

## APPROVED MINUTES OF THE 10TH FAIS AD HOC MEETING

The tenth meeting of the T11.5 FAIS Ad Hoc group took place at the Embassy Suites in Monterey, CA, on April 6-7, 2004.

The following people were present:

AAROHI	Parag Bhide	parag@aarohi.net
ASTUTE NETWORKS	Tanjore Suresh	tsuresh@astutenetworks.com
BROCADE	Ed McClanahan	edmc@brocade.com
BROCADE	John Crandall	jcrandal@brocade.com
CISCO	Claudio DeSanti	cds@cisco.com
CISCO	Silvano Gai	sgai@cisco.com
CNT	Bret Ketchum	bretk@cnt.com
CNT	David Peterson	dap@cnt.com
CROSSROADS	Dexter Anderson	danderson@crossroads.com
DOT HILL	Elizabeth Rodriguez	Elizabeth.Rodriguez@dothill.com
EMC	Fred Oliveira	oliveira_fred@emc.com
EMC	David Black	black_david@emc.com
HEWLETT PACKARD	Predrag Spasic	predrag_spasic@hp.com
INCIPIENT	Brian Geisel	bgeisel@incipient.com
JRBM	Robert Pulley	rpulley@jrbminc.com
MCDATA	Larry Hofer	larry.hofer@mcddata.com
MCDATA	Michael O'Donnell	mike.o'donnell@mcddata.com
QLOGIC	Frank Campbell	frank.campbell@qlogic.com
TROIKA NETWORKS	William Chow	wchow@troikanetworks.com
VERITAS	Roger Cummings	roger.cummings@veritas.com
VERITAS	Amitara Guha	amitara.guha@veritas.com (?)

A total of 21 people from 15 organizations.

## **1. Opening remarks and introductions**

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

## **2. Administrivia**

### **2.1 Approval of minutes**

The minutes of the March 9 FAIS Ad Hoc meeting had been uploaded to [www.t11.org](http://www.t11.org) by William Chow of Troika Networks as 04-203v0.

Claudio DeSanti requested the following changes:

- Change his company/email address to Cisco

Pursuant to these changes, the minutes were approved in the absence of any objections.

### **2.2 Approval of this agenda**

Claudio proposed that this meeting only focused on continuing the review of the letter ballot comments for the requirements document.

Ed McClanahan requested that the group review his document 04-147v0, if time permits. This was accepted, in the absence of any objections.

## **3. Call for Patents**

Claudio stated that amongst rules and policies under which this Working Group operates are the T11, INCITS, and ANSI patent policies. He directed persons wishing to make statements relevant to those policies to do so at the T11.5 or T11 plenary meetings.

## **4. Review of old FAIS action items**

The review of old action items was deferred until the next FAIS Ad Hoc meeting.

## **5. Old business**

There was no old business at this meeting.

## **6. Scheduled FAIS business**

**6.1 Letter Ballot Comments****04-171v1**

R-16:

Claudio noted that Andiamo-16 et al were resolved by dothill-19.

R-17:

Andiamo-17 proposed deleting it. In the absence of any objections, this was accepted. William Chow stated that “other physical resources” was too broad in the new R-15/R-16. He suggested replacing this phrase with “physical resources controlled by the FAIS\_Provider”. No objections.

R-18:

William moved to delete it; Silvano Gai seconded. Vote: y=3, n=7, a=1. Motion failed. Roger Cummings moved to rewording it to “FAIS shall leverage existing discovery APIs”; Silvano seconds. Vote: y=6, n=4, a=3. Motion carried. Silvano moved to delete it; Fred Oliveira seconded. Ed suggested amending the motion with a dependent modification to R-15 and R-16 such that it replaced “physical resources” with “local resources” to include the case of connections with remote SCSI ports; this was accepted. William suggested also modifying R-15 and R-16 such that “controlled” was replaced with “managed”; this was accepted. Vote: y=8, n=1, a=2. Motion carried.

R-19:

Ed moved to add a definition for the term “remote SCSI port”; Silvano seconded. No objections. Silvano moved to reword the requirement by replacing “remote FAIS\_Data\_Ports” with “remote SCSI\_Port”. No objections.

R-20:

William indicated that (1a) of his proposed resolution is already covered and withdrew it. William moved to add (1b) of his proposed resolution as a new requirement. No objections. Ed suggested amending the new requirement by adding “binding to DPCs”. No objections. William withdrew (2b) of his proposed resolution.

R-21:

William asked whether creation/deletion of FAIS\_SCSI\_Ports is optional. Silvano responded that the FAIS\_provider can reject any function call. Claudio suggested deleting the requirement, per dothill-21. No objections.

R-22, R-23:

Ed moved to reword both into a single version such that FLUs and BLUs support SBC. Elizabeth asked about SSC. William suggested handling SSC as a separate requirement from SBC. No objections.

R-24:

Ed suggested replacing “mappings” with “LUN mappings”. No objections.

R-25:

Dave Peterson asked what “access control” means, e.g. is it same/different from that defined by SCSI? Ed moves to drop “control”. William suggests replacing “control” with “permissions”. No objections.

R-26:

Silvano moved to delete it, per emc-9; Fred seconded. No objections.

R-27:

Parag Bhide noted that this requirement is now already handled by the resolution for R-22. Claudio suggested deleting this requirement. No objections.

Tanjore Suresh asked about support for full task set management. Roger suggested adding a requirement to only support basic task management. William noted that this is a negative requirement. No action taken.

R-30:

Parag asked about support for data movement b/t FLUs. Ed also wanted support for VDEVs. Claudio suggested adding support for all. No objections.

