Minutes
Automation/Drive Interface (ADI) Working Group
Ad Hoc Meeting
T10/06-306r2
10 July 2006
9:04 AM–1:00 PM MDT
Colorado Springs, Colorado

1   Introductions:

Paul Suhler called the meeting to order at 9:04 AM MDT. He thanked LSI 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. He walked the group through the discussion items re-ordering them to focus on ADC-2 ahead of ADT-2.

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 approved the modified agenda unanimously.

3   Approval of previous meeting minutes:

8 May 2006 meeting   06-228r0

Paul Suhler requested corrections for the minutes of the 8 May 2006 meeting, 06-228r0.

Michael Banther made a motion for acceptance of the minutes as written. Rod Wideman 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. *Carryover*.

06-013   Michael Banther will revise 05-377r0 per comments received in discussion item 5.4. of 06-031r1. *Closed*, 05-377r1.

06-017   Rod Wideman will bring in a proposal to sort out the two bridging models per discussion item 5.1 of 06-118r0 including addressing Paul Entzel's observation about reservations. *Carryover*.

06-025   Paul Suhler will revise 06-061r0 per discussion item 5.4 of 06-0228r0. *Closed*, 06-061r1.

06-026   Rod Wideman will revise 05-155r4 per discussion item 5.5 of 06-0228r0. *Closed*, 05-155r5.

06-027   Paul Entzel will incorporate 05-155r4 as revised into ADC-2. *Closed*.

06-028   Kevin Marks will revise 06-183r0 per discussion item 5.7 of 06-0228r0. *Closed*, 06-183r1.

06-029   Kevin Marks will revise 06-180r0 per discussion item 5.6 of 06-0228r0. *Closed*, 06-180r1.

06-030   Paul Entzel will incorporate 06-180r0 as revised into ADC-2. *Closed*.

06-031   Paul Entzel will incorporate 06-180r0 as revised into ADT-2. *Closed*.

06-032   Michael Banther will revise 06-218r0 per discussion item 5.8 of 06-0228r0. *Closed*, 06-218r1.

06-033   Michael Banther will revise 06-222r0 per discussion item 5.9 of 06-0228r0. *Closed*, 06-222r1.

06-034   Michael Banther will revise 06-235r0 per unscheduled business item 6.2 of 06-0228r0. *Closed*, 06-235r1.

06-035   Paul Entzel will incorporate the ADC-2 portion of 06-235r0 as revised into ADC-2. *Closed*.

06-036   Paul Entzel will revise ADT-2, 4.3.3.2 per unscheduled business item 6.1 of 06-0228r0. *Carryover*.

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

06-038   Paul Entzel will bring in a proposal to fix the reservation problem in 4.2.3.2 in ADC-2. *Closed*, 06-0261r0.

06-039   Paul Suhler will revise 06-060r0 per discussion item 5.11 of 06-0228r0. *Closed*, 06-060r1.

5   Old business:

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

At the author's request, the group deferred discussion of this item until the September meeting.

5.2   *ADT-2 Negotiable Time-Outs (05-377r1) [Banther]*

The group did not consider this proposal due to lack of time.

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

At the author's request, the group deferred discussion of this item until the September meeting.

5.4 ADC-2 Model for Devices with No ADT Ports (06-061r2) [Suhler]

Paul Suhler introduced the changes since the last revision.

Rod Wideman raised a concern about the implication of the proposed text in clause 4.2.2 and the ENABLE bits in the RMC and ADC logical unit descriptors. The group reached a consensus that the proposed text implies that the ENABLE bits are set to one and unchangeable when the corresponding logical units are visible over the DT device primary port. After some debate, the group agreed that the inference is sufficient; the text does not need to make any explicit statement about the ENABLE bits.

Michael Banther asked if the proposed text should include a statement about providing symmetric logical unit access to the ADC device server if the DT device doesn't contain an ADI port. Paul Entzel chimed in throwing water on this idea and pointed out that Paul Suhler's definition of ADI port includes a DT device primary port. The group spent some time generalizing the proposed text to allow for multiple primary ports and to exclude primary ports from the definition of ADI port.

