12. The use for ScsiIntrAttTgtPort was questioned, and Marjorie replied that this was something like the targets that an initiator "expected to see". Ed Gardner wanted a flag added to this object to indicate if the Initiator should attach to the Target, or ignore it. He contended that this functionality would help almost all current operating systems by allowing them to "mask out" devices claimed by other systems. Marjorie said that the MIB group would discuss this usage.

13. The consensus was that Row Status in ScsiTgtAuthorizedIntr was not necessary. Where such a function was needed, a number of people felt that it would be provided by vendor-specific MIBs.
14. Rob Elliot listed a number of constructs that were LUN-based rather than LU-based. These included the Relative Port Identifier, and Target and Initiator Port groups as identified in the Asymmetric access proposal. A number of people thought there were problems with the Relative Port Identifier.
15. The need for a "type" attribute in ScsiLogical Unit was discussed. Roger Cummings stated that the major reason for this is to enable a management app to display an appropriate icon in a network diagram. After discussion it was agreed that a type was needed, and that it should be derived from an existing SCSI "device type" field for simplicity.
16. The type discussion above lead to a discussion of including basic and general disk and tape characteristics in the SCSI MIB. Several people wanted this, others cautioned that this would be the "camel's nose" leading to proposals for a large number of attributes.
17. Roger Cummings raised the issue of Persistent Reservations, on the ground that the reservation state and relationship would also be usefully displayed by a management app. Access controls was also mentioned as having similar characteristics. It was noted that the normal development path in the IETF is for a "base" MIB to be extended by relationships to additional, newer, and more-specific MIBs, and thus it was suggested that this process could be followed for these functions.
18. George Penokie commented that after all the discussion, and all the examples raised , the current model and its relationships seemed correct and sufficient.

The meeting adjourned at 12.27pm