Voting Results on T10 Letter Ballot 08-381r0 on Forwarding FCP-4 to First Public Review
Ballot closed: 2008/10/16 12:00 noon MDT

<table>
<thead>
<tr>
<th>Organization</th>
<th>Name</th>
<th>S</th>
<th>Vote</th>
<th>Add'l Info</th>
</tr>
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<tr>
<td>AMCC</td>
<td>Paul von Stamwitz</td>
<td>P</td>
<td>Yes</td>
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<tr>
<td>Brocade</td>
<td>David Peterson</td>
<td>P</td>
<td>Yes</td>
<td>Cmmts</td>
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<tr>
<td>Dell, Inc.</td>
<td>Kevin Marks</td>
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<tr>
<td>EMC Corp.</td>
<td>David Black</td>
<td>A</td>
<td>Yes</td>
<td>Cmmts</td>
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<tr>
<td>Emulex</td>
<td>Robert H. Nixon</td>
<td>A</td>
<td>Yes</td>
<td></td>
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<tr>
<td>ENDL</td>
<td>Ralph O. Weber</td>
<td>P</td>
<td>Yes</td>
<td>Cmmts</td>
</tr>
<tr>
<td>FCI</td>
<td>Douglas Wagner</td>
<td>P</td>
<td>Abs</td>
<td>Cmmts</td>
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<tr>
<td>Finisar Corp.</td>
<td>David Freeman</td>
<td>P</td>
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<td>Foxconn Electronics</td>
<td>Elwood Parsons</td>
<td>P</td>
<td>Abs</td>
<td>Cmmts</td>
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<td>Fujitsu</td>
<td>Mike Fitzpatrick</td>
<td>P</td>
<td>Yes</td>
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<td>Hewlett Packard Co.</td>
<td>Rob Elliott</td>
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<td>No</td>
<td>Cmmts</td>
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<td>Hitachi Global Storage Tech.</td>
<td>Dan Colegrove</td>
<td>P</td>
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<td>IBM Corp.</td>
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<td>Mark Seidel</td>
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<td>Joel Silverman</td>
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<td>KnowledgeTek, Inc.</td>
<td>Dennis Moore</td>
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<td>Molex Inc.</td>
<td>Jay Neer</td>
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<td>Frederick Knight</td>
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<td>Mark Overby</td>
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<td>Abs</td>
<td>Cmmts</td>
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<td>PMC-Sierra</td>
<td>Tim Symons</td>
<td>P</td>
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<td>Quantum Corp.</td>
<td>Paul Suhler</td>
<td>P</td>
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<tr>
<td>Samsung</td>
<td>Joseph Chen</td>
<td>P</td>
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<tr>
<td>SanDisk Corporation</td>
<td>Avraham Shimor</td>
<td>P</td>
<td>Yes</td>
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<td>Seagate Technology</td>
<td>Gerald Houlder</td>
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<tr>
<td>Sun Microsystems, Inc.</td>
<td>Dale LaFollette</td>
<td>P</td>
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<td>Symantec</td>
<td>Roger Cummings</td>
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<td>TycoElectronics</td>
<td>Scott Shuey</td>
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<td>Western Digital</td>
<td>Mark Evans</td>
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<td>Cmmts</td>
</tr>
</tbody>
</table>

Ballot totals: (22:4:7:0=33)
22 Yes
4 No
7 Abstain
0 Organization(s) did not vote
33 Total voting organizations
14 Ballot(s) included comments

This 2/3rds majority ballot passed.
22 Yes are more than half the membership eligible to vote
[greater than 16] AND
22 Yes are at least 18 (2/3rds of those voting YES or NO [26]).

Key:
P Voter is principal member
A Voter is alternate member
Abs Abstain vote
DNV Organization did not vote
Cmnts Comments were included with ballot
NoCmnts No comments were included with a vote that requires comments

[This report prepared by LB2 v2.5.]
******************************************************************************

Comments attached to Yes ballot from David Peterson of Brocade:

Problem: REC response reason code and reason code explanation usage.

Solution: Clarify that an FCP_Port should behave the same if it receives either reason code 03h or 09h in response to an REC ELS if the reason code explanation is either 15h or 17h.

******************************************************************************

Comments attached to Yes ballot from David Black of EMC Corp.: 

[First line of each comment is #, Technical/Editorial, Page #, Section/Table/Figure #]

1 T 1 Section 2.3
   FC-LS reference should not be listed as under development. Does FC-LS-2 need to be referenced?

2 E 2 Section 3.1.1
   Remove Class 4 from list of examples for acknowledged class. Also "class" --> "Fibre Channel class" for clarity.

3 E 2 Section 3.1.5
   "that is returned" --> "that is automatically returned to the application client" in order to better match "autosense" and the definition of "sense data".

4 E 2 Section 3.1.8
   Change "extent" to "amount" or "size" to avoid confusion.

5 E 4 Section 3.1.43, 3.1.44
   "A loop operating" --> "A Fibre Channel arbitrated loop operating" for clarity.

6 T 4 Section 3.1.45
   The word "arbitrary" seems wrong. The key concept is that the data is not accessed in sequential order. Also, change "extent" to "size".

7 T 4 Section 3.1.46
"I3" is easily confused with "13" in the font used. Clarify in some fashion.

8 T 5 Section 3.1.61
Linked commands are obsolete. Remove them from this definition.

9 E 5 Section 3.1.64
"Any class" -> "Any Fibre Channel class" for clarity.

10 T 7 Section 3.3.3
Expand definition of "ignored" so that the entity is ignored by whatever receives it, not just a "SCSI device".

11 T 7 Section 3.3.10
In definition of "restricted, change "other SCSI standards" --> "other standards" for generality.

12 T 10 Table 1
"Send Task Management Request" is missing. Section 4.2 refers to this operation.
With two exceptions, an unsolicited command IU is used.

13 T 10 Section 4.2
Remove "or a list of linked requests" from first paragraph. Linked commands are obsolete.

14 T 10 Section 4.2
Second paragraph covers sending a command. Text needs to be added to cover task management functions, including mentioning the use of link services (ABTS, REC)
to realize two of the task management functions in place of sending a command IU.

15 T 11 Section 4.2
Remove last paragraph on p.11, it described linked command handling. Linked commands are obsolete.

16 T 12 Section 4.2
"designed to operate with any class of service" -> "designed to operate with any unicast Fibre Channel class of service". FCP is not going to work well over over FC multicast ;-).

17 E 12 Section 4.2
"SCSI allows the SCSI initiator port function in any FCP_Port and the SCSI target port function in any FCP_Port." -->
"The SCSI initiator port function may exist in any FCP_Port and the SCSI target port function may exist in any FCP_Port."

18 T 12 Section 4.3
In "A device server that supports bidirectional commands may implement both
unidirectional and bidirectional commands." change "may" --> "should" as
a device that implements only bidirectional commands will be all but useless.

19 E 12 Section 4.4
"were" -> "where" in first line of section.

20 E 12 Section 4.4
"is often not critical" -> "may not be critical" in second line of section.
"are not important" -> "may not be important" in third line line of section.

21 T 13 Section 4.4
Item g) can cause imprecise execution of a task management function that affects multiple tasks, e.g., ABORT TASK SET. Allow the CRN for a task management function to be non-zero, but do not require it to be non-zero.

22 E 13 Section 4.4
"that used for" --> "that are used for" in last paragraph of section.

23 E 13 Section 4.5
"bit" -> "bits" in the next to last line of first paragraph of section.
"is used to negotiate" -> "are used to negotiate" in last line of first paragraph of section.

24 T 14 Section 4.5
Why is confirmed completion forbidden for task management requests?

25 T 14 Section 4.5
Remove paragraph and a)-b) list on command linking. Linked commands are obsolete.

26 E 17 Section 4.9.1
"Exchnage" -> "Exchange" in b) item below Table 3.

27 T 20 Table 7
Qualify "Hard Address Acquisition Attempted" clearing effect as applying to arbitrated loop only. Elaboration of footnote 1 is one possible means of doing this.

28 T 21 Table 8
Qualify "Hard Address Acquisition Attempted" clearing effect as applying to arbitrated loop only. A table footnote may be appropriate.

29 E 21 Section 4.11
"for the following" -> "as a consequence of the following events"

30 E 25 Section 6.2
5th paragraph: "An image pair may also be established by an implicit
Process

Login established by methods outside the scope of this standard." Is an "or" missing between "implicit Process Login" and "established by methods"? If not, suggest changing: "established" --> "performed".

31 E 27 Section 6.3.3
"information is complete enough so that login (i.e., PLOGI ELS) is sufficient
   to perform" --> "information is sufficient for login (i.e., PLOGI ELS) to perform"

32 E 27 Table 10
Three bits (the two validity bits for process associators plus READ FCP_XFER_RDY DISABLED) have required values, but only the required value for READ FCP_XFER_RDY DISABLED is indicated in the table. Either indicate all 3 required values or none of them. Adding the requirement that the two process associator valid bits be zero is the preferred resolution.

33 T 28 Section 6.3.4
Should the two process associator fields (words 1 and 2) be required to be zero or be RESERVED? They aren't used.

34 T 32 Section 6.4
Add text indicating non-use of the PRLO parameter that has been added for FC-SB-4.

35 T 34 Section 7.2 and 7.3
Add new FC-4 TYPE and features. In Table 12, define FC-4 feature bit 3 for TYPE 8 as indicating registration of extended FC-4 features for FCP.

36 T 39 Table 19
Linked commands are obsolete, so IUs T3 and T4 are also obsolete.

37 T 40 Table 20
Linked commands are obsolete, so remove "Linked or" from the SCSI primitive cell in the I5 row.

38 E 41 Section 9.2.2.1
Both of these are in the last paragraph on p.41:
"task managmenent function" -> "task management function"
"the rules for selection of incorrect logical units" -> "the rules for responding
to selection of an incorrect logical unit"

39 T 42 Section 9.2.2.2
Why no support for precise delivery of task management functions? Comment
EMC-21
is related. For what it's worth, iSCSI not only supports, but requires 
precise
delivery of task management functions.

40 T 42 Table 22
The SIMPLE task attribute has two description fields. Only one of them can 
be correct - figure out which one it is and delete the other one.

41 T 43-44 Section 9.2.2.5
For ABORT TASK SET, CLEAR TASK SET, and LOGICAL UNIT RESET, the "may"
require
ment for clearing exchange resources is too weak. This needs to be at least a
"should"
requirement, possibly with language about when it is necessary vs. not
necessary
to clear exchange resources.

42 E 44 Section 9.2.2.5
Last paragraph in section: "by transmitting ab ABTS-LS" --> "by
transmitting an
ABTS-LS"

43 T 50 Section 9.5.1
Linked commands are obsolete. Remove first paragraph on p.50.

44 E 75 Section 12.4.2.2
"with the PARAMETER field bot 0 set to one" ->
"with the PARAMETER field bit 0 set to one"

45 T 86 Annex B.1.11
Linked commands are obsolete. Remove this example.

46 T 126 Annex D.1.1 and D.1.2
The use of "authenticating" in the first sentence of both of these annexes is
incorrect with respect to FC-SP. Two possible alternative words are
"verifying"
and "validating".

47 T 127 Annex D.2 and D.3
The use of "authentication" in the titles of both of these annexes is
incorrect with respect to FC-SP. Two possible alternative words are
"verification" and "validation".

**********************************************************************

Comments attached to Yes ballot from Ralph O. Weber of
ENDL:

ENDL Texas 1
PDF pg 44, pg 28, 6.3.4, word 3, bit 11, s 2
If the ENHANCED DISCOVERY bit is set to one, the Originator is requesting, as an initiator FCP_Port, that an image pair be established only if the initiator FCP_Port has been authorized to access one or more logical units, not including default logical units, that are addressed through the target FCP_Port. It is not necessary to mention initiator FCP_Port twice in the same sentence.

If the ENHANCED DISCOVERY bit is set to one, the Originator is requesting that an image pair be established only if the initiator FCP_Port has been authorized to access one or more logical units, not including default logical units, that are addressed through the target FCP_Port.

It is not necessary to mention initiator FCP_Port twice in the same sentence.

When the REC ELS supported (REC_SUPPORT) bit is set to one, the Originator is indicating that it supports, as an initiator FCP_Port, the transmission of the REC ELS. This is hard to read and thus unclear.

When the REC ELS supported (REC_SUPPORT) bit is set to one, the Originator is indicating that it supports the transmission of the REC ELS when it is acting as an initiator FCP_Port.

When the RETRY bit is set to one, the Originator or Responder is indicating that it supports as an initiator FCP_Port the capability of requesting a retransmission of unsuccessfully transmitted data or as a target FCP_Port the capability of performing a requested retransmission. This is hard to read and thus unclear.

When the RETRY bit is set to one, the Originator or Responder is indicating that its initiator FCP_Port functions support the capability of requesting a retransmission of unsuccessfully transmitted data or that its target FCP_Port functions support the capability of performing a requested retransmission.

When the ENHANCED DISCOVERY bit is set to one, the Responder is indicating that it supports, as a target FCP_Port, enhanced discovery (i.e., an image pair is established only if the initiator FCP_Port is authorized to access logical units, other than default logical units, that are addressed through the target FCP_Port). It is not necessary to mention initiator FCP_Port twice in the same sentence.

When the ENHANCED DISCOVERY bit is set to one, the Responder is indicating that it supports enhanced discovery (i.e., an image pair is established only if the initiator FCP_Port is authorized to access logical units, other than default logical units, that are addressed through the target FCP_Port).
<<When the ENHANCED DISCOVERY bit is set to zero, the Responder is indicating that it does not support, as a target FCP_Port, enhanced discovery.>> is unnecessarily complicated, particularly in context

_S_When the ENHANCED DISCOVERY bit is set to zero, the Responder is indicating that it does not support enhanced discovery when it is acting as a target FCP_Port.

ENDL Texas 6
PDF pg 48, pg 32, 6.3.5, word 3, bit 10, s 1

<<When the REC ELS supported (REC_SUPPORT) bit is set to one, the Responder is indicating that it supports, as a target FCP_Port, the receipt of the REC ELS.>> is hard to read and thus unclear

_S_When the REC ELS supported (REC_SUPPORT) bit is set to one, the Responder is indicating that it supports the receipt of the REC ELS, when it is acting as a target FCP_Port.

******************************************************
Comments attached to Abs ballot from Douglas Wagner of FCI:

no knowlege in this area.

******************************************************
Comments attached to Abs ballot from Elwood Parsons of Foxconn Electronics:

Lack of expertise

******************************************************
Comments attached to No ballot from Rob Elliott of Hewlett Packard Co.:

comment number 1
Page=2 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
initiator and target
s/b
initiator port and target port

---
comment number 2
Page=2 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
task
s/b
command

---
comment number 3
Page=2 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
W eb
s/b
Web

---
comment number 4
Page=2 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
570415
s/b
5704

---
comment number 5
Page=9 Subtype=Text Subj=Note Author=RElliott
Comment=
The table of contents should show the annex titles
For example:
Annex A
should be:
A SAM-4 mapping to FCP-4

---
comment number 6
Page=14 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
sequence
s/b
Sequence

---
comment number 7
Page=14 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Lower-Level Interfaces
s/b
SCSI Storage Interfaces

---
comment number 8
Page=14 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Device Level Interfaces
s/b
Fibre Channel Interfaces

---
comment number 9
Fibre Channel Classes of Service 1, 2, and 3

is out of date. Class 2 is obsolete, and there are some other classes now.

---

comment number 10

Information Units used to transfer SCSI commands, data, and status across a Fibre Channel connection

s/b

FC-FS-3 frame header

---

comment number 11

Information Unit

s/b

FCP Information Unit

---

comment number 13

the SCSI management features for Fibre Channel, including

---

comment number 14

the protocol for transmitting SCSI information over Fibre Channel.

s/b

FCP

---

comment number 15

error recovery algorithms

s/b

operation and recovery

---

comment number 16

error recovery algorithms

s/b
link error detection and error recovery procedures

---
comment number 17
Page=15 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
the protocol for transmitting SCSI information over Fibre Channel s/b
FCP

---
comment number 18
Page=15 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
protocol s/b
FCP protocol

---
comment number 19
Page=15 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
the protocol for transmitting SCSI information over Fibre Channel s/b
FCP

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comment number 20
Page=15 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=-4

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comment number 21
Page=15 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
the protocol for transmitting SCSI information over Fibre Channel s/b
FCP

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comment number 22
Page=15 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=-4

---
comment number 23
Page=15 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=-4

---
comment number 24
Page=15 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
The Fibre Channel Protocol for SCSI, Fourth Version (FCP-4) standard has
the following annexes:
---

comment number 25
Page=15 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI device capabilities over Fibre Channel
s/b
FCP device capabilities

---

comment number 26
Page=16 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
INCITS Project 1683-D

SAM-4 should have an ANSI INCITS-xxx number now

---

comment number 27
Page=17 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=r

---

comment number 28
Page=17 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
and describes additional error recovery capabilities for the Fibre Channel Protocol.

That was new in FCP-3, but is no longer new in FCP-4.

---

comment number 29
Page=17 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete:
INCITS TR-36-2004, Fibre Channel - Device Attach (FC-DA)

and upgrade all references to FC-DA to FC-DA-2. Don't refer to two versions of a standard simultaneously.

---

comment number 30
Page=17 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete:
ANSI/INCITS 402-2005, SCSI Architecture Model - 3 (SAM-3)

and upgrade all references to SAM-4. Don't refer to two versions of a standard simultaneously.

---

comment number 31
Page=17 Subtype=Text Subj=Note Author=RElliott
Comment=
Page 1 has 1" margins on both left and right.

Even pages 2+ have 0.8" margins on the left and 1" margins on the right.

Odd pages 3+ have 1" margins on the left and 0.8" margins on the right.

I suggest using 0.9" margins on both sides on all pages.

---

comment number 32
Page=17 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Published standard and technical report references
s/b
Approved references

---

comment number 33
Page=18 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete:
and Class 4

as it is obsolete in FC-FS-3

---

comment number 34
Page=18 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI commands s/b
commands and task management function requests

---

comment number 35
Page=18 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete:
3.1.5 autosense data: Sense data (see 3.1.50) that is returned in the
FCP_RSP IU payload. See SAM-4.

SAM-4 no longer defines such a term.

Separate comments are provided to dispose of each use of autosense.

---

comment number 36
Page=18 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
after:
command descriptor block
add:
(CDB)

---

comment number 37
tasks
s/b
commands

---

comment number 38
See SAM-4.
See 6.3 and 9.3.

---

comment number 39
SCSI command
s/b
command

---

comment number 40
Copies of these INCITS T10 and T11 draft standards and technical reports are available for purchase from Global Engineering Documents. For further information, contact Global Engineering Documents at 800-854-7179 (phone) or 303-792-2181 (phone) or by mail at 15 Inverness Way East, Englewood, CO 80122-5704. The INCITS T10 draft standards are also available on the website www.t10.org. The INCITS T11 draft standards and technical reports are also available on the website www.t11.org.

NOTE - For more information on the current status of these documents, contact the INCITS Secretariat at 202-737-8888 (phone), 202-638-4922 (fax) or via Email at incits)itic.org. To obtain copies of these documents, contact Global Engineering at 15 Inverness Way, East Englewood, CO 80122-5704 at 303-792-2181 (phone), 800-854-7179 (phone), or 303-792-2192 (fax) or see http://www.incits.org.

and delete the first paragraph in 2.3 as well

---

comment number 41
The following references are the product of the SFF committee. For information on the current status and availability of the documents, contact the SFF committee at 408-867-6630 (phone) or by mail at 14426 Black Walnut Court, Saratoga, CA 95070.

NOTE - For more information on the current status of SFF documents, contact
the SFF Committee at
408-867-6630 (phone), or 408-867-2115 (fax). To obtain copies of these
documents, contact the SFF
Committee at 14426 Black Walnut Court, Saratoga, CA 95070 at 408-867-6630
(phone) or 408-741-1600
(fax) or see http://www.sffcommittee.org.

following the SFF line rather than preceding it

---

comment number 42
Page=19 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
delete:
3.1.26 initiator: A SCSI device containing application clients that
originate device service requests and task management functions to be
processed by a target SCSI device. In this standard, the word initiator
also refers to an FCP_Port using the Fibre Channel Protocol to perform the
SCSI initiator functions defined by SAM-4.

and get rid of any bare "initiator"s that remain in the text. (Separate
comments provided for several of them)

---

comment number 43
Page=19 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
or of a SCSI target/initiator port when operating as a SCSI initiator port

---

comment number 44
Page=19 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
fully qualified exchange identifier
s/b
fully qualified Exchange identifier (FQXID)

---

comment number 45
Page=19 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
an Originator Exchange_ID (OX_ID) and a Responder Exchange_Identifier
(RX_ID)
s/b
OX_ID and RX_ID

---

comment number 46
Page=19 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
sequence
s/b
Sequence

---
comment number 47
Page=19 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
sequence
s/b
Sequence

---

comment number 48
Page=19 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
sequence
s/b
Sequence

---

comment number 49
Page=19 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
manages tasks to process
s/b
manages and processes

---

comment number 50
Page=19 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
add:
s/b
In this standard, the address identifier of the initiator FCP_Port is an initiator port identifier.

---

comment number 51
Page=19 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI Command
s/b
command

---

comment number 52
Page=20 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete
a series of linked SCSI commands,

Linked commands are obsolete in SAM-4.

