

Draft Minutes
Automation/Drive Interface (ADI) Working Group
Ad Hoc Teleconference
T10/03-262r0
21 July 2003
8:00 AM – 10:00 AM PDT

Conference Call Information:

Hosted by: Certance
Toll Free: (866) 828-0531
International: (309) 229-0103
Pass code: 6412485

1. Introductions: Group

Paul Suhler called the meeting to order at 8:08 AM PDT. He thanked Certance for hosting the meeting. A table of the attendees appears at the end of these minutes.

2. Approval of the agenda: 03-261r0 Paul Suhler

Paul Suhler discussed the order of the discussion items. Michael Banther asked to delay discussion of Upgrade Protect until next teleconference. Paul Suhler agreed.

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

Paul Suhler requested comments for the minutes of the 7-8 July 2003 meeting, 03-236r0.

No comments were forthcoming.

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*
- c. Paul Entzel will incorporate 03-208r0 into ADT. *Carryover*
- d. Rod Wideman will incorporate 03-212 as revised into ADC. *Closed*
- e. Michael Banther to modify 204r2 as discussed and provide to Rod Wideman for inclusion into ADC. *Carryover*
- f. Rod Wideman to incorporate 204r2 as revised into ADC. *Carryover*
- g. Michael Banther to modify 237r0 as discussed and provide to Paul Entzel for inclusion into ADT. *Closed*
- h. Paul Entzel to incorporate 237r0 as revised into ADT. *Carryover*

- i. Rod Wideman will revise 03-217r0 per discussion item (d) of 03-236r0. *Closed*
- j. Rod Wideman will incorporate 03-217r0 as revised into ADC. *Closed*
- k. Rod Wideman will incorporate the proposal embedded in discussion item (e) into ADC. *Closed*
- l. Paul Suhler will revise 03-202r1 per discussion item (e) of 03-236r0. *Closed*
- m. Rod Wideman will incorporate 03-202r1 as revised into ADC. *Carryover*
- n. Lee Jesionowski will revise 03-220r1 per discussion item (f) of 03-236r0. *Closed*
- o. Rod Wideman will incorporate 03-220r1 as revised into ADC. *Closed*
- p. Susan Gray will revise 03-221r1 per discussion item (g) of 03-236r0. *Closed*
- q. Paul Entzel will incorporate 03-221r1 as revised into ADT. *Carryover*
- r. Rod Wideman will incorporate 03-221r1 as revised into ADC. *Closed*
- s. Susan Gray will prepare a proposal to add a bit to the VHF data for sequential mode operation. *Closed, 03-263r0.*
- t. Paul Suhler will update the ADC-2 pending issues list to include automation initiated/mediated DTD diagnostics. *Closed, in 03-133r2.*
- u. Paul Suhler will update the ADC-2 pending issues list to include automation firmware update from tape via a read buffer command. *Closed, in 03-133r2.*

5. Discussion items:

- a. Host Initiated Unload 03-263r0 Susan Gray

Susan Gray described the changes to the proposal. She added HIU as bit 6 in the first byte of the VHF data.

Rod Wideman re-capped his e-mail comment:

We used to have an Unload Complete field defined in the VHF data, and talked ourselves out of it for various reasons (primarily because the other states could be interpreted [sic] to indicate the same thing).

I was wondering if it might make more sense to have this field only indicate that an unload has been initiated by a host, and let the states still reflect when the unload is complete. It could then still be cleared upon reading the page.

Susan Gray pointed out that she didn't want HIU to turn on and then have the automation wait until the unload operation completes. Rod Wideman would like to define the HIU relative to one or more specific unload nominal states. Kevin Butt stated that he expected HIU to turn on upon the beginning of an Unload operation. Susan noted that Kevin's change will require the automation to remember if it's seen the HIU bit on until the clearing of the bit (possibly several states later). Rod suggested limiting the bit to turn on when the DTD reaches the first terminal state (INXTN off), and to turn off upon the DTD making a transition to any other state.

