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Draft Minutes
Automation/Drive Interface (ADI) Working Group
Ad Hoc Meeting
T10/08-151r0
10 March 2008
2:15 PM – 7:06 PM EDT
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1 Introductions:

Paul Suhler called the teleconference to order at 2:15 PM EDT.

2 Approval of the agenda:

Paul Suhler reviewed the agenda with the group.

Paul Suhler recommended that items 9.3 and 9.5 be moved to the start of the agenda followed by 8.3.

Kevin Butt made a motion for acceptance of the agenda as modified. Halvard Eriksen 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:

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Name                                S    Organization
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Mr. Noud Snelder                    V    BDT
Mr. Curtis Ballard                  A    Hewlett Packard Co.
Mr. Kevin Butt                      P    IBM Corp.
Mr. Paul Stone                      A    Quantum Corp.
Dr. Paul Suhler                     P    Quantum Corp.
Mr. Halvard Eriksen                 AV   Tandberg Storage

6 People Present

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

Paul Suhler briefly discussed the INCITS patent policy and directed interested individuals to the T10 short summary at http://www.t10.org/patpol.htm. Paul Suhler also reviewed the rules around avoidance of anti-trust issues.

5   Approval of previous meeting minutes:

14 January 2008 meeting   08-042r1

30 January 2008 meeting   08-098r0

13 February 2008 meeting   08-104r0

Paul Suhler requested comments for the minutes of the 14 January 2008 meeting, 08-042r1 the minutes of the 30 January 2008 teleconference, 08-098r0, and minutes of the 13 February 2008 teleconference, 08-104r0.

Paul Suhler reported that 08-042r1 indicated the meeting was a teleconference not a face to face and it needs to be corrected and posted.

Paul Stone moved the meetings minutes as revised be accepted, Kevin Butt seconded. The motion was approved unanimously.

6   Review of action items:

07-060   Paul Suhler will revise 07-438r0 per Old Business item 9.3 of 07-477r0. *Carryover*.

07-061   Paul Suhler will revise 07-469r0 per New Business item 10.2 of 07-477r0. *Complete (07-469r1)*

08-002   Curtis Ballard to revise 08-029r1 and post as 08-029r2 per Old Business item 8.1. *Complete*

08-003   Paul Stone to incorporate 08-029r2 into r0 ADC-3. *Complete (adc3r00a.pdf)*

08-005   Paul Suhler to add an agenda item for the March meeting to discuss which standards versions ADC-3 should reference. *Complete*

08-006   Rod Wideman will revise 08-021r0 per Old Business item 8.3 of 08-104r0 *Carryover*

7   Call for secretary [Suhler]

Paul Suhler noted that the ADC working group does not have a secretary at this time . He asked if anyone wished to volunteer to fill this role. No one volunteered, so Paul encouraged participants to consider taking up the role. Curtis Ballard agreed to serve as secretary for this meeting.

8   Old business:

8.1   *ADC-3 Automation Device Serial Number subpage (08-021r0) [Wideman]*
Defered

8.2   *ADT-2: SCSI Command IU to Initiator only port (07-428r0) [Suhler]*
Defered

8.3   *ADT-2: Internet ADT (iADT) (07-469r1) [Suhler*

Paul Suhler lead an overview of iADT. Paul pointed out that the ACK timeout needed to be shorter than the TCP/IP timeout. Kevin Butt responded that he felt the ACK timeout shouldn't exist anymore and that we were mapping at the wrong layer and link layer services should be completely replaced with TCP/IP. Kevin indicated that he felt we should continue to use all the existing IU's but we didn't need to reuse the lower level layers. Curtis requested that we carefully consider all of

the cases where error recovery is being used and make certain that we can perform the same function using TCP/IP without significant changes.

Port numbers were discussed and Paul Suhler pointed out that a single predefined port number may not be the best choice, in which case we could release the currently assigned port number.

Paul Suhler asked whether we should address security and whether any router requirements should be set. The working group recommended that security not be addressed.

