

T10/08-382r0

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

Organization	Name	S	Vote	Add'l Info
AMCC	Paul von Stamwitz	P	Yes	
Brocade	David Peterson	P	Yes	Cmnts
Dell, Inc.	Kevin Marks	P	Yes	
EMC Corp.	David Black	A	Yes	Cmnts
Emulex	Robert H. Nixon	A	Yes	
ENDL	Ralph O. Weber	P	Yes	Cmnts
FCI	Douglas Wagner	P	Abs	Cmnts
Finisar Corp.	David Freeman	P	Yes	
Foxconn Electronics	Elwood Parsons	P	Abs	Cmnts
Fujitsu	Mike Fitzpatrick	P	Yes	
Hewlett Packard Co.	Rob Elliott	P	No	Cmnts
Hitachi Global Storage Tech.	Dan Colegrove	P	Yes	
IBM Corp.	Kevin Butt	P	No	Cmnts
Intel Corp.	Mark Seidel	P	Abs	Cmnts
Kawasaki Microelectronics Am	Joel Silverman	P	Yes	
KnowledgeTek, Inc.	Dennis Moore	P	Yes	
Lexar Media, Inc.	John Geldman	P	Abs	Cmnts
LSI Corp.	John Lohmeyer	P	No	Cmnts
Marvell Semiconductor, Inc.	Paul Wassenberg	A	Yes	
Maxim Integrated Products	Gregory Tabor	P	Abs	Cmnts
Microsoft Corp.	Robert Griswold	P	Yes	
Molex Inc.	Jay Neer	P	Yes	
NetApp	Frederick Knight	P	No	Cmnts
Nvidia Corp.	Mark Overby	P	Abs	Cmnts
PMC-Sierra	Tim Symons	P	Yes	
Quantum Corp.	Paul Suhler	P	Yes	
Samsung	Joseph Chen	P	Yes	
SanDisk Corporation	Avraham Shimor	P	Yes	
Seagate Technology	Gerald Houlder	P	Yes	
Sun Microsystems, Inc.	Dale LaFollette	P	Yes	
Symantec	Roger Cummings	P	Yes	
TycoElectronics	Scott Shuey	A	Yes	
Western Digital	Mark Evans	P	Abs	Cmnts

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 mutiple 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 cffect 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 foonote 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 management 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" requirement 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.

_S 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.

ENDL Texas 2

PDF pg 44, pg 28, 6.3.4, word 3, bit 10, s 1

<<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.>> is hard to read and thus unclear

_S 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.

ENDL Texas 3

PDF pg 44, pg 28, 6.3.4, word 3, bit 8, s 1

<<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.>> is hard to read and thus unclear

_S 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.

ENDL Texas 4

PDF pg 48, pg 32, 6.3.5, word 3, bit 11, s 1

<<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.

_S 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).

ENDL Texas 5

PDF pg 48, pg 32, 6.3.5, word 3, bit 11, s 2

<<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=
WEb
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

Page=14 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
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
Page=15 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
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
Page=15 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=FC-GS-6

comment number 12
Page=15 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Information Unit
s/b
FCP Information Unit

comment number 13
Page=15 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=the SCSI management features for Fibre Channel, including

comment number 14
Page=15 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
the protocol for transmitting SCSI information over Fibre Channel.
s/b
FCP

comment number 15
Page=15 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
error recovery algorithms
s/b
operation and recovery

comment number 16
Page=15 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
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

comment number 20

Page=15 Subtype=StrikeOut Subj=Cross-Out Author=RElliott

Comment=-4

comment number 21

Page=15 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=

the protocol for transmitting SCSI information over Fibre Channel

s/b

FCP

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

Page=18 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
tasks
s/b
commands

comment number 38
Page=18 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
See SAM-4.
s/b
See 6.3 and 9.3.

comment number 39
Page=18 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI command
s/b
command

comment number 40
Page=18 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
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 web site www.t10.org. The INCITS T11 draft standards and technical reports are also available on the web site www.t11.org.

s/b
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 80112-5704 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
Page=18 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
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.

s/b
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 (FXID)

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=
3.1.40Port 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=
identifer
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 table 3 in 4.9

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.

