

To: INCITS T10 Committee

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Subject: Modifications to SMC-2 to resolve Letter Ballot comment Q52.

## 1 Revision History

Revision 0:

Initial revision of the proposal created at the May 2003 T10 working group meeting.

## 2 General

Letter Ballot comment Quantum-52 states that other features implemented by vendors should be standardized. Specifically, fields indicating bar code reader present, MAM capability, and cleaning management were suggested.

These issues were discussed at the T10 meeting in May, 2003 and this proposal was written to address this letter ballot comment.

## 3 Proposal

### 3.1 *Read Element Status command changes*

#### 3.1.1 Add to all READ ELEMENT STATUS descriptors

Add the following fields to byte 9 of all of the READ ELEMENT STATUS descriptors, replacing the reserved field:

Add a bit called MAC: The MAM Access Capable (MAC) shall be set to one to indicate the medium changer is capable of supporting the READ ATTRIBUTES and WRITE ATTRIBUTE command on medium in this element. This bit shall to zero indicates that it may not be capable of processing READ ATTRIBUTES and WRITE ATTRIBUTE command

Add a 2 bit field called VTQ: The Volume Tag Qualifier (VTQ) field indicates that the validity of the volume tag fields. Table X defines the values for this field

Table X – VTQ field values

Value	Description
00b	Volume tags are valid. This value shall be returned when the volume tags have been determined or the medium changer does not contain a volume tag reader (see device capabilities mode page description).
01b	Volume tag fields are invalid because the volume tags are currently inaccessible (e.g. medium is loaded in a data transfer element such that a barcode label can not be accessed and there is no prior knowledge of the label).
10b	Volume tag fields are invalid because the volume tags are unreadable or there is a problem with the volume tag reader.
11b	Reserved

Add a bit ED: The Element Disabled (ED) bit shall be set to one if the element is disabled (e.g. a magazine or drive is not installed or has been logically disabled). This bit shall be set to zero when the element is enabled.

Add a bit CMP: The Cleaning Medium Present (CMP) bit shall be set to one if the medium changer has determined the medium in this element is a cleaning medium. This bit shall be set to zero if the medium changer has not determined if the element contains a cleaning medium.

### 3.1.2 Other changes to READ ELEMENT STATUS command

Remove the sentence from the FULL, ACCESS, IMPEXP bits descriptions that claims they are not valid when the EXCEPT bit is set to one.

Add to bit 7 of byte 2 of the IE descriptor, OIR: The Operator Intervention Required (OIR) bit shall be set to one when operator intervention is required to make the import/export element accessible. The OIR bit shall be set to zero if the ACCESS bit is set to one or if no operator intervention is required.

## 3.2 *Changes to Device Capabilities mode page*

Add the following fields to byte 3 of the Device Capabilities mode page:

Add a one bit field called BTV with the following description: The Byte Three Valid (BTV) bit shall be set to one when fields in byte 3 of the Device Capabilities mode page are supported per this standard. The BTV bit shall be set to zero when byte 3 of the Device Capabilities mode page are treated as reserved.

Add a one bit field called VTRP with the following description: The Volume Tag Reader Present (VTRP) bit shall be set to one by the medium changer to indicate that a volume tag reader is installed in the medium changer (e.g. optical bar code reader). The VTRP shall be set to zero to indicate that a volume tag reader is not present or is not functional.

Add a one bit field called ACE with the following description: The Auto-clean Enabled (ACE) shall be set to one if the medium changer is managing the data transfer element cleaning process. This bit shall be set to zero if the medium changer is not managing the cleaning process.

Add a one bit field call DMAC with the following description: The Dedicated MAM Access Capable (DMAC) bit shall be set to one to indicate that a MAM reader/writer which is dedicated to the medium changer system is present. The DMAC bit shall be set to zero when a dedicated MAM reader/writer is not present within the medium changer system. A medium changer that sets the DMAC bit to zero may be capable of supporting the READ ATTRIBUTES and WRITE ATTRIBUTES command by using the MAM reader/writer within the data transfer devices within the medium changer.