

APPROVED MINUTES OF THE 16TH FAIS AD HOC MEETING

The sixteenth meeting of the T11.5 FAIS Ad Hoc group took place at the Driskill Hotel in Austin, TX, on October 6, 2004.

The following people were present:

AAROHI	Parag Bhide	parag@aarohi.net
BROCADE	Ed McClanahan	edmc@brocade.com
CISCO	Claudio DeSanti	cds@cisco.com
CISCO	Silvano Gai	sgai@cisco.com
DOT HILL	Elizabeth Rodriguez	Elizabeth.Rodriguez@dothill.com
EMC	John Kemeny	kemeny_john@emc.com
INCIPIENT	Brian Geisel	bgeisel@incipient.com
IVIVITY	Eddy Quicksall	eddyquicksall@ivivity.com
MCDATA	Gib Cardwell	gibc@mcddata.com
MCDATA	Joe Pelissier	joe.pelissier@mcddata.com
MCDATA	Larry Hofer	larry.hofer@mcddata.com
SEAGATE	James Coomes	jim.coomes@seagate.com
TROIKA NETWORKS	William Chow	wchow@troikanetworks.com
TRUE FOCUS	Horst Truedtedt	hotrues@attglobal.net

A total of 14 people from 11 organizations.

1. Opening remarks and introductions

The Chairman of FAIS, Claudio DeSanti of Cisco, called the meeting to order and welcomed the attenders, and led a round of introductions.

2. Administrivia

2.1 Approval of minutes

The minutes of the September FAIS Ad Hoc meeting had been uploaded to www.t11.org by William Chow of Troika Networks as 04-617v0.

The following corrections were noted:

- Add action item for Ed McClanahan to incorporate the object model into the draft specification.
- Add note that the motion to incorporate the object model into the draft specification was approved by acclamation.

Pursuant to these changes, the minutes were approved by acclamation.

2.2 Approval of this agenda

Claudio had distributed a draft agenda for this meeting as 04-654v0 via the T11 Web site, and he now asked for changes to that agenda. The following changes were made:

- Added review of Ed's initial draft 04-675v0.

Claudio moved to approve the agenda; Ed seconded. The motion was approved by acclamation.

3. Call for Patents

Claudio stated that this Working Group operates under the INCITS procedures, which are available on the web at <http://www.incits.org/>. Amongst these procedures are the ANSI patent policies. He directed persons to forward any patent related issue to the T11.5 and T11 Plenary meetings.

4. Review of old FAIS action items

Old action items were reviewed. Their status was updated as follows:

- AI 4: Amitava Guha to provide requirements for statistics gathering in FAIS and present proposals (Opened 9/10/2003)
Tabled until object model finalized. Target: Nov meeting.
- AI 5: Ed McClanahan and William Chow will work on a draft of Chapter 5. (Opened 11/9/2003)
Open. Target: Nov meeting.
- AI 7: Tanjore Suresh will cross-reference names/types of capabilities against existing standards/prior work. (Opened 1/13/2004)
Open. Target: the next meeting after completion of action item #8.
- AI 8: Roger Cummings/John Kemeny/Brian Geisel will each provide a list of capabilities that they must be able to query support for. (Opened 1/13/2004)
Open. Target: Nov meeting.
- AI 9: Ed McClanahan will propose an approach for supporting failover in the event of CPP failure. (Opened 1/13/2004)
Open. Target: Dec meeting.

