Summary of Comments on Serial Attached SCSI Standard

Author: ADPT

Page: i
Sequence number: 4
Date: 1/30/2003 5:55:52 PM
Type: Note

ACCEPT - DONE (adopted Mark Evans' proposed terminology changes)
1.0 References to ATA through-out the draft need to be reviewed and
changed
to SATA where necessary. The interface protocol that SAS implements is SATA.
SATA specification in turn references ATA as the upper layer protocol.

Page: 8
Sequence number: 14
Date: 1/30/2003 5:58:38 PM
Type: Note

REJECT (only one use of that term at this time this comment was reviewed, in the port introduction; changed it to use
"identification sequence")
2.0 The term "initialization" is used in 3 places. It should be added to
the definitions sub-clause.

Page: 8
Sequence number: 15
Date: 2/25/2003 6:45:42 PM
Type: Note

REJECT (per 2/25 WG)
3.0 The term "idle" used through-out the draft has conflicting meanings.
Sometimes it refers to "idle time" and other times to "no activity". We
should
use "idle time" or "idle dwords" or "no activity".

Page: 24
Sequence number: 9
Date: 1/22/2003 3:32:17 PM
Type: Note

REJECT (initiator could support SATA to talk to a SATA-only target port, but STP won't help)(whole section being deleted anyway)
4.0 P24, 4.1.6 2nd para - Last sentence reads "included in SAS domains if
the expander device". S/B "included in SAS domains if the Initiator or
expander device"

Page: 30
Sequence number: 12
Date: 1/23/2003 5:04:38 PM
Type: Note

ACCEPT - DONE
5.0 P30, 5th para - "physical links that make up to pathway", S/B
"physical
links that make up the pathway".

Page: 66
Sequence number: 4
Date: 1/31/2003 4:01:23 PM
Type: Note

ACCEPT - DONE (per SAS PHY WG Accept. Update all cable and backplane figures to reflect power and port capabilities)
6.0 P66, Figure 33 Internal backplane environment - It is unclear where
power for the target device is derieved.

Page: 68
Sequence number: 6
Date: 1/31/2003 4:17:43 PM

Type: Note
ACCEPT - DONE (per SAS PHY WG Change AR+/-, AT+/-, BR+/-, and BT+/- to RP+/-, TP+/-, RS+/-, and TS+/- respectively.
Resolves both Adaptec comments without adding a SATA column to table 30.)
7.0 P68, Table 30 - For clarification, a SATA column S/B added that
clearly
shows that the connections are the same.

Page: 68
Sequence number: 7
Date: 1/31/2003 4:17:50 PM
Type: Note
ACCEPT - DONE (per SAS PHY WG Change AR+/-, AT+/-, BR+/-, and BT+/- to RP+/-, TP+/-, RS+/-, and TS+/- respectively.
Resolves both Adaptec comments without adding a SATA column to table 30.)
8.0 P68, Table 30 - Name Column - Names should match SATA to resolve
confusion. Refer to figure 6 in SATA 1.0. Use the same terminology used in
Table 31 for Rx and Tx signals.

Page: 71
Sequence number: 21
Date: 1/31/2003 4:44:13 PM
Type: Note
REJECT (per phy WG - Active is not determined by the cable assembly.)
9.0 P71, 5.4.2 2nd para - S/B "one, two, three, or four active physical links".

Page: 72
Sequence number: 10
Date: 1/31/2003 4:47:16 PM
Type: Note
ACCEPT - DONE (with "defined by this standard". Per phy WG: Resolve ADPT comment by changing "characteristic tables to:
characteristics within this standard)
10.0 P72, 5.7.1 1st para - Is "transmitter and reciever characteristic
tables, See Tables 35 & 36, only".

Page: 73
Sequence number: 2
Date: 2/9/2003 11:23:37 AM
Type: Note
ACCEPT - DONE (Accept connector designation, reject distance. Figures will be updated.)
11.0 P73, Figure 35 & 36 - distance from connector pin to loads S/B
specified. The connector should also be identified.

Page: 74
Sequence number: 6
Date: 1/31/2003 4:55:26 PM
Type: Note
ACCEPT - DONE
12.0 P74, Table 34 - note b - refer to the SATA 1.0 specification

Page: 77
Sequence number: 7
Date: 1/20/2003 5:14:04 PM
Type: Note
REJECT (per phy WG: Not needed with incorporation of OOB characteristics in Table 35.)
13.0 P77, Top of page - add a new sub-clause 5.7.4.1

Page: 82
Sequence number: 11
Date: 2/20/2003 9:36:44 AM
Type: Note
ACCEPT - DONE (changed to inter-enclosure and intra-enclosure transmitter)
14.0 P82, 5.7.11, 3rd para - Is "specification of the external, initiator,
expander .....device transmitter". S/B "specification of the initiator,
expander .....device transmitter". What is an external device transmitter?

Page: 94
Sequence number: 1
Date: 2/24/2003 10:02:13 AM
Type: Note
REJECT (per SAS phy WG, Reject. The text is not in error.)

15.0 P94, 6.5 1st para - "signals are low-speed signal patterns detected".
S/B "signals are low-speed envelope patterns detected".

Page: 97
Sequence number: 9
Date: 1/8/2003 2:09:38 PM
Type: Note
    REJECT (for OOB signal detection, all rates up to the highest speed must be supported)
    16.0 P97, 3rd para - e.g. should read "a SAS reciever shall support its
    current speed and one generation less. A 3.0Gbps reciever shall support
    1.5Gbps, a 6.0Gbps reciever need only support 3.0Gbps. The transmitter and reciever portion of the PHY shall support the same
    rate.

Page: 98
Sequence number: 4
Date: 1/8/2003 2:28:41 PM
Type: Note
    ACCEPT - DONE (added receiving but not primitive, since it's a primitive sequence)
    17.0 P98, 6.6.1, last sentence - "After a HARD RESET a device" S/B "After
    reciept of a HARD RESET primitive a device".

Page: 104
Sequence number: 8
Date: 1/9/2003 3:33:55 PM
Type: Note
    REJECT (but will remove the whole sentence)
    18.0 P104, Table 49 -RCD - comments- reads "Used by transmitter and
    receiver to calculate the speed negotiation window time." S/B "Used by transmitter and reciever to indicate the speed negotiation
    window is beginning."

Page: 104
Sequence number: 9
Date: 1/24/2003 3:07:10 PM
Type: Note
    REJECT (but the receiver times are being deleted)
    19.0 P104, Table 49 3rd row - "(SNTT for reciever)" S/B "(SNTR for reciever)"

Page: 104
Sequence number: 10
Date: 1/24/2003 3:07:04 PM
Type: Note
    REJECT (but the receiver times are being deleted)
    20.0 P104, Table 49 6th row - "(SNLT for reciever)" S/B "(SNLR for reciever)"

Page: 105
Sequence number: 3
Date: 1/9/2003 4:11:03 PM
Type: Note
    ACCEPT - DONE (just remove "receiving")
    21.0 P105, 1st sentence- "If the recieved phy supports the physical link
    rate...." S/B "If the phy supports the recieved physical link rate...."

Page: 106
Sequence number: 5
Date: 1/9/2003 4:26:07 PM
Type: Note
    ACCEPT - DONE (added "sequence" here and in prev paragraph)
    22.0 P106, 1st sentence - "...SAS phy fails speed negotiation, it
    shall....." S/B "...SAS phy fails speed negotiation at all supported rates,
    it shall....."

Page: 138
Sequence number: 15
Date: 1/8/2003 1:02:38 PM
Type: Note
    ACCEPT - DONE
    23.0 P138, 7.1.4.9, 4th para - TBD?

Page: 143

Sequence number: 11
Date: 1/8/2003 1:18:00 PM
Type: Note
    ACCEPT - DONE
    24.0 P143, 7.1.6.5, delete "used as"

Page: 151
Sequence number: 5
Date: 1/24/2003 7:15:16 PM
Type: Note
    ACCEPT - DONE (changed all "device" to "port" and made sure all are defined in ch3)
    25.0 P151, clarify what is a SMP target/initiator?

Page: 161
Sequence number: 8
Date: 1/22/2003 5:27:09 PM
Type: Note
    REJECT (whole section deleted)(comment is correct; if left in, need to show gating off the output and input)
    26.0 P161, Figure 68 - the figure does not match the verbage on the previous page - sub-clause 7.10.

Page: 229
Sequence number: 25
Date: 1/6/2003 6:15:51 PM
Type: Note
    ACCEPT - DONE (it was called TIMEOUT in the table)
    27.0 P229, the RETRANSMIT bit shall. Where is the bit shown in the SSP
    Frame format table 88 or table 96?

Page: 240
Sequence number: 13
Date: 2/2/2003 2:01:55 PM
Type: Note
    ACCEPT - DONE
    28.0 P240, remove the editors note

Author: DELL

Page: 65
Sequence number: 4
Date: 1/20/2003 4:03:10 PM
Type: Note
    REJECT (SAS PHY WG majority vote to REJECT as the WG looked at this item prior to choosing no key.)
    Dell #1
    Request investigation of keying feature for SAS 4X external connection to
    allow future compatibility with SATA 4X JBODs. The current cable selection
    (non-keyed) is not compatible with any keyed cable. Proposal could
    anticipate a keyed SAS connector for controllers and JBODs, and a keyed
    SAS/SATA connector for controllers only.

Page: 65
Sequence number: 5
Date: 1/22/2003 10:04:52 AM
Type: Note
    REJECT (per phy WG)
    Dell #2
    Request investigation of the HDD connector keying feature to prevent SAS
    drives from plugging into SATA backplanes. Most drive slots use bays and
    carriers with integrated levers for increased seating force. The drive
    carrier lever engages with the front panel just prior to the connection
    engagement, which means activating the lever to seat the drive will cause
    damage to the drive and midplane connectors due to the increased (10x)
    forces involved.

Author: DSS

Page: 21
Sequence number: 12
Date: 1/23/2003 3:13:53 PM
Type: Note
> ACCEPT - DONE (reworded; see new text)
> 1. (T) Section 4.1.3, second paragraph (unordered list). It is unclear in
> the standard, but I don't think Phys don't have SAS addresses. This wording needs improvement to indicate exactly what the SAS
> Address in question is assigned to.

Page: 32
Sequence number: 6
Date: 2/9/2003 4:20:47 PM
Type: Note
> ACCEPT - DONE (No. Chapter 10 says "The target device shall use different identifiers for each logical unit name, each target
> port identifier, and the target device name." To help clarify that in this section, added "The selected SAS address shall be used for
> no other name or identifier." to the device name and port identifier sections.)
> 2. (T) Section 4.2.1, first paragraph. In FCP-2, the device (node) is
> allowed to share the same name as LUN 0. Is that true for SAS also?

Page: 34
Sequence number: 5
Date: 1/23/2003 6:15:46 PM
Type: Note
> ACCEPT - DONE (remove the bit mention)
> 3. (T) Section 4.2.6, first paragraph. Should be "6-bit".

Page: 35
Sequence number: 3
Date: 1/7/2003 6:18:00 PM
Type: Note
> REJECT - state machines are a key documentation technique to try to reduce interpretation differences about what is legal.
> 4. (T) Section 4.3, entire section. These state machines do not belong in
> this standard as normalized text.
> The standard should be specifying observable behavior, not implementation such as this.

Page: 41
Sequence number: 1
Date: 1/6/2003 3:46:39 PM
Type: Note
> ACCEPT - DONE
> 5. (E) Table 12, there are 2 cases of missing ")".

Page: 43
Sequence number: 11
Date: 1/6/2003 3:47:04 PM
Type: Note
> ACCEPT - DONE
> 6. (E) Table 15, there are 2 cases of missing ")".

Page: 49
Sequence number: 15
Date: 1/11/2003 5:07:34 PM
Type: Note
> ACCEPT - DONE (changed to "SCSI BUS RESET OCCURRED" since the new names proposed in 02-232 were rejected)
> 7. (T) Section 4.4.2, last paragraph. The additional sense code "HARD RESET
> OCCURRED" does not
> exist.

Page: 49
Sequence number: 16
Date: 1/6/2003 3:12:08 PM
Type: Note
> 8. (T) Section 4.6.1, first paragraph unordered list, item c. This sounds
> like it forbids an expander from
> supporting only wide ports with multiple phys per port.

Page: 50
Sequence number: 6
Date: 1/7/2003 4:15:12 PM
Type: Note
9. (E) Section 4.6.2, third paragraph. Change the second sentence to "If an
expander device contains more than one internal SMP port, more than one internal SSP port, or more than one internal STP port, the additional ports shall include SAS addresses different from that of the expander device.

Page: 138
Sequence number: 14
Date: 1/6/2003 3:13:32 PM
Type: Note
ACCEPT - DONE
10. (E) Section 7.1.4.6, second paragraph. Reference is wrong - should be
7.7.

Page: 141
Sequence number: 5
Date: 1/6/2003 3:13:56 PM
Type: Note
ACCEPT - DONE
11. (E) Section 7.1.4.12, second paragraph. Reference is wrong - should be
7.7.

Page: 151
Sequence number: 4
Date: 1/8/2003 1:32:39 PM
Type: Note
ACCEPT - DONE
12. (T) Section 7.7.2, seventh paragraph after table 73. Shouldn't this be
"the SAS Address of the port
transmitting the IDENTIFY address frame"?

Page: 154
Sequence number: 6
Date: 1/24/2003 7:21:34 PM
Type: Note
ACCEPT - DONE (changed other text indicating the address is for the device. It's for the port.)
13. (T) Section 7.8.1, forth paragraph. In section 7.7.2, the SAS ADDRESS
field is defined as belonging to the device, not the port. Here it looks like the port's SAS Address. If it is not the port's SAS address, but is in fact the devices SAS Address, this statement is incorrect and it is not possible to
detect that multiple Phys are attached to the same port using the SAS
Address. If instead a Phy is supposed to report the SAS Address of the port it is attached to, then expander devices will need to assign a unique SAS Address to each port.

Page: 157
Sequence number: 13
Date: 2/25/2003 7:27:00 PM
Type: Note
ACCEPT - DONE (SL_IR transmitter section was too high)
14. (E) Section 7.8.6. Hanging paragraphs, add a level 3 subclause heading.

Page: 157
Sequence number: 14
Date: 3/1/2003 6:12:56 PM
Type: Note
ACCEPT - DONE (tracking with other comments)
15. (E) Section 7.8.6 SL_IR transmitter, last paragraph. The wording of the second sentence is unclear, and it occurs at least twice in the document. I think it is trying to limit the frame length for the purpose of ignoring primitives to cover the case where the EOAF is missed. Better wording is:
"For the purpose of ignoring primitives, IDENTIFY frames consist of a SOAF followed by a maximum of 8 dwords and an EOAF.

Page: 157
Sequence number: 15
Date: 2/25/2003 7:28:22 PM
Type: Note
REJECT (I agree, but would require lots of changes. Consider for SAS-2)
16. (T) Section 7.8.6.1.2.1. States can't take action. The state machine can take action while in a state or
when entering or leaving a state. Even better, the port can take an action when the state machine is in a

state, or when it (the state machine) transitions into or out of a state. This issue is prevalent in these state machine descriptions.

Page: 162
Sequence number: 9
Date: 2/17/2003 5:33:00 PM
Type: Note
  REJECT (XFER_RDY counts as data)
  17. (E) Section 7.12.1, second paragraph. What about XFER_RDY?

Page: 162
Sequence number: 10
Date: 2/17/2003 5:34:23 PM
Type: Note
  ACCEPT - DONE (changed all "request response" to "response" in this section)
  18. (E) Section 7.12.2.1, third paragraph. The term "connection response" is
  used in this paragraph
  without definition. The term "connection request response" is defined in the
  next subclause. Are these
  the same?

Page: 162
Sequence number: 11
Date: 2/17/2003 5:40:46 PM
Type: Note
  REJECT (functional equivalence is certainly allowed, but this is how we specify things.)
  19. (E) Section 7.12.2.1, third paragraph. The method of performing timeouts
  is vendor specific and
  should not be specified this way. Fix the wording so that timeout periods
  are used rather than timers.

Page: 162
Sequence number: 12
Date: 2/17/2003 5:40:55 PM
Type: Note
  ACCEPT - DONE (reworded)
  20. (E) Section 7.12.2.1, forth paragraph. There is a double negative in the
  second sentence that confuses
  the meaning.

Page: 162
Sequence number: 13
Date: 2/17/2003 5:37:34 PM
Type: Note
  ACCEPT - DONE
  21. (E) Section 7.12.2.1, forth paragraph, last sentence. Change "Rate
  matching is used on any..." to "Rate
  matching shall be used on any..."

Page: 163
Sequence number: 28
Date: 2/17/2003 5:48:50 PM
Type: Note
  REJECT (that section mentions OPEN_REJECT (RETRY). That's covered by "sent in response by the destination port" in the
  table.)
  22. (T) Section 7.12.2.2, last paragraph. The first paragraph in subclause
  7.16.1 describes another reason
  for sending an OPEN_REJECT.

Page: 170
Sequence number: 5
Date: 2/10/2003 6:24:52 PM
Type: Note
  REJECT
  23. (T) Section 7.13 and 7.14. The state machines described in subclauses 7.13 and 7.14 are implementation details that are
  vendor specific and should not be included as normative text within a T10 standard. This standard should be limited to specifying
  observable behavior and refrain from specifying implementation.

Page: 192
Sequence number: 2

Date: 2/18/2003 4:04:28 PM
Type: Highlight
ACCEPT - DONE (replaced with "is receiving")
24. (T) Section 7.16.5, the paragraph before figure 79. The term "back
channel" and "backchannel" is used
here without definition.

Page: 193
Sequence number: 5
Date: 2/16/2003 10:16:42 AM
Type: Note
ACCEPT - DONE (changed to "not balanced" in most cases)
25. (E) Section 7.16.6, unordered list. "unbalanced", "imbalanced",
"nonbalanced" and "not balanced" are
all terms that are used throughout the document. Should look for one
consistent, defined term.

Page: 193
Sequence number: 6
Date: 2/9/2003 3:39:17 PM
Type: Note
REJECT
26. (T) Subclause 7.16.7 describes an implementation of subclauses 7.16.1
through 7.16.6. This is
inappropriate for normative text and should be removed.

Page: 207
Sequence number: 6
Date: 2/19/2003 10:59:27 AM
Type: Note
REJECT (the intent is that SMP functions do not require processing (from request time to response time). New functions could be
defined that request something and poll for results later. We are clarifying that hard reset/link reset phy operations return
immediately rather than wait for the reset to complete.)
27. (T) Section 7.18.1, first paragraph. Several of the management functions may require software or
firmware intervention. No provision is included to break the connection and free the resource while this intervention takes place.
This could lead to serious performance degradation in SAS networks.

Page: 207
Sequence number: 7
Date: 2/19/2003 11:02:35 AM
Type: Note
ACCEPT - DONE (changed from "shall" to "checks" and added cross reference. This is the same way it is now expressed in the
SSP link layer section.)
28. (T) Section 7.18.1, last paragraph. What is the action for frames with
less than 8 bytes and good CRC?

Page: 207
Sequence number: 8
Date: 2/19/2003 11:04:22 AM
Type: Note
REJECT (there is no reason to specify what the source should get back after doing something illegal. The target state machine
will ignore any additional frames.)
29. (T) Section 7.18.2, second sentence. What should the source expect to receive if it transmits more than 1 request?

Page: 208
Sequence number: 10
Date: 1/11/2003 5:01:05 PM
Type: Note
REJECT
30. (T) Subclause 7.18.4 describes an implementation of subclauses 7.18.1
through 7.18.3. This is
inappropriate for normative text and should be removed.

Page: 227
Sequence number: 2
Date: 2/2/2003 11:05:08 AM
Type: Note
REJECT (it receives them before they are ACKed, thus the "going to". Changed to "to be" per Intel comment.)
31. (E) Section 9.1. Change "...that are going to be ACKed..." to "that are

ACKed..."

Page: 228
Sequence number: 6
Date: 1/6/2003 3:24:12 PM
Type: Note
    ACCEPT - DONE
    32. (T) Table 88. TIMEOUT bit should be RETRANSMIT bit.

Page: 229
Sequence number: 22
Date: 1/6/2003 3:24:35 PM
Type: Note
    ACCEPT - DONE
    33. (T) Table 89. Data frames are 1 to 1 024 bytes (can't have zero length
    data frame).

Page: 229
Sequence number: 23
Date: 2/2/2003 11:14:56 AM
Type: Note
    ACCEPT - DONE (changed to "failed in its previous attempt" without mentioning specific reasons)
    34. (T) Section 9.1, fourth paragraph after table 89. The frame can be
    retransmitted after receiving a NAK
    also.

Page: 229
Sequence number: 24
Date: 2/2/2003 11:08:58 AM
Type: Note
    ACCEPT - DONE (added an e.g. to try to clarify)
    35. (E) Section 9.1, seventh paragraph after table 89. I don't understand
    the last sentence in this paragraph.
    "The tag space used in the tag fields is shared across COMMAND and TASK frames."

Page: 230
Sequence number: 12
Date: 1/6/2003 3:25:42 PM
Type: Note
    ACCEPT - DONE
    36. (E) Section 9.2.2.1, first paragraph after table 90. The rules for
    handling commands sent to logical
    units that do not exist are defined in SAM-2, not SPC-2.

Page: 231
Sequence number: 4
Date: 1/13/2003 6:20:43 PM
Type: Note
    REJECT (Jan WG - SAM-3 will mention that CHECK CONDITION/ILLEGAL MESSAGE will be returned for any invalid task
    attributes. It's not a SAS-specific issue.)
    37. (T) Section 9.2.2.1. What is the correct response to a COMMAND frame with a TASK ATTRIBUTE field value that is not
    supported by the logical unit?

Page: 231
Sequence number: 5
Date: 2/15/2003 3:57:59 PM
Type: Note
    ACCEPT - DONE (per Feb 11 call, go ahead and say "shall ignore". Even though "reserved" is how SPI-5, FCP-2, and SRP
    describe it, it is unlikely that any target ever checks those bytes and seems best to prohibit checking.)
    38. (T) Section 9.2.2.1, second paragraph after table 91. Defining fields to be reserved generally means they must be tested for
    zero. Change the second sentence from "Any bytes between the end of the CDB and the end of the two fields are reserved" to
    "Any bytes between the end of the CDB and the end of these two field shall be ignored". Change the last sentence to "...the
    remaining ten bytes shall be ignored and the..."

Page: 232
Sequence number: 6
Date: 2/15/2003 4:22:24 PM
Type: Note
    ACCEPT - DONE (added INVALID LOGICAL UNIT response code to be returned in this case. SAM-3 proposal will be made to

return a service response of FUNCTION REJECTED in this case. Also added to state machine.)
39. (T) Section 9.2.2.2, paragraph preceding table 93. I could find no rules for handling task management functions addressed to logical units that do not exist in either SPC-2 or
SAM-2.

Page: 232
Sequence number: 7
Date: 2/2/2003 3:00:06 PM
Type: Note
    ACCEPT - DONE (added footnote that TARGET RESET is not supported on this row. FCP uses 20h for that function.)
    40. (E) Table 93. Why is 20h spelled out here with the "all others" below
    indicating "reserved"?

Page: 232
Sequence number: 8
Date: 2/2/2003 11:37:56 AM
Type: Note
    ACCEPT - DONE (added "unsupported")
    41. (T) Section 9.2.2.2, first paragraph after table 93. What if a valid TMF
    is not supported?

Page: 232
Sequence number: 9
Date: 2/2/2003 11:36:55 AM
Type: Note
    REVIEW PROTOCOL WG
    ACCEPT - DONE (no need to define all the tmf behaviors - SAM-3 does that. This paragraph and the QUERY TASK paragraph
    should be deleted.)
    42. (T) Section 9.2.2.2, third paragraph after table 93. What is returned if
    the task with TAG OF TASK
    TO BE MANAGED is in the task set?

Page: 233
Sequence number: 17
Date: 1/22/2003 6:22:09 PM
Type: Note
    REJECT (but renamed Relative Offset here to Requested Offset and the header one to Data Offset)
    43. (T) Section 9.2.2.3, first paragraph after table 94. This is confusing
    to have RELATIVE OFFSET field in the payload of the frame and a field with exactly the same name in the header of the frame.
    Recommend that this field be removed and the RELATIVE OFFSET field in the frame header be used for this purpose.

Page: 233
Sequence number: 18
Date: 1/22/2003 6:23:01 PM
Type: Note
    ACCEPT - DONE
    45. (T) Section 9.2.2.3, second paragraph after table 94. The last sentence
    in this paragraph should be
    "...the target port shall set the WRITE DATA LENGTH field to less than or
    equal to the value in the
    MAXIMUM BURST SIZE field times 512 (see 10.1.6.14)."

Page: 233
Sequence number: 19
Date: 2/28/2003 6:10:02 PM
Type: Note
    REVIEW PROTOCOL WG
    ACCEPT - DONE (changed to "to the value indicated by". Don't think we want to specify the 512 here; the mode page owns that)
    46. (T) Section 9.2.2.3, forth paragraph after table 94. Change the first
    sentence in this paragraph to: "...set
    the relative offset to 512 times the value of the FIRST BURST SIZE field in
    the Disconnect-Reconnect mode page (see 10.1.1.1.5). Fix the link to the section.

Page: 234
Sequence number: 4
Date: 1/6/2003 3:48:20 PM
Type: Note
    ACCEPT - DONE
    47. (E) Section 9.2.2.4, first paragraph after note 23. This paragraph is

redundant with the first 2
paragraphs on this page. We get it already.

Page: 236
Sequence number: 4
Date: 3/8/2003 3:08:36 PM
Type: Note
ACCEPT - DONE (Nothing for SAS itself. Jan WG - that's for SAM-3 to worry about. SAM-3 rev 5 added a rule that invalid task attributes shall return a CHECK CONDITION with sense key of ILLEGAL REQUEST and additional sense code of INVALID MESSAGE ERROR.)
52. (T) Section 9.2.5.1, fifth paragraph. What is to be done with a COMMAND frame with an unsupported TASK ATTRIBUTE value?

Page: 237
Sequence number: 8
Date: 2/2/2003 1:08:21 PM
Type: Note
ACCEPT - DONE (added footnote explaining that code 00h is only used with responding to a TASK frame)
48. (T) Table 99. A command frame that does not have an invalid field value will not return a RESPONSE IU with RESPONSE_DATA format, but will instead use the SENSE_DATA format. This means that option 'a' under Code 0 is not required. It would also be helpful to add a paragraph
explaining this behavior to the subclause.

Page: 237
Sequence number: 9
Date: 2/15/2003 2:47:56 PM
Type: Note
ACCEPT - DONE (per Feb 11 call. Remove x4 requirement.
Original note: Currently, the sense data list length is required to be x4, so the padding is inside the sense data field itself. The frame header number of fill bytes is not used (only DATA frames use that). This differs from other protocols so needs to be changed.)
49. (T) Section 9.2.2.5.4, forth paragraph. Add statement that the NUMBER OF
FILL BYTES field in the
frame header shall indicate the number of fill bytes added.

Page: 239
Sequence number: 8
Date: 2/15/2003 5:49:36 PM
Type: Note
REJECT (Several tape backup companies report no problem with recovery. Defer any optimizations to SAS-2).
50. (T) Section 9.2.4.3, second paragraph. The lack of an ability to recover from these types of errors at the link level will preclude the use of this interface on devices other than
disk drives. When this shortcoming is solved in the next generation of SAS, it will create interoperability issues that will
hinder the acceptance of this interface. Quantum has produced a proposal (02-487) that will solve this problem that should be included before forwarding SAS.

