

Draft Minutes
T11.3 FC-FS Working Group Meeting
July 17, 2001 – Colorado Springs, Colorado
9 AM – 6 PM

An interim meeting of working group FC-FS of NCITS Technical Committee T11 Task Group T11.3 was held at Colorado Springs, Colorado to continue resolution of letter ballot comments. Attendance at this meeting is tabulated at the end of this document. Thanks to Bob Snively for taking the notes from which these minutes were developed.

1. Opening remarks: Jim Nelson

Editor Jim Nelson opened the meeting at 9 AM Tuesday, July 19, 2001.

2. Approval of Agenda – The approved agenda is document 01-352v1

3. FS Action Item Review

- 1) Jim Coomes will provide a rewrite of clause 17 to improve organization and define the X's and R's.
(OPENED 5/9/01)
- 2) Bob Snively to rewrite 15.5.25-27 to eliminate inappropriate examples using "IU"
(OPENED 5/9/01)
- 3) Bob Snively to propose structure for Intermix to the reflector.
(OPENED 5/9/01)
- 4) ACTION Mike Dorsett to rewrite clauses 17.6.7-8 to include class 6 support. –
Closed (provided to the editor)
(OPENED 5/9/01)
- 5) ACTION: Bill Martin to provide a proposal for the login requirement for every ELS.
(OPENED 5/10/01)
- 6) ACTION: Bob Nixon to write up a revised statement replacing "shall" with "if you do this, this is how it will hurt", and review it with Tom Lindsey and Bill Ham.
(OPENED 5/10/01)

- 7) Bob Nixon to provide references for the IP terms used in RNID/RTIN descriptions.
– Closed (See 01-324v0)
(OPENED 6/5/01)
- 8) George Penokie to update his RTIN/RNID proposal T11/01-250v0 to incorporate changes discussed at this meeting.
(OPENED 6/5/01) - Closed
- 9) Bob Nixon to send out an email notifying the community that buffered class 1 has been eliminated from FC-FS.
(OPENED 6/6/01) - Closed
- 10) Bob Nixon to send an email to Mike Foster requesting text to satisfy Akara-019. -
Closed
(OPENED 6/6/01)
- 11) Bob Nixon to send out an email notifying the community that Annex F has been eliminated from FC-FS. - Closed
(OPENED 6/6/01)
- 12) Ken Hirata to upload his presentation on FARP Discrepancies as a document -
Closed (see 01-307v0)
(OPENED 6/5/01)
- 13) Bob Nixon to write a message to the reflector noting the FARP discrepancy and asking for implementer input, copy the authors of the RFC - Closed
(OPENED 6/5/01)
- 14) John Scheible to allow time in the next meeting to discuss feedback on FARP header discrepancies. – OBE?
(OPENED 6/5/01)
- 15) Bob Nixon to modify the proposal for Clarification of Management IP Address as requested at 6/6/01 meeting and provide the text to George Penokie to incorporate into his RNID proposal. – Closed (See 01-324v0)
(OPENED 6/6/01)
- 16) Jim Coomes to include corrections to 17.3.3 concerning FLOGI class of service in his rewrite of clause 17.
(OPENED 6/6/01)
- 17) Jim Coomes to include changes to remove PLOGI class of service restrictions in his rewrite of clause 17 (OPENED 6/6/01)

4. 01-354v0, Error in definition of OX_ID selection

Bob Snively, Brocade, presented 01-354v0, Error in definition of OX_ID selection. This document proposes fixes in clause 16 to correctly indicate the relationship between OX_ID and D_ID/S_ID. The proposal was accepted.

5. 01-353v0, Inrange Proposed changes

Greg Knollner, Inrange, posted 01-353v0, Proposed Changes to CS_CTL/Priority field. This proposal was accepted. The editor reserves the right to make minor editorial changes.

6. 01-250v1, RTIN/RNID Update

Not done as none of the principals were not present.

7. 01-138v6, Review of comments

Note that the clause and section numbers referenced below refer to the new version of FC-FS – 1.30 (document 01-024v3)