---

comment number 53
Page=20 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
3.1.40 Port Identifier: An address identifier (see 3.1.2) assigned to an N_Port or NL_Port during implicit or explicit fabric login (see FC-LS).
Either
a) delete this term and use "address identifier" everywhere it is used.
b) change this to N_Port_ID, which is the term defined and used in FC-FS-3.

---
comment number 54
Page=20 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Data returned to an application client as a result of an autosense operation or REQUEST SENSE command. See SPC-4.
s/b
Data describing an error or exceptional condition that a device server delivers to an application client in an FCP_RSP frame along with a CHECK CONDITION status or as parameter data in response to a REQUEST SENSE command. See SPC-4.

---
comment number 55
Page=20 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Port_Name
s/b
N_Port_Name
to match FC-FS-3. (separate comments added for each use in the text)

---
comment number 56
Page=20 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
after:
.
add:
See FC-FS-3.

---
comment number 57
Page=20 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
after:
Data frames
add:
(see 3.1.11)

---
comment number 58
Page=20 Subtype=Text Subj=Note Author=RElliott
Comment=
Add
Sequence_ID (SEQ_ID): An identifier used to identify a Sequence. See FC-FS-3.

---
comment number 59
Page=20 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Originator Exchange Identifier
s/b
Originator Exchange_ID (OX_ID)

to match FC-FS-3

---
comment number 60
Page=20 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Responder Exchange Identifier
s/b
Responder Exchange_ID (RX_ID)

to match FC-FS-3

---
comment number 61
Page=20 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
N_Port to another N_Port
s/b
Nx_Port to another Nx_Port

- but -
this standard doesn't define Nx_Port.

---
comment number 62
Page=21 Subtype=Text Subj=Note Author=RElliott
Comment=
Delete the . from the end of most of the abbreviation lines (e.g., in ABTS, ABTS-LS, ... but not in ID. LS, ...)

---
comment number 63
Page=21 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete
or group of linked commands

Linked commands are obsolete in SAM-4.

---
comment number 64
Page=21 Subtype=Text Subj=Note Author=RElliott
Comment=
Add:
CDB command descriptor block (see 3.1.7)

---
comment number 65
Page=21 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=unsigned binary

---

comment number 66
Page=21 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
s/b identifier

---

comment number 67
Page=21 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
or of a SCSI target/initiator port when operating as a SCSI target port

---

comment number 68
Page=21 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
In all cases when this term is used it refers to an initiator port or a SCSI target/initiator port operating as a SCSI initiator port.

---

comment number 69
Page=21 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
A peer-to-peer confirmed service provided by a task manager that may be invoked by an application client to affect the processing of one or more tasks
s/b
A task manager service capable of being requested by an application client to affect the processing of one or more commands

---

comment number 70
Page=21 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
The queuing specification for a task
s/b
An attribute of a command that specifies the processing relationship of the command with regard to other commands in the task set

---

comment number 71
Page=21 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete 3.1.61 task:

That term was eradicated from SAM-4.

---

comment number 72
Page=21 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=that contains a task router and
---
comment number 73
Page=21 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
indications and responses
s/b
requests, indications, responses, and confirmations
---

---
comment number 74
Page=21 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
requests, indications, responses, and confirmations
s/b
requests and confirmations
---

---
comment number 75
Page=21 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
In this standard, the term SCSI initiator port also refers to an FCP_Port using the Fibre Channel protocol to perform the SCSI initiator port functions defined by SAM-4.
s/b
In this standard, an initiator FCP_Port is a SCSI initiator port.
---

---
comment number 76
Page=21 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
In this standard, the term SCSI target port also refers to an FCP_Port using the Fibre Channel protocol to perform the SCSI target port functions defined by SAM-4.
s/b
In this standard, an target FCP_Port is a SCSI target port.
---

---
comment number 77
Page=21 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
An address identifier (see 3.1.2) that a SCSI initiator port uses to identify the SCSI target port.
s/b
A value by which a SCSI target port is identified in a domain. In this standard, the address identifier of a target FCP_Port is a target port identifier.
---

---
comment number 78
Page=22 Subtype=Text Subj=Note Author=RElliott
Comment=
Add
SEQ_ID    Sequence_ID
---
comment number 79
Page=22 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(see FC-FS-3)
s/b
(see 3.1.xx)
---

comment number 80
Page=22 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(see FC-FS-3)
s/b
(see 3.1.xx)
---

comment number 81
Page=22 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
exchange
s/b
Exchange
---

comment number 82
Page=24 Subtype=Highlight Subj=Comment on Text Author=curtisb
Comment=Use the table from SSC-3 which includes the 3.14159265 example
---

comment number 83
Page=25 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
two ports
s/b
two NL_Ports
---

comment number 84
Page=25 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
a port on the loop and a port on a switching fabric
s/b
a NL_Port on the loop an an N_Port on a switching fabric
---

comment number 85
Page=25 Subtype=Highlight Subj=Comment on Text Author=curtisb
Comment=Seems extraneous - suggest this editorial comment be stricken.
---

comment number 86
Page=26 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
delete
or a list of linked requests

Linked commands are obsolete in SAM-4.

---
comment number 87
Page=26 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Expand:
Send SCSI Command request | Unsolicited command IU (FCP_CMND)
to
Send SCSI Command request | Sending an unsolicited command IU (FCP_CMND)
SCSI Command Received indication | Receiving an unsolicited command IU  
(FCP_CMND)

---
comment number 88
Page=26 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Expand:
Send Command Complete response | Command status IU (FCP_RSP)
into:
Send Command Complete response | Sending a command status IU (FCP_RSP)
Command Complete Received confirmation | Receiving a command status IU 
(FCP_RSP)

---
comment number 89
Page=26 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Data delivery request | Data descriptor IU (FCP_XFER_RDY)
s/b
Receive Data-Out request | Data descriptor IU (FCP_XFER_RDY)
Data-Out Received confirmation | Receipt of solicited data IU (FCP_DATA)

---
comment number 90
Page=26 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Data delivery action | Solicited data IU (FCP_DATA)
s/b
Send Data-In request | Sending solicited data IO (FCP_DATA)
Data-In Delivered confirmation | depends on class of service

---
comment number 91
Page=26 Subtype=Text Subj=Note Author=RElliott
Comment=
Add:

Send Task Management request | sending the FCP equivalent specified in

Task Management Request Received indication | receiving the FCP equivalent
specified in see 4.9
Task Management Function Executed response | sending the response specified in table 4 in 4.9.1, table 5 in 4.9.2, or table 6 in 4.9.3
Received Task Management Function Executed response | receiving the response specified in table 4 in 4.9.1, table 5 in 4.9.2, or table 6 in 4.9.3

---

comment number 92
Page=26 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
FCP_Port that is the initiator for the command
s/b
initiator FCP_Port

---

comment number 93
Page=26 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
initiator
s/b
initiator FCP_Port

---

comment number 94
Page=26 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
target
s/b
target FCP_Port

---

comment number 95
Page=26 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=.

---

comment number 96
Page=26 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete:
invoke the Send SCSI Command SCSI transport protocol service request (see SAM-4) and
the application client already invoked it.

---

comment number 97
Page=26 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
When
s/b
If

Since not all commands are writes, this is just one possibility.
In 4.2, either embed the "or task management function" concept throughout the description, or make these paragraphs dedicated for commands and add another set of paragraphs for task management functions.

Right now, the first paragraph mentions both, but subsequent paragraphs only mention commands.

Send Task Management request
s/b
Send Task Management Request

it transmits a data descriptor IU containing the FCP_XFER_RDY IU payload to the
s/b
it invokes the Receive Data-Out transport protocol service request and the target FCP_Port transmits a data descriptor IU containing the FCP_XFER_RDY IU payload to the

The FCP_XFER_RDY IU and FCP_DATA IU payloads constitute the Receive Data-Out protocol service request and Data-Out Received service confirmation described in SAM-4.

Protocol Service
s/b
transport protocol service

Delete:
REQ/ACK for Command Complete
Confirmation IU (FCP_CONF)
SAM-4 doesn't discuss confirming the Send Command Complete response or the Task Management Function Executed response; the device server just invokes it and hopes it works.

---
comment number 104
Page=26 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI command
s/b
command

---
comment number 105
Page=26 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI command
s/b
command

---
comment number 106
Page=26 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI command
s/b
command

---
comment number 107
Page=26 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=SCSI

---
comment number 108
Page=27 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete (Linked commands are obsolete in SAM-4):
command linking,

---
comment number 109
Page=27 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete (Linked commands are obsolete in SAM-4):
The device server determines whether additional linked commands are to be performed in the FCP I/O operation. If this is the last or only command processed in the FCP I/O operation, the FCP I/O operation and the Exchange are terminated.
(note: there may be need to keep part of the second sentence)

---
comment number 110
Page=27 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete (Linked commands are obsolete in SAM-4):

If the command is linked to another command, the FCP_RSP IU payload shall contain the proper status (i.e., INTERMEDIATE or INTERMEDIATE-CONDITION MET) indicating that another command shall be processed. The target FCP_Port shall present the FCP_RSP using the IU that allows command linking, IS (see 9.1). The initiator FCP_Port shall continue the same Exchange with an FCP_CMND IU, beginning the next SCSI

---

comment number 111
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
autosense data
s/b
sense data

---

comment number 112
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
autosense data
s/b
sense data

---

comment number 113
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
initiator and target
s/b
initiator FCP_Port and target FCP_Port

---

comment number 114
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
initiator
s/b
initiator FCP_Port

---

comment number 115
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
initiator and target
s/b
initiator FCP_Port and target FCP_Port

---

comment number 116
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI device

26
s/b
SCSI target device

---
comment number 117
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
initiator
s/b
SCSI initiator device

---
comment number 118
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
When
s/b
If

---
comment number 119
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
When
s/b
If

---
comment number 120
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
transmits
s/b
invokes

---
comment number 121
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
return
s/b
invoke

---
comment number 122
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
returned information is used to prepare and return
s/b
the initiator FCP_Port uses returned information to invoke

---
comment number 123
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

27
s/b
then

---
comment number 124
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

s/b
then

---
comment number 125
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

s/b
then

---
comment number 126
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

s/b
then

---
comment number 127
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

s/b
then

---
comment number 128
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

s/b
then

---
comment number 129
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
sequence
s/b
Sequence

---
comment number 130
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
the target FCP_Port transmits a solicited data IU to the initiator
FCP_Port. The solicited data IU shall contain the FCP_DATA IU payload. The
FCP_DATA IU constitutes the Send Data-In protocol service request described
in SAM-4.
s/b
it invokes the Send Data-In transport protocol service request (see SAM-4)
and the target FCP_Port transmits a solicited data IU containing the
FCP_DATA IU payload to the initiator FCP_Port.

---
comment number 131
Page=27 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
The FCP_XFER_RDY IU and FCP_DATA IU payloads constitute the Receive
Data-Out protocol service request and Data-Out Received service
confirmation described in SAM-4.

---
comment number 132
Page=27 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
The FCP_DATA IU constitutes the Send Data-In protocol service request
described in SAM-4.

---
comment number 133
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
it transmits a data descriptor IU containing the FCP_XFER_RDY IU payload
s/b
it invokes the Receive Data Out transport protocol service and the target
FCP_Port transmits a data descriptor IU containing the FCP_XFER_RDY IU
payload

---
comment number 134
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
the solicited data IU to the target FCP_Port. The solicited data IU shall
contain the FCP_DATA IU payload requested by the FCP_XFER_RDY IU.
s/b
a solicited data IU containing the FCP_DATA IU payload requested by the
FCP_XFER_RDY IU

(match wording in the write operation paragraph)

---
comment number 135
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
the target FCP_Port transmits a solicited data IU to the initiator
FCP_Port. The solicited data IU shall contain the FCP_DATA IU payload.
s/b
it invokes the Send Data-In transport protocol service request (see SAM-4)
and the target FCP_Port transmits a solicited data IU containing the FCP_DATA IU payload to the initiator FCP_Port.

---

comment number 136
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
add:

, except that only one Data-In or Data-Out transfer operation is allowed at a time in an Exchange.

---

comment number 137
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
protocol service response
s/b
transport protocol service response

---

comment number 138
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
by requesting the transmission of an IU
s/b
and the target FCP_Port transmits a command status IU

---

comment number 139
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
protocol service confirmation
s/b
transport protocol service confirmation

---

comment number 140
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
to the application client that requested the operation.
s/b
to notify the application client.

---

comment number 141
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
a protocol service indication that confirms delivery
s/b
confirmed delivery

(this does not fit into anything defined by SAM-4, so calling it a "protocol service indication" is inappropriate)
comment number 142
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI command
s/b
command

comment number 143
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI command
s/b
command

comment number 144
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI command
s/b
command

comment number 145
Page=27 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI command
s/b
command

comment number 146
Page=28 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete (Linked commands are obsolete in SAM-4):

command. All SCSI commands linked in the FCP I/O operation except the last are processed in the manner described above. SAM-4 defines the cases that interrupt and terminate a series of linked commands. In those cases, the FCP_RSP IU of the last command in the set of linked commands shall be transmitted using the IU that does not allow command linking, I4 (see 9.1). See 4.5.

comment number 147
Page=28 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
were
s/b
where

comment number 148
Page=28 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
initiator
s/b
SCSI initiator port

... comment number 149
Page=28 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
bis/b
bit
s/b
bit to one

... comment number 150
Page=28 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
page. See 10.3.
s/b
page (see 10.3).

... comment number 151
Page=28 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

... comment number 152
Page=28 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

... comment number 153
Page=28 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

... comment number 154
Page=28 Subtype=Highlight Subj=Comment on Text Author=curtisb
Comment=
Why is this necessary? It says right above that unidirectional payloads shall use the unidirectional FCP_RSP so by definition device servers that do not support bidirectional commands can't use the bidirectional FCP_RSP

...
The CRN itself simply does not exist for task management functions. The COMMAND REFERENCE NUMBER field in the FCP_CMND IU does exist when that IU is being used to deliver a task management request, and it is set to zero in that case.
Comment=
There is no "CRN field".

There is a CRN (uppercase) described in the text above, and a COMMAND REFERENCE NUMBER (smallcaps) field in the FCP_CMND IU. They are not the same.

---

comment number 163
Page=29 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
receipt of

Convert into an A)B)C) list

---

comment number 164
Page=29 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
CRN set to zero

is meaningless for task management functions - SAM-4 defines no such thing. The FCP_CMND IU COMMAND REFERENCE NUMBER (smallcaps) field, however, does exist, and is set to zero for TMFs.

---

comment number 165
Page=29 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
that used
s/b
that are used

---

comment number 166
Page=29 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
FCP devices
s/b
device servers

---

comment number 167
Page=29 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b , then

---

comment number 168
Page=29 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
If command linking is being performed, the target FCP_Port shall not request confirmed completion for an FCP_RSP IU containing INTERMEDIATE or INTERMEDIATE-CONDITION MET status. The target FCP_Port may request confirmed completion:

a) when providing the FCP_RSP IU for the last command of the set of linked commands; or
b) when providing the FCP_RSP IU for a command that terminates linking because of an error or CHECK CONDITION status.
Page=30 Subtype=Highlight Subj=Highlight Author=RElliott
 autosense data
 s/b
 sense data

... comment number 177
Page=30 Subtype=Highlight Subj=Highlight Author=RElliott
 initiators and targets
 s/b
 SCSI initiator devices and SCSI target devices

... comment number 178
Page=30 Subtype=Highlight Subj=Highlight Author=RElliott
 : 
 s/b
 , then:

... comment number 179
Page=30 Subtype=Text Subj=Note Author=RElliott
 Item b) "shall support" is not well-placed in a list prefaced by "If an error is identified by..."

The "shall support" statement is true even if an error is not identified yet.

Split out that rule to be based on only "if data retransmission capability is supported..."

... comment number 180
Page=30 Subtype=Highlight Subj=Highlight Author=RElliott
 ,
 s/b
 , then

... comment number 181
Page=30 Subtype=Highlight Subj=Highlight Author=RElliott
 queued SCSI command
 s/b
 command

... comment number 182
Page=30 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
 Comment=queued
shall be zero
s/b shall be set to zero

, s/b , then

QUERY UNIT ATTENTION
s/b QUERY ASYNCHRONOUS EVENT
to match final SAM-4

Delete:
a) FC-FS-3 BLSs are used to perform the ABORT TASK task management function.

There is no such footnote for QUERY TASK/REC ELS (see FC-LS), and it doesn't seem to provide any new information.
---
comment number 189
Page=33 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(see FC-FS-3)
s/b
(see 4.9.2 and FC-FS-3)
---

comment number 190
Page=33 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(see FC-LS)
s/b
(see 4.9.3 and FC-LS)
---

comment number 191
Page=33 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
the
s/b
, then the
---

comment number 192
Page=33 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Exchange
s/b
Exchange
---

comment number 193
Page=33 Subtype=StrikeOut Subj=Cross-Out Author=curtisb
Comment=
---

comment number 194
Page=33 Subtype=Caret Subj=Replacement Text Author=curtisb
Comment=Exchange
---

comment number 195
Page=34 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
functions
s/b
function
---

comment number 196
Page=34 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

38
task
s/b
command

---
comment number 197
Page=34 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
task abort events
s/b
something else

---
comment number 198
Page=35 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
functions
s/b
function

---
comment number 199
Page=36 Subtype=Text Subj=Note Author=RElliott
Comment=Change to lettered table footnotes, delete "NOTES:"

---
comment number 200
Page=36 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 201
Page=36 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 202
Page=36 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=ABTS (Sequence)
    s/b
    ABTS

---
comment number 203
Page=36 Subtype=Text Subj=Note Author=RElliott
Comment=Merge Clearing effect cell with blank cell above

---
comment number 204
Page=37 Subtype=Text Subj=Note Author=RElliott
Comment=
Make the Clearing effect column in table 8 wider so the "Only for FCP
Sequences associated with Aborted FCP Exchanges" line doesn't wrap

---

comment number 205
Page=37 Subtype=Text Subj=Note Author=RElliott
Comment=Change to lettered table footnotes, delete "NOTES:"

---

comment number 206
Page=37 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b , then

---

comment number 207
Page=37 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
reason code
s/b a Reason Code set to

---

comment number 208
Page=37 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
reason code explanation
s/b a Reason Code Explanation set to

---

comment number 209
Page=37 Subtype=Highlight Subj=Comment on Text Author=curtisb
Comment=Is this a "shall respond" or a "may respond"?

---

comment number 210
Page=37 Subtype=Text Subj=Note Author=RElliott
Comment=Fix double-line on top right

---

comment number 211
Page=37 Subtype=Text Subj=Note Author=RElliott
Comment=Merge Clearing effect cell with blank cell above

---

comment number 212
Page=38 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
shall assign the new initiator port identifier to the existing registration
and reservation to the initiator FCP_Port having the same Worldwide_Name is unclear, and Worldwide_Name is misused.

Reword as an a)b) list:

shall
a) assign the new initiator port identifier to the existing registration
b) set the reservation holder to the initiator FCP_Port having the same N_Port_Name.

---

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---

---

---

---

---

---

---

---

---

---

---

---

---

---

---
The Worldwide_Name for the FCP_Port shall be different from the Worldwide_Name for the node
add:
(i.e., the N_Port_Name shall be different from the Node_Name).

---

comment number 219
Page=38 Subtype=Text Subj=Note Author=RElliott
Comment=
Add:
"Each FCP device should include a SCSI device name in NAA IEEE Registered format (see SPC-4). If the FCP device includes a Platform Name (see FC-GS-6), then the Platform Name shall be the same as the SCSI device name.

In the Device Identification VPD page, a device server in an FCP target device that implements a SCSI device name:
a) shall report the SCSI device name in binary NAA format; and
b) should report the SCSI device name in SCSI name string format (e.g., "naa." followed by 16 hexadecimal digits followed by 4 ASCII null characters)."

Also add this to the SAM-5 names & identifiers annex (IEEE Registered format, 8 bytes).

SAM-4 allows a transport protocol to mandate implementing device names and define their format.

Node names were never well defined in FC, always unclear whether they named a Port, an HBA (a set of Ports on the same card), or a system (set of cards in a system). They are thus worthless.

Platform name supposedly provides clearer guidance, identifying the entire system - the same scope as a SCSI device name.

With NPIV and server virtualization gaining popularity, it would be helpful to have a unique identifier for each operating system instance, reported through all the SCSI initiator ports (whether NPIV or physical) that the operating system uses. If the operating system instance is shut down and restarted on a different physical machine, that identifier should move with it. This identifier should even work if the operating system has access to a mix of protocols - e.g. some FCP ports, some iSCSI ports, and some SAS ports. The same NAA IEEE Registered identifier can be reported and used in FCP (both binary and as a "naa." string), SAS (both binary and as a "naa." string) and iSCSI (as a "naa." string). A system that doesn't have iSCSI ports could just report the binary NAA format.

The device name would be helpful for configuring V-SANs, zoning, SCSI access controls, etc. For example, the system administrator could grant certain zoning permissions to an operating system instance, no matter which physical machine it happens to be running on and which ports it happens to be using.

---

comment number 220
World Wide Names
s/b
Worldwide_Names

---

comment number 221
Page=38 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
each Fibre Channel node and each Fibre Channel port shall have a Worldwide_Name
s/b
each Fibre Channel node shall have a Node_Name that is a Worldwide_Name and each Fibre Channel port shall have an N_Port_Name that is a Worldwide_Name.