Page: 240
Sequence number: 12
Date: 2/24/2003 12:11:56 AM
Type: Note
REJECT (same comment made on prev page - only one needed for tracking)
51. (T) Section 9.2.4.4, first paragraph. The lack of an ability to recover
from these types of errors at the link level will preclude the use of this interface on devices other than disk drives. When this shortcoming is solved in the next generation of SAS, it will create
interoperability issues that will hinder the acceptance of this interface. Quantum has produced a proposal (02-487) that will solve this
problem that should be included before forwarding SAS.

Page: 241
Sequence number: 4
Date: 2/2/2003 3:09:19 PM
Type: Note
ACCEPT - DONE (per Jan WG; all changed to just "initiator shall abort" except 10.1.3, which gives an "e.g. sending ABORT TASK"))
53. (E) Section 9.2.5.2, third paragraph. An initiator always has the option of sending a TASK frame with an ABORT TASK or ABORT TASK SET task management function. Perhaps it would
be better to remove the recurring statements and add a paragraph that states that an initiator may use this means to abort the task when an error is detected with it.

Page: 242
Sequence number: 20
Date: 1/11/2003 4:52:24 PM
Type: Note
 REJECT
 54. (T) Subclause 9.2.6 describes an implementation of subclauses 9.2.1
 through 9.2.5. This is
 inappropriate for normative text and should be removed.

Page: 260
Sequence number: 9
Date: 1/11/2003 4:52:11 PM
Type: Note
 ACCEPT - DONE (reference to 10.3.1 added)
 55. (T) Section 9.4.2, second paragraph after table 102. Where is FUNCTION
 described?

Page: 260
Sequence number: 10
Date: 1/11/2003 4:50:42 PM
Type: Note
 ACCEPT - DONE (1023 fixed to 1024)
 56. (T) Section 9.4.2, third paragraph after table 102. Should be 1 024
 bytes based on description of max
 size frame?

Page: 261
Sequence number: 10
Date: 1/30/2003 4:42:07 PM
Type: Note
 ACCEPT - DONE (changed 1023 to 1024)
 57. (T) Section 9.4.3, first paragraph after table 104. Should be 1 024 bytes based on description of max
 size frame?

Page: 262
Sequence number: 5
Date: 1/11/2003 4:48:15 PM
Type: Note
 REJECT
 58. (T) Subclause 9.4.4 describes an implementation of subclauses 9.4.1
 through 9.4.3. This is
 inappropriate for normative text and should be removed.

Page: 269
Sequence number: 4
Date: 2/28/2003 3:41:43 PM
Type: Note
 ACCEPT - DONE (reworded with DATAPRES)
 59. (T) Table 108. There is no RSPVALID field in the RESPONSE frame.

Page: 270
Sequence number: 4
Date: 2/28/2003 3:41:37 PM
Type: Note
 ACCEPT - DONE (reworded with DATAPRES)
 60. (T) Table 109. There is no RSPVALID field in the RESPONSE frame.

Page: 274
Sequence number: 4
Date: 2/28/2003 3:41:21 PM
Type: Note
 ACCEPT - DONE (reworded with DATAPRES)
 61. (T) Table 116. There are no RSPVALID or SNSVALID fields in the RESPONSE
 frame.

Page: 275
Sequence number: 3
Date: 1/30/2003 2:33:33 PM
Type: Note

ACCEPT - DONE (reworded with DATAPRES)
62. (T) Table 117. There are no RSPVALID or SNSVALID fields in the RESPONSE
frame.

Page: 276
Sequence number: 4
Date: 1/30/2003 2:31:26 PM
Type: Note
　REJECT (but downgraded the list to a set of examples, since there are other ways to determine the tag is free for reuse. The layer
　crossing is conceptually solved by passing the DONEs, etc. upstream - I'd rather just refer to them directly in the examples).
　63. (T) Section 10.1.3, last paragraph and unordered list. This paragraph is placing a requirement on an application client that
　involves knowledge of activities not seen at that
　level.

Page: 277
Sequence number: 4
Date: 1/11/2003 4:37:24 PM
Type: Note
　REJECT (the OPEN used to open the connection communicated the full SAS address of the opener and destination. That is used
　for persistent reservations as the "initiator port address".)
　64. (T) Section 10.1.5. Without a port login, the only method available to
　associate persistent reservation to an initiator port is to use the hashed source address. A statement to clarify this should be added
　in this subclause. What action should be taken in cases where a conflict
　exists?

Page: 277
Sequence number: 5
Date: 1/13/2003 8:48:23 PM
Type: Note
　REJECT (can use OPEN_REJECT (RETRY) to prevent additional initiator-based opens)
　65. (T) Section 10.1.5. Similar to SPI, there is no port login function that
　can be used by a device to manage each I_T nexus. Unlike SPI, SAS networks can be configured with hundreds of initiators.
　How does a device report an error caused by receipt of a command from an initiator when no more resources are available to
　manage a new I_T nexus?

Page: 277
Sequence number: 6
Date: 1/14/2003 11:06:14 AM
Type: Note
　REJECT
　66. (T) Section 10.1.6.1.1. Unfortunately, there is precedence for this.
　However, mode pages are a bad
　way to configure the transport layer. It requires too much information be
　shared between layers and between logical units, which should not be sharing information. A much better method of configuring
　the transport layer was introduced when port logins were added, and that is exactly where the parameters included in this page
　belong. Unfortunately again, this transport layer does not include the
　concept of a port login, a shortcoming that will undoubtedly be corrected in
　future versions causing great interoperability issues for years to come.

Page: 279
Sequence number: 6
Date: 1/30/2003 1:56:05 PM
Type: Note
　ACCEPT - DONE (requires moving the 512-byte definition up above this sentence)
　67. (E) Section 10.1.6.1.5, first paragraph. The wording of the last
　sentence is confusing. Try replacing
　"... where the transfer length is specified in the WRITE DATA LENGTH field"
　with "where the
　WRITE DATA LENGTH field is equal to 512 times the FIRST BURST SIZE."

Page: 279
Sequence number: 7
Date: 1/30/2003 1:49:52 PM
Type: Highlight
　ACCEPT - DONE ("the same connection in which the command is transferred"
　68. (T) Section 10.1.6.1.5, fourth paragraph. The last sentence in this
　paragraph should be removed or the
　term "this connection" should be clarified.

Page: 281
Sequence number: 8
Date: 1/11/2003 4:29:17 PM
Type: Note
ACCEPT - DONE (corrected page layout)
69. (T) Table 122. What happened to byte 2 and 3?

Page: 281
Sequence number: 9
Date: 2/8/2003 12:18:37 PM
Type: Note
ACCEPT - DONE (but it's plus 4 not plus 2, once the byte numbers for this page are corrected).
[comment moved to 10.1.6.2.3 from 6.2.2]
70. (T) Section 10.1.6.2.3. A description for the PAGE LENGTH field should
be added that states the
PAGE LENGTH shall be equal to the (NUMBER OF PHYS value times the SAS phy
mode descriptor
length) plus 2 and is not adjusted for truncation.

Page: 296
Sequence number: 9
Date: 1/6/2003 3:39:26 PM
Type: Note
ACCEPT - DONE
71. (E) Section 10.3.1.2, paragraph immediately preceding table 131. This
paragraph should not be
numbered.

Page: 302
Sequence number: 12
Date: 1/29/2003 3:48:16 PM
Type: Note
ACCEPT - DONE (clarified that it might be the SAS address of a SAS port, expander device, or address provided for a SATA
device port. Also added expander device to SAS device in next a)b) list.)
72. (T) Section 10.3.1.4, the paragraphs below table 139 that describe the
SAS ADDRESS field.
According to the definition of SAS Address in 3.1.99, Phys don't have SAS
Addresses. These must be
either the SAS address of the Port or the device.

Page: 308
Sequence number: 3
Date: 1/6/2003 3:41:12 PM
Type: Note
ACCEPT - DONE
73. (E) Section 10.3.1.7, third paragraph below table 147. Reference numbers
need to be fixed.

Page: 312
Sequence number: 6
Date: 1/6/2003 3:41:03 PM
Type: Note
ACCEPT - DONE
74. (E) Section 10.3.1.8, third paragraph after table 150. Reference numbers
need to be fixed.

Page: 330
Sequence number: 4
Date: 1/17/2003 11:33:47 AM
Type: Note
REJECT (but added "to help" in 4.2.3)
75. (T) Annex D. This annex indicates that hashed address collisions should be very infrequent, but they will still happen. What
action is taken when a collision is detected?

Author: ENDL

Page: v
Sequence number: 1
Date: 2/6/2003 11:42:03 AM
Type: Note
    ACCEPT - DONE (track with another comment)
     Remove revision history before delivering the dpANS to Public Review.

Page: 6
Sequence number: 1
Date: 3/8/2003 3:54:46 PM
Type: Highlight
    ACCEPT - DONE (lacking input from Cris Simpson, added text about relaying an indication and replying to a request)
    3.1.17 confirmation
     Is a confirmation really just a single parameter passed from a lower layer to a higher layer? Or, is a confirmation a passing of
    parameters and other state information from a lower layer to a higher layer?

Page: 6
Sequence number: 2
Date: 1/22/2003 3:36:13 PM
Type: Highlight
    ACCEPT - DONE (deleted "device". It was intended to indicate that there is no special SAS meaning for the term on its own.)
    3.1.25 device
    The definition of device should include some relationship to SAS. As currently defined, a "device" may be a pencil, a house, a
    spaceship, or the moon.

Page: 6
Sequence number: 3
Date: 1/22/2003 10:34:16 AM
Type: Highlight
    REJECT (per Jan Editor's meeting: acronym suffices)
    3.1.27 direct current
    Provide a definition for A.C.

Page: 6
Sequence number: 4
Date: 2/25/2003 6:42:48 PM
Type: Highlight
    REJECT (use of signal in English meaning, T1 meeting, INCITS meaning, etc. is sufficiently clear. Are renaming "signal" to
    "message" when referring to request/confirmation/indication/response.)
    ([2/21 Phy group recommends no definition.]
    I think we're stuck overloading this term.
    T1 glossary
    signal: 1. Detectable transmitted energy that can be used to carry information. 2. A time-dependent variation of a characteristic of a
    physical phenomenon, used to convey information. 3. As applied to electronics, any transmitted electrical impulse. [JP1] 4.
    Operationally, a type of message, the text of which consists of one or more letters, words, characters, signal flags, visual displays,
    or special sounds, with prearranged meaning and which is conveyed or transmitted by visual, acoustical, or electrical means. [JP1])
    3.1.27 direct current
    Provide a definition for "signal". Relying on the standard English definition for "signal" allows a Stop sign to be a "signal".

Page: 7
Sequence number: 1
Date: 2/28/2003 3:18:45 PM
Type: Highlight
    ACCEPT - DONE (change this use to "message")
    3.1.39 expander connection router
    Global
    The reason why "signal" is not a defined term is becoming clear, i.e. "signal" has no consistent usage in SAS. The term "signal" as
    used in the ER definition almost certainly means something very different than the term "signal" as used in the D.C. definition.
    Otherwise, a SAS expander operates by switching raw waveforms from one phy to another, which seems unlikely to be the case.
    The inconsistent usage of 'signal' is far and away the most egregious problem ENDL discovered in its limited Letter Ballot review.

Page: 7
Sequence number: 2
Date: 1/25/2003 11:19:31 AM
Type: Highlight
    ACCEPT - DONE (deleted sentence)
    3.1.43 expander port
     Please provide a subject for this 'sentence': "Contains one or more phys."

Page: 7
Sequence number: 3
Date: 1/7/2003 2:27:42 PM
Type: Highlight

ACCEPT - DONE ("set of values")
3.1.55 hash function
 Since "domain" is equivalent to "SAS domain" (see 3.1.31), a hash function can be applied only to a SAS domain, whatever that means. Perhaps "domain" can be replaced with "value range" twice in the 3.1.55 definition.

Page: 8
Sequence number: 1
Date: 3/8/2003 9:30:01 AM
Type: Highlight

ACCEPT - DONE (tracking with INTC comment)
3.1.62 indication
 Is an indication really just a single parameter passed from a lower layer to a higher layer? Or, is an indication a passing of parameters and other state information from a lower layer to a higher layer?

Page: 8
Sequence number: 2
Date: 1/7/2003 2:29:36 PM
Type: Highlight

ACCEPT - DONE
3.1.63 information unit
 "Portion" s/b "The portion"

Page: 8
Sequence number: 3
Date: 2/7/2003 6:33:03 PM
Type: Highlight

REJECT (but deleted link altogether)
3.1.70 link
 "A physical link." s/b "Synonymous with physical link (see 3.1.86)."

Page: 9
Sequence number: 1
Date: 2/7/2003 6:46:42 PM
Type: Highlight

REJECT (but deleted the "part of" sentence)
3.1.80 OOB sequence
 "OOB signals. Part of" s/b "OOB signals, part of"

Page: 9
Sequence number: 2
Date: 3/5/2003 5:05:48 PM
Type: Highlight

ACCEPT - DONE (tracking with INTC comment)
3.1.96 request
 Is a request really just a single parameter passed from a higher layer to a lower layer? Or, is a request a passing of parameters and other state information from a higher layer to a lower layer?

Page: 9
Sequence number: 3
Date: 3/5/2003 5:05:38 PM
Type: Highlight

ACCEPT - DONE (tracking with INTC comment)
3.1.97 response
 Is a response really just a single parameter passed from a higher layer to a lower layer? Or, is a response a passing of parameters and other state information from a higher layer to a lower layer?

Page: 10
Sequence number: 1
Date: 1/30/2003 6:04:16 PM
Type: Line

REJECT (but deleted "SAS primitive" since that term is never used. SATA primitive is only used twice. Once replaced by "Primitives defined by SATA". The other is in a title of scrambling types.)
3.1.xx
Since SAS primitive has a definition, should SATA primitive have a definition?

Page: 10
Sequence number: 2
Date: 2/28/2003 9:30:23 AM
Type: Highlight
    ACCEPT - DONE
    3.1.115 SCSI initiator device
    "originate device service" s/b "originates device service"

Page: 11
Sequence number: 1
Date: 1/30/2003 6:07:20 PM
Type: Highlight
    ACCEPT - DONE (added "to an expander device". Also added to subtractive routing method definition.)
    3.1.137 table routing method
     It is not clear from the definitions whether a table routing method could result in a routing to an end device. If that is possible, both
    table routing and direct routing may do the same thing. If that is not possible, then "route connection requests" should be "route
    connection requests to devices other than end devices".

Page: 15
Sequence number: 1
Date: 1/7/2003 3:06:59 PM
Type: Highlight
    ACCEPT - DONE
    3.4 Editorial conventions
     "Fields containing only one bit are usually referred to as the name bit instead of the name field." is a repeat of the second
    sentence in the third paragraph in this subclause. Remove this paragraph because the earlier sentence uses small caps more
    correctly.

Page: 19
Sequence number: 1
Date: 1/7/2003 5:28:27 PM
Type: Highlight
    REJECT (this is not a subset of SAS ports)
    4.1.1 Architecture overview
     'which' s/b 'that' [twice]

Page: 22
Sequence number: 1
Date: 1/7/2003 5:34:29 PM
Type: Circle
    ACCEPT - DONE
    4.1.3 Ports
    Figure 6 Ports
    Based on the title of the subclause, the title of the figure, and the text preceding the figure, the ports attached to the narrow link
    should belabeled 'Narrow Port', 'Port'.

Page: 23
Sequence number: 1
Date: 1/7/2003 5:37:17 PM
Type: Circle
    ACCEPT - DONE
    4.1.4 SAS devices
    figure 7
    If figure 6 is changed to use 'Narrow Port' perhaps figure 7 should be changed too.

Page: 23
Sequence number: 2
Date: 1/22/2003 3:31:03 PM
Type: Highlight
    ACCEPT - DONE (added "in this standard")
    4.1.4 SAS devices
    last 2 in subclause
    The phrase 'In figures that show ports but no phys ...' makes not sense in the context of this subclause. Perhaps 'In figures in this
    standard that show ports but no phys ...'.

Page: 26
Sequence number: 1
Date: 2/8/2003 11:35:48 AM
Type: Circle

ACCEPT - DONE (kept the internal port given the new virtual phy approach for internal SAS devices. It's important to clarify that those internal expander ports have direct routing attributes. Changed "target port" to "SAS port" so it represents both initiators and targets and added a SAS device around it.. Labeled the expander port as "internal". Made each use the "more than one is possible" style.)

4.1.8.2 Edge expander device set, figure 11

I think this figure would more clearly represent the routing possibilities in an edge expander device set if the optional target port joined the optional initiator port in being absent from the figure. If necessary, add a sentence before or after the figure indicating that optional initiator and target ports have been omitted for clarity.

Page: 26
Sequence number: 2
Date: 3/3/2003 6:37:32 PM
Type: Note

ACCEPT - DONE (Moved the edge expander device set section after the Domain section. Added a small service delivery subsystem section.

Thus, 4.1.1 introduces a hierarchy of objects; 4.1.2 details the lowest level (phy) and leads up to this section on domains. Subsequent sections in 4.1.x give more detail on expander topologies, connections, and pathways. Arguably the expander topologies section could be made part of the service delivery subsystem section, and pathways could join it. There's no good home for connections, though. Leaving it in this order until a better suggestion comes along).

Counterargument: expander topologies are really defining the service delivery subsystem object, so should remain before domains.)

4.1.9 Domains

The presence of a subclause describing domains separating two subclauses discussing expanders and expander topologies is more than a little confusing. My gut level preference would be to put the domains subclause between 4.1.1 and 4.1.2. However, it appears that the general order of topic introduction in 4.1 is from the bottom of the architectural pyrimid up, leading to the conclusion that the discussion of domains should appear last among the subclauses in 4.1.

Page: 28
Sequence number: 1
Date: 1/23/2003 4:45:51 PM
Type: Strikeout

ACCEPT - DONE (replaced with an intro saying something like "a service delivery subsystem may contain expanders")

4.1.10 Expander device topologies

Delete the first sentence of this subclause. It grows tiresome with repetition. Surely, the reader has grapsed the concept by this point in 4.1.

Page: 28
Sequence number: 2
Date: 3/4/2003 11:33:35 AM
Type: Highlight

ACCEPT - DONE (changed "configured" to "constructed" to avoid confusion with the discover process)

4.1.10 Expander device topologies

Regarding, 'The number of edge expander devices and the phy route attributes of edge expander devices within an edge expander device set shall be established when the edge expander device set is configured.'

Since it is said elsewhere that application clients do something to edge expander device sets in the configuration process, does the cited sentence mean that application clients can control the number of exander devices in an edge expander device set?

Page: 30
Sequence number: 2
Date: 1/23/2003 5:07:42 PM
Type: Highlight

ACCEPT - DONE (overcome by rewrite)

4.1.11 Connections

items a) and c) in the first unordered list identify the protocol in use, while item b) omits this information. Include or do not include the protocol information equally in all list entries.

Page: 30
Sequence number: 3
Date: 1/23/2003 5:02:39 PM
Type: Highlight

ACCEPT - DONE (Reworded)

4.1.11 Connections

Regarding, '...the number of connections shall not exceed the number of phys within the wide port (i.e., only one connection per phy is allowed)...'.

It would seem that this requirement applies equally well to both wide and narrow ports. Furthermore, I cannot find a statement that specifically limits a narrow port to one connection per phy (i.e., one connection). It might be useful to 1) remove the word 'however', and 2) change 'wide port' to 'port' or if that is deemed too vague change 'wide port' to 'port, either wide or narrow,'.

Page: 30

Sequence number: 4
Date: 1/23/2003 5:03:29 PM
Type: Highlight
ACCEPT - DONE
4.1.11 Connections
 Move the qualifing phrase 'if multiple pathways exist between the initiator port(s) and the target port(s)' to the beginning of the sentence so that the word following directly introduces the list.

Page: 31
Sequence number: 1
Date: 3/2/2003 3:37:22 PM
Type: Circle
ACCEPT - DONE (tracking with another comment)
4.1.11 Connections
 Do not anchor figure 17 to list entry d) so that list entry d) is not orphaned from the rest of the list by a quarter page of white space.

Page: 31
Sequence number: 2
Date: 3/2/2003 3:40:06 PM
Type: Circle
ACCEPT - DONE (got rid of curves, use straight lines for connections)
4.1.11 Connections
 It is most curious how connection E has succeeded in avoiding the requirement to pass through any phy on one of the expanders and in the target port.

Page: 32
Sequence number: 1
Date: 3/2/2003 3:01:00 PM
Type: Circle
ACCEPT - DONE (redrew instead. Made all end phys SAS phys not initiator or target, so it's obvious that any phy can open any other phy. Reduced from 6 to 4 to avoid clutter. Label the expander phys as such.)
4.1.11 Connections
 Since figure 18 appears to make no attempt to unambiguously relate pathways to phsyical links (e.g., one of the magenta pathways passes through four phys in the expander device) perhaps it would be best to remove the physical links and expander device phys from the figure.

Author: FUJ

Page: ix
Sequence number: 4
Date: 1/7/2003 11:13:52 AM
Type: Note
ACCEPT - DONE
FUJITSU-1
PDF page : ix
Section : 1.19 Revision sas-r02c
Figure/Table
Paragraph/sentense/row/colum
Comment : 1.19 Revision sas-03

Page: 6
Sequence number: 16
Date: 1/22/2003 10:05:45 AM
Type: Highlight
ACCEPT - DONE (delete the 2nd sentence)
FUJITSU-2
PDF page : 6
Section : 3.1.18 connection
Figure/Table
Paragraph/sentense/row/colum
Comment : It defines only SSP(SCSI) case. SMP/STP case should be added since "3.1.78 nexus:" explains only SCSI and "see SAM-3"

Page: 109
Sequence number: 16
Date: 1/9/2003 4:48:12 PM

Type: Note
    ACCEPT - DONE (removed "Phy layer" and changed "phy" to "phy layer")
    FUJITSU-3
    PDF page : 109
    Section : 6.8.2 OOB sequence status
    Figure/Table : Figure 56
    Paragraph/sentense/row/colum : line 3
    Comment : "Phy layer SAS phy (SP) state machine" / "SAS phy (SP) state
    machine" unification of the term as "SAS phy layer (SP) state
    machine"

Page: 139
Sequence number: 4
Date: 1/22/2003 10:06:45 AM
Type: Highlight
    ACCEPT - DONE (change "response" to "the result of")
    FUJITSU-4
    PDF page : 139
    Section : 7.1.4.11 OPEN_REJECT
    Figure/Table :
    Paragraph/sentense/row/colum line 2
    Comment : "The response to some OPEN_REJECTs is to abandon the connection
    request and the response to other OPEN_REJECTs is to retry the
    connection request."   This "response" makes confusion as RESPONSE
    to the originator of OPEN_REJECT. An "action" seems better to
    understanding.

Page: 139
Sequence number: 5
Date: 2/17/2003 1:47:03 PM
Type: Highlight
    ACCEPT - DONE (change "Any device" to "any phy" (check other tables nearby). This does not only apply to expanders - if the
    destination gets a bad rate request, it returns this too. The last sentence in the description describes the direct-connect situation
    which does not include an expander.)
    FUJITSU-5
    PDF page : 139
    Section : 7.1.4.11 OPEN_REJECT
    Figure/Table :Table 61
    Paragraph/sentense/row/colum: 2nd row
    Comment : OPEN_REJECT (CONNECTION RATE NOT SUPPORTED) by "Any device".
    No Expander case, this is a mistake of OOB speed matching
    sequence.
    But how to communicate using different speed?
    So, this is the case of only Expander.

Page: 139
Sequence number: 6
Date: 1/17/2003 6:10:30 PM
Type: Note
    REJECT (no change requested)
    FUJITSU-6
    PDF page : 139
    Section : 7.1.4.11 OPEN_REJECT
    Figure/Table : Table 61
    Paragraph/sentense/row/colum : 1st, last row
    Comment : In case of BAD/WRONG destination, Initiator can report to Upper Application, but device can do nothing except to
    terminate the
    command. This kind of logical error should be reported on
    appropriate method.

Page: 163
Sequence number: 26
Date: 2/17/2003 5:50:09 PM
Type: Highlight
    ACCEPT - DONE (point to 7.12.3 where arbitration fairness selects the winner when OPENs cross)
    FUJITSU-7
    PDF page : 163
    Section : 7.12.2.2 Connection request responses
    Figure/Table : Table 78

Paragraph/sentense/row/colum : 4th row
Comment : "OPEN address frame" "indicates two connection requests crossing
on the physical link." In no expander case, the action should be
defined to avoid racing condition or ping-pong condition. For
instance, Initiator implicitly abandon the connection request,
and
Target proceeds operation.

Page: 163
Sequence number: 27
Date: 1/17/2003 6:15:48 PM
Type: Note
    REJECT (the device sending OPEN is not the only one that could send a BREAK. The other side could send it first.)
    FUJITSU-8
    PDF page : 163
    Section : 7.12.2.2 Connection request response
    Figure/Table : Table 78
    Paragraph/sentense/row/colum : row 5 BREAK
    Comment : According to 7.12.5 and 7.12.6, BREAK is used by originator at
    first. If BREAK is responded for Connection (OPEN address
    frame),
    this is a protocol error. So, "The destination port or expander
    port may reply with BREAK indicating the connection is not being
    established." is not correct. BREAK is the response of the BREAK
    of open requester not correct response of Connection request
    (OPEN
    address frame).

Page: 167
Sequence number: 11
Date: 3/5/2003 3:38:17 PM
Type: Highlight
    REJECT (Changed "No response and timer expires" to "Break Timeout timer expires" to be a little clearer. Although the originating
    device could do a link reset sequence, that may be overkill (a single lost SOAF will trigger this case.) On the other hand, "Breaking
    a connection" below is more likely to be a major error. Added a comment below recommending that.)
    FUJITSU-9
    PDF page : 167
    Section : 7.12.5 Abandoning a connection request
    Figure/Table : Table 81
    Paragraph/sentense/row/colum : row 3 No response and timer expires
    Comment : In case of response time out of BREAK, there should be clear
    action definition. Since BREAK is used for AIP timeout, the
    response timeout of BREAK is double timeout condition. Link
    Initialization or something to recover or terminate queue action
    should be taken. (Then, the other path action should be taken on
    multiple port devices in future.)

Author: HPQ

Page: ix
Sequence number: 1
Date: 2/16/2003 11:41:50 AM
Type: Highlight
    ACCEPT - DONE
    1.19 Revision sas-r02d
    This should be sas-r03 not sas-r02d.

Page: 30
Sequence number: 1
Date: 3/2/2003 3:28:49 PM
Type: Note
    ACCEPT - DONE (added a sentence, somewhat out of place here)
    4.1.11 Connections
    This general intro needs to make it clear that frames related to one command (ATA or SCSI) may be transferred in different
    connections. A connection need not stay open for the duration of the command.

Page: 59
Sequence number: 1
Date: 2/16/2003 11:41:50 AM
Type: Highlight
    ACCEPT - DONE
    4.6.11.3 Expander route table
    Change "expander" to "expander device" before (i.e., self-reference)

Page: 61
Sequence number: 1
Date: 2/16/2003 11:41:50 AM
Type: Highlight
    ACCEPT - DONE
    4.6.11.4 Expander route index order
    Table 26 - Expander route table levels
    Change "SAS address of the device" to "SAS address of the port" for each entry

Page: 114
Sequence number: 1
Date: 2/16/2003 11:41:50 AM
Type: Highlight
    ACCEPT - DONE (Track with other comment)
    6.8.3 SP state machine
    Implement Editor's Note 1 about the interaction between SP and SP_DWS.