Lee Jesionowski asked for the rationale for the presence of this bit. Susan Gray pointed out that the bit indicates the reason for doing the unload command.

Michael Banther raised a concern about the wording 'primary host'. He also raised concern about the SSC definition of the RETEN and LOAD bits. Susan Gray agreed to make changes to limit the bit to Unload operations issued to the RMC device server. Finally, Michael asked about interactions between the SUHO and AHO bits in the RMC Logical Unit descriptor. We agreed that limiting the HIU bit to finish in one of the terminal unload states, removes any negative interactions.

Lee Jesionowski suggested changing the meaning of the bit to indicate that the drive has given permission for the automation to load a cartridge. Substantial discussion followed with the group attempting to discover whether Lee's solution has more general capability than Susan's. No consensus emerged.

Paul Suhler suggested having Susan Gray revise the proposal and for Lee Jesionowski to bring in a counter-proposal. Susan agreed but Lee declined. Susan's revision will include a model section to explain sequential operation.

b. LIV/RHA discussion

Rod Wideman

Rod Wideman explained the basis for this discussion. Susan Gray had previously asked about the meaning of several fields when set to zero. Rod had updated all of these fields but realised that LIV and RHA fields may have problems with zero values. Kevin Butt sent out an e-mail with suggestions. The prior discussion ended there.

The basic concern is the combination of LIV equal 0b and RHA equal 1b. Paul Suhler agreed that this combination does pose a problem, and he suggested having the ADC device server report CHECK CONDITION status when this combination arises. Kevin Butt had previously suggested in an e-mail dated 11 June: LIV equal 0b implies that the ADC device server ignore the value of the FC-AL Loop ID field, and having the ADC device server treat LIV equal 0b and RHA equal 1b as an illegal combination. Rod Wideman brought out another possibility, LIV equal 0b causes the ADC device server to ignore both the FC-AL Loop ID and RHA fields.

Rod Wideman agreed to add text to have the ADC device server ignore the FC-AL Loop ID field if LIV equal 0b. He will also add text to return CHECK CONDITION if LIV equal 0b and RHA equal 1b.

Kevin Butt questioned the existing text requiring a target to ignore RHA if it is not on an arbitrated loop. Paul Suhler pointed out that the target doesn't necessarily know the topology at the time it receives the Fibre Channel descriptor. We debated removing the existing sentence. Kevin pointed out that several engineers he has worked with have been confused when attaching fibre ports in a point-to-point topology and expecting the target device to require a hard address. After some discussion, we agreed to move this text into a note and remove the 'shall' requirement. Kevin, Paul Suhler, and Rod created some text for the note.

Rod Wideman will revise ADC per these comments.

c. ADC Mode parameter operation per SPC

Group

With Paul Entzel absent, we agreed to delay this item until next teleconference. He had opposed Lee Jesionowski's suggestion from the July meeting to move the current density field from a mode page to a log page.

d. Completion of firmware upgrade

Susan Gray

Susan Gray described the problem. She suggested waiting until Michael Banther's upgrade protection discussion. However, Paul Suhler stated that he would like to move this discussion forward so that we can get ADC ready for letter ballot.

Lee Jesionowski recapped previous e-mail communication regarding this topic. Michael Banther quoted the last meeting minutes, and suggested that leaving firmware upgrade notification until ADI-2 doesn't make the situation worse than at present. Susan, Rod Wideman, and Kevin Butt discussed the importance of having a standard firmware upgrade notification mechanism. Kevin pointed out that some products automatically upgrade upon completion of the firmware image upload whilst others require a device reset. The group agreed to take this item forward as a letter ballot comment.

e. Schedule for completion of ADC and ADT draft standards

Paul Suhler

Rod Wideman reported outstanding items for the completion of ADC: Michael Banther's 03-204 as revised; incorporation of Paul Suhler's annex 03-202. Rod stated his intention of releasing ADC for the letter ballot process after the 4 August 2003 teleconference.