---

comment number 222
Page=38 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
\,
s/b
\,
then

---

comment number 223
Page=38 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
task identifier
s/b
command identifier

---

comment number 224
Page=39 Subtype=Text Subj=Note Author=RElliott
Comment=
FC-FS-3 divides R_CTL into two fields: ROUTING and INFORMATION.

FCP-4 should say something like:
"The R_CTL field is subdivided into a ROUTING field and an INFORMATION field (see FC-FS-3). The ROUTING field shall be set to Oh (i.e. Device_Data) and the INFORMATION field shall be set to the value defined in table 19 and table 20."

Or, change table 19 and table 20 to relate the full byte value for R_CTL, and ignore the subfields.
Change entries like
6
to
06h

---

comment number 225
Page=39 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
value in the TYPE field shall be 08h
s/b
TYPE field shall be set to 08h (i.e., Fibre Channel Protocol)... (see
FC-FS-3).

---
comment number 226
Page=39 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
31-24
s/b
31-24 (no space)
to match the other column headers in this table

---
comment number 227
Page=40 Subtype=Text Subj=Note Author=RElliott
Comment=
FC-FS-3 has some more specific rules about RX_ID assignment that clarify
the only time the target FCP_Port is allowed to select the RX_ID:

"The Responder of the Exchange shall set a unique value for RX_ID other
than FF FFh, if RX_ID is being used, by one of two methods:
a) in an ACK to a Data frame in the first Sequence of an Exchange in Class
1 and 2; or
b) in the first Sequence transmitted as a Sequence Initiator, if any, in
Class 3."

FCP's statement "until the Exchange Responder assigns a different value in
its response to the Exchange Originator" is looser than that, and should be
tightened.

---
comment number 228
Page=40 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
FCP type (i.e., 08h)
s/b
TYPE field set to 08h (i.e., Fibre Channel Protocol).

---
comment number 229
Page=40 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
For frames of the solicited data category (i.e., FCP_DATA IUs) (see 9.1 and
9.4)
s/f
For a frame with the R_CTL field set to 01h (i.e., solicited data)(i.e., an
FCP_DATA IU),

---
comment number 230
Page=40 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
For frames of the unsolicited control category (i.e., FCP_CMND IUs) (see 9.1 and 9.2)
s/b For a frame with the R_CTL field set to 02h (i.e., unsolicited control) (i.e., an FCP_CMND IU)

FCP_CMND IU is described as having R_CTL of 06h in table 19, which means "Unsolicited command" not "Unsolicited control" according to FC-FS-3. So, the current "i.e." doesn't match the text. Decide if 02h, 06h, or both are intended, and word the text accordingly.

---
comment number 231
Page=40 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
For all other Device_Data frames with the FCP type (i.e., 08h) s/b For a frame with R_CTL set to 0xh other than 01h and 02h,

---
comment number 232
Page=40 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
For the solicited data category (FCP_DATA IUs)

The paragraph is already restricted to that case

---
comment number 233
Page=40 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
For solicited data category frames,

The paragraph is already restricted to that case

---
comment number 234
Page=40 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
contain a value of zero
s/b be set to zero

---
comment number 235
Page=40 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b , then

---
comment number 236
Page=40 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
,
s/b
, then

---
comment number 237
Page=41 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
successfully
s/c
successfully

---
comment number 238
Page=41 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
WWPN
s/b
Port_Name

---
comment number 239
Page=41 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
WWPN
s/b
Port_Name

---
comment number 240
Page=41 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
If multiple images are required in an initiator FCP_Port, they shall be provided by transparent aliasing of the N_Port Identifier of the initiator FCP_Port. If multiple images are required in a target FCP_Port, they shall be provided by SCSI logical units.

1. Mention NPIV instead.
2. Downgrade the "shall"s. On the target side, supporting NPIV is also feasible - multiple logical units are not the only solution.

---
comment number 241
Page=41 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Note 1
s/b
NOTE 1

and the text should use 9pt font.

---
comment number 242
Page=41 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
s/b
, then

---
comment number 243
Page=41 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=  
, s/b  
, then

---
comment number 244
Page=42 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=  
6.3.2 Process_Associator requirements
6.2 already prohibits using Process_Associators, so section 6.3.2 should not exist.

---
comment number 245
Page=42 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=  
, s/b  
, then

---
comment number 246
Page=42 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=  
, s/b  
, then

---
comment number 247
Page=42 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=  
, s/b  
, then

---
comment number 248
Page=43 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= (See FC-FS-3.) 
s/b  
See FC-LS.

---
comment number 249
Page=43 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI FCP (08h)
s/b
TYPE CODE (08h for this standard)

---
comment number 250
Page=43 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
VALID
s/b
VALIDITY
to match FC-LS. Also change below the table.

---
comment number 251
Page=43 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
VALID
s/b
VALIDITY
to match FC-LS. Also change below the table.

---
comment number 252
Page=43 Subtype=Text Subj=Note Author=RElliott
Comment=
Add a row after word 2 with double lines:

Service Parameters

highlighting that all the fields that follow are part of that section.

---
comment number 253
Page=43 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
FCP_XFER_RDY

make this smallcaps. Below the table too.

---
comment number 254
Page=43 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
FCP_XFER_RDY

make this smallcaps. Below the table too.

---
comment number 255
Page=43 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

48
FCP specific code
s/b
TYPE CODE

---
comment number 256
Page=43 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
OBsolete
s/b
Obsolete

---
comment number 257
Page=43 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
OBsolete
s/b
Obsolete

---
comment number 258
Page=43 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ORIGINATOR PROCESS_ASSOCIATOR
s/b
all small caps

---
comment number 259
Page=43 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
RESPONDER PROCESS_ASSOCIATOR
s/b
all small caps

---
comment number 260
Page=43 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ESTABLISH IMAGE PAIR
s/b
all small caps

---
comment number 261
Page=43 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ORIGINATOR PROCESS_ASSOCIATOR
s/b
all small caps

---
comment number 262
Page=43 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
RESPONDER PROCESS_ASSOCIATOR
s/b
all small caps

---
comment number 263
Page=43 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Bit
s/b
Bit(s)

---
comment number 264
Page=44 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
default logical units

This term needs to be defined. I understand the intent is to ignore RAID control logical units, but report RAID volumes.

---
comment number 265
Page=44 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ENHANCED DISCOVERY

This bit name is rather vague. A name that better represents the functionality would be better.

---
comment number 266
Page=44 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
REC_SUPPORT

Get rid of the _ since other bits do not use it

---
comment number 267
Page=44 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
VALID
s/b
VALIDITY

---
comment number 268
Page=44 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
VALID
s/b
VALIDITY
---

comment number 269
Page=44 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
VALID
s/b
VALIDITY

---

comment number 270
Page=44 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
VALID
s/b
VALIDITY

---

comment number 271
Page=44 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
VALID
s/b
VALIDITY

---

comment number 272
Page=44 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
VALID
s/b
VALIDITY

---

comment number 273
Page=44 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b , then

---

comment number 274
Page=44 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b , then

---

comment number 275
Page=44 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b , then
---
comment number 276
Page=44 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 277
Page=44 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 278
Page=44 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
When the REC ELS supported (REC_SUPPORT) bit is set to one, the Originator
is indicating that it supports, as an initiator FCP_Port, the transmission
of the REC ELS.
s/b
a REC ELS Supported (REC_SUPPORT) bit set to one specifies that the
Originator, as an initiator FCP_Port, supports the transmission of the REC
ELS.

---
comment number 279
Page=44 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
When the REC_SUPPORT bit is set to zero, the Originator is providing no
information about whether it supports transmission of the REC ELS.
s/b
A REC_SUPPORT bit set to zero provides no information about whether or not
the Originator supports transmission of the REC ELS.

---
comment number 280
Page=44 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
When the TASK RETRY IDENTIFICATION REQUESTED bit is set to one, the
Originator of the PRLI ELS requests that task retry identification (see
4.7) be used.
s/b
A TASK RETRY IDENTIFICATION REQUESTED bit set to one requests that task
retry identification (see 4.7) be used

---
comment number 281
Page=44 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
When the TASK RETRY IDENTIFICATION REQUESTED bit is set to zero by either
the Originator of or the Responder to the PRLI ELS, task retry identification shall not be used.

s/b

A TASK RETRY IDENTIFICATION REQUESTED bit set to zero specifies that task retry identification shall not be used.

---

comment number 282
Page=44 Subtype=Text Subj=Note Author=RElliott
Comment=
Reword the "When" sentences in the other field descriptions, as suggested for bit 10 and bit 9.

---

comment number 283
Page=45 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b , then

---

comment number 284
Page=45 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b , then

---

comment number 285
Page=45 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b , then

---

comment number 286
Page=45 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b , then

---

comment number 287
Page=45 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
a target s/b the target

---

comment number 288
Page=45 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

, s/b
, then

... comment number 289
Page=45 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= a target
s/b
the target

... comment number 290
Page=45 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= process
s/b
Originator or Responder

... comment number 291
Page=45 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= process
s/b
Originator or Responder

... comment number 292
Page=45 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

, s/b
, then

... comment number 293
Page=45 Subtype=StrikeOut Subj=Cross-Out Author=curtisb
Comment=

... comment number 294
Page=45 Subtype=Caret Subj=Replacement Text Author=curtisb
Comment=only if the RETRY bit is set to one

... comment number 295
Page=45 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= command
s/b
SCSI command
---
comment number 296
Page=46 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI write operation
s/b
write operation

---
comment number 297
Page=46 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
all FCP I/O operations performing SCSI writes
s/b
write operations

---
comment number 298
Page=47 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI FCP (08h)
s/b
TYPE CODE (08h for this standard)

---
comment number 299
Page=47 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
VALID
s/b
VALIDITY

---
comment number 300
Page=47 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
VALID
s/b
VALIDITY

---
comment number 301
Page=47 Subtype=Text Subj=Note Author=RElliott
Comment=
Add a row after word 2 with double lines:

Service Parameters

highlighting that all the fields that follow are part of that section.

---
comment number 302
Page=47 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
then

---
comment number 303
Page=47 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
after:
ACCEPT RESPONSE CODE
add:
field

---
comment number 304
Page=47 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
OBSELETE
s/b
Obsolete

---
comment number 305
Page=47 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
OBSELETE
s/b
Obsolete

---
comment number 306
Page=47 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
RETRY
s/b
all smallcaps (no uppercase R)

---
comment number 307
Page=47 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
IMAGE PAIR ESTABLISHED
s/b
all small caps

---
comment number 308
Page=47 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ACCEPT RESPONSE CODE
s/b
all small caps

---
comment number 309
Page=47 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ORIGINATOR PROCESS_ASSOCIATOR
s/b
all small caps

---
comment number 310
Page=47 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
RESPONDER PROCESS_ASSOCIATOR
s/b
all small caps

---
comment number 311
Page=47 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
READ FCP_XFER_RDY DISABLED
s/b
all small caps

---
comment number 312
Page=47 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
WRITE FCP_XFER_RDY DISABLED
s/b
all small caps

---
comment number 313
Page=47 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Bit
s/b
Bit(s)

---
comment number 314
Page=48 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 315
Page=48 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 316
Page=48 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
after:
ACCEPT RESPONSE CODE
add:
field

---

comment number 317
Page=48 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
task
s/b
command

---

comment number 318
Page=49 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b,
, then

---

comment number 319
Page=49 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
bidirectional SCSI command
s/b
bidirectional command

---

comment number 320
Page=50 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
FCP initiator function
s/b
initiator FCP_Port function

---

comment number 321
Page=50 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
FCP target function
s/b
target FCP_Port function

---

comment number 322
Page=51 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
reason code of
s/b
Reason Code set to
---

comment number 323
Page=51 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= reason code explanation of s/b
Reason Code Explanation set to

---

comment number 324
Page=51 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= Encoded value word 0 of payload (bits 31-24) s/b
R_CTL (word 0 bits 31-24)

---

comment number 325
Page=51 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= the R_CTL Information Category bits 27-24 s/b
the R_CTL Information field (word 0 bits 27-24)

---

comment number 326
Page=51 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= R_CTL bits 31-28 (Word 0) s/b
the R_CTL Routing field (word 0 bits 31-28)

---

comment number 327
Page=51 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= , s/b
, then

---

comment number 328
Page=51 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= , s/b
, then

---

comment number 329
Page=51 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= reason code of s/b
Reason Code set to

---

comment number 330
Page=51 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
reason code explanation of
s/b
Reason Code Explanation set to

---

comment number 331
Page=51 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b , then

---

comment number 332
Page=51 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
task
s/b
command

---

comment number 333
Page=51 Subtype=Highlight Subj=Comment on Text Author=curtisb
Comment=
It should be more clear whether the preferred behavior is continuously increasing or rezero.

---

comment number 334
Page=51 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Abbr.
is not a defined abbreviation in 3.2

There's no need to abbreviate here, though. Change the column header to "Name" and move this column left of the Description column.

---

comment number 335
Page=52 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
This i.e. is unclear. FC-FS-3 doesn't mention FCP_XFER_RDY, FCP_RSP, or FCP_DATA.

---

comment number 336
Page=52 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
01h for Solicited Data or to 05h for Data Descriptor.
s/b 01h (i.e., Device_Data/Solicited Data) or 05h (i.e., Device_Data/Data Descriptor).

---

comment number 337
Page=52 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
a reason code of
s/b
a Reason Code set to

---

comment number 338
Page=52 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
reason code explanation of
s/b
Reason Code Explanation set to

---

comment number 339
Page=52 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
RELATIVE OFFSET parameter
s/b
RELATIVE OFFSET field

---

comment number 340
Page=52 Subtype=Text Subj=Note Author=RElliott
Comment=
Add definitions of the OX_ID and RX_ID field.

---

comment number 341
Page=52 Subtype=Text Subj=Note Author=RElliott
Comment=
Move the R_CTL FOR IU paragraph after the RELATIVE OFFSET paragraph.

---

comment number 342
Page=52 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
In the event that
s/b
If

---

comment number 343
Page=52 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then
(matching adding "If" to the beginning of the sentence)

---

comment number 344
Page=53 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
reason code and reason code explanation
s/b
Reason Code and Reason Code Explanation

---

comment number 345
Page=53 Subtype=Text Subj=Note Author=RElliott
Comment=
FCP_ACC should have its own 8.x section, like FCP_RJT

Add:
8.x FCP_LS Accept (FCP_ACC)
Adjust the cross reference in table 13

---

comment number 346
Page=53 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
VENDOR SPECIFIC
s/b
Vendor specific

---

comment number 347
Page=53 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
delete:
Delete:
A four-byte reason code shall be contained in the Data_Field (see table 16).
The Reason Code field is 1 byte, not 4 bytes, so this is incorrect.

---

comment number 348
Page=54 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
The reason codes for FCP_RJT are specified in table 17.
s/b
The REASON CODE field is defined in table 17.

---

comment number 349
Page=54 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Table 18 lists the reason code explanations for FCP_LS requests.
s/b
The REASON CODE EXPLANATION field is defined in table 18.
comment number 350
Page=54 Subtype=Text Subj=Note Author=RElliott
Comment=
Make the Description column narrower and the Meaning column wider, to shorten the table.
Delete the double vertical line left of the Meaning column.
Merge the Reserved row's Description and Meaning cells.

---

comment number 351
Page=55 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete T3 and T4 and add them to the list of obsolete IUs. Linked commands are obsolete in SAM-4.

T3
Command request (Linked)
  6
  FCP_CMND
  M
  T
  O
T4
Command request (Linked)
  6
  FCP_CMND
  M
  H
  O

---

comment number 352
Page=55 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete (Linked commands are obsolete in SAM-4):
T3 and T4 are only permitted for linked SCSI commands.

---

comment number 353
Page=55 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Task Mgmt Rqst
s/b
Task management request

---

comment number 354
Page=55 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
CAT Information category of Device_Data frames carrying the data block
Change the column header name to INFORMATION field, which is what it is called in FC-FS-3. Change the entries to hex (e.g. 6h, 1h, 3h).

or....
Change the column header to R_CTL and include two hex values (e.g., 06h, 01h, 03h).

---
comment number 355
Page=55 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
when
s/b
while

---
comment number 356
Page=55 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
sequence
s/b
Sequence

---
comment number 357
Page=55 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=and T4

---
comment number 358
Page=55 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=and T4

---
comment number 359
Page=55 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
none
s/b
FCP_CONF

Since section 9.6 exists, claiming to define FCP_CONF. The fact that it has no bytes is secondary.

---
comment number 360
Page=55 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI primitive
s/b
Description

since SCSI doesn't define anything called "primitive"s

---
comment number 361
Page=55 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
I5 frame requesting the confirmed completion protocol. See table 20

By definition, the I5 frame requests confirmation. Otherwise, it'd be an
I4 frame. Change to:
"I5 frame (see table 20)."

---

comment number 362
Page=56 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete (Linked commands are obsolete in SAM-4):

(Linked or confirm request)

---

comment number 363
Page=56 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete (Linked commands are obsolete in SAM-4):

for linked SCSI commands or

---

comment number 364
Page=56 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Task Mgmt response
s/b
Task management response

---

comment number 365
Page=56 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 366
Page=56 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
sequence
s/b
Sequence

---

comment number 367
Page=56 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI primitive
s/b
since SCSI doesn't define anything called "primitive"s

---

comment number 368
Page=56 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Data delivery request
s/b
Data-Out delivery request
to better match the wording in these two tables.

---

comment number 369
Page=56 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI Command
s/b
command

---

comment number 370
Page=57 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
managmenent
s/b
management

---

comment number 371
Page=57 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
N
s/b
n
in lowercase

---

comment number 372
Page=57 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
The FCP_CMND IU shall contain the values and control fields defined in table 21 in its payload.
s/b
The format of the FCP_CMND IU payload is shown in table 21.
to match other IU introductions

---

comment number 373
Page=57 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Each target FCP_Port shall accept an INQUIRY command addressed to LUN 0. If LUNs other than zero are supported by the SCSI target device, LUN 0 shall implement the REPORT LUNS command. See SPC-4.

SPC-4 defines that all logical units must support REPORT LUNS; there is no special rule for LUN 0 any more.

s/b
, then the

s/b
, then

s/b
COMMAND PRIORITY
to match SAM-4

c/b
command
tasks
s/b
commands

---
comment number 380
Page=58 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete:
(CRN)
The field name does not use an acronym. The acronym is the functionally defined value.

---
comment number 381
Page=58 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
CRN
s/b
COMMAND REFERENCE NUMBER (smallcaps)

---
comment number 382
Page=58 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
,  
, then

---
comment number 383
Page=58 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
,  
, then

---
comment number 384
Page=58 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
zero value in the CRN field indicates  

s/b
a COMMAND REFERENCE NUMBER field set to zero specifies

---
comment number 385
Page=58 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
,  
, then

---
comment number 386
Page=58 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

s/b

, then

---

comment number 387
Page=58 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= PRIORITY

s/b

COMMAND PRIORITY


to match SAM-4

---

comment number 388
Page=58 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= PRIORITY

s/b

COMMAND PRIORITY


to match SAM-4

---

comment number 389
Page=58 Subtype=Underline Subj=Underline Author=RElliott
Comment= specifies the relative scheduling of this task in relation to other tasks already in the task set for processing by the device server (see SAM-4). If the TASK ATTRIBUTE field contains a value other than SIMPLE, then this field is reserved.

s/b

specifies the relative scheduling importance of a command with the TASK ATTRIBUTE field set to 000b (i.e., SIMPLE) in relation to other commands already in the task set with SIMPLE task attributes (see SAM-4).

Don't say it is Reserved; that's for SAM-4 to decide.

---

comment number 390
Page=58 Subtype=Highlight Subj=Comment on Text Author=curtisb
Comment= This is confusing - two descriptions with no explanation for why. Need to reference the PRIORITY field somehow to explain the reason for two or just collapse it into one.

---

comment number 391
Page=59 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= QUERY UNIT ATTENTION
s/b QUERY ASYNCHRONOUS EVENT

to match final SAM-4

---

comment number 392
Page=59 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

s/b
FCP_QUERY_UNIT_ATTENTION
s/b
FCP_QUERY_ASYNCHRONOUS_EVENT

to match final SAM-4

---

comment number 393
Page=59 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

, s/b, then

---

comment number 394
Page=59 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

, s/b, then

---

comment number 395
Page=59 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
task
s/b command

---

comment number 396
Page=59 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
task
s/b command

---

comment number 397
Page=59 Subtype=Highlight Subj=Comment on Text Author=curtisb
Comment=
CLEAR ACA "shall not be sent" to a logical unit with a NORMACA bit equal to
zero -- why not state this in terms of what the target supports instead of
trying to place a requirement on the initiator?
... comment number 398
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
QUERY UNIT ATTENTION
s/b
QUERY ASYNCHRONOUS EVENT

to match final SAM-4

... comment number 399
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
control field

control s/b smallcaps

... comment number 400
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
NOTE 3

There does not appear to be a NOTE 2 after NOTE 1 and before NOTE 3.

