

Final Minutes

T11.3 FC-FS Working Group Meeting

September 11, 2001 – Huntington Beach, CA

9 AM – 7 PM

Changes approved at FC-FS meeting 10/10/01: Remove spurious text (former section 6.6.52) and closed action listed as carryover (former section 8.2.5).

A meeting of working group FC-FS of NCITS Technical Committee T11 Task Group T11.3 was held at Huntington Beach, California on September 11, 2001, in conjunction with the T10 Plenary Week meetings. Attendance at this meeting is tabulated at the end of this document.

1. Opening remarks and introductions: **Bob Nixon**

Facilitator John Scheible was unable to attend due to the tragedy in New York this morning. Secretary Bob Nixon opened the meeting at 9:00 AM Tuesday, September 11, 2001, thanked our host company, Qlogic, and led a round of introductions.

2. Call for changes to minutes

2.1 **AL-2/FS report to T11.3 - 08/09/01** [01-428v0](#) **Bob Nixon for John Scheible**

Approved as written.

2.2 **AL-2/FS minutes – 8/7-8/01** [01-437v0](#) **Bob Nixon**

Action 8.2.14 “Bill Martin to publish 01-287v1 and 01-343v2...” should have been listed under “AL/2 Action Items”

The minutes will remain open for further changes until next meeting. Steve Wilson/Boeing is believed to have a question.

3. Approval of the agenda: **no document** **Bob Nixon**

approved as presented.

4. Review of old action items: [01-437v0](#) **Bob Nixon**

4.1 **AL/2 Action Items**

4.1.1 Bill Martin to publish 01-287v1 and 01-343v2 to include the change agreed at FC-FS Ad Hoc meeting August 7-8, 2001.

(OPENED 8/8/01) (CLOSED by [01-287v1](#) and [01-343v2](#))

4.2 FS Action Items

- 4.2.1 Bob Snively to rewrite 15.5.25-27 to eliminate inappropriate examples using "IU"
(OPENED 5/9/01) (CARRYOVER)
- 4.2.2 Bob Snively to propose structure for Intermix to the reflector.
(OPENED 5/9/01) (CARRYOVER)
- 4.2.3 Mike Dorsett to rewrite clauses 17.6.7-8 to include class 6 support.
(OPENED 5/9/01) (CARRYOVER)
- 4.2.4 Bill Martin to provide a proposal for the login requirement for every ELS.
(OPENED 5/10/01) (CARRYOVER)
- 4.2.5 Jim Coomes will rewrite clause 14 with appropriate inclusion of WWN information from the annexes. The title will be "Name_Identifier Formats".
(OPENED 7/17/01) (CLOSED by [01-442v1](#))
- 4.2.6 Jim Nelson will post the proposed fix to [Brocade 18](#).
(OPENED 7/17/01) (CARRYOVER)
- 4.2.7 Bob Snively will post the concerns about [Agilent 006 and 007](#).
(OPENED 7/17/01) (CARRYOVER)
- 4.2.8 Jim Nelson will post the proposed correction to [Agilent 005](#).
(OPENED 7/17/01) (CARRYOVER)
- 4.2.9 Bob Snively will post the required correction to 12.2.2.2.2, item a.
(OPENED 7/17/01) (CARRYOVER)
- 4.2.10 Craig Stuber to provide resolution for [JNI 005](#).
(OPENED 7/17/01) (CARRYOVER)
- 4.2.11 Mike Dorsett will provide a proposed resolution for [Tivoli-853](#).
(OPENED 7/17/01) (CARRYOVER)
- 4.2.12 Mike Dorsett (was Jim Nelson) will follow up with Mike Foster to be sure our interpretation of [QLogic 145](#) is correct.
(OPENED 7/17/01) (CARRYOVER)
- 4.2.13 Bob Snively to investigate proper choice of OLS and NOS during speed negotiation.
(OPENED 7/17/01) (CLOSED)
- 4.2.14 Jim Nelson to publish [01-313v2](#) to incorporate the changes discussed at FC-FS Ad Hoc meeting August 7-8, 2001 and incorporate the result into FC-FS.
(OPENED 8/7/01) (CLOSED by [01-313v2](#))

