Draft Minutes
Automation/Drive Interface (ADI) Working Group
Ad Hoc Meeting
T10/06-490r0
6 November 2006
9:00 AM – 1:00 PM PST
Las Vegas, Nevada

1   Introductions:

Paul Suhler called the meeting to order at 9:00 AM PST. He thanked Hitachi GST and Dan Colegrove for hosting the meeting. A table of the attendees appears at the end of these minutes.

2   Approval of the agenda:

Paul Suhler reviewed the order of the discussion items. Kevin Butt requested deferral of discussion item 5.1 until January, 2007. Michael Banther requested removal of discussion item 5.3 from this and all future agendas. Paul Suhler asked Noud Snelder and Kevin Butt about their ADC-2 proposals under new business. Noud noted that his proposal was originally submitted prior to the close of technical input of ADC-2. Kevin requested discussion even though he submitted his proposal after close of technical input.

Kevin Butt made a motion for acceptance of the agenda as modified. Rod Wideman seconded the motion. In the absence of objections or abstentions, the group approved the modified agenda unanimously.

3   Approval of previous meeting minutes:

11 September 2006 meeting   06-401r1

Paul Suhler requested corrections for the minutes of the 11 September 2006 meeting, 06-401r1. No one provided corrections.

Michael Banther made a motion for acceptance of the minutes as written. Halvard Erikson seconded the motion. In the absence of objections or abstentions, the group approved the minutes unanimously.

4   Review of action items:

06-001   Michael Banther will write a proposal to place all of the IU statements associated with entry into a state in the state description sub-clause and to remove such statements from the transition sub-clauses (remembering to rationalize incomplete statements). This proposal will also change the description of each state machine to clearly indicate what state it is in upon activation. He will produce this proposal for the September or November 2004 meeting. *Carryover.*

06-006   Michael Banther will revise 05-265r0 per discussion item 5.8 of 05-408r1 and discussion item 5.5 of 06-031r1. *Closed*, proposal withdrawn.

06-037   Noud Snelder will revise 06-226r0 per unscheduled business item 6.3 of 06-0228r0. *Closed*, 06-226r1.

06-040   Paul Entzel will incorporate 06-218r1 as revised into ADC-2. *Closed.*

06-041   Michael Banther will revise and post 06-306r1 per agenda item 3 of 06-401r1. *Closed*, 06-306r2.

06-042   Michael Banther will revise 05-377r1 per discussion item 5.2 of 06-401r1. *Closed*, 05-377r2.

06-043   Paul Entzel will revise 06-261r1 per discussion item 5.4 of 06-401r1. *Closed.*

06-044   Paul Entzel will incorporate 06-261r1 as revised into ADC-2. *Closed.*

06-045   Paul Suhler will add consideration of how an RMC device server acquires the automation device's worldwide name and the DT device's element address to the project proposal for ADC-3. *Closed*, 06-425r0.

06-046   Paul Suhler will add consideration of how to clarify interactions between RMC and ADC device servers, the physical device, and the DT device to the project proposal for ADC-3. *Closed*, 06-425r0.

06-047   Paul Suhler will add consideration of how to pass through reservations to the project proposal for ADC-3. *Closed*, 06-425r0.

5   Old business:

5.1   ADC-2 Working List for ISV feedback (SMC/SSC/ADC/SPC) (05-315r3) [Butt]

IBM requested deferral of this discussion item until the January, 2007 meeting.

5.2   ADT-2 Negotiable Time-Outs (05-377r2) [Banther]

Michael Banther described the changes to the latest revision. He described the new IU format and the usage model.

Kevin Butt noted that the word 'set' in item b) of the lettered list should be 'request'.

Kevin Butt asked if we really want two VU bits in the IU. No one thought that this was a bad idea.

Rod Wideman requested a change to the sentence above Figure 9 to make it clear that the port not only calculates but also uses the newly calculated value after changing operating parameters.

Kevin Butt raised a concern about existing implementations that use the formula in Figure 9 to establish the minimum acknowledgement IU time-out but then raised their actual acknowledgment IU time-out above this minimum. After some discussion he decided that no issue exists.

Michael Banther noted that the word 'minimum' should be struck in two places.

Halvard Eriksen noted that certain existing products send encapsulated SCSI IU's very quickly after opening the link. These products may see time-out exceptions until time-out negotiation completes.

Rod Wideman noted that the model clause does not specify when the new acknowledgement IU time-out takes effect. He also noted that the next to the last sentence uses the forbidden word 'will'. Michael Banther agreed to add a sentence stating when the new acknowledgment IU time-out takes effect. The group suggested the wording, 'The new acknowledgement IU time-out value shall apply to every frame transmitted after sending the

ACK IU for a Time-out IU with the REQUEST bit set to one and may apply to frames transmitted prior to sending the ACK IU for a Time-out IU with the REQUEST bit set to one.'

Paul Entzel asked if the new text should include exception handling and, if so, should the exception text appear in the model clause. After some discussion, he agreed that the proposal does not need text for exceptions but that he would like to see a sentence in the model clause stating that the usage model described there is not mandatory and that other usage models are possible. The model clause should state that ADT-2 supports asymmetric acknowledgement IU time-outs. The Time-out IU REQUEST and DESCRIBE bits should be a two-bit field whose names state what they do. Paul Entzel would like a table in the IU description that specifies what the different values of the two-bit field do.