comment number 98

Page=26 Subtype=Text Subj=Note Author=RElliott

Comment=

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.

comment number 99

Page=26 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=

Send Task Management request

s/b

Send Task Management Request

comment number 100

Page=26 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=

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

comment number 101

Page=26 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 102

Page=26 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=

Protocol Service

s/b

transport protocol service

comment number 103

Page=26 Subtype=StrikeOut Subj=Cross-Out Author=RElliott

Comment=

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, I5 (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

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=

,
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=
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

comment number 155
Page=28 Subtype=StrikeOut Subj=Cross-Out Author=curtisb
Comment=

comment number 156
Page=28 Subtype=Caret Subj=Inserted Text Author=curtisb
Comment=where

comment number 157
Page=28 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI commands
s/b
commands

comment number 158
Page=28 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI commands
s/b
commands

comment number 159
Page=29 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
initiator
s/b
initiator FCP_Port

comment number 160
Page=29 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
initiator
s/b
initiator FCP_Port

comment number 161
Page=29 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
"and for task management functions" is incorrect.

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 number 162
Page=29 Subtype=Highlight Subj=Highlight Author=RElliott

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

, then

comment number 169
Page=29 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
protocol service
s/b
transport protocol service

comment number 170
Page=29 Subtype=StrikeOut Subj=Cross-Out Author=curtisb
Comment=

comment number 171
Page=29 Subtype=Caret Subj=Replacement Text Author=curtisb
Comment=i.e.,

comment number 172
Page=29 Subtype=StrikeOut Subj=Cross-Out Author=curtisb
Comment=

comment number 173
Page=29 Subtype=Caret Subj=Replacement Text Author=curtisb
Comment=that are used

comment number 174
Page=30 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete (Linked commands are obsolete in SAM-4):

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.

comment number 175
Page=30 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
autosense data
s/b
sense data

comment number 176

Page=30 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
autosense data
s/b
sense data

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

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

comment number 179
Page=30 Subtype=Text Subj=Note Author=RElliott
Comment=
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
Comment=
,
s/b
, then

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

comment number 182
Page=30 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=queued

comment number 183
Page=31 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
shall be zero
s/b
shall be set to zero

comment number 184
Page=31 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
,
s/b
, then

comment number 185
Page=31 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
,
s/b
, then

comment number 186
Page=33 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
QUERY UNIT ATTENTION
s/b
QUERY ASYNCHONOUS EVENT

to match final SAM-4

comment number 187
Page=33 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
FCP_QUERY_UNIT_ATTENTION
s/b
FCP_QUERY_ASYNCHRONOUS_EVENT

to match final SAM-4

comment number 188
Page=33 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
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=
Exchnage
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=

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.

comment number 213

Page=38 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=

between

s/b

between the

comment number 214

Page=38 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=

3. Each

start new paragraph with "Each" to separate the address identifier definition from the FQXID definition

comment number 215

Page=38 Subtype=Text Subj=Note Author=RElliott

Comment=

Mention that the RX_ID field value does not exist at the beginning of the FCP I/O operation, and it may change during the FCP I/O operation.

comment number 216

Page=38 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=

Port_Name

s/b

N_Port_Name

comment number 217

Page=38 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=

Worldwide_Name

s/b

N_Port_Name

comment number 218

Page=38 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=

after:

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

Page=38 Subtype=Highlight Subj=Highlight Author=RElliott
 Comment=
 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 0h (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/bFor 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=
sucessfully
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=

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=

,
s/b
, 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=
OBSOLETE
s/b
Obsolete

comment number 305
Page=47 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
OBSOLETE
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 valueword 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:
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

Description

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=

,
s/b
, then

comment number 374
Page=57 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete:

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.

comment number 375
Page=57 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
the
s/b
, then the

comment number 376
Page=57 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
,
s/b
, then

comment number 377
Page=57 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
PRIORITY
s/b
COMMAND PRIORITY

to match SAM-4

comment number 378
Page=58 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
task
s/b
command

comment number 379
Page=58 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

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=
,
s/b
, then

comment number 383
Page=58 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
,
s/b
, 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=
,
s/b
, 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 ASYNCHONOUS EVENT

to match final SAM-4

comment number 392
Page=59 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
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 ASYNCHONOUS 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
s/b
command

comment number 416
Page=60 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
task resources
s/b
resources

