Draft Minutes
Automation/Drive Interface (ADI) Working Group
Ad Hoc Meeting
T10/08-291r1
14 July 2008
3:00 pm – 6:42 pm AKDT

1 Introductions:

Paul Suhler called the meeting to order at 3:00 PM AKDT. He thanked Emulex for hosting the meeting.

2 Approval of the agenda:

Paul Suhler reviewed the agenda with the group.

Curtis Ballard made a motion for acceptance of the agenda as modified. Paul Stone seconded the motion. The group approved the motion unanimously.

3 Attendance and Membership:

Paul Suhler discussed the attendance, membership, and voting rules for this meeting.

The listing below captures the attendance at this meeting:

Name	S	Organization
Mr. Curtis Ballard	A	Hewlett Packard Co.
Mr. Geoffrey Barton	V	Overland Storage
Mr. Kevin Butt	P	IBM Corp.
Mr. Roger Cummings	P	Symantec
Mr. Noud Snelder	V	BDT
Mr. Paul Stone	A	Quantum Corp.
Dr. Paul Suhler	P	Quantum Corp.

7 People Present

Status Key:
- P - Principal
- A - Alternate
- AV - Advisory Member
- E - Emeritus
- L - Liaison
- V - Visitor

4 INCITS Patent Policy:

Paul Suhler reviewed the INCITS patent policy.

5 INCITS Antitrust Guidelines

Paul Suhler reviewed the guidelines around avoidance of antitrust issues.

6 Approval of previous meeting minutes:

5 May 2008 meeting	08-223r0
4 June 2008 teleconference	08-256r0
18 June 2008 teleconference	08-269r1

Paul Suhler requested comments for the minutes of the 5 May meeting and the 4 and 18 June 2008 teleconferences (see above). No one provided comments or corrections.

7 Call for secretary [Suhler]:

Paul Suhler noted that ADI remains without a permanent secretary. He asked if anyone wished to volunteer to fill this role. No one volunteered, so Paul encouraged participants to consider taking up the role. Paul Stone agreed to serve as secretary for this meeting.

8 Review of action items:

08-018 Rod Wideman will revise 08-021r0 per Old Business item 9.1 of 08-269r1. *Complete [closed by 08-021r1]*

08-019 Paul Suhler to revise 07-469r5 and post per old business item 9.2 of 08-269r1 *Complete [closed by 07-469r6]*

9 Old business:

9.1 ADC-3 Set Automation Device Attribute (08-021r1) [Wideman]

Paul Suhler took comments for this proposal on behalf of Rod Wideman.

Curtis Ballard felt that there is no strong need to report an error for an ATTRIBUTE LENGTH field of zero, because a value of zero corresponds to a non-existing attribute. Paul Suhler agreed.

Kevin Butt wanted attributes to be returned in a prioritized order. If the automation device serial number was available, then that would be reported. Otherwise, the manufacturer-assigned serial number would be reported.

Curtis felt that SSC was pretty clear that if a serial number is not available, the field needs to be returned filled with spaces, so no additional explanation is needed.

Kevin requested a Report Automation Device Attribute command to match the Set Automation Device Attribute command.

The attribute identifier code for the automation device serial number will be changed to 0001h, in case it is necessary to implement a code to return all attributes.

Paul Suhler brought up padding. Kevin felt that we must specify either left-justified or right-justified. Curtis felt that it should work exactly as in SPC (as indicated in the footnote of Table x+3, “ATTRIBUTE IDENTIFIER field”).

Paul Suhler requested a new action item for Rod Wideman to revise 08-021r1 and post.

9.2 ADT-2: Internet ADT (iADT) (07-469r6) [Suhler]

The group discussed the effects of a bridging manager on the implementation of iADT.

Paul Suhler felt that a TCP CLOSE operation should remain mapped to an I_T nexus loss, because there is no requirement for a bridging manager nexus loss to generate an I_T Nexus loss. He said that there is not a one-to-one mapping between commands issued by the bridging manager and commands issued by the host application.

On Kevin Butt's behest, Paul Suhler will add a note stating that an I_T nexus loss at the bridging manager level will not necessarily cause termination of the command being processed by the local SMC device server.

Paul Suhler suggested that a TCP CLOSE and TCP ABORT should behave similarly with respect to whether it causes an I_T nexus loss.

Curtis Ballard and Kevin preferred to add the SCSI application layer to Figure 4, although Paul Suhler pointed out that Fast Access is not SCSI.

Kevin requested the text for Figure 5 to be placed before the figure, and for the figure to be broken out into a diagram for the serial layers and a diagram for the TCP/IP layers. Paul Suhler agreed to split the table out.

The prefix "ADT" was removed from the names of the layers.

