Draft Minutes
Automation/Drive Interface (ADI) Working Group
Ad Hoc Teleconference
T10/03-270r0
4 August 2003
8:00 AM – 10:00 AM PDT

Conference Call Information:
    Hosted by: Quantum
    Toll Free: (800) 668-7083
    International: (719) 536-6600
    Pass code: 5764

1. Introductions: Group

    Paul Suhler called the meeting to order at 8:05 AM PDT. He thanked Quantum for hosting
    the meeting. A table of the attendees appears at the end of these minutes.

2. Approval of the agenda: 03-269r0   Paul Suhler

    Paul Suhler discussed the order of the discussion items and asked for modifications. Nothing
    was heard.

    Paul Suhler made a motion for acceptance of the modified agenda. Michael Banther
    seconded the motion. In the absence of objections, the group passed the motion
    unanimously.

3. Approval of previous meeting minutes: Paul Suhler

    7-8 July 2003 meeting   03-236r0

    21 July 2003 teleconference   03-262r0

    Paul Suhler requested comments for the minutes of the 7-8 July 2003 meeting and the 21 July
    2003 teleconference, 03-236r0 and 03-262r0 respectively. No one offered any corrections or
    additions.

4. Review of action items: Michael Banther
    a. Bob Griswold to follow up with SNIA Interoperability Conformance Test Program
        (ICTP) Subcommittee regarding test/emulation tool. *Carryover*

    b. Paul Entzel will write an appendix to ADT to describe an example login. *Carryover*,
        expect completion by the Sept. meeting.

    c. Paul Entzel will incorporate 03-208r0 into ADT. *Closed*

    d. Michael Banther to modify 204r2 as discussed and provide to Rod Wideman for inclusion
        into ADC. *Closed*

    e. Rod Wideman to incorporate 204r2 as revised into ADC. *Closed*

    f. Paul Entzel to incorporate 237r0 as revised into ADT. *Closed*

g. Rod Wideman will incorporate 03-202r1 as revised into ADC. *Closed*

h. Paul Entzel will incorporate 03-221r1 as revised into ADT. *Closed*

i. Michael Banther will revise 03-239r0 to remove the Upgrade bit in the Load Unload command and reinstate the FUE bit in the mode page. *Closed*

j. Susan Gray will revise 03-263r0 per discussion item (a) of 03-262r0. *Closed*

k. Rod Wideman will revise ADC LIV/RHA text as per discussion item (b) of 03-262r0. *Closed*

l. Rod Wideman will incorporate the proposal in Unscheduled Business item (a) of 03-262r0 into ADC. *Closed*

m. Rod Wideman will incorporate the proposal in Unscheduled Business item (b) of 03-262r0 into ADC. *Closed*

n. Rod Wideman will respond to Kevin Butt's e-mail containing ADC comments. *Closed*

o. Paul Suhler will discuss the September T10 meeting schedule at the 4 August teleconference. *Closed*

p. Paul Suhler will send an e-mail requesting a host for the 4 August teleconference. *Closed*

5. Discussion items:

a. ADC Upgrade Protection   03-239r1   Michael Banther

Michael Banther described the changes in this revision. Rod Wideman pointed out that the term 'upgrade' may be not well enough defined for a standard. He likes 'micro-code replacement operation'. Rod suggests changing 'upgrade media' to 'of media containing a microcode image'. Paul Suhler pointed out that SPC uses 'microcode' without a hyphen. Paul Entzel agreed to change the text 'firmware image' to 'microcode image'. Paul Entzel would also like to see the FUE and UP bits located adjacent to one another. Paul Suhler suggested swapping DRMODE and UP.

Paul Suhler suggested changing 'replacement' and 'update' to 'save' for consistency with SPC.

Paul Entzel and Rod Wideman debated the validity of FUE and UP both set.

Paul Suhler asked whether the term 'update' is specific enough to allow sufficient leeway to allow non-saving of firmware until after a reset.

Michael Banther made a motion for acceptance of 03-239r1 as revised into ADC. Paul Suhler seconded the motion. As no one offered an objection, the motion passed unanimously.

b. ADI Host Initiated Unload Reporting   03-263r1   Susan Gray

Susan Gray described the changes in this revision.

Rod Wideman raised some editorial concerns about the 1st paragraph of proposed text in the model section. Paul Entzel suggested some text regarding the visibility of the automation device via SCSI. Susan found text using the term 'automation device' already, resolving one of Rod's concerns. Several of us asked to remove the sentence

starting, 'The primary host only has ....' We made a minor change to the penultimate sentence in the first paragraph.

We debated and Susan agreed to several editorial changes to the typical sequence.

We moved on to the proposed text in sub-clause 6.1.2. Rod Wideman asked that Susan Gray include HIU before 'bit' in the last sentence. Michael Banther raised concerns about Load Unload commands with LOAD equal 0b and RETEN equal 1b. Paul Entzel pointed out that a re-tension operation will not result in the automation device server reaching Unload states (e) through (h). Michael asked about potential problems with having the bit become set to 1b for states (e) and (f). This comment prompted Rod Wideman to ask for additional text to limit the conditions that cause the device server to clear the bit. We agreed that the bit will clear on any transition from unload states (e) through (h) to any state except unload states (e) through (h).

