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Draft Minutes
Automation/Drive Interface (ADI) Working Group
Ad Hoc Teleconference
T10/03-151r0
26 March 2003
8:00 AM – 10:00 AM PST

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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 teleconference to order at or around 8:00 AM PST. He thanked
    Quantum for hosting the call. A table of the attendees appears at the end of these minutes.

2. Approval of the agenda: 03-150r0   Paul Suhler

    Paul Suhler requested approval of the agenda. The group agreed to add discussion of 03-
    152r0, Definitions clause clean-up in ADT, by Paul Entzel.

    Paul Suhler made a motion for approval of the agenda as revised. Michael Banther seconded
    the motion. The group passed the motion by acclimation.

3. Approval of previous meeting minutes: Paul Suhler

    10-11 March 2003 meeting   03-117r0

    Paul Suhler requested comments for the minutes of the 10-11 March 2003 meeting, 03-117r0.
    No comments were forthcoming.

4. Call for Patents   Paul Suhler

5. Review of action items: Michael Banther
    a. Rod Wideman to produce a proposal for device server interaction section in ADC
        document. *Carryover*
    b. Lee Jesionowski to create a proposal for method to convey Interface Status changed.
        Carryover
    c. Paul Entzel to write up a proposal for the ADC model of TapeAlert. *Carryover*
    d. Paul Suhler to follow up with SNIA Interoperability Conformance Test Program (ICTP)
        Subcommittee regarding test/emulation tool. *Carryover*, moved to Bob Griswold
    e. Michael Banther will revise 02-358r4. *Closed*
    f. Paul Entzel will incorporate 02-358r4 as revised into ADT. *Closed*
    g. Paul Entzel will incorporate 03-080r2 into ADT. *Closed*

h. Paul Suhler will find out when any patent notification must be made in terms of the ability of the draft standard to contain the standard patent statement. *Closed*

i. Paul Entzel will revise 03-101 as described in discussion item a of 03-117r0. *Closed*

j. Paul Entzel will incorporate 03-101r0 as revised into ADT. *Closed*

k. Paul Suhler will revise 03-077 as described in discussion item c of 03-117r0. *Closed*

l. Paul Suhler will revise 03-087 as described in discussion item d of 03-117r0. *Closed*

m. Paul Suhler will search for a bridging tech report (see George Penokie – MSC Management Server Commands) to investigate the method recommended to handle transport-level mode pages. No tech report exists according to George P. *Closed*

n. Paul Entzel will propose an Abort Open Exchanges bit to the Port Login IU. *Carryover*

o. Paul Suhler will raise an ADI-2 tracking proposal and add ADC Progress Indication to it. *Closed*

p. Paul Suhler will revise 03-095 per discussion item e of 03-117r0. *Closed*

q. Paul Suhler will modify the drawings for ADC and provide descriptive text. *Closed*

r. Rod Wideman will incorporate 03-042r2 as modified into ADC. *Carryover*

s. Rod Wideman will incorporate 03-106r0 as modified into ADC. *Carryover*

t. Rod Wideman will incorporate 03-113r0 into ADC. *Carryover*

u. All will review nomenclature and propose changes, specifically port references and device server references. *Carryover*

v. Paul Suhler will announce the schedule of teleconferences in March and April and the next meeting in May. *Closed*

w. Rod Wideman will remove the READ POSITION command from table 2 of ADC r01. *Carryover*

6. Discussion items:

a. Date of next teleconference   Paul Suhler

Paul Suhler briefly confirmed with the group that we will meet by teleconference on Tuesday, 8 April and Wednesday, 23 April 2003.

b. ADI-2 Features Tracking   03-133r0   Paul Suhler

Paul Suhler described the document, its purpose and current content. Paul Entzel stated his approval of it. Lee Jesionowski asked if we want to add Mask-Unmask functionality (03-087). Paul Suhler replied that he wishes to wait and see where the discussion of 03-087 leads.

c. ADI Bridging   03-077r4   Paul Suhler

Paul Suhler described the revisions between 03-077r3 and r4.

