

From: GSTEPHEN--TUCVM2  
To: GOP --RCHVMP3

Date and time 06/28/90 10:50:47

\*\*\* Reply to note of 06/27/90 15:56  
Subject: More SCSI Tape Stuff  
George,

I am aware of the problem stated in the document. It was also transmitted to X3 through the EVENTIDE Corp., Brian Earle. I am on the mailing list for that part of the discussion.

Since all tapes have, by definition, at least one partition, it was felt that the Additional Partitions Defined field, when not zero would be a good signal for a multiple partition tape. Therefore, older devices would report zero(0) in this field. These newer devices may have more than one partition and a non-zero value provides the key indicator. Thus, the current interpretation of this field in implementations is correct.

The Partition Size Descriptor list was designed to indicate the approximate size of ALL partitions. By summing up the various capacities in the list, one can arrive at the approximate device capacity in a single partition environment. In addition, listing only the "additional" partitions does not properly indicate the capacity of the default partition. As the size of additional partitions is increased, there should be a reduction in the size of the default partition. This should be accurately reflected in the list. That is, the estimated capacity should hold relatively constant as the various partitions are formed. The total capacity may decrease if there is any overhead for guarding or protecting the partition boundaries.

Thus, a volume formatted with one partition should show one item in the list. When formatted for two partitions, there should be two items in the list whose estimated capacity is equal to or slightly lower than the single partition case.

This was the intent so that the system knows the available capacity of ALL partitions.

If the default partition is not present or ignored, then one cannot estimate the capacity of the default partition since nowhere is the total estimated capacity provided for this type of operation.

Another problem was reported by EVENTIDE to X3 also. It has to do with block numbering. In the 3480 format and other vendor equivalents, blocks and file marks (and I suppose SET marks) are each given a block number. This RULE is defined in the ANSI standard for the format of the tape. This rule was incorporated into the tape device model in SCSI-2.

The DAT device format has a problem in that it appears to not specifically state whether tape marks are numbered or not. There are now two interpretations of that in implemented devices. One that is compatible with the SCSI and 3480 definition, and at least one which is not. The cartridges produced on these two devices are NOT INTERCHANGEABLE.

I have pointed this out to Brian Earle, and pointed him to X3 and the committee that devines the DAT format. The problem appears to be in the format standard and not in the SCSI-2 standard. However, it points up the necessary link between device formats and interface protocols.

The SCSI committee does not, as a matter of course, review these preliminary standards. Those reviewing them for the various corporations may not be looking for the right things either.

I will not attend the Rochester Working Group meeting. I plan to attend the August Plenary in Denver/Boulder.

Gary Stephens 6/28/90