1. Brocade 162 and 163. Chapter 7 has been created to address this issue. It needs to be reviewed.
2. VIXEL 122. The FC-BB types for BBL (50-52) are not included in table 20. No reference has been found defining where they would be used, so they remain reserved. The FC-BB facilitator indicated that the BBL types can be changed to reserved.
3. Tivoli 161. Exchange context and sequence context do not clearly indicate what actions are associated with the bits being set to zero and to one. This will be resolved according to table 21.
4. Tivoli 195. The IEEE extended format needs to be defined in a new table. This text has been moved to a special NAA section in clause 14. Jim Coomes will drag the two annexes on this subject in and rewrite clause 14 accordingly.
5. Tivoli 212. This will be corrected editorially.
6. Vixel 20. Table 40 has a lot of TBD values that need to be fixed. Jim Nelson has the action to fix.
7. Tivoli-267/Gadzoox 094. This is an action item for Bill Martin.
8. Rhapsody 034. This actually needs to be resolved by placing some model text in 4.12 that indicates that sequences are the minimum deliverable unit of data and that exchanges are used by ULPs to relate sequences. Then a reference to 4.12 can be used. The use of the word deliverable will be considered. Jim Nelson to do this.
9. Seagate 20. A reference table with the contents of table 49 should also be included. Comment was withdrawn.
10. QLogic 058/Gadzoox 109. The question involves how Fabric Controllers know that they are to receive RSCNs. Jim will rewrite 12.3.2.22.3 accordingly. Fabric Controllers are always implicitly registered to receive RSCNs after a successful implicit or explicit FLOGI.
11. Gadzoox 110. The RSCN payload is constrained to less than or equal to 256 bytes. This is convenient for ELS buffering. This is editorial error. The value should

- be 1024. This may place additional rules on the RSCN usage in high port count switches.
12. Gadzoox 114/Tivoli 359. This may require separation of clauses for convenience.
 13. Tivoli 344. Target is changed to Exchange recipient where appropriate.
 14. Rhapsody 37. He suggests that topology discovery should be based on CT only. The comment was rejected because of legacy concerns, not because it was a bad idea. Most devices do not use CT functions very much. This really belongs in a profile, but it is not clear where this would be done.
 15. Emulex 026/Tivoli 394/Emulex 028/Qlogic 066/. This will be addressed with Tivoli's rewrite of RTIN.
 16. Tivoli 568. Editorial issue. All cases where bits are defined need to have an indication of the meaning of the 1 and 0 values.
 17. Boeing 023. A reference will be provided, but we feel that it would be desirable to combine them. No one accepted an action item.
 18. Agilent 004. The comment was accepted. However, it was noted that 18.6 item e is incorrect, since RO and Sequence Count contain redundant information and either could be used for reassembly. In addition, there does not seem to be a need to check F_CTL bit values unless you are electing to perform reassembly with RO.
 19. Brocade 18. Open and active are not clearly distinguished. Active bit should be obsoleted and removed from the S_STAT block and the state of "active" should be replaced with open. This is a fundamental change and Jim will post the proposal to the reflector.
 20. Agilent 006. This now will qualify the RRQ with SEQ_ID. This is an important change and will be posted to the reflector. Note that this improves FCP recovery, but also provides for the possibility of incompatibility. Note also that ABTS does not provide the proper information to make this work properly. It also does not help for cases where the ABTS may be for overlapping sequences. We are not comfortable with accepting this proposal yet.
 21. Agilent 007. See Agilent 006.
 22. Agilent 005. It looks like Acknowledged classes shall always use RX_ID to separate re-used OX_IDs from cases where an ACK is lost. This is not a change to any known devices.
 23. Agilent 001. This was not resolved at this meeting.
 24. IBM 052. Rejected. This corrects a hanging paragraph.
 25. JNI 003. Accepted, with editorial license.
 26. QLogic 035. Jim Nelson will solve this as an editorial issue.
 27. Tivoli 455. This is a simple editorial correction.
 28. Tivoli 461/Tivoli 476. This will probably be rewritten by George anyway, but it is a simple editorial question.

29. Gadzoox 122. The PDISC, ADISC, and related functions need to be reorganized.
30. Vixel 129. The page size in LCLM request and response will be changed to reserved.
31. HP-01. This is a simple editorial correction.
32. Rhapsody 045. The comment was rejected. The normal FC-AL-2 and class 1 behaviors apply.
33. QLogic 085. The first part of the proposal changes the rules to apply to only class 1 SOFc1 frames. Then any other class 1 frames will be simply discarded. This should be applied to FC_Ports. Note that the wording for class 4 is inconsistent with this. Note that this is being rewritten by Jim Coomes and must be analyzed again after the rewrite.
34. QLogic 088. This applies similar problems as QLogic 085, but for class 3 behavior.
35. Tivoli 621. The period of time defined by the paragraph in fabric management really means E_D_TOV. The problem has moved to clause 13.5.2 d and e in revision 3 of FC-FS. The text should be modified to provide a reference to 11.3.1. However, the text in 11.3.1 is rather obscure and must be clarified.
36. Akara 022. Note that this is obsolete wording related to the prototype class 1 behavior. It is required to not change because of legacy requirements. The comment is rejected.
37. Boeing 105. The comment is incomplete. It is assumed that he needs a new item for class 6 behavior. Jim Nelson will inquire about that question.
38. While studying this issue, it was pointed out that ABTS does not require end-to-end credit to be available (rev 3, 12.2.2.2.2). This conflicts with 16.3.10.1, items j-A and k-B. This also makes item j-B wrong. 17.6 also has conflicting terminology about what happens when frames are sent without credit. This means that 12.2.2.2.2 item a should be deleted. This will be posted by Bob Snively. References to LCR should be provided if no credit is available (11.3.5.2).
39. Rhapsody 049/Tivoli 760. The paragraph was changed to reference the alternate BB credit management mechanism, which uses a count-down model. It was pointed out that the actual physical implementation may count either way, but the rules must be explained with one assumption. This effects 20.3 (rev 2).
40. Akara 027. The table 250 in 17.8 (rev 3) does not reflect the text in 17.5.13. In reality, the table is poorly labeled and will be editorially updated to make it easier to understand. In addition, figure 33 and table 250 need to be upgraded to contain the BB credit recovery mechanisms. Jim Nelson will try to address this editorially.
41. Figure 32 needs to have the EE credit effects of LCR included in much the same way they are included in figure 33.
42. Akara 028. The second paragraph of 20.2.4.3 of revision 3 is the worst possible idea for any of our present ULPs. The last sentence will be used as the basis for a new second paragraph that says ABTS should NEVER be used for verifying