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

Comment=

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=

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

rddata	wrdata	Description
0 0		Non-data command
0 1		Write command
1 0		Read command
1 1		Bidirectional command

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

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

comment number 478
Page=65 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=bidirectional SCSI command

comment number 479
Page=65 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
bidirectional SCSI command
s/b
bidirectional command

comment number 480
Page=65 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
write data operation
s/b
write operation

comment number 481
Page=66 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete (Linked commands are obsolete in SAM-4):

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 COMMANDCOMPLETE (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.

comment number 482
Page=66 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
a target
s/b
the target FCP_Port

comment number 483
Page=66 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
target
s/b
target FCP_Port

comment number 484

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.

s/b

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

Comment=

The number shall be 00000004h, or 00000008h.

s/b

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

comment number 526

Page=70 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=

,

s/b

, then

comment number 527

Page=70 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=

,

s/b

, then

comment number 528

Page=70 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=

,

s/b

, then

comment number 529

Page=70 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=

,

s/b

, then

comment number 530

Page=70 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=

,

s/b

, then

comment number 531

Page=70 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=

No FCP_SNS_INFO is provided.

s/b

The FCP_SNS_INFO field is not present.

comment number 532

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 ASYNCHONOUS 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

comment number 539
Page=72 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
autosense data
s/b
sense data

comment number 540
Page=72 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=FCP devices shall perform autosense.

comment number 541
Page=72 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
SCSI status byte of CHECK CONDITION is presented as specified by SAM-4.
s/b
SCSI STATUS FIELD is set to CHECK CONDITION (see SAM-4).

comment number 542
Page=72 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
,
s/b
, then

comment number 543
Page=72 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
shall be zero
s/b
shall be set to zero

comment number 544
Page=72 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
when
s/b
if

comment number 545
Page=73 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
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=

,
s/b
, 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

Page=79 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
tasks
s/b
commands

comment number 577
Page=79 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
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.
s/b
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 578
Page=79 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 579
Page=79 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
, the target FCP_Port
s/b
, then it

comment number 580
Page=79 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
,
s/b
, then

comment number 581
Page=79 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
,
s/b
, then

comment number 582
Page=79 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

,
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

Page=79 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 590

Page=79 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

,
s/b
, then

comment number 591

Page=79 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

one, a target FCP_Port attached by an arbitrated loop (see FC-AL-2) shall
s/b
one, then the target FCP_Port shall

comment number 592

Page=79 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

tasks
s/b
commands

comment number 593

Page=80 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

RR_TOVSEQ_INIT

SEQ_INIT should be subscript

comment number 594

Page=80 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

the target FCP_Port attached by an arbitrated loop
s/b
then the target FCP_Port

comment number 595

Page=80 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

,
s/b
, then

comment number 596
Page=80 Subtype=Text Subj=Note Author=RElliott
Comment=
There should be a separate section for RR_TOV UNITS, or 10.4.10 should mention both in the header

comment number 597
Page=80 Subtype=Text Subj=Note Author=RElliott
Comment=
Change the left columns of table 32 to a single column RR_TOV UNITS since it is a named field:
000b
001b
011b
101b

comment number 598
Page=81 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Initiator | Target
s/b
Initiator FCP_Port | Target FCP_Port

comment number 599
Page=81 Subtype=Text Subj=Note Author=RElliott
Comment=Change to lettered table footnotes, delete "NOTES:"

comment number 600
Page=81 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
a
b
c
s/b
a)
b)
c)

comment number 601
Page=81 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
0
s/b
zero

comment number 602
Page=81 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
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

Page=90 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
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
Page=90 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
,
s/b
, then

comment number 652
Page=90 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
,
s/b
, then

comment number 653
Page=90 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
,
s/b
, then

comment number 654
Page=90 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
with the Relative Offset parameter specified by the SRR FCP_LS request
s/b
with the FCP_DATA_R0 field in the FCP_XFER_RDY IU set to the value of the
RELATIVE OFFSET field in the SRR

comment number 655
Page=91 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
reason code explanation set to
s/b
a Reason Code Explanation set to

comment number 656
Page=91 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=