The group agreed that a Time-out IU with the REQUEST bit set to one and the DESCRIBE bit set to zero occurs in a simple exchange. The other two use of the Time-out IU, describe and response, occur in a single, non-simple exchange. The model clause should include a description of the two exchange sequence. Paul Entzel stated that the text should state what happens to an exchange when a port has sent a describe Time-out IU, has received the associated ACK IU, but then never receives a response Time-out IU. He would like the statement in 6.5.12.4 lettered list item e) to also appear in the model clause and to make it clear that this action aborts the previous outstanding exchange.

Add an 'or' to item d) of the lettered list in 6.5.12.4.

The group agreed that the port that alters its acknowledgement IU time-out due to receipt of a Time-out IU will not send a further, unsolicited Time-out IU describing the new value in effect.

The group requested that the proposal make it clear that support for the Time-out IU is mandatory.

Paul Entzel suggested stating the units of the time-out fields in all sentences that reference them within the description of the field.

Paul Suhler suggested changing 'for the responding port requested by the originating port' to 'of the responding port' in the first paragraph after the editors notes.

Kevin Butt suggested adding a column per time-out field in the new Time-out IU table.

Michael Banther will bring back a revision base don comments received.

5.3   ADT-2 Smaller Connector (05-265r0) [Banther]

HP stated that they will abandon this proposal.

5.4   ADI: Features for ADC-2 and ADT-2 (06-060r3) [Suhler]

Paul Suhler walked the group through the list of outstanding ADT-2 work items. He made some small corrections and will post a revision.

6   New business:

6.1   ADI: Features for ADC-3 and ADT-3 (06-425r0) [Suhler]

Paul Suhler asked if the group wanted to add items to the ADC-3 and ADT-3 list of work items. Kevin Butt suggested that the group discuss other transports. Michael Banther suggested adding compliance with SAM-4 and SPC-4.

Paul Suhler will revise the list of work items based on comments received.

6.2   *ADC-2 Add Encrypting field in VHF data ([06-226r1](#)) [Snelder]*

Noud Snelder walked the group through the proposal. He proposed adding two new values to the DT DEVICE ACTIVITY field in the VHF data.

The working group requested that Paul Entzel add a letter ballot comment to ADC-2. The comment will state the desire to add information about the encryption status of data flowing to or from the medium to the DT DEVICE ACTIVITY field of the VHF data.

Noud Snelder made a motion to use 06-226r1 to resolve the late letter ballot comment thus created. Kevin Butt seconded the motion. In the absence of objection or abstentions, the group passed the motion unanimously.

6.3   *ADC-2: NL-Port vs. LN-Port ([06-468r0](#)) [Butt]*

Kevin Butt walked the group through the proposal. Legacy IBM drives have the ability to attempt either L-port or N-port negotiation first and then switch to the other mode (N-port or L-port respectively) if the first attempt fails.

Paul Entzel noted that the P2P, TOPLOCK, and TOPNEG fields all interact. He believes that placing all three fields in a table would show that only five possible settings exist. Hence only one additional bit is needed. Kevin Butt chose to call the new bit the ORDER bit.

Paul Entzel objected to adding this change into ADC-2 principally because the T10 community at large will not have the option to review it through the letter ballot process.

Kevin Butt will revise the proposal based on comments received.

6.4   *ADC-2 Letter Ballot Comment Resolution ([06-475r0](#)) [Entzel]*

Paul Entzel and the group worked to resolve letter ballot comments to ADC-2.

7   Next meeting requirements:

Subject to approval by the T10 Plenary, the group will hold a meeting 15 January 2007 during T10 plenary week in Orlando, Florida beginning at 9:00 AM EST and concluding at 1:00 PM EST.

8   Review new action items:

06-048   Michael Banther will revise [05-377r2](#) per discussion item 5.2.

06-049   Paul Suhler will revise [06-060r3](#) per discussion item 5.4.

06-050   Kevin Butt will revise [06-468r0](#) per new business item 6.3.

06-051   Paul Suhler will revise [06-425r0](#) per new business item 6.1.

9   Adjournment:

Kevin Butt made a motion for adjournment. Rod Wideman seconded the motion. The group passed the motion unanimously. Paul Suhler adjourned the group at 1:08 PM PST.

Attendees:

Name	Status	Organization
Mr. Noud Snelder	V	BDT
Mr. Michael Banther	A	Hewlett Packard Co.
Mr. Dan Colegrove	P	Hitachi Global Storage Tech.
Mr. Kevin Butt	A	IBM Corp.
Mr. Paul Entzel	P	Quantum Corp.
Dr. Paul Suhler	A	Quantum Corp.
Mr. Rod Wideman	V	Quantum Corp.
Mr. Roger Cummings	P	Symantec
Mr. Halvard Eriksen	AV	Tandberg Data ASA

Status Key: P   -   Principal
              A,A#   -   Alternate
              AV   -   Advisory Member
              L   -   Liaison
              V   -   Visitor