Draft Minutes
Automation/Drive Interface (ADI) Working Group
Ad Hoc Meeting
T10/05-112r0
7 March 2005
9:00 AM – 1:00 PM PST
Dana Point, CA

1 Introductions:

Paul Suhler called the meeting to order at 9:00 PST. He thanked QLogic 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. Rod Wideman requested a review of 04-263r4, the list of ADI-2 items.

Kevin Butt made a motion for acceptance of the modified agenda. David Hawks seconded the motion. In the absence of objections or abstentions, the group passed the motion unanimously.

3 Comments on previous meeting minutes:

17 January 2005 meeting   05-030r1

Paul Suhler requested corrections for the minutes of the 17 January 2005 meeting, 05-030r1. No one provided corrections.

Kevin Butt made a motion for acceptance of the minutes as written. Rod Wideman seconded the motion. In the absence of objections or abstentions, the group passed the motion unanimously.

4 Review of action items:

a. 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*

b. 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*

c. Paul Suhler will write a proposal based on discussion item (c) of 04-385r0. *Carryover*

d. Rod Wideman will provide the ADC-2 source document to Paul Entzel. *Closed*

e. Paul Entzel will revise 04-364r0 per discussion item 5.1 of 05-030r1. *Closed*

f. Paul Entzel will revise 05-015r0 per discussion item 5.4 of 05-030r1. *Closed*

g. Paul Entzel will incorporate 05-022r0 into ADC-2. *Carryover*

h. Paul Entzel will incorporate 04-381r0 into ADT-2. *Carryover*

i. Paul Entzel will incorporate 04-369r0 into ADT-2. *Carryover*

5   Discussion items:

5.1   *SPC-4 and ADC-2, add new ADC-2 command to set Volume Tag (05-015r1) [Entzel].*

Paul Entzel reviewed the proposal with the group. It provides a command that the library can use to pass a medium attribute (e.g., a barcode) to the tape drive. The primary justification for this addition is a customer desire to see the barcode in the drive logs.

Kevin Butt raised a concern about overlap between this new command and his action item for automation type MAM attributes. Paul Suhler asked if the drive remembers the attributes after an unload. Paul Entzel replied that it could. The group agreed that Kevin's action item is to create a new MAM attribute area.

Michael Banther asked about the life of the attribute once set by the library. Rod Wideman pointed out the proposed text that covers this area, the drive forgets the attributes upon unload. Kevin Butt asked if we want to keep the attribute until the next load rather than losing it on an unload operation. Paul Entzel replied that he expects the library to issue the command before a load operation so that the drive has the barcode value even if the load operation fails. Rod suggested that the proposal add a note explaining why the life of the attribute ends with the unload operation instead of, as with so many other medium parameters, ending with the subsequent load operation. After a brief discussion the group realized that we wanted to add normative text mandating that the drive keep attribute information when received with no medium in the drive and apply the attribute to the next medium loaded.

Kevin Butt and David Hawks raised concerns about aborted loads, e.g., if the library sends a SET MEDIUM ATTRIBUTE command with one barcode value and then decides, probably due to external intervention, to load a tape with another barcode value. The group agreed that we needed more text to cover various conditions that cause a drive to cease retaining an attribute value. Much debate and word-smiting followed.

Paul Suhler asked if the new text makes it clear that receipt of an attribute with zero length clears the attribute. Paul Entzel agreed that we could add text to that effect further down. However, Kevin Butt pointed out that this text already exists.

Noud Snelder asked if the attributes defined in this proposal can be read using a READ ATTRIBUTE command. Paul Entzel responded that the one defined attribute may be accessible by READ ATTRIBUTE but that this proposal does not mandate such access. In general, these attributes are not MAM attributes.

Rod Wideman requested adding a vendor-specific section to the range of attribute identifiers. Paul Entzel agreed to this change.

Michael Banther raised a concern about clarifying the relationship between medium attributes and MAM attributes.

Paul Entzel made a motion to incorporate 05-015r1 as modified into ADC-2, to recommend to the SMC-3 working group that they accept it into SMC-3, and to recommend to the CAP working group that they accept it into SPC-4. Kevin Butt seconded the motion.

Rod Wideman asked if incorporation of 05-015r1 as modified into ADC-2 depended on acceptance by CAP for incorporation into SPC-4. Paul Entzel replied that acceptance by CAP is a nice-to-have; however the proposal needs acceptance by the SMC-3 working group for SMC-3 for incorporation into ADC-2 to make sense.

Rod Wideman and Paul Entzel found some inconsistencies in nomenclature within the proposal and Paul made a note to fix them.

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

5.2 *Smaller connector for ADT-2 [Suhler]*

Paul Suhler pointed out again that we would like a smaller connector as a possibility for ADT-2. Michael Banther stated that HP has a product that uses a smaller connector already and that he has requested the part number for further investigation.

The group briefly detoured into a discussion of mapping SCSI over USB. However we returned to the serious business at hand, with many opinions expressed.

