

Date: Sept. 16, 1999

To: T10 Committee (SCSI)

From: George Penokie (IBM)

Subject: MCM Additions to Fibre Channel Control Page in FCP-2

1 Overview

MCM defines new functions for FC-AL some of which initiators should have control over. The best way to do this is by adding in that control to the fibre channel control page (19h). This proposal adds in those controls into that mode page.

1.1 Fibre Channel Control mode page

The Fibre Channel Control mode page (see table 1) contains those parameters that select SCSI fibre channel device port operation options. The page shall be implemented by LUN 0 of all SCSI fibre channel devices. The page shall not be implemented by logical units other than LUN 0. The implementation of any bit and its associated functions is optional. The page follows the MODE SENSE / MODE SELECT rules specified by SCSI Primary Commands-2 Standard.

Table 1 - Fibre Channel Control page (19h)

Bit Byte	7	6	5	4	3	2	1	0	
0	PS	RESERVED	PAGE CODE (19h)						
1	PAGE LENGTH (0Eh)								
2	DTFD	PLPB	DDIS	DLM	DSA	ALWLI	DTIPE	DTOLI	
3	RESERVED				PROTOCOL IDENTIFIER (0h)				
4	RESERVED								
5	RESERVED								
6	RESERVED					RR_TOV UNITS			
7	RESOURCE RECOVERY TIME OUT VALUE (RR_TOV)								
8	RESERVED						CONTROL MCM		
9	RESERVED								
10	RESERVED								
11	ORIGINATOR CMR'S PER PORT								
12	RESERVED								
13	RESPONDER CMR'S PER PORT								
14	(MSB)	MCM TIME OUT VALUE (MCM_TOV)							
15								(LSB)	

The CONTROL MCM field indicates which MCM operations the target is allowed to initiate.

Table 2 - CONTROL MCM field

Codes	Description
00b	The target may participate in and initiate all MCM operations
01b	The target shall not respond to any MCM primitives (i.e., MCM is disabled to the target)
10b	The target may participate in MCM operations but shall not begin MCM (i.e., target shall not transmit a BMCM).
11b	Reserved

The ORIGINATOR CMR'S PER PORT field indicates the minimum number of MCM circuits the target may originate at each of the target's ports. A value of zero in the ORIGINATOR CMRS PER PORT field indicates a vendor specific number of MCM circuits per port.

The RESPONDER CMR'S PER PORT field indicates the minimum number of MCM circuits the target may respond to at each of the target's ports. A value of zero in the RESPONDER CMR'S PER PORT field indicates a vendor specific number of MCM circuits per port.

The MCM TIME OUT VALUE (MCM_TOV) field indicates the minimum time in milliseconds an MCM device shall remain in the MCM state before transmitting an EMCM. A value of zero in the MCM TIME OUT VALUE (MCM_TOV) indicates there is no minimum time an MCM device has to remain in the MCM state before transmitting an EMCM.