R-31:

Claudio suggested rewording the requirement to support BLUs, FLUs, and VDEVs. No objections.

R-32:

Claudio suggested deleting it, per andiamo-22. No objections.

R-33:

William suggested upgrading to “shall”. Fred notes that the new R-31 already covers this. Claudio suggests deleting this requirement. No objections.

R-34:

Silvano indicated that this is already covered by R-35 and suggested deleting it. No objections.

R-35:

Claudio suggested rewording to “also while I/O is occurring”. No objections.

R-36:

Ed indicated that he believes this is an implementation detail. Silvano suggests deleting it. No objections.

R-40:

William suggested replacing “drain” with “wait for completion”. Ed also suggested covering only “active I/Os”. No objections.

R-41:

Ed indicated that he wants to also support aborting I/Os which are not offloaded. Ed moved for a new requirement; William suggested that this should go in section 3.5. No objections.

R-42:

Ed withdrew brocade-23.

R-43:

William suggested replacing “fastpath” with “offloaded”. Mike O’Donnell alternatively suggested simply removing the phrase, “for...”. No objections.

R-44:

William indicated that that mappings already implies I/O offload; the current wording additionally suggests that the FAIS\_provider can offload the creation of mappings. Parag suggested removing “offloading”. Claudio offered a simplified version of the troika-23 resolution. No objections.

R-45:

Ed proposed a variant of the troika-24 resolution, except with “sparsely populated”. No objections.

R-46:

Parag suggested replacing “offloading mirroring” with “synchronous mirroring”.

R-47:

Ed indicated that there is customer demand for journaling support. Mike favors keeping this requirement. Elizabeth Rodriguez is actioned to present a proposal on how to support journaling. No objections.

R-48:

Mike moved to delete this requirement. Vote: y=6, n=3, a=2. Motion carried.

R-49:

Silvano suggested changing this to “shall”. No objections. Mike asked who performs the load-balancing; Fred responded that the FAIS\_provider does.

R-50:

Ed noted that “active” refers to paths the FAIS\_provider can use for an I/O, while “passive” refers to those that it may autonomously activate.

Roger proposed replacing “physical disk” with “BLU”. No objections.

Ed proposed removing the reference to BLUs and rewording to support multiple active paths. No objections.

R-51:

Ed proposed explicitly calling out separate read and write policies for the active paths. No objections.

## 7. **Unscheduled FAIS business**

There was no unscheduled FAIS business.

## 8. **Review of FAIS action items**

The outstanding action items for the meeting were not reviewed. The current action items, carried forward from the previous meeting and including any new ones from the current meeting, are as follows:

- AI 1: Ed McClanahan to review the required operation if an i/o crosses a boundary and the second extent is "held". (Opened 7/9/2003)  
**Open.**
- AI 2: Tanjore Suresh to investigate methods of generating WWNs. (Opened 7/9/2003)  
**Open.**
- AI 3: Robert Mulcahy to propose support for journaling. (Opened 7/9/2003)  
**Open.**
- AI 4: Roger Cummings to provide requirements for statistics gathering in FAIS and present proposals (Opened 9/10/2003)  
**Tabled until object model finalized.**
- AI 5: Mike O'Donnell to post updated terminology/glossary document for review at the next meeting. (Opened 10/7/2003)  
**Open.**
- AI 6: Mike O'Donnell to look at wording of HBA API and determine how linkage independency and thread safety/reentrancy is treated. (Opened 10/7/2003)  
**Open.**
- AI 7: William Chow to post revisions to the requirements document to address specifics of "error" cases - I/O faults, backside I/O errors, timeouts. (Opened 10/7/2003)  
**Open.**
- AI 8: Silvano Gai will work on a draft of Chapter 6. (Opened 11/9/2003)  
**Open.**
- AI 9: Roger will work with Claudio on a draft of Chapter 4. (Opened 11/9/2003)  
**Open.**
- AI 10: Ed McClanahan and William Chow will work on a draft of Chapter 5. (Opened 11/9/2003)  
**Open.**
- AI 11: Roger Cummings to check on possible restrictions for upcall context. (Opened 12/9/2003)  
**Open.**
- AI 12: Tanjore Suresh will cross-reference names/types of capabilities against existing standards/prior work. (Opened 1/13/2004)  
**Open.**
- AI 13: Roger Cummings/Fred Oliveira/Bob Mulcahy will each provide a list of capabilities that they must be able to query support for. (Opened 1/13/2004)  
**Open.**

AI 14: Ed McClanahan will propose an approach for supporting failover in the event of CPP failure. (Opened 1/13/2004)

**Open.**

AI 15: George Penokie will produce a UML conventions section for inclusion in the standard. (Opened 2/3/2004)

**Open.**

AI 16: Roger Cummings will provide specific requirements for DPC pass-thru support. (Opened 2/3/2004)

**Open.**

AI 17: William Chow will post a new requirements document per the final resolution of the letter ballot comments. (Opened 2/3/2004)

**Open.**

AI 18: Elizabeth Rodrigues will propose support for journaling. (Opened 4/6/2004)

**New.**

## **19. Next meeting schedule**

The next meeting of the FAIS group will be at the T10 Plenary week in Monterey, California, on May 3-4, at 9am-5pm on both days.

Claudio proposed that draft chapters be submitted for review in the next meeting. He proposed a deadline of 4/26.

Roger proposed a concall to complete the remaining letter ballot comments on 4/16. He will post the dial-in details to the reflector. Claudio suggested that a new requirements updated per the comment resolutions be posted by 4/21.

## **20. Adjournment**

A motion to adjourn the meeting was passed unanimously.