Paul Suhler indicated that an I_T nexus loss probably could be mapped to a TCP/IP connection loss. Kevin Butt recommended that while that was the most obvious choice that we should be consider that there may be a different option similar to SAS where connections may open/close without causing an I_T nexus loss.

Paul Suhler pointed out that there may be some issues to resolve around packet sizes.

Paul Suhler indicated that the TCP ABORT call needs to be understood to determine whether it is a lower level call which does not need to be handled or is it passed to the application layer.

Paul Suhler asked if the group felt that the DTD device should be required to disable one port if both an iADT and an ADT port are available. Kevin Butt stated strongly that he felt that both ports needed to be available.

Paul Suhler asked whether the group needed to address Ethernet speeds. The group recommended that the standard have minimal if any text addressing this issue. If it needs to address this, then the standard may simply state that devices must support auto-negotiation. Paul Suhler asked about IPv6 –v – IPv4 also. After some discussion the group determined that the proposal should not address which version of IP is used.

Connectors were discussed and the group felt that working on a standard connector should be pursued.

Addressing – Curtis Ballard indicated that there are a number of well known ways for device discovery over Ethernet and a discovery method didn't have to be built into iADT. Kevin Butt requested that we explicitly state how discovery should be done. The group agreed to discuss it further.

Should UDP be used in place of TCP? Kevin Butt indicated that it only made sense if we were going to keep all of the ADT recovery mechanisms, which he would prefer we remove. Curtis Ballard indicated that there were too many places where it would be useful to have the packets able to cross as subnet and he would strongly prefer TCP.

Should there be a mechanism for a DTD to know that is in a library and not enable the primary port? Paul indicated that he could not find a way to provide this function. Kevin Butt indicated that he felt that the standard didn't need to address it as we would all want to do different things. Curtis Ballard indicated that it would be good but he didn't feel strongly that it needed to be in the standard as long as the standard didn't lock them out of their preferred implementation. Noud Snelder indicated that if a custom connector is used and has to have a converter to get to RJ-45 then a sense line could still be provided. It was pointed out that we should try to retain the functions currently available in ADT and it provides that function so it should be investigated. After further discussion the group agreed to discuss this item further.

Multi-Initiator discussion – Kevin Butt indicated that multi-initiator support is a requirement for being able to have both ADT and iADT functional at the same time and that we need to address it at the same time as working on iADT. Curtis Ballard requested that we solve the simple case of iADT in single initiator mode first and not attempt to solve both problems at once. Kevin Butt indicated

that multi-initiator support affected the architecture and had to be addressed. Curtis replied that he agreed that iADT needed to be architected to allow multi-initiator support and that some initiator ID needed to be identified and made available to the next level, but the whole solution was not needed at this point. Kevin agreed that as long as we get the initiator ID up to the next level that we could work on the handling of that at the next level as a follow on activity. The group agreed that a fully qualified I_T nexus identifier was necessary. Some discussion on potential methods ensued.

ADT-2 or ADT-3 discussion:

Curtis Ballard indicated that he would like to see iADT resolved in a timely manner, maybe about a year, and that it would take all of that to finish iADT, so deferring full multi-initiator support to ADT-3 would allow for iADT to be in an approved standard. Kevin Butt indicated that he felt that the full solution was necessary for a useful implementation and that it needed to be resolved in the same standard.

Paul Suhler brought up the current ADT definition of an I_T_L_Q nexus and the working group determined that it does not appear adequate for supporting multi-initiator and likely have to be changed. Kevin Butt asked if Curtis agreed that it needed to be changed. Curtis agreed that we may need to change that, but indicated that he felt that a full solution would cause other effects that didn't necessarily have to change right now. The group agreed that the full effects of multi-initiator support may not be understood for a while and we should defer the decision of whether full multi-initiator support is done in ADT-2 or ADT-3.

8.4   ADC-2 Typo in r8 (e-mail from Paul Suhler) [Suhler]

Skipped

8.5   ADT-3 Project proposal (08-054r0) [Suhler]

Paul Suhler asked if the group felt that we need a project proposal for ADT-3. Kevin Butt indicated that as we have opened ADT-2 for a significant new development that he felt it was premature and Paul should withdraw the proposal. Paul reviewed the proposal and felt that the items that were left were small enough we may be able to pull them into ADT-2 if we have ADT-2 open to allow time to put iADT into ADT-2.

