

Draft Minutes
Automation/Drive Interface (ADI) Working Group
Ad Hoc Teleconference
T10/04-021r0
5 January 2004
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 8:03 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: 04-020r1 Paul Suhler

Paul Suhler discussed the order of the discussion items.

Paul Entzel made a motion for acceptance of the modified agenda. Rod Wideman seconded the motion. In the absence of objections or abstentions, the group passed the motion unanimously.

3. Approval of previous meeting minutes: Paul Suhler

3-4 November 2003 meeting	03-378r0
17 November 2003 conference call	04-002r0
15 December 2003 conference call	04-017r0

Paul Suhler requested comments for the minutes of the 3-4 November 2003 meeting, the 17 November 2003 teleconference and the 15 December 2003 teleconference – 03-378r0, 04-002r0 and 04-017r0 respectively. No one provided corrections.

4. Review of action items: Michael Banther

- a. Paul Entzel will write an appendix to ADT to describe an example login. *Closed*
- b. Susan Gray will revise 03-369r0 per discussion item (d) of 03-378r0. *Closed*
- c. Paul Entzel will incorporate 03-382r1 into ADT. *Closed*
- d. Susan Gray will revise 03-355r4 per discussion item (b) of 04-017r0. *Closed*
- e. Paul Entzel will revise 04-003r0 per discussion item (c) of 04-017r0. *Closed*
- f. Kevin Butt will revise 04-008r0 per discussion item (d) of 04-017r0. *Closed*
- g. Paul Entzel will incorporate 04-008r0 as revised into ADT. *Closed*

5. Discussion items:

- a. ADT Section 4.7.1.3 03-355r5 Susan Gray

Susan Gray described the changes in the most recent revision to section 4.7.1.3. Paul Entzel and Susan pointed out two editorial changes. Regarding protocol errors, Rod Wideman asked if the phrase 'no retry process is defined' needs qualification with 'by the standard'. Paul Entzel voiced support and Susan agreed.

Susan Gray described the rewrite of 4.7.2.2. We word-smithed the new text slightly.

Susan Gray reviewed the changes in 4.7.2.3, 4.7.2.4, and 4.7.2.5.

Rod Wideman raised concern about some confusion regarding the five sub-clauses in 4.7.2 versus the four error types defined in 4.7.1.3. Paul Entzel suggested adding cross references to point out that Retryable errors are defined in 4.7.1.2.

We discussed the footnotes in Table x+1 and the perspective of the table for error naming purposes. We concluded that the existing text is correct.

Susan Gray reviewed the list of changes needed.

Susan Gray made a motion to accept 03-355r5 as revised into ADT. Rod Wideman seconded the motion. In the absence of objections or abstentions, the group passed the motion unanimously.

- b. Frame Number Restrictions for Frames in ADT 04-003r1 Paul Entzel

Paul Entzel described the changes in this revision. Michael Banther asked for the opportunity to review the text in detail. Rod Wideman and Paul Suhler raised a couple of editorial concerns.

Susan Gray noted a misnaming of a NAK Status Code. Paul Entzel agreed to correct it.

Rod Wideman asked about the last sentence in the last paragraph of sub-clause 3.2. After brief discussion, we agreed to delete this sentence as it's unnecessary.

Rod Wideman made a motion to accept 04-003r1 as revised into ADT. Susan Gray seconded the motion. In the absence of objections or abstentions, the group passed the motion unanimously.

- c. ADT SCSI Application Diagrams 04-014r0 Susan Gray

Susan Gray described the justification for the proposal. She noted two changes that she believes the existing draft standard text needs.

Susan Gray reviewed figure x, a SCSI command with no data phase. Paul Entzel asked if the diagram contains anything normative. He and Susan agreed that it's informative, and they debated, along with Paul Suhler, the best location in the draft standard.

Moving on to the second diagram, figure x+1, the discussion of location came up again although we didn't reach a conclusion. The two contenders are: a sub-clause in the normative text labelled as informative or an informative annex.

We discussed the ordering of the receipt by a target port of Send Data In from the target device server and SCSI Transfer Ready IU from the initiator port. We agreed that no ordering requirement of these two events exists. The target port can receive them in either order.