Paul Suhler made a motion for inclusion of 06-061r2 as revised into ADC-2. Kevin Butt seconded the motion. Paul Suhler verified with Kevin Butt that the paragraph in 4.2.2 will split into two paragraphs, one covering the RMC device server and the other covering the ADC device server. In the absence or objections or abstentions, the group passed the motion unanimously.

5.5 ADC-2: Device Statistics log page parameter updates (06-183r1) [Marks]

Paul Suhler introduced the proposal to the group. Kevin Marks stated that the group had agreed to move the definition of the page to SSC-3 and this proposal accomplishes that purpose.

Michael Banther asked if the current revision of SSC-3 includes the Device Statistics log page. Kevin Marks verified that it does.

Some confusion arose about the use or re-use of page code 14h. However the group sorted it out quickly.

Kevin Butt made a motion for inclusion of 06-183r1 into ADC-2. Rod Wideman seconded the motion. In the absence or objections or abstentions, the group passed the motion unanimously.

5.6 ADC-2 Clarification of MOUNTED (06-218r1) [Banther]

Michael Banther introduced the revised proposal.

Kevin Butt complained about the use of 'should' in the note. Michael Banther and Rod Wideman replied that should is acceptable in a note.

Kevin Butt then raised the concern about whether or not the note should be normative text. Paul Entzel supported Kevin's point. Michael Banther agreed to make the note normative.

Paul Entzel asked if the definition of mounted belongs in the model clause given its length. Kevin Butt agreed. Paul suggested putting it in 4.2.4.1 of adc2r05a. Rod Wideman suggested keeping the entry in 3.1.27 but have its text refer to 4.2.4.1 once the text is moved there. However after a search for the use of 'mounted', Rod suggested removing 3.1.27 entirely after moving the definition to 4.2.4.1.

Michael Banther made a motion for inclusion of 06-218r1 as revised for incorporation into ADC-2. Rod Wideman seconded the motion. In the absence or objections or abstentions, the group passed the motion unanimously.

5.7 ADC-2 Add supported operation codes to caching (06-222r1) [Banther]

Michael Banther introduced the changes since the last revision. He noted that the only changes from the last revision was to name of the CSC bit to SOCC and the removal of a vendor-specific bit.

Michael Banther made a motion for inclusion of 06-222r1 for incorporation into ADC-2. Paul Entzel seconded the motion.

Kevin Butt reviewed the purpose of the proposal. Noud Snelder asked how much of a delay HP expects if the operation codes are not cached. Several people provided examples.

In the absence or objections or abstentions, the group passed the motion unanimously.

5.8 ADI: Features for ADC-2 and ADT-2 (06-060r1) [Suhler]

Paul Suhler walked the group through the list of work items closing two and deferring one. Paul Suhler will post a revision.

6 New business:

6.1 ADT-2 Correct Major and Minor Revision Numbers (06-280r0) [Suhler]

Paul Suhler walked the group through the proposed changes (all three letters).

Michael Banther made a motion for inclusion of 06-280r0 for incorporation into ADC-2. Paul Suhler seconded the motion. In the absence or objections or abstentions, the group passed the motion unanimously.

6.2 ADT-2 Limit Login due to Symbol Framing Errors (06-283r0) [Banther]

Michael Banther introduced the proposal to the group. HP wants to clean up a small conflict regarding symbol framing errors when in P3: Logged Out state.

Kevin Butt pointed out that we might want include P0: Initial with P3: Logged Out as a state that will ignore symbol framing errors. Paul Entzel agreed and Michael Banther did likewise.

Paul Suhler made a motion for inclusion of 06-283r0 as revised for into ADT-2. Kevin Butt seconded the motion. In the absence or objections or abstentions, the group passed the motion unanimously.

6.3 ADT-2 More logout reasons (06-294r0) [Entzel]

Paul Entzel introduced the proposal. Quantum wants to add further reason codes for the Port Logout IU.

Kevin Butt sought the definition of a bug check and the group found one in wikipedia. Kevin requested the addition of further examples for a microcode error. Paul Suhler suggested that we need a code for cases where the port logging out needs operator intervention due to the severity of a condition. Rod Wideman supported this idea and further suggested setting aside ranges of codes for each category. The group then debated and agreed to use an additional bit to indicate whether the port logging out may attempt a subsequent port login or not. The

reason code will shrink to 7 bits and the new bit will occupy bit 7. Paul Entzel captured various changes to the proposed text.