- 4.2.15 Bob Nixon to send out email to the reflector apprising the members of the deletion of RTIN ELS.
(OPENED 8/7/01) (CLOSED email 8/16/01)
- 4.2.16 George Penokie to publish [01-250v2](#) to reflect removal of RTIN and the RNID changes agreed at FC-FS Ad Hoc meeting August 7-8, 2001, and present it at the next meeting..
(OPENED 8/7/01) (CARRYOVER)
- 4.2.17 Bob Nixon to send out email soliciting opinion (ie extant product) on where an IPv4 address should be positioned within the Management IP address field of an RTIN reply payload.
(OPENED 8/7/01) (CLOSED email 8/16/01)
- 4.2.18 Greg Koellner to publish [01-353v1](#) to reflect the discussion at FC-FS Ad Hoc meeting August 7-8, 2001 and present it at the next meeting.
(OPENED 8/7/01) (CARRYOVER)
- 4.2.19 Jim Coomes to publish [01-403v1](#) to reflect the discussion of FLOGI at FC-FS Ad Hoc meeting August 7-8, 2001 and provide to the editor for incorporation into FC-FS.
(OPENED 8/7/01) (CLOSED this meeting)
- 4.2.20 Bob Nixon to write email requesting the membership to indicate what they include in an area SW-RSCN or RSCN.
(OPENED 8/7/01) (CLOSED email 8/16/01)
- 4.2.21 Craig Stuber will post his presentation at FC-FS Ad Hoc meeting August 7-8, 2001 on clarifying table 220 as a document and request input via the reflector.
(OPENED 8/8/01) (CARRYOVER)
- 4.2.22 Bob Nixon to write email to the reflector informing that FC-FS intends to vote at its October meeting whether to retain hunt groups and inviting opinions supporting its value.
(OPENED 8/8/01) (CLOSED email 8/16/01)
- 4.2.23 Bob Nixon to write email to the reflector that FC-FS intends to restore the range of vendor-unique FC-4 frame type codes to those identified in [FC-FS ver .10](#), returning the released codes to reserved.
(OPENED 8/8/01) (CLOSED email 8/16/01)

5. Scheduled New Business AL-2/AL-3

- 5.1 **AL-2 Amendment** [01-343v2](#) **Bill Martin**
The document is in letter ballot at this time.

6. Scheduled New Business FS

- 6.1 **Status of FC-FS rev 1.30** [01-024v3](#) **Jim Nelson**
About 100 comments are still open. Our hope is to resolve the majority today.

6.2 Name Identifier Formats [01-442v1](#) Jim Coomes

The only comment in this area unresolved by this document is a suggestion to add a format for IPv6 addresses. If a format acceptable to the IP community is presented, it will be considered.

Any additional comments against this document are requested by 1 week prior to the October meeting, since we expect to approve its incorporation at that meeting.

6.3 Login Clause [01-403v1](#) Jim Coomes

Jim presented his revisions. They were acceptable. He has already given them to the editor and will publish his revised document for the record.

6.4 PLOGI Restrictions no document Roger Cummings

Roger presented a request which stemmed from a public review comment on FCP-2 concerning an apparent regression with respect to tape backup recovery. The issue and its resolution are described in [T10/01-197r1](#).

The FCP-2 resolution was to request changes from other standards. The request to FS is to strongly recommend against (though not prohibit) a port from using PLOGI after a configuration change event unless it first determines by a nondisruptive means (e.g., by ADISC) that the fcid or port name or fabric name has changed.

There was some additional discussion of the original issue. It was generally accepted that there was weakness in all of: The standards; the device implementations; the HBA / driver implementations; the backup applications.

