

Draft Minutes
Automation/Drive Interface (ADI) Working Group
Ad Hoc Meeting
T10/06-031r1
9 January 2006
9:00 AM – 1:00 PM MST
Scottsdale, Arizona

1 Introductions:

Paul Suhler called the meeting to order at 9:09 AM MST. He thanked Intel 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 made a motion for acceptance of the agenda as modified. Michael Banther seconded the motion. In the absence of objections or abstentions, the group passed the motion unanimously.

3 Approval of previous meeting minutes:

7 November 2005 meeting [05-408r0](#)

Paul Suhler requested corrections for the minutes of the 7 November 2005 meeting, [05-408r0](#). No one provided comments or corrections.

Rod Wideman made a motion for acceptance of the minutes as written. Paul Entzel seconded the motion. In the absence of objections or abstentions, the group passed the motion 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*
- 06-002 Kevin Butt will write a proposal against SPC-3 to add automation type MAM attributes (reference ADC letter ballot [04-197r1](#), comment IBM Roberts - 2). *Carryover*
- 06-003 Paul Entzel will incorporate [05-155r2](#) into ADC-2. *Closed*
- 06-004 Paul Entzel will incorporate [05-304r1](#) into ADC-2. *Closed*
- 06-005 Michael Banther will revise [05-310r2](#) per discussion item 5.3. *Carryover*
- 06-006 Michael Banther will revise [05-265r0](#) per discussion item 5.8. *Carryover*

- 06-007 Paul Suhler will approach the SFF committee to begin the standardisation of the ADT-2 connector referenced in discussion item 5.8. *Closed*
- 06-008 Rod Wideman will review item 26 of [04-263r8](#) and post a summary to the T10 reflector. *Closed*
- 06-009 Paul Suhler will revise [04-263r8](#) per discussion item 5.4. *Closed*, [04-263r9](#).

5 Discussion items:

5.1 **ADC-2 Add Identification Descriptors to SMC Logical Unit Descriptor Format ([05-310r2](#)) [Banther]**

At the authors request, the group deferred discussion of this agenda item until the March, 2006 meeting.

5.2 **ADI: Features for ADC-2 and ADT-2 ([04-263r9](#)) [Suhler]**

Paul Suhler walked through the list of outstanding items. The group reviewed them but did not identify any additional ones. Paul Suhler picked up responsibility for one open item. Curtis Ballard raised the possibility of using the passthrough bridging model. HP agreed to take ownership to determine if ADI-2 should include passthrough bridging.

5.3 **ADC-2 Working List for ISV feedback (SMC/SSC/ADC/SPC) ([05-315r2](#)) [Butt]**

The group reviewed the list of ISV feedback. We discussed the issue to making a media changer serial number visible in a removable medium device and concluded that we will use a solution similar to [05-243](#) (proposed for SMC-3) once that proposal has been accepted. We expect the follow-on discussion to occur in both SSC-3 and ADI-2.

5.4 **ADT-2 Negotiable Time-Outs ([05-377r0](#)) [Banther]**

Michael Banther introduced the proposal and walked the group through it.

Paul Entzel requested that the multiplication of $\text{Offset}_{\text{MAX}}$ times Size_{NAK} be placed in parentheses. Kevin Butt noted that the default value of '0.1' seconds should be '0,1' seconds to conform to the editorial convention. Rod Wideman pointed out that the default coefficient is dimensionless. Various people complained about the use of the word 'seconds' at the end of the formula in Figure 9. Paul Entzel suggested removing it. Kevin Butt suggested prefixing $\text{Timeout}_{\text{CONST}}$ with a coefficient of 0,1 so that it appears in 100 milliseconds both in Figure 9 and in the Port Login IU. This change will allow removal of the footnote. Michael Banther agreed to all of these changes.

Paul Entzel raised the question of whether we want a symmetric, negotiated minimum ACK timeout value or asymmetric, established minimum ACK timeout values for the DTD and the Automation ADT ports. The group reached consensus that using asymmetric established ACK timeout values is a better solution, and that using a new link service IU is the best method to establish these values.

Robert Payne suggested following the Windows API design of using GetComm/SetComm as a model.

