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Draft Minutes
Automation/Drive Interface (ADI) Working Group
Ad Hoc Teleconference
T10/03-086r0
12 February 2003
8:00 AM – 10:00 AM

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Conference Call Information

Hosted by ADIC
Toll free: 877-988-2405
International: 712-884-0228
Pass code: 108356

1. Introductions: Group

   ADIC hosted the teleconference. Paul Suhler called the group to order at 8:10 AM PST.

2. Approval of this agenda: 03-085r0   Paul Suhler

   Paul Suhler requested approval of the agenda. The group amended the agenda to postpone
   the discussion of 03-042r1 and add discussion of the connector. The group approved the
   modified agenda.

3. Approval of previous meeting minutes: Paul Suhler

   Paul Suhler requested comments for the minutes of the 01/29/2003 Conference Call, 03-
   069r0. No one registered comments.

4. Review of action items: Michael Banther

   a. Michael Banther 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*

   e. Paul Suhler will proposal a bridging function. *Closed*, 03-077r0

   f. Rod Wideman will review SSC log pages for applicability to ADC and bring in a
      proposal. *Carryover*

   g. Lee Jesionowski will propose the Requested Recovery log page. *Carryover*, re-
      assigned to Paul Suhler

   h. Rod Wideman will review SSC and SPC VPD pages for inclusion in ADC and bring
      in a proposal. *Carryover*

   i. Rod Wideman will revise 03-042 based on group comments. *Carryover*

   j. Rod Wideman will incorporate 03-008 as revised into ADC. *Closed*

k. Erich Oetting will propose a Checksum field. *Carryover*

l. Rod Wideman will post ADC draft incorporating all accepted proposals to the T10 document archive. *Closed*

m. Rod Wideman will incorporate the diagram of the relationship between the ADC device server, data transfer device server, and application client(s) into ADC. *Closed*

n. Michael Banther will investigate how SAS specifies cables. *Closed*

o. Michael Banther will revise 02-358r4. *Carryover*

p. Paul Entzel will incorporate 02-358r4 as revised into ADT. *Carryover*

q. Michael Banther will revise 03-078r0. *Closed*

r. Paul Entzel will incorporate 03-078r0 as revised into ADT. *Carryover*

s. Paul Entzel will incorporate 03-079r0 into ADT. *Carryover*

t. Michael Banther will revise 03-080r0. *Closed*

u. Michael Banther will review ADT for non-link service payload – type incompatabilities. *Closed*

v. Paul Suhler will propose Masking of Status on a Load/Unload over the primary port. *Closed*

5. Discussion items:

a. Discussion of action items   Paul Suhler

Paul Suhler led a discussion of important action items outstanding. The group agreed that the important action items include:

- The Request Recovery log page. This log page needs at least a shell. Paul Suhler has taken ownership.
- A discussion on other log and VPD pages. Rod Wideman requested this item.
- Definition of the frame checksum. Reif Heck will check with Erich Oetting, who owns this action item, as to the status of it.
- The state transition table in the ADC model section. Rod owns this issue.

The group also agreed that for the first draft standard, AEN does not need additional work, that Tape Alert changes are not critical, and that the test/emulation tool is not terribly important.

The group discussed the expected schedule for letter ballot. Michael Banther raised the possibility of delaying letter ballot until July. He stated that he expects HP to bring in proposals up through May. Paul Suhler stated that he has no intention of cutting off technical input in May. Reif Heck stated that StorageTek may or may not have technical input after May. StorageTek is still evaluating the draft standards. StorageTek has some concerns over support for a legacy protocol. A short discussion by the group explained the crafting of the standards to allow legacy protocols whilst remaining silent about them. The group reached a consensus that no need exists to revise the project proposals again to reflect a change of date.

    b. ADT Payload Size - Type Restriction   03-080r1   Michael Banther

Michael Banther led the group through the changes made in r1 of this proposal. He pointed out that he has added all previous comments except moving the text from 6.3 to each of the service description sub-clauses.

The group discussed the changes and agreed to remove the two item numerical list in favour of stating that a missing field will not cause a change in the current settings of the parameters controlled by those fields.

The group also agreed that the text in 6.3 should move to sub-clauses 6.5 and 7.1. The group recognised that the problem of incorrectly sized payloads occurs in the Encapsulated SCSI service. Paul Entzel wants to use the solution already present in SCSI, and he will investigate SAS for this purpose.

Paul Suhler made a motion for incorporation of 03-080r1 as revised into ADT. Michael Banther seconded the motion. The group approved the motion by acclimation.

    c. SCSI Surrogate Mode   03-077r0   Paul Suhler

Paul Suhler asked about the name of this feature. Did we want to continue to use 'surrogate'? Michael Banther asked to remove 'surrogate' to avoid confusion with HP's proprietary feature. Lee Jesionowski suggested 'bridging' with different modifiers for 'hosted' bridging and 'pass-through' bridging. Group agreed to change 'surrogate' to 'bridging' with adjectives as stated.