Paul Suhler requested input on restricting access to transport-related mode and log pages to LUN 0. The problem lies in differentiating ADT transport-specific mode pages and the primary transport-specific mode pages. How does the drive-library combination behave when receiving a transport-specific Mode Select on a bridged LU? Paul Entzel argued

that the ADT draft standard should not define any transport-specific mode pages. He wants a 'shall' statement in ADT disallowing such pages, and he will propose text for this statement.

ADC Sub-clause 4.2.x.1:

Paul Suhler reviewed this sub-clause and requested comments. No comments were forthcoming.

ADC Sub-clause 4.2.x.2:

Susan Gray raised a question about the correlation between local device server, remote device server, DTD, and automation devices SMC device server, which goes with which? Paul Suhler confirmed that local device server corresponds to DTD bridged device server and remote device server corresponds to automation.

Michael Banther raised objections to the sentence about, 'the remote device cannot necessarily implement.' Paul Suhler agreed to clean up the offending text.

Lee Jesionowski requested that the text specifically exclude element reservations. Paul Entzel pointed out that Read Element Status has peculiar behaviour with regard to reservation. Michael Banther agreed that we could restrict ADC to not support element reservations.

Lee Jesionowski pointed out some text improvements to the second (lettered) list.

Paul Entzel asked if we should pass Request Sense through if no Contingent Allegiance exists or if the primary transport does not support Contingent Allegiance. The group agreed to keep Request Sense processing wholly within the drive. Lee Jesionowski asked about polling with Request Sense to pick up Unit Attentions. Some ambiguity exists in the standard about whether the Request Sense returns the Unit Attention sense data or not. The group discussed the issue and agreed to have the draft standard remain silent, as we couldn't see a way to solve this issue.

ADC Sub-clause 4.2.x.3:

Paul Entzel requested changing, 'The local device server should discontinue.' to 'The local device server shall discontinue.' Paul Suhler agreed to make this change. Lee Jesionowski pointed out the need for a model section on cached ready status.

ADC Sub-clause 6.2.2.3.3:

Paul Entzel pointed out that the first paragraph should include a reference to the model section to add clarity in the case of reading the standard out-of-order. He also wanted to re-word the text so that the information the automation receives is no longer the basis of the description.

Lee Jesionowski questioned whether disabling a bridged logical unit aborts only the commands passed to the automation or all commands on the logical unit. Paul Entzel pointed out that we have to raise a Unit Attention condition anyway due to the logical unit inventory change. Michael Banther supported Lee's position to abort all commands on the logical unit. Paul Suhler agreed to change the text to abort all nexii on the bridged logical unit.

Paul Suhler asked if the text should specify the ASC/ASCQ as it currently does. We agreed to change the ASC/ASCQ to LOGICAL UNIT COMMUNICATION FAILURE.

ADT Sub-clause 7.1.2:

Paul Suhler described the addition of the First Burst Length field to the SCSI Request IU. Lee Jesionowski asked about the naming the field 'burst length'. Paul Suhler asked if the same naming is used in the Xfer Ready IU and Paul Entzel verified that it was. Michael Banther asked for clarification of the interaction between the burst length fields in the two IU's. We agreed to add text to the description of the SCSI Request IU referencing the Xfer Ready IU and pointing out that the SCSI Request IU implies an Xfer Ready with offset equal to zero.

ADT Sub-clause 7.1.3

After a brief read through, the group approved the revised text. Michael Banther asked if we want a 'shall' statement requiring a GOOD value in the SCSI Status field when the Response Code equals 06h. Paul Suhler agreed to add this text.

ADT Sub-clause 7.1.4

ADT Sub-clause Paul Suhler asked for comments and Michael Banther, Lee Jesionowski, and Paul Entzel began word-smithing the text. After a while, Paul Entzel pointed out that the latest revision of ADT has changed the text under consideration. Paul Suhler agreed to re-word based on ADT revision 3.

ADT Sub-clause 7.2.4

No one could find fault with the revisions in this sub-clause. The group agreed to leave it alone.