Page: 137
Sequence number: 1
Date: 2/16/2003 11:41:50 AM
Type: Note
    REJECT (Jan WG)
    7.1.4.4 BROADCAST
    Make one of the BROADCAST primitives BROADCAST (VENDOR SPECIFIC).

Page: 137
Sequence number: 2
Date: 2/16/2003 11:41:50 AM
Type: Note
    ACCEPT - DONE (per Jan WG go ahead and use 8 broadcast codes. Keep existing encodings; pull next four from annex H for the
    new ones.)
    7.1.4.4 BROADCAST
    Increase the total number of broadcast primitives to 8. There are 4 more D04.7 codes available.
    broadcast (change)
    broadcast (rsvd change 0) (end devices treat as change)
    broadcast (rsvd change 1)
    broadcast (rsvd 0)
    broadcast (rsvd 1)
    broadcast (rsvd 2)
    broadcast (rsvd 3)
    broadcast (rsvd 4)

Page: 142
Sequence number: 1
Date: 2/16/2003 11:41:50 AM
Type: Strikeout
    ACCEPT - DONE
    7.1.5.6 RRDY (Receiver ready)
    Remove:
    "RRDY (RESERVED 2) Reserved. Processed the same as RRDY (NORMAL)."
    There is no primitive code assigned for this.

Page: 143
Sequence number: 1
Date: 2/16/2003 11:41:50 AM
Type: Note
    ACCEPT - DONE
    7.2 Clock skew management
    Remove blank line after second paragraph

Page: 151

Sequence number: 1
Date: 2/16/2003 11:41:50 AM
Type: Highlight
ACCEPT - DONE (clarified that for SAS ports, it's a port identifier. For expander devices, it's a device name.)
7.7.2 IDENTIFY address frame
"The SAS ADDRESS field indicates the SAS address of the device transmitting the IDENTIFY address frame."
It's really the SAS address of the port, not the device.

Page: 160
Sequence number: 1
Date: 2/19/2003 6:09:13 PM
Type: Highlight
REJECT (went with LSI command "if one of the")
7.9 Power management
Change "If the primitives arrives" to "If the primitive arrives"

Page: 162
Sequence number: 1
Date: 2/17/2003 5:39:35 PM
Type: Highlight
ACCEPT - DONE (reworded)
7.12.2.1 Connection request
"If none of the
prospective intermediate physical links does not support the requested connection rate,"
should be
"If one of the ..."
[from hcurley@indra.com]

Page: 163
Sequence number: 1
Date: 3/5/2003 3:23:45 PM
Type: Highlight
ACCEPT - DONE (deleted reference from table 81. Once a BREAK is sent, no reason to honor anything but BREAK coming back.
Ignore incoming OPENs, OPEN_ACCEPTs, etc. at that time)
7.12.2.2 Connection request responses
BREAK is effectively referenced twice by table 81 since it shows up here, and this table shows up in table 81
Need to differentiate between originated and received BREAKs (the latter need responses) too

Page: 165
Sequence number: 1
Date: 2/19/2003 3:47:01 PM
Type: Note
REVIEW PROTOCOL WG
ACCEPT - DONE (also added to last sentence in section)
7.12.3.1.4 Pathway Recovery
***
This comparison should also include the connection rate as the lowest priority bits, so two requests from a wide port (which have
the same source address) resolve consistently
This parallels the normal arbitration fields specified in 7.12.3.1.1 (which uses AWT, source address, connection rate)

Page: 207
Sequence number: 1
Date: 2/19/2003 10:57:56 AM
Type: Highlight
REJECT (whole paragraph deleted)
7.17.3 Preparing to close an STP connection
Add "or" before the last option in the list: "detected, [or] after"

Page: 216
Sequence number: 1
Date: 2/16/2003 11:41:50 AM
Type: Highlight
ACCEPT - DONE
8.3.2 Port layer
remove duplicate header numbers

Page: 224
Sequence number: 1
Date: 3/1/2003 4:17:35 PM

Type: Highlight
    REFER PORT WG - TODO
    8.4.3.1.2 PL_PM I_T nexus loss timer
    Second list:
    a) Open Failed (Connection Rate Not Supported)
    is unnecessary since targets are required to try 1.5 Gbps and that will never get this error
    (at least for target side)

Page: 228
Sequence number: 1
Date: 2/16/2003 11:41:50 AM
Type: Highlight
    ACCEPT - DONE
    9.2.1 SSP frame format
    Table 88 - SSP frame format
    Change TIMEOUT bit to RETRANSMIT

Page: 240
Sequence number: 1
Date: 2/16/2003 11:41:50 AM
Type: Highlight
    ACCEPT - DONE (for too short for LUN field, too short for CDB, and additional cdb mismatch, generate a RESPONSE IU with a
    RESPONSE CODE indicating INVALID FRAME. In ch10 protocol services, this means a service delivery subsystem failure.)
    9.2.5.1 Target port error handling
    and 9.2.6.3.9 in the state machine
    "the target port shall return a
    CHECK CONDITION status with a sense key of ILLEGAL REQUEST and an additional sense code of
    INFORMATION UNIT TOO SHORT (see 9.2.6.3.9)."
    Instead, return a RESPONSE frame with a RESPONSE CODE indicating this problem. Don't involve the application layer.

Page: 240
Sequence number: 2
Date: 2/16/2003 11:41:50 AM
Type: Highlight
    ACCEPT - DONE (for too short for LUN field, too short for CDB, and additional cdb mismatch, generate a RESPONSE IU with a
    RESPONSE CODE indicating INVALID FRAME. In ch10 protocol services, this means a service delivery subsystem failure.)
    9.2.5.1 Target port error handling
    "the target port shall return a CHECK CONDITION status with a sense key of ILLEGAL
    REQUEST and an additional sense code of INFORMATION UNIT TOO LONG (see 9.2.6.3.9)."
    Instead, return a RESPONSE frame with a RESPONSE CODE and don't bother the application layer.

Page: 258
Sequence number: 1
Date: 2/16/2003 11:41:50 AM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.9.1 State description (for ST_TTS7)
    Editor's Note 3 - add service response argument to SCSI Command Received () and Task Management Function Request ()
    This note should be rejected. Errors in command frame reception should generate RESPONSE frames with RESPONSE CODE
    errors, not CHECK CONDITIONs.

Page: 258
Sequence number: 2
Date: 2/28/2003 11:20:34 AM
Type: Highlight
    REJECT (maybe in SAS-2)
    9.2.6.3.9.1 State description (ST_TTS7)
    Editor's Note 4 - add local Service Response to Send Command Complete () and Task Management Function Executed ()
    Implement only if a SAM-3 proposal is accepted in the letter ballot resolution timeframe.

Page: 259
Sequence number: 1
Date: 2/16/2003 11:41:50 AM
Type: Highlight
    ACCEPT - DONE
    9.3.1 Initial FIS
    Change "the SMP REPORT SATA PORT function" to "the SMP REPORT PHY SATA function"

Page: 259

Sequence number: 2
Date: 2/16/2003 11:41:50 AM
Type: Highlight
    ACCEPT - DONE
    9.3.2 SATA tunneling for multiple STP initiator ports
    Change "CLOSE CLEAR AFFILIATION" to "CLOSE (CLEAR AFFILIATION)"

Page: 292
Sequence number: 1
Date: 3/4/2003 6:14:00 PM
Type: Highlight
    TODO (depends on CAP WG handling of 02-419 - last edit)
    10.1.9 SCSI vital product data
    Table 128 - Device Identification VPD page required identification descriptors
    The target device name should follow the common string format being proposed in 02-419 (if that is accepted by CAP).
    Only SAS-only devices should be required to use the "naa." format name for a target device name.
    Similarly, only SAS-only devices should be required to use the NAA binary formats for logical unit names.

Page: 294
Sequence number: 1
Date: 2/16/2003 11:41:50 AM
Type: Note
    ACCEPT - DONE (1/21 call voted to accept 03-034r4 which doesn't contain a GENERAL CONTROL function any longer. Instead,
    a virtual internal phy concept is used.)
    10.3.1 SMP functions
    Add a GENERAL CONTROL function 80h. See 03-034.
    It has bits to reset internal targets of each protocol
    clear affiliation of an internal STP target

Page: 296
Sequence number: 1
Date: 2/16/2003 11:41:50 AM
Type: Highlight
    ACCEPT - DONE
    10.3.1.2 REPORT GENERAL function
    EXPANDER ROUTE INDEXES paragraph
    ...route indexes PER PHY
    also note that some phys may not reach this limit

Page: 296
Sequence number: 2
Date: 2/16/2003 11:41:50 AM
Type: Highlight
    ACCEPT - DONE
    10.3.1.2 REPORT GENERAL function
    Table 131 - REPORT GENERAL response
    The row labeled byte 28 should be labeled byte 11.

Page: 296
Sequence number: 3
Date: 2/16/2003 11:41:50 AM
Type: Highlight
    ACCEPT - DONE
    10.3.1.2 REPORT GENERAL function
    Table 131 - REPORT GENERAL response
    The first row labeled byte 31 should be labeled byte 27.

Page: 302
Sequence number: 1
Date: 2/16/2003 11:41:50 AM
Type: Highlight
    ACCEPT - DONE (Reworded)
    10.3.1.4 DISCOVER function
    "The ATTACHED SAS ADDRESS field contains the SAS address of the attached phy."
    It's really the SAS address of the attached port or erxpander device, as reported by the attached phy.

Page: 302
Sequence number: 2
Date: 2/16/2003 11:41:50 AM

Type: Highlight
    ACCEPT - DONE (mention "transmitted during initialization sequence". Also mention SAS port and expander device as the owner of the SAS address.)
    "The SAS ADDRESS field contains the SAS address of this phy."
    It's really the address reported by this phy, not the address of this phy.

Page: 382
Sequence number: 1
Date: 2/28/2003 3:26:37 PM
Type: Highlight
    REFER PROTOCOL WG - TODO (delete the logo or adopt STA's?)
    Annex J SAS logo
    Figure J.1 — SAS logo
    The SCSI Trade Association has a new logo for SAS to replace this one.

Author: IBM

Page: ii
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    Points of Contact
    George Penokie's email address is gop@us.ibm.com

Page: iii
Sequence number: 2
Date: 1/7/2003 11:08:43 AM
Type: Highlight
    REVIEW ALL WG
    ACCEPT - DONE (contents merged with LSI comment)
    Abstract
    This abstract is inaccurate and should be rewritten to the following:
    This standard defines mechanical, electrical, timing requirements, command, and task management delivery protocol requirements to transfer commands and data between SCSI devices attached to a SCSI
    serial interface. This standard is intended to be used in conjunction with the SCSI command sets. The resulting interface facilitates the interconnection of computers and intelligent peripherals and thus provides a common interface standard for both system integrators and suppliers of intelligent peripherals.

Page: v
Sequence number: 2
Date: 2/19/2003 6:46:35 PM
Type: Highlight
    ACCEPT - TODO (remove in last edit)
    Revision Information
    This needs to be removed before public review.

Page: x
Sequence number: 2
Date: 2/19/2003 6:45:59 PM
Type: Circle
    REJECT (I'll follow Bill Ham and submit with multiple levels and let ANSI and ISO ruin it if they insist. All the long titles have been corrected so there are no wrapping problems.)
    Contents
    Indents only go one deep. So ,for example, everything under clause 4 should be intended to the same level no matter how many sub-sections there are. This will happen at either ANSI or ISO any way.
    Also, when the indents are more that four deep there is a readability issue with long section titles.

Page: x
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    Contents
    The term 'Page' needs to be move so the 'e' aligns with the LSD of the page number.

Page: xxxiii
Sequence number: 2
Date: 1/6/2003 6:16:00 PM
Type: Note
    ACCEPT - DONE
    Foreword
    The INCITS leadership should be adding here as follows:
    Karen Higginbottom, Chair
    David Michael, Vice-chair
    Monica Vago, Secretary

Page: xxxiii
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Note
    ACCEPT - DONE
    Foreword
    The t10 leadership should be adding here as follows:
    John B. Lohmeyer, Chair
    George O. Penokie, Vice-Chair
    Ralph O. Weber, Secretary

Page: xxxiii
Sequence number: 4
Date: 2/19/2003 6:37:31 PM
Type: Note
    ACCEPT - DONE (added as of 2/19/2003)
    Foreword
    The list of t10 members should be added here. A good format is to place the list in three columns (see SPI-5)

Page: 1
Sequence number: 1
Date: 1/7/2003 1:53:36 PM
Type: Highlight
    REJECT - this standard is better
    Figure 1
    The statement << this standard >> should in this case be replaced with SAS.

Page: 1
Sequence number: 2
Date: 1/7/2003 1:53:30 PM
Type: Highlight
    REJECT - this standard is better
    Figure 2
    The statement << this standard >> should in this case be replaced with SAS.

Page: 4
Sequence number: 1
Date: 1/11/2003 5:31:27 PM
Type: Highlight
    ACCEPT - DONE (global format fix for notes)
    2.3 References under development
    Global
    The format of the notes should be << NOTE 1 - >> the dash is missing.

Page: 4
Sequence number: 2
Date: 1/7/2003 1:55:41 PM
Type: Square
    REVIEW EDITORS WG
    REJECT - there are SATA references throughout this standard. (might want to make it clear that a "SATA" reference means all of
    these, not just the 8/29/01 document)
    2.4 Other references
    As far as I can tell there are no references to these documents within this standard. So why are they listed as norminative? They
    should be removed or appropriate references added.

Page: 5
Sequence number: 3
Date: 1/7/2003 2:14:28 PM

Type: Highlight
    ACCEPT - DONE
    3.1.13 broadcast primitive processor
    The statement << The portion of an ... >> should be changed to << An object within an ... >>.

Page: 5
Sequence number: 4
Date: 2/6/2003 1:46:07 PM
Type: Note
    ACCEPT - DONE
    3.1 Definitions
    The ATA definitions should be replaced with document 03-022.

Page: 6
Sequence number: 10
Date: 2/6/2003 11:52:00 AM
Type: Strikeout
    ACCEPT - DONE (changed most "domain" references to "SAS domain". Kept this definiton but changed to "A SAS domain, SCSI
    domain, or ATA domain." (since we have a section called "Domains" which has pictures of ATA domains. I don't want to rename
    that section "SAS domains and ATA domains".))
    3.1.31 domain:
    Get rid of this by using << SAS domain >> in all cases.

Page: 6
Sequence number: 11
Date: 1/7/2003 2:20:41 PM
Type: Strikeout
    ACCEPT - DONE
    3.1.32 downstream phy:
    The term << primary>> should be deleted as it provide no additional information to the definition.

Page: 6
Sequence number: 12
Date: 1/7/2003 2:15:27 PM
Type: Highlight
    REJECT - upward signals are not always a response to anything
    3.1.17 confirmation
    A confirmation is not a parameter that is passed rather it is the a response returned from a lower layer indicating completion of a
    request from a higher layer.

Page: 7
Sequence number: 8
Date: 1/7/2003 2:24:10 PM
Type: Highlight
    ACCEPT - DONE
    3.1.39 expander connection router (ER):
    The statement << The portion of an ...>> should be changed to << An object within an ... >>.

Page: 7
Sequence number: 9
Date: 1/7/2003 2:25:07 PM
Type: Highlight
    ACCEPT - DONE
    3.1.41 expander function:
    The statement << The portion of an ... >> should be changed to << An object within an ... >>.

Page: 7
Sequence number: 10
Date: 2/7/2003 11:19:48 AM
Type: Highlight
    ACCEPT - DONE (changed to "A routed SAS address" among other changes)
    3.1.44 expander route entry:
    So what is << A single destination SAS address >>? Do not all SAS addresses belong to an individual device? If so then all are
    single destination SAS addresses.

Page: 7
Sequence number: 11
Date: 1/7/2003 2:28:33 PM
Type: Highlight

ACCEPT - DONE
3.1.55 hash function:
Change the statement << into a hashed value >> to << into a shorter hashed value >>.

Page: 8
Sequence number: 10
Date: 2/28/2003 2:59:35 PM
Type: Highlight
REJECT
3.1.62 indication:
An indication is not a parameter that is passed rather it is a transaction from a lower layer that conveys a request to a higher layer.

Page: 8
Sequence number: 11
Date: 2/7/2003 6:46:14 PM
Type: Strikeout
REJECT - this links the term to other defined terms also in the glossary. Did add some xrefs.
3.1.72 link reset sequence:
This is way to detailed and is a duplicate of what is in 4.4. Delete <<an identification sequence, or a phy reset sequence followed by a hard reset sequence, another phy reset sequence, and an identification sequence>> and replace with <<one or more other sequences (see 4.4).>>

Page: 9
Sequence number: 10
Date: 3/5/2003 5:04:14 PM
Type: Highlight
ACCEPT - DONE (tracking with INTC comment)
3.1.96 request:
A request is not a parameter that is passed rather it is a transaction request from a higher layer that invokes a service from a lower layer.

Page: 9
Sequence number: 11
Date: 3/5/2003 5:04:03 PM
Type: Highlight
ACCEPT - DONE (tracking with INTC comment)
3.1.98 response:
A response is not a parameter that is passed rather it is a transaction from a higher layer that conveys the result of a request to a lower layer.

Page: 9
Sequence number: 12
Date: 1/7/2003 2:49:36 PM
Type: Strikeout
ACCEPT - DONE
3.1.91 programmed maximum physical link rate:
The definition is no place to be defining the default value. Delete <<defaults to the hardware maximum physical link rate.>>

Page: 9
Sequence number: 13
Date: 1/7/2003 2:49:43 PM
Type: Strikeout
ACCEPT - DONE
3.1.92 programmed minimum physical link rate:
The definition is no place to be defining the default value. Delete <<defaults to the hardware maximum physical link rate.>>

Page: 10
Sequence number: 6
Date: 2/28/2003 9:38:57 AM
Type: Highlight
ACCEPT - DONE (Depends on if it's referring to the "request-response" model in SAM-3 4.2 and 4.3, or the 4-step model in the transport protocol services. The change was made in SAM-3 so is also made here.)
3.1.116 SCSI initiator port:
The statement <<requests and responses are routed>> should be <<requests and confirmations are routed>>. Note this is also wrong in SAM-3.

Page: 10
Sequence number: 7
Date: 2/28/2003 9:39:03 AM

Type: Highlight
ACCEPT - DONE (Depends on if it's referring to the "request-response" model in SAM-3 4.2 and 4.3, or the 4-step model in the transport protocol services. The change was made in SAM-3 so is also made here.)
3.1.119 SCSI target port:
The statement <<requests and
responses are routed>> should be <<indications and responses are routed>>. Note this is also wrong in SAM-3.

Page: 11
Sequence number: 8
Date: 1/20/2003 4:01:47 PM
Type: Strikeout
REJECT (per PHY WG, but delete "(SSC)" abbreviation and keep a definition since the term is used within the specification.)
3.1.129 spread spectrum clocking (SSC):
This should be deleted as the term is not used anywhere else in this standard.

Page: 11
Sequence number: 9
Date: 1/7/2003 2:59:26 PM
Type: Highlight
ACCEPT - DONE ("set of protocols and the interconnect")
3.1.124 Serial Attached SCSI (SAS):
The term <<protocol>> should be <<protocols>> as there are at least two protocols defined (i.e., SMP and SSP)

Page: 12
Sequence number: 2
Date: 3/8/2003 3:45:55 PM
Type: Square
ACCEPT - DONE (They are SAM-3 terms so need to remain. Added i.e.'s relating the terms to SCSI application client, SCSI device server, SSP initiator port, and SSP target port.)
3.1.146 transport protocol service confirmation:
3.1.147 transport protocol service indication: .
3.1.148 transport protocol service request:
3.1.149 transport protocol service response:
I don't think these should even be in the glossary. But if they remain they need to change in the same manner suggested in the confirmation, indication, request, and response definitions.

Page: 12
Sequence number: 3
Date: 2/8/2003 10:38:14 AM
Type: Strikeout
ACCEPT - DONE
3.1.151 upstream phy:
The term << primary >> should be deleted as it provide no additional information to the definition.

Page: 12
Sequence number: 4
Date: 2/8/2003 10:37:45 AM
Type: Strikeout
REJECT (since we don't say "primitive" after each one in the text, the reader might not realize some obscure string of capital letters is a primitive name.)
3.2 Symbols and abbreviations
Primitives should not be listed in the abbreviations list. Remove all primitives from the list.

Page: 13
Sequence number: 3
Date: 2/8/2003 10:39:56 AM
Type: Strikeout
REJECT (see same comment earlier)
3.2 Symbols and abbreviations
Primitives should not be listed in the abbreviations list. Remove all primitives from the list.

Page: 13
Sequence number: 4
Date: 2/8/2003 10:39:53 AM
Type: Strikeout
REJECT (see same comment earlier)
3.2 Symbols and abbreviations
Primitives should not be listed in the abbreviations list. Remove all primitives from the list.

Page: 14
Sequence number: 2
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    3.3.6 need not::
    Remove one of the :s

Page: 16
Sequence number: 3
Date: 1/7/2003 2:37:45 PM
Type: Circle
    ACCEPT - DONE
    Figure 3
    The indication goes from lower layers to higher layers. This should be response name.

Page: 16
Sequence number: 4
Date: 1/7/2003 2:37:54 PM
Type: Circle
    ACCEPT - DONE
    Figure 3
    The indication goes from lower layers to higher layers. This should be response name.

Page: 16
Sequence number: 5
Date: 1/7/2003 2:38:06 PM
Type: Circle
    ACCEPT - DONE
    Figure 3
    The Response goes from higher layers to lower layers. This should be indication name.

Page: 16
Sequence number: 6
Date: 1/7/2003 2:37:59 PM
Type: Circle
    ACCEPT - DONE
    Figure 3
    The Response goes from higher layers to lower layers. This should be indication name

Page: 17
Sequence number: 5
Date: 2/25/2003 7:01:57 PM
Type: Highlight
    REJECT
    3.5.3 Parameters, requests, indications, confirmations, and responses
    Loss the """" around the <<"(to all states)">>.

Page: 17
Sequence number: 6
Date: 1/7/2003 5:21:23 PM
Type: Highlight
    REJECT (I like to spell out the first use in the text then use the acronym thereafter - who studies the acronym list before reading
    the document? Also, MSB and LSB could easily be read as ms/ls BYTE not BIT.)
    3.6 Bit and byte ordering
    There is not need to redefine the LSB and MSB acronym as it has already been defined in the abbreviations list. Change <<least
    significant bit (LSB) is shown on the right and the most significant bit (MSB)>> to <<LSB is shown on the right and the MSB>>.

Page: 19
Sequence number: 2
Date: 1/7/2003 5:27:59 PM
Type: Highlight
    REJECT - not referring to a subset of ports; all SAS ports do this
    4.1.1 Architecture overview
    This which should be a that.

Page: 19
Sequence number: 3
Date: 1/6/2003 6:16:00 PM

Type: Highlight
REJECT - not referring to a subset of ports
4.1.1 Architecture overview
This which should be a that.

Page: 20
Sequence number: 1
Date: 1/7/2003 5:24:47 PM
Type: Highlight
REJECT (what's wrong with semicolons for related sentences?)
4.1.2 Physical links and phys
The statement <<A phy is a transceiver; it is the object in a ...>> should be changed to <<A phy is a transceiver and it is the object in a ...>>

Page: 21
Sequence number: 8
Date: 1/7/2003 5:25:30 PM
Type: Highlight
ACCEPT - DONE (but with "which" rather than "that" - it's not a subset)
4.1.2 Physical links and phys
The statement <<unique phy identifier (see 4.2.6) within the device.>> should be changed to <<phy identifier (see 4.2.6) that is unique within the device>>.

Page: 21
Sequence number: 9
Date: 1/29/2003 12:35:34 PM
Type: Strikeout
ACCEPT - DONE (this is here so ch4 the model chapter introduces the concept of link rates and dwords, which are used throughout subsequent chapters. Changed from naming 1.5 and 3.0 to "rates defined in 5.7" to address this comment. Later on in the connections section we have to add the concept of connection rate to address another comment.)
4.1.2 Physical links and phys
This should be deleted as it only contains information that is defined elsewhere. It adds nothing to the standard and could easily be forgotten about and not updated in the next version of the standard. Delete << Phys transmit and receive bits at physical link rates of 1,5 Gbps or 3,0 Gbps (see 5.7). The bits are part of
dwords (see 6.1) which have been 8b10b coded into 10-bit characters (see 6.2).>>

Page: 24
Sequence number: 6
Date: 1/22/2003 3:06:09 PM
Type: Highlight
REJECT (whole section being deleted anyway)
4.1.6 Target devices
***
The idea that a target would support both SCSI and ATA is too weird to conceive. I would like the idea deleted. The effect is that some of the and/ors change to or and figure 9 looses the middle set of boxes.

Page: 25
Sequence number: 4
Date: 2/8/2003 11:17:04 AM
Type: Highlight
REJECT (that's not true)
Figure 10
The term <<(optional)>> should be deleted as everything is optional unless stated otherwise.

Page: 25
Sequence number: 5
Date: 3/3/2003 6:00:53 PM
Type: Highlight
ACCEPT - DONE
4.1.8.2 Edge expander device set
The statement <<grouped into edge expander device sets.>> should be changed to <<grouped into an edge expander device set>>

Page: 25
Sequence number: 6
Date: 3/3/2003 6:01:09 PM
Type: Highlight
ACCEPT - DONE
4.1.8.2 Edge expander device set
The statement <<The edge expander device sets are>> should be <<An edge expander device set is>>

Page: 25
Sequence number: 7
Date: 3/3/2003 6:04:33 PM
Type: Highlight
    ACCEPT - DONE (split the previous sentence into an a)b) list and merged with this sentence (as a second a)b) list))
    4.1.8.2 Edge expander device set
    The statement <<Edge expander device sets are>> should be <<An edge expander device set is>>.

Page: 26
Sequence number: 4
Date: 2/8/2003 11:18:07 AM
Type: Highlight
    REJECT (but deleted this anyway)
    Figure 11
    The term <<(optional)>> should be deleted as everything is optional unless stated otherwise.

Page: 28
Sequence number: 3
Date: 3/4/2003 11:32:48 AM
Type: Circle
    ACCEPT - DONE (and changed configured to "constructed" to avoid confusion with configuring via the discover process)
    4.1.10 Expander device topologies
    After the sentence that ends in <<is configured.>> add in the following sentence <<The method used to configure edge expander
    device sets is outside the scope of this standard.>>

Page: 28
Sequence number: 4
Date: 3/6/2003 9:04:21 AM
Type: Circle
    ACCEPT - DONE
    Figure 14
    The bracket that is labeled <<64 edge expander device sets>> should be rotated 90 degrees and be stretched to bracket the two
    edge expander device sets.

Page: 29
Sequence number: 2
Date: 3/6/2003 9:04:31 AM
Type: Circle
    ACCEPT - DONE
    Figure 15
    The bracket that is labeled <<64 attached devices or edge expander device sets>> should be rotated 90 degrees and be stretched
    to bracket the edge expander device set, the initiator or target devices, and the ...s.

Page: 29
Sequence number: 3
Date: 3/6/2003 9:04:44 AM
Type: Circle
    REJECT (but removed this bracket altogether)
    Figure 16
    The bracket that is labeled <<64 physical links per edge expander device set>> should be rotated 90 degrees and be stretched to
    bracket the initiator or target devices.

Page: 29
Sequence number: 4
Date: 3/6/2003 9:07:33 AM
Type: Circle
    ACCEPT - DONE
    Figure 16
    The bracket that is labeled <<2 edge expander device sets>> should be rotated 90 degrees and be stretched to bracket the 2
    edge expander device sets.