Dal Allan suggested that FS should prohibit, not just discourage, unnecessary PLOGI. Others felt this would lead to the need to carefully specify when it was necessary. Dal countered that the requirement could be to do something like ADISC, then do a PLOGI only if not fully recovered.

Roger emphasized that although FS clearly specifies the broad impact of PLOGI (reset) on FS context, it does not hint that the impact may be severe 'way up the stack.

ACTION: Roger Cummings to propose a warning statement and a proscription statement about unnecessary PLOGI.

ACTION: Bob Nixon to notify via the reflector that at the October meeting we will choose between a warning statement and a proscription statement about unnecessary PLOGI.

Claudio DeSanti raised two questions about what should be in the ACC to FLOGI.

- What happens to the fabric name when the principal switch changes?

Bob Snively consulted his experts by phone and reported that the fabric name changes only on fabric build, but this would probably occur on any event causing change of principal switch. The result would probably be widespread disruption. There are lots of related and poorly resolved issues being targeted in SW-3.

- What is the scope of the class set identified in an FLOGI ACC? Or, equivalently, what is reported if not all switches have the same class capability? Reference back to a discussion at the last meeting, it was claimed that the fabrics could not merge. Bob Snively confirmed this by telephone.

6.5 FLOGI/PLOGI/ACC Reserved words [01-477v0](#) Dave Peterson

Dave's document requests changing the reserved words in the extended PLOGI/etc to "vendor-specific".

Bob Snively and Dal Allan said it would lead to non-interoperable implementations, and stressed the importance of maintaining full compatibility at FLOGI.

They also expressed strong antipathy to removing reserved words from possible future standard use.

Dal suggested that it might be acceptable to add an "architected" extension for vendor-specific use. He gave an example how this might be done. Bob described how this could still lead to non-interoperable implementations.

Dave was given the guidance that his vendor-specific use was not acceptable as proposed but would probably be accepted if brought in as a standard proposal.

6.6 FC-FS comment compilation [01-138v7](#) Jim Nelson

6.6.1 Rhapsody-003

ACTION: Bob Nixon to contact Venkat Rangan to request his proposed text for Rhapsody-003.

6.6.2 IBM-009

The comment suggested adding information about 2G operation to a table of effective bandwidth. The information now in the table is only for 1G. It is also incorrect. Rather than add to the table, it will be removed. "Class of service" will be added to the list of factors affecting bandwidth in the prior sentence.

6.6.3 Brocade-122

Editor asked if the resolution applied to 4.12.4. Answer from Brocade: Yes.

6.6.4 Gadzoox-044

Accepted. Editor will reword.

6.6.5 Brocade-145

Accepted, editor will propose wording changes.

6.6.6 Brocade-160

A class 6 question.

ACTION Bob Nixon to contact Mike Dorsett to request his assistance in resolving Brocade-160.

6.6.7 Brocade-164

Brocade will review the proposed fix.

6.6.8 Gadzoox-058

A class 6 question.

ACTION: Bob Nixon to contact Mike Dorsett to request his assistance in resolving Gadzoox-058.

6.6.9 Brocade-170

Brocade will review the proposed fix.

6.6.10 Brocade-172

Brocade will review the proposed fix.

6.6.11 Qlogic-035

A class 4 question.

ACTION Bob Nixon to contact Gary Stephens to request his assistance in resolving Qlogic-035.

6.6.12 Vixel-130

This questioned the definition of "Online" and "Offline" used in the second paragraph of 9.4.1 (v1.3). The proposed resolution substitutes references to a not-yet-specified primitive sequence protocol instead of the undefined terms. The text is used to describe conditions for an N_Port losing its identity. The only case the people present could construct where this is expected is power on, which was felt to be obvious. The sentence will be removed.

ACTION: Jim Coomes to propose text for when a port becomes unidentified as part of a general topic of address discovery.

6.6.13 WG-002

A class 6 question.