forward progress of a transmission. The present second paragraph will be reduced to a note applicable only to FC environments not using a request/response protocol. Note that even multi-exchange connections use higher level verification and would be damaged by ABTS.

43. Tivoli 827. Apply the proper reference.
44. JNI 005. X_ID invalidation is not used anymore, requiring the removal of the second sentence in 21.7.4 (rev 3). Table 256 should be corrected by Craig Stuber
45. Tivoli 829. 20.7.2.2.3 was commented on. However, the problem is the same as Akara 028. The clause is stricken.
46. Tivoli 853. Mike Dorsett will provide a proposed resolution.
47. JNI 004/AE 003. The reference to Broadcast service parameters should be removed.
48. AE 004. This was resolved by Tivoli 860.
49. QLogic 141 and Tivoli 894. Jim Nelson will contact Gary Stephens for guidance.
50. Tivoli 925. This is purely editorial.
51. QLogic 145. 28.3.2.1 in revision 3 uses the concept of a well-known address with respect to primitive signals. This is obviously not valid. We believe that the primitive signals are used to adjust the same clock service that is addressed by ELSs to that well-known address. The text should be adjusted to indicate that. Mike Foster will be contacted for agreement.
52. Tivoli 937 is treated as an editorial problem and will be corrected by separating the two ideas into separate sentences.
53. Agilent 001. There is a requirement that connectors be demated for 3 seconds as part of the speed negotiation assumptions. Bob Nixon will study the purpose for this.
54. QLogic 146. Some old devices do not like the choice of primitives being provided during speed negotiation in 29.5 (revision 3). OLS or NOS should both be allowed, and in fact OLS does not work on some devices. Old types of devices should probably use NOS for this.
55. JNI 002. In 29.6.2, item E, the disabled link requirement should require the link to go down for at least 100 msecs to complete the link off requirement. This needs to be reviewed by Bob Nixon.
56. QLogic 147. The example provided in Annex H (revision 3) for alternate BB credit management is deleted.
57. Emulex 030. Annex I in revision 3 is removed. The text is verified to be sure the relevant parts are included in the WWN definitions.
58. Emulex 031. See Emulex 030, but for Annex J in revision 3.
59. Brocade 061. The annex M technical content should be moved into the WWN definitions.

60. Emulex 33 - 50 are editorial comments that will be included in Jim Coomes' rewrite of the Name_Identifier formats clause.

New Action items:

1. Jim Nelson will bring the question of Vixel 122 to the FC-BB group.
2. Jim Coomes will rewrite clause 14 with appropriate inclusion of WWN information from the annexes. The title will be "Name_Identifier formats".
3. Gary Stephens has been actioned in absentia to correct Boeing 23.
4. Jim Nelson will post the proposed fix to Brocade 18.
5. Bob Snively will post the concerns about Agilent 006 and 007.
6. Jim Nelson will post the proposed correction to Agilent 005.
7. Bob Snively will post the required correction to 12.2.2.2.2, item a.
8. Craig Stuber to provide resolution for JNI 005.
9. Mike Dorsett will provide a proposed resolution for Tivoli-853.
10. Jim Nelson will contact Gary Stephens for guidance on QLogic 141 and Tivoli 894.
11. Jim Nelson will contact Mike Foster to be sure our interpretation of QLogic 145 is correct.
12. Bob Nixon has already got an action item to address Agilent 001.
13. Bob Snively to investigate proper choice of OLS and NOS during speed negotiation.
14. Bob Nixon will review JNI 002 with Tom Lindsay and Bill Ham to see if that is the correct resolution.

Attendance:

Jim Nelson, Vixel
Bob Snively, Brocade
Craig Carlson, Qlogic
Ken Moe, Sun Microsystems,
Jim Coomes, Seagate
Charles Binford, Pirus
Dal Allen, ENDL
Robert Griswald, Crossroads