... comment number 401
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b , then

... comment number 402
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b , then

... comment number 403
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b , then

... comment number 404
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
task
s/b
command

---
comment number 405
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
task
s/b
command

---
comment number 406
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
task
s/b
command

---
comment number 407
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
task
s/b
command

---
comment number 408
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
task
s/b
command

---
comment number 409
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
task
s/b
command

---
comment number 410
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
task
s/b
command

---
comment number 411
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
tasks
s/b
commands

---
comment number 412
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
task
s/b
command

---
comment number 413
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
tasks
s/b
commands

---
comment number 414
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
task
s/b
command

---
comment number 415
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
task resources
s/b
resources

---
comment number 416
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ab
s/b
an

---
comment number 417
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ab
s/b
an

---
comment number 418
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
automatic contingent allegiance
s/b
ACA condition

---
comment number 419
Page=60 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=value of the

---
comment number 420
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI read operation
s/b
read operation

---
comment number 421
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI write operation
s/b
write operation

---
comment number 422
Page=61 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 423
Page=61 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 424
Page=61 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
a read operation has the RDDATA bit set to zero or the WRDATA bit set to one
s/b
the command is defined as performing a read operation and the RDDATA bit is set to to zero

---
comment number 425
Page=61 Subtype=Highlight Subj=Highlight Author=RElliott
a write operation has the WRDATA bit set to zero or the RDDATA bit set to one
s/b
the command is defined as performing a write operation and the WRDATA bit is set to to zero

---
comment number 426
Page=61 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete:
a bidirectional SCSI command has either the RDDATA bit set to zero or the WRDATA bit set to zero
along with changing a) and b) as suggested. Those changes cover bidirectional commands.

---
comment number 427
Page=61 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
value of zero indicates
s/b
field set to zero specifies

---
comment number 428
Page=61 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI command
s/b
command

---
comment number 429
Page=61 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI command
s/b
command

---
comment number 430
Page=61 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI command
s/b
command

---
comment number 431
Page=61 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
bidirectional SCSI command
s/b
bidirectional command

---

comment number 432
Page=61 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
bidirectional SCSI command
s/b
bidirectional command

---

comment number 433
Page=61 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
bidirectional SCSI command
s/b
bidirectional command

---

comment number 434
Page=61 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI read operation and a SCSI write operation
s/b
read operation and a write operation

---

comment number 435
Page=61 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI read operation
s/b
read command

(since a bidirectional command also performs a read operation, but this sentence is not true)

---

comment number 436
Page=61 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI write operation
s/b
write command

(although a bidirectional command also performs a write operation and does use this definition of FCP_DL, there is a separate paragraph for bidirectional commands)

---

comment number 437
Page=61 Subtype=Text Subj=Note Author=RElliott
Comment=

76
Delete "This is a bidirectional SCSI command." and add a table:

<table>
<thead>
<tr>
<th>rddata</th>
<th>wrdata</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>Non-data command</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
<td>Write command</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>Read command</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>Bidirectional command</td>
</tr>
</tbody>
</table>

---

comment number 438
Page=62 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b , then

---

comment number 439
Page=62 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b , then

---

comment number 440
Page=62 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
when s/b if

---

comment number 441
Page=62 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
RDDATA or WRDATA
s/b the RDDATA bit or the WRDATA bit

---

comment number 442
Page=62 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment= the

---

comment number 443
Page=62 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
value of zero indicates
s/b field set to zero specifies

---

comment number 444
Page=62 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Process Login
s/b
Process Login (see 4.14 and 6.3)

---
comment number 445
Page=62 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
category 5, the data descriptor category
s/b
category 5 (i.e., data descriptor)

---
comment number 446
Page=62 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI command
s/b
command

---
comment number 447
Page=62 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
bidirectional SCSI command
s/b
bidirectional command

---
comment number 448
Page=63 Subtype=Text Subj=Note Author=RElliott
Comment=
Add a simple table showing the format of the FCP_DATA IU.

s/b
The format of the FCP_DATA IU payload is shown in table xx.

Table xx - FCP_DATA IU payload
  7 6 5 4 3 2 1 0
  0   data
  n

Also mention that:
NOTE n - The FCP_DATA IU is spread across multiple Fibre Channel frames if the data is longer than the Fibre Channel frame size.

---
comment number 449
Page=63 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b , then
---

comment number 450
Page=63 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 451
Page=63 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 452
Page=63 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 453
Page=63 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 454
Page=63 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 455
Page=63 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=the

---

comment number 456
Page=63 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= value of
s/b
value of the

---

comment number 457

79
Page=63 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
value of
s/b
value of the ... field

---
comment number 458
Page=63 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
value of
s/b
value of the ... field

---
comment number 459
Page=63 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
bit is set to one in the PLRI FCP Service Parameter page
s/b
bit is set to one in Process Login

---
comment number 460
Page=63 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
bit is set to one
s/b
bit is set to one in Process Login (see 4.14 and 6.3)

---
comment number 461
Page=63 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
bit is set to one in the PLRI FCP Service Parameter page (see 6.3)
s/b
bit is set to one in Process Login

---
comment number 462
Page=63 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
bit is set to zero in the PLRI FCP Service Parameter page (see 6.3)
s/b
bit is set to zero in Process Login

---
comment number 463
Page=64 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
,
s/b
, then

---
comment number 464
Page=64 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 465
Page=64 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 466
Page=64 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 467
Page=64 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
length FCP_DL
s/b
the length specified by the FCP_DL field in the FCP_CMND IU

---

comment number 468
Page=64 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
after:
field
add:
in the FCP_CMND IU

---

comment number 469
Page=64 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
after:
field
add:
in the FCP_CMND IU

---

comment number 470
Page=64 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
FCP_DL
s/b
the FCP_DL field

---
 comment number 471
Page=64 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
FCP_DL
s/b
the length specified by the FCP_DL field

---
 comment number 472
Page=64 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=the length specified by the FCP_DL field

---
 comment number 473
Page=64 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=SCSI command set for that command
s/b
SCSI command standard defining that command

---
 comment number 474
Page=65 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=autosense data
s/b
sense data

---
 comment number 475
Page=65 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b, then

---
 comment number 476
Page=65 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b, then

---
 comment number 477
Page=65 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=value s/b length
If command linking is being performed, an FCP_RSP IU is provided for each command. For linked commands, INTERMEDIATE status or INTERMEDIATE-CONDITION MET status indicates successful completion of a command with no other information valid if all other fields are zero. If command linking is requested, the use of the INTERMEDIATE or INTERMEDIATE-CONDITION MET status indicates that linking shall be performed. The LINKED COMMAND COMPLETE or LINKED COMMAND COMPLETE (WITH FLAG) Service Response defined by SAM-4 is implicit in the presentation of INTERMEDIATE or INTERMEDIATE-CONDITION MET status in the FCP_RSP IU.
Page=66 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 485
Page=66 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 486
Page=66 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 487
Page=66 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
In the event that
s/b
If

---
comment number 488
Page=66 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

(paired with changing the beginning of the sentence to "If")

---
comment number 489
Page=66 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=What is a "SCSI device error"?

---
comment number 490
Page=66 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=What is a "SCSI device error"?

---
comment number 491
Page=67 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
The content of the FCP_RSP IU is indicated in table 25.
The format of the FCP_RSP IU payload is shown in table 25.

to match other IU introductions

---
... comment number 492
Page=67 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= RETRY DELAY TIMER
s/b STATUS QUALIFIER

to match SAM-4. Also, remove (MSB) and (LSB) since it now has substructure.

---
... comment number 493
Page=67 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= RETRY DELAY TIMER field contains the retry delay timer code
s/b STATUS QUALIFIER field contains the status qualifier

---
... comment number 494
Page=67 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= ,
s/b , then

---
... comment number 495
Page=67 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= ,
s/b , then

---
... comment number 496
Page=68 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= SCSI STATUS CODE field

make SCSI smallcaps

---
... comment number 497
Page=68 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= ,
s/b , then
---
comment number 498
Page=68 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b, then
---
comment number 499
Page=68 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b, then
---
comment number 500
Page=68 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b, then
---
comment number 501
Page=68 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b, then
---
comment number 502
Page=68 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b, then
---
comment number 503
Page=68 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b, then
---
comment number 504
Page=68 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

**comment number 505**

Page=68 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=

, s/b

, then

---

**comment number 506**

Page=69 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=

, s/b

, then

---

**comment number 507**

Page=69 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=

, s/b

, then

---

**comment number 508**

Page=69 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=

, s/b

, then

---

**comment number 509**

Page=69 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=

have

s/b

be set to

---

**comment number 510**

Page=69 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=

, s/b

, then

---

**comment number 511**

Page=69 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=
s/b
, then

---
comment number 512
Page=69 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI command
s/b
command

---
comment number 513
Page=69 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI command
s/b
command

---
comment number 514
Page=69 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI command
s/b
command

---
comment number 515
Page=69 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
bidirectional SCSI commands
s/b
bidirectional commands

---
comment number 516
Page=69 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
bidirectional SCSI commands
s/b
bidirectional commands

---
comment number 517
Page=69 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
bidirectional SCSI commands
s/b
bidirectional commands

---
comment number 518
Page=69 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
bidirectional SCSI commands
s/b
bidirectional commands

---
comment number 519
Page=69 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
read operations and write operations
s/b
read commands and write commands

---
comment number 520
Page=69 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
read operations and write operations
s/b
read commands and write commands

---
comment number 521
Page=69 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
,
s/b
, then

---
comment number 522
Page=69 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
,
s/b
, then

---
comment number 523
Page=69 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
,
s/b
, then

---
comment number 524
Page=69 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
,
s/b
, then

---
comment number 525
Page=70 Subtype=Highlight Subj=Highlight Author=RElliott
The number shall be 00000004h, or 00000008h. 

This field shall be set to 00000004h or 00000008h.

---

comment number 526
Page=70 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, 
, then

---

comment number 527
Page=70 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, 
, then

---

comment number 528
Page=70 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, 
, then

---

comment number 529
Page=70 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, 
, then

---

comment number 530
Page=70 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, 
, then

---

comment number 531
Page=70 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
No FCP_SNS_INFO is provided. 
, then

The FCP_SNS_INFO field is not present.
Page=70 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

, s/b
, then

---

comment number 533
Page=70 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

, s/b
, then

---

comment number 534
Page=70 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

, s/b
, then

---

comment number 535
Page=70 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

SCSI command
s/b
command

---

comment number 536
Page=71 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

QUERY UNIT ATTENTION
s/b
QUERY ASYNCHRONOUS EVENT
to match final SAM-4

---

comment number 537
Page=71 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

, s/b
, then

---

comment number 538
Page=71 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

, s/b
, then
autosense data
s/b
sense data

FCP devices shall perform autosense.

SCSI status byte of CHECK CONDITION is presented as specified by SAM-4.

SSCSI STATUS FIELD is set to CHECK CONDITION (see SAM-4).

, s/b
, then

shall be zero
s/b
shall be set to zero

when
s/b
if

service delivery subsystem
s/b
target FCP_Port.

It doesn't directly modify the service delivery subsystem itself (that
would mean modifying switch settings); by adjusting the target port behavior, though, it affects the overall behavior of the service delivery subsystem.

---

comment number 546
Page=73 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=shall return CHECK CONDITION status. The sense key shall be set to ILLEGAL REQUEST and the additional sense code set to ILLEGAL FIELD IN PARAMETER LIST
s/b terminate the command with CHECK CONDITION status with the sense key set to ILLEGAL REQUEST and the additional sense code set to ILLEGAL FIELD IN PARAMETER LIST

---

comment number 547
Page=73 Subtype=Text Subj=Note Author=RElliott
Comment=Include the Subpage code in table 28h.

02h 00h Disconnect-Reconnect mode page
18h 00h Protocol-Specific Logical Unit mode page
   01h to DFh Reserved
   E0h to FEh Vendor specific
   FFh Return all subpages for this mode page code SPC-4
19h 00h Protocol-Specific Port mode page
   01h to DFh Reserved
   E0h to FEh Vendor specific
   FFh Return all subpages for this mode page code SPC-4

---

comment number 548
Page=73 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=Control

---

comment number 549
Page=73 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=Control

---

comment number 550
Page=73 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete:

3Fh Return all mode pages (valid only for the MODE SENSE command)
SPC-4

That is covered by SPC-4

---
---

comment number 551
Page=73 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

s/b
, then

---

comment number 552
Page=74 Subtype=Highlight Subj=Comment on Text Author=curtisb
Comment=
interconnect tenancy - why no section heading to allow easy browsing to this and provide an introduction to a new concept?

---

comment number 553
Page=75 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

s/b
, then

---

comment number 554
Page=75 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
the
s/b
, then the

---

comment number 555
Page=76 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

s/b
, then

---

comment number 556
Page=76 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

s/b
, then

---

comment number 557
Page=76 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

s/b
, then

---
comment number 558
Page=76 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 559
Page=76 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 560
Page=76 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 561
Page=76 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 562
Page=76 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
by the state of the PRLI ELS FCP Service Parameter page DATA OVERLAY ALLOWED bit.
s/b
by the DATA OVERLAY ALLOWED bit in Process Login (see 4.14 and 6.3)

---

comment number 563
Page=77 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
initiator
s/b
application client

---

comment number 564
Page=77 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then
---

comment number 565
Page=77 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, 
, then

---

comment number 566
Page=77 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ENABLE PRECISE DELIVERY CHECKING
s/b lowercase
to match the convention used elsewhere (e.g. in 10.2.8)

---

comment number 567
Page=78 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=shown in

---

comment number 568
Page=78 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, a target FCP_Port attached to an arbitrated loop (see FC-AL-2) shall not
generate a LIP following insertion into the loop.
s/b
, then the target FCP_Port shall not generate a LIP following insertion
into an arbitrated loop (see FC-AL-2).

---

comment number 569
Page=78 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, the target FCP_Port attached to an arbitrated loop shall generate
LIP(F7,xx) after it enables a port into a loop.
s/b
, then the target FCP_Port shall generate LIP(F7, xx) after it enables a
port into an arbitrated loop.

---

comment number 570
Page=78 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, 
s/b
, then

---

comment number 571
Page=78 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

one, a target FCP_Port attached to an arbitrated loop (see FC-AL-2) shall wait for an initiator FCP_Port to transmit the Loop Port Enable (LPE) primitive sequence before inserting itself into an arbitrated loop (see FC-AL-2).

s/b one, then the target FCP_Port shall wait for an initiator FCP_Port to transmit the Loop Port Enable (LPE) primitive sequence before inserting itself into an arbitrated loop (see FC-AL-2).

---

comment number 572
Page=78 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

s/b

, then

---

comment number 573
Page=78 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

s/b

, then

---

comment number 574
Page=78 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

one, a target FCP_Port attached to an arbitrated loop (see FC-AL-2) shall

s/b

one, then the target FCP_Port shall

---

comment number 575
Page=78 Subtype=Text Subj=Note Author=RElliott
Comment=

Global:
Each spelled out bit name in 10.4.x should be lowercase to match the convention used elsewhere (like 10.2.8)

Example:
10.4.2 The disable target originated loop initialization (DTOLI) bit (with DTOLI in smallcaps)

Suggestion: This would be more readable with the long phrase separated by parenthesis, rather than the short bit/field name. Change all the field definitions to:

The DTOLI (disable target originated loop initialization) bit
(with DTOLI in smallcaps)

---

comment number 576
tasks

... comment number 577
return CHECK CONDITION status and the sense key shall be set to ILLEGAL REQUEST and the additional sense code shall be set to INVALID FIELD IN THE PARAMETER LIST.

... comment number 578
one, a target FCP_Port attached to an arbitrated loop (see FC-AL-2) shall

... comment number 579
one, then the target FCP_Port shall

... comment number 579
, the target FCP_Port

... comment number 580
, then it

... comment number 580
, s/b

... comment number 581
, then

... comment number 581
, s/b

... comment number 582
, then
, s/b
, then

---
comment number 583
Page=79 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
follows
s/b
shall follow

---
comment number 584
Page=79 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 585
Page=79 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, a target FCP_Port attached to an arbitrated loop (see FC-AL-2) shall
s/b
, then the target FCP_Port shall

---
comment number 586
Page=79 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
one, a target FCP_Port without a valid fabric login attached to an
arbitrated loop (see FC-AL-2) shall
s/b
one, then the target FCP_Port shall

---
comment number 587
Page=79 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 588
Page=79 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 589
one, a target FCP_Port attached to an arbitrated loop (see FC-AL-2) shall
s/b
tasks

RR_TOVSEQ_INIT
SEQ_INIT should be subscript
There should be a separate section for RR_TOV UNITS, or 10.4.10 should mention both in the header

Change the left columns of table 32 to a single column RR_TOV UNITS since it is a named field:

000b
001b
011b
101b

Initiator | Target
s/b
Initiator FCP_Port | Target FCP_Port

Change to lettered table footnotes, delete "NOTES:"

0
s/b
zero

1
s/b
one

---
comment number 603
Page=81 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
0
s/b
zero

---
comment number 604
Page=81 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
1
s/b
one

---
comment number 605
Page=81 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Add space around x and ensure that the Symbol font multiply character is used, not the letter x

---
comment number 606
Page=81 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Add space around x and ensure that the Symbol font multiply character is used, not the letter x

---
comment number 607
Page=81 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=,

---
comment number 608
Page=81 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
,, s/b
,, then

---
comment number 609
Page=82 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
specific initiator
s/b
initiator FCP_Port

---
comment number 610
Page=82 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
,'s/b', then

---

comment number 611
Page=82 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
,'s/b', then

---

comment number 612
Page=82 Subtype=Text Subj=Note Author=RElliott
Comment=
Split 11.4 into two sections, one for each timer. The sentence "If either of these two...before expiration of RR_TOV" is not worded well, and is not the same as the intended rules:

If Exchange Authentication is not performed within RR_TOVauth of completion of the Loop Initialization protocol, then...
If the initiator FCP_Port does not send a response within RR_TOVseq_init of the transfer of Sequence Initiative, then...

---

comment number 613
Page=83 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Usage
's/b lowercase

---

comment number 614
Page=84 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
bidirectional SCSI commands
's/b bidirectional commands

---

comment number 615
Page=85 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
',s/b', then

---

comment number 616
Page=85 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
sequence
s/b
Sequence

---
comment number 617
Page=85 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
bidirectional SCSI commands
s/b
bidirectional commands

---
comment number 618
Page=85 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
bidirectional SCSI command
s/b
bidirectional command

---
comment number 619
Page=85 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
bidirectional SCSI command
s/b
bidirectional command

---
comment number 620
Page=85 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
bidirectional SCSI command
s/b
bidirectional command

---
comment number 621
Page=85 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
bidirectional SCSI command
s/b
bidirectional command

---
comment number 622
Page=86 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b,
, then

---
comment number 623
Page=86 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b, then

---
comment number 624
Page=86 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
sequence
s/b
Sequence

---
comment number 625
Page=86 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
tasks
s/b
commands

---
comment number 626
Page=87 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
RX_ID field
RX_ID s/b smallcaps

---
comment number 627
Page=87 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=

---
comment number 628
Page=87 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 629
Page=87 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 630
Page=87 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b, then

---
comment number 631
Page=87 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b, then

---
comment number 632
Page=87 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= sequence
s/b Sequence

---
comment number 633
Page=87 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= SCSI task
s/b command

---
comment number 634
Page=88 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= reason code explanation set to
s/b a Reason Code Explanation set to

---
comment number 635
Page=88 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= the reason code of
s/b a Reason Code set to

---
comment number 636
Page=88 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b, then

---
comment number 637
Page=88 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 638
Page=88 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 639
Page=88 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 640
Page=88 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 641
Page=88 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 642
Page=88 Subtype=Underline Subj=Underline Author=RElliott
Comment= retransmit
This sentence needs a subject.

---
comment number 643
Page=88 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 644
Page=88 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 645

Page=89 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= OX_ID;
s/b
OX_ID field value;

---

comment number 646

Page=89 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= S_ID; and
s/b
S_ID field value; and

---

comment number 647

Page=89 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 648

Page=89 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 649
Page=89 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete:
"For non-tagged command queuing operations, the target FCP_Port shall retain the Exchange information until:
a) the next FCP_CMND IU has been received for that LUN from the same initiator FCP_Port;
b) an FCP_CONF IU is received for the Exchange; or
c) after RR_TOVSEQ_INIT times out.
For tagged command queuing operations,

since SAM-4 doesn't define untagged commands any more.

---

comment number 650
transmit an FCP_RSP IU with CHECK CONDITION status and sense data containing a sense key of HARDWARE ERROR and an additional sense code of INITIATOR DETECTED ERROR MESSAGE RECEIVED

s/b terminate the command with CHECK CONDITION status with the sense key set to HARDWARE ERROR and the additional sense code set to INITIATOR DETECTED ERROR MESSAGE RECEIVED

---

comment number 651

s/b

, then

---

comment number 652

s/b

, then

---

comment number 653

s/b

, then

---

comment number 654

with the Relative Offset parameter specified by the SRR FCP_LS request

s/b

with the FCP_DATA_RO field in the FCP_XFER_RDY IU set to the value of the RELATIVE OFFSET field in the SRR

---

comment number 655

reason code explanation set to

s/b

a Reason Code Explanation set to

---

comment number 656
the reason code of
s/b
a Reason Code set to

---
comment number 657
Page=91 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
target devices
s/b
FCP target devices

---
comment number 658
Page=91 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 659
Page=91 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 660
Page=91 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 661
Page=91 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---
comment number 662
Page=91 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
the
s/b
, then the

---
comment number 663
Page=91 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

s/b
then

---

comment number 664
Page=91 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
sequence
s/b
Sequence

---

comment number 665
Page=92 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 666
Page=92 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 667
Page=92 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 668
Page=92 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 669
Page=92 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 670

111
Page=92 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 671
Page=92 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 672
Page=93 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 673
Page=93 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 674
Page=93 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, s/b
, then

---

comment number 675
Page=94 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= retransmission
s/b retransmission

---

comment number 676
Page=94 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= Port_Name
s/b N_Port_Name

---
Port_Name
s/b
N_Port_Name

---

comment number 678
Page=94 Subtype=Text Subj=Note Author=RElliott
Comment=Change to lettered table footnotes, delete "NOTES:"

---

comment number 679
Page=94 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=Delete this section header
A.1 Definition of procedure terms

since there is no A.2

---

comment number 680
Page=94 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=tasks
s/b
commands and task management functions

---

comment number 681
Page=94 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=tasks
s/b
commands

---

comment number 682
Page=94 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=add:
and enables the task router and task manager(s) to receive and process task management functions.