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

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

comment number 677
Page=94 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
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=retranmission 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=retranmission 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

(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.1.11SCSI 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

Comment=
 Xfer Seq Initiative
 s/b
 Transfer Sequence Initiative

 comment number 711
 Page=104 Subtype=Highlight Subj=Highlight Author=RElliott
 Comment=
 Xfer Seq Initiative
 s/b
 Transfer Sequence Initiative

 comment number 712
 Page=104 Subtype=Highlight Subj=Highlight Author=RElliott
 Comment=
 Xfer Seq Initiative
 s/b
 Transfer Sequence Initiative

 comment number 713
 Page=104 Subtype=Highlight Subj=Highlight Author=RElliott
 Comment=
 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.

 comment number 714
 Page=104 Subtype=Highlight Subj=Highlight Author=RElliott
 Comment=
 Initiator Frames Target Frames
 s/b
 FCP initiator port frames FCP target port frames

 comment number 715
 Page=104 Subtype=Text Subj=Note Author=RElliott
 Comment=

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 ELS
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
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Comment=
Invalid OX_ID - RX_ID
s/b
Invalid OX_ID - RX_ID combination

comment number 756
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ABTS (Sequence)
s/b
ABTS

comment number 757
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Comment=
ABTS (Sequence)
s/b
ABTS

comment number 758
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Comment=
ABTS (Sequence)
s/b
ABTS

comment number 759
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(seq=1, cnt=0, R0=0)
s/b
SEQ_ID=1, SEQ_CNT=0, PARAMETER=0

comment number 760
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s/b
SEQ_ID=1, SEQ_CNT=1

comment number 761
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s/b
(SEQ_ID=2, SEQ_CNT=0, PARAMETER=0)

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s/b
(SEQ_ID=2, SEQ_CNT=1)

comment number 763
Page=121 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(R0=0)
s/b
(FCP_DATA_R0=0)

comment number 764
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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
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(seq=1, cnt=0, RO=0)
s/b
(SEQ_ID=1, SEQ_CNT=0, PARAMETER=0)

comment number 768
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Comment=
(seq=1, cnt=1)
s/b
(SEQ_ID=1, SEQ_CNT=1)

comment number 769
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s/b
(SEQ_ID=2, SEQ_CNT=0, PARAMETER=0)

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s/b
(SEQ_ID=2, SEQ_CNT=1)

comment number 771
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Comment=
(RO=0)
s/b
(FCP_DATA_RO=0)

comment number 772
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Comment=
(RO=0)
s/b
(FCP_DATA_RO=0)

and add a space before (

comment number 773
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Comment=
(RO=0)
s/b
(RELATIVE OFFSET=0)

comment number 774
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(seq=1, cnt=0, RO=0)
s/b
(SEQ_ID=1, SEQ_CNT=0, PARAMETER=0)

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s/b
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s/b
(SEQ_ID=2, SEQ_CNT=0, PARAMETER=0)

comment number 777
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Comment=

(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

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Comment=

(RO=0)

s/b

(FCP_DATA_RO=0)

comment number 780

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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

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s/b

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comment number 783

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Comment=

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s/b

(SEQ_ID=1, SEQ_CNT=1)

comment number 784

Page=124 Subtype=Highlight Subj=Highlight Author=RElliott

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s/b
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comment number 785
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Comment=
(seq=2, cnt=1)
s/b
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comment number 786
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Comment=
(R0=0)
s/b
(FCP_DATA_R0=0)

comment number 787
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Comment=
(R0=0)
s/b
(FCP_DATA_R0=0)

and add a space before (

comment number 788
Page=124 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(R0=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

comment number 791
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s/b
(SEQ_ID=1, SEQ_CNT=0, PARAMETER=0)

comment number 792
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s/b
(SEQ_ID=1, SEQ_CNT=1)

comment number 793
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s/b
(SEQ_ID=2, SEQ_CNT=0, PARAMETER=0)

comment number 794
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Comment=
(seq=2, cnt=1)
s/b
(SEQ_ID=2, SEQ_CNT=1)

comment number 795
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Comment=
(R0=0)
s/b
(RELATIVE OFFSET=0)

comment number 796
Page=125 Subtype=StrikeOut Subj=Cross-Out Author=curtisb
Comment=

comment number 797
Page=125 Subtype=Caret Subj=Replacement Text Author=curtisb
Comment=

