

Draft Minutes
Automation/Drive Interface (ADI) Working Group
Ad Hoc Teleconference
T10/04-051r0
26 January 2004
8:00 AM – 10:00 AM PDT

Conference Call Information:

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

1. Introductions: Group

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

2. Approval of the agenda: 04-058r0 Paul Suhler

Paul Suhler discussed the order of the discussion items. He requested additions or changes. Rod Wideman requested discussion of ADC letter ballot comments if time permits. Paul Suhler requested time to make comments on the ADI connector. Both new items appear under *Unscheduled Business*.

Susan Gray 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. Comments on previous meeting minutes: Paul Suhler

12-13 January 2004 meeting 04-034r0

26 January 2004 teleconference 04-051r0

Paul Suhler requested comments for the minutes of the 12-13 January 2004 meeting and the 26 January 2004 teleconference – 04-034r0 and 04-051r0 respectively. No one provided comments.

4. Review of action items: Michael Banther

- a. Susan Gray will generate a proposal for link services error recovery. *Closed*
- b. Rod Wideman will post 03-385r1. *Carryover*
- c. Rod Wideman will send an e-mail to the T10 reflector that tags possibly controversial technical comments in 03-385r1. *Carryover*
- d. Paul Entzel will incorporate 04-014r1 as revised into ADT. *Closed*
- e. Kevin Butt will generate a proposal to address the problem described in unscheduled business item (b) of 04-034r0. *Carryover*

- f. Michael Banther will generate a proposal to deal with how a port responds if it receives a SCSI Data IU when it expects a SCSI Transfer Ready IU and vice versa (see discussion item [g] of 04-034r0). *Carryover*
- g. Paul Entzel will generate a proposal to deal with recoverable transport layer errors with PR equal zero, e.g., out of resources (see discussion item [g] of 04-034r0). *Carryover*
- h. Susan Gray will revise 03-369r1 per discussion item (d) of 04-034r0. *Closed*
- i. Michael Banther will investigate and if necessary generate a proposal to state the behaviour of a port upon detection of a non-recoverable (retryable) error. *Carryover*

5. Discussion items:

- a. ADT State Machine 03-369r2 Susan Gray

Susan Gray walked us through the revised proposal section by section.

Michael Banther noted some editorial comments.

Regarding the Port state machine, Paul Suhler asked what event causes the transition from P2: Active to P1: Initial upon reception of a Port Login IU from the other port. He also noted that no mechanism exists for the upper layer to request sending a Port Login IU whilst in P2: Active. Susan Gray replied that the current text discusses sending Port Login from P2: Active. Rod Wideman pointed out that the same problem exists for other Link Service IU's.

Michael Banther asked if the text stated what IU's a port can send from a particular port state. Susan Gray, Rod Wideman, and Paul Suhler replied that the text implies this information from the IU's receivable. Kevin Butt weighed in supporting Michael's concern. In the end we all agreed that the standard can only specify response to an observable event. Hence no change is needed.

The group moved on to consideration of the Negotiation state machine. We discussed some editorial issues. Michael Banther pointed out that state N3 cannot send a Port Login IU, however the diagram states that it can. Susan agreed to change the diagram.

Susan Gray asked for comments on the Transmitter Error Recovery state machine and then quickly moved on to the Receiver Error Recovery state machine. She drew attention to the description of R1: Pending Recovery state. Paul Entzel pointed out that the NAK of Awaiting Initiate Recovery IU should have PR equal to one. We debated the wisdom of allowing NOP and Pause IU's when in this state. Paul Entzel stated that allowing Pause means that the P (Port) state machine transitions to P3: Paused and therefore loses the context of this sub-state machine. He suggested making P3: Paused a sub-state machine of P2: Active. We debated this and other ideas including: making the T sub-state machine persistent whenever the P state machine is in P2: Active, elevating the T machine to being a peer of the P state machine, or making a new peer machine to the P state machine to cover just pausing. After much discussion, a consensus emerged for:

- a. Elimination of P3: Paused,
- b. Creation of a separate sub-state machine to P2 (with states Active and Paused), and
- c. Making all sub-state machines of P2 persistent (they go into Idle upon entry to P2).

Paul Entzel pointed out that the Paused sub-state may actually comprise several multiple states as the receiver of the Pause IU sends outstanding acknowledgement IU's and the Pause IU's acknowledgement IU.

Susan Gray reviewed the technical changes for the benefit of the group.

Kevin Butt made a motion for incorporation of 03-369r2 as revised into ADT. Paul Entzel seconded the motion. In the absence of objections or abstentions, the group passed the motion unanimously.

- b. ADT Error Recovery 04-056r0 Susan Gray

Susan Gray introduced the proposal. After some debate about the correctness of the introductory table describing all error recovery, we agreed to review the actual proposed text. Paul Entzel raised concern about the text statement that detection of a retryable error in a Port Login IU causes a transition into P1. By implication a transition into P1 resets the Negotiation state machine. We don't want to reset the N machine if we're already in P1.

Susan Gray requested that we return to the table and check it for correctness. She explained the notation. Paul Entzel suggested breaking the table into two, one for the transmitter and another for the receiver.

Paul Entzel argued that a port sending a Port Login IU on a logged in port should send the first one at current operating parameters and any second one at default operating parameters.

Susan Gray will revise 04-056r0 based on comments received.

6. Unscheduled business:

- a. ADI Connector Paul Suhler

Paul Suhler noted that SFF has opened a letter ballot that includes the ADI connector. He suggested that we each review the draft standard and prepare to discuss it at the next teleconference.

- b. ADC letter ballot comments Rod Wideman

Rod Wideman reported that he has resolved approximately 1/3 of the comments. He expects to post 03-385r1 this week.

7. Next meeting requirements: Paul Suhler

The group will hold a teleconference on 23 February 2004, from 8:00 to 10:00 PST, hosted by Quantum.

The group will hold a meeting 8-9 March 2004 during T10 plenary week in Dana Point, CA. The meeting will begin on the 8th at 9:00 AM and conclude at 7:00 PM PST. The meeting will reconvene on the 9th at 9:00 AM and adjourn at 11:00 AM PST.

8. Review new action items: Michael Banther

- a. Susan Gray will revise 03-369r2 per discussion item (a).
b. Paul Entzel will incorporate 03-369r2 as revised into ADT.

c. Susan Gray will revise 04-056r0 per discussion item (b).

9. Adjournment:

Group

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

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
Arturo Mojica	IBM	mojica@us.ibm.com
Kevin Butt	IBM	kdbutt@us.ibm.com
Paul Entzel	Quantum	paul.entzel@quantum.com
Susan Gray	Quantum	susan.gray@quantum.com