- AI 10: Larry Hofer will produce a UML conventions section for inclusion in the standard.
(Opened 2/3/2004)
Closed per 04-620v0.
- AI 12: Elizabeth Rodriguez will propose support for journaling. (Opened 4/6/2004)
Open.
- AI 20: Tanjore Suresh and Eddy Quicksall will propose chapter 6 text for iSCSI-specific port attributes. (Opened 5/8/2004)
Open. Target: Nov meeting.
- AI 22: Ed McClanahan will propose a draft for chapter 1 and 2. (Opened 5/8/2004)
Partially closed (only chapter 2). Open. Target: Oct meeting.
- AI 23: Larry Hofer will propose a draft for chapter 3. (Opened 5/8/2004)
Open. Target: Feb meeting.
- AI 24: Ed McClanahan will incorporate the operational model (04-340) to the draft specification as chapter 1. (Opened 5/8/2004)
Closed per 04-675v0. Target: Oct meeting.
- AI 27: Ronak Desai will write up API requirements for Client takeover and handling of a faulted I/O. (Opened 7/13/2004)
Open. Target: Oct meeting.
- AI 28: William Chow will propose modifications to the EMC- proposed API (04-402v1) for his object model modications and Client-initiated I/Os. (Opened 7/13/2004)
Closed per 04-665v0. Target: Oct meeting.
- AI 29: Roger Cummings will propose object model modifications to support pass-thru of non-read/write I/Os. (Opened 7/13/2004)
Open. Was tabled until object model is finalized.
- AI 30: Larry Hofer will merge the conventions and glossary sections into a single proposal. (Opened 8/3/2004)
Closed 04-393v1. Target: Oct meeting.
- AI 31: Claudio will notify the membership (via the reflector) of the remaining schedule of the working group upon completion of the initial draft of the spec. (Opened 9/14/2004)
Open.
- AI 32: Ed McClanahan will incorporate the object model (04-401v3) into the draft specification. (Opened 9/14/2004)
Closed 04-675v0.

5. Old business

There was no old business at this meeting.

6. Scheduled FAIS business

6.1 SCSI Device and Port Name (04-630v1)

Eddy Quicksall

Ed asked if an initiator-mode FAIS object uses EVPD to access its name. Eddy responded no, his presentation applied only to SCSI, not FAIS.

Ed asked if “multiple paths to device” referred to the LU. Eddy responded: yes, I think.

Eddy suggested using “SCSI name string” format (type 8) for the port name. Ed said that it is the FAIS Client’s responsibility to construct the EVPD pages (e.g. page code 83). William suggested that there are portname-related attributes that need to be passed down to the provider, e.g. target portal group tag. Ed said he would like to see object model implications, e.g. specific new attributes and/or objects.

Action for Eddy to propose an object to represent a port in the object model.

6.2 Initial FAIS draft (04-475v0)

Ed McClanahan

Roger Cummings said that “FIBRE CHANNEL” can be removed from the name.

Action for Roger to provide list of SCSI documents to cite in the draft.

Silvano suggested that graphics should be in color. Claudio said INCITS allows color. Gib Cardwell had a black & white copy that looked acceptable, so the color version remains.

William indicated that the aggregation associations should all be “composite”. John Kemeny was actioned to make the source for the graphic available for this to be fixed.

Ed noted that he still needs to fix the fonts in the object model section.

6.3 FAIS Conventions (04-393v1)

Larry Hofer

Ed said some of the terms are not used in the draft, e.g. write journaling. Claudio said the glossary should reflect the current state of the draft. Larry said he will set aside any terms that are not yet used.

Ed suggested there should be separate terms (from “quiesce”) for returning busy and for faulting new I/Os. William noted that there are many ways of reaching a drained state. Larry said he will make it more general.

Larry noted that he still needs to remove “switch-based” with “FAIS platform” definition. Ed indicated that the definition is limited to a single CPP and DPC. Larry said he will generalize this to “one or more”.

Ed noted that the keyword definitions differ from FC-SP. Larry said he will diff them against definitions in FC-SP.

6.4 FAIS draft (04-675v0)

Ed McClanahan

Ed noted that the definition of “qualifier” in his UML book differs.

George Penokie noted that it’s not clear how to use “discriminator” since its definition is unclear. William noted that the rule is that we only define terms we actually use. Larry said he will remove it.

John asked whether any of the existing attributes should be handled as “qualifiers”. There was a lots of discussion and no agreement. William suggested that it isn’t necessary since they all can be handled as simple attributes. Larry will remove it.

Ed suggested that we should use “role names” for some associations (e.g., mirror and mirrorset). William noted that this is not currently done in the object model. Claudio suggested keeping it as is.

6.5 FAIS draft (04-665v0)

William Chow

William stated that some applications wanted to support separate VDEVs for Read/Write attributes, while others wanted to use combined (a single) VDEVs for read and write. The impact is on the provider, so the provider vendors seemed most affected by the proposal.

After lengthy debates about the proposal and alternate techniques, an initial motion was made by William to "Incorporate the Troika 04-665v0 proposal for supporting both separate and combined modes for VDEVs." Claudio made a friendly amendment to the motion to say "All provider implementations shall support both separate and combined VDEV mode." The motion was seconded by Eddy.