ADT Sub-clause 7.2.6

Paul Entzel pointed out that the inclusion of the Fail bit ties Mask-Unmask sense functionality (see 03-087) to ADT. Paul would prefer to sever this link. Lee Jesionowski voiced support for the intent of the Fail bit but cannot argue with Paul Entzel's objection. The group agreed to postpone further discussion.

Regarding the Mode Page Changed bit, Paul Entzel asked if libraries alter anything in the mode page header or just the mode pages. He doesn't want to limit the caching of mode parameters to only pages unless we can guarantee that no library will want to change the header. Paul Suhler agreed to change the text to include the header, not just the mode pages. Lee Jesionowski objected to the restriction on setting the bit '… since the last execution.' Susan Gray asked, 'when is the bit cleared?' We talked through scenarios for caching mode data in an attempt to reach a consensus for her question. Susan and Lee proposed that the bit clears after sending the AER IU. Paul Suhler noted that he needs some text to describe that the automation, when setting the bit, must send the AER IU.

Lee Jesionowski asked whether all drives shall support this IU and does that imply caching. We agreed that drives that do not support caching should throw the IU away. Susan Gray gave the opinion that only drives that support bridging must support this IU. Paul Suhler disagreed, all drives should support (i.e., not NAK for unsupported IU) the IU but they may discard it. The group agreed with Paul's opinion.

Lee Jesionowski pointed out that clearing of the various bits by the automation should only occur on receipt of an ACK.

Lee Jesionowski, Paul Entzel, and Susan Gray requested changing the introduction paragraph to include only mode and all Inquiry data, not log pages and not just VPD.

Lee Jesionowski pointed out several changes that he would like to the meaning of RSC. It should reflect changes to the ASC/ASCQ associated with Ready status. ASC/ASCQ equal zero and RSC equal one implies a transition has occurred from Not Ready to Ready. It also implies a Unit Attention to all initiators.

Paul Entzel pointed out that BUASDV and RSC cannot both equal one. Paul Suhler agreed.

Paul Suhler will revise this proposal based on the discussion.

d. ADC Drawings   03-140r0   Paul Suhler

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

e. ADC Data Transfer Device Status Masking   03-087r1   Paul Suhler

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

f. ADC Recovery Requested Log Page   03-095r1   Paul Suhler

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

g. Connector status   03-147r0   Paul Suhler

Paul Suhler updated the group on the status of the connector discussions taking place in the Small Form Factor committee. He hopes for a conclusion in May, 2003. Regardless of the SFF schedule, we have an SFF number to reference which is all the ADT draft standard requires.

7. Unscheduled business:

a. Definitions clause clean-up in ADT   03-152r0   Paul Entzel

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

8. Next meeting requirements: Paul Suhler

The group will hold ad-hoc teleconferences on:

− 8 April 2003 – hosted by Crossroad Systems tentatively, and

− 23 April 2003 – hosted by ADIC.

Each meeting will start 8:00 AM PST and finish at 10:00 AM PST.

The group will hold a meeting 5-6 May 2003 during T10 plenary week in Nashua, NH. The meeting will begin on the 5th immediately after the T10 SSC-2 Working Group meeting finishes. The meeting time on the 6th will occupy the entire day, concluding at 6:00 PM EST.

9. Review new action items: Michael Banther

    a. Paul E. will propose text for ADT to disallow protocol-specific mode pages.

    b. Paul S. will e-mail proposed text for a subset of the bridging issues to the group.

    c. Paul S. will revise 03-077 from r4 to r5.

10. Adjournment: Group

    Paul Entzel made a motion for adjournment. Paul Suhler seconded the motion. The group passed the motion by acclimation. Paul Suhler adjourned the group at 9:56 AM PST.

Attendees:

Name	Organization	E-mail
Michael Banther	HP	michael_banther@hp.com
Lee Jesionowski	IBM	ljesion@us.ibm.com
Paul Entzel	Quantum	paul.entzel@quantum.com
Susan Gray	Quantum	susan.gray@quantum.com
Paul Suhler	Seagate Technology	paul.a.suhler@seagate.com