Date: April 25, 2007

To: T10 Committee (SCSI)

From: George Penokie (IBM)

Subject: SES-2: Indication if element may be hot swapped

1 Overview

Some of the elements that are defined may be implemented so that may be removed without turning off the power (i.e., hot swapped). However, there is currently no indication in the element as to if the element is hot swappable. This proposal adds a bit into the elements that may be implemented as hot swappable.

2 Changes to SES-2

The format of the status field for a Power Supply element is defined in table 1.

Table 1 — Power Supply element for status-type diagnostic pages

Byte\Bit	7	6	5	4	3	2	1	0
0	COMMON STATUS							
1	IDENT	Reserved						
2	Reserved				DC OVER VOLTAGE	DC UNDER VOLTAGE	DC OVER CURRENT	Rsvd
3	HOT SWAP	FAIL	RQSTED ON	OFF	OVERTMP FAIL	TEMP WARN	AC FAIL	DC FAIL

A HOT SWAP bit set to one indicates that the element may be replaced without removing power from the SES device that contains the element. A HOT SWAP bit set to zero indicates that the element is not a replaceable element or power is required to be removed from the SES device before the element is replaced.

The format of the status field for a cooling element is defined in table 2.

Table 2 — Cooling element for status-type diagnostic pages

Byte\Bit	7	6	5	4	3	2	1	0
0	COMMON STATUS							
1	IDENT	Reserved				(MSB)		
2	ACTUAL FAN SPEED							(LSB)
3	HOT SWAP	FAIL	RQSTED ON	OFF	Rsvd	ACTUAL SPEED CODE		

A HOT SWAP bit set to one indicates that the element may be replaced without removing power from the SES device that contains the element. A HOT SWAP bit set to zero indicates that the element is not a replaceable element or power is required to be removed from the SES device before the element is replaced.

The format of the status field for an Enclosure Services Controller Electronics element is defined in table 3.

Table 3 — Enclosure Services Controller Electronics element for status-type diagnostic pages

Byte\Bit	7	6	5	4	3	2	1	0
0	COMMON STATUS							
1	IDENT	FAIL	Reserved					
2	Reserved							REPORT
3	HOT SWAP	Reserved						

A HOT SWAP bit set to one indicates that the element may be replaced without removing power from the SES device that contains the element. A HOT SWAP bit set to zero indicates that the element is not a replaceable element or power is required to be removed from the SES device before the element is replaced.