FCP_DATA retransmission uses a new

comment number 798
Page=126 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=
ABTS (Sequence)
s/b
ABTS

comment number 799
Page=126 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(seq=1, cnt=0, R0=0)
s/b
(SEQ_ID=1, SEQ_CNT=0, PARAMETER=0)

comment number 800
Page=126 Subtype=Highlight Subj=Highlight Author=RElliott
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(seq=1, cnt=1)
s/b
(SEQ_ID=1, SEQ_CNT=1)

comment number 801
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Comment=
(seq=2, cnt=0, R0=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=
(R0=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

Page=127 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
REC_TOV*
s/b
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, R0=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, R0=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=
(R0=0)
s/b
(RELATIVE OFFSET=0)

comment number 812
Page=127 Subtype=StrikeOut Subj=Cross-Out Author=curtisb
Comment=

comment number 813
Page=127 Subtype=Caret Subj=Replacement Text Author=curtisb
Comment=

FCP_DATA retransmission uses a new -- again something seems left off -
probably "Exchange."

comment number 814
Page=128 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
sequence
s/b
Sequence

comment number 815
Page=128 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Error
s/b
error

comment number 816
Page=128 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

comment number 817
Page=128 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(seq=1, cnt=0, R0=0)
s/b
(SEQ_ID=1, SEQ_CNT=0, PARAMETER=0)

comment number 818
Page=128 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
(seq=1, cnt=1)
s/b
(SEQ_ID=1, SEQ_CNT=1)

comment number 819
Page=128 Subtype=Highlight Subj=Highlight Author=RElliott

Comment=
(seq=2, cnt=0, R0=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=
(R0=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, R0=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, R0=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=
(R0=0)
s/b
(FCP_DATA_R0=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

Page=138 Subtype=StrikeOut Subj=Cross-Out Author=curtisb
Comment=

comment number 847
Page=138 Subtype=Caret Subj=Replacement Text Author=curtisb
Comment=

Sequunce should be Sequence

comment number 848
Page=139 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 849
Page=139 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
ABTS (Sequence)
s/b
ABTS

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 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)

comment number 867
Page=143 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
PAGE CODE
s/b
PAGE CODE field

comment number 868
Page=143 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
the Device Identification VPD page
s/b
set to 83h (i.e., the Device Identification VPD page)

comment number 869
Page=144 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
task
s/b
command

comment number 870
Page=146 Subtype=Highlight Subj=Highlight Author=RElliott
Comment=
Excahnge
s/b
Exchange

comment number 871
Page=146 Subtype=StrikeOut Subj=Cross-Out Author=RElliott
Comment=
Delete this section header
E.3.1 RRQ ELS request format

since there is no E.3.2

Comments attached to No ballot from Kevin Butt of
IBM Corp.:

Identical comments uploaded in xls format as T10/08-413
BrianHart-001 (T) Page: 85 (69 hardcopy) Location: 12.2.2 first paragraph,
item b)

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,

requires: "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 " \geq E_D_TOV + 1s" with " \geq 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 " \geq REC_TOV + $2 \times R_A_TOV_{els} + 1s$ " (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: " $\leq R_A_TOV$ ", " $\leq R_A_TOV + E_D_TOV$ ", or " $\leq 2 \times R_A_TOV$ ". -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: " $\geq \text{ceil}(\text{REC_TOV}) + R_A_TOV + 1s$ " (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 Geldman of Lexar Media, Inc.:

T11 is not currently pertinent to our business.

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 >>

LSI comment number 9 -- by George Penokie
Page 3 (PDF 19), 6.9 inches from the top, 0.7 inches from the left
- - - - -

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 time 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.

LSI comment number 10 -- by George Penokie
Page 3 (PDF 19), 7.4 inches from the top, 0.9 inches from the left
- - - - -

You need to set frame so it will not split a hyphen across lines.

LSI comment number 11 -- by George Penokie
Page 3 (PDF 19), 7.9 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 initiator port >> needs to be deleted.