---

comment number 683
Page=94 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=nexus
s/b
I_T_L_Q nexus

---

comment number 684
Page=94  Subtype=StrikeOut  Subj=Cross-Out  Author=curtisb
Comment=

---
comment number 685
Page=94  Subtype=CareT  Subj=Replacement Text  Author=curtisb
Comment=retransmission should be retransmission

---
comment number 686
Page=94  Subtype=StrikeOut  Subj=Cross-Out  Author=curtisb
Comment=

---
comment number 687
Page=94  Subtype=CareT  Subj=Replacement Text  Author=curtisb
Comment=retransmission should be retransmission

---
comment number 688
Page=95  Subtype=Highlight  Subj=Highlight  Author=RElliott
Comment=
init = initiator
s/b
init = SCSI initiator port

---
comment number 689
Page=95  Subtype=Highlight  Subj=Highlight  Author=RElliott
Comment=
targ = target
s/b
target = SCSI target port

---
comment number 690
Page=95  Subtype=StrikeOut  Subj=Cross-Out  Author=RElliott
Comment=
initiator SCSI ID
SAM-4
this standard
DS targ
or TM targ

---
comment number 691
Page=95  Subtype=Text  Subj=Note  Author=RElliott
Comment=Change to lettered table footnotes, delete "Notes"

---
comment number 692
Page=95  Subtype=Text  Subj=Note  Author=RElliott
Comment=
Add
status qualifier | SAM-4 | SAM-4 | DS -> targ -> init -> AC
---
comment number 693
Page=95 Subtype=Text Subj=Note Author=RElliott
Comment=
Add command priority | SAM-4 | SAM-4/cmd | AC -> init -> targ -> DS
---

---
comment number 694
Page=96 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI FCP read operation
s/b read command

(change section and table headers too)
---

---
comment number 695
Page=97 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI command
s/b command
---

---
comment number 696
Page=97 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI FCP write operation
s/b write command

(change section and table headers too)
---

---
comment number 697
Page=97 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
typical SCSI FCP operation terminating without data transfer, either because of an error or because the SCSI command does not require any data transfer,
s/b non-data command or a command terminating without data transfer

(change section and table headers too)
---

---
comment number 698
Page=98 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI read operation
s/b read command

115
(change section and table headers too)

---
comment number 699
Page=98 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI write operation
s/b
write command

(change section and table headers too)

---
comment number 700
Page=98 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
FCP_XFR_RDY
s/b
FCP_XFER_RDY

---
comment number 701
Page=99 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI FCP bidirectional command
s/b
bidirectional command

(change section and table headers too)

---
comment number 702
Page=99 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI FCP bidirectional command
s/b
bidirectional command

(change section and table headers too)

---
comment number 703
Page=100 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI FCP bidirectional command
s/b
bidirectional command

(change section and table headers too)

---
comment number 704
Page=101 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI FCP bidirectional command
s/b
bidirectional command

(change section and table headers too)

---

comment number 705
Page=102 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete this section, since linked commands are obsolete in SAM-4.

B.1.11 SCSI linked commands

---

comment number 706
Page=103 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI Task Management function
s/b
task management function

(change section and table headers too)

---

comment number 707
Page=103 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Task Management function
s/b
lowercase

---

comment number 708
Page=103 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI WRITE command
s/b
write command

(change section and table headers too)

---

comment number 709
Page=104 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
an FCP write
s/b
a write command

(change section and table headers too)

---

comment number 710
Page=104 Subtype=Highlight Subj=Highlight Author=RElliott
The use of OX_ID and FQXID doesn’t seem right. FQXID is defined as S_ID, D_ID, OX_ID, and RX_ID. The definition mentions that the RX_ID part starts as FFFFh, but that doesn’t make it not a FQXID.

The first frame has S_ID, D_ID, and OX_ID filled in. RX_ID is unused. The FCP_XFER_RDY frame fills in RX_ID as well.

This might be better shown using variables. In the first frame, show:
S_ID=A
D_ID=B
OX_ID=C
RX_ID=FFFFh

Then show this in the FCP_XFER_RDY frame and FCP_RSP frame:
S_ID=B, D_ID=A, OX_ID=C, RX_ID=D.

Make similar changes in figures B.2 and B.3.
Add "class 2" to the section header and paragraph introducing the figure.

---
Comment number 716
Page=104 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SOFi2, EOFn, and EOFt have not been defined in this standard. Add a key: list at the bottom of each figure using them.

---
Comment number 717
Page=105 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
frameframe
s/b
frame

---
Comment number 718
Page=105 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Xfer Seq Initiative
s/b
Transfer Sequence Initiative

---
Comment number 719
Page=105 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Hold Seq Initiative
s/b
Hold Sequence Initiative

---
Comment number 720
Page=105 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Hold Seq Initiative
s/b
Hold Sequence Initiative

---
Comment number 721
Page=105 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Initiator Frames Target Frames
s/b
FCP initiator port frames FCP target port frames

---
Comment number 722
Page=106 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
an FCP read
s/b
a read command

(change section and table headers too)

---

comment number 723
Page=106 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Xfer Seq Initiative
s/b
Transfer Sequence Initiative

---

comment number 724
Page=106 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Xfer Seq Initiative
s/b
Transfer Sequence Initiative

---

comment number 725
Page=106 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Initiator Frames Target Frames
s/b
FCP initiator port frames   FCP target port frames

---

comment number 726
Page=106 Subtype=Text Subj=Note Author=RElliott
Comment=
Add "class 2" to the section header and paragraph introducing the figure.

---

comment number 727
Page=107 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Hold Seq Initiative
s/b
Hold Sequence Initiative

---

comment number 728
Page=107 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Hold Seq Initiative
s/b
Hold Sequence Initiative

---

comment number 729
Page=107 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Hold Seq Initiative
s/b
Hold Sequence Initiative

---

comment number 730
Page=107 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
FCP Initiator Frames FCP Target Frames
s/b
FCP initiator port frames FCP target port frames

---

comment number 731
Page=109 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/bABTS

---

comment number 732
Page=109 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
In all annex C figures:
Initiator Target
s/b
Initiator FCP_Port Target FCP_Port

---

comment number 733
Page=111 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
REC E1S
s/b
REC ELS

---

comment number 734
Page=111 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

---

comment number 735
Page=111 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

---

comment number 736
Page=112 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b ABTS

---
comment number 737
Page=113 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
REC_TOV*
s/b REC_TOV

---
comment number 738
Page=113 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
REC_TOV*
s/b REC_TOV

---
comment number 739
Page=113 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
REC_TOV*
s/b REC_TOV

---
comment number 740
Page=113 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(RO=0)
s/b (FCP_DATA_RO=0)

---
comment number 741
Page=113 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(RO=0)
s/b (FCP_DATA_RO=0)

---
comment number 742
Page=114 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b ABTS

---
comment number 743
Page=114 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(RO=0)
s/b
(FCP_DATA_RO=0)

---
comment number 744
Page=114 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(RO=0)
s/b
(FCP_DATA_RO=0)

---
comment number 745
Page=115 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

---
comment number 746
Page=115 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(RO=0)
s/b
(FCP_DATA_RO=0)

---
comment number 747
Page=116 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
RR_TOVSEQ_INI
s/b
RR_TOVSEQ_INIT

---
comment number 748
Page=116 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
REC_TOV*
s/b
REC_TOV

---
comment number 749
Page=116 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
REC_TOV*
s/b
REC_TOV

---
comment number 750
Page=117 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

... comment number 751
Page=118 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

... comment number 752
Page=119 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
reason code of
s/b
Reason Code set to

... comment number 753
Page=119 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
the reason code explanation of
s/b
Reason Code Explanation set to

... comment number 754
Page=119 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

... comment number 755
Page=120 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Invalid OX_ID - RX_ID
s/b
Invalid OX_ID - RX_ID combination

... comment number 756
Page=120 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

...
comment number 757
Page=120 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

---

comment number 758
Page=120 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

---

comment number 759
Page=121 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(seq=1, cnt=0, RO=0)
s/b
SEQ_ID=1, SEQ_CNT=0, PARAMETER=0

---

comment number 760
Page=121 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
seq=1, cnt=1
s/b
SEQ_ID=1, SEQ_CNT=1

---

comment number 761
Page=121 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(seq=2, cnt=0, RO=0)
s/b
(SEQ_ID=2, SEQ_CNT=0, PARAMETER=0)

---

comment number 762
Page=121 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(seq=2, cnt=1)
s/b
(SEQ_ID=2, SEQ_CNT=1)

---

comment number 763
Page=121 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(RO=0)
s/b
(FCP_DATA_RO=0)
---
comment number 764
Page=121 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(RO=0)
s/b
(FCP_DATA_RO=0)
---

comment number 765
Page=121 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(RO=0)
s/b
(RELATIVE OFFSET=0)
---

comment number 766
Page=122 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS
---

comment number 767
Page=122 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(seq=1, cnt=0, RO=0)
s/b
(SEQ_ID=1, SEQ_CNT=0, PARAMETER=0)
---

comment number 768
Page=122 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(seq=1, cnt=1)
s/b
(SEQ_ID=1, SEQ_CNT=1)
---

comment number 769
Page=122 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(seq=2, cnt=0, RO=0)
s/b
(SEQ_ID=2, SEQ_CNT=0, PARAMETER=0)
---

comment number 770
Page=122 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(seq=2, cnt=1)
s/b
(SEQ_ID=2, SEQ_CNT=1)
... comment number 771
Page=122 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= (RO=0)
s/b (FCP_DATA_RO=0)

... comment number 772
Page=122 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= (RO=0)
s/b (FCP_DATA_RO=0)

and add a space before (  

... comment number 773
Page=122 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= (RO=0)
s/b (RELATIVE OFFSET=0)

... comment number 774
Page=123 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= (seq=1, cnt=0, RO=0)
s/b (SEQ_ID=1, SEQ_CNT=0, PARAMETER=0)

... comment number 775
Page=123 Subtype=Highlight Subj=Highlight Author=RElliott
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s/b (SEQ_ID=1, SEQ_CNT=1)

... comment number 776
Page=123 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= (seq=2, cnt=0, RO=0)
s/b (SEQ_ID=2, SEQ_CNT=0, PARAMETER=0)

... comment number 777
Page=123 Subtype=Highlight Subj=Highlight Author=RElliott
Comment= 127
(seq=2, cnt=1)
s/b
(SEQ_ID=2, SEQ_CNT=1)

---
comment number 778
Page=123 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(RO=0)
s/b
(FCP_DATA_RO=0)

---
comment number 779
Page=123 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(RO=0)
s/b
(FCP_DATA_RO=0)

---
comment number 780
Page=123 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(RO=0)
s/b
(RELATIVE OFFSET=0)

---
comment number 781
Page=124 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

---
comment number 782
Page=124 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(seq=1, cnt=0, RO=0)
s/b
(SEQ_ID=1, SEQ_CNT=0, PARAMETER=0)

---
comment number 783
Page=124 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(seq=1, cnt=1)
s/b
(SEQ_ID=1, SEQ_CNT=1)

---
comment number 784
Page=124 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(seq=2, cnt=0, RO=0)
s/b
(SEQ_ID=2, SEQ_CNT=0, PARAMETER=0)

---
comment number 785
Page=124 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(seq=2, cnt=1)
s/b
(SEQ_ID=2, SEQ_CNT=1)

---
comment number 786
Page=124 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(RO=0)
s/b
(FCP_DATA_RO=0)

---
comment number 787
Page=124 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(RO=0)
s/b
(FCP_DATA_RO=0)

and add a space before ( 

---
comment number 788
Page=124 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(RO=0)
s/b
(RELATIVE OFFSET=0)

---
comment number 789
Page=125 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
REC_TOV*
s/b
REC_TOV

---
comment number 790
Page=125 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
REC_TOV*
s/b
REC_TOV
FCP_DATA retransmission uses a new...
Comment=
ABTS (Sequence)
s/b
ABTS

---
comment number 799
Page=126 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(seq=1, cnt=0, RO=0)
s/b
(SEQ_ID=1, SEQ_CNT=0, PARAMETER=0)

---
comment number 800
Page=126 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(seq=1, cnt=1)
s/b
(SEQ_ID=1, SEQ_CNT=1)

---
comment number 801
Page=126 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(seq=2, cnt=0, RO=0)
s/b
(SEQ_ID=2, SEQ_CNT=0, PARAMETER=0)

---
comment number 802
Page=126 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(seq=2, cnt=1)
s/b
(SEQ_ID=2, SEQ_CNT=1)

---
comment number 803
Page=126 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(RO=0)
s/b
(RELATIVE OFFSET=0)

---
comment number 804
Page=127 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
REC_TOV*
s/b
REC_TOV

---
comment number 805
REC_TOV*
...

comment number 806
Page=127 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
     is
     add space before

...

comment number 807
Page=127 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
     (seq=1, cnt=0, RO=0)
     s/b
     (SEQ_ID=1, SEQ_CNT=0, PARAMETER=0)

...

comment number 808
Page=127 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
     (seq=1, cnt=1)
     s/b
     (SEQ_ID=1, SEQ_CNT=1)

...

comment number 809
Page=127 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
     (seq=2, cnt=0, RO=0)
     s/b
     (SEQ_ID=2, SEQ_CNT=0, PARAMETER=0)

...

comment number 810
Page=127 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
     (seq=2, cnt=1)
     s/b
     (SEQ_ID=2, SEQ_CNT=1)

...

comment number 811
Page=127 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
     (RO=0)
     s/b
     (RELATIVE OFFSET=0)

...
FCP_DATA retransmission uses a new -- again something seems left off -- probably "Exchange."

sequence

Error

ABTS (Sequence)

(seq=1, cnt=0, RO=0)

(seq=1, cnt=1)
Comment=
(seq=2, cnt=0, RO=0)
s/b
(SEQ_ID=2, SEQ_CNT=0, PARAMETER=0)

---
comment number 820
Page=128 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(seq=2, cnt=1)
s/b
(SEQ_ID=2, SEQ_CNT=1)

---
comment number 821
Page=128 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(RO=0)
s/b
(RELATIVE OFFSET=0)

---
comment number 822
Page=129 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

---
comment number 823
Page=129 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(seq=1, cnt=0, RO=0)
s/b
(SEQ_ID=1, SEQ_CNT=0, PARAMETER=0)

---
comment number 824
Page=130 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
the ABTS

---
comment number 825
Page=130 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

---
comment number 826
Page=130 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(seq=1, cnt=0, RO=0)
s/b
(SEQ_ID=1, SEQ_CNT=0, PARAMETER=0)

... comment number 827
Page=130 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(seq=1, cnt=1)
s/b
(SEQ_ID=1, SEQ_CNT=1)

... comment number 828
Page=130 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(RO=0)
s/b
(FCP_DATA_RO=0)

... comment number 829
Page=132 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

... comment number 830
Page=133 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Invalid OX_ID-RX_ID
s/b
Invalid OX_ID-RX_ID combination

... comment number 831
Page=133 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

... comment number 832
Page=134 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
2xR_A_TOV

Add space around x and ensure that the Symbol font multiply character is used, not the letter x
---
comment number 833
Page=134 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

---
comment number 834
Page=134 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

---
comment number 835
Page=135 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

---
comment number 836
Page=135 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

---
comment number 837
Page=137 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Lost, Unacknowledged Classes, Abort
s/b
lowercase

---
comment number 838
Page=137 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
2xR_A_TOV

Add space around x and ensure that the Symbol font multiply character is used, not the letter x

---
comment number 839
Page=137 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
2xR_A_TOV
Add space around x and ensure that the Symbol font multiply character is used, not the letter x

---
comment number 840
Page=137 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

---
comment number 841
Page=137 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

---
comment number 842
Page=138 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
2 times R_A_TOV
s/b
2 x R_A_TOV
using the Symbol font times character

---
comment number 843
Page=138 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

---
comment number 844
Page=138 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

---
comment number 845
Page=138 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

---
comment number 846
Sequene should be Sequence

using the Symbol font times character

---

comment number 850
Page=139 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

---

comment number 851
Page=140 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

---

comment number 852
Page=140 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

---

comment number 853
Page=140 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS
Comment=
ABTS (Sequence)
s/b
ABTS

---
comment number 854
Page=141 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

---
comment number 855
Page=141 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

---
comment number 856
Page=141 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

---
comment number 857
Page=142 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
FCP target function
s/b
FCP target port function

---
comment number 858
Page=142 Subtype=highlight Subj=Highlight Author=RElliott
Comment=
type of target
s/b
peripheral device type of the logical unit

---
comment number 859
Page=142 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Port_Name
s/b
N_Port_Name

---
comment number 860
Page=142 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
PAGE CODE
s/b
PAGE CODE field

---

Comment number 861
Page=142 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
the
s/b
each

---

Comment number 862
Page=143 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Address Identifier
s/b
lowercase

---

Comment number 863
Page=143 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Address Identifier
s/b
lowercase

---

Comment number 864
Page=143 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
the
s/b
each

---

Comment number 865
Page=143 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
PAGE CODE
s/b
PAGE CODE field

---

Comment number 866
Page=143 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
the Device Identification VPD page
s/b
83h (i.e., the Device Identification VPD page)
Problem Description:
Target requirement for FCP_RESID_UNDER is missing:: There is no requirement
for a target to set FCP_RESID_UNDER if a read operation results in the
transfer of fewer than FCP_DL bytes. The 4th paragraph of section 9.4.2,
Because there were fewer bytes provided than required by FCP_DL, the FCP_RESID_UNDER bit...shall be set to one in the FCP_RSP IU...." But this occurs in the context of a discussion of a write operation. There is no similar requirement that FCP_RESID_UNDER be set appropriately in the context of read operations. Section 12.2.2 first paragraph bullet (b) requires the initiator to detect underrun. This may imply a requirement for the target, but it would be better explicitly stated.

Suggested Solution:
1) Break section 9.4 paragraph 4 after "...the target FCP_Port shall discard the excess bytes.", -and- 2) Amend the following sentence to replace "Because there were fewer bytes provided than required...." with "If an operation results in the transfer of fewer bytes than required....".

BrianHart-002 (T) Page: 43 (27 hardcopy) Location: 6.3.4

Problem Description:
Sequence level recovery is not defined:: Every usage of the phrase "Sequence level recovery" has the indicated capitalization. This is a marked usage and suggests that the phrase is being used as a term of art. However, the phrase is not defined by the standard, so is left to assume its normal English meaning. It is not clear how the normal meaning of the phrase relates to the concepts of the standard. Specifically, it is not clear when an FCP_Port "ha[s] agreed to Sequence level recovery". What constitutes this agreement should be clearly defined as it qualifies several sections describing recovery. This has ramifications for data integrity (see, e.g., issue (4) below).

Suggested Solution:
In section 6.3.4, subsection "Word 3, Bit 8: RETRY", add a sentence following the first sentence of the third paragraph: "...in both the request payload and in the accept payload. In this case the initiator and target shall have agreed to Sequence level recovery."

BrianHart-003 (T) Page: 89 (73 hardcopy) Location: 12.4.1.5

Problem Description:
Recovery is insufficiently required:: Several recovery sections (e.g. 12.4.1.5) are qualified by: "This procedure shall be used only by FCP devices that have agreed to Sequence level recovery". That is, agreement to Sequence level recovery is necessary but not sufficient to imply that an initiator or target will perform the defined recovery. The standard provides no mechanism for an agreeable FCP_Port to communicate its actual intent to follow the recovery procedures, so it is possible that an initiator and target might make opposite choices. There are cases, though, where either both or neither initiator and target must perform the recovery in order to preserve data integrity. A target, for example, might agree to Sequence level recovery but elect not to perform the FCP_RSP IU recovery described in section 12.4.1.5. Not being subject, then, to the restrictions in 12.4.1.5, the target would be at liberty to discard exchange information as soon as an FCP_RSP was sent. If the FCP_RSP were lost, an otherwise timely REC by the initiator would be rejected by the target with "Logical error"/ Invalid OX_ID-RX_ID combination". The initiator could then resend the FCP_CMND (per 12.4.1.3) to the detriment of data integrity. (The target would have performed the operation twice but the initiator would believe
that it had only been performed once.)

Suggested Solution:
Replace the qualifications at the heads of sections 12.4.1.3, 12.4.1.4, 12.4.1.5, 12.4.1.6, and 12.4.1.7 with: "This procedure shall be used by and only by FCP devices that have agreed to Sequence level recovery." Note the larger effect on 12.4.1.3 than on the others.

