

To: T10 Technical Committee

From: Kevin Butt, IBM Document: T10/04-228r1

Subject: Automation/Drive Interface - Commands (ADC) - Resolution of LB Comment Quantum

104

Quantum 104: Add a current speed value of "Unknown" and remove the requirement that LNPC be true for the CURRENT SPEED field to be valid.

IBM believes that a value of "unknown" for the speed is not required. The true problem here is the lack of a concise definition for LNPC. This definition needs to be made precise and another bit field added to help convey and clarify the intent of the LNPC bit.

Proposal

6.1.2.3.1 Fibre Channel Status Data

The DTD Primary Port Status data for a Fibre Channel port is shown in table 16

Table 16 — Fibre Channel Status data

| Bit Byte | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
|-------------|-------------------|---------------|---|---|----|----------|--------|------------|
| 4 | CURRTOP | CURRENT SPEED | | | LC | CONFLICT | SIGNAL | <u>PIC</u> |
| 5 | | | | | | | | |
| 6 | CURRENT N_PORT_ID | | | | | | | |
| 7 | | | | | | | | |

A value of one in the port initialization complete (PIC) field indicates that the FC_Port state machine is in the ACTIVE state (see FC-FS) and the primary port is operating in point-to-point topology, or the most recent Loop Initialization Process (LIP) has completed successfully (see FC-AL-2). A value of zero indicates that the primary port is not in the ACTIVE state and is not synchronized (see FC-FS) or successfully completed the most recent LIP.

A value of one in the SIGNAL field indicates that a signal is detected at the primary port. A value of zero indicates a signal is not detected. An example of signal detection is detection of light for an optical medium.

A value of one in the CONFLICT field indicates that another device has the required Hard AL_PA or that no AL_PA is available for the primary port. A value of zero indicates there is no AL_PA conflict.

A value of one in the login complete (LC) bit indicates that at least on initiator port has completed process login (PRLI) with the DT device (see FCP-2) on this primary port. A value of zero in this bit indicates that a login has not successfully completed through the PRLI phase.

The CURRENT SPEED field indicates the bit rate in which the port is operating currently. The valid values can be found in table 34 in clause 6.2.2.2.2. This field is undefined when the **LNPC** PIC field is set to zero.

A value of one in the current topology (CURRTOP) field indicates the port is operating currently in point to point mode. A value of zero indicates the port is operating currently in arbitrated loop mode. This field is undefined when the **LNPC PIC** field is set to zero.

The CURRENT N_PORT_ID field indicates the 24-bit N_Port_ID (as defined by see FC-FS) that is assigned currently to the port. This field is undefined when the <u>LNPC PIC</u> field is set to zero.