Page: 30
Sequence number: 9
Date: 1/23/2003 5:00:40 PM
Type: Highlight
    REJECT (yes more than one I_T can be connected at a time in the domain. It's only on a physical link that they are one at a time.)
    4.1.11 Connections
    The statement <<b) SCSI initiator port(s) to expander port(s) to SCSI target port(s); and>> is not correct. You cannot establish a

connection between more that one initiator port and target port at a time. The statement should be changed to <<b) SCSI initiator port to expander port(s) to SCSI target port; and>>. The same is probably true for item c.

Page: 30
Sequence number: 10
Date: 3/2/2003 3:04:35 PM
Type: Note
    ACCEPT - TODO (check in last edit)
    4.1.11 Connections
    Global
    Having the anchored frame tag at the end of a paragraph can cause paragraphs, lines, and even individual words to be separated be large amounts of white space. This can made it difficult to read. The solution to this is to place the anchor in it's own paragraph. I recommend this be done. throughout this standard.

Page: 32
Sequence number: 5
Date: 2/10/2003 3:00:46 PM
Type: Circle
    ACCEPT - DONE
    Figure 18
    The text in the key list is not lined up.

Page: 33
Sequence number: 1
Date: 1/23/2003 5:52:17 PM
Type: Highlight
    ACCEPT - DONE
    4.2.2 SAS addresses
    The statement <<names in this>> in note 7 should be <<names defined by this standard.>>

Page: 34
Sequence number: 2
Date: 1/23/2003 5:51:57 PM
Type: Highlight
    REJECT - this convention is already described in section 3.4 after table 2 for binary and hex numbers
    4.2.2 SAS addresses
    The _ notation needs to be added to the notations section.

Page: 34
Sequence number: 3
Date: 1/23/2003 6:16:05 PM
Type: Highlight
    ACCEPT - DONE (and removed the 8-bit part too)
    4.2.6 Phy identifier
    The statement <<a unique 8-bit identifier within the device.>> should be change to <<an 8-bit identifier that is unique within the device.>>.

Page: 35
Sequence number: 2
Date: 1/7/2003 6:16:47 PM
Type: Highlight
    ACCEPT - DONE
    4.3.1 State machine overview
    The statement <<and target devices and their relationships to each other and to the SAS device,>> should be changed to <<and target devices, their relationships to each other, and to the SAS device,>>

Page: 36
Sequence number: 2
Date: 1/7/2003 6:19:57 PM
Type: Circle
    REJECT (f a state machine has an associated transmitter, that controls both data and control of the MUX. SP, SP_IR, and SL are this way)
    Figure 20
    The blue dotted line on the last thing on the right is not connected to the correct text box. On closer inspection it looks like there two other blue dotted lines that look like they are going to the wrong place and there are two boxes with no lines coming out.

Page: 39
Sequence number: 5
Date: 1/23/2003 6:34:34 PM

Type: Note
REJECT (some of these have special meaning for STP)
Figure 23
In general this is too detailed for a SAS standard. Reduce the details. At a minimum reduce or eliminate the SATA primitives. All that is needed are some << SATA primitives >> labels.

Page: 39
Sequence number: 6
Date: 1/24/2003 9:32:45 AM
Type: Note
4.3.3 Signals
Tables 9 through 22
There needs to be a better notation for the direction indication. the --> and <-- looks hookey.

Page: 39
Sequence number: 7
Date: 1/24/2003 9:32:38 AM
Type: Note
4.3.3 Signals
Tables 9 through 22
In these tables the acronyms for the state machines are used but not all of them have been defined at this point in the standard. One solution would be to make a list or table of all the state machines with there acronyms before table 9. Another way would be to add in keys to every table with the acronym followed by the long name.

Page: 39
Sequence number: 8
Date: 2/9/2003 5:05:23 PM
Type: Note
ACCEPT - DONE (tracking with Mark Evans' comment)
4.3.3 Signals between state machines
This section needs to be replaced with proposal 03-023.

Page: 40
Sequence number: 1
Date: 1/24/2003 9:32:54 AM
Type: Circle
4.3.3 Signals
Tables 11 through 15
Where ever there are multiple blank rows they should be combined to make a single blank area.

Page: 45
Sequence number: 1
Date: 2/9/2003 5:21:30 PM
Type: Circle
REJECT (it's not. Table 10 also has signals to the expander function.)
Table 18
Why is this the only table that has something called an <<Expander function>> in the layers column? It seems out of place. At the minimum some kind if explanation is needed as to what it is and why it is here.

Page: 49
Sequence number: 6
Date: 1/24/2003 9:45:07 AM
Type: Highlight
ACCEPT - DONE (changed this to "a hard reset")
4.4.2 Hard reset
In the statement <<If the port is part of a SCSI device, this causes a Transport Reset>> it is not clear what the <<this>> is referring to. This needs to be corrected.

Page: 49
Sequence number: 7
Date: 1/24/2003 9:40:31 AM
Type: Note
ACCEPT - DONE (but only here, the first additional sense code mentioned; not adding an SPC-3 crossref to every use of additional sense code because there is often already a crossref after such)
4.4.2 Hard reset
There should be a reference to SPC-3 at the end of the last paragraph of this section.

Page: 49
Sequence number: 8

Date: 2/9/2003 5:22:28 PM
Type: Highlight
    ACCEPT - DONE
    4.5 I_T nexus loss
    The statement <<an open connection time out in response>> should be changed to <<an open connection time out occurs in response>>

Page: 49
Sequence number: 9
Date: 1/24/2003 9:35:56 AM
Type: Highlight
    REJECT (timers expire)
    4.5 I_T nexus loss
    The term <<expires>> is not a word that should be used (look up the definition). It could easily be translated into dies. A quick fix would be to use <<times out>>. But I am open to other suggestions.

Page: 49
Sequence number: 10
Date: 2/9/2003 5:24:10 PM
Type: Circle
    REJECT (the editorial conventions say "lists sequenced by letters" which covers upper and lower case. There is no need to explain caps vs. lowercase; it's obvious.)
    4.6.1 Expander device model overview
    We have not used the A,B,C convention in any t10 standards yet. We have been just using the a,b,c even in second level lists. If we are going to start using this then we need to define in the conventions section how we will indicate up to four(?) levels for both ordered and unordered lists. I don't think that is necessary and that changing this to a,b,c would not cause any confusion.

Page: 49
Sequence number: 11
Date: 2/9/2003 5:25:18 PM
Type: Strikeout
    REVIEW PROTOCOL WG
    REJECT (we indicate the minimum number here as 2. This sentence indicates there is a maximum as well.)
    4.6.1 Expander device model overview
    I see no benefit from the statement <<For the maximum number of phys, see 4.1.8>>. If should be deleted or at a minimum reduced to <<(see 4.1.8)>>.

Page: 49
Sequence number: 12
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    4.5 I_T nexus loss
    The statement << it shall retry the connection request until: >> appears to be in conflict with Table 61 — OPEN_REJECT abandon primitives. That table includes OPEN_REJECT (CONNECTION RATE NOT SUPPORTED). So who can it be retried and abandoned at the same time . This needs to be fixed.

Page: 50
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    Figure 25
    What is the statement <<Narrow or wide port>> have to do with this figure? It seems like it is saying there is a port that connects the expander function to the external SAS port. I believe it should be deleted.

Page: 50
Sequence number: 4
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    4.6.1 Expander device model overview
    In figure 25 it appears the <<external expander port>> is called an <<external SAS port>> also the same figure lists <<IR>> while the text lists <<SL_IR>>. This inconsistent terminology needs to be resolved.

Page: 50
Sequence number: 5
Date: 1/6/2003 6:16:00 PM
Type: Circle
    4.6.1 Expander device model overview
    There are several cases of inconsistent terminology between this section and figure 25. These all need to be resolved to one set of terms.

Page: 51
Sequence number: 1
Date: 1/24/2003 9:50:43 AM
Type: Highlight
    ACCEPT - DONE
    4.6.6 Expander device interface
    The statement <<The interaction between an XL state machine and the expander function is called
    the expander device interface, and uses signals called requests, confirmations, indications, and responses.>> should be changed
    to <<The interaction between the XL state machine and the expander function consists of requests, confirmations, indications, and
    responses. This interaction is called the expander device interface.>>

Page: 52
Sequence number: 1
Date: 2/9/2003 5:27:26 PM
Type: Circle
    REJECT (Jan editors meeting said accept, but that's incorrect)
    Figure 26
    The outputs from the broadcast primitive processor should be called confirmation not indication. The indication only occurs when
    there are interim steps between the request and the confirmation.

Page: 53
Sequence number: 1
Date: 2/14/2003 5:12:13 PM
Type: Circle
    REJECT (Jan editors meeting said accept, but that's incorrect. They're not confirming any request - they are asynchronous inputs.)
    Figure 27
    The outputs from the broadcast primitive processor should be called confirmations not indications. The indication only occurs when
    there are interim steps between the request and the confirmation.

Page: 55
Sequence number: 1
Date: 1/24/2003 10:21:49 AM
Type: Circle
    REJECT - the input indications are very important (the phy has got two signals named Transmit Open - the request going out and
    the indication coming in).
    Table 24
    Global
    All the request/indication terms should be changed to just request. There is no need to state the indication part of the procedure.

Page: 55
Sequence number: 2
Date: 1/24/2003 10:22:30 AM
Type: Circle
    REJECT - the input confirmations are very important (the phy has got two signals named Arb Status (Normal) - the respose going
    out and the confirmation coming in).
    Table 24
    Global
    All the confirmation/response terms should be changed to just confirmation. There is no need to state the response part of the
    procedure.
    This change should also be made in the globally.

Page: 55
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    4.6.9 Expander connection router interface
    The term <<signals>> is not correct here. I'm not sure what it should be maybe <<dwords>> or <<parameters>>.

Page: 59
Sequence number: 2
Date: 2/9/2003 5:29:22 PM
Type: Strikeout
    REJECT (the example is of a sequence of unknown length not a 3 level sequence)
    4.6.9 Expander connection router interface
    The <<, etc.>> should be deleted because the e.g. implies an etc. at the end of the list.

Page: 59
Sequence number: 3

Date: 2/9/2003 5:30:39 PM
Type: Highlight
    REJECT (unordered list makes the conditions stand out better)
    4.6.9 Expander connection router interface
    The following <<For each of the level 2 devices that:
    a) is an edge expander device with M phys; and
    b) is attached to a phy in the level 1 edge expander device with the table routing attribute,
    the next M entries shall be the SAS addresses of the devices (level 3) attached to that level 2 edge expander device.>>
    should be changed to
    <<For each of the level 2 devices that is an edge expander device with M phys and is attached to a phy in the level 1 edge
    expander device with the table routing attribute, the next M entries shall be the SAS addresses of the devices (level 3) attached to
    that level 2 edge expander device.>>

Page: 65
Sequence number: 3
Date: 1/31/2003 3:48:54 PM
Type: Highlight
    REJECT (per SAS PHY WG
    Reject IBM comment: Adds to the normative explanation of the SAS connection scheme by showing similarities.)
    5.1 SATA cables and connectors (informative)
    This section should be placed in a annex that describes any SATA specific functions.

Page: 66
Sequence number: 3
Date: 1/31/2003 3:56:32 PM
Type: Highlight
    ACCEPT - DONE (per SAS PHY WG with "pins" too)
    5.2 SAS cables and connectors
    Figure 32
    The statement <<Tx to Rx on each>> should be changed to <<the Tx signal to the Rx signal on each>>

Page: 67
Sequence number: 9
Date: 1/31/2003 4:05:44 PM
Type: Highlight
    ACCEPT - DONE (per PHY WG Accept text change but leave as text rather than changing to a footnote.)
    5.2 SAS cables and connectors
    The following paragraph should be a footnote in table 29 and should be modified as shown <<The SATA device plug connector
    (e.g., used by a <<SATA>> disk drive) may be attached to a SAS backplane receptacle
    connector or a SAS internal cable receptacle connector, connecting the primary signal pairs and leaving the
    second signal pairs unconnected.

Page: 67
Sequence number: 10
Date: 1/31/2003 4:06:48 PM
Type: Strikeout
    ACCEPT - DONE
    5.2 SAS cables and connectors
    The term <<drive>> should be deleted as the form factors apply to a size of a device not the type of device.

Page: 67
Sequence number: 11
Date: 1/31/2003 4:11:33 PM
Type: Highlight
    ACCEPT - DONE (per SAS PHY WG
    Delete (xxx)s to resolve IBM comment. Use is obvious by the name.)
    5.3.2.1 SAS plug connector overview
    The statement <<(for SAS cables) and SAS backplane
    receptacle connectors (for SAS backplanes).>> should be <<for SAS cables and SAS backplane
    receptacle connectors for SAS backplanes>>

Page: 67
Sequence number: 12
Date: 1/31/2003 4:13:21 PM
Type: Highlight
    ACCEPT - DONE (per PHY WG)
    5.3.3 SAS internal cable receptacle connector
    The statement <<link, pins S8 through S14, is>> should be <<link (i.e., pins S8 through S14) is>>.

Page: 68
Sequence number: 2
Date: 1/31/2003 4:41:20 PM
Type: Highlight
    ACCEPT - DONE (per PHY WG)
    Table 30
    So when I hook up all the voltage and precharge pins together and blow-up the drive and the possibly the power supply who is going to be responsible.
    This should change to <<
    The precharge pin and each corresponding voltage pin shall be connected together (e.g., the V5 precharge pin is connected to the two V5 pins).>>.

Page: 68
Sequence number: 3
Date: 1/31/2003 5:08:59 PM
Type: Highlight
    ACCEPT - DONE (with "pin" per phy WG)
    5.3.5 SAS internal connector pin assignments
    The statement << AT+ of connector 1 shall connect to AR+ >> should be << AT+ signal of connector 1 shall connect to AR+ signal >>.

Page: 68
Sequence number: 4
Date: 1/20/2003 4:12:52 PM
Type: Highlight
    ACCEPT - DONE
    5.3.6 SAS external cable plug connector
    It the statement << It
    attaches >> what is the << it >> supposed to be be? I'm not sure. This needs to be fixed.

Page: 68
Sequence number: 5
Date: 1/20/2003 4:10:02 PM
Type: Highlight
    ACCEPT - DONE
    5.3.5 SAS internal connector pin assignments
    The statement <<Table 30 shows>> should be <<Table 30 defines>>.

Page: 69
Sequence number: 3
Date: 1/20/2003 4:12:42 PM
Type: Highlight
    ACCEPT - DONE
    5.3.7 SAS external receptacle connector
    It the statement << It
    attaches >> what is the << it >> supposed to be be? I'm not sure. This needs to be fixed.

Page: 69
Sequence number: 4
Date: 1/20/2003 4:13:28 PM
Type: Highlight
    ACCEPT - DONE
    5.3.8 SAS external connector pin assignments
    The statement <<Table 31 shows>> should be <<Table 31 defines>>.

Page: 70
Sequence number: 6
Date: 1/31/2003 4:27:40 PM
Type: Highlight
    ACCEPT - DONE (per PHY WG)
    5.4.1 SAS internal cables
    The statement << SATA-style cable receptacle on the initiator device >> should be << SATA-style cable receptacle (see SATA) on the initiator device >>.

Page: 70
Sequence number: 7
Date: 1/31/2003 4:29:14 PM
Type: Highlight
    ACCEPT - DONE (per PHY WG, with "same as that defined for")

5.4.1 SAS internal cables
The following << A SAS initiator device shall use a SATA-style host plug connector for connection to the SAS internal cable. The SATA host plug connector is defined in SATA. The signal assignment for the SAS initiator device or expander device with this connector shall be the same as defined for a SATA host in SATA. >>
should be changed to
<< A SAS initiator device shall use a SATA-style host plug connector (see STAT) for connection to the SAS internal cable. The signal assignment for the SAS initiator device or expander device with this connector shall be the same as a SATA host (see SATA). >>

Page: 71
Sequence number: 14
Date: 1/31/2003 4:43:31 PM
Type: Highlight
    ACCEPT - DONE (per phy WG; include rather than carry)
    5.4.2 SAS external cables
    The statement << not carry power>> should be changed to << not contain power >>.

Page: 71
Sequence number: 15
Date: 1/20/2003 4:29:36 PM
Type: Highlight
    ACCEPT - DONE
    5.6 READY LED pin
    The statement << READY LED signal is raised, >> should be << READY LED signal is asserted, >>

Page: 71
Sequence number: 16
Date: 2/20/2003 9:28:55 AM
Type: Strikeout
    ACCEPT - DONE (deleted whole sentence)
    5.6 READY LED pin
    The following should be deleted << since this pin may be connected by a system directly to power supply GROUND. >>. The standard does not need to justify a requirement.

Page: 71
Sequence number: 17
Date: 1/20/2003 4:43:20 PM
Type: Highlight
    ACCEPT - DONE
    5.6 READY LED pin
    global
    Whenever a signal name is used it needs to be followed by the term << signal >>. Several places in this section READY LED is used without the term << signal >>. It should have been written as << READY LED signal >> in all cases.

Page: 71
Sequence number: 18
Date: 1/20/2003 4:26:34 PM
Type: Highlight
    ACCEPT - DONE
    5.6 READY LED pin
    The title of this section is not correct. It should be << READY LED signal >>.

Page: 71
Sequence number: 19
Date: 1/20/2003 4:43:06 PM
Type: Highlight
    ACCEPT - DONE
    5.6 READY LED pin
    global
    There should be a reference to where the <<standby or stopped power condition state,>> are defined.

Page: 71
Sequence number: 20
Date: 1/20/2003 4:43:12 PM
Type: Highlight
    ACCEPT - DONE
    5.6 READY LED pin
    global
    There should be a reference to where the <<. active or idle power condition state,>> are defined.

Page: 72
Sequence number: 7
Date: 1/20/2003 4:49:28 PM
Type: Highlight
    ACCEPT - DONE
    5.6 READY LED pin
    The references to the a,b,c list items should have a cross-reference link.

Page: 72
Sequence number: 8
Date: 2/9/2003 11:22:37 AM
Type: Strikeout
    REJECT (from minutes of Joint WG in Jan: George Penokie led a discussion of the importance or unimportance of BER (Bit Error
    Rate) in SAS. Bill Ham, Alvin Cox and several others attempted (without success) to convince George that all BER information in
    SAS is very necessary. Eventually, it was agreed that every occurrence of BER in SAS be inspected and agreement reached by
    the group to keep them, remove them, or reword them to emphasize a preference for the use of better BERs than
    those stated in SAS.)
    5.7.2 General interface specification
    ****
    All references to a BER should be removed from this standard. The value as specific is not low enough and specifying a lower
    number is not practical. Any SAS design that only meets the current specified BER will fail any qualification being used today.

Page: 72
Sequence number: 9
Date: 1/20/2003 5:00:10 PM
Type: Highlight
    ACCEPT - DONE (per SAS phy WG, changed to "These signal specifications are consistent with using good quality cable
    assemblies constructed with shielded twinex cable with 24 gauge solid wire up to eight meters in length without using any form of
    equalization (e.g.,
    transmitter pre-emphasis, receiver adaptive equalization, or passive cable equalization).")
    5.7.2 General interface specification
    ****
    The following statement indicates there are cable lengths specified in this standard but there are none.
    I believe that with out guidance from this standard as to what reasonable lengths are for cables this group is doing a disservice to
    the using community. I proposal cable lengths be specified in the same manner as they are in SPI-5.
    << TxRx connections operating at the maximum specified distances may require some form of equalization (e.g.,
    transmitter pre-emphasis, receiver adaptive equalization, or passive cable equalization) to enable the signal
    requirements to be met. >>

Page: 74
Sequence number: 3
Date: 1/20/2003 5:02:30 PM
Type: Circle
    ACCEPT - DONE
    Table 34
    The entries in the characteristics column should be left justified.

Page: 74
Sequence number: 4
Date: 1/31/2003 4:55:57 PM
Type: Strikeout
    ACCEPT - DONE (per phy WG)
    Table 34
    The term << or odd mode, >> is not used anywhere else in this standard and should be deleted.

Page: 74
Sequence number: 5
Date: 1/31/2003 4:56:35 PM
Type: Highlight
    ACCEPT - DONE
    Table 34
    The statement << rate (both up and down). >> should be << rate for both power on and power off conditions. >>

Page: 75
Sequence number: 1
Date: 1/20/2003 5:06:28 PM
Type: Highlight
    ACCEPT - DONE

5.7.3.2 Delivered (receive) eye mask at IR, CR, and XR
The term << delivered (receive) >> should be changed to << receive >>

Page: 76
Sequence number: 1
Date: 1/20/2003 5:12:15 PM
Type: Highlight
ACCEPT - DONE
5.7.3.3 Jitter tolerance masks
In the statement starting with << However, the leading >> the << however >> seems odd. It's not clear as to where the << however >> is referring to. Either the sentence needs to move or the << however >> should be deleted. I think deletion is the right answer.

Page: 76
Sequence number: 2
Date: 1/31/2003 4:58:48 PM
Type: Highlight
ACCEPT - DONE (per phy WG)
5.7.4 Transmitted signal characteristics
After the first usage of the statement << SATA 1.0 signal levels >> there needs to be a the << (see SATA) >> reference added.

Page: 77
Sequence number: 4
Date: 1/25/2003 11:22:27 AM
Type: Highlight
ACCEPT - DONE (xref to 5.7.8)
5.7.5 Received signal characteristics
Table 35
There need to be a reference to were the << CJTPAT test pattern >> is.

Page: 77
Sequence number: 5
Date: 1/31/2003 4:59:26 PM
Type: Highlight
REJECT (per phy WG reject IBM comment to split tables.)
5.7.5 Received signal characteristics
Table 36
This table should be broken into three tables with titles of:
<< Delivered signal characteristic at IR compliance points >>, << Delivered signal characteristic at CR compliance points >>, and << Delivered signal characteristic at XR compliance points >>. Then the first column can be deleted and the table will not flow across multiple pages.

Page: 78
Sequence number: 2
Date: 2/21/2003 3:48:02 PM
Type: Highlight
ACCEPT - DONE (per phy call 2/21)
5.7.5 Received signal characteristics
Table 36
The term << guaranteed >> should be deleted in all cases. Standards in general do not give guarantees. I do not believe anything would be lost if it is deleted.

Page: 80
Sequence number: 1
Date: 1/31/2003 5:01:51 PM
Type: Highlight
ACCEPT - DONE (Accept IBM comment. make the following changes:
Change section title to:
Compliant jitter test pattern (CJTPAT)
Change first sentence to:
The CJTPAT within a compliant protocol frame shall be used for all jitter testing unless otherwise specified.)
5.7.8 Jitter compliance test pattern (CJTPAT)
What the heck does CJPAT stand for: Jitter compliance test pattern or compliant protocol frame? It appears to be defined as both here. This needs to be resolved.

Page: 81
Sequence number: 1
Date: 3/4/2003 6:17:59 PM
Type: Highlight
ACCEPT - DONE (added space to table cells)

5.7.9 Impedance specifications
Table 39
The formatting of table 39 needs work. The super-script is running into the double lines.

Page: 81
Sequence number: 2
Date: 1/31/2003 5:04:32 PM
Type: Highlight
    ACCEPT - DONE
    5.7.9 Impedance specifications
    Table 39
    The last sentence of the footnotes does not have a period.

Page: 81
Sequence number: 3
Date: 1/31/2003 5:04:09 PM
Type: Highlight
    ACCEPT - DONE (per phy WG, with tweaks. Add the following definition:
    Media: A term referring to particular elements comprising the interconnect including copper cables, pc boards, or other
    transmission line materials.)
    5.7.9 Impedance specifications
    Table 39
    The term << media >> is not defined. This needs to be added to the glossary.

Page: 82
Sequence number: 5
Date: 1/20/2003 5:31:05 PM
Type: Highlight
    ACCEPT - DONE
    5.7.11 Transmitter characteristics
    global
    The term << A. C. >> needs to be changed to <<A.C.>> in all cases.

Page: 82
Sequence number: 6
Date: 1/31/2003 5:35:47 PM
Type: Highlight
    ACCEPT - DONE
    5.7.11 Transmitter characteristics
    global
    The term << D. C. >> needs to be changed to <<D.C.>> in all cases.

Page: 82
Sequence number: 7
Date: 1/31/2003 5:35:20 PM
Type: Highlight
    ACCEPT - DONE
    5.7.11 Transmitter characteristics
    global
    There should be no << etc. >> at the end of an e.g. list. The ect is implied in all e.g. lists and is therefore not needed.

Page: 82
Sequence number: 8
Date: 1/20/2003 5:35:34 PM
Type: Highlight
    ACCEPT - DONE (f is the signal frequency in hertz.)
    5.7.11 Transmitter characteristics
    In the equation for S21 it in not clear what << f >> is. There needs to be a << Where: >> after the equation that describes << f >>.

Page: 82
Sequence number: 9
Date: 1/20/2003 5:38:27 PM
Type: Highlight
    REJECT (per phy WG, "a" intentionally left out as inclusion of it implies a single measurement. Multiple measurements)
    5.7.11 Transmitter characteristics
    The statement << determined by measurement made >> seems to be missing a word. I think it should be << determined by a
    measurement made >>.

Page: 86

Sequence number: 10
Date: 2/6/2003 11:16:16 AM
Type: Highlight
    REJECT (but moved column to the right. Shows the differences between SAS and SATA primitives.)
    6.2.1 Encoding overview
    Table 40
    The << Usage in SATA >> column should be deleted. As most there could be a footnote stating << For the SATA usage of K28.3
    and K28.5 characters see SATA. >>

Page: 88
Sequence number: 2
Date: 1/24/2003 12:15:55 PM
Type: Highlight
    ACCEPT - DONE (deleted parens altogether)
    6.3.2 Transmission order
    The statement << (SOF delimiter) >> is not complete in SAS because we use other delimiters. It should be change to << (e.g.,
    SOF delimiter) >>.

Page: 88
Sequence number: 3
Date: 1/24/2003 12:15:49 PM
Type: Highlight
    ACCEPT - DONE (deleted parens altogether)
    6.3.2 Transmission order
    The statement << (EOF delimiter) >> is not complete in SAS because we use other delimiters. It should be change to << (e.g.,
    EOF delimiter) >>.

Page: 88
Sequence number: 4
Date: 1/24/2003 12:10:58 PM
Type: Highlight
    REJECT - this seems like a truly parenthetical expression to me. It's not crucial to the sentence but is pointing out that the
    characters might be the same.
    6.3.3.1 Definitions
    The statement << two (not necessarily different) transmission >> should be change to << two, not necessarily different,
    transmission >>.

Page: 88
Sequence number: 5
Date: 1/24/2003 12:12:08 PM
Type: Highlight
    ACCEPT - DONE
    6.3.3.1 Definitions
    The term << Current RD >> should not be capitalized. Change to << current RD >>.

Page: 88
Sequence number: 6
Date: 1/24/2003 12:11:40 PM
Type: Highlight
    ACCEPT - DONE
    6.3.3.1 Definitions
    The term << Current RD >> should not be capitalized. Change to << current RD >>.

Page: 92
Sequence number: 1
Date: 1/24/2003 12:19:18 PM
Type: Highlight
    ACCEPT - DONE (table 43 or table 44)
    6.3.3.2 Generating transmission characters
    In the statement << the table shall be found >> what table is being referred to? I don't know and this needs to be fixed.

Page: 93
Sequence number: 2
Date: 1/24/2003 12:19:40 PM
Type: Circle
    ACCEPT - DONE
    6.4 Bit order
    Figure 44
    The << 16 >> at the top needs to be fixed.