ACTION Bob Nixon to contact Mike Dorsett to request his assistance in resolving WG-002.

6.6.14 Tivoli-195

Fixed by Jim Coomes proposal 01-442v1

6.6.15 Tivoli-267

Pending Bill Martin action enumerating login requirements for all ELSs

6.6.16 Gadzoox-094

Pending Bill Martin action enumerating login requirements for all ELSs

6.6.17 Gadzoox-099

Pending Bill Martin action enumerating login requirements for all ELSs

6.6.18 McData-011

This proposed better use for a field in RSCN. Rejected, good idea but existing implementations may be based on the current spec.

6.6.19 Gadzoox-112

An editor question on this was answered by the observation that "The name server is an N_Port".

6.6.20 Emulex-028

Pending George Penokie's RNID rewrite of [01-250v1](#).

6.6.21 Tivoli-455

During discussion of the comment, it was perceived that the term "Reporting-Status Order" was thought to be confusing, so it will be changed to "Severity Indication"

6.6.22 Tivoli-456

ACTION Bob Nixon to contact Mike O'Donnell to request his assistance in resolving Tivoli 456.

6.6.23 Tivoli-600

A class 4 question.

ACTION Bob Nixon to contact Gary Stephens to request his assistance in resolving Tivoli-600.

6.6.24 Tivoli-604

A class 4 question.

ACTION Bob Nixon to contact Gary Stephens to request his assistance in resolving Tivoli-604.

6.6.25 Qlogic-085

A class 4 and 6 question.

ACTION Bob Nixon to contact Gary Stephens (class 4) and Mike Dorsett (class 6) to request their assistance in resolving Qlogic-085.

6.6.26 Tivoli-611

A class 4 question.

ACTION Bob Nixon to contact Gary Stephens to request his assistance in resolving Tivoli-611.

6.6.27 Qlogic-088

A class 4 and 6 question.

ACTION Bob Nixon to contact Gary Stephens (class 4) and Mike Dorsett (class 6) to request their assistance in resolving Qlogic-088.

6.6.28 Boeing-023

Rejected, the cost of reorganizing the text outweighs the benefit, and the organization is not out of line with other class descriptions. A cross-reference will be added to tie together the sections, though.

6.6.29 Qlogic-092

A class 4 question.

ACTION Bob Nixon to contact Gary Stephens to request his assistance in resolving Qlogic-092.

6.6.30 Boeing-008

Accepted earlier, but there was a question whether the clock service parameters should be earlier in the PLOGI extension. Answer: Leave it alone for fear of invalidating existing implementations.

- 6.6.31 Vixel--053**
Accepted. change "FC-2" to "FC-2 Level"
- 6.6.32 Boeing-026**
Rejected, sort of. The text will be clarified to say that E_D_TOV is determined from the value of this field only in a point-to-point topology.
- 6.6.33 IBM-029**
Current resolution is not quite sufficient. In the discussion, the issue was raised that if, as posed in the resolution, class 6 is not really a class, it should not be (almost) everywhere described as such. Left open for plenary discussion.
- 6.6.34 Boeing-042**
Editorial issue was resolved.
- 6.6.35 Qlogic-117**
Open pending review by Qlogic
- 6.6.36 Qlogic-118**
Open pending review by Qlogic
- 6.6.37 Qlogic-120**
A class 4 question.
ACTION Bob Nixon to contact Gary Stephens to request his assistance in resolving Qlogic-120.
- 6.6.38 Boeing-064**
A class 4 question.
ACTION Bob Nixon to contact Gary Stephens to request his assistance in resolving Boeing-064.
- 6.6.39 Qlogic-121**
A class 4 and 6 question. Class 4 has been answered.
ACTION Bob Nixon to contact Mike Dorsett (class 6) to request his assistance in resolving Qlogic-121.
- 6.6.40 Qlogic-125**
A class 6 question.
ACTION Bob Nixon to contact Mike Dorsett to request his assistance in resolving Qlogic-125.
- 6.6.41 Qlogic-126**
A class 6 question.
ACTION Bob Nixon to contact Mike Dorsett to request his assistance in resolving Qlogic-126.

