Draft Minutes
Automation/Drive Interface (ADI) Working Group
Ad Hoc Meeting
T10/06-118r0
6 March 2006
9:07 AM – 3:24 PM EST
Hilton Head, South Carolina

1   Introductions:

Paul Suhler called the meeting to order at 9:07 AM EST. He thanked STA 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 requested moving the *ADI: Features
for ADC-2 and ADT-2* discussion to the end of the discussion list.

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

3   Approval of previous meeting minutes:

9 January 2006 meeting   06-031r1

Paul Suhler requested corrections for the minutes of the 9 January 2006 meeting, 06-031r1. No
one provided comments or corrections.

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*

06-002   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). *Closed*,
          06-137r0.

06-005   Michael Banther will revise 05-310r2 per discussion item 5.3 of 05-408r1. *Closed*,
          05-310r3.

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*

06-010   Kevin Butt will e-mail to the T10 reflector the part number of the JST connector that
           IBM uses. *Closed*

06-011   Kevin Butt will bring a sample of the smaller JST connector for inspection by the
           group. *Closed*

06-012   Paul Suhler will check pin assignments with the Quantum electrical engineers.
           Closed, could not confirm compatability.

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

06-014   Paul Suhler will provide a proposal for item 18 in 04-263r9. *Closed*, 06-061r0.

06-015   Paul Suhler will revise 04-263r9 per discussion item 5.2. of 06-031r1. *Closed*, 06-060r0.

06-016   Paul Suhler will post an e-mail to the T10 reflector announcing last proposals for
           ADC-2 by May, 2006. *Closed*

5   Discussion items:

5.1   *ADC-2 Add Identification Descriptors to SMC Logical Unit Descriptor Format (05-310r3) [Banther]*

Michael Banther reviewed the progress on this proposal.

Rod Wideman suggested changing 'the local SMC device servers' to 'the set of local SMC device servers.' Kevin Butt noted that 'IDENTIFICATION TYPE' should be 'IDENTIFIER TYPE' and 'IDENTIFICATION FIELD' should be 'IDENTIFIER FIELD.' Kevin, Paul Entzel, and Rod suggested changing the use of 'target device identification descriptors' to 'identification descriptors with an ASSOCIATION value of 2.' They suggested a corresponding change for 'logical unit identification descriptors (i.e. ASSOICATION value of 0).'

Paul Entzel pointed out an unintended consequence of changing the LOGICAL UNIT NUMBER FIELD NAME to LOCAL SMC DEVICE SERVER LOGICAL UNIT NUMBER. Rod Wideman concurred. Michael Banther agreed to revert to the original name.

Much discussion ensued regarding the various models that the proposed additions to 4.2.3.3 seeks to solve. We concurred that two models exist: one where the target device includes the remote SMC device server and all DT devices that bridge to that remote SMC device server; and one where each DT device appears as a separate target device and the automation device presents one remote SMC device server for each bridged DT device. We reached an agreement that the statements in the lettered list represent two independent requirements. Hence they should appear as two separate sentences and not as a lettered list. Beyond that, there exists a general consensus that the model clause will benefit from an expanded description of the two models including diagrams. Paul Entzel pointed out that the model of a single target device containing multiple DT devices requires lifting the current restriction on a local SMC device server not forwarding reservations on to a remote SMC device server.

Rod Wideman agreed to bring in a proposal to sort out the model issues. Michael Banther agreed to strike the proposed changes to 4.2.3.3 in lieu of Rod's proposal.

Kevin Butt asked if the model clause requires modifications due to the inclusion of the REMOTE SMC DEVICE SERVER LOGICAL UNIT NUMBER field. Michael Banther identified two changes, one in 4.2.3.2 and one in 4.2.3.4.

Michael Banther made a motion for incorporation of 05-310r3 as revised into ADC-2. Kevin Butt seconded the motion. In the absence of objections or abstentions, the group approved the motion unanimously.

5.2   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 proposal until May, 2006.

5.3   ADT-2 Negotiable Time-Outs (05-377r0) [Banther]

At the author's request, the group deferred discussion of this proposal until May, 2006.

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

At the author's request, the group deferred discussion of this proposal until May, 2006.