Page: 95
Sequence number: 1
Date: 1/8/2003 1:53:56 PM
Type: Highlight
ACCEPT - DONE
6.5 Out of band (OOB) signals
****
The term << UI >> is used throughout this section with a different meaning than in all section up to this point. In this section it is assumed to be a fixed value while in all other sections it assumed to be a value the is related to the data rate of the bus. This inconsistency cannot be allowed. The thing that is called UI in this section needs to be renamed. I like OOBI. Out Of Band Interval. This would then be defined as the G1 UI.

Page: 95
Sequence number: 2
Date: 1/8/2003 1:56:15 PM
Type: Strikeout
REJECT (now that we're not using the SATA UI(OOB) term, this note serves to relate OOBI to UI(OOB) in SATA.)
Table 46
This statement << UI(OOB) is different than that defined in SATA; SAS has tighter clock tolerance. >> is meaningless in this standard as there are lots of differences between SAS and SATA.

Page: 97
Sequence number: 5
Date: 1/8/2003 2:08:17 PM
Type: Highlight
ACCEPT - DONE
6.5 Out of band (OOB) signals
The statement << Figure 47 describes SAS OOB signal detection by the SP receiver. >>
needs a cross-reference to the SP receiver section which 6.7.

Page: 97
Sequence number: 6
Date: 2/9/2003 5:36:42 PM
Type: Note
ACCEPT - DONE (track with Mark Evans' comment)
6.5 Out of band (OOB) signals
Here's another one of those chopped sentences that occur because of the anchor placement.

Page: 97
Sequence number: 7
Date: 3/5/2003 4:14:29 PM
Type: Note
ACCEPT - DONE (made at least one pass reviewing the tables and applying a common table format with more cell spacing.)
Tables
Global
Many of the table have spacing between the double line borders and the text that is too close. This needs to be fixed on all tables.

Page: 99
Sequence number: 1
Date: 2/16/2003 10:02:19 AM
Type: Highlight
REJECT (it is most useful in context, which is here.)
6.6.2 SATA phy reset sequence (informative)
This entire section should be deleted as it only described SATA functionality that is a duplicate of what is defined in the SATA document. If not deleted then it should be moved to a informative annex.

Page: 99
Sequence number: 2
Date: 1/8/2003 2:55:35 PM
Type: Highlight
ACCEPT - DONE
6.6.3 SAS to SATA phy reset sequence
The statement << in response to a COMINT, >> should be << in response to receiving a COMINIT, >>.

Page: 100
Sequence number: 5
Date: 1/8/2003 3:02:42 PM
Type: Circle

ACCEPT - DONE
Figure 50
The << Time z >> and it's definition are not lined up.

Page: 102
Sequence number: 4
Date: 1/8/2003 5:42:21 PM
Type: Highlight
ACCEPT - DONE
6.6.4.1 SAS OOB sequence
The statement <<phy A starting the SAS OOB sequence before, after, or at the same time as SAS phy. >> should be << phy A starting the SAS OOB sequence before, after, or at the same time as SAS phy B. >>.

Page: 103
Sequence number: 1
Date: 2/16/2003 10:02:42 AM
Type: Strikeout
REJECT (highlights an important difference)
6.6.4.2 SAS speed negotiation sequence
The statement << like the SATA speed negotiation sequence. >> is not relevant to this standard and should be deleted.

Page: 103
Sequence number: 2
Date: 1/8/2003 5:52:36 PM
Type: Strikeout
ACCEPT - DONE
6.6.4.2 SAS speed negotiation sequence
The SNLT is defined elsewhere so there is not need for the statement << a subset of the SNTT used by the receiver. >> which is more confusing than helpful. Delete it.

Page: 104
Sequence number: 4
Date: 1/24/2003 2:46:14 PM
Type: Highlight
ACCEPT - DONE (who cares if an initiator takes longer? An attached device unless it tries. There should be a requirement on expanders. We might place a requirement on targets. Even then, the initiator's own polls will find a hot-plugged target quickly as it deserves. This value is here just to indicate that some attempt should be made again if nothing is detected.
Changing to:
initiator max - no (initiator can wait as long as it wants)
initiator min - yes (for EMI)
expander max - yes (so initiators are assured of seeing targets quickly)
expander min - yes (for EMI)
target max - no
target min - yes (for EMI)
drop nominal time
only applies to enabled phys (see SMP PHY CONTROL)
(original comment:)
Table 49
The hot-plug time out should be a requirement not a option. The <<should>> should be changed to a << shall >>

Page: 104
Sequence number: 5
Date: 1/8/2003 1:57:22 PM
Type: Strikeout
ACCEPT - DONE (deleted note a as it is not used)
Table 49
This statement << UI(OOB) is different than that defined in SATA; SAS has tighter clock tolerance. >> is meaningless in this standard as there are lots of differences between SAS and SATA.

Page: 104
Sequence number: 6
Date: 1/14/2003 8:52:33 PM
Type: Note
REJECT (the WG repeatedly requested overall text rules here so the state machine doesn't have to be thought-simulated to figure out the resulting rules. That's what this section does.)
6.6.4.2 SAS speed negotiation sequence
****
Much of the information in this section after table 49 is an exact duplicate of the information provided in the SAS speed negotiation states sections. It is not a good idea to have the same thing defined in two places in the standard. I suggest that the duplicate

information in this section be placed in annex B.

Page: 105
Sequence number: 1
Date: 1/8/2003 6:10:42 PM
Type: Highlight
ACCEPT - DONE (it's not an "in other words" sentence. However, an ordered list works much better. Also tossed the "valid" and "invalid" wording. Also changed annex B examples like this.)
6.6.4.2 SAS speed negotiation sequence
The statement << (supported by phy A but not by phy B, so invalid), >> should be << (i.e., supported by phy A but not by phy B, so invalid), >>

Page: 105
Sequence number: 2
Date: 1/8/2003 6:12:32 PM
Type: Highlight
ACCEPT - DONE (it's not an "in other words" sentence. However, an ordered list works much better. Also tossed the "valid" and "invalid" wording. Also changed annex B examples like this.)
6.6.4.2 SAS speed negotiation sequence
The statement << (supported by phy A but not by phy B, so invalid), >> should be << (i.e., supported by phy A but not by phy B, so invalid), >>

Page: 106
Sequence number: 4
Date: 1/24/2003 3:50:22 PM
Type: Highlight
REJECT (only required for expander phys)
6.6.5 Phy reset sequence after device is attached
The transmission of COMINIT should be a requirement not a option. The <<should>> should be changed to a << shall >>

Page: 108
Sequence number: 1
Date: 1/24/2003 6:18:28 PM
Type: Highlight
REJECT (SATA used Await. English rules would replace Await with WaitFor, not just Wait)
6.8 SAS phy (SP) state machine (global)
All the states that have << Await >> in the title should be change to << Wait >>.

Page: 108
Sequence number: 2
Date: 1/8/2003 6:30:19 PM
Type: Strikeout
REJECT (allow that rule to be violated in introductions... note this one even has an e.g. about the source)
6.8.1 Overview
The statement << from the management layer >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 109
Sequence number: 5
Date: 1/10/2003 2:36:41 PM
Type: Highlight
ACCEPT - DONE
6.8.2.1.1 State description
The statement << This state shall send a Transmit COMINIT parameter to the SP transmitter and wait for COMINIT to be transmitted and/or received.>> should be << Upon entry into this state, this state shall:
a) request a COMINIT be transmitted by sending a Transmit COMINIT parameter to the SP transmitter then wait for the receipt of a COMINIT Transmitted parameter and/or a COMINIT Detected parameter; and
b) send a PhyNotReady parameter to the SP_DWS state machine. >>

Page: 109
Sequence number: 6
Date: 1/10/2003 11:20:56 AM
Type: Highlight
ACCEPT - DONE (it doesn't wait at all; changed "and does not receive" to "and has not received" so it doesn't imply waiting might occur)
6.8.2.1 SP1:OOB_COMINIT state
There is a problem with this state in that there is not indication as to the timing relationship between the receipt of COMINIT Transmitted and COMINIT Detected. This does not allow one to pick out which one of the three transitions to make. For example a COMINIT transmitted is received so how long does the state wait before determining that no COMINIT detected is going to

occur? Or the reverse? This needs to be fixed.

Page: 109
Sequence number: 7
Date: 3/5/2003 4:15:08 PM
Type: Circle
    REJECT (but in the SL_IR picture put arrows into each state machine, and put the orange cutouts in all the figures)
    Figure 56
    The statement << (to all states in the SP state machine causing transition to SP1:OOB_COMMINIT) >> should be changed to <<
    causes all states to transition to SP1:OOB_COMMINIT) >>

Page: 109
Sequence number: 8
Date: 1/24/2003 6:19:59 PM
Type: Circle
    REJECT (per Jan WG)
    Figure 56
    The labels on the state transitions should be deleted and they don't necessarily give the complete reason for the transition.

Page: 110
Sequence number: 3
Date: 2/21/2003 2:59:05 PM
Type: Strikeout
    ACCEPT - DONE
    6.8.2.3.1 State description
    The statement << This state is entered when a COMINIT sequence has been detected but the COMINIT initiated in
    SP1:OOB_COMINIT has not been completely transmitted. >> should be deleted as we do not describe entry conditions only exit
    conditions.

Page: 110
Sequence number: 4
Date: 2/21/2003 2:58:50 PM
Type: Strikeout
    ACCEPT - DONE
    6.8.2.4.1 State description
    The statement << This state is reached when a COMINIT has been transmitted and detected.>> should be deleted as we do not
    describe entry conditions only exit conditions.

Page: 110
Sequence number: 5
Date: 1/10/2003 2:42:27 PM
Type: Highlight
    ACCEPT - DONE
    6.8.2.4.1 State description
    The statement << This state shall send a Transmit COMSAS parameter to the SP transmitter and wait for COMSAS to be
    transmitted and/or detected..>> should be << Upon entry into this state, this state shall request a COMSAS be transmitted by
    sending a Transmit COMSAS parameter to the SP transmitter then wait for the receipt of a COMSAS Transmitted parameter
    and/or a COMSAS Detected parameter. >>

Page: 110
Sequence number: 6
Date: 1/10/2003 5:09:58 PM
Type: Highlight
    ACCEPT - DONE (changed "does not receive" to "has not received" to avoid any implication of waiting)
    6.8.2.4 SP4:OOB_COMSAS state
    There is a problem with this state in that there is not indication as to the timing relationship between the receipt of COMSAS
    Transmitted and COMSAS Detected. This does not allow one to pick out which one of the three transitions to make. For example
    a COMSAS Detected is received so how long does the state wait before determining that no COMSAS Transmitted is going to
    occur? The reverse? This needs to be fixed.

Page: 110
Sequence number: 7
Date: 1/10/2003 2:37:38 PM
Type: Highlight
    ACCEPT - DONE
    6.8.2.3.1 State description
    The statement << This state waits for COMINIT to be transmitted. >> should be << This state waits for receipt of a COMINIT
    Transmitted parameter. >>

Page: 111
Sequence number: 2
Date: 2/9/2003 5:44:32 PM
Type: Strikeout
    REJECT (useful as an overview)
    6.8.2.6.1 State description
    The statement << This state is entered when a COMSAS sequence has been both transmitted and detected. >> should be deleted
    as we do not describe entry conditions only exit conditions.

Page: 111
Sequence number: 3
Date: 2/4/2003 7:10:25 PM
Type: Highlight
    REJECT (but changed to "initialized and started")
    6.8.2.7.1 State description
    The statement << time out timer shall be initialized and enabled. >> should be << time out timer shall be set to it's initial value and
    enabled. >>

Page: 111
Sequence number: 4
Date: 1/24/2003 6:24:52 PM
Type: Highlight
    ACCEPT - DONE (moved the NOTE into an i.e.; split item d) into two)
    6.8.2.7.2 Transition SP7:OOB_AwaitCOMSAS to SP1:OOB_COMINIT
    The statements << If all of these conditions are true: ... this state shall send a Broadcast Event Notify (SATA Spinup Hold)
    confirmation to the expander function and perform this transition.
    NOTE 11 In other words, SMP PHY CONTROL-based requests to reset the phy bypass spinup hold; all other resets honor it. >>
    should be changed to
    <<This state shall send a Broadcast Event Notify (SATA Spinup Hold) confirmation to the expander function if: .... >> This deletes
    the note.

Page: 113
Sequence number: 3
Date: 1/10/2003 5:15:33 PM
Type: Highlight
    ACCEPT - DONE
    Figure 57
    The term << window >> in 2 places should be << rate >>.

Page: 113
Sequence number: 4
Date: 1/10/2003 5:15:01 PM
Type: Highlight
    ACCEPT - DONE (made a little shorter)
    Figure 57
    The << ALIGN1 Detected >> going into SP11 looks like it is coming from SP10.

Page: 113
Sequence number: 5
Date: 1/24/2003 6:30:17 PM
Type: Circle
    REJECT (per Jan WG)
    Figure 57
    The labels on the state transitions should be deleted and they don't necessarily give the complete reason for the transition.

Page: 114
Sequence number: 4
Date: 2/21/2003 2:47:20 PM
Type: Strikeout
    REJECT (it is not stated anywhere else)
    6.8.3.1.1 State description
    The following statement should be deleted as the information stated is already stated elsewhere << This allows time required for a
    transmitter to switch to either the next higher or next lower supported speed. >>

Page: 114
Sequence number: 5
Date: 2/21/2003 2:47:45 PM
Type: Highlight
    ACCEPT - DONE

6.8.3.1.1 State description
The following statement << This state marks the beginning of the SAS speed negotiation process. >> should be << This is the
initial state of the SAS speed negotiation >>.

Page: 114
Sequence number: 6
Date: 2/21/2003 2:48:05 PM
Type: Strikeout
  ACCEPT - DONE
  6.8.3.1.1 State description
  The following statement should be deleted as the same information is duplicated in the last sentence of this section << It is used to
  transmit idle in between
  SAS speed negotiation windows. >>.

Page: 114
Sequence number: 7
Date: 2/4/2003 7:11:25 PM
Type: Highlight
  REJECT (this is the selected timer terminology)
  6.8.3.1.1 State description
  The statement <<... RCD timer shall be initialized and >> should be << ... RCD timer shall be set to it's initial value and enabled..>>.

Page: 114
Sequence number: 8
Date: 1/10/2003 10:44:47 AM
Type: Highlight
  ACCEPT - DONE
  6.8.3.1.2 Transition SP8:SAS_Start to SP10:SAS_AwaitALIGN
  The statement << speed negotiation window is supported. >> should be << speed negotiation rate is supported. >> It's not the
  window that's supported or not supported but the link rate for that window.

Page: 114
Sequence number: 9
Date: 1/10/2003 10:44:53 AM
Type: Highlight
  ACCEPT - DONE
  6.8.3.1.3 Transition SP8:SAS_Start to SP9:SAS_RateNotSupported
  The statement << speed negotiation window is not supported. >> should be << speed negotiation rate is not supported. >> It's not
  the window that's supported or not supported but the link rate for that window.

Page: 114
Sequence number: 10
Date: 2/21/2003 2:50:06 PM
Type: Square
  ACCEPT - DONE (using new timer convention and keeping the selecting... text)
  6.8.3.1.1 State description
  This should be an a.b.c list like this:
  Upon entering this state, this state shall:
  a) set the RCD timer to it's initial value;
  b) enable the RCD timer; and
  c) send the Set Rate parameter to the SP transmitter to select the next negotiated rate.

Page: 114
Sequence number: 11
Date: 2/16/2003 10:11:28 AM
Type: Highlight
  REJECT (this is DC idle not idle dwords)
  6.8.3.1.1 State description
  The statement << During this state idle shall be transmitted. >> should be changed to << This state shall request idle dwords be
  transmitted by repeatedly sending a Transmit Idle Dword parameter to
  the SP transmitter (see 7.3). >>

Page: 114
Sequence number: 12
Date: 2/21/2003 2:50:20 PM
Type: Highlight
  REJECT (it's DC idle not idle dwords)
  6.8.3.2.1 State description
  The statement << During this state idle shall be transmitted. >> should be changed to << This state shall request idle dwords be

transmitted by repeatedly sending a Transmit Idle Dword parameter to
the SP transmitter (see 7.3). >>

Page: 114
Sequence number: 13
Date: 2/4/2003 7:10:58 PM
Type: Highlight
    REJECT (but changed to "initialized and started")
    The statement << SNTT timer shall be initialized and enabled. >> should be << SNTT timer shall be set to it's initial value and
    enabled. >>

Page: 114
Sequence number: 14
Date: 1/25/2003 4:44:32 PM
Type: Strikeout
    ACCEPT - DONE
    6.8.3.2.1 State description
    This statement adds nothing but confusion and should be deleted << The state machine exits from this
    state after the SNTT expires.>>

Page: 114
Sequence number: 15
Date: 1/10/2003 10:44:05 AM
Type: Highlight
    ACCEPT - DONE (after ..expires if...)
    6.8.3.1.2 Transition SP8:SAS_Start to SP10:SAS_AwaitALIGN
    The statement << occur if the RCD timer expires and the current >> should be << occur after the RCD timer expires if the current
    >>. The timer will always time out.

Page: 114
Sequence number: 16
Date: 1/10/2003 10:44:10 AM
Type: Highlight
    ACCEPT - DONE (after ..expires if...)
    6.8.3.1.3 Transition SP8:SAS_Start to SP9:SAS_RateNotSupported
    The statement << occur if the RCD timer expires and the current >> should be << occur after the RCD timer expires if the current
    >>. The timer will always time out.

Page: 114
Sequence number: 17
Date: 1/10/2003 10:45:58 AM
Type: Highlight
    ACCEPT - DONE
    6.8.3.2.2 Transition SP9:SAS_RateNotSupported to SP14:SAS_Fail
    The statement << if the >> should be <<after the >> as the timer will always time out.

Page: 114
Sequence number: 18
Date: 2/21/2003 2:43:12 PM
Type: Square
    ACCEPT - DONE (not as an a)b) list but use the parameter name and preface with Upon entering)
    6.8.3.3.1 State description
    The following should be made into an a,b,c list << The state machine shall start transmitting ALIGN (0) primitives at the current rate
    (G1, G2, G3…).
    Upon entering this state, the SNTT timer and SNLT timer shall be initialized and enabled. >> as follows:
    << Upon entering this state, this state shall:
    a) request ALIGN (0) be transmitted at the current rate (e.g., G1, G2, G3) by repeatedly sending a Transmit ALIGN0 parameter to
    the SP transmitter; and
    b) the SNTT timer and SNLT timer shall be set to their initial value and enabled. >>.

Page: 114
Sequence number: 19
Date: 2/21/2003 2:43:03 PM
Type: Highlight
    ACCEPT - DONE (delete whole sentence)
    6.8.3.3.1 State description
    The statement << synchronization occurs before >> should be changed to << synchronization (i.e., ALIGN0 Detected parameter
    or ALIGN1 Detected parameter received) occurs before >>.

Page: 114
Sequence number: 20
Date: 2/21/2003 2:44:26 PM
Type: Highlight
    ACCEPT - DONE
    6.8.3.1.1 State description
    The statement << speed negotiation window received as an argument.>> should be changed to
    << SAS Speed Negotiation Window Rate argument. >>

Page: 115
Sequence number: 6
Date: 2/21/2003 2:57:41 PM
Type: Strikeout
    ACCEPT - DONE
    6.8.3.4.1 State description
    The statement << This state is reached after ALIGN (0) has been both transmitted and received. >> should be deleted as we do
    not describe entry conditions only exit conditions.

Page: 115
Sequence number: 7
Date: 2/21/2003 2:52:18 PM
Type: Highlight
    REJECT (unnecessary verbage, and says the wrong kind of ALIGN too)
    6.8.3.4.1 State description
    The following statement << This state shall repeatedly send a Transmit ALIGN0 parameter to the SP transmitter.>> should be
    <<This state shall request ALIGN (0) be transmitted at the current rate (e.g., G1, G2, G3) by repeatedly sending a Transmit
    ALIGN0 parameter to the SP transmitter. >>

Page: 115
Sequence number: 8
Date: 1/25/2003 4:47:57 PM
Type: Highlight
    REJECT (rewording implies an ominiscent state. This state can only based decisions on its inputs.)
    6.8.3.4.2 Transition SP11:SAS_AwaitALIGN1 to SP14:SAS_Fail
    The following statement << This transition shall occur if the SNTT timer expires. This indicates that the other phy has not been able
    to lock
    at the current rate. >> should be <<This transition shall occur if the other phy has not locked at the current rate and the SNTT timer
    times-out. >>

Page: 115
Sequence number: 9
Date: 1/25/2003 4:46:51 PM
Type: Highlight
    REJECT (this state can only respond to its input signals, not to the state of some other phy.)
    6.8.3.4.3 Transition SP11:SAS_AwaitALIGN1 to SP14:SAS_ AwaitSNW
    The statement <<This transition shall occur if this state receives an ALIGN1 Detected parameter before the SNTT timer expires.
    This indicates that the other phy has been able to lock at the current rate. >> should be changed to << This transition shall occur if
    the other phy has locked (i.e., ALIGN1 Detected parameter received before the SNTT timer expires). >>

Page: 115
Sequence number: 10
Date: 2/21/2003 3:00:16 PM
Type: Strikeout
    ACCEPT - DONE
    6.8.3.5.1 State description
    The statement << This state is reached after ALIGN (1) has been both transmitted and received. >> should be deleted as we do
    not describe entry conditions only exit conditions.

Page: 115
Sequence number: 11
Date: 2/21/2003 2:54:14 PM
Type: Highlight
    REJECT (unnecessarily verbose)
    6.8.3.5.1 State description
    The following statement << This state shall repeatedly send a Transmit ALIGN1 parameter to the SP transmitter.>> should be
    <<This state shall request ALIGN (1) be transmitted at the current rate (e.g., G1, G2, G3) by repeatedly sending a Transmit
    ALIGN1 parameter to the SP transmitter.>>.

Page: 115

Sequence number: 12
Date: 1/10/2003 10:46:42 AM
Type: Highlight
   ACCEPT - DONE
   6.8.3.5.2 Transition SP12:SAS_AwaitALIGN1 to SP13:SAS_Pass
   The statement << if the >> should be << after the >>.

Page: 115
Sequence number: 13
Date: 2/21/2003 2:56:06 PM
Type: Highlight
   ACCEPT - DONE
   6.8.3.6.2 Transition SP13:SAS_Pass to SP8:SAS_Start
   The statement << which is sent as an argument to the SN_start state>> should be moved to the end of the section and restated as
   <<This transition shall pass a SAS Speed Negotiation Window Rate argument to the SN_start state. >>.

Page: 116
Sequence number: 2
Date: 2/21/2003 3:05:14 PM
Type: Highlight
   ACCEPT - DONE
   6.8.3.7.3 Transition SP14:SAS_Fail to SP8:SAS_Start
   The statement << Which speed negotiation window to use is sent as an argument with this transition. >> should be changed to
   <<This transition shall pass which speed negotiation window to use in the SAS Speed Negotiation Window Rate argument to the
   SN_start state. >>.

Page: 116
Sequence number: 3
Date: 3/8/2003 12:30:08 PM
Type: Strikeout
   ACCEPT - DONE (editors note incorporation eliminated this sentence)
   6.8.3.8.1 State description
   The following << to provide rule checking for
   dword synchronization and determination of link failure. >> should be deleted as the information is already in the DWS section. A
   reference to DWS would be OK.

Page: 116
Sequence number: 4
Date: 2/21/2003 4:38:11 PM
Type: Highlight
   ACCEPT - DONE
   6.8.3.8.1 State description
   The statement << the receipt of a COMINIT; >> should be << the receipt of a COMINIT Detected parameter >>.

Page: 116
Sequence number: 5
Date: 2/21/2003 4:39:19 PM
Type: Strikeout
   ACCEPT - DONE
   6.8.3.8.1 State description
   The statement << While in this state, dwords from the link layer are transmitted at
   the negotiated physical link rate >> should be deleted as it is stated 2 times in this section.

Page: 116
Sequence number: 6
Date: 2/21/2003 4:38:52 PM
Type: Strikeout
   REJECT (this is special)
   6.8.3.8.1 State description
   The statement << from the link layer >> should be deleted as the general rule is that we do not state where things come from in
   state diagrams.

Page: 117
Sequence number: 1
Date: 1/10/2003 10:55:14 AM
Type: Highlight
   REJECT (but changed it to "if ...this state receives" to match other text)
   6.8.3.8.2 Transition SP15:SAS_PHY_Ready to SP1:OOB_COMINIT
   The statement << occur if: >> should be << occur after >>.

Page: 117
Sequence number: 2
Date: 2/5/2003 10:03:07 AM
Type: Highlight
ACCEPT - DONE
6.8.4 SATA host emulation states
The statement << the SAS device (an initiator device or expander device) has >> should be << a SAS initiator device or an expander device has >>.

Page: 117
Sequence number: 3
Date: 2/16/2003 10:12:58 AM
Type: Strikeout
REJECT (it's a good overview of what these states do)
6.8.4 SATA host emulation states
The statement << During SATA host emulation, the SAS device transmits a COMWAKE sequence and then waits to receive a COMWAKE. Once the COMWAKE sequence is detected, the SAS device follows the speed negotiation
sequence defined in SATA. >> should be deleted as the information in this statement is duplicate information.

Page: 118
Sequence number: 5
Date: 2/4/2003 6:46:17 PM
Type: Circle
ACCEPT - DONE
Figure 58
The COMWAKE Transmitted parameter is missing as a input to SP16.

Page: 118
Sequence number: 6
Date: 2/4/2003 6:49:18 PM
Type: Circle
ACCEPT - DONE
Figure 58
The COMWAKE Detected parameter is missing as a input to SP17.

Page: 118
Sequence number: 7
Date: 2/4/2003 6:49:25 PM
Type: Circle
ACCEPT - DONE
Figure 58
The COMWAKE Completed parameter is missing as a input to SP18.

Page: 118
Sequence number: 8
Date: 1/24/2003 6:31:38 PM
Type: Circle
REJECT (per Jan WG)
Figure 58
The labels on the state transitions should be deleted and they don't necessarily give the complete reason for the transition.

Page: 119
Sequence number: 3
Date: 2/21/2003 4:40:57 PM
Type: Highlight
ACCEPT - DONE
6.8.4.2.2 Transition SP17:SATA_AwaitCOMWAKE to SP18:SATA_AawitNoCOMWAKE
There is a type in the SP18 state name. It should SATA_AwaitNoCOMWAKE.

Page: 119
Sequence number: 4
Date: 2/21/2003 4:40:33 PM
Type: Highlight
ACCEPT - DONE (but COMWAKE Transmitted not COMWAKE Completed)
6.8.4.1.1 State description
The statement << wait for COMWAKE to be
transmitted. >> should be changed to << wait for a COMWAKE Completed parameter to be received. >>.

Page: 119
Sequence number: 5
Date: 2/21/2003 4:41:13 PM
Type: Highlight
    ACCEPT - DONE
    6.8.4.3.1 State description
    The statement << This state waits for COMWAKE to be fully received. >> should be << This state waits for a COMWAKE
    Completed parameter to be received. >>

Page: 119
Sequence number: 6
Date: 2/21/2003 4:41:36 PM
Type: Highlight
    REJECT (unnecessarily verbose)
    6.8.4.4.1 State description
    The statement << repeatedly send a Transmit D10.2 parameter to the SP transmitter; >> should be <<request D10.2s be
    transmitted by repeatedly sending a Transmit D10.2 parameter to the SP transmitter. >>

Page: 119
Sequence number: 7
Date: 2/4/2003 7:14:01 PM
Type: Highlight
    REJECT (but changed to "initialized and start")
    6.8.4.4.1 State description
    The statement << start the ALIGN detect time out timer; >> should be << set the ALIGN detect timer to it's initial value and
    enabled it; >>

Page: 119
Sequence number: 8
Date: 2/21/2003 4:41:59 PM
Type: Highlight
    ACCEPT - DONE
    6.8.4.4.1 State description
    The statement <<ALIGN to be received or an ALIGN detect time out. >> should be << ALIGN0 Received parameter to be received
    or an ALIGN detect time out to occur. >>

Page: 119
Sequence number: 9
Date: 3/4/2003 6:36:51 PM
Type: Strikeout
    ACCEPT - DONE (is it based on receiving COMWAKE or transmitting it? SATA uses "after detecting the release of" which
    indicates COMWAKE Completed is intended - i.e. entry into this state..)
    6.8.4.4.1 State description
    The statement << The SAS device shall start transmitting D10.2 characters no later than 20 G1 dwords (i.e., 533 ns) after
    COMWAKE was deasserted. >> should be deleted as it makes no sense here. It appears to be more of a transmitter requirement
    rather than a requirement of this state. Also COMWAKE is not something that can be deasserted it is a sequence of signals.