- 6.6.42 Agilent-006**
Pending action by Bob Snively
- 6.6.43 Agilent-007**
Pending action by Bob Snively
- 6.6.44 Agilent-005**
Editor to rework text from comment to provide resolution.
- 6.6.45 Tivoli-853**
A class 6 question.
ACTION Bob Nixon to contact Mike Dorsett to request his assistance in resolving Tivoli-853.
- 6.6.46 Qlogic-141**
A class 4 question.
ACTION Bob Nixon to contact Gary Stephens to request his assistance in resolving Qlogic-141.
- 6.6.47 Agilent-001**
A resolution proposed in [01-333v0](#) will be reviewed at the next FS plenary week meeting.
- 6.6.48 JNI-002**
A resolution will be discussed at the next meeting.
ACTION: Bob Nixon to forward to the reflector a summary of the private discussion of JNI-002 with Nelson, Ham, Lindsay (email 7/30/01)
- 6.6.49 Brocade-061**
Fixed by the new clause 14 ([01-442v1](#)).
- 6.6.50 Emulex-32, 48**
Accepted in principle. A reference to the FC-4 Qualifier in the RNFT ELS ACC will be added at the end of the new section on Name_Identifiers to complete the catalog of uses of IEEE Company IDs.
- 6.6.51 Emulex-033, -034, -035, -036, -037, -038, -039, -040, -041, -042, -043, -044, -045, -046, -047, -050**
Fixed by the new clause 14 ([01-442v1](#)).

7. **Unscheduled new FS business**

8. **Review of AL-2/FS action items**

8.1 **AL/2 Action Items – None**

8.2 **FS Action Items**

- 8.2.1 Bob Snively to rewrite 15.5.25-27 to eliminate inappropriate examples using “IU”
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(OPENED 9/11/01)
- 8.2.20 Bob Nixon to contact Mike O'Donnell to request his assistance in resolving [Tivoli 456](#).
(OPENED 9/11/01)
- 8.2.21 Bob Nixon to contact Mike Dorsett to request his assistance in resolving class 6 related issues in [Brocade-160, Gadzoox-058, WG-002, Qlogic-121, Qlogic-125, Qlogic-126, and Tivoli-853](#).
(OPENED 9/11/01)
- 8.2.22 Bob Nixon to contact Gary Stephens to request his assistance in resolving class 4 related issues in [Qlogic-035, Tivoli-600, Tivoli-604, Tivoli-611, Qlogic-092, Qlogic-120, Boeing-064, and Qlogic-141](#).
(OPENED 9/11/01)
- 8.2.23 Bob Nixon to contact Gary Stephens (class 4) and Mike Dorsett (class 6) to request their assistance in resolving issues in areas of their expertise in [Qlogic-085 and Qlogic-088](#).
(OPENED 9/11/01)

9. Future meeting plans

As much as possible at the October T11 plenary meeting.

10. Adjournment (FS WG)

The meeting was adjourned at 7:00 PM Tuesday, September 11, 2001.

11. Attendance

Company Represented	Last Name	First Name	Email
Andiamo Systems	DeSanti	Claudio	cds@andiamo.com
Brocade	Snively	Robert	rsnively@brocade.com
Cisco Systems	Peterson	David	dap@cisco.com
Emulex	Nixon	Bob	bob.nixon@emulex.com
ENDL	Allan	Dal	endlcom@acm.org
Nishan	Monia	Charles	cmonia@nishansystems.com
Seagate	Coomes	James	jim_coomes@seagate.com
Sun Microsystems	Moe	Ken	kenneth.moe@sun.com
Veritas	Cummings	Roger	roger.commings@veritas.com
Vixel	Nelson	James	jnelson@vixel.com