Rod Wideman asked if Kevin Butt's editorial comments might contain any technical discussions. Kevin highlighted 4.2.2.1.3, 2nd paragraph, regarding bridging. A brief review showed that Kevin's comments do contain technical content. Rod asked that we attempt to resolving these questions in the next fortnight, after that we will resolve them through letter ballot comments.

Rod Wideman asked when Michael Banther could provide 03-204r2 as revised. Michael agreed to provide it by the end of the week. Rod suggested releasing ADCr05 early and then releasing ADCr06 incorporating 03-204r2 as revised plus changes due to Kevin Butt's questions. In the end, Rod decided to prepare ADCr05 and query Michael regarding the availability of 03-204r2 as revised. If 03-204 is available, Rod will include it in ADCr05, otherwise he will incorporate 03-204 into ADCr06.

Rod Wideman expects to enter the letter ballot process with ADCr06.

In the absence of Paul Entzel, Paul Suhler delayed discussion of the completion of ADT.

6. Unscheduled business:

a. Renumbering of ADC log pages

Rod Wideman

Rod Wideman requested permission to re-number log page codes due to the removal of the Interface Status log page. We agreed that removal constitutes a technical change since it could affect an implementation already started. Hence the change requires a proposal and vote.

Consequently, Rod Wideman proposed re-numbering the Device Statistics log page from 15h to 14h due to the removal of the Interface Status log page.

Rod Wideman made a motion for inclusion of the proposal stated above into ADC. Paul Suhler seconded the motion. In the absence of objections, the motion passed unanimously.

b. Clearing of INTFC bit

Rod Wideman

Rod Wideman brought up a question about the current (ADCr04) text that defines when the ADC device server clears the INTFC bit in the VHF Data. As the parameters from the associated log page have been absorbed into the VHF Data log page as the DTD Primary Port Status log parameters (100h – 1FFh), should the device server clear the bit upon retrieval of any of the DTD Primary Port Status log parameters or upon retrieval of all of them? We agreed to allow clearing upon the retrieval of any of the parameters.

Rod Wideman made a motion for the inclusion into ADC of the proposed documented above. Paul Suhler seconded the motion. In the absence of objections, the motion passed unanimously.

c. September T10 schedule

Kevin Butt

Kevin Butt brought up the subject of the T10 meeting schedule for September. He pointed out that ADI starts on Monday morning at 9:00 AM and runs through Tuesday all day. It overlaps FCP-3 and CAP on Tuesday. Several members stated their desire to attend either the FCP-3 meeting or the CAP meeting or both. Starting at 9:00 on Monday morning makes travel plans more difficult for some members. We agreed to discuss this issue further at the 4 August 2003 teleconference.

7. Next meeting requirements:

Paul Suhler

The group will hold an ad-hoc teleconference on 4 August 2003 starting at 8:00 AM PDT and ending at 10:00 AM PDT. Quantum will host this teleconference.

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 03-239r0 to remove the Upgrade bit in the Load Unload command and reinstate the FUE bit in the mode page.
- b. Susan Gray will revise 03-263r0 per discussion item (a).
- c. Rod Wideman will revise ADC LIV/RHA text as per discussion item (b).
- d. Rod Wideman will incorporate the proposal in Unscheduled Business item (a) into ADC.
- e. Rod Wideman will incorporate the proposal in Unscheduled Business item (b) into ADC.
- f. Rod Wideman will respond to Kevin Butt's e-mail containing ADC comments.
- g. Paul Suhler will discuss the September T10 meeting schedule at the 4 August teleconference.
- h. Paul Suhler will send an e-mail requesting a host for the 4 August teleconference.

9. Adjournment:

Group

Paul Suhler made a motion for adjournment. Michael Banther seconded the motion. The group passed the motion unanimously. Paul Suhler adjourned the group at 10:03 AM.

Attendees:

Name	Organization	E-mail
Rod Wideman	ADIC	rod.wideman@adic.com
Paul Suhler	Certance	paul.a.suhler@certance.com
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Kevin Butt	IBM	kdbutt@us.ibm.com
Lee Jesionowski	IBM	ljesion@us.ibm.com
Susan Gray	Quantum	susan.gray@quantum.com