Paul requested a straw poll for whether iADT should be put into ADT-2. The vote was 4-0-1. Paul asked if anybody opposed withdrawing the proposal. Kevin Butt requested a formal vote since this would need to be submitted to the plenary. Kevin Butt made a motion that the working group recommend to the T10 plenary that the ADT-3 project proposal 08-054r0 be withdrawn. Paul Suhler seconded the motion. There was no discussion on the topic. The vote passed unanimously.

9   New business:

9.1   Standards to be referenced by ADC-3 [Suhler]

Kevin Butt indicated that he felt it should be SAM-4 and SPC-4. Paul Suhler as if anybody felt that this would be the wrong decision. There was no disagreement.

9.2   IANA Notification of iADT Port Number (08-111r0) [Suhler]

Paul Suhler presented the IANA notification of the iADT port number. There was no discussion.

9.3   ADC-3 Automation Encryption Control Corrections (08-119r0) [Ballard]

Curtis Ballard led the group through proposed changes to table y in the automation encryption control proposal. He pointed out that while this proposal had been written against the original

automation encryption control proposal that ADC-3r00a was now published and that the changes proposed should be against table 6 of ADC-3r00a.

Group concurred that this was placing a requirement directly on the RMC (SSC) device server, which is inappropriate for ADC-3. SSC-3 already specifies this. The decision was to strike the text which was proposed to be struck.

Table y, key, item A=Allowed proposal to add qualifying text – The group agreed.

Unanimously accepted as written.

9.4   ADT-2: Rename Receiver Error state machine states to RE:n [Wideman]

Rod Wideman pointed out that the state machines in ADT have an inconsistent prefix for the states in the receiver error recovery state machine. The transmitter error recovery state machine uses TE, so receiver error recovery should use RE.

Paul Suhler moved that we instruct the editor to change the receiver error recovery state machine names from R0,R1,R2 to RE0,RE1,RE2. Kevin Butt seconded the motion. The motion passed unanimously.

9.5   ADC-3: Potential security hole in automation encryption control (08-140r0)

A management interface sets a policy, then the DT Device is power cycled and comes up with "No Key Requests" policy, which is the default.

Kevin Butt: The management interface is vendor specific, so we can't mandate its behavior; the device may choose to remember the policy.

Curtis Ballard: This may be an issue in SSC-3, which requires the policy to be set to defaults on a hard reset condition.

Kevin Butt: Remove the SSC-3 statement after tables 15 and 16 about setting to defaults. We don't need an editorial note as this is not an interoperability issue.

Paul Suhler: Why was the statement about defaults at reset added?

Curtis Ballard: Paul Entzel requested it.

Group agreed that we definitely need to fix SSC-3 to allow different behavior. Kevin says not to specify what the default values are.

Curtis Ballard and Kevin Butt will add SSC-3 letter ballot comments requesting that the last sentences in the first row right column of tables 15 and 16 be struck.

Group consensus is that this is not an issue for ADC at this time and can be handled by vendor unique behavior in the management interface, so we should not address this in ADC-3.

9.6   Features for ADC-3 and ADT-3 (06-425r8) [Suhler]

Paul Suhler reviewed the features for ADC-3 and ADT-3 to determine what items should be considered for ADT-2 since it would be open longer.

Adding new task management functions should be considered for ADT-2.

10 Next meeting requirements:

The group will hold a teleconference April 16th 2008 at 8:00 AM PDT.

11 Review new action items:

08-007   Paul Stone to revise ADT-2r05 to change the receiver error state machine names as per business item 9.4

08-008   Paul Suhler to revise and post 06-425r8 as per business item 9.6.

12 Adjournment:

Kevin Butt made a motion for adjournment. Paul Stone seconded the motion. The group passed the motion unanimously. Paul Suhler adjourned the group at 7:06 pm EDT.