Joint T11.3/T10 Activity Working Group AdHoc Meeting T11/00-398v1
June 7, 2000, Revised July 10, 2000
Boise, ID

Stewart Wyatt, HP, Secretary

1 Opening Remarks and Introductions: Dale LaFollette

The facilitator, Dale LaFollette, called the meeting to order at 2:25 PM and had the participants introduce themselves. He announced that due to reorganization at his employment that he would no longer be serving as facilitator. Dave Peterson will be replacing him. Dave was not in attendance at this meeting but would attend the next one. In addition Dale announced that the Secretary, Stewart Wyatt, would be resigning after next months meeting due to reorganization at his employment. He called for a volunteer to replace Stewart without getting any response.

2. Approve this Agenda: T11/00-334v0 Facilitator

Approved

3. Approve 05/15/00 minutes: T11/00-296v0 Stewart Wyatt

Stewart noted a comment of Carl's that was posted to the reflector. Carl did not feel that the minutes needed amending. The minutes were accepted as is.

4. Review Old Action Items: Stewart Wyatt

#1 Bob Snively – FS end exchange cases needs to include Class 3 case of lost FCP_CONF. Check for other new end exchange cases. Closed
#2 Bill Martin requested to review out-of-order proposal for corner case problems. Ongoing
#3 Dave Peterson: update the SSC-2 proposal T10/00-173 as modified. Completed
#4 Eric Oetting: Present the SSC-2 proposal to T10. Accepted by T10
#5 Bob Snively: Reconcile the statement that SEQ_CNT restarts are 0 in clause 8.1 with the RRQ requirements. Discussed with resulting new action items
#6 Carl Zeitler and Charles Binford check out the validity of establishing a recovery qualifier without an RRQ. A specific case is noted in T11/00-145v2, D.14b Class 3, SRR Response Lost – does it need a recovery qualifier? Discussed

+++ Joint T10/T11.3 +++

5. FCP-2:	T10 Working Drafts FCP2R04	Bob Snively
Letter Ballot Comments	T10/00-154r4	Bob Snively
FC-FS Issues	T10/00-230r2	Bob Snively
Ladder Diagrams	T10/00-137r4	Carl Zeitler

Bob noted that T10/00-230r2 was approved yesterday.

Carl's presentation T10/00-137r4

Carl prefaced his comments by stating that he had reviewed and updated his proposal noting the differences between his current out-of-order diagrams and the original in-order ones included in the last version of FCP-2. He believed that the cases are virtually identical with the exception of the length of certain timeouts. In some cases the values of R_A_TOV and REC_TOV can be set to zero for in-order systems. In Class 2 there is the issue with SEQ_CNT that was raised last month.

Carl reviewed each of his diagrams with comments about the differences between the in-order and out-order cases to emphasis his point. Last month the group had voted to include Carl's diagrams as an informative annex. Carl wanted that decision to be reconsidered and the diagrams to be included as part of the standard. He felt the in-order and out-of-order cases could be merged into a common set of diagrams.

One important observation came from a discussion of where to start the REC_TOV timers after a missing frame in an out-of-order system. The timer could be started after detecting an out-of-order event or it could be delayed until the response was received. The diagram implied waiting for the response. Bob wanted to emphasize that the diagrams are examples and more aggressive error recovery approaches should not be considered non-compliant.

Charles Binford questioned whether a recovery qualifier could be set up on only one side. He didn't feel that was justified by the text of FC-FS. The group agreed the FS text was vague and difficult to interpret.

Carl's solution to the SEQ_CNT issue from last month was to wait for the R_A_TOV timeout to occur before initiating the error recovery. This may delay the recovery but reduces the complexity of setting up the recovery qualifier.

Bob Snively noted that the objectors to including the out-of-order error recovery diagrams were Charles Binford and Dave Peterson. Charles was present and said he no longer had objections. Dave Peterson was absent and Ralph Weber questioned whether a decision should be made in Dave's absence. Bob thought Dave's concern was that including out-of-order would hold up progress. Bob said we could reverse the decision later with a "few strokes of the pen" and proposed we include out-of-order. The decision made was that Bob will merge the two diagrams to create a single annex and preserve the original in-order annex until Dave has a chance to review it. If Dave is dissatisfied and can convince the group that there is a problem with the new annex then the draft will revert to the old annex.

Bob stated that he will have a FCP-2 REV05 next month with many of these changes, but it will not be a final version. He stated that it will include the merged diagrams.

Bob took the floor and started reviewing his “red” comments in T10/00-150r4. He had the reviewers comment on his responses in the document to their original letter ballot comments. Several hours were spent reviewing a large number of comments.

One comment elicited a long discussion. Carl Zeitler had questioned resetting the continuously increasing sequence count to zero after an SRR. He noted that FC-FS requires that the count always increase. This discussion revealed that after an error resulting in the loss of frames in Class 2, the recipient, can learn the next expected sequence count from the ABTS. In Class 3, the recipient is unable to determine the next expected count since Class 3 does not use ABTS. The requirement in FCP-2 to reset the sequence count after an SRR was to accommodate Class 3.

Carl argued that continuously increasing sequence count should be prohibited in Class 3 to avoid resetting the sequence count to zero after an error since he was afraid that it would break something in Class 2 such as the recovery qualifier. Matt Wakeley argued that continuously increasing sequence count was necessary for detecting errors in Class 3 and unnecessary in Class 2 since lost frames are detected in Class 2 by not receiving an ACK.

This discussion revealed several cases where the error recovery in FCP-2 violates the Fibre Channel standards as documented in FC-FS. These cases are allowing a sequence with an error to be closed by an SRR and having sequence initiative changed in an exchange (the one in error) by another exchange (the SRR).

The discussion drifted into a number of related issues. Bob thought the best solution to the issues raised was to include the SEQ_ID in the recovery qualifier. There was some discussion about the historical background for the omission of SEQ_ID. Bob took an action item to propose the inclusion of SEQ_ID in the recovery qualifier in FC-FS.

Next month Bob will produce chapter 12 and annex D fully corrected and updated. He thinks this alone will require more review than we will have time for next month. If he has additional time he will start a REV05 with additional changes.

6. New Business

+++ T11.3 +++
7. New Business

None

+++ T10 +++
8. New Business

None

+++ Admin +++

9. Next Meeting requirements Facilitator

Dale asked about requirements for the next T11 meeting. Bob believes he will have REV05 finished by then. He will request as much time as possible.

10. Review New Action Items: Stewart Wyatt

1. Bill Martin requested to review out-of-order proposal for corner case problems.

2. Bob Snively - Add to FC-FS changes to close a sequence with SRR and legalize SRR changing sequence initiative transfer in the exchange error recovery. Propose including SEQ_ID in recovery qualifier

11. Adjournment: Facilitator

The meeting adjourned at 8PM.

Attendance

Dale LaFollette	StorageTek	Stewart Wyatt	HP
John Lohmeyer	LSI	George Penokie	IBM
Steve Sletten	StorageTek	Dave Ford	Orca
Craig Stuber	JNI	Glen Virball	Pirus Networks
Predrag Spasic	HP	Pak Seto	Interphase
Bob Kembell	Connectivity Solutions		
Gene Milligan	Seagate	Horst Truestedt	TrueFocus
Charles Monia	Adaptec	Carl Zeitler	Compaq
Neil Wanamaker	Crossroads	Matt Wakeley	Agilient Tech
Ralph Weber	ENDL	Jim Coomes	Seagate
Charles Binford	LSI Logic	Curt Ridgeway	LSI Logic
Bob Nixon	Emulex	Paul Suhler	Seagate