Michael Banther will revise the proposal based on comments received.

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

Michael Banther passed around the HP connector for inspection. Halvard Eriksen noted production concerns with insertion force and breakage on smaller connectors. Noud Snelder and Rod Wideman stated that they had not seen any problems with this particular connector. Paul Entzel stated that he would like to see a connector with latches and insulation displacement.

We moved on to a wide-ranging discussion of the proposed pin-out. Rod Wideman noted that one of the ADIC EE's has requested that the ground on pin 14 be swapped to pin 12 and vice-versa. Much discussion ensued regarding a known incompatibility between HP's use of pins 11 and 14 and Quantum's proposed use. HP uses these pins for 3.3V and ground respectively and Quantum wants to use them as a second Tx-Rx signal. Kevin Butt stated that IBM uses a smaller, 10-pin JST connector. He will provide a part number. Curtis Ballard described a way to support both HP's and Quantum's pin usage model: using HP's pin-out, a Quantum drive could treat pins 11 and 14 as a TTL Tx-Rx connection driven by the DTD and pins 12 and 13 as a TTL Tx-Rx connection driven by the Automation device. Curtis noted that the HP drive uses TTL signals on pins 12 and 13.

Michael Banther already has an action item to provide a revision and he agreed to incorporate these comments into the revision.

5.6 *ADC VHF Data MOUNTED Bit Clarification (05-409r0) [Suhler]*

Paul Suhler introduced the proposal. The group engaged in a vigorous debate in the need for this proposal. We reached a realization that two distinct camps exist regarding the meaning of the INTXN bit. Some companies believe that once INTXN reaches zero, it can change to one based on stimulus from within the physical mechanism, e.g. completion of cleaning, over temperature, etc. Other companies believe that once INTXN reaches zero, only stimulus from the automation device or the host can cause it to change the value to one. This difference leads to what Load State the DTD reaches when using Cleaning and Microcode Update cartridges.

A few editorial changes were noted.

Michael Banther made a motion for inclusion of [05-409r0](#) as modified into ADC-2. Paul Suhler seconded the motion.

The group continued debate with little sign of agreement on whether adding the new state actually solves a problem or not. Several people indicated that they would like to check with their engineers about what risk this proposal involves.

Paul Suhler made a motion to table the discussion of [05-409r0](#) until the March, 2006 working group meeting. Kevin Butt seconded the motion.

The motion to table passed without objection or abstentions.

6 Unscheduled business:

6.1 *FMR Issues with ADI (06-047r0) [Butt]*

Kevin Butt reviewed the issue and then requested that the group defer discussion of this agenda item until the March, 2006 meeting.

7 Next meeting requirements:

Subject to approval by the T10 Plenary, the group will hold a meeting 6 March 2006 during T10 plenary week in Hilton Head, South Carolina beginning at 9:00 AM and concluding at an unspecified time.

8 Review new action items:

- 06-010 Kevin Butt will e-mail to the T10 reflector the part number of the JST connector that IBM uses.
- 06-011 Kevin Butt will bring a sample of the smaller JST connector for inspection by the group.
- 06-012 Paul Suhler will check pin assignments with the Quantum electrical engineers.
- 06-013 Michael Banther will revise [05-377r0](#) per comments received in discussion item 5.4.
- 06-014 Paul Suhler will provide a proposal for item 18 in [04-263r9](#).
- 06-015 Paul Suhler will revise [04-263r9](#) per discussion item 5.2.
- 06-016 Paul Suhler will post an e-mail to the T10 reflector announcing last proposals for ADC-2 by May, 2006.

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 1:01 PM MST.

Attendees:

Name	Status	Organization
Mr. Rod Wideman	V	ADIC
Mr. Noud Snelder	V	BDT
Mr. Curtis Ballard	V	Hewlett Packard Co.
Mr. Michael Banther	V	Hewlett Packard Co.
Mr. Kevin Butt	A	IBM Corp.
Mr. Robert Payne	P	Iomega Corp.
Dr. Paul Suhler	A	Quantum Corp.
Mr. Paul Entzel	P	Quantum Corp.
Mr. Halvard Eriksen	AV	Tandberg Data

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