BrianHart-004 (T) Page: 82 (66 hardcopy) Location: 11.3

Problem Description:
R_A_TOV (re)definitions drop vital guarantee:: Section 11.3 states: "R_A_TOV has two separate components, labeled R_A_TOVseq_qual and R_A_TOVels." FC-FS-2 contains no mention of separate components of R_A_TOV. It's unclear whether FCP's R_A_TOV component timers inherit substance or merely name from FC-FS-2. FC-FS-2 section 20.2.1.4 provides a guarantee: "R_A_TOV represents E_D_TOV plus twice the maximum time that a frame may be delayed within a Fabric and still be delivered." The notion that R_A_TOV encompasses the maximum fabric delivery time is vital to the definition of RR_TOVseq_init (Table 30) and the recovery mechanisms that depend on it (e.g. section 12.4.1.5). If R_A_TOVels does not inherit substantially from FC-FS-2 R_A_TOV then this vital guarantee is dropped. Even if R_A_TOVels does inherit substantially from FC-FS-2 R_A_TOV, Table 30 flatly redefines the duration of R_A_TOVels as 2 or 10 seconds without mention of maximum fabric delivery time, dropping the vital guarantee.

Suggested Solution:
Amend Table 30 - Timer summary NOTE 1 to add a sentence: "R_A_TOV for ELS shall encompass the maximum time that a frame may be delayed within a Fabric and still be delivered." Note that boundedness of R_A_TOVels directly affects boundedness of RR_TOVseq_init, and so has implications for boundedness of REC_TOV.

BrianHart-005 (T) Page: 88 (72 hardcopy) Location: 12.4.1.3

Problem Description:
REC_TOV floor allows REC vs FCP_CMND race:: Section 12.4.1.3 equates REC reject (with "Logical error"/"Invalid OX_ID-RX_ID combination") to the loss of the FCP_CMND and prescribes retransmission of the FCP_CMND. But an initiator would see the same reject in the case where the REC merely arrived at the target ahead of the FCP_CMND. In that case retransmission of the FCP_CMND could result in a loss of data integrity. Arrival of REC ahead of FCP_CMND could be prevented by ensuring that REC is not transmitted until it is certain that the FCP_CMND is either delivered or lost. FC-FS-2 section 20.2.1.3 limits to three the actions whose duration is bounded by E_D_TOV; frame delivery across a fabric is not among those. Rather, FC-FS-2 section 20.2.1.4 describes R_A_TOV as the timer that encompasses the maximum frame delivery time. In order to ensure REC is not sent prematurely, REC_TOV's range must therefore encompass R_A_TOV rather than E_D_TOV.

Suggested Solution:
Replace REC_TOV range of " >= E_D_TOV + 1s" with " >= R_A_TOV" in Table 30 - Timer summary. -or- Replace section 12.4.1.3 paragraph 2 with: 'If the target reports the exchange invalid (i.e. the initiator FCP_Port receives an LS_RJT for the REC with the reason code of "Logical error" and reason code
explanation set to "Invalid OX_ID-RX_ID combination"), the initiator shall not retransmit the FCP_CMND and shall notify the application client appropriately.' Note that if 12.4.1.3 is allowed to stand a modification may still be in order. Verb "retransmit" following the parenthetical is in the imperative mood and would better be declarative: "...), the initiator shall retransmit...."

BrianHart-006  (T) Page: 81 (65 hardcopy)  Location: Table 33

Problem Description:
Lack of REC_TOV ceiling allows REC vs exchange discard race:: REC_TOV is described in the timer summary table (Table 33) as a range with a floor but no ceiling. No mechanism is provided to communicate the choice of REC_TOV between initiator and target. This allows the possibility that an initiator may choose a REC_TOV that is arbitrarily large and that differs from the REC_TOV chosen by the target. Further, section 11.5 describes REC_TOV as the "minimum polling interval" for REC and states that a duration of "at least" REC_TOV occurs before REC may be sent. REC_TOV is not a ceiling on the REC polling interval. Section 12.4.1.5 attempts to ensure that a target will maintain exchange information until a timely REC arrives by requiring that the target retain the information for up to RR_TOVseq_init after sending the FCP_RSP. Table 30 suggests RR_TOVseq_init should be ">= REC_TOV + 2xR_A_TOVels + 1s" (in the RETRY case), but this is insufficient. The target must necessarily base its RR_TOVseq_init on its own REC_TOV since it has no knowledge of the initiator's REC_TOV. The initiator's REC_TOV can be arbitrarily larger than the target's, so the target can be left with an RR_TOVseq_init that does not encompass the initiator's REC_TOV. Even when the initiator and target have sufficiently similar REC_TOV, the initiator may delay arbitrarily beyond REC_TOV before transmitting the REC, leaving the target with an RR_TOVseq_init that does not encompass the initiator's REC polling interval. If the initiator sends REC after the target's RR_TOVseq_init expires (or merely late enough in the RR_TOVseq_init interval), the REC will (may) arrive after RR_TOVseq_init has expired. The target, then, may have discarded the exchange information in accordance with 12.4.1.5 and will reject the REC with "Logical error"/"Invalid OX_ID-RX_ID combination". The initiator may respond by resending the FCP_CMND (per 12.4.1.3) to the detriment of data integrity. The initiator's REC polling interval must be constrained to ensure the REC arrives at the target before the expiration of RR_TOVseq_init. This requires a ceiling on REC polling (and so also on REC_TOV) and an effective floor on RR_TOVseq_init.

Suggested Solution:
All three of: 1) Modify section 11.5 first paragraph to add a sentence encouraging prompt polling by initiators: "....first polling for Exchange status with the REC ELS. Initiators should transmit REC promptly after REC_TOV expiration. Table 31...." -and- 2) Modify Table 30 to set an appropriate ceiling for REC_TOV, perhaps one of: ">= R_A_TOV", ">= R_A_TOV + E_D_TOV", or ">= 2xR_A_TOV". -and- 3) Modify Table 30 to set a floor for RR_TOVseq_init based on the REC_TOV ceiling, making RR_TOVseq_init's range: ">= ceil(REC_TOV) + R_A_TOV + 1s" (with "R_A_TOV" allowing time for the REC to traverse the fabric and "1s" as an allowance for initiator promptness failings). -- Or just: -- Replace section 12.4.1.3 paragraph 2 with: 'If the target reports the exchange invalid (i.e. the initiator FCP_Port receives an LS_RJT for the REC with the reason code of "Logical error" and reason code explanation set to "Invalid OX_ID-RX_ID combination"), the initiator shall
not retransmit the FCP_CMND and shall notify the application client of the problem.' Note that if 12.4.1.3 is allowed to stand a modification may still be in order. Verb "retransmit" following the parenthetical is in the imperative mood and would better be declarative: "...), the initiator shall retransmit...."

BrianHart-007 (T) Page: Location:

Problem Description:
The target must retain the exchange information not only long enough to ensure that any REC from the initiator will have arrived before discard, but additionally long enough to allow time for the target to transmit the REC ACCEPT, the ACCEPT to cross the fabric and reach the initiator, the initiator to process the ACCEPT and respond with SRR, and the SRR to cross the fabric to arrive again at the target. Practically, I think that means the target must retain the exchange information for an additional "2 x R_A_TOV + 1s" (two fabric traversals and some grace for promptness of target and initiator) _beyond_ what I had considered originally.

Suggested Solution:

KevinButt-001 (T) Page: Location: 12.4.2.3 & 4.7 - General comment

Problem Description:
There needs to be a shall statement prohibiting consecutive exchanges with the same OX_ID as well as making the clear statement that "rapid" (whatever that means) reuse of OX_ID is highly frowned upon. If a shall statement cannot be made, then a statement is needed that clearly acknowledges that rapid OX_ID reuse is dangerous behavior. It seems like rapid OX_ID reuse would create a colossal mess if command queuing were enabled.

Suggested Solution:

********************************************************************************

Comments attached to Abs ballot from Mark Seidel of Intel Corp.:

The work of our organization is not materially affected by the subject matter of this standard.

********************************************************************************

Comments attached to Abs ballot from John Goldman of Lexar Media, Inc.:

T11 is not currently pertinent to our business.

145
Comments attached to No ballot from John Lohmeyer of LSI Corp.:

LSI comment number 1 -- by George Penokie
Page ii (PDF 2), 7.9 inches from the top, 0.7 inches from the left

Abstract
The abstract is not correct as it says nothing about this version of FCP. I would suggest that putting version information is not a good idea and that the abstract should be rewritten to be more abstract.

LSI comment number 2 -- by George Penokie
Page ii (PDF 2), 8.5 inches from the top, 2.7 inches from the left

The PATENT STATEMENT should be forced to start at the top of the page.

LSI comment number 3 -- by George Penokie
Page v (PDF 5), 1.3 inches from the top, 0.9 inches from the left

The Change History needs to be deleted in the version that goes to public review.

LSI comment number 4 -- by George Penokie
Page 1 (PDF 17), 7.3 inches from the top, 1.4 inches from the left

There is no reference to SAM-3 in this standard so this << ANSI/INCITS 402-2005, SCSI Architecture Model - 3 (SAM-3) >> should be deleted.

LSI comment number 5 -- by George Penokie
Page 2 (PDF 18), 4.6 inches from the top, 0.7 inches from the left

This << Class 4) See >> needs a period << Class 4). See >>

LSI comment number 6 -- by George Penokie
Page 3 (PDF 19), 9.0 inches from the top, 2.8 inches from the left

This << An encoded 64-bit identifier for a logical unit. >> should be changed to << An identifier for a logical unit. >>

LSI comment number 7 -- by George Penokie
Page 3 (PDF 19), 1.4 inches from the top, 2.0 inches from the left

This << The term used in FC-FS-3 to describe removing >> should be << Removing >> as the reset is redundant with the << See FC-FS-3 >> statement.

LSI comment number 8 -- by George Penokie
Page 3 (PDF 19), 5.4 inches from the top, 0.9 inches from the left

This << performs the operations described in >> should be << performs I_T nexus loss operations described in >>
You have a definition for the term "initiator" but there is no corresponding definition for the term "target". One solution would be to delete this term as it is only used about 10 times and change all the usages to something more specific like SCSI initiator device which would also have to be defined but at least you would be in line with SAM-4 that way. In either case you have add in the corresponding target definition.

You need to set frame so it will not split a hyphen across lines.

There is no such thing as a SCSI target/initiator port in SAM-4 so this "or of a SCSI target/initiator port when operating as a SCSI initiator port" needs to be deleted.

There is no definition of a "FCP device". One needs to be added to the list of definitions.

This "A SCSI target device object, containing a device server and task manager, that implements a device model and manages tasks to process commands sent by an application client. See SAM-4." should be changed to "An externally addressable entity within a SCSI target device that implements a SCSI device model and contains a device server. See SAM-4." depending on if it is an complete list or a list of examples. The "such as" implies it is a complete list.
This << FC-2 layer. It may act as an >> should be << FC-2 layer that may act as an >>

LSI comment number 16 -- by George Penokie
Page 4 (PDF 20), 9.2 inches from the top, 2.1 inches from the left

This << A device that originates or services SCSI commands.>> should be << A device that contains one or more SCSI ports that are connected to a service delivery subsystem and supports a SCSI application protocol. >>

LSI comment number 17 -- by George Penokie
Page 4 (PDF 20), 9.5 inches from the top, 5.1 inches from the left

There are no more linked command in SAM-4 so this << a series of linked SCSI commands, >> needs to be deleted.

LSI comment number 18 -- by George Penokie
Page 5 (PDF 21), 1.5 inches from the top, 0.9 inches from the left

There is no such thing as a SCSI target/initiator port in SAM-4 so this << or 
a SCSI target/initiator port operating as a SCSI initiator port >> needs to be deleted.

LSI comment number 19 -- by George Penokie
Page 5 (PDF 21), 4.2 inches from the top, 0.9 inches from the left

There is no such thing as a SCSI target/initiator port in SAM-4 so this << or 
of a SCSI target/initiator port when operating as a SCSI target port >> needs to be deleted.

LSI comment number 20 -- by George Penokie
Page 5 (PDF 21), 9.2 inches from the top, 0.8 inches from the left

Remove all the periods from the abbreviations descriptions.

LSI comment number 21 -- by George Penokie
Page 6 (PDF 22), 6.5 inches from the top, 4.2 inches from the left

LUN needs to be added to the acronyms list.

LSI comment number 22 -- by George Penokie
Page 7 (PDF 23), 2.4 inches from the top, 0.9 inches from the left

This is not a keyword and should be deleted << 3.3.1expected: A keyword used to describe the behavior of the hardware or software in the design models assumed by this standard. Other hardware and software design models may also be implemented. >>

LSI comment number 23 -- by George Penokie
Page 7 (PDF 23), 8.3 inches from the top, 0.9 inches from the left
LSI comment number 24 -- by George Penokie
Page 8 (PDF 24), 3.3 inches from the top, 0.5 inches from the left
------------------------------------------------------------------------
This is not an accurate description of the conventions. I recommend you copy section 3.4 from SAS-2 here.

LSI comment number 25 -- by George Penokie
Page 9 (PDF 25), 2.6 inches from the top, 0.9 inches from the left
------------------------------------------------------------------------
Give me a break, this sentence is just too much << The FC-2 layer may be treated as a very powerful delivery service with information grouping and several defined classes of service. >> it should be << The FC-2 layer is a delivery service with information grouping and several defined classes of service. >>

LSI comment number 26 -- by George Penokie
Page 10 (PDF 26), 5.2 inches from the top, 0.7 inches from the left
------------------------------------------------------------------------
You need to set frame so it will not split a hyphen across lines.

LSI comment number 27 -- by George Penokie
Page 10 (PDF 26), 6.4 inches from the top, 0.7 inches from the left
------------------------------------------------------------------------
Linked command are no longer defined so this << or a list of linked requests >> should be deleted.

LSI comment number 28 -- by George Penokie
Page 11 (PDF 27), 6.3 inches from the top, 6.4 inches from the left
------------------------------------------------------------------------
There is no more linking so << no command linking >> this should be deleted.

LSI comment number 29 -- by George Penokie
Page 11 (PDF 27), 6.9 inches from the top, 0.9 inches from the left
------------------------------------------------------------------------
There is not linking so this << sequence of the Exchange. The device server determines whether additional linked commands are to be performed in the FCP I/O operation. If this is the last or only command processed in the FCP I/O operation, the FCP I/O operation and the >> should be << sequence of the Exchange, then the FCP I/O operation and the >>

LSI comment number 30 -- by George Penokie
Page 11 (PDF 27), 9.9 inches from the top, 0.9 inches from the left
------------------------------------------------------------------------
No linking so delete << If the command is linked to another command, the FCP_RSP IU payload shall contain the proper status (i.e., INTERMEDIATE or INTERMEDIATE-CONDITION MET) indicating that another command shall be processed. The target FCP_Port shall present the FCP_RSP using the IU that allows command linking, T5 (see 9.1). The initiator FCP_Port shall continue the same Exchange with an FCP_CMND IU, beginning the next SCSI >>

LSI comment number 31 -- by George Penokie
No linking so delete << command. All SCSI commands linked in the FCP I/O operation except the last are processed in the manner described above. SAM-4 defines the cases that interrupt and terminate a series of linked commands. In those cases, the FCP_RSP IU of the last command in the set of linked commands shall be transmitted using the IU that does not allow command linking, I4 (see 9.1). See 4.5. >>

LSI comment number 32 -- by George Penokie
Page 12 (PDF 28), 4.9 inches from the top, 5.7 inches from the left
This << the RDDATA and WRDATA bits >> should be << the RDDATA bit and WRDATA bit >>

LSI comment number 33 -- by George Penokie
Page 12 (PDF 28), 5.3 inches from the top, 2.3 inches from the left
This << the RDDATA and WRDATA bit >> should be << the RDDATA bit and WRDATA bit >>

LSI comment number 34 -- by George Penokie
Page 12 (PDF 28), 5.7 inches from the top, 2.7 inches from the left
This << the RDDATA and WRDATA bits >> should be << the RDDATA bit and WRDATA bit >>

LSI comment number 35 -- by George Penokie
Page 12 (PDF 28), 6.3 inches from the top, 5.3 inches from the left
This << the RDDATA and WRDATA bits >> should be << the RDDATA bit and WRDATA bit >>

LSI comment number 36 -- by George Penokie
Page 12 (PDF 28), 8.1 inches from the top, 0.7 inches from the left
SAM-4 does no such thing as << SAM-4 defines a mechanism to assure ordering of commands >> so it should be deleted.

LSI comment number 37 -- by George Penokie
Page 12 (PDF 28), 9.3 inches from the top, 4.3 inches from the left
This << MODE SENSE and MODE SELECT commands to >> should be << MODE SENSE command and MODE SELECT command to >>

LSI comment number 38 -- by George Penokie
Page 12 (PDF 28), 9.7 inches from the top, 0.7 inches from the left
This << and set the enable precise delivery checking (EPDC) bit in the Fibre Channel Logical Unit Control mode page. See 10.3. >> should be << and set the EPDC bit in the Fibre Channel Logical Unit Control mode page to one (see 10.3). >>

LSI comment number 39 -- by George Penokie
Page 13 (PDF 29), 6.5 inches from the top, 5.3 inches from the left
This << management algorithms. See SAM-4; >> should be << management algorithms (see SAM-4); >>

LSI comment number 40 -- by George Penokie
Page 13 (PDF 29), 7.4 inches from the top, 6.9 inches from the left
This << that used for >> should be << that are used for >>.

LSI comment number 41 -- by George Penokie
Page 13 (PDF 29), 8.7 inches from the top, 2.5 inches from the left
This << (see 6.3.5) is used to negotiate >> should be << (see 6.3.5) are used to negotiate >>

LSI comment number 42 -- by George Penokie
Page 13 (PDF 29), 9.1 inches from the top, 0.9 inches from the left
This << Parameter page, the target >> should be << Parameter page, then the target >>

LSI comment number 43 -- by George Penokie
Page 14 (PDF 30), 5.0 inches from the top, 5.7 inches from the left
This << and >> should be << or >>

LSI comment number 44 -- by George Penokie
Page 14 (PDF 30), 3.5 inches from the top, 0.7 inches from the left
No linking so delete << If command linking is being performed, the target FCP_Port shall not request confirmed completion for an FCP_RSP IU containing INTERMEDIATE or INTERMEDIATE-CONDITION MET status. The target FCP_Port may request confirmed completion:
a) when providing the FCP_RSP IU for the last command of the set of linked commands; or
b) when providing the FCP_RSP IU for a command that terminates linking because of an error or CHECK CONDITION status. >>

LSI comment number 45 -- by George Penokie
Page 14 (PDF 30), 3.7 inches from the top, 5.5 inches from the left
This << Particular examples include: >> should be << Examples include: >>

LSI comment number 46 -- by George Penokie
Page 14 (PDF 30), 9.1 inches from the top, 5.8 inches from the left
This << page (see 6.3.4 and 6.3.5): >> should be << page (see 6.3.4 and 6.3.5), then: >>

LSI comment number 47 -- by George Penokie
Page 15 (PDF 31), 2.0 inches from the top, 0.9 inches from the left

This << request) The particular case that has been identified as a problem is related to the recovery procedure diagrammed in figure C.7. >> should be << request) (see figure C.7 for a case in which task retry identification may be used to detect that sense recovery is needed). >>

LSI comment number 48 -- by George Penokie
Page 15 (PDF 31), 2.0 inches from the top, 3.2 inches from the left

In a new paragraph. Change this <<it is possible that initiator >> to << For example, it is possible that initiator >>

LSI comment number 49 -- by George Penokie
Page 15 (PDF 31), 3.1 inches from the top, 0.9 inches from the left

This << Many small variations on this scenario may exist >> is not needed when the <<for example >> is added

LSI comment number 50 -- by George Penokie
Page 15 (PDF 31), 3.6 inches from the top, 4.9 inches from the left

There is no definition of this term << task retry identifier >>. One needs to be added to the glossary.

LSI comment number 51 -- by George Penokie
Page 15 (PDF 31), 4.2 inches from the top, 0.9 inches from the left

This << unambiguously relating them to the particular command >> adds nothing and should be deleted.

LSI comment number 52 -- by George Penokie
Page 15 (PDF 31), 4.3 inches from the top, 4.1 inches from the left

This << the FCP_CMND IU, REC ELS, and SRR FCP_LS frames. >> should be << the FCP_CMND IU frame, REC ELS frame, and SRR FCP_LS frame. >>

LSI comment number 53 -- by George Penokie
Page 17 (PDF 33), 6.7 inches from the top, 1.8 inches from the left

This << not configured) the target FCP_Port >> should be << not configured), then the target FCP_Port >>

LSI comment number 54 -- by George Penokie
Page 17 (PDF 33), 7.1 inches from the top, 4.3 inches from the left
This << and >> should be << or >>

LSI comment number 55 -- by George Penokie
Page 18 (PDF 34), 5.0 inches from the top, 0.7 inches from the left
-- -------------------------------------------------------------
This justification << To be compliant with FC-FS-3, >> is not needed and should be deleted.