Rod Wideman asked for guidance that he could pass on to his electrical engineers.

Michael Banther agreed to bring in a proposal for a smaller connector. Kevin Butt agreed to bring in the IBM connector specifications.

Paul Suhler pointed out that SFF has not given final approval to the ADT connector, SFF-8054. He will investigate.

6 Unscheduled business:

6.1 *ADT-2: update to SAM-3, SPC-3, and ADC-2 (05-091r0) [Entzel]*

Paul Entzel introduced the proposal. This proposal rolls ADT-2 up to using SAM-3, SPC-3, and ADC-2. Paul walked the group through the changes.

Rod Wideman asked how the changes between SAM-2 and SAM-3 regarding the Send Command Complete transport protocol service affects the text. Paul Entzel searched SAM-3 and found that SAM-3 includes the Sense Data Length as an optional parameter while SAM-2 does not. Kevin Butt asked how the new Sense Data Length affects ADT-2 in detail. Paul responded that it allows ADT-2 to point out that the Sense Length field in the SCSI Response IU comes from the Sense Data Length parameter in the Send Command Complete transport protocol service.

Rod Wideman asked if the new style guide affects ADT-2. Kevin Butt noted that, although George Penokie has posted a new style guide, the style guide review meeting has been cancelled; hence it has not effect at present. Paul Entzel pointed out that he will take a look at the style guide, and he would follow it generally.

Paul Entzel made a motion for incorporation of 05-091r0 into ADT-2. Kevin Butt seconded the motion. In the absence of objections or abstentions, the group passed the motion unanimously.

6.2 *ADI: Features for ADC-2 and ADT-2 (04-263r4) [Suhler]*

Paul Suhler walked the group through the list by priority. Paul agreed to add a status column to ease tracking.

After much discussion, the group agreed to close the issue raised by ADC letter ballot comment HP-159, the interaction between the WRTP bit in the VHF data and WORM cartridges. However we raised an issue about creating a method for the drive to report the presence of a WORM cartridge, and possibly other cartridge types.

Regarding IBM's issue of providing a method to prepare and retrieve logs, the group debated what we wanted. We reached the conclusion that the drive needs a method to identify multiple logs (e.g., a log id), a method to identify log format attributes (e.g., ASCII or binary), an optional log name, and the log size. We expect retrieval using SEND DIAGNOSTIC/RETRIEVE DIAGNOSTIC RESULTS or READ BUFFER. Much discussion ensued about the command used for access. Kevin Butt agreed to bring in a proposal.

We worked our way through the rest of the list canceling issues or keeping them as necessary.

6.3   *Add a new ADT Link Service IU - Device Reset IU ([04-364r1](#)) [Entzel]*

Paul Entzel walked the group through a comparison of r1 versus r0 of this proposal. We reviewed the changes generating additional comments.

Paul Entzel made a motion for incorporation of [04-364r1](#) as modified into ADT-2. Susan Gray seconded the motion.

Kevin Butt raised a concern about the new text describing what to do on an I_T nexus loss. After some consideration, he satisfied himself that the proposal does not reset anything that it shouldn't.

In the absence of 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 2 May 2005 during T10 plenary week in Oklahoma City, Oklahoma beginning at 9:00 AM and concluding at 1:00 PM.

8   Review new action items:

a. Paul Entzel will present [05-015r1](#) to the SMC-3 and CAP working groups.

b. Paul Entzel will incorporate [05-015r1](#) as revised into ADC-2 upon acceptance of the proposal for incorporation into SMC-3.

c. Michael Banther will bring in a proposal for a smaller connector (reference item 8 in [04-263r5](#)).

d. Kevin Butt will bring in specifications for the IBM connector.

e. Paul Suhler will investigate the status and progress of the ADT connector SFF-8054 in SFF.

f. Paul Entzel will incorporate [05-091r0](#) into ADT-2.

g. Kevin Butt will bring in a proposal for preparation and retrieval of drive failure dumps/logs.

h. Paul Suhler will add to [04-263r4](#) a line for the detection of WORM media by a library.

i. Paul Entzel will revise [04-364r1](#) per Unscheduled Business item 6.4.

j. Paul Entzel will incorporate [04-364r1](#) as revised into ADT-2.

   k. Susan Gray will investigate Automation mediated R/W diagnostics (reference item 4 in 04-263r5).

   l. Paul Entzel will investigate Density Override in the RMC LU descriptor (reference item 16 in 04-263r5).

   m. Rod Wideman will bring in a proposal for reporting of medium types in ADC-2 (reference item 26 in 04-263r5).

9   Adjournment:

Kevin Butt made a motion for adjournment. David Hawks seconded the motion. The group passed the motion unanimously. Paul Suhler adjourned the group at 12:57 PM PST.

Attendees:

Name	Organization	E-mail
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David Hawks	Iomega	hawks at iomega dot com
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