memorandum

T10/06-218r0

To	From	Subject	Date
INCITS T10 Committee	Michael Banther, HP	ADC-2 Clarification of MOUNTED	3 May 2006

Revision History

Revision 0 – Initial document.

Background

For some time, different DT device vendors have interpreted the meaning of the MOUNTED bit in the very high frequency data log parameter in slightly different ways. This problem has occurred for cleaning cartridges and firmware update cartridges.

The text that defines the mounted bit appears in clauses 3.1.27, 4.2.4, and 6.1.2.2 of adc2r04.

Over time, the ADI-2 working group has reached consensus of the way the MOUNTED bit should behave. This proposal attempts to clarify the draft standard to reflect the group's consensus.

Changes to draft standard

3.1.27 mounted: The state of a medium in a DT device when the DT device is physically capable of processing operations that involve interactions between the read/write element(s) of the DT device and the operational substrate of the medium. The interactions between the read/write element(s) of the DT device and the operational substrate of the medium may vary depending on the medium type, e.g. altering or detecting the magnetic polarization of the operational substrate for a magnetically recordable medium or physical abrasion of the read/write element(s) for a cleaning medium. A medium in a DT device is not mounted when the medium is seating, threading, positioning to its usable area, unthreading, or unseating.

> Editorial note: The phrase 'positioning to its usable area' may have an undesirable consequence for a cleaning medium. In some technologies, each cleaning operation requires an unused area of the operational substrate. Consequently a DT device could take a substantial period of time (e.g. seconds) after completion of the thread to position to a usable area. Does this additional delay in reporting mounted cause a problem?

4.2.4.1 Load states

Table 1 – Load states

Load state	Very high frequency data log parameter field					
	INTXN	RAA	MPRSNT	MSTD	MTHRD	MOUNTED
a) DT device initialized, no medium present	0	1	0	0	0	0
b) Early detection of medium placement by DT device	0	1	1	0	0	0
c) Acknowledgement of medium control by DT device	0	0	1	0	0	0
d) Medium seating	1	0	1	0	0	0
e) Medium seated	0	0	1	1	0	0
f) Medium threading	1	0	1	1	0	0
g) Medium threaded	0	0	1	1	1	0
h) Completing load	1	0	1	1	1	0
i) ~~Load complete (e.g., DT device ready)~~ Medium mounted	0	0	1	1	1	1

The DT device shall set the INTXN bit ~~is set~~ to zero when the DT device requires an external stimulus (e.g., a command or medium movement) to attempt to reach another state. The DT device may set the INTXN bit to zero when the DT device requires an internal stimulus (e.g., completion of a cleaning operation when using a cleaning cartridge) to attempt to reach another state.

Load state (i) represents ~~the completion of the load operation (e.g., the DT device being in the SCSI READY state, microcode image or cleaning medium loaded)~~ a mounted medium (see 3.1.27).

Table 2 – Load example

Load event	Very high frequency data log parameter field					
	INTXN	**RAA**	**MPRSNT**	**MSTD**	**MTHRD**	**MOUNTED**
1) DT device initialized, no medium present	0	1	0	0	0	0
2) Initial medium placement into DT device	0	1	0	0	0	0
3) After the automation device pushes a medium into DT device, now seating	1	0	1	0	0	0
4) After seating, medium now threading	1	0	1	1	0	0
5) Medium threaded, completing load	1	0	1	1	1	0
6) ~~Load complete (e.g., DT device ready)~~ Medium mounted	0	0	1	1	1	1