After discussion, an alternate proposal to provide a "hint" in an API call was found to be appealing. William withdrew the previous motion and a new motion was made by him to approve the modified proposal as shown at the meeting. The modified proposal said:

"In the API: Create_XMap()

KeepSeparateVdev Arg Hint for an xmap.

Possible values:

True: XmapEntries have separate Vdevs for Reads and writes

False: XmapEntries have one Vdev for all I/Os

In the model: 1.5.10.4 Attributes (XmapEntry)

ReadVdev Settable The handle of a Vdev for reads

WriteVdev Settable The handle of a Vdev for writes.

If KeepSeparateVdev == FALSE, then the FAIS provider may reject the XmapEntry if ReadVdev does not equal WriteVdev. "

After brief discussion, the motion passed by acclamation (unanimous, no abstentions).

These action items were created:

- John K. to incorporate the above changes from the motion by William into the API proposal update.

- Ed to update the draft with the object model changes to add the ReadVdev and WriteVdev attributes from the approved motion.
- William to post a revised version of the proposal as agreed to at the meeting to t11.org.

7. **Unscheduled FAIS business**

There was no unscheduled business.

8. **Review of FAIS action items**

New action items were not reviewed. The list was updated as follows:

- AI 4: Amitava Guha to provide requirements for statistics gathering in FAIS and present proposals (Opened 9/10/2003)
Tabled until object model finalized. Target: Nov meeting.
- AI 5: Ed McClanahan and William Chow will work on a draft of Chapter 5. (Opened 11/9/2003)
Open. Target: Nov meeting.
- AI 7: Tanjore Suresh will cross-reference names/types of capabilities against existing standards/prior work. (Opened 1/13/2004)
Open. Target: the next meeting after completion of action item #8.
- AI 8: Roger Cummings/John Kemeny/Brian Geisel will each provide a list of capabilities that they must be able to query support for. (Opened 1/13/2004)
Open. Target: Nov meeting.
- AI 9: Ed McClanahan will propose an approach for supporting failover in the event of CPP failure. (Opened 1/13/2004)
Open. Target: Dec meeting.
- AI 12: Elizabeth Rodriguez will propose support for journaling. (Opened 4/6/2004)
Open.
- AI 20: Tanjore Suresh and Eddy Quicksall will propose chapter 6 text for iSCSI-specific port attributes. (Opened 5/8/2004)
Open. Target: Nov meeting.
- AI 22: Ed McClanahan will propose a draft for chapter 1 and 2. (Opened 5/8/2004)
Partially completed (only chapter 2). Still open. Target: Oct meeting.
- AI 23: Larry Hofer will propose a draft for chapter 3. (Opened 5/8/2004)
Open. Target: Feb meeting.
- AI 27: Ronak Desai will write up API requirements for Client takeover and handling of a faulted I/O. (Opened 7/13/2004)
Open. Target: Oct meeting.
- AI 29: Roger Cummings will propose object model modifications to support pass-thru of non-read/write I/Os. (Opened 7/13/2004)
Open. Was tabled until object model is finalized.
- AI 31: Claudio DeSanti will notify the membership (via the reflector) of the remaining schedule of the working group upon completion of the initial draft of the spec.

Open.

AI 33: Eddy Quicksall will propose an object to represent a port in the object model.

New.

AI 34: Roger will provide a list of SCSI documents to cite in the draft specification.

New.

AI 35: John Kemeny will make the source for the object model available.

New.

AI 36: William Chow will post a revised version of the proposal to t11.org (as 04-665v1) for Xmap changes for single read/write Vdev, as agreed to at the meeting.

New.

AI 37: John Kemeny will incorporate the Xmap changes for single read/write Vdev (from 04-665v1) into his API proposal.

New.

AI 38: Ed McClanahan will incorporate the Xmap changes for single read/write Vdev (from 04-665v1) into the draft specification.

New.

9. Next meeting schedule

The next meeting of the FAIS group will be hosted by Cisco in San Jose, CA. He suggested that he will first try for 11/15 or 11/16.

10. Adjournment

A motion to adjourn the meeting was passed unanimously.