LSI comment number 12 -- by George Penokie
Page 3 (PDF 19), 8.1 inches from the top, 4.6 inches from the left
- - - - -

There is no definition of a << FCP device >>. One needs to be added to the list of definitions.

LSI comment number 13 -- by George Penokie
Page 3 (PDF 19), 8.8 inches from the top, 0.9 inches from the left
- - - - -

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. >>

LSI comment number 14 -- by George Penokie
Page 3 (PDF 19), 9.9 inches from the top, 4.1 inches from the left
- - - - -

This << in Fibre Channel such as N_Port, Node, F_Port, or Fabric. >> should either be change to << in Fibre Channel (i.e., N_Port, Node, F_Port, or Fabric). >> or << in Fibre Channel (e.g., N_Port, Node, F_Port, or Fabric). >> depending on if it is an complete list or a list of examples. The << such as >> implies it is a complete list.

LSI comment number 15 -- by George Penokie
Page 4 (PDF 20), 2.8 inches from the top, 4.7 inches from the left

- - - - -
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
- - - - -

This << alternative; equivalent to the phrase "it is strongly recommended". >>
>>
should be << alternative (equivalent to "it is strongly recommended"). >>

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, I5 (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

Page 12 (PDF 28), 1.7 inches from the top, 0.7 inches from the left

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 of either table 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 paragarph.

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 theFCP_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 referring 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), 7.1 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), 8.7 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), 1.4 inches from the top, 0.9 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), 2.5 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), 4.6 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), 1.4 inches from the top, 5.1 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), 3.1 inches from the top, 3.8 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), 9.0 inches from the top, 4.7 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

Page 49 (PDF 65), 8.8 inches from the top, 1.8 inches from the left

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 its 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 to 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 to 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

Page 73 (PDF 89), 9.0 inches from the top, 1.7 inches from the left
 - - - - -
 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 it's 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 bot 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.1.11SCSI 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 >>

LSI comment number 208 -- by George Penokie
Page 128 (PDF 144), 3.7 inches from the top, 0.7 inches from the left

This << transmit an ABTS frame. When it does so, the specified fields should be set as shown in table E.1. >> should be << transmit an ABTS frame and when they do the specified fields should be set as shown in table E.1. >>

LSI comment number 209 -- by George Penokie
Page 129 (PDF 145), 1.6 inches from the top, 0.9 inches from the left

This <<with BA_ACC. When it does so, the BA_ACC should be as shown in table E.2. >> should be << with BA_ACC and when they do the BA_ACC should be as shown in table E.2.>>

LSI comment number 210 -- by George Penokie
Page 129 (PDF 145), 3.1 inches from the top, 6.7 inches from the left

All the Content cell except the one that states << Recipient >> should have a period at the end of the comment.

LSI comment number 211 -- by George Penokie
Page 129 (PDF 145), 4.1 inches from the top, 4.9 inches from the left

This << Invalid (don't care) for Abort >> should be << Invalid (i.e., don't care) for Abort >>

LSI comment number 212 -- by George Penokie
Page 130 (PDF 146), 1.6 inches from the top, 0.7 inches from the left

This << BA_RJT. When it does, the BA_RJT should be as shown in table E.3 >> should be << BA_RJT and when they do the BA_RJT should be as shown in table E.3 >>

LSI comment number 213 -- by George Penokie
Page 130 (PDF 146), 2.7 inches from the top, 4.9 inches from the left

This << OX_ID field value from ABTS frame >> should be << OX_ID field value from ABTS frame. >> Period added.

LSI comment number 214 -- by George Penokie
Page 130 (PDF 146), 3.1 inches from the top, 4.9 inches from the left

This << RX_ID field value from ABTS frame >> should be << RX_ID field value from ABTS frame. >> Period added.

LSI comment number 215 -- by George Penokie
Page 130 (PDF 146), 7.5 inches from the top, 5.8 inches from the left

All the Content cell except the one that states << FFFFh >> 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 Table 3

This table maps SAM-4 functions to FCP-4 functions - but the SAM I_T NEXUS RESET function is missing (table 7 seems to indicate that LOGO ELS has the appropriate clearing effect)

NetApp-2 Table 8

Missing Column for I_T NEXUS RESET

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 *****