LSI comment number 56 -- by George Penokie
Page 19 (PDF 35), 5.1 inches from the top, 4.8 inches from the left
-- -------------------------------------------------------------
This << command code); >> should be << command code); or>>

LSI comment number 57 -- by George Penokie
Page 19 (PDF 35), 7.3 inches from the top, 0.9 inches from the left
-- -------------------------------------------------------------
This << Tables 7 and 8 summarize >> has to be << Table 7 and table 8 summarize >>

LSI comment number 58 -- by George Penokie
Page 19 (PDF 35), 8.5 inches from the top, 0.9 inches from the left
-- -------------------------------------------------------------
Most if not all of this belongs in the table footer. At a minimum the Y, N, and - need to be places in a Key list. Also single quotes indicate a character string which is not correct here. This all needs to be fixed. << A Â“YÂ” in the corresponding column indicates the clearing effect upon successful completion of the specified action. The clearing effects are applicable only to Sequences and Exchanges associated with Fibre Channel Protocol actions. Sequences and Exchanges associated with other actions follow rules specified in FC-FS-3 or other relevant protocol standards. An Â“NÂ” in the corresponding column indicates the clearing effect is not performed by the specified action. A Â“-Â” in the column indicates that the clearing effect is not applicable. Rows indicating a clearing effect for all initiator FCP_Ports have the specified clearing effect on all initiator FCP_Ports, regardless of the link that attaches the initiator FCP_Port to the target FCP_Port. >>

LSI comment number 59 -- by George Penokie
Page 20 (PDF 36), 5.3 inches from the top, 2.4 inches from the left
-- -------------------------------------------------------------
This << LIP(AL_PD,AL_PS), the >> should be << LIP(AL_PD,AL_PS), then the >>

LSI comment number 60 -- by George Penokie
Page 20 (PDF 36), 5.7 inches from the top, 3.9 inches from the left
-- -------------------------------------------------------------
This << receiving NL_Port, the receiving >> should be << receiving NL_Port, then the receiving >>

LSI comment number 61 -- by George Penokie
Page 21 (PDF 37), 5.6 inches from the top, 2.7 inches from the left
-- -------------------------------------------------------------
This << ABTS-LS that also has the >> should be << ABTS-LS which has the >>

LSI comment number 62 -- by George Penokie
Page 21 (PDF 37), 8.6 inches from the top, 0.9 inches from the left
This << An NL_Port shall deliver a Transport Reset notification (see SAM-4) for a Reset LIP(y,x) (see FC-AL-2) FC link event if the AL_PD matches the AL_PA of the receiving NL_Port. >> should be << If the AL_PD matches the AL_PA of the receiving NL_Port, then an NL_Port shall deliver a Transport Reset notification (see SAM-4) for a Reset LIP(y,x) (see FC-AL-2) FC link event. >>

LSI comment number 63 -- by George Penokie
Page 22 (PDF 38), 5.1 inches from the top, 0.7 inches from the left
This << Addressability of logical units uses the FCP_LUN field provided in the FCP_CMND IU. >> should be << Addresses of logical units are contained in the FCP_LUN field of FCP_CMD IUs. >>

LSI comment number 64 -- by George Penokie
Page 22 (PDF 38), 8.4 inches from the top, 1.2 inches from the left
This << registration and reservation to the initiator >> should be << registration and persistent reservation to the initiator >>

LSI comment number 65 -- by George Penokie
Page 25 (PDF 41), 5.4 inches from the top, 3.1 inches from the left
This << will be >> should be << is >>

LSI comment number 66 -- by George Penokie
Page 25 (PDF 41), 5.6 inches from the top, 1.2 inches from the left
This << condition. Consider the case where the target FCP_Port WWPN is larger than the initiator FCP_Port WWPN. In this case the target FCP_Port PLOGI ELS request will be processed, but the target FCP_Port is prohibited from transmitting a PRLI ELS. If the initiator FCP_Port does not transmit a PRLI ELS, a deadlock occurs. >> should be << condition (e.g., if the target FCP_Port WWPN is larger than the initiator FCP_Port WWPN, then the target FCP_Port PLOGI ELS request is processed, but the target FCP_Port is prohibited from transmitting a PRLI ELS. If the initiator FCP_Port does not transmit a PRLI ELS, a deadlock occurs). >>

LSI comment number 67 -- by George Penokie
Page 26 (PDF 42), 4.8 inches from the top, 5.5 inches from the left
This << Port capabilities, a single image >> should be << Port capabilities, then a single image >>

LSI comment number 68 -- by George Penokie
Page 26 (PDF 42), 5.4 inches from the top, 2.1 inches from the left
This << IMAGE PAIR ESTABLISHED bit in the PRLI ELS accept >> should be << IMAGE PAIR ESTABLISHED bit set to one in the PRLI ELS accept >>

LSI comment number 69 -- by George Penokie
Page 27 (PDF 43), 1.5 inches from the top, 1.5 inches from the left

This << condition that would normally be performed and established >> should be << condition that are normally performed and established >>

LSI comment number 70 -- by George Penokie
Page 28 (PDF 44), 5.0 inches from the top, 6.4 inches from the left

this << logical units, the >> should be << logical units, then the >>

LSI comment number 71 -- by George Penokie
Page 28 (PDF 44), 8.0 inches from the top, 0.7 inches from the left

I have no idea what the << it >> is in this statement << then it shall be used
>> this needs to be fixed.

LSI comment number 72 -- by George Penokie
Page 28 (PDF 44), 1.5 inches from the top, 0.7 inches from the left

This << bit shall be zero, >> should be << bit shall be set to zero, >>

LSI comment number 73 -- by George Penokie
Page 28 (PDF 44), 2.2 inches from the top, 0.7 inches from the left

This << bit shall be zero, >> should be << bit shall be set to zero, >>

LSI comment number 74 -- by George Penokie
Page 28 (PDF 44), 3.1 inches from the top, 0.7 inches from the left

These two paragraphs << If the ESTABLISH IMAGE PAIR bit is set to zero, the PRLI ELS only exchanges service parameters as defined in FC-LS. If the ESTABLISH IMAGE PAIR bit is set to one, the PRLI ELS exchanges service parameters and attempts to establish an image pair as defined in FC-LS. >> should be combined to be one paragraph.

LSI comment number 75 -- by George Penokie
Page 28 (PDF 44), 4.2 inches from the top, 3.1 inches from the left

In most cases you are using <<when>> in the bit descriptions. Therefore you should change this <<If >> to a << When >>.

LSI comment number 76 -- by George Penokie
Page 28 (PDF 44), 4.4 inches from the top, 2.0 inches from the left

In most cases you are using <<when>> in the bit descriptions. Therefore you should change this <<If >> to a << When >>.

LSI comment number 77 -- by George Penokie
Page 29 (PDF 45), 2.1 inches from the top, 6.0 inches from the left
This << only if the RETRY bit is set in >> should be << only if the RETRY bit is set to one in >>

LSI comment number 78 -- by George Penokie
Page 29 (PDF 45), 3.1 inches from the top, 4.2 inches from the left
This << capability, overlay of data >> should be << capability, then overlay of data >>

LSI comment number 79 -- by George Penokie
Page 29 (PDF 45), 8.2 inches from the top, 1.3 inches from the left
This << the process does not have >> does not compute. Process is a verb but it appears to be being used as a noun here. This needs to be fixed.

LSI comment number 80 -- by George Penokie
Page 29 (PDF 45), 8.4 inches from the top, 0.9 inches from the left
This << the INITIATOR FUNCTION and the TARGET FUNCTION bits may be >> should be << the INITIATOR FUNCTION bit and the TARGET FUNCTION bit may be >>

LSI comment number 81 -- by George Penokie
Page 31 (PDF 47), 9.6 inches from the top, 6.9 inches from the left
In most cases you are using <<when>> in the bit descriptions. Therefore you should change this <<If >> to a << When >>.

LSI comment number 82 -- by George Penokie
Page 32 (PDF 48), 1.2 inches from the top, 0.7 inches from the left
In most cases you are using <<when>> in the bit descriptions. Therefore you should change this <<If >> to a << When >>.

LSI comment number 83 -- by George Penokie
Page 34 (PDF 50), 3.6 inches from the top, 5.0 inches from the left
This << possible >> adds nothing and should be deleted.

LSI comment number 84 -- by George Penokie
Page 34 (PDF 50), 3.6 inches from the top, 6.5 inches from the left
This << The object is a >> should be << The FC-4 Features object is a >>

LSI comment number 85 -- by George Penokie
Page 34 (PDF 50), 7.1 inches from the top, 6.1 inches from the left
This << The object is provided >> should be << The FC-4 Features object is provided >>

LSI comment number 86 -- by George Penokie
Page 36 (PDF 52), 2.6 inches from the top, 0.7 inches from the left

What in the world does this mean << unless unusual conditions make the retransmission impossible >>? Unless this can be quantified better it should be deleted as the << should >> allows for that.

LSI comment number 87 -- by George Penokie
Page 36 (PDF 52), 6.8 inches from the top, 6.0 inches from the left

This << field shall be zero >> should be << field shall be set to zero >>

LSI comment number 88 -- by George Penokie
Page 37 (PDF 53), 3.6 inches from the top, 0.9 inches from the left

This << A four-byte reason code shall be contained in the Data_Field >> give misleading and confusing information. It should be << A reason code shall be contained in word 1 of the FCP_RJT payload >>

LSI comment number 89 -- by George Penokie
Page 37 (PDF 53), 5.3 inches from the top, 3.4 inches from the left

This << contain a reason code and reason code explanation for rejecting the >> should be << contain a reason code, reason code explanation, and vendor specific information, if any, for rejecting the >>

LSI comment number 90 -- by George Penokie
Page 38 (PDF 54), 4.2 inches from the top, 5.0 inches from the left

This << This indicates that >> is not stated in any of the other descriptions and is not need here so it should be deleted.

LSI comment number 91 -- by George Penokie
Page 39 (PDF 55), 4.6 inches from the top, 1.2 inches from the left

Linked commands are no longer defined in SAM-4. So these should be deleted.

LSI comment number 92 -- by George Penokie
Page 39 (PDF 55), 5.5 inches from the top, 1.5 inches from the left

This << T5, T7, T8, T9, T10, and T11 are obsolete >> should be << T3, T4, T5, T7, T8, T9, T10, and T11 are obsolete >>

LSI comment number 93 -- by George Penokie
Page 39 (PDF 55), 5.7 inches from the top, 2.0 inches from the left

Should be deleted as linked commands are no more.

LSI comment number 94 -- by George Penokie
Page 39 (PDF 55), 5.9 inches from the top, 1.5 inches from the left

This << T3 and T4 are only permitted for linked SCSI commands >> should be
deleted as linked commands are no more.

LSI comment number 95 -- by George Penokie
Page 39 (PDF 55), 6.1 inches from the top, 2.0 inches from the left
 Should be deleted as linked commands are no more.

LSI comment number 96 -- by George Penokie
Page 40 (PDF 56), 3.5 inches from the top, 1.9 inches from the left
 Should be deleted as linked commands are no more.

LSI comment number 97 -- by George Penokie
Page 40 (PDF 56), 4.1 inches from the top, 2.1 inches from the left
 This << for linked SCSI commands or >> should be deleted as linked commands are no more.

LSI comment number 98 -- by George Penokie
Page 41 (PDF 57), 9.0 inches from the top, 2.1 inches from the left
 This << contains a valid logical unit address the command or >> should be << contains a valid LUN the command or >>

LSI comment number 99 -- by George Penokie
Page 41 (PDF 57), 3.8 inches from the top, 4.6 inches from the left
 This << (N-27)/4 >> should be << (n-27)/4 >>

LSI comment number 100 -- by George Penokie
Page 41 (PDF 57), 8.1 inches from the top, 6.0 inches from the left
 This << (i.e., the logical unit number) >> should be << (i.e., the LUN) >>

LSI comment number 101 -- by George Penokie
Page 42 (PDF 58), 2.7 inches from the top, 0.7 inches from the left
 This << shall be reserved and set to zero and >> has to either << is reserved and >> or << shall be set to zero and >>, as you cannot put requirements on a field that is reserved as reserved is a defined key word.

LSI comment number 102 -- by George Penokie
Page 42 (PDF 58), 6.6 inches from the top, 3.3 inches from the left
 Having two table sells in the description of SIMPLE does no make any sense. The 2 should be combined to one and stated as << Requests that the task be managed according to the rules for a simple task attribute and priority, if implemented (see SAM-4).>>

LSI comment number 103 -- by George Penokie
Page 43 (PDF 59), 6.7 inches from the top, 1.6 inches from the left
This << The FCP_CDB field is honored instead. >> should be << The TASK MANAGEMENT FLAGS field is ignored. >>

LSI comment number 104 -- by George Penokie
Page 43 (PDF 59), 7.4 inches from the top, 1.6 inches from the left

This << INQUIRY data (see SPC-4) and it shall not be sent to a logical unit with a NORMACA bit equal to zero in the standard INQUIRY data. >> should be << INQUIRY data (see SPC-4). A CLEAR ACA task management function shall not be sent to a logical unit if the NORMACA bit is set to zero in the standard INQUIRY data. >>

LSI comment number 105 -- by George Penokie
Page 43 (PDF 59), 8.3 inches from the top, 3.9 inches from the left

This << target FCP_Port as shown in 4.10. >> should be << target FCP_Port (see 4.10). >>

LSI comment number 106 -- by George Penokie
Page 43 (PDF 59), 9.1 inches from the top, 4.0 inches from the left

This << target FCP_Port as shown in 4.10. >> should be << target FCP_Port (see 4.10). >>

LSI comment number 107 -- by George Penokie
Page 44 (PDF 60), 1.7 inches from the top, 1.0 inches from the left

It's not important why the timeout occurred so this << Subsequent retries fail because the task resources have been cleared in the logical unit, so the initiator FCP_Port shall clear >> should be << If a timeout occurs the initiator FCP_Port shall clear >>

LSI comment number 108 -- by George Penokie
Page 44 (PDF 60), 1.7 inches from the top, 5.7 inches from the left

Global:
This structure << See 12.3. >> should only be used in glossary entries. In all other cases it should be << (see xx.x). >> as it is not clear what the see is refering to.

LSI comment number 109 -- by George Penokie
Page 44 (PDF 60), 3.3 inches from the top, 5.5 inches from the left

This << logical unit as shown in 4.10. >> should be << logical unit (see 4.10). >>

LSI comment number 110 -- by George Penokie
Page 44 (PDF 60), 4.6 inches from the top, 1.0 inches from the left
It's not important why the timeout occurred so this << Subsequent retries fail
because the task resources have been cleared in the logical unit, so the
initiator FCP_Port shall clear >> should be << If a timeout occurs the
initiator FCP_Port shall clear >>

LSI comment number 111 -- by George Penokie
Page 44 (PDF 60), 0.7 inches from the top, 0.7 inches from the left
---------------------------------------------------------------------
This << The use of the ACA bit in the CDB >> has to be << The use of the NACA
bit in the CDB >> as there is no such thing as an ACA bit in the CDB.

LSI comment number 112 -- by George Penokie
Page 44 (PDF 60), 0.7 inches from the top, 0.7 inches from the left
---------------------------------------------------------------------
This << RDDATA and WRDATA bits >> should be << RDDATA bit and WRDATA bit >>

LSI comment number 113 -- by George Penokie
Page 45 (PDF 61), 0.7 inches from the top, 0.7 inches from the left
---------------------------------------------------------------------
This << and a SCSI write operation. This is a bidirectional SCSI command.
The >> should be << and a SCSI write operation (i.e., a bidirectional SCSI
command). The >>

LSI comment number 114 -- by George Penokie
Page 46 (PDF 62), 0.7 inches from the top, 0.7 inches from the left
---------------------------------------------------------------------
This << If either RDDATA or WRDATA is set to zero >> should be << If either
the RDDATA bit or WRDATA bit is set to zero >>

LSI comment number 115 -- by George Penokie
Page 46 (PDF 62), 0.7 inches from the top, 0.7 inches from the left
---------------------------------------------------------------------
This << field if requested. >> should be << field when requested. >> as I
assume the data will be requested at some point.

LSI comment number 116 -- by George Penokie
Page 47 (PDF 63), 0.7 inches from the top, 0.7 inches from the left
---------------------------------------------------------------------
This << This is the same as the SAM-4 application >> should be << This is
equivalent to the SAM-4 application >>

LSI comment number 117 -- by George Penokie
Page 47 (PDF 63), 0.7 inches from the top, 0.7 inches from the left
---------------------------------------------------------------------
This << is the same as the SCSI data delivery request >> should be << is
equivalent to the SCSI data delivery request >>

LSI comment number 118 -- by George Penokie
Page 49 (PDF 65), 0.7 inches from the top, 0.7 inches from the left
---------------------------------------------------------------------
This << Bytes 10 and 11 shall >> should be << Byte 10 and byte 11 shall >>

LSI comment number 119 -- by George Penokie
This << fields in bytes 10 and 11 summarize >> should be << fields in byte 10 and byte 11 summarize >>

LSI comment number 120 -- by George Penokie
Page 50 (PDF 66), 2.3 inches from the top, 0.7 inches from the left
This is no linking any more so this should be deleted << If command linking is being performed, an FCP_RSP IU is provided for each command. For linked commands, INTERMEDIATE status or INTERMEDIATE - CONDITION MET status indicates successful completion of a command with no other information valid if all other fields are zero. If command linking is requested, the use of the INTERMEDIATE or INTERMEDIATE-CONDITION MET status indicates that linking shall be performed. The LINKED COMMAND COMPLETE or LINKED COMMAND COMPLETE (WITH FLAG) Service Response defined by SAM-4 is implicit in the presentation of INTERMEDIATE or INTERMEDIATE-CONDITION MET status in the FCP_RSP IU. >>

LSI comment number 121 -- by George Penokie
Page 51 (PDF 67), 9.0 inches from the top, 0.9 inches from the left
This << FCP_BIDI_READ_RESID_OVER and FCP_BIDI_READ_RESID_UNDER bits >> should be << FCP_BIDI_READ_RESID_OVER bit and FCP_BIDI_READ_RESID_UNDER bit >>

LSI comment number 122 -- by George Penokie
Page 51 (PDF 67), 9.3 inches from the top, 0.9 inches from the left
This << FCP_BIDI_READ_RESID_OVER and FCP_BIDI_READ_RESID_UNDER bits >> should be << FCP_BIDI_READ_RESID_OVER bit and FCP_BIDI_READ_RESID_UNDER bit >>

LSI comment number 123 -- by George Penokie
Page 52 (PDF 68), 1.8 inches from the top, 0.7 inches from the left
You really can't put a requirement on the application to check something. So this << The application client shall examine the >> should be << The application client should examine the >>

LSI comment number 124 -- by George Penokie
Page 52 (PDF 68), 2.9 inches from the top, 1.2 inches from the left
You really can't put a requirement on the application to check something. So this << The application client shall examine the >> should be << The application client should examine the >>

LSI comment number 125 -- by George Penokie
Page 52 (PDF 68), 4.8 inches from the top, 3.9 inches from the left
You really can't put a requirement on the application to check something. So this << The application client shall examine the >> should be << The
application client should examine the >>

LSI comment number 126 -- by George Penokie
Page 52 (PDF 68), 5.8 inches from the top, 0.7 inches from the left
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - 
This << bytes that could not be transferred >> should be << bytes that were not transferred >>

LSI comment number 127 -- by George Penokie
Page 52 (PDF 68), 5.8 inches from the top, 4.3 inches from the left
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - 
You really can't put a requirement on the application to check something. So this << The application client shall examine the >> should be << The application client should examine the >>

LSI comment number 128 -- by George Penokie
Page 52 (PDF 68), 6.9 inches from the top, 0.7 inches from the left
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - 
You really can't put a requirement on the application to check something. So this << The application client shall examine the >> should be << The application client should examine the >>

LSI comment number 129 -- by George Penokie
Page 52 (PDF 68), 8.3 inches from the top, 0.7 inches from the left
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - 
You really can't put a requirement on the application to check something. So this << The application client shall examine the >> should be << The application client should examine the >>

LSI comment number 130 -- by George Penokie
Page 53 (PDF 69), 5.2 inches from the top, 2.7 inches from the left
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - 
There is no requirement from whom to verify that the ...? I'm guessing it's the device server. If that is the case then this << There is no requirement to verify that the >> should be << There is no requirement for the device server to verify that the >>

LSI comment number 131 -- by George Penokie
Page 53 (PDF 69), 7.7 inches from the top, 1.1 inches from the left
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - 
This << FCP_RESID, FCP_SNS_LEN, and FCP_RSP_LEN fields if the FCP_RESID_UNDER, FCP_RESID_OVER, FCP_SNS_LEN_VALID, and FCP_RSP_LEN_VALID bits were >> should be << FCP_RESID field, FCP_SNS_LEN field, and FCP_RSP_LEN field if the FCP_RESID_UNDER bit, FCP_RESID_OVER bit, FCP_SNS_LEN_VALID bit, and FCP_RSP_LEN_VALID bit were >>

LSI comment number 132 -- by George Penokie
Page 54 (PDF 70), 1.5 inches from the top, 4.6 inches from the left
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - 
There is no requirement from whom to verify that the ...? I'm guessing it's the device server. If that is the case then this << There is no requirement to
verify that the >> should be << There is no requirement for the device server
to verify that the >>

LSI comment number 133 -- by George Penokie
Page 54 (PDF 70), 4.2 inches from the top, 1.2 inches from the left
This << FCP_BIDI_READ_RESID_UNDER and the FCP_RESID_OVER bits >> should be << FCP_BIDI_READ_RESID_UNDER bit and the FCP_RESID_OVER bit >>

LSI comment number 134 -- by George Penokie
Page 57 (PDF 73), 6.7 inches from the top, 0.9 inches from the left
This << normally the Fibre Channel interface circuitry >> contains no information useful to this standard and should be deleted.