The group discussed ADT timeouts with respect to TCP timeouts. Curtis Ballard said that the ADT timeout should be enough shorter than a TCP timeout to allow all of the ADT error recovery we want to take place before the operating system closes down the TCP connection and unwinds the stack, which contains all of the information about the TCP connection, including information related to the failure. There was general agreement on this point.

Kevin felt that there were two different types of retries, and that it was important to identify the layer at which each recovery would be performed. The first is where the bridging manager retries the command, while for the other one it is necessary to complete ADT retries before a TCP timeout could occur. Curtis pointed out that TCP won't handle a "no response" situation, and Kevin agreed that this is an appropriate area for ADT port layer retry.

Kevin pointed out that for serial it was common to limit the ADT timeout to twice the transmission time of the longest frame. Paul Suhler pointed out that there is a default timeout which can be changed at port login or by issuing a new Timeout IU. Paul said that the main [performance] problem with the serial interface is the baud rate, but with Ethernet the limiting factor is how fast we can process on either end.

Paul Suhler discussed the electrical characteristics, which is in the physical layer. It had been decided at a previous meeting to make the $Sense_d$ connection optional.

Kevin pointed out that Paul Suhler was discussing the Ethernet transmit-receive connection, and wondered if Paul Suhler intended to encompass TCP/IP as well as UDP. He felt that the intention had been to just do TCP/IP. He also questioned whether the ADT TCP layer should go above both the ADT serial layer as well as the TCP layer in the Interconnect layer part of Figure 5.

At Kevin's behest, Paul Suhler will change "ADT transmit/receive connections" to "Ethernet transmit/receive connections" in Table 10 (which may require other changes elsewhere to maintain consistency). Paul Suhler said he will consider whether or not to use "iADT Ethernet port".

Kevin suggested removing the two paragraphs under Table 12 and replacing with a reference to 802.3-2005. Paul Suhler and Kevin collaborated on other changes to the accompanying text.

The group requested Paul Suhler to restructure the "ladder" diagrams (figures 16 - 19). Curtis suggested that for serial there need only be text explaining that the connection always exists between the ADT port and the ADT interconnect port, whereas for iADT, there is a process for establishing a connection, and there could be diagrams detailing that sequence. Paul Suhler agreed. Also, Kevin and Curtis requested more detailed and more conventional ladder diagrams, and Paul Suhler agreed to try to rework them.

Curtis requested placing ADT-specific information in a TCP/IP ping, and the group decided that this would be a violation of TCP/IP.

Paul Suhler requested an action item for himself to revise and post 07-469r6.

9.3 ADI: Features for ADC-3 and ADT-3 (08-147r1) [Suhler]

The group updated the document to reflect features which had been completed.

Paul Suhler requested an action item for himself in order to satisfy item 11 of 08-147r1.

10 New Business

10.1 ADT-2: Support QUERY TASK SET Task Management Function (08-148r0) [Suhler]

The group discussed the proposal.

Paul Suhler moved for incorporation of 08-148r0 into ADT-2. Curtis Ballard seconded the motion. The motion passed unanimously.

10.2 ADC-3: Add Port and Node Name to Fibre Channel Port Status Data (08-226r1) [Suhler]

The group discussed the proposal.

Kevin Butt moved for incorporation of 08-226r1 into ADC-3. Curtis Ballard seconded the motion. The motion passed with a vote of 4:0:1.

10.3 ADC-3: Remove Configure Encryption Policy mounted volume restriction (08-247r1) [Wideman]

This item was deferred.

11 Next meeting requirements:

Subject to approval by the T10 Plenary, the group will hold a meeting on 8 September 2008 during T10 plenary week in Colorado Springs, Colorado beginning when the SMC-3 working group adjourns and concluding at 6:30 PM PDT.

The group will hold a teleconference on 13 August 2008 at 8:00 AM PDT until 10 AM PDT.

12 Review new action items:

08-020 Rod Wideman to revise 08-021r1 and post per old business item 9.1 of 08-291r1.

08-021 Paul Suhler to revise 07-469r6 and post per old business item 9.2 of 08-291r1.

08-022 Paul Stone to incorporate 08-226r1 into ADC-3.

08-023 Paul Stone to incorporate 08-148r0 into ADT-2.

08-024 Paul Suhler to create a proposal for item 11 in 08-147r1 per old business item 9.3 of 08-291r1.

08-025 Paul Suhler to revise 08-147r1 and post per old business item 9.3 of 08-291r1.

08-026 Geoffrey Barton to create a proposal for item 12 in 08-147r1 per old business item 9.3 of 08-291r1.

13 Adjournment:

Paul Stone moved for adjournment. Kevin Butt seconded the motion. The group passed the motion unanimously. Paul Suhler adjourned the group at 6:42 PM AKDT.