Page: 119
Sequence number: 10
Date: 2/21/2003 4:46:39 PM
Type: Strikeout
    ACCEPT - DONE (reworded. In SATA speed negotiation, the ALIGNs can come in at any link rate; this phy doesn't know what
    rate to expect at this time. Added sentence "...the ALIGN(0) was received at any of the physical link rates supported by this phy."
    Added sentence to SP receiver section that that argument is provided for SATA speed negotiation.)
    6.8.4.4.2 Transition SP19:SATA_AwaitALIGN to SP20:SATA_AdjustSpeed
    The statement << at any of its supported physical link rates. >> should be deleted as it makes no sense here.

Page: 119
Sequence number: 11
Date: 2/4/2003 7:15:18 PM
Type: Highlight
    REJECT (unnececessarily verbose)
    6.8.4.5.1 State description
    The statement << This state shall repeatedly send Transmit D10.2 parameters to the SP transmitter >> should be <<This state
    shall request D10.2s be transmitted by repeatedly sending a Transmit D10.2 parameter to the SP transmitter >>

Page: 120
Sequence number: 7
Date: 1/10/2003 10:50:49 AM

Type: Highlight
ACCEPT - DONE (but left in "this state")
6.8.4.5.2 Transition SP20:SATA_AdjustSpeed to SP21:SATA_TransmitALIGN
This statement << when this state receives a Transmitter Ready parameter. >> should be <<after receiving a Transmitter Ready parameter. >>.

Page: 120
Sequence number: 8
Date: 2/21/2003 6:46:21 PM
Type: Highlight
REJECT (unnecessarily verbose)
6.8.4.6.1 State description
The statement << This state shall repeatedly send the Transmit ALIGN0s parameter to the SP transmitter. >> should be << This state shall request ALIGN0s be transmitted by repeatedly sending a Transmit ALIGN0 parameter to the SP transmitter. >>

Page: 120
Sequence number: 9
Date: 2/21/2003 6:45:24 PM
Type: Strikeout
ACCEPT - DONE (added a Dword Received parameter to the SP receiver, and changed the transition to "after this state receives three consecutive Dword Received parameters with dwords other than ALIGN(0).")
6.8.4.6.1 State description
The statement << When the SP receiver detects three back-to-back non-ALIGNs, the state machine transitions to state SP22:SATA_PHY_Ready. >> should be deleted as all the information is in the transition description.

Page: 120
Sequence number: 10
Date: 1/10/2003 10:55:44 AM
Type: Highlight
REJECT (that doesn't follow the convention)
6.8.4.7.4 Transition SP22:SATA_PHY_Ready to SP23:SATA_PM_Slumber
The statement << if this state receives an Enter Slumber request. >> should be << if an Enter Slumber request is received.>>.

Page: 120
Sequence number: 11
Date: 1/10/2003 10:55:38 AM
Type: Highlight
REJECT (that doesn't follow the convention)
6.8.4.7.4 Transition SP22:SATA_PHY_Ready to SP23:SATA_PM_Slumber
The statement << if this state receives an Enter Partial request. >> should be << if an Enter Partial request is received.>>

Page: 120
Sequence number: 12
Date: 2/4/2003 7:05:45 PM
Type: Highlight
ACCEPT - DONE (changed to OOB_COMINIT proper state number)
6.8.4.7.2 Transition SP22:SATA_PHY_Ready to SP1:Reset
In figure 58 this transition goes to SP1:OOB_COMMINIT but here it goes to SP1:Reset . Only one is correct. This needs to be fixed.

Page: 120
Sequence number: 13
Date: 2/21/2003 6:49:16 PM
Type: Highlight
ACCEPT - DONE (changed COMINIT Received to COMINIT Detected.   Added it and DWS Reset to the figure.)
6.8.4.7.2 Transition SP22:SATA_PHY_Ready to SP1:Reset
The statement << This transition shall occur if this state receives a COMINIT Received parameter or a DWS Reset parameter. >> makes no sense as there is not COMINIT Received or DWS Reset in figure 58. So it is not clear what causes this transition.

Page: 120
Sequence number: 14
Date: 2/21/2003 6:52:19 PM
Type: Highlight
REJECT
6.8.4.7.1 State description
The statement << This state shall send a PhyReady (SATA) parameter to the SP_DWS state machine. >> should be
Upon entering this state, this state shall send a PhyReady (SATA) parameter to the SP_DWS state machine. >>.

Page: 120
Sequence number: 15

Date: 2/21/2003 6:52:09 PM
Type: Highlight
    ACCEPT - DONE (reworded to match SAS_PHY_Ready)
    6.8.4.7.1 State description
    The statement << In this state, the SP state machine hands control over dword transmission to the SP_DWS state machine. The SP receiver monitors the input dword stream looking for COMINIT. >>
    should be
    << This state sends RhyReady (SATA) parameter to the SP_DWS state machine to enable it. >> If this state needs to take some action if a COMINIT detected or complete happens then there needs to be a parameter input and a description as to what happens when the parameter is received.

Page: 120
Sequence number: 16
Date: 1/10/2003 10:55:53 AM
Type: Highlight
    REJECT (that doesn't follow the convention)
    6.8.4.8.2 Transition SP23:SATA_PM_Partial to SP16:SATA_COMWAKE
    The statement << if this state receives a Exit Partial request. >> should be << if an Exit Partial request is received. >>

Page: 120
Sequence number: 17
Date: 1/10/2003 10:56:00 AM
Type: Highlight
    REJECT (that doesn't follow the convention)
    6.8.4.8.3 Transition SP23:SATA_PM_Partial to SP18:SATA_AwaitNoCOMWAKE
    The statement << if this state receives a COMWAKE Detected parameter. >> should be << if a COMWAKE Detected parameter is received. >>.

Page: 120
Sequence number: 18
Date: 2/21/2003 6:41:23 PM
Type: Highlight
    ACCEPT - DONE
    6.8.4.8.1 State description
    The statement << Exit from this state is driven from receipt of COMWAKE or by request of the link layer. >> should be << This state waits for a COMWAKE Detected parameter or a Exit Partial parameter to be received. >>

Page: 120
Sequence number: 19
Date: 2/21/2003 6:41:15 PM
Type: Highlight
    ACCEPT - DONE
    6.8.4.9.1 State description
    The statement << Exit from this state is driven from receipt of COMWAKE or by request of the link layer. >> should be << This state waits for a COMWAKE Detected parameter or a Exit Slumber parameter to be received. >>.

Page: 120
Sequence number: 20
Date: 1/10/2003 10:56:04 AM
Type: Highlight
    REJECT (that doesn't follow the convention)
    6.8.4.9.2 Transition SP24:SATA_PM_Slumber to SP16:SATA_COMWAKE
    The statement << if this state receives a Exit Slumber request. >> should be << if an Exit Slumber request is received. >>

Page: 121
Sequence number: 2
Date: 2/4/2003 6:59:47 PM
Type: Highlight
    REJECT (may be a better convention, but not predominant for SAS-1)
    6.8.4.9.3 Transition SP24:SATA_PM_Slumber to SP18:SATA_AwaitNoCOMWAKE
    The statement << if this state receives a COMWAKE Detected parameter. >> should be << if a COMWAKE Detected parameter is received. >>.

Page: 121
Sequence number: 3
Date: 1/9/2003 9:23:21 AM
Type: Highlight
    REJECT (they're sent/pushed here for action. received implies "pulled")
    6.9.1 Overview

The statement << are sent to the SP_DWS machine >> should be << are received by the SP_DWS state machine >>.

Page: 121
Sequence number: 4
Date: 2/20/2003 9:30:24 AM
Type: Circle
ACCEPT - DONE (item c) above should be "receiving Phy Not Ready" not PhyReady - that causes the state machine to start in DWS0)
6.9.1 Overview
There should be text here that states what happens when a PhyNotReady parameter is received.

Page: 121
Sequence number: 5
Date: 2/21/2003 6:36:50 PM
Type: Note
ACCEPT - DONE (added green arrow and use parameter names throughout. Added to SP_DWS receiver section).
6.9.1 Overview
It seems like there should a Dword Received parameter from the receiver that goes to all the states within this state machine. As a result there should be a green open arrow pointing to the edge of the SP_DWS state machine. The following text should be added here: All the states within the SP_DWS receive the Dword Receive parameter from the SP receiver.

Page: 121
Sequence number: 6
Date: 1/10/2003 10:59:22 AM
Type: Strikeout
REJECT (that rule is not for introductions)
6.9.1 Overview
The statement << from the SP state machine. >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 121
Sequence number: 7
Date: 1/10/2003 10:59:27 AM
Type: Strikeout
REJECT (that rule is not for introductions)
6.9.1 Overview
The statement << from the SP state machine: >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 122
Sequence number: 1
Date: 2/28/2003 9:59:49 AM
Type: Circle
ACCEPT - DONE (cutout added, but to all states kept)
Figure 59
There needs to be a cut-out so the PhyNotReady arrow points to the SP_DWS state machine. Also the text need not state that the parameter goes to all states. That is implied. The statement << (This parameter causes a transition to SP_DW0:AcquireSync) >>.

Page: 122
Sequence number: 2
Date: 1/24/2003 6:31:59 PM
Type: Circle
REJECT (per Jan WG)
Figure 59
The labels on the state transitions should be deleted and they don't necessarily give the complete reason for the transition.

Page: 123
Sequence number: 5
Date: 2/21/2003 6:16:36 PM
Type: Strikeout
ACCEPT - DONE (reworded to just "this is the initial state of this state machine.)
6.9.2.1 State description
The statement << This state is entered upon power on loss or previous dword synchronization. >> should be deleted as we do not define entry conditions.

Page: 123
Sequence number: 6
Date: 2/21/2003 6:17:29 PM
Type: Highlight

REJECT (no it just waits for the first Dword Received)
6.9.2.1 State description
The statement << In this state, the receiver monitors the input data stream >> should be << This state monitors the Dwords received in the Dword Received parameter >>.

Page: 123
Sequence number: 7
Date: 2/21/2003 6:17:59 PM
Type: Highlight
ACCEPT - DONE (but moved to SP_DWS receiver section)
6.9.2.1 State description
The statement << character it detects into the >> should be << character detected into the >>.

Page: 123
Sequence number: 8
Date: 2/21/2003 6:18:19 PM
Type: Highlight
ACCEPT - DONE
6.9.2.2 Transition SP_DWS0:AcquireSync to SP_DWS1:Valid1
The statement << is detected. >> should be << is received >>.

Page: 123
Sequence number: 9
Date: 1/10/2003 11:01:17 AM
Type: Strikeout
REJECT (it explains the state name and is not a set of entry equations)
6.9.3.1 State description
The statement << This state is reached after one valid primitive has been detected. >> should be deleted as we do not describe entry conditions.

Page: 123
Sequence number: 10
Date: 1/10/2003 11:01:23 AM
Type: Strikeout
REJECT (it explains the state name and is not a set of entry equations)
6.9.4.1 State description
The statement << This state is reached after the receiver has detected two valid primitives. >> should be deleted as we do not describe entry conditions.

Page: 123
Sequence number: 11
Date: 1/10/2003 11:01:30 AM
Type: Strikeout
REJECT (it explains the state name and is not a set of entry equations)
6.9.5.1 State description
The statement << This state is reached when the receiver has detected three valid primitives without adjusting the dword synchronization. >> should be deleted as we do not describe entry conditions.

Page: 123
Sequence number: 12
Date: 2/21/2003 6:19:36 PM
Type: Highlight
ACCEPT - DONE (reworded)
6.9.3.1 State description
The statement <<In this state, the receiver shall monitor the
input data stream looking >> should be << This state shall monitor the Dwords received in the Dword Received parameter looking >>

Page: 123
Sequence number: 13
Date: 2/21/2003 6:19:50 PM
Type: Highlight
ACCEPT - DONE (reworded)
6.9.4.1 State description
The statement <<In this state, the receiver shall monitor the
input data stream looking >> should be << This state shall monitor the Dwords received in the Dword Received parameter looking >>

Page: 123

Sequence number: 14
Date: 2/21/2003 6:22:18 PM
Type: Highlight
    ACCEPT - DONE (reworded)
    6.9.5.1 State description
    The statement << In this state, the receiver shall monitor the incoming data stream looking >> should be << This state shall
    monitor the Dwords received in the Dword Received parameter looking >>

Page: 123
Sequence number: 15
Date: 2/21/2003 6:21:20 PM
Type: Highlight
    ACCEPT - DONE
    6.9.3.2 Transition SP_DWS1:Valid1 to SP_DWS2:Valid2
    The statement << This transition shall occur when a valid primitive is detected. >>
    should be << This transition shall occur after receiving a Dword Received parameter that contains a valid primitive. >>

Page: 123
Sequence number: 16
Date: 2/21/2003 6:20:29 PM
Type: Highlight
    ACCEPT - DONE
    6.9.4.2 Transition SP_DWS2:Valid2 to SP_DWS3:SyncAcquired
    The statement << This transition shall occur when a valid primitive is detected. >>
    should be << This transition shall occur after receiving a Dword Received parameter that contains a valid primitive. >>

Page: 123
Sequence number: 17
Date: 2/21/2003 6:20:48 PM
Type: Highlight
    ACCEPT - DONE
    6.9.4.3 Transition SP_DWS2:Valid2 to SP_DWS0:AcquireSync
    The statement << This transition shall occur when a invalid dword is detected. >>
    should be << This transition shall occur after receiving a Dword Received parameter that contains an invalid Dword.>>

Page: 123
Sequence number: 18
Date: 2/21/2003 6:24:19 PM
Type: Highlight
    ACCEPT - DONE
    6.9.5.2 Transition SP_DWS3:SyncAcquired to SP_DWS4:Lost1
    The statement << This transition shall occur when an invalid dword (i.e., the first invalid dword) is detected.>> should be << This
    transition shall occur after receiving a Dword Received parameter that contains an invalid Dword (i.e., the first invalid dword).>>

Page: 123
Sequence number: 19
Date: 2/28/2003 10:09:10 AM
Type: Highlight
    ACCEPT - DONE (move to XL state machine)
    6.9.5.2 Transition SP_DWS3:SyncAcquired to SP_DWS4:Lost1
    The statement << An expander forwarding the dword to another phy shall replace the invalid dword with ERROR for a SAS
    physical link or
    SATA_ERROR for a SATA physical link. >> seems out of place here. This should be defined in the expander information that
    describes the insertion of error primitives. As most there should be a reference to that information << For expander rules on invalid
    Dwords replacement see x.x.x. >>

Page: 124
Sequence number: 2
Date: 2/21/2003 6:25:57 PM
Type: Strikeout
    REJECT (explains what the state is)
    6.9.6.1 State description
    The statement << This state is reached when one invalid dword has been received and not nullified. >> should be deleted as we
    do not describe entry conditions.

Page: 124
Sequence number: 3
Date: 1/10/2003 11:01:41 AM
Type: Strikeout

REJECT (it explains the state name and is not a set of entry equations)
6.9.7.1 State description
The statement << This state is reached when a valid dword has been received, and another valid dword will nullify the previous invalid dword. >> should be deleted as we do not describe entry conditions.

Page: 124
Sequence number: 4
Date: 1/10/2003 11:01:49 AM
Type: Strikeout
REJECT (it explains the state name and is not a set of entry equations)
6.9.8.1 State description
The statement << This state is reached when two invalid dwords has been received and not nullified. >> should be deleted as we do not describe entry conditions.

Page: 124
Sequence number: 5
Date: 1/10/2003 11:01:54 AM
Type: Strikeout
REJECT (it explains the state name and is not a set of entry equations)
6.9.9.1 State description
The statement << This state is reached when a valid dword has been received, and another valid dword will nullify the previous invalid dword. >> should be deleted as we do not describe entry conditions.

Page: 124
Sequence number: 6
Date: 1/10/2003 11:01:35 AM
Type: Highlight
REJECT (it explains the state name and is not a set of entry equations)
6.9.6.1 State description
The statement <<In this state, the receiver shall monitor the
incoming data stream looking >> should be << This state shall monitor the Dwords received in the Dword Received parameter looking >>

Page: 124
Sequence number: 7
Date: 2/21/2003 6:28:33 PM
Type: Highlight
ACCEPT - DONE (reworded)
6.9.7.1 State description
The statement <<In this state, the receiver shall monitor the
incoming data stream looking >> should be << This state shall monitor the Dwords received in the Dword Received parameter looking >>

Page: 124
Sequence number: 8
Date: 2/21/2003 6:28:41 PM
Type: Highlight
ACCEPT - DONE (Reworded)
6.9.8.1 State description
The statement <<In this state, the receiver shall monitor the
incoming data stream looking >> should be << This state shall monitor the Dwords received in the Dword Received parameter looking >>

Page: 124
Sequence number: 9
Date: 2/21/2003 6:28:58 PM
Type: Highlight
ACCEPT - DONE (Reworded)
6.9.9.1 State description
The statement <<In this state, the receiver shall monitor the
incoming data stream looking >> should be << This state shall monitor the Dwords received in the Dword Received parameter looking>>

Page: 124
Sequence number: 10
Date: 2/21/2003 6:25:28 PM
Type: Highlight
ACCEPT - DONE
6.9.6.2 Transition SP_DWS4:Lost1 to SP_DWS5:Lost1Recovered

The statement << This transition shall occur when a valid dword is detected. >>
should be << This transition shall occur after receiving a Dword Received parameter that contains an valid Dword.>>

Page: 124
Sequence number: 11
Date: 2/21/2003 6:26:42 PM
Type: Highlight
    ACCEPT - DONE
    6.9.7.2 Transition SP_DWS5:Lost1Recovered to SP_DWS3:SyncAcquired
    The statement << This transition shall occur when a valid dword is detected. >>
    should be << This transition shall occur after receiving a Dword Received parameter that contains an valid Dword.>>

Page: 124
Sequence number: 12
Date: 2/21/2003 6:27:13 PM
Type: Highlight
    ACCEPT - DONE
    6.9.8.2 Transition SP_DWS6:Lost2 to SP_DWS7:Lost2Recovered
    The statement << This transition shall occur when a valid dword is detected. >>
    should be << This transition shall occur after receiving a Dword Received parameter that contains an valid Dword.>>

Page: 124
Sequence number: 13
Date: 2/21/2003 6:28:10 PM
Type: Highlight
    ACCEPT - DONE
    6.9.6.3 Transition SP_DWS4:Lost1 to SP_DWS6:Lost2
    The statement << This transition shall occur when an invalid dword is detected.>> should be << This transition shall occur after
    receiving a Dword Received parameter that contains an invalid Dword.>>

Page: 124
Sequence number: 14
Date: 2/21/2003 6:29:13 PM
Type: Highlight
    ACCEPT - DONE
    6.9.7.3 Transition SP_DWS5:Lost1Recovered to SP_DWS6:Lost2
    The statement << This transition shall occur when an invalid dword is detected.>> should be << This transition shall occur after
    receiving a Dword Received parameter that contains an invalid Dword.>>

Page: 124
Sequence number: 15
Date: 2/21/2003 6:27:33 PM
Type: Highlight
    ACCEPT - DONE
    6.9.8.3 Transition SP_DWS6:Lost2 to SP_DWS8:Lost3
    The statement << This transition shall occur when an invalid dword is detected.>> should be << This transition shall occur after
    receiving a Dword Received parameter that contains an invalid Dword.>>

Page: 124
Sequence number: 16
Date: 2/28/2003 10:09:18 AM
Type: Highlight
    ACCEPT - DONE (move to XL state machine)
    6.9.6.3 Transition SP_DWS4:Lost1 to SP_DWS6:Lost2
    The statement << An expander forwarding the dword to another phy shall replace the invalid dword with ERROR for a SAS
    physical link or
    SATA_ERROR for a SATA physical link. >> seems out of place here. This should be defined in the expander information that
    describes the insertion of error primitives. As most there should be a reference to that information << For expander rules on invalid
    Dwords replacement see x.x.x. >>

Page: 124
Sequence number: 17
Date: 2/28/2003 10:09:24 AM
Type: Highlight
    ACCEPT - DONE (move to XL state machine)
    6.9.7.3 Transition SP_DWS5:Lost1Recovered to SP_DWS6:Lost2
    The statement << An expander forwarding the dword to another phy shall replace the invalid dword with ERROR for a SAS
    physical link or
    SATA_ERROR for a SATA physical link. >> seems out of place here. This should be defined in the expander information that

describes the insertion of error primitives. As most there should be a reference to that information << For expander rules on invalid Dwords replacement see x.x.x. >>

Page: 124
Sequence number: 18
Date: 2/28/2003 10:09:30 AM
Type: Highlight
ACCEPT - DONE (move to XL state machine)
6.9.8.3 Transition SP_DWS6:Lost2 to SP_DWS8:Lost3
The statement << An expander forwarding the dword to another phy shall replace the invalid dword with ERROR for a SAS physical link or
SATA_ERROR for a SATA physical link. >> seems out of place here. This should be defined in the expander information that describes the insertion of error primitives. As most there should be a reference to that information << For expander rules on invalid Dwords replacement see x.x.x. >>

Page: 125
Sequence number: 1
Date: 1/10/2003 11:02:02 AM
Type: Strikeout
REJECT (it explains the state name and is not a set of entry equations)
6.9.10.1 State description
The statement << This state is reached when three invalid dwords has been received and not nullified. >> should be deleted as we do not describe entry conditions.

Page: 125
Sequence number: 2
Date: 1/10/2003 11:02:21 AM
Type: Strikeout
REJECT (it explains the state name and is not a set of entry equations)
6.9.11.1 State description
The statement << This state is reached when a valid dword has been received, and another valid dword will nullify the previous invalid dword. >> should be deleted as we do not describe entry conditions.

Page: 125
Sequence number: 3
Date: 2/21/2003 6:35:26 PM
Type: Highlight
ACCEPT - DONE (Reworded)
6.9.10.1 State description
The statement <<In this state, the receiver shall monitor the
incoming data stream looking >> should be << This state shall monitor the Dwords received in the Dword Received parameter looking >>

Page: 125
Sequence number: 4
Date: 2/21/2003 6:35:06 PM
Type: Highlight
ACCEPT - DONE (reworded)
6.9.11.1 State description
The statement <<In this state, the receiver shall monitor the
incoming data stream looking >> should be << This state shall monitor the Dwords received in the Dword Received parameter looking >>

Page: 125
Sequence number: 5
Date: 2/21/2003 6:34:52 PM
Type: Highlight
ACCEPT - DONE
6.9.9.2 Transition SP_DWS7:Lost2Recovered to SP_DWS4:Lost1
The statement << This transition shall occur when a valid dword is detected. >>
should be << This transition shall occur after receiving a Dword Received parameter that contains an valid Dword.>>

Page: 125
Sequence number: 6
Date: 2/21/2003 6:33:00 PM
Type: Highlight
ACCEPT - DONE
6.9.10.2 Transition SP_DWS8:Lost3 to SP_DWS9:Lost3Recovered
The statement << This transition shall occur when a valid dword is detected. >>

should be << This transition shall occur after receiving a Dword Received parameter that contains an valid Dword.>>

Page: 125
Sequence number: 7
Date: 2/21/2003 6:33:08 PM
Type: Highlight
    ACCEPT - DONE
    6.9.11.2 Transition SP_DWS9:Lost3Recovered to SP_DWS6:Lost2
    The statement << This transition shall occur when a valid dword is detected. >>
    should be << This transition shall occur after receiving a Dword Received parameter that contains an valid Dword.>>

Page: 125
Sequence number: 8
Date: 2/21/2003 6:34:28 PM
Type: Highlight
    ACCEPT - DONE
    6.9.9.3 Transition SP_DWS7:Lost2Recovered to SP_DWS8:Lost3
    The statement << This transition shall occur when an invalid dword is detected.>> should be << This transition shall occur after
    receiving a Dword Received parameter that contains an invalid Dword.>>

Page: 125
Sequence number: 9
Date: 2/21/2003 6:34:11 PM
Type: Highlight
    ACCEPT - DONE (just "after sending". Moved the rest into the state description.)
    6.9.10.3 Transition SP_DWS8:Lost3 to SP_DWS0:AcquireSync
    The statement << If an invalid dword (i.e., the fourth non-nullified invalid dword) is detected, this state shall send a DWS Reset
    parameter to the SP state machine and this transition shall occur. >> should be << This transition shall occur after receiving a
    Dword Received parameter that contains an invalid Dword (i.e., the fourth non-nullified invalid dword) and after sending a DWS
    Reset parameter to the SP state machine.>>

Page: 125
Sequence number: 10
Date: 2/21/2003 6:34:04 PM
Type: Highlight
    ACCEPT - DONE (just "after sending". Moved the rest into the state description.)
    6.9.11.3 Transition SP_DWS9:Lost3Recovered to SP_DWS0:AcquireSync
    The statement << If an invalid dword (i.e., the fourth non-nullified invalid dword) is detected, this state shall send a DWS Reset
    parameter to the SP state machine and this transition shall occur. >> should be << This transition shall occur after receiving a
    Dword Received parameter that contains an invalid Dword (i.e., the fourth non-nullified invalid dword) and after sending a DWS
    Reset parameter to the SP state machine.>>

Page: 125
Sequence number: 11
Date: 2/28/2003 10:09:36 AM
Type: Highlight
    ACCEPT - DONE (move to XL state machine)
    6.9.9.3 Transition SP_DWS7:Lost2Recovered to SP_DWS8:Lost3
    The statement << An expander forwarding the dword to another phy shall replace the invalid dword with ERROR for a SAS
    physical link or
    SATA_ERROR for a SATA physical link. >> seems out of place here. This should be defined in the expander information that
    describes the insertion of error primitives. As most there should be a reference to that information << For expander rules on invalid
    Dwords replacement see x.x.x. >>

Page: 125
Sequence number: 12
Date: 1/25/2003 11:24:27 AM
Type: Strikeout
    ACCEPT - DONE
    6.10 Spin-up
    The statement << NOTE 12 A SATA target device with rotating media spins up:
    a) automatically after power on (allowed by SATA);
    b) after its phy is enabled (allowed by SATA);
    c) after the reset sequence has completed (recommended by SATA); or
    d) after the Power Up in Standby flag is cleared by an application (if the ATA Power Up in Standby feature is
    implemented).
    The ATA Power Up in Standby feature is not widely implemented, since it requires the target device to include
    a nonvolatile memory to remember the state of the Power Up in Standby flag. Desktop-class disk drives do
    not typically have nonvolatile memory storage. >> has no value to this standard and should be deleted.

Page: 127
Sequence number: 2
Date: 1/25/2003 11:24:39 AM
Type: Highlight
    REJECT
    Table 51
    The footnotes have to be on each split of the table not just the last one.

