To: INCITS T10 Committee

From: Paul Entzel, Quantum

Date: 6 June 2007

Document: T10/07-269r0

Subject: SPC-4: Update Annex C for ADC-2 changes

1 Revision History

Revision 0:
Initial revision posted to the T10 web site on 6 June 2007.

2 Reference

T10/SPC-4 revision 11
T10/ADC-2 revision 7e
T10/06-475r4, ADC-2 letter ballot resolution

3 General

During the course of resolving letter ballot comments in ADC-2, we have added support for several additional commands and pages. This proposal requests updates to annex C in SPC-4 to reflect these changes and to resolve letter ballot comments HPQ-135 and HPQ-178 which requested these changes.

Proposed additions are in blue, removed text is in crossed out red.

4 Changes to SPC-4, Annex C

4.1 Table C.2 (Operation codes)

Table C.2 lists all of the opcode values together with the command name and a column for each command set standard showing whether the command is mandatory, optional, vendor specific, or obsolete. Make the following changes to this table (the second column reflects the V column, only rows with requested changes are shown):

OP	V	Description
83h	O	EXTENDED COPY
84h	O	RECEIVE COPY RESULTS
86h	O	ACCESS CONTROL IN
87h	O	ACCESS CONTROL OUT
A2h	O	SECURITY PROTOCOL IN
A3h	O	MAINTENANCE (OUT)
A4h	O	MAINTENANCE (IN)
A9h	O	SERVICE ACTION OUT (12)
ABh	O	SERVICE ACTION IN (12)
B5h	O	SECURITY PROTOCOL OUT

The MAINTENANCE (OUT) opcode (A3h) presents a bit of a dilemma, because the ADC-2 command set supports 7 flavors of this opcode:

1. REPORT ALIASES (A3h/0Bh), REPORT DEVICE IDENTIFIER (A3h/05h), REPORT PRIORITY (A3h/0Eh), REPORT SUPPORTED TASK MANAGEMENT FUNCTIONS (A3h/0Dh), REPORT TARGET PORT GROUPS (A3h/0Ah), and REPORT TIMESTAMP (A3h/0Fh) are all optional; and

2. REPORT SUPPORTED OPERATION CODES (A3h/0Ch) is mandatory.

For this proposal, MAINTENANCE (OUT) is marked as optional for ADC-2 until guidance is provided by CAP. I see 3 possible solutions to this problem (there are surely more):

1. Add a new key value, such as "S = Support varies by service action" and use this instead.

2. Break out each of the service actions in table C.2 so support can be shown on a per command basis.

3. Add a support column to table C.3.3 and C.3.4 for each command set and change the support column in table C.2 for each of these commands to "(See table C.3.3)" or "(See table C.3.4)".

4.2   Table C.10 (Log page codes)

Make the following changes for ADC-2 devices (the third column represents the V column, only rows with requested changes are shown):

Log Page Code	Log Subpage Code	V	Log Page Name
01h	00h	V	Buffer Over-Run/Under-Run
02h	00h	V	Write Error Counter
03h	00h	V	Read Error Counter
04h	00h	V	Read Reverse Error Counter
05h	00h	V	Verify Error Counter
06h	00h	V	Non-Medium Error
07h	00h	V	Last n Error Events
08h	00h	V	Format Status
0Bh	00h	V	Last n Deferred Error or Asynchronous Events
0Ch	00h	V	Sequential-Access Device
0Dh	00h	V	Temperature
0Eh	00h	V	Start-Stop Cycle Counter
0Fh	00h	V	Application Client
10h	00h	V	Self-Test Results
18h	00h	V	Protocol Specific Port
2Fh	00h	V	Informational Exceptions

4.3 Table C.11 (Mode page codes)

Make the following changes for ADC-2 devices (the third column represents the V column, only rows with requested changes are shown):

Mode Page Code	Mode Subpage Code	V	Mode Page Name
0Eh	00h	V	ADC Device Configuration
0Eh	01h	V	Target Device
0Eh	02h	V	DT Device Primary Port
0Hh	03h	V	Logical Unit
0Eh	04h	V	Target Device Serial Number
1Ah	00h	V	Power Condition
1Ch	00h	V	Information Exception

4.4 Table C.12 (VPD page codes)

Make the following changes for ADC-2 devices (the second column represents the V column, only rows with requested changes are shown):

VPD page Code	V	VPD Page Name
B1h	V	Manufacturer-assigned Serial Number