Michael Banther asked about the effects of resets or any other events that will clear the HIU bit. Paul Entzel stated that a Logical Unit reset will not cause the bit to clear in SDLT, but a hard reset will. Michael confirmed that some technologies will be able to propagate the setting of the bit across a Logical Unit reset and that the HP LTO drive will lose the setting of the bit across a hard reset. We agreed to add a 'may' clause stating that RMC or ADC device server logical unit resets may cause the bit to clear.

Rod Wideman made a motion for acceptance of 03-263r1 as revised into ADC. Susan Gray seconded the motion. As no one offered an objection, the motion passed unanimously.

c. ADC Mode parameter operation per SPC.   Group

Rod Wideman recalled that Lee Jesionowski had some concerns with the CURRENT DENSITY field in the mode page. Lee didn't like having a field that only reports information in a mode page. Paul Entzel stated that precedence exists for a read-only field, e.g., the Write Protect bit.

Kevin Butt stated a concern with the operation of the DENSITY OVERRIDE bit and the SELECT WRITE DENSITY field. Paul Entzel explained the problem with having only a SELECT WRITE DENSITY field, namely that the drive has to read at whatever density the data has been written at. If an application performed a Mode Sense and retrieved a density that had been previously set using a Mode Select command, it would not know the actual density that the drive is operating at, hence the need for the CURRENT DENSITY field.

We moved on to consideration of the MLUD field. The current definition causes the drive to report a different value for this field than that given to it on a Mode Select. A usage model exists for mode parameters: an application client should be able to obtain a mode page via a Mode Sense, then only change the parameters that it wishes to alter the value of, and then send the entire page back to the target device server using a Mode Select. Paul Entzel pointed out that an application client that changes the RMC Logical Unit Descriptor Parameters using a MLUD of 11b, then a subsequent Mode Sense will report the MLUD as 01b. An application following the usage model could get an MLUD of 01b and then issue a subsequent Mode Select with MLUD at 01b. Rod Wideman agreed that a problem exists with this mode page and other mode pages (tables 28, 33, and 39). The group agreed to continue working on this issue by e-mail.

    d.   Schedule for completion of ADT draft standards   Paul Suhler

       The group did not discuss this item due to lack of time.

    e.   September T10 schedule   Kevin Butt

       Paul Suhler suggested working into Monday evening, starting at 8:00 AM Tuesday morning, and then finishing at 11:00 AM Tuesday. Paul Suhler asked if anyone objected to starting at 8:00 AM Tuesday, and no one did.

    f.   ADC Resolution of Technical Comments from Kevin Butt's e-mail   Rod Wideman

       We agreed to delay discussing this item until the 18 August 2003 teleconference.

6.   Unscheduled business:

   No one raised any unscheduled business.

7.   Next meeting requirements: Paul Suhler

   The group will hold an ad-hoc teleconference on 18 August 2003 starting at 8:00 AM PDT and ending at 10:00 AM PDT. IBM will host this teleconference.

   The group will hold a meeting 8-9 September 2003 during T10 plenary week in Seattle, WA. The meeting will begin on the 8th immediately after the T10 SMC-2 Working Group meeting finishes. The meeting time on the 9th will occupy the entire day, concluding at 6:00 PM MDT.

8.   Review new action items: Michael Banther
    a.   Michael Banther will revise 03-239r1 per discussion item (a).
    b.   Rod Wideman will incorporate 03-239r1 as revised into ADC.
    c.   Susan Gray will revise 03-263r1 per discussion item (b).
    d.   Rod Wideman will incorporate 03-263r1 as revised into ADC.
    e.   Everyone will consider the MLUD field problem identified in discussion item (C) and comment on it by e-mail by 18 August.
    f.   Paul Suhler will request a schedule change from John Lohmeyer regarding the ADI working group schedule per discussion item (e).
    g.   Paul Suhler will notify John Lohmeyer that ADC will not be ready for letter ballot until 29 August 2003.
    h.   Everyone to read Rod Wideman's response to Kevin Butt's e-mail and comment on it by the 18 August 2003 teleconference.

9.   Adjournment: Group

   Michael Banther made a motion for adjournment. Rod Wideman seconded the motion. The group passed the motion unanimously. Paul Suhler adjourned the group at 10:01 AM.

Attendees:

Name	Organization	E-mail
Rod Wideman	ADIC	rod.wideman@adic.com
Paul Suhler	Certance	paul.a.suhler@certance.com
Michael Banther	HP	michael_banther@hp.com
Kevin Butt	IBM	kdbutt@us.ibm.com
Susan Gray	Quantum	susan.gray@quantum.com
Paul Entzel	Quantum	paul.entzel@quantum.com