Paul Entzel made a motion for inclusion of 06-294r0 as revised for into ADT-2. Kevin Butt seconded the motion. In the absence or objections or abstentions, the group passed the motion unanimously.

6.4   ADC-2: Fix bridging reservations and other stuff (06-261r0) [Entzel]

Paul Entzel introduced the proposal. ADI bridging, as defined in ADC and ADC-2, does not support bridging through two local SMC device servers to a single remote SMC device server. The primary problem lies with reservations since no mechanism exists for the local SMC device server to pass on the reservation I_T nexus to the remote SMC device server.

Michael Banther and Kevin Butt objected to the proposed text. Paul Entzel stated that he is willing to remove the offensive text but that the problem remains and needs to be fixed. Much discussion ensued. Paul noted that this problem probably occurs in any bridged device. Rod Wideman noted provided an example where this problem arises: in a shared storage environment, multiple servers coordinate access to the media changer. Such an environment uses reservations to catch any violation of their proprietary coordination mechanism. Paul suggested that the bridging command set working group is a good place to resolve this problem. Rod pointed out that the support of pass-thru bridging in ADC-3 could also solve it.

Moving on, Paul Entzel walked the group through several other clean-up changes that various people have requested. The group supplied various comments.

The proposed changes to text in clause 4.2.3.5 of adc2r05a drew several comments. In particular Kevin Butt argued that the CACHE bit should control when the local SMC device server establishes the cache and the ENABLE bit controls when the DT device includes the local SMC logical unit in the logical unit inventory. Rod Wideman suggested moving the proposed text of 4.2.3.5 into 6.2.2.4.3 which defines the CACHE bit. As the group looked at 6.2.2.4.3, we discovered that that clause already mentions both the CACHE and ENABLE bits when it describes enabled caching. Paul Entzel agreed to put the new restriction in both places.

Paul Entzel will revise based on comments received.

6.5   ADC-2 Add Tape Alert flags to match SSC-3 (06-307r0) [Entzel]

Paul Entzel introduced the proposal. SSC-3 has added two new TapeAlert flags. This proposal brings ADC-2 into synchronization.

Kevin Butt made a motion for inclusion of 06-307r0 for incorporation into ADC-2. Paul Entzel seconded the motion.

Rod Wideman asked how the two working groups could keep the TapeAlert flag definitions in synchronization. Rod also pointed out that the first sentence of 4.2.6 in adc2r05a references TapeAlert as defined in SSC-2. Michael Banther asked if this proposal should change this reference. After some discussion, we agreed to defer this change to a later proposal.

In the absence or objections or abstentions, the group passed the motion unanimously.

7   Next meeting requirements:

Subject to approval by the T10 Plenary, the group will hold a meeting 11 September 2006 during T10 plenary week in Nashua, New Hampshire beginning immediately after the adjournment of the SMC-3 working group and concluding at 7:00 PM EDT.

8   Review new action items:

06-040   Paul Suhler will revise 06-061r2 per old business item 5.4.

06-041   Paul Entzel will incorporate 06-061r2 as revised into ADC-2.

06-042   Paul Entzel will incorporate 06-183r1 into ADC-2.

06-043   Michael Banther will revise 06-218r1 per old business item 5.6.

06-044   Paul Entzel will incorporate 06-218r1 as revised into ADC-2.

06-045   Paul Entzel will incorporate 06-222r1 into ADC-2.

06-046   Paul Entzel will incorporate 06-280r0 into ADT-2.

06-047   Paul Entzel will incorporate 06-307r0 into ADC-2.

06-048   Paul Entzel will revise 06-261r0 per new business item 6.4.

06-049   Michael Banther will revise 06-283r0 per new business item 6.2.

06-050   Paul Entzel will incorporate 06-283r0 as revised into ADT-2.

06-051   Paul Entzel will revise 06-294r0 per new business item 6.3.

06-052   Paul Entzel will incorporate 06-294r0 as revised into ADT-2.

06-053   Paul Suhler will revise 06-060r1 per old business item 5.8.

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 1:00 PM MDT.

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.
Dr. Paul Suhler	A	Quantum Corp.
Mr. Paul Entzel	P	Quantum Corp.

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