



Date: 21 August, 1997
To: T10 Membership
From: Ralph Weber, X3T10 Alternate member from Symbios Logic
Subject: LUN_Z Capabilities Bit in SPC-2

Problem Statement

SCC and SCC-2 require the logical unit at LUN=0 to have a device type of 'storage Array controller device' (0Ch). However, many operating systems require the LUN=0 unit to have a device type of 'direct access' (00h) or 'sequential access' (01h) for the purposes of their configuration scanning code. Also, there is no reason why a RAID device cannot have a virtual unit at LUN=0.

I have submitted a letter ballot comment, which if accepted will change this. Yet, additional changes are needed in SPC-2 to support the proposed letter ballot change in SCC-2.

Proposed Changes

A bit must be defined in the Standard Inquiry Data that, when set, indicates that the logical unit supports the SCC command set in addition to the command set identified by the device type. It is recommended that this bit be called LUN_Z and that it be bit 0 in byte 5.

In Table B.2 (the operation code numerical list), O (for optional) must be added in the D (disk), T (tape), W (write-once), O (optical), M (medium changer), and E (enclosure) columns for the following commands:

A3h	MAINTENANCE (IN)
A4h	MAINTENANCE (OUT)
BAh	REDUNDANCY GROUP (IN)
BBh	REDUNDANCY GROUP (OUT)
BCh	SPARE (IN)
BDh	SPARE (OUT)
BEh	VOLUME SET (IN)
BFh	VOLUME SET (OUT)

Note: It would be nice to be able to include the R (CD-ROM) column in the list above. But, this is not possible because CD-ROM defines several of these operation codes for other uses. Perhaps this can be resolved as part of the DVD work. Otherwise, it will not be possible to have LUN=0 be both a CD-ROM device and a RAID controller device. If no resolution can be reached, perhaps giving software developers sufficient notice of this restriction will allow them to design system configuration scanning code that deals with it.