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

Paul Suhler reviewed the progress on the proposal. Quantum has decided that they do not need the proposal at all. Paul Entzel stated that the root of the problem is that some implementors have interpreted the standard to mean that the device server can only set the INXTN bit to one upon receipt of an external stimulus while other implementors have interpreted it to mean that the device server can set the it to one due to internal stimulus.

Paul Entzel stated that Quantum libraries use INXTN to signal the end of the unload operation. Rod Wideman stated that it adds some value for the automation application client to know that the DT device has reached the end of the load.

Michael Banther explored the consequences of having the INXTN bit turn on due to internal stimulus. In the end he agreed to adding a sentence stating that a DT device should set the INXTN bit to zero when the DT device requires an internal stimulus (e.g. completion of a cleaning or microcode update operation) to attempt to reach another state.

Paul Suhler withdrew his motion from January for incorporation of 05-409r0 into ADC-2 (see 06-031r1).

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

Kevin Butt introduced the proposal. Based on customer input, IBM wishes to ensure that ADC-2 makes it clear when a load completes for a microcode upgrade tape. They also want an indication that the load of a microcode upgrade tape failed due to the DT device not being in the correct mode.

After some discussion, the group agreed that the existing ADC-2 text, combined with the action item from discussion item 5.5, covers the first concern.

Rod Wideman suggested using the RRQST bit plus the addition of a recovery procedure to indicate that the DT device isn't in the correct mode. Kevin Butt proposed some text.

Kevin Butt made a motion for incorporation of 06-047r0 as revised into ADC-2. Paul Suhler seconded the motion. In the absence of objections or abstentions, the group approved the motion unanimously.

5.7   ADC-2 Model for Devices with No ADT Ports (06-061r0) [Suhler]

Paul Suhler introduced the proposal and then walked the group through it.

The group explored the possible configurations: either a dedicated automation port that uses some transport other than ADT or no dedicated automation port with automation traffic passing through device primary ports.

Paul Suhler will bring in a revision based on comments received.

5.8   ADI: Primary port access to ADC mode page 0x0E shall be restricted. (06-089r0) [Eriksen]

Halvard Eriksen introduced the proposal. Via the primary port, he would like to have the same restriction, or lack thereof, on enabling and disabling the RMC and ADC device servers that currently exists for only the SMC device server. The restriction states that the ADC device server shall reject a MODE SELECT command received over the primary port that changes the value of the SMC device server's ENABLE bit.

Halvard Eriksen proposed two alternatives:

   a.   Removing the restriction currently placed on the local SMC device server;or
   b.   Adding this restriction to the RMC and ADC device servers.

Halvard Eriksen made a motion to incorporate alternative (a) of 06-089r0 into ADC-2. Paul Entzel seconded the motion. In the absence of objections or abstentions, the group approved the minutes unanimously.

5.9   ADI: Features for ADC-2 and ADT-2 (06-060r0) [Suhler]

Paul Suhler walked the group through the list of remaining ADC-2 and ADT-2 features.

6   Unscheduled business:

No one raised unscheduled business.

7   Next meeting requirements:

Subject to approval by the T10 Plenary, the group will hold a meeting 8 May 2006 during T10 plenary week in San Jose, California beginning at 9:00 AM and concluding at an unspecified time.

8   Review new action items:

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

06-018   Michael Banther will revise 05-310r3 per discussion item 5.1.

06-019   Paul Entzel will incorporate 05-310r3 as revised into ADC-2.

06-020   Michael Banther will bring in a proposal to clarify the conditions that set the INXTN bit to zero per discussion item 5.5.

06-021   Kevin Butt will revise 06-047r0 per discussion item 5.6.

06-022   Paul Entzel will incorporate 06-047r0 as revised into ADC-2.

06-023   Paul Entzel will incorporate alternative (a) of 06-089r0 into ADC-2.

06-024   Paul Suhler will revise 06-061r0 per discussion item 5.7.

9   **Adjournment:**

Michael Banther made a motion for adjournment. Kevin Butt seconded the motion. The group passed the motion unanimously. Paul Suhler adjourned the group at 3:24 PM EST.

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.
Mr. Halvard Eriksen	AV	Tandberg Data

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