LSI comment number 135 -- by George Penokie
Page 58 (PDF 74), 8.1 inches from the top, 0.7 inches from the left
All this should be above the table 29. And it should have some kind of introduction like << This mode page uses interconnection tenancy to define a period of time when ... >>
Move this << An interconnect tenancy is the period of time when an FCP device
owns or may access a shared Fibre Channel interconnect. For arbitrated loops
(see FC-AL-2) and Fibre Channel Class 1 connections, a tenancy typically
begins when an FCP device successfully opens the connection and ends when
the FCP device releases the connection for use by other device pairs. Data and
other information transfers take place during interconnect tenancies.
Point-to-point or fabric-attached Class 2 or Class 3 links and many other
configurations do not have a concept of interconnect tenancy and may perform
transfers at any time. >>

LSI comment number 136 -- by George Penokie
Page 59 (PDF 75), 9.7 inches from the top, 0.9 inches from the left
This << This value shall be implemented by all FCP devices. >> should be << The
no limit option (i.e., the zero value) shall be implemented by all FCP devices. >>

LSI comment number 137 -- by George Penokie
Page 60 (PDF 76), 5.0 inches from the top, 1.3 inches from the left
This << The FAA bit controls >> needs the have the full name of the bit
listed. It should be << The xxxx xxxx xxxx (FAA) bit controls >>.

LSI comment number 138 -- by George Penokie
Page 60 (PDF 76), 3.9 inches from the top, 1.2 inches from the left
This << FAA, FAB, FAC bits >> should be << FAA bit, FAB bit , and FAC bit >>
LSI comment number 139 -- by George Penokie
Page 60 (PDF 76), 5.2 inches from the top, 0.7 inches from the left
----------------------------------------
This << The FAA bit controls arbitration when the target FCP_Port has one or
more FCP_DATA IU frames to transmit to an initiator FCP_Port. >> should be in
it's own paragraph.

LSI comment number 140 -- by George Penokie
Page 60 (PDF 76), 5.4 inches from the top, 0.7 inches from the left
----------------------------------------
This << The FAB bit controls >> needs the have the full name of the bit
listed. It should be << The xxxx xxxx xxxx (FAB) bit controls >>.

LSI comment number 141 -- by George Penokie
Page 60 (PDF 76), 5.9 inches from the top, 0.7 inches from the left
----------------------------------------
This << The FAC bit controls >> needs the have the full name of the bit
listed. It should be << The xxxx xxxx xxxx (FAC) bit controls >>.

LSI comment number 142 -- by George Penokie
Page 60 (PDF 76), 9.6 inches from the top, 4.2 inches from the left
----------------------------------------
This << value of this parameter to adjust internal >> should be << value of
this field to adjust internal >>

LSI comment number 143 -- by George Penokie
Page 61 (PDF 77), 1.8 inches from the top, 2.1 inches from the left
----------------------------------------
This << the MODE SENSE and MODE SELECT command >> should be << the MODE
SENSE command and MODE SELECT command >>

LSI comment number 144 -- by George Penokie
Page 61 (PDF 77), 5.3 inches from the top, 3.9 inches from the left
----------------------------------------
This << bit of one indicates that >> should be << bit set to one indicates
that >>

LSI comment number 145 -- by George Penokie
Page 61 (PDF 77), 6.2 inches from the top, 3.6 inches from the left
----------------------------------------
This << the MODE SENSE and MODE SELECT command >> should be << the MODE
SENSE command and MODE SELECT command >>

LSI comment number 146 -- by George Penokie
Page 61 (PDF 77), 8.1 inches from the top, 0.9 inches from the left
----------------------------------------
This << logical unit 0 >> should be << LUN 0 >> as that is what it is called
in SAM-4.

LSI comment number 147 -- by George Penokie
Page 61 (PDF 77), 8.1 inches from the top, 4.4 inches from the left
----------------------------------------
This << logical unit 0 >> should be << LUN 0 >> as that is what it is called in SAM-4.

LSI comment number 148 -- by George Penokie
Page 61 (PDF 77), 8.2 inches from the top, 4.7 inches from the left
 This << the MODE SENSE and MODE SELECT command >> should be << the MODE SENSE command and MODE SELECT command >>

LSI comment number 149 -- by George Penokie
Page 61 (PDF 77), 8.7 inches from the top, 0.9 inches from the left
 This << Some of the bits defined by the Fibre Channel >> should be << Some of the bits values defined by the Fibre Channel >>

LSI comment number 150 -- by George Penokie
Page 61 (PDF 77), 8.7 inches from the top, 5.0 inches from the left
 This << page require the FCP_Port to violate one >> should be << page results in the FCP_Port to violating one >>

LSI comment number 151 -- by George Penokie
Page 61 (PDF 77), 9.2 inches from the top, 0.4 inches from the left
 This << Some of the bits defined by the Fibre Channel Port Control mode page require the FCP_Port to violate one or more of the Fibre Channel standards. The non-standard behaviors have been identified as useful for certain specialized operating environments. >> should be a note.

LSI comment number 152 -- by George Penokie
Page 65 (PDF 81), 2.9 inches from the top, 6.9 inches from the left
 In table 33 the << Notes >> column should be deleted to be replaced with the T10 standard table notes styles. This will add, for example, a superscript << b >> and a superscript << c >> at the end of the << E_D_TOV >> term in the timer column.

LSI comment number 153 -- by George Penokie
Page 65 (PDF 81), 7.7 inches from the top, 1.1 inches from the left
 This << NOTES:>> needs to be deleted as it does not follow the t10 style guide.

LSI comment number 154 -- by George Penokie
Page 65 (PDF 81), 9.6 inches from the top, 1.3 inches from the left
 The notation for an unordered list is a), b), c) not a,b,c this needs to be fixed.

LSI comment number 155 -- by George Penokie
Page 65 (PDF 81), 9.9 inches from the top, 1.1 inches from the left
Table notes are indicate with small letter not numbers.

LSI comment number 156 -- by George Penokie
Page 66 (PDF 82), 4.5 inches from the top, 0.9 inches from the left
This << S_ID, D_ID, OX_ID, RX_ID, and SEQ_ID fields >> should be << S_ID filed, D_ID field, OX_ID field, RX_ID field, and SEQ_ID field >>

LSI comment number 157 -- by George Penokie
Page 66 (PDF 82), 8.4 inches from the top, 3.7 inches from the left
This << expiration of RR_TOV, a target FCP >> should be << expiration of RR_TOV, then a target FCP >>

LSI comment number 158 -- by George Penokie
Page 67 (PDF 83), 3.3 inches from the top, 1.8 inches from the left
This << FCP_Port (optional) >> should be << CP_Port (optional). >>. The period is missing.

LSI comment number 159 -- by George Penokie
Page 68 (PDF 84), 2.8 inches from the top, 4.2 inches from the left
This << associated resources as described in 12.3. >> should be << associated resources (see 12.3). >>

LSI comment number 160 -- by George Penokie
Page 68 (PDF 84), 4.4 inches from the top, 2.0 inches from the left
This << recovery as described in 12.4 shall >> should be << recovery (see 12.4) shall >>

LSI comment number 161 -- by George Penokie
Page 68 (PDF 84), 7.7 inches from the top, 2.0 inches from the left
This << defined in FC-FS-3, the same recovery >> should be << defined in FC-FS-3, then the same recovery >>

LSI comment number 162 -- by George Penokie
Page 69 (PDF 85), 9.0 inches from the top, 2.9 inches from the left
This << further >> should be deleted as it adds nothing and could be confusing

LSI comment number 163 -- by George Penokie
Page 69 (PDF 85), 4.1 inches from the top, 2.8 inches from the left
This << further >> should be deleted as it adds nothing and could be confusing.

LSI comment number 164 -- by George Penokie
Page 69 (PDF 85), 7.5 inches from the top, 2.8 inches from the left
This << further >> should be deleted as it adds nothing and could be confusing

LSI comment number 165 -- by George Penokie
Page 69 (PDF 85), 9.9 inches from the top, 1.4 inches from the left

Marked set by George Penokie

LSI comment number 166 -- by George Penokie
Page 70 (PDF 86), 1.9 inches from the top, 2.6 inches from the left

This << task management request or because of an error. >> should be << task management request or an error. >>

LSI comment number 167 -- by George Penokie
Page 70 (PDF 86), 3.4 inches from the top, 5.1 inches from the left

This << the OX_ID and RX_ID field values >> should be << the OX_ID field and RX_ID field values >>

LSI comment number 168 -- by George Penokie
Page 70 (PDF 86), 6.5 inches from the top, 2.4 inches from the left

This << error recovery as described in 12.5 shall be >> should be << error recovery (see 12.5) shall be >>

LSI comment number 169 -- by George Penokie
Page 70 (PDF 86), 9.4 inches from the top, 0.7 inches from the left

This << If the RX_ID field is FFFFh, target FCP_Ports shall >> should be << If the RX_ID field contains FFFFh, target FCP_Ports shall >>

LSI comment number 170 -- by George Penokie
Page 71 (PDF 87), 3.0 inches from the top, 0.8 inches from the left

The indentation of the nested list is not correct. Look at the T10 style guide for the correct indentation.

LSI comment number 171 -- by George Penokie
Page 72 (PDF 88), 3.8 inches from the top, 0.7 inches from the left

This << an ABTS-LS as specified in 12.3. >> should be << an ABTS-LS (see 12.3). >>

LSI comment number 172 -- by George Penokie
Page 72 (PDF 88), 4.3 inches from the top, 2.7 inches from the left

This << recovery as described in 12.5 shall be performed >> should be << recovery shall be performed (see 12.5). >>

LSI comment number 173 -- by George Penokie
This << same S_ID; and >> should be << same S_ID; and >>. Missing space.

LSI comment number 174 -- by George Penokie
Page 74 (PDF 90), 6.7 inches from the top, 4.3 inches from the left
This << next data requested, the initiator FCP >> should be << next data requested, then the initiator FCP >>.

LSI comment number 175 -- by George Penokie
Page 74 (PDF 90), 7.5 inches from the top, 0.7 inches from the left
This << The target FCP_Port shall first transmit the FCP_ACC for the SRR FCP_LS request, then shall retransmit the requested data specified by the SRR FCP_LS request in a new Sequence, and then complete the Exchange in the normal manner, including transmitting or retransmitting the FCP_RSP IU.>> should be converted into an ordered list. In its current form it is virtually incomprehensible.

LSI comment number 176 -- by George Penokie
Page 75 (PDF 91), 7.7 inches from the top, 2.6 inches from the left
This << within E_D_TOV, the target FCP_ >> should be << within E_D_TOV, then the target FCP_ >>

LSI comment number 177 -- by George Penokie
Page 75 (PDF 91), 7.9 inches from the top, 2.4 inches from the left
This << PARAMETER field bit 0 set to one >> should be << PARAMETER field bit 0 set to one >>

LSI comment number 178 -- by George Penokie
Page 76 (PDF 92), 3.5 inches from the top, 2.3 inches from the left
This << are unsuccessful, the initiator FCP >> should be << are unsuccessful, then the initiator FCP >>

LSI comment number 179 -- by George Penokie
Page 76 (PDF 92), 4.5 inches from the top, 3.9 inches from the left
This << times R_A_TOVELS, the initiator FCP_Port >> should be << times R_A_TOVELS, then the initiator FCP_Port >>

LSI comment number 180 -- by George Penokie
Page 76 (PDF 92), 5.3 inches from the top, 4.6 inches from the left
This << times R_A_TOVELS, the initiator FCP_Port >> should be << times R_A_TOVELS, then the initiator FCP_Port >>

LSI comment number 181 -- by George Penokie
Page 76 (PDF 92), 7.4 inches from the top, 4.8 inches from the left

This << times R_A_TOVELS, the initiator FCP_Port >> should be << times R_A_TOVELS, then the initiator FCP_Port >>

LSI comment number 182 -- by George Penokie
Page 77 (PDF 93), 2.0 inches from the top, 0.9 inches from the left

This << frame, the FCP device shall discard >> should be << frame, then the FCP device shall discard >>

LSI comment number 183 -- by George Penokie
Page 78 (PDF 94), 6.0 inches from the top, 1.6 inches from the left

This << NOTES:>> needs to be deleted as it does not follow the t10 style guide.

LSI comment number 184 -- by George Penokie
Page 78 (PDF 94), 6.9 inches from the top, 1.4 inches from the left

Table notes are indicated with small letter not numbers.

LSI comment number 185 -- by George Penokie
Page 79 (PDF 95), 3.1 inches from the top, 4.6 inches from the left

This << (note 1) >> needs to be replaced with a superscript << a >> to comply with the T10 standard table notes styles.

LSI comment number 186 -- by George Penokie
Page 79 (PDF 95), 3.3 inches from the top, 4.8 inches from the left

This << (note 2) >> needs to be replaced with a superscript << b >> to comply with the T10 standard table notes styles.

LSI comment number 187 -- by George Penokie
Page 79 (PDF 95), 3.6 inches from the top, 4.8 inches from the left

This << (note 2) >> needs to be replaced with a superscript << b >> to comply with the T10 standard table notes styles.

LSI comment number 188 -- by George Penokie
Page 79 (PDF 95), 3.9 inches from the top, 4.8 inches from the left

This << (note 2) >> needs to be replaced with a superscript << b >> to comply with the T10 standard table notes styles.

LSI comment number 189 -- by George Penokie
Page 79 (PDF 95), 9.7 inches from the top, 1.5 inches from the left

Table notes are indicated with small letter not numbers.

LSI comment number 190 -- by George Penokie
Page 80 (PDF 96), 3.2 inches from the top, 5.8 inches from the left

This << SCSI initiators or targets. >> needs to match whatever you put in
the
glossary for these two entities.

LSI comment number 191 -- by George Penokie
Page 86 (PDF 102), 6.4 inches from the top, 0.7 inches from the left
Delete this section << B.11SCSI linked commands >> as linked commands are no longer defined.

LSI comment number 192 -- by George Penokie
Page 88 (PDF 104), 2.8 inches from the top, 1.3 inches from the left
This figure title << Figure B.1 - Example of class 2 FCP write operation >> needs to move to the bottom of the figure.

LSI comment number 193 -- by George Penokie
Page 89 (PDF 105), 2.6 inches from the top, 1.1 inches from the left
This is no reference to figure B.2. One needs to be added.

LSI comment number 194 -- by George Penokie
Page 89 (PDF 105), 7.8 inches from the top, 2.7 inches from the left
This figure title << Figure B.2 - Example of class 2 FCP_DATA write >> needs to move to the bottom of the figure.

LSI comment number 195 -- by George Penokie
Page 90 (PDF 106), 7.9 inches from the top, 2.4 inches from the left
This figure title << Figure B.3 - Example of class 2 FCP read operation >> needs to move to the bottom of the figure.

LSI comment number 196 -- by George Penokie
Page 91 (PDF 107), 4.0 inches from the top, 0.8 inches from the left
This is no reference to figure B.4. One needs to be added.

LSI comment number 197 -- by George Penokie
Page 91 (PDF 107), 8.3 inches from the top, 2.7 inches from the left
This figure title << Figure B.4 - Example of class 2 FCP_DATA read >> needs to move to the bottom of the figure.

LSI comment number 198 -- by George Penokie
Page 93 (PDF 109), 1.1 inches from the top, 2.6 inches from the left
None of the figure in this section are referenced. This has to be fixed. I suggest you build a table at the beginning of the section that contains all the names of the figures with a reference to each figure placed in a column.

LSI comment number 199 -- by George Penokie
Page 93 (PDF 109), 1.2 inches from the top, 0.9 inches from the left
All the figures in this section have the titles at the top of the figure. They all have to be move to the bottom of the figure.

LSI comment number 200 -- by George Penokie
Page 93 (PDF 109), 1.2 inches from the top, 6.2 inches from the left
---------------------------------------------------------------------
The paragraph spacing in inconsistent in the figures in this section. Some have no line spacing and other have a line space between the paragraphs. All paragraphs should have a line space between them. This needs to be fixed.

LSI comment number 201 -- by George Penokie
Page 93 (PDF 109), 2.8 inches from the top, 0.8 inches from the left
---------------------------------------------------------------------
The font size in the paragraphs in all the figures seems to be larger than 10 point. If that is the case it needs to be changed to 10 point.

LSI comment number 202 -- by George Penokie
Page 94 (PDF 110), 5.2 inches from the top, 2.1 inches from the left
---------------------------------------------------------------------
This << LS_RJT (Logical error, Invalid OX_ID - RX_ID combination) for >> should be << LS_RJT (i.e., Logical error, Invalid OX_ID - RX_ID combination) for >>

LSI comment number 203 -- by George Penokie
Page 97 (PDF 113), 4.7 inches from the top, 1.3 inches from the left
---------------------------------------------------------------------
This << Exchange. (LS_ACC to REC ELS arrived before FCP_XFER_RDY, out of order). >> should be << Exchange (i.e., LS_ACC to REC ELS arrived before FCP_XFER_RDY, out of order). >>

LSI comment number 204 -- by George Penokie
Page 100 (PDF 116), 4.4 inches from the top, 0.9 inches from the left
---------------------------------------------------------------------
This << Exchange. (LS_ACC to REC ELS arrived before FCP_RSP was sent). >> should be << Exchange. (i.e., LS_ACC to REC ELS arrived before FCP_RSP was sent). >>

LSI comment number 205 -- by George Penokie
Page 126 (PDF 142), 4.4 inches from the top, 0.7 inches from the left
---------------------------------------------------------------------
You should add hyperlinks to these steps << step 2 and step 3 >>

LSI comment number 206 -- by George Penokie
Page 127 (PDF 143), 1.2 inches from the top, 3.1 inches from the left
---------------------------------------------------------------------
You should add a hyperlink to this step << step 1 >>

LSI comment number 207 -- by George Penokie
Page 127 (PDF 143), 5.4 inches from the top, 1.5 inches from the left
---------------------------------------------------------------------
This << during fabric login, a configuration change >> should be << during fabric login, then a configuration change >>
This \textit{transmit an ABTS frame}. When it does so, the specified fields should be set as shown in table E.1. \textit{should be} transmit an ABTS frame and when they do the specified fields should be set as shown in table E.1. \textit{should be}

This \textit{with BA_ACC. When it does so, the BA_ACC should be as shown in table E.2. \textit{should be}} with BA_ACC and when they do the BA_ACC should be as shown in table E.2.\textit{ should be}

All the Content cell except the one that states \textit{Recipient} \textit{should have a period at the end of the comment.}

This \textit{Invalid (donÂ’t care) for Abort} \textit{should be} \textit{Invalid (i.e., donÂ’t care) for Abort} \textit{should be}

This \textit{BA_RJT. When it does, the BA_RJT should be as shown in table E.3 \textit{should be}} BA_RJT and when they do the BA_RJT should be as shown in table E.3 \textit{should be}

This \textit{OX_ID field value from ABTS frame} \textit{should be} \textit{OX_ID field value from ABTS frame. \textit{Period added.}}

This \textit{RX_ID field value from ABTS frame} \textit{should be} \textit{RX_ID field value from ABTS frame. \textit{Period added.}}

All the Content cell except the one that states \textit{FFFFh} \textit{should have a period at the end of the comment.}
Comments attached to Abs ballot from Gregory Tabor of Maxim Integrated Products:

FCP-4 is outside of Maxim's domain of interest and expertise.

Comments attached to No ballot from Frederick Knight of NetApp:

NetApp 1 (T) Page: 17 Location: Table 3

Problem Description:
SAM I_T NEXUS RESET function is missing.

Suggested Solution:
Table 7 seems to indicate that LOGO ELS has the appropriate clearing effect; clause 4.11 also says a LOGO ELS causes an I_T nexus loss.

NetApp 2 (T) Page: 21 Location: Table 8

Problem Description:
Missing Column for I_T NEXUS RESET

Suggested Solution:
add a column for INITIATOR FCP_PORT action of I_T NEXUS RESET

NetApp 3 (T) Page: 34 Location: Clause 7

Problem Description:
08-366r0 is missing

Suggested Solution:

NetApp 4 (T) Page: 39 Location: Table 19

Problem Description:
Row T3 and T4 still contains references to Linked SCSI Commands

Suggested Solution:
Search whole document for references to Linked SCSI Commands, and remove such references

NetApp 5 (T) Page: 40 Location: Table 20

Problem Description:
Row I5 contains another "Linked" reference

Suggested Solution:
remove
Problem Description:
INTERMEDIATE status went away with linked commands

Suggested Solution:
Search whole document for references to INTERMEDIATE SCSI status (or INTERMEDIATE - CONDITION MET) and remove such references

Problem Description:
I could not find "retry delay" anything in SAM-4

Suggested Solution:
Find the correct reference in SAM-4 (STATUS QUALIFIER?)

Problem Description:
SCSI Linked Commands - are gone

Suggested Solution:
remove the whole clause

Comments attached to Abs ballot from Mark Overby of Nvidia Corp.:
1. NVIDIA abstains due to a lack of technical expertise in the material that the standard covers.

Comments attached to Abs ballot from Mark Evans of Western Digital:
My company is not materially affected by this standard, as we have no Fibre Channel products.

End of Ballot Report