However Paul Entzel thought that ADT sub-clause 8 includes rules on when the device server may issue Send Data In requests. Paul Suhler and Paul Entzel searched for the rules and couldn't find them, either in ADT or elsewhere. Paul Suhler asked if we need a requirement interlocking Send Data In and Data In Delivered. Paul Entzel pointed out that an implementation that does not interlock these signals cannot be tested against the standard as the standard only measures compliance on the port-to-port interface.

Paul Suhler sought consensus on the diagram. Michael Banther asked if an implementation, that does not wait for a Data In Delivered to send a Send Data In signal from the device server to the target port, experiences a non-recoverable failure reported via the Data In Delivered, what implications does that have for interoperability? Paul Entzel described a scenario where the initiator could receive less data than it expected and the data could appear with a gap. However, the task will complete with Check Condition status.

Susan Gray noted that our Data In Delivered does not contain an I_T_L nexus field while SAM-3's does. We discovered that our specification follows SAM-2, where Data In Delivered only gets issued after a successful delivery. We debated whether we should follow SAM-2 or SAM-3 in this case. We agreed to hold our ground and stick to SAM-2.

Susan Gray introduced the figure x+2. Paul Suhler asked if the initial Send Data Out is necessary. Paul Entzel pointed out that sub-clause 4.9 allows several different usage models of the Send Data Out and Data Out Delivered signals. Michael Banther pointed out that the text should indicate the existence of the different usage models with a reference to sub-clause 4.9. Paul Entzel suggested adding a statement to the sub-clause 8 introduction leading the reader to this text and that this text should appear as an annex. He received general support for this idea.

Susan Gray reviewed the changes. She will revise the proposal.

- d. ADT: Example Containing Figure 3 in ADT w/o the Figure

04-009r0

Kevin Butt

The group did not discuss this proposal as Kevin Butt did not attend the meeting.

- e. ADT/ADC comments

e-mail 12 Dec 03 Kevin Butt

The group did not discuss this proposal as Kevin Butt did not attend the meeting.

- f. ADT State Machine

03-369r1

Susan Gray

Susan Gray introduced the revision of this proposal.

We reviewed the Port state machine. Paul Entzel pointed out a duplication of the same event, a Port Login IU, causing entry to P1 twice.

We debated the value of removing the transitions from a state to itself. Removing them implies that all undocumented events leave the state machine in the same state. The group agreed to remove these transitions. If we kept them, a window of opportunity for omissions appears.

We reviewed the Link Negotiation state machine. Paul Entzel pointed out that the N4:N0 transition needs to have 'with accept = 1' added. Michael Banther raised concerns about N1:Initiate state. If both sides end up here, how do they transition out?

Paul Suhler suggested tabling the proposal until the January meeting in Chandler due to lack of time.

- g. ADT Informative Annex, Port Login Example 04-033r0 Paul Entzel

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

6. **Unscheduled business:**

No one raised unscheduled business.

7. **Next meeting requirements:**

Paul Suhler

The group will hold a meeting 12-13 January 2004 during T10 plenary week in Chandler, AZ. Subject to approval by T10, the meeting will begin on the 12th at 9:00 AM and conclude at 7:00 PM MST. The meeting will reconvene on the 13th at 9:00 AM and adjourn at 11:00 AM MST.

8. **Review new action items:**

Michael Banther

- a. Susan Gray will generate a proposal for link services error recovery.
- b. Susan Gray will revise 03-355r5 per discussion item (a).
- c. Paul Entzel will incorporate 03-355r5 as revised into ADT.
- d. Paul Entzel will revise 04-003r1 per discussion item (b).
- e. Paul Entzel will incorporate 04-003r1 as revised into ADT.
- f. Susan Gray will revise 04-014r0 per discussion item (c).

9. **Adjournment:**

Group

Rod Wideman made a motion for adjournment. Susan Gray seconded the motion. The group passed the motion unanimously. Paul Suhler adjourned the group at 10:03 AM PDT.

Attendees:

Name	Organization	E-mail
Rod Wideman	ADIC	rod.wideman@adic.com
Paul Suhler	Certance	paul.a.suhler@certance.com
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