Page: 135
Sequence number: 1
Date: 2/17/2003 11:26:42 AM
Type: Strikeout
    ACCEPT - DONE (keep these 3 sentences here. Put a short reference in each of the 3 sections below back to here - "ALIGNs
    may be sent inside primitive sequences as described in 7.1.3.1.")
    7.1.3.1 Primitive sequence overview
    The statement << ALIGNs may be sent inside primitive sequences without affecting the count or breaking the consecutiveness
    requirements. >>
    should be deleted as it is repeated in each of the next three sections.
    The other option would be to delete the text in all three sections and leave it here.

Page: 135
Sequence number: 2
Date: 2/17/2003 11:27:48 AM
Type: Highlight
    ACCEPT - DONE (delete everything after "consecutively")
    7.1.3.4 Triple primitive sequence
    The statement << consecutively and followed by idle dwords until a response is received. >> should be <<consecutively followed
    by idle dwords. >> The statement << until a response is received >> is incomplete because it does not describe what the response
    is that is received. Either that has to be defined or the statement deleted.

Page: 135
Sequence number: 3
Date: 2/17/2003 11:27:19 AM
Type: Strikeout
    ACCEPT - DONE
    7.1.3.3 Repeated primitive sequence
    The statement << until a response is received >> is incomplete because it does not describe what the response is that is received.
    Either that has to be defined or the statement deleted.

Page: 135
Sequence number: 4
Date: 2/17/2003 11:28:17 AM
Type: Highlight
    ACCEPT - DONE
    7.1.3.4 Triple primitive sequence
    The statement << detect a triple primitive sequence by receiving the identical primitive in three consecutive dwords. >> should be
    << detect a triple primitive sequence after the identical primitive is received in three consecutive dwords. >>

Page: 135
Sequence number: 5
Date: 2/17/2003 12:02:01 PM
Type: Highlight
    REJECT (your comment on the previous section deleted "and followed by..." which is a good idea for both sections. No point in
    removing it there and adding it here.)
    7.1.3.5 Redundant primitive sequence
    The statement << shall be sent six times consecutively. >> should be << shall be sent six times consecutively followed by idle
    dwords.

Page: 135
Sequence number: 6
Date: 2/17/2003 12:02:40 PM
Type: Highlight
    ACCEPT - DONE
    7.1.3.5 Redundant primitive sequence
    The statement << detect redundant primitive sequences by receiving an identical primitive for three consecutive
    dwords. >> should be << detect a redundant primitive sequence after the identical primitive is received in three consecutive
    dwords. >>

Page: 135
Sequence number: 7
Date: 2/17/2003 11:29:52 AM
Type: Highlight
ACCEPT - DONE (Change to "After receiving a triple primitive sequence, a receiver shall not detect a second instance of the same triple primitive sequence until")   Apply to the redundant primitive sequence text too.
7.1.3.4 Triple primitive sequence
***
In the statement << receiver shall not detect primitive sequences a second time until it >> it is not clear if the primitive sequence that shall not be detected is this primitive sequence or any primitive sequence or any triple primitive sequence. This needs to be made clear.

Page: 135
Sequence number: 8
Date: 2/17/2003 12:03:04 PM
Type: Highlight
ACCEPT - DONE (worded per comment in previous section)
7.1.3.5 Redundant primitive sequence
***
In the statement << receiver shall not detect primitive sequences a second time until it >> it is not clear if the primitive sequence that shall not be detected is this primitive sequence or any primitive sequence or any redundant primitive sequence. This needs to be made clear.

Page: 135
Sequence number: 12
Date: 2/16/2003 10:14:56 AM
Type: Highlight
ACCEPT - DONE (removed sentence)
7.1.3.5 Redundant primitive sequence
Redundant primitive sequences shall only be detected outside of a connection.
is wrong. BREAK is a redundant primitive and is certainly allowed inside connections.

Page: 136
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Strikeout
ACCEPT - DONE
7.1.4.2 ALIGN
The statement << are used for >> should be deleted as it is duplicated in the sentence.

Page: 136
Sequence number: 2
Date: 2/17/2003 12:09:23 PM
Type: Strikeout
REJECT - highlights a difference with SATA that could lead to interop bugs.
7.1.4.2 ALIGN
The statement << NOTE 14 SATA devices are allowed to decode every dword starting with a K28.5 as an ALIGN, since ALIGN is the only primitive defined starting with K28.5. >> as it contains no information that is relevant to this standard.

Page: 137
Sequence number: 5
Date: 2/17/2003 12:59:50 PM
Type: Highlight
ACCEPT - DONE
7.1.4.4 BROADCAST
Change << BROADCAST indications >> to << BROADCASTs >>.

Page: 137
Sequence number: 6
Date: 2/17/2003 12:59:56 PM
Type: Highlight
ACCEPT - DONE
7.1.4.4 BROADCAST
Change << BROADCAST indication >> to << BROADCAST >>.

Page: 137
Sequence number: 7
Date: 2/17/2003 1:00:18 PM
Type: Highlight

ACCEPT - DONE
7.1.4.4 BROADCAST
Change << second indication >> to << second BROADCAST >>.

Page: 137
Sequence number: 8
Date: 2/17/2003 1:00:49 PM
Type: Highlight
ACCEPT - DONE (changed to "affiliation" which is now in the definitions section)
Table 60
The term << initiator affiliation. >> is not used anywhere else in this standard. So I have no idea as to what it is. It needs to be defined or changed to a term that is defined.

Page: 137
Sequence number: 10
Date: 2/17/2003 1:01:29 PM
Type: Highlight
ACCEPT - DONE (Jan WG treat like CLOSE (NORMAL) when received in SSP or SMP connection)
7.1.4.5 CLOSE
***
There is no indication as to what a device should do if it does not support STP and receives a CLOSE (CLEAR AFFILIATION). I suggest the description should be changed to << Close an open STP connection and clear the initiator affiliation. If a device does not support STP it shall process the CLOSE (CLEAR AFFILIATION) the same as CLOSE (NORMAL). >>

Page: 138
Sequence number: 8
Date: 1/6/2003 6:16:00 PM
Type: Highlight
ACCEPT - DONE
7.1.4.9 NOTIFY
The TBD needs to be replaced with a reference.

Page: 138
Sequence number: 9
Date: 2/17/2003 1:02:59 PM
Type: Note
ACCEPT - DONE (added "and shall be ignored at other times")
7.1.4.8 HARD_RESET
There should be a statement that states that the HARD_RESET shall be ignored if received at any time other than after a phy reset sequence and before the identification sequence.

Page: 138
Sequence number: 10
Date: 1/8/2003 1:04:01 PM
Type: Highlight
ACCEPT - DONE
7.1.4.9 NOTIFY
The statement << devices shall transmit NOTIFY (ENABLE_SPINUP) >> should changed to << devices shall use NOTIFY (ENABLE_SPINUP) >>. The rules for usage do follow in this paragraph but the use of the word << transmit >> in this sentence makes the sentence seem incomplete.

Page: 138
Sequence number: 11
Date: 2/17/2003 1:33:56 PM
Type: Note
REJECT (Either ALIGN or NOTIFY fulfills the 2048 dwords.)
7.1.4.9 NOTIFY
****
The way this is now it is possible that the receiver may not get an ALIGN within the 2048 dwords if a NOTIFY replaces an ALIGN. There needs to be a rule that when sending NOTIFYs the transmitter is still required to send ALIGNs at least once every 2048 dwords.

Page: 139
Sequence number: 3
Date: 2/11/2003 5:07:32 PM
Type: Highlight
ACCEPT - DONE (added a definition to 3.1.x)
7.1.4.11 OPEN_REJECT
Table 61

The term << affiliation >> needs to be defined.

Page: 140
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Circle
    ACCEPT - DONE
    Table 62
    There needs to be a double line between the body and footer.

Page: 141
Sequence number: 3
Date: 2/17/2003 1:57:27 PM
Type: Square
    ACCEPT - DONE
    Table 63
    The statement << Timed out waiting for an ACK or NAK. The ACK/NAK count does not match the frame count. Transmitter is going to transmit
    BREAK in 1 ms unless DONE is received prior to that. >>
    should be
    << The SSP state machine timed out waiting for an ACK or NAK (see 7.16.7.2) and the transmitter is going to transmit BREAK unless a DONE is received within 1 ms of transmitting the DONE (ACK/NAK TIMEOUT).

Page: 143
Sequence number: 6
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE (joined two sentences with and)
    7.2 Clock skew management
    The statement << This is used when transmitting data >> should be << The internal clock is used when transmitting data >>.

Page: 143
Sequence number: 7
Date: 2/17/2003 4:38:59 PM
Type: Highlight
    ACCEPT - DONE (all data changed to dwords in this section)
    7.2 Clock skew management
    The statement << data needs to be latched based >> should be << dwords need to be latched based >>.

Page: 143
Sequence number: 8
Date: 2/17/2003 4:37:02 PM
Type: Highlight
    ACCEPT - DONE
    7.2 Clock skew management
    The statement << receive data
    and not be able to >> should be << receive dwords and not be able to

Page: 143
Sequence number: 9
Date: 2/17/2003 4:37:09 PM
Type: Highlight
    ACCEPT - DONE (change all these "data" to "dwords". In the figure, "clock derived from serial bitstream")
    7.2 Clock skew management
    The statement << have data when needed >> should be << have dwords when needed >>.

Page: 143
Sequence number: 10
Date: 2/17/2003 4:38:41 PM
Type: Highlight
    REJECT (this is a valid use of "will". Just rewording it to avoid using the word "will" but still have same meaning is worse than leaving "will" in place.)
    7.1.6.3 SATA_HOLD and SATA_HOLDA (Hold and hold acknowledge)
    The statement << SATA_HOLDA will arrive within >> should be << SATA_HOLDA arrives within >>.

Page: 144
Sequence number: 4
Date: 1/6/2003 6:16:00 PM
Type: Square

ACCEPT - DONE
Table 66
Make the information << Original source of data
SSP initiator phy or target phy in SSP connection, SMP initiator phy or SMP target phy in SMP connection, Any phy outside connections, or
STP target phy in an STP connection >> into a left aligned a,b,c list.

Page: 144
Sequence number: 5
Date: 2/17/2003 4:44:34 PM
Type: Highlight
ACCEPT - DONE
7.2 Clock skew management
The term << amongst >> should << through >>

Page: 144
Sequence number: 6
Date: 2/17/2003 4:44:40 PM
Type: Highlight
ACCEPT - DONE (slightly different)
7.3 Idle links
The statement << While no connection is open and a physical link is idle, or while an SSP or SMP connection is open and the physical link is idle, SAS phys shall transmit idle dwords. >> should be << SAS phys shall transmit idle words if:
a) no connection is open and a physical link is idle;
b) an SSP connection is open and the physical link is idle; or
c) an SMP connection is open and the physical link is idle. >>

Page: 145
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Highlight
REJECT - there's no overlap between lines, and the suggested setting adds awkward look extra space to some of the lines but not all
Table 67
The paragraphs within the definitions should have the paragraph designer, basic, line spacing, fixed box unchecked. This will remove the superscripts running into the line above.

Page: 146
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Highlight
ACCEPT - DONE
7.4.2 CRC generation
The statement << order - the bits within each byte of the data dword are transposed to match the implicit transposition in the 8b10b encoding process. >> should be << order (i.e., the bits within each byte of the data dword are transposed to match the implicit transposition in the 8b10b encoding process). >>.

Page: 147
Sequence number: 13
Date: 1/17/2003 11:28:23 AM
Type: Highlight
REJECT (but sentence being deleted)
7.5 Scrambling
The statement << Table 69 shows when the scrambling logic shall treat data as big-endian and when it shall treat data as little-endian. >> should be << Table 69 shows when the scrambling logic shall handle data as big-endian and when it shall handle data as little-endian. >> .

Page: 147
Sequence number: 14
Date: 2/17/2003 5:00:03 PM
Type: Highlight
ACCEPT - DONE (delete second sentence)
7.5 Scrambling
The statement << These patterns can cause issues in the physical >> should be << These patterns may cause issues in the physical >>.

Page: 149
Sequence number: 1
Date: 1/6/2003 6:16:00 PM

Type: Strikeout
    ACCEPT - DONE
    7.7.1 Address frames overview
    The statement << Primitives may be inserted in the address frame. >> is no longer valid and needs to be deleted.

Page: 150
Sequence number: 2
Date: 1/24/2003 7:13:10 PM
Type: Strikeout
    ACCEPT - DONE
    7.7.2 IDENTIFY address frame
    The statement << The recipient shall ignore reserved and ignored fields in the IDENTIFY address frame. >> should be deleted as
    the information is already stated in the keywords definitions.

Page: 152
Sequence number: 3
Date: 2/17/2003 5:07:43 PM
Type: Strikeout
    ACCEPT - DONE (Move all the reasons for OPEN REJECT into the OPEN REJECT table in 7.1.4.11. Most of the reasons are
    there already.)
    7.7.3 OPEN address frame
    The statement << The destination device shall reject the connection request with OPEN_REJECT (PROTOCOL NOT
    SUPPORTED) if the PROTOCOL field is set to a value it does not support. >> should be deleted as this information is already
    stated in the state machines.

Page: 153
Sequence number: 2
Date: 2/17/2003 5:15:34 PM
Type: Strikeout
    ACCEPT - DONE (move to 7.1.11)
    7.7.3 OPEN address frame
    The statement << Every phy shall support the 1,5 Gbps connection rate at every physical link rate. >> should be deleted as this is
    not the place to put link speed requirements.

Page: 153
Sequence number: 3
Date: 1/24/2003 7:18:31 PM
Type: Strikeout
    ACCEPT - DONE (changing Reserved to Compatible Features; shall set to zero, receivers shall not check. This is NOT the normal
    definition of reserved.)
    The statement << The destination device shall ignore the contents of reserved fields in the OPEN address frame. >> should be
    deleted as it is already stated in the keywords definitions section.

Page: 153
Sequence number: 4
Date: 2/17/2003 5:23:45 PM
Type: Strikeout
    REJECT (did not delete, but reworded as "alternative to using the SAS target port's SAS address for context lookup.)
    7.7.3 OPEN address frame
    The statement << The INITIATOR CONNECTION TAG field is used for SSP and STP connection requests to provide an initiator
    port
    an easier context lookup when the target port originates a connection request. >> states no requires or options and should be
    deleted.

Page: 154
Sequence number: 4
Date: 3/1/2003 6:19:00 PM
Type: Highlight
    ACCEPT - DONE (change "shall transmit" to "transmits" and "shall expect to receve" to "receives")
    7.8.1 Overview
    The statement << Each phy shall also expect to receive an >> should be << Each phy receives an >>.

Page: 154
Sequence number: 5
Date: 1/24/2003 7:23:13 PM
Type: Highlight
    ACCEPT - DONE (this IS the definition of it. Nevertheless, pointed to 4.4.1 the reset overview)
    7.8.1 Overview
    The statement << link reset sequence. >> should be << link reset sequence (see x.x.x.) >>.

Page: 155
Sequence number: 8
Date: 2/21/2003 7:14:17 PM
Type: Highlight

ACCEPT - DONE (with rewording per other comments)

7.8.2 Initiator device specific rules

The statement << When this is done after a link reset sequence, this allows the application client within an initiator device to discover all the devices in the SAS domain. When this is done after a BROADCAST (CHANGE), this allows the application client within an initiator device to determine what has changed in the SAS domain. >>
 should be
<< If an application client initiates the discover process after a link reset sequence then on completion of the discovery that application client has discovered all the devices within the SAS domain. If the application client initiates the discovery process after a BROADCAST (CHANGE) then on completion of the discovery that application client has discovered any devices that have been removed or inserted into the SAS domain. >>

Page: 155
Sequence number: 9
Date: 2/21/2003 7:07:27 PM
Type: Highlight

ACCEPT - DONE (with and instead of then)

7.8.2 Initiator device specific rules

The statement << a routing loop. It shall disable routing >> should be << a routing loop then the application client shall disable routing >> .

Page: 155
Sequence number: 10
Date: 2/21/2003 7:06:40 PM
Type: Highlight

ACCEPT - DONE (merge sentences, only point to the SMP function name not the field name, and added an xref)

7.8.2 Initiator device specific rules

The statement << function request is used to disable the expander port of an expander device. >> should be << function request shall be used to disable the expander port of an expander device. >>

Page: 155
Sequence number: 11
Date: 3/1/2003 6:18:21 PM
Type: Square

ACCEPT - DONE

7.8.5.1 Overview

The statements << The SL_IR state machine sends the following parameters to the SL_IR transmitter:
a) Transmit IDENTIFY; and
b) Transmit HARD_RESET.
The SL_IR state machine receives the following parameters:
a) SOAF Received;
b) Data Dword Received;
c) EOAF Received; and
d) HARD_RESET Received. >> should be placed in section 7.8.6 as that is where the transmitter and receiver information is defined. That way it is all in one place.

Page: 155
Sequence number: 12
Date: 1/24/2003 7:39:31 PM
Type: Note

ACCEPT - DONE

7.8.5.1 Overview

There needs to be an item << c) Transmit Idle Dword >> added to the SL_IR transmitter list.

Page: 155
Sequence number: 13
Date: 1/24/2003 7:38:46 PM
Type: Note

ACCEPT - DONE

7.8.5.1 Overview

There needs to be an items << e) IDENTIFY Transmitted
f) HARD_RESET Transmitted >> add to the SL_IR receiver list.

Page: 156
Sequence number: 8

Date: 2/28/2003 10:19:37 AM
Type: Circle
    ACCEPT - DONE (duplicated to each state machine. Kept "to all states".)
    7.8.5 Identification and hard reset
    Figure 67
    The << Enable Disable Link Layer (Disable) >> confirmation needs to point into each of the 3 state machines. The statement << (to all states in all state machines, causing transition to Idle state) >> should be changed to << ((This parameter causes a transition to SL_IR_xxx1:Idle) >> replace xxx with TIR, RIF, and IRC on the appropriate arrow.

Page: 156
Sequence number: 9
Date: 2/19/2003 5:40:55 PM
Type: Circle
    ACCEPT - DONE (spaced out SL_IR_TIR and SL_IR_IRC states some more)
    Figure 67
    Several of the green arrows look like they are originating from other states. They should be shortened to avoid confusion.

Page: 156
Sequence number: 10
Date: 1/24/2003 7:41:52 PM
Type: Circle
    ACCEPT - DONE
    Figure 67
    The << Enable Disable SAS Link (Enable) >> should indicate it goes to SL or XL.

Page: 157
Sequence number: 5
Date: 3/1/2003 6:15:06 PM
Type: Highlight
    ACCEPT - DONE (trashed this list and replaced with a list of the real parameter names)
    7.8.6 SL_IR transmitter and receiver
    The statement << SOAF/IDENTIFY address frame/EOAF; >> has a problem in that the name of the parameter that causes the transmission is called << Transmit IDENTIFY >>. Those two names are enough different so it is not obvious one is a result of the other. One solution would be to add << (i.e., Transmit IDENTIFY parameter) >> to item b).

Page: 157
Sequence number: 6
Date: 3/1/2003 6:14:24 PM
Type: Highlight
    ACCEPT - DONE (deleted paragraph, since the SL_IR state machines parse dwords on their own, the receiver doesn't know anything about frames)
    7.8.6 SL_IR transmitter and receiver
    The statement << The SL_IR receiver shall ignore any primitive received inside an IDENTIFY address frame. In this case, a data dword shall be considered inside a frame when it is received after an SOAF and before an EOAF if the primitive is received after the 8th data dword following the SOAF. >> seems to be confusing. Changing it to the following may help << The SL_IR receiver shall ignore any primitive received inside an IDENTIFY address frame. In this case, a primitive shall be considered inside a frame when it is received within the first eight data dwords after an SOAF. >>

Page: 157
Sequence number: 7
Date: 3/1/2003 6:13:42 PM
Type: Note
    ACCEPT - DONE
    7.8.6 SL_IR transmitter and receiver
    There needs to be a new paragraph that describes what the SL_IR receiver receives. Something like << When the SL_IR receiver receives a dword the SL_IR receiver notifies the SL_IR state machine of the receipt of those dwords. The following are the only received dwords that the SL_IR transmitter shall send notifications on:
    a) SOAF;
    b) Data Dword;
    c) EOAF; or
    d) HARD_RESET. >>.

Page: 157
Sequence number: 8
Date: 2/21/2003 7:18:00 PM
Type: Strikeout
    ACCEPT - DONE (I disagree it's obvious but will delete it anyway)
    7.8.6.1.1 Overview
    The statement << This is the only state machine in the SL_IR state machines that transmits dwords on the physical link. >> Is

obvious and not necessary.

Page: 157
Sequence number: 9
Date: 2/19/2003 5:42:09 PM
Type: Highlight
    ACCEPT - DONE
    7.8.6.1.2.1 State description
    The statement << This state shall repeatedly send Transmit Idle Dword to the SL_IR transmitter. >> should be
    << This state shall request idle dwords be transmitted by repeatedly sending a Transmit Idle Dword parameter to
    the SL_IR transmitter (see 7.3). >>

Page: 157
Sequence number: 10
Date: 1/24/2003 7:45:48 PM
Type: Highlight
    ACCEPT - DONE
    7.8.6.1.2.2 Transition SL_IR_TIR1:Idle to SL_IR_TIR2:Transmit_Identify
    The statement << when both: >> should be changed to << after >>.

Page: 157
Sequence number: 11
Date: 1/24/2003 7:45:54 PM
Type: Highlight
    ACCEPT - DONE
    7.8.6.1.2.3 Transition SL_IR_TIR1:Idle to SL_IR_TIR3:Transmit_Hard_Reset
    The statement << when both: >> should be changed to << after >>.

Page: 157
Sequence number: 12
Date: 1/24/2003 7:45:09 PM
Type: Highlight
    ACCEPT - DONE
    7.8.6.1.3.1 State description
    The statement << This state shall send a Transmit IDENTIFY parameter to the SL_IR transmitter. >> should be << Upon entry into
    this state, this state shall send a Transmit IDENTIFY parameter to the SL_IR transmitter. >>

Page: 158
Sequence number: 2
Date: 2/19/2003 5:44:40 PM
Type: Highlight
    REJECT (the state description talks about receiving. Just transition after doing the last thing is simpler)
    7.8.6.1.3.2 Transition SL_IR_TIR2:Transmit_Identify to SL_IR_TIR4:Completed
    The statement << This transition shall occur after this state has sent an Identify Transmitted parameter. >> should be << This
    transition shall occur after:
    a) receiving a IDENTIFY Transmitted parameter; and
    b) sending an Identify Transmitted parameter to the IRC state machine. >>.

Page: 158
Sequence number: 3
Date: 2/19/2003 5:44:04 PM
Type: Highlight
    ACCEPT - DONE
    7.8.6.1.3.1 State description
    The statement << When this state receives >> should be << After this state receives >>.

Page: 158
Sequence number: 4
Date: 1/24/2003 7:46:49 PM
Type: Highlight
    ACCEPT - DONE
    7.8.6.1.4.1 State description
    The statement << This state shall send a >> should be << Upon entry into this state, this state shall send a >>.

Page: 158
Sequence number: 5
Date: 2/19/2003 5:44:57 PM
Type: Highlight
    ACCEPT - DONE

7.8.6.1.4.1 State description

The statement << When this state receives >> should be << After this state receives >>.

Page: 158
Sequence number: 6
Date: 2/19/2003 5:46:23 PM
Type: Highlight

REJECT (state description discusses receiving; simpler to base transition only on sending)

7.8.6.1.4.2 Transition SL_IR_TIR3:Transmit_Hard_Reset to SL_IR_TIR3:Completed

The statement << This transition shall occur after sending a HARD_RESET Transmitted confirmation. >> should be << This transition shall occur after:

a) receiving a HARD_RESET Transmitted parameter; and

b) sending a HARD_RESET Transmitted confirmation to the management application layer. >>.

Page: 158
Sequence number: 7
Date: 2/19/2003 5:46:38 PM
Type: Highlight

ACCEPT - DONE

7.8.6.1.5 SL_IR_TIR4:Completed state

The statement << This state shall repeatedly send the Transmit Idle Dword parameter to the SL_IR transmitter. >> should be << This state shall request idle dwords be transmitted by repeatedly sending a Transmit Idle Dword parameter to the SL_IR transmitter (see 7.3). >>

Page: 158
Sequence number: 8
Date: 2/19/2003 5:47:39 PM
Type: Highlight

REJECT (no, it only collects the SOAF. The next state collects the rest of the address frame)

7.8.6.2.2.1 State description

The statement << This state waits for an SOAF to be received from the physical link, indicating an address frame is arriving. >> should be << This state waits for an address frame to be received. >>

Page: 158
Sequence number: 9
Date: 1/24/2003 7:47:20 PM
Type: Highlight

ACCEPT - DONE

7.8.6.2.2.2 Transition SL_IR_RIF1:Idle to SL_IR_RIF2:Receive_Identify_Frame

The statement << when both: >> should be changed to << after >>.

Page: 158
Sequence number: 10
Date: 2/19/2003 5:48:15 PM
Type: Highlight

ACCEPT - DONE

7.8.6.2.3.1 State description

The statement << After receiving the frame, it shall check if it is a correct IDENTIFY address frame. >> should be << After receiving the address frame, this state shall check if it is a valid IDENTIFY address frame. >>

Page: 158
Sequence number: 11
Date: 2/19/2003 5:46:57 PM
Type: Highlight

ACCEPT - DONE

7.8.6.2.1 Overview

The statement << an IDENTIFY address frame from the physical link and checks the IDENTIFY address >> should be << an IDENTIFY address frame and checks that IDENTIFY address >>.

Page: 159
Sequence number: 3
Date: 2/19/2003 5:49:36 PM
Type: Highlight

REJECT (but deleted the after receiving portion, which is covered by the state description)

7.8.6.2.3.2 Transition SL_IR_RIF2:Receive_Identify_Frame to SL_IR_RIF3:Completed

The statement << This transition shall occur after receiving an EOAF and sending the Identify Received parameter or Address Frame Failed confirmation. >> should be << This transition shall occur after:

a) receiving an EOAF Received parameter; and

b) sending the Identify Received parameter or Address Frame Failed confirmation. >>

Page: 159
Sequence number: 4
Date: 2/19/2003 5:50:03 PM
Type: Highlight
    ACCEPT - DONE
    7.8.6.2.4 SL_IR_RIF3:Completed state
    The statement << This state does nothing except wait for >> should be << This state waits for >>.

Page: 159
Sequence number: 5
Date: 2/19/2003 5:50:49 PM
Type: Highlight
    ACCEPT - DONE (also changed notify to notifies to match)
    7.8.6.3.1 Overview
    The statement << state machines function is to ensure IDENTIFY address >> should be << state machine ensures IDENTIFY
    address >>.

Page: 159
Sequence number: 6
Date: 2/19/2003 5:54:02 PM
Type: Highlight
    ACCEPT - DONE
    7.8.6.3.2.1 State description
    The statement << This state shall >> should be << Upon entry into this state, this state shall: >>

Page: 159
Sequence number: 7
Date: 2/19/2003 5:54:15 PM
Type: Note
    ACCEPT - DONE (deleted from figure)
    7.8.6.3.2.1 State description
    There is not description of when the << Identify Time out >> confirmation is send out. That confirmation is in figure 67 as an output
    from the SL_IR_IRC1 state. This needs to fixed.

Page: 160
Sequence number: 7
Date: 1/24/2003 7:48:07 PM
Type: Highlight
    ACCEPT - DONE (removed)
    7.10 Near-end analog loopback test
    ***
    This section should be deleted as it causes implantation problems and is of little or no use in real life.