Paul Suhler asked, 'Does the model belong in ADC, ADT or both?' Lee and Paul Entzel agreed that a cut down version should go into ADT to introduce need for new frame types. The ADT model section will refer to ADC; however the ADC model section will not refer to ADT.

4.2.x Lee requested changing 'This is typically used ...' with ' An example where this might be used ....'

4.2.x.2 Paul Suhler asked, 'Is reporting Logical Unit communication failure mandatory?' Rod Wideman believes it should be.

4.2.x.3 Paul Entzel pointed out that this sub-clause begs the question of how the SMC refreshes the data transfer device's cache. Lee suggested using a Port Logout. If the standard doesn't state what is cached, how does library know when to indicate a cache refreshment is needed? The group engaged in much discussion on whether cache definition (i.e., what's cached) is needed and whether refreshment should be out-of-band or performed through the ADC device server. No final consensus emerged. However the group did lean toward using either a log page (in band to ADC) or fast access command (out of band to ADC) to allow the library device to asynchronously signal the drive that cache refreshment is needed.

Paul Suhler suggested expanding the bridging mode bit to a field. Rod Wideman verified that Paul's choice of the Medium Changer descriptor of the Logical Unit sub-page of the ADC Device Configuration mode page is the right place to include this functionality. However Rod suggested keeping the type of bridging operation, hosted or pass through, separate from the enable bit and also to make the type a bit map. With this solution, the

automation can probe the types of bridging operation that a drive supports by requesting the changeable bits in the mode sub-page. Without this solution, the automation must attempt to enable each type to determine support. Lee and Rod suggested adding text stating that attempts to set more than one type bit results in Check Condition status. Paul Suhler agreed to make these changes.

The group considered the effects of disabling bridging mode on outstanding SMC tasks. Four ideas emerged: return Task Aborted status, return Not Ready status (which I interpret to mean Check Condition status with sense set to Not Ready), do not return any status, or have the draft standard remain silent on the matter. No consensus emerged on which is the better choice. The group agreed that Paul Suhler should add text for reporting a Unit Attention if the primary port is enabled and then bridging mode is enabled or disabled due to the change in the Logical Unit inventory. Paul agreed to make this change. The group also agreed that, after disabling bridging mode, the data transfer device should report 'LUN missing' (interpreted to mean Check Condition status with the Sense Key set to Not Ready and the ASC equal to 04h, it's not obvious what ASCQ to use), for new tasks attempting to access the (now missing) bridged logical units. Paul Suhler requested that we continue this discussion by e-mail due to lack of time.

ADT 6.5 Lee suggested changing 'process login/logout' to 'bridging login/logout' or similar text to make the intent of the frames apparent to the reader. Paul Suhler agreed to make this change.

Regarding the Process Login frame payload contents, Paul Entzel pointed out incompatibilities between long port identifiers and port names and short negotiated frame lengths. At present no mechanism exists to send an IU in multiple frames. Paul Suhler will look at this problem.

Regarding the Process Logout frame payload contents, Paul Suhler asked, 'Is anything needed except the Accept bit?' No one identified other bits or fields. Paul Entzel asked Paul Suhler to move the Accept bit to bit 7 of byte 0, and Paul Suhler agreed to make this change.

    d.   ADC Data Transfer Device Status Masking   03-087r0   Paul Suhler
       The group did not discuss this item due to lack of time.

    e.   Connector discussion   Paul Suhler
       The group did not discuss this item due to lack of time.

6. Unscheduled business:

No one raised any unscheduled business.

7. Next meeting requirements: Paul Suhler

The group will hold a teleconference on 26 February 2003. IBM will host. This teleconference will start at 8:00 AM PST and finish at 10:00 AM PST.

The next meeting will occur during the normal plenary week on 10-11 March 2003.

8. Review new action items: Michael Banther

    a. Paul Entzel will bring in a proposal to add a version number to the Port Login frame.

    b. Paul Entzel will investigate how SAS handles information units whose size when received doesn't match the standard's definition.

    c. Michael Banther will revise 03-080 to r2.

    d. Paul Entzel will incorporate 03-080r2 into ADT.

    e. Paul Suhler will send an e-mail to the group to discuss the unanswered questions from the discussion of 03-077r0.

    f. Paul Suhler will revise 03-077r1.

9. Adjournment: Group
    Rod Wideman made a motion for adjournment. Reif Heck seconded the motion. The group passed the motion by acclimation. Paul Suhler adjourned the group at 9:57 AM PST.

Attendees:

Name	Organization	email
Rod Wideman	ADIC	rod.wideman@adic.com
Michael Banther	HP	michael_banther@hp.com
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