To: INCITS T10 Committee

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Subject: ADC: FC Descriptor (ADC Device Specific Mode Page)

In the ADI teleconference held in August, 2002 there was an action item to create a proposal for modifying the Fibre Channel Descriptor of the Service Delivery Port descriptor sub-page described in 02-253r1 to more clearly specify the use and reporting of Hard Addressing.

2.2.5 Fibre Channel Descriptor

Table 1 describes the fields in the Fibre Channel Descriptor:

TABLE 1. Fibre Channel Descriptor

Bit Byte	7	6	5	4	3	2	1	0
4	P2P	TopLock	RHA	HAV	MPN		APE	PE
5	Reserved				SpdLock	Speed		
6	Reserved							
7	FC-AL Hard Loop ID							
8 - 15	WWN							

The Port Enable (PE) bit is set to one to enable the port. When set to zero, the port will not be enabled its drivers onto the Fibre.

The Automatic Port Enable (APE) bit is set to one to automatically enable the port after power on, without waiting for a command. When set to zero, the port will not be enabled until a MODE SELECT command is received with the PE bit set to one.

The Modify Port Name (MPN) field is used to modify and report modifications to the device's port name, as defined in Table 2:

TABLE 2. Modify Port Name

MPN	MODE SENSE	MODE SELECT
00b	The value in the WWN field is the manufacturer assigned port name.	Do not modify the port's world wide name. The WWN field shall be ignored.
01b	The value in the WWN field has been modified from the manufacturer's assigned value.	Do not modify the port's world wide name. The WWN field shall be ignored.
10b	Invalid value for a MODE SENSE.	Set the port's world wide name to the manufacturer's default value. The value in the WWN field shall be ignored.
11b	Invalid value for a MODE SENSE.	Set the port's world wide name to the value in the WWN field.

If the Hard Address Valid (HAV) bit is set to one, the value in the FC-AL Hard Loop ID field indicates the loop ID that the port shall use to set the Hard AL_PA to be used during a LIHA process when the RHA bit is set to one. This value shall be retained in the devices non-volatile memory.

If the Require Hard Address (RHA) bit is set to one, the value in the FC-AL Hard Loop ID field indicates the loop ID that the port shall use to request the Hard AL_PA during a LIHA process. If the RHA bit is set to zero the FC-AL Hard Loop ID field is ignored and the port will not select a hard address during LIHA phase.

The Point To Point (P2P) is set to one to indicate the port is configured to operate in point to point mode. When set to zero, the port is configured to operate in arbitrated loop mode.

The Topology Lock (TopLock) bit is set to one to force the port to only operate in the mode selected by the P2P bit. When set to zero, the port may negotiate the topology and select the appropriate one. When this bit is set to 0 on a MODE SELECT command, the P2P bit is ignored.

The Speed field indicates the bit rate that the port is configured to operate in. The valid values can be found in Table 3:

TABLE 3. Speed Values

Value	Speed
000b	1 GB/Sec
001b	2 GB/Sec
010b – 111b	Reserved

The Speed Lock (SpdLock) bit is set to one to force the port to only operate in the speed selected by the Speed field. When set to zero, the port may negotiate the speed and select the appropriate one. When this bit is set to 0 on a MODE SELECT command, the Speed field is ignored.