To: T10 Technical Committee
From: Rob Elliott, HP (elliott@hp.com)
Date: 13 December 2002
Subject: T10/03-029r0 SES-2 Array Status element bypass status enhancement

Revision History
Revision 0 (13 December 2002) first revision

Related Documents
ses2r02 – SCSI Enclosure Services - 2 revision 2
02-251r1 - SES-2 Enclosure Status element bypass status enhancement

Overview
02-251 split up the bypass status bits in the Enclosure Status diagnostic page, isolating device, application, and enclosure based bypasses.

The same splitting is appropriate for the Array Status diagnostic page. Rather than duplicate the bit definitions, they are just made references to the enclosure pages.

Suggested Changes
7.2.2 Device element defined for Array Control and Array Status diagnostic pages
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The format of the STATUS INFORMATION field for a device element type in the Enclosure Status page is defined in table 28.
[byte 3 bits 1:0 renamed, bits 3:2 renamed]
[byte 2 bits 5:4 new, byte 2/3 bits 7 new]
[These locations are to match the Enclosure Status page. Simply using up byte 3 would make sense otherwise.]

Table 37 – Device element for Array Status diagnostic page

	7	6	5	4	3	2	1	0
0	COMMON STATUS							
1	OK	RSVD DEVICE	HOT SPARE	CONS CHK	IN CRIT ARRAY	IN FAILED ARRAY	REBUILD/ REMAP	R/R ABORT
2	~~Rsvd~~ APP CLIENT BYPASSED A	DO NOT REMOVE	~~Rsvd~~ ENCLOSURE BYPASSED A	~~Rsvd~~ ENCLOSURE BYPASSED B	Rsvd	RMV	IDENT	Rsvd
3	~~Rsvd~~ APP CLIENT BYPASSED B	Reserved			~~ENABLE BYP A~~ BYPASSED A	~~ENABLE BYP B~~ BYPASSED B	~~BYP A ENBLED~~ DEVICE BYPASSED A	~~BYP B ENBLED~~ DEVICE BYPASSED B

. . .

The APP CLIENT BYPASSED A bit, APP CLIENT BYPASSED B bit, ENCLOSURE BYPASSED A bit, ENCLOSURE YPASSED B bit, BYPASSED A bit, BYPASSED B bit, DEVICE BYPASSED A bit, and DEVICE BYPASSED B bit are defined in the Device element for Enclosure Status diagnostic page.

~~The enable bypass A bit (ENABLE BYP A) is set to indicate that Port A has been bypassed by request of the application client, the device, or the enclosure. The ENABLE BYP A bit is cleared if the port bypass is disabled and the device is included on the device interface.~~

~~The enable bypass B bit (ENABLE BYP B) is set to indicate that Port B has been bypassed by request of the application client, the device, or the enclosure. The ENABLE BYP B bit is cleared if the port bypass is disabled and the device is included on the device interface.~~

The bypass A enabled bit (BYP A ENABLED) is set to indicate that port A of the device is bypassed under control of the device. The device may be removed, turned off, not operational, or controlling the bypass signals under control of the device server. The BYP A ENABLED bit is cleared to indicate that Port A is not being bypassed under control of the device. The device may still be bypassed under control of the enclosure services process.

The bypass B enabled bit (BYP B ENABLED) is set to indicate that port B of the device is bypassed under control of the device. The device may be removed, turned off, not operational, or controlling the bypass signals under control of the device server. The BYP B ENABLED bit is cleared to indicate that Port B is not being bypassed under control of the device. The device may still be bypassed under control of the enclosure services process.