Page: 160
Sequence number: 8
Date: 2/19/2003 5:54:48 PM
Type: Strikeout
    ACCEPT - DONE
    7.8.6.3.3.1 State description
    The statement << from the Transmit IDENTIFY or HARD_RESET
    state machine, >> should be deleted as we do not state were things come from.

Page: 160
Sequence number: 9
Date: 2/19/2003 5:55:49 PM
Type: Highlight
    ACCEPT - DONE (following new timer convention - initialize and start the)
    7.8.6.3.3.1 State description
    The statement << initialize a receive identify time out >> should be << initialize the receive identify time out >> .

Page: 160
Sequence number: 10
Date: 2/19/2003 5:56:19 PM
Type: Highlight
    ACCEPT - DONE (but changed to expires which is the convention)
    7.8.6.3.3.1 State description
    The statement << time out timer is
    exceeded, this state shall: >> should be << time out timer times out, this state shall >>.

Page: 160
Sequence number: 11
Date: 2/19/2003 5:02:05 PM
Type: Highlight
    ACCEPT - DONE (renamed Identification Sequence Complete and put in figure)
    7.8.6.3.3.1 State description
    The << Identify Sequence Complete >> confirmation is not shown in figure 67. This needs to be fixed.

Page: 160
Sequence number: 12
Date: 2/19/2003 5:58:29 PM
Type: Highlight
    ACCEPT - DONE (added to figure)
    7.8.6.3.3.1 State description
    The << HARD_RESET Received >> confirmation is not shown in figure 67. This needs to be fixed.

Page: 160
Sequence number: 13
Date: 2/19/2003 5:56:48 PM
Type: Highlight
    ACCEPT - DONE (but with expires, the new convention)
    The statement << time out timer is exceeded before >> should be << time out timer times out before >> .

Page: 160
Sequence number: 14
Date: 2/19/2003 6:02:08 PM
Type: Highlight
    REJECT (this would just duplicate all the text in the state description. Took out "to the management application layer" but just left
    in the "after sending ..." list. Added Phy Enabled to the list and made it an and/or.)
    7.8.6.3.3.2 Transition SL_IR_IRC2:Wait to SL_IR_IRC3:Completed
    The statement << This transition shall occur after sending a HARD_RESET Received confirmation, Identify Timeout
    confirmation, or Identify Sequence Complete confirmation to the management application layer. >>
    should be
    << This transition shall occur:
    a) if an Identify Received parameter and an Identify Transmitter parameter are received, and after sending:
        A) an Identify Sequence Complete confirmation to the   management application layer;
        B) in an expander device, a Broadcast Event Notify (Identification Sequence Complete) confirmation to the expander function;
        C) a Phy Enabled confirmation to the port layer and the   management application layer; and
        D) an Enable Disable SAS Link (Enable) parameter to the SL state machine (see 7.13) in initiator devices and target devices or
    the XL state machine (see 7.14) in expander devices;
    b) if a HARD_RESET Received parameter is received and after sending a HARD_RESET Received confirmation to the
    management application layer; or
    c) if the identify timer times out and after sending an Identify Timeout confirmation to the management application layer.>>

Page: 160
Sequence number: 15
Date: 2/19/2003 6:02:27 PM
Type: Highlight
    ACCEPT - DONE
    7.8.6.3.4 SL_IR_IRC3:Completed state
    The statement << This state does nothing except wait for >> should be << This state waits for >>.

Page: 160
Sequence number: 16
Date: 2/19/2003 6:03:14 PM
Type: Strikeout
    REJECT (we have to describe how we do not support it if the SATA device tries to use it.)
    The statement << SATA interface power management is not supported in SAS. >> should be deleted. For something that is not
    supported there seems to be a lot of discussion in this section.

Page: 160
Sequence number: 17
Date: 2/19/2003 5:55:00 PM
Type: Strikeout
    ACCEPT - DONE
    7.8.6.3.3.1 State description
    The statement << from the Receive IDENTIFY Address Frame state machine >> should be deleted as the general rule is that we
    do not state where things come from in state diagrams.

Page: 161
Sequence number: 7
Date: 2/17/2003 5:28:00 PM
Type: Highlight
    ACCEPT - DONE
    7.11 Domain changes
    The statement << domain with a discover process (see 4.6.11.5) >> should be << domain using the discover process (see 4.6.11.5) >>

Page: 162
Sequence number: 6
Date: 2/17/2003 5:32:13 PM
Type: Highlight
    ACCEPT - DONE
    The statement << communication can begin. >> should be << any communication begins >>.

Page: 162
Sequence number: 7
Date: 2/17/2003 5:35:20 PM
Type: Highlight
    REJECT (this is the overview of what the state machines do)
    7.12.2.1 Connection request
    The statement << After transmitting an OPEN address frame, the source phy shall initialize an open time out timer to 1 ms and start the timer. Whenever an AIP is received, the source phy shall reinitialize and restart the timer. Source phys are not required to enforce a limit on the number of AIPs received before abandoning the connection request, but they may do so. When any connection response is received, the source phy shall reinitialize the timer. If the timer expires before a connection response is received, the source phy may assume the destination port does not exist and shall transmit BREAK to abandon the connection request. >>
    is a duplicate of the information that is in the state machines and should be deleted.

Page: 163
Sequence number: 18
Date: 1/25/2003 11:38:31 AM
Type: Highlight
    REJECT (the OPEN address frame is mentioned in the first sentence in this paragraph)
    7.12.3 Arbitration fairness
    The statement << the SCALE bit to one; >> should be << the SCALE bit in the OPEN address frame to one; >>.

Page: 163
Sequence number: 19
Date: 1/25/2003 11:40:24 AM
Type: Highlight
    ACCEPT - DONE (deleted retry delay so this is moot; responses would have been 1) this IS the definition of retry delay 2) it was supposed to be a shall; 3) agree it should be a minimum)
    7.12.2.2 Connection request responses
    ***
    The text << the source port shall wait a retry delay of 15 µs before >> has more than one problem.
    One is that the term retry delay should be defined as a specific time (i.e., retry delay = 15usec) the 15 usec would then be dropped from the text. Or the the statement needs to change to << the source port shall wait 15 µs before >>.
    The next problem is that this is a shall when it should be a should.
    The last problem is that there is no tolerance on the value. It should be stated as << shall (should) wait a minimum of 15 us before >>.

Page: 163
Sequence number: 20
Date: 2/17/2003 5:41:23 PM
Type: Strikeout
    ACCEPT - DONE
    7.12.2.2 Connection request responses
    The term << possible >> should be deleted.

Page: 163
Sequence number: 21
Date: 2/17/2003 5:46:19 PM
Type: Highlight
    ACCEPT - DONE
    7.12.2.2 Connection request responses
    global

The statement << I_T_L_Q >> should be << I_T_L_Q nexus >>. In all cases I_T, I_T_L, and I_T_L_Q should be I_T nexus, I_T_L nexus, and I_T_L_Q nexus.

Page: 163
Sequence number: 22
Date: 1/25/2003 11:30:02 AM
Type: Highlight
    ACCEPT - DONE (with which rather than that; it's not a subset)
    7.12.3 Arbitration fairness
    The statement << wait timer counting the >> should be << wait timer that counts the >>.

Page: 163
Sequence number: 23
Date: 1/25/2003 11:33:17 AM
Type: Highlight
    ACCEPT - DONE
    7.12.3 Arbitration fairness
    The statement << may be unfair, setting the >> should be << may be unfair by setting the >>.

Page: 163
Sequence number: 24
Date: 3/5/2003 3:27:27 PM
Type: Highlight
    ACCEPT - DONE
    7.12.3 Arbitration fairness
    The term <<livelocks.>> needs to be added to the glossary.

Page: 163
Sequence number: 25
Date: 1/25/2003 11:34:47 AM
Type: Strikeout
    REJECT (a hint that livelocks exist if the AWT is rendered ineffective seems appropriate here)
    7.12.3 Arbitration fairness
    The statement << and helps prevent livelocks. >> should be deleted.

Page: 163
Sequence number: 32
Date: 1/25/2003 11:36:12 AM
Type: Highlight
    ACCEPT - DONE (Jan WG remove totally; also removed the single reference to retry delay in the port layer)
    7.12.2.2 Connection request responses
    ***
    The requirement << After receiving an OPEN_REJECT that indicates a retry may be performed (see table 62), the source port shall wait a retry delay of 15 μs before issuing another connection request to the same destination port. >> should be removed as it only adds needless complexity to targets and initiators. It's also not clear the reason for this requirement as the open/reject functionally will most likely be contained totally in hardware.

Page: 164
Sequence number: 8
Date: 2/19/2003 12:39:39 PM
Type: Highlight
    REJECT (this is a good use of must. It's not a shall; it's referring to the effects of a shall somewhere else.)
    7.12.3 Arbitration fairness
    Note 22 states << of the time a device must wait after receiving OPEN_REJECT (PATHWAY BLOCKED) >>
    which has two problems one is the word must is used. If that is changed to a shall which seems logical then problem two occurs in that now you have a requirement in a note which is not allowed. This needs to be fixed.

Page: 164
Sequence number: 9
Date: 2/19/2003 12:36:49 PM
Type: Highlight
    ACCEPT - DONE ("by" implies there might be other ways to win arbitration. Reworded into an i.e.)
    7.12.3 Arbitration fairness
    The statement << wins arbitration, receiving either >> should be << wins arbitration by receiving either >>.

Page: 164
Sequence number: 10
Date: 2/19/2003 12:37:50 PM
Type: Highlight

ACCEPT - DONE (reworded as an i.e.)
7.12.3 Arbitration fairness
The statement
<< arbitration request, receiving an OPEN address frame from the destination port with matching PROTOCOL and CONNECTION RATE fields. >>
should be <
< arbitration request if an OPEN address frame from the destination port with matching PROTOCOL and CONNECTION RATE fields was received. >>

Page: 164
Sequence number: 11
Date: 1/25/2003 11:42:36 AM
Type: Highlight
    ACCEPT - DONE
    7.12.3 Arbitration fairness
    The statement << values in this order: >> should be << values in the following order: >>.

Page: 164
Sequence number: 12
Date: 2/19/2003 11:16:49 AM
Type: Highlight
    ACCEPT - DONE
    7.12.3.1.1 Arbitration overview
    The statement << values in this order: >> should be << values in the following order: >>.

Page: 165
Sequence number: 3
Date: 1/25/2003 11:44:48 AM
Type: Highlight
    REJECT (SAM has a status called CONDITION MET; what's wrong with that term?)
    7.12.3.1.1 Arbitration overview
    The statement << conditions are met: >> should be << conditions occur >>.

Page: 165
Sequence number: 4
Date: 1/25/2003 11:44:40 AM
Type: Highlight
    REJECT (SAM has a status called CONDITION MET; what's wrong with that term?)
    7.12.3.1.1 Arbitration overview
    The statement << conditions are met: >> should be << conditions occur >>.

Page: 165
Sequence number: 5
Date: 1/25/2003 11:44:36 AM
Type: Highlight
    REJECT (SAM has a status called CONDITION MET; what's wrong with that term?)
    7.12.3.1.1 Arbitration overview
    The statement << conditions are met: >> should be << conditions occur >>.

Page: 165
Sequence number: 6
Date: 2/19/2003 1:50:09 PM
Type: Highlight
    ACCEPT - DONE
    7.12.3.1.1 Arbitration overview
    The statement << port which contains >> should be << port that contains >>.

Page: 165
Sequence number: 7
Date: 2/19/2003 1:51:11 PM
Type: Highlight
    ACCEPT - DONE
    7.12.3.1.1 Arbitration overview
    The statement << destination (this case occurs >> should be << destination (i.e., occurs >>

Page: 165
Sequence number: 8
Date: 1/25/2003 11:45:04 AM
Type: Highlight

REJECT (SAM has a status called CONDITION MET; what's wrong with that term?)
7.12.3.1.3 Partial Pathway Timer
The statement << conditions are met: >> should be << conditions occur >>.

Page: 165
Sequence number: 9
Date: 2/19/2003 2:54:20 PM
Type: Highlight
REJECT (met is fine)
7.12.3.1.3 Partial Pathway Timer
The statement << above are not met, the >> should be << above do not occur, the >>.

Page: 165
Sequence number: 10
Date: 2/19/2003 2:54:48 PM
Type: Strikeout
ACCEPT - DONE (got rid if decrementing verbiage)
7.12.3.1.3 Partial Pathway Timer
Delete the statement << until reaching zero, >> and place the following statement in this section <<The expander connection manager shall stop decrementing the PPT timer when it reaches zero. >>.

Page: 165
Sequence number: 11
Date: 2/19/2003 3:54:51 PM
Type: Highlight
ACCEPT - DONE (changed to "shall stop")
The statement << manager shall hold the PPT timer at an initial value set to the partial pathway time out value. >> does not make sense. This needs to be fixed.

Page: 165
Sequence number: 12
Date: 2/19/2003 1:53:32 PM
Type: Highlight
REJECT (important to say why this exists)
7.12.3.1.4 Pathway Recovery
The statement << requests in order to prevent deadlock using Pathway Recovery Priority comparisons. >> should be << requests using Pathway Recovery Priority comparisons. >>.

Page: 165
Sequence number: 13
Date: 2/19/2003 1:52:57 PM
Type: Highlight
ACCEPT - DONE
7.12.3.1.4 Pathway Recovery
The statement << fields within the OPEN >> should be << fields from the OPEN >>.

Page: 165
Sequence number: 14
Date: 2/19/2003 3:45:16 PM
Type: Strikeout
ACCEPT - DONE
7.12.3.1.4 Pathway Recovery
The statement << as follows: >> should be deleted as there is no list that follows.

Page: 166
Sequence number: 1
Date: 2/19/2003 3:55:41 PM
Type: Highlight
ACCEPT - DONE (wins)
7.12.4.1 All expander devices
The statement << frame will win >> should be << frame shall will >> or << frame wins >>.

Page: 166
Sequence number: 2
Date: 2/19/2003 4:05:12 PM
Type: Strikeout
ACCEPT - DONE (it does add something, but will delete it)(later removed entire sentence)
7.12.3.1.4 Pathway Recovery
The term << effectively >> should be deleted as it adds nothing.

Page: 166
Sequence number: 3
Date: 2/19/2003 4:05:02 PM
Type: Highlight
    ACCEPT - DONE (used "using" instead) (later removed entire sentence)
    7.12.3.1.4 Pathway Recovery
    The statement << only with the SOURCE SAS >> should be << only on the SOURCE SAS >>.

Page: 166
Sequence number: 4
Date: 2/19/2003 4:11:46 PM
Type: Highlight
    ACCEPT - DONE (in previous sections, clearly defined "arbitration priority" in a table, and added "arbitration" in front of priority
    here.)
    7.12.4.1 All expander devices
    In the statement << frame unless it has higher >> it is not clear what the it is referring to. This needs to be fixed.

Page: 166
Sequence number: 5
Date: 2/19/2003 4:12:10 PM
Type: Highlight
    ACCEPT - DONE
    7.12.4.1 All expander devices
    The statement << three AIPs consecutively >> should be << three consecutive AIPs >>.

Page: 166
Sequence number: 6
Date: 2/21/2003 7:19:37 PM
Type: Highlight
    REVIEW PROTOCOL WG
    ACCEPT - DONE (changed to "within 128 dwords" per email discussion)
    7.12.4.1 All expander devices
    The term << immediately >> does not give enough information as to how soon immediately is. This needs to be fixed.

Page: 166
Sequence number: 7
Date: 2/21/2003 7:19:58 PM
Type: Strikeout
    ACCEPT - DONE
    7.12.4.2 Edge expander devices
    The statement << this means >> should be deleted.

Page: 166
Sequence number: 8
Date: 2/21/2003 7:20:11 PM
Type: Highlight
    ACCEPT - DONE
    7.12.4.2 Edge expander devices
    The statement << When two edge expander >> should be << If two edge expander >>.

Page: 166
Sequence number: 9
Date: 2/21/2003 7:20:24 PM
Type: Highlight
    ACCEPT - DONE
    7.12.4.2 Edge expander devices
    The statement << When a fanout expander >> should be << If a fanout expander >>.

Page: 167
Sequence number: 4
Date: 2/21/2003 7:29:20 PM
Type: Highlight
    ACCEPT - DONE
    7.12.4.3 Fanout expander devices
    The statement << phys which are >> should be << phys that are >>.

Page: 167
Sequence number: 5

Date: 2/21/2003 7:29:01 PM
Type: Highlight
REJECT (it is the fanout expander device)
7.12.4.3 Fanout expander devices
In the statement << it shall compare >> it is not clear what the it is. This needs to be fixed.

Page: 167
Sequence number: 6
Date: 2/21/2003 7:28:50 PM
Type: Note
REJECT (it is the fanout expander device)
7.12.4.3 Fanout expander devices
There are a whole bunch of << it >> s in this section where it is not clear what the it is. This needs to be fixed.

Page: 167
Sequence number: 7
Date: 3/5/2003 3:51:53 PM
Type: Strikeout
REJECT (this is an overview of what the state machine does, and shouldn't be just buried in the state machine)
7.12.5 Abandoning a connection request
The statement << After transmitting BREAK, the source port shall initialize a break time out timer to 1 ms and start the timer. If the timer expires before a break response is received, the source port may assume the physical link is
unusable. >> should be deleted as it is duplicated in the state machine descriptions.

Page: 167
Sequence number: 8
Date: 3/5/2003 3:25:18 PM
Type: Circle
ACCEPT - DONE (deleted the row; ignore anything but BREAKs after sending BREAK)
This confirms that the connection request has been abandoned.
Table 81
The statement << The BREAK was too late and an open response arrived late. The originator shall honor this as a response to the open request it was attempting to abandon. >> is not clear and the reference to 7.12.2 does not help in understanding this. This needs to be fixed.

Page: 167
Sequence number: 9
Date: 2/21/2003 7:28:08 PM
Type: Highlight
ACCEPT - DONE
7.12.5 Abandoning a connection request
The statement << the target port. >> should be << the destination port >> as a BREAK can be sent from both targets and initiators .

Page: 167
Sequence number: 10
Date: 3/5/2003 3:49:39 PM
Type: Strikeout
ACCEPT - DONE
7.12.5 Abandoning a connection request
The term << possible >> should be deleted.

Page: 168
Sequence number: 2
Date: 2/19/2003 4:26:01 PM
Type: Highlight
REJECT (good use of will - it's not a shall, it's a reflection of some other shalls)
7.12.5 Abandoning a connection request
The statement << that an open response will not occur. >> should be << that an open response shall not occur >>.

Page: 168
Sequence number: 3
Date: 2/19/2003 4:32:40 PM
Type: Note
ACCEPT - DONE (there's not really any order implied here. The text inside the figure describes the order. However, added arrows showing which OPENs and BREAKs are forwarded or locally replied to.)
Figure 69
The order of the BREAKs in this figure is not clear. They should be numbered in the time order they will occur.

Page: 169

Sequence number: 1
Date: 1/25/2003 11:46:04 AM
Type: Highlight
    REJECT - the title is "breaking a connection"
    7.12.5 Abandoning a connection request
    The statement << BREAK to break the connection. >> should be << BREAK to end the connection >>.

Page: 169
Sequence number: 2
Date: 2/19/2003 4:33:06 PM
Type: Highlight
    REJECT (the title is "breaking")
    7.12.6 Breaking a connection
    The statement << to break a connection, >> should be << to end a connection, >>.

Page: 169
Sequence number: 3
Date: 3/5/2003 3:49:51 PM
Type: Strikeout
    ACCEPT - DONE
    7.12.6 Breaking a connection
    The term << possible >> should be deleted.

Page: 169
Sequence number: 4
Date: 2/19/2003 4:33:26 PM
Type: Highlight
    REJECT (the title is breaking)
    7.12.6 Breaking a connection
    The statement << may be broken as the >> should be ended as the >>

Page: 169
Sequence number: 5
Date: 2/19/2003 4:33:38 PM
Type: Highlight
    REJECT (the title is breaking)
    7.12.6 Breaking a connection
    The statement << to a broken connection: >> should be << to a connection that has ended do to a BREAK: >>.

Page: 169
Sequence number: 6
Date: 2/19/2003 4:33:49 PM
Type: Highlight
    REJECT (the title is breaking)
    7.12.6 Breaking a connection
    The statement << the broken connection; >> should be << to a connection that has ended do to a BREAK: >>.

Page: 169
Sequence number: 7
Date: 2/19/2003 4:33:57 PM
Type: Highlight
    REJECT (the title is breaking)
    7.12.6 Breaking a connection
    The statement << a broken connection >> should be << a connection that has ended do to a BREAK >>.

Page: 169
Sequence number: 8
Date: 2/19/2003 4:34:06 PM
Type: Highlight
    REJECT (the title is breaking)
    7.12.6 Breaking a connection
    The statement << a broken connection >> should be << a connection that has ended do to a BREAK >>.

Page: 170
Sequence number: 2
Date: 2/10/2003 5:54:46 PM
Type: Strikeout
    REJECT (it's more unclear with that phrase removed, which would confuse the source of the CLOSE).
    7.12.7 Closing a connection

The statement << when the connection was opened. >> does not seem necessary and is unclear. It should be deleted.

Page: 170
Sequence number: 3
Date: 3/5/2003 4:17:19 PM
Type: Highlight
    ACCEPT - DONE (moved all the affiliation discussion to the STP closing a connection section (which is replacing the STP preparing to close section)))
    7.12.7 Closing a connection
    The statement << If an expander that supports attachment of a SATA target >> should start a new paragraph.
    [also expander should be expander device]

Page: 170
Sequence number: 4
Date: 2/10/2003 3:51:47 PM
Type: Circle
    ACCEPT - DONE (added parenthetical note in figure that ACK, RRDY, and NAK may be sent after the DONE)
    Figure 71
    It is not at all clear what the purpose of the ACK and RRDY indications from the transmitter is all about. This needs to be fixed.

Page: 171
Sequence number: 1
Date: 2/10/2003 3:46:46 PM
Type: Strikeout
    REJECT (from other state machines in other sections is good to mention)
    7.13.1 Overview
    The statement << from the SL_IR state machines >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 171
Sequence number: 2
Date: 2/10/2003 3:46:39 PM
Type: Strikeout
    REJECT (from other state machines in other sections is good to mention)
    7.13.1 Overview
    The statement << from the SSP, STP, and SMP link layer state
    machines: >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 171
Sequence number: 3
Date: 2/10/2003 3:46:31 PM
Type: Strikeout
    REJECT (from other state machines in other sections is good to mention)
    7.13.1 Overview
    The statement << from the SL_IR state machines >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 172
Sequence number: 1
Date: 2/28/2003 10:23:00 AM
Type: Circle
    ACCEPT - DONE (made arrow touch box, left text alone)
    Figure 72
    The << Enable Disable Link Layer (Disable) >> confirmation needs to touch the edge of the state machine box. The statement << (to all states in all state machines, causing transition to SL0:Idle) >> should be changed to << (This parameter causes a transition to SL0:Idle) >>.

Page: 173
Sequence number: 1
Date: 3/1/2003 6:11:56 PM
Type: Note
    ACCEPT - DONE
    7.13.2 SL transmitter and receiver
    There should be a list of inputs and outputs from the SL transmitter listed in this section. Something like this should be added. <<
    The SL state machine sends the following parameters to the SL transmitter:
    a, b, c list of outputs
    The SL state machine receives the following parameters from the SL receiver:
    a, b, c list of inputs

Page: 174
Sequence number: 7
Date: 2/28/2003 6:18:45 PM
Type: Highlight
REJECT (but deleted whole paragraph)
7.13.2 SL transmitter and receiver
The statement << The SL receiver shall ignore any primitive received inside an OPEN address frame. In this case, a dword shall be considered inside a frame when it is received after an SOAF and before an EOAF if the primitive is received after the 8th data dword following the SOAF. >> seems to be confusing.
Changing it to the following may help
<< The SL receiver shall ignore any primitive received inside an OPEN address frame. In this case, a primitive shall be considered inside a frame when it is received within the first eight data dwords after an SOAF. >>

Page: 174
Sequence number: 8
Date: 2/3/2003 3:32:54 PM
Type: Highlight
ACCEPT - DONE (but paragraph deleted)
7.13.3.1 State description
The statement << SSP Link (Enable) confirmation is received >> should be << SSP Link (Enable) parameter is received >>

Page: 174
Sequence number: 9
Date: 2/3/2003 3:27:33 PM
Type: Highlight
ACCEPT - DONE (modeled after XL0 wording; dropped "activated" concept)
7.13.3.1 State description
The statement << that is used when the SL state machine is activated and there is no active connection >> should be << that is used when the SL state machine is activated and there is no pending or active connection >>. This should be the same wording that is used in the XL0 state description in 7.14.2.1.

Page: 174
Sequence number: 10
Date: 2/3/2003 3:34:05 PM
Type: Highlight
ACCEPT - DONE
7.13.3.1 State description
The statement << The SL0:Idle state is the >> should be << This state is the >>.

Page: 175
Sequence number: 1
Date: 1/11/2003 5:25:44 PM
Type: Highlight
ACCEPT - DONE
7.13.4.1 State description
The statement << c) If the frame is discarded then no further action is taken by this state relating to the invalid address frame. >> should not have a c). It should just be a sentence.

Page: 177
Sequence number: 6
Date: 2/3/2003 3:20:00 PM
Type: Highlight
ACCEPT - DONE (recast into paragraph rather than a) b) list so "this transition shall occur after" is contiguous)
7.13.5.2 Transition SL2:Selected to SL0:Idle
The statement in 1, 2, 3, and 4 << then after this >> should be changed to << and after this >> . This change should make the statements more clear that they are currently.

Page: 179
Sequence number: 1
Date: 1/24/2003 7:50:55 PM
Type: Highlight
REJECT (mentioning both the parent and the two children are important here)
7.14.1 Overview
The statement << facilitated by the expander function - specifically the expander connection manager and expander connection router. >> should be << facilitated by the expander connection manager and the expander connection router. >>

Page: 180
Sequence number: 3
Date: 2/10/2003 3:05:12 PM

Type: Highlight
    ACCEPT - DONE
    7.14.1 Overview
    The statement << The XL state machine shall be activated after the completion of the phy reset sequence by receiving an after
    receiving an Enable Disable SAS Link (Disable) parameter from the SL_IR state machines (see 7.8.5). >>
    should be changed to
    << The state machine shall start in the XL0:Idle state. The state machine shall transition to the XL0:Idle state from any other state
    after receiving an Enable Disable SAS Link (Disable) parameter from the SL_IR state machines (see 7.8.5). >>

Page: 180
Sequence number: 4
Date: 2/10/2003 3:06:07 PM
Type: Strikeout
    REJECT
    7.14.1 Overview
    The statement << from the expander connection manager: >> should be deleted as the general rule is that we do not state where
    things come from in state diagrams.

Page: 180
Sequence number: 5
Date: 2/10/2003 3:06:21 PM
Type: Strikeout
    REJECT
    7.14.1 Overview
    The statement << from the broadcast primitive processor: >> should be deleted as the general rule is that we do not state where
    things come from in state diagrams.

Page: 180
Sequence number: 6
Date: 2/10/2003 3:06:27 PM
Type: Strikeout
    REJECT
    7.14.1 Overview
    The statement << from the SL_IR state machine: >> should be deleted as the general rule is that we do not state where things
    come from in state diagrams.

Page: 181
Sequence number: 1
Date: 3/1/2003 11:31:06 AM
Type: Circle
    ACCEPT - DONE
    7.14.1 XL state machine overview
    Figure 74
    The << Enable Disable Link Layer (Disable) >> confirmation needs a cut out from the XL state machine and it needs to touch the
    edge of the state machine box. [accept]
    The statement << (to all states in all state machines, causing transition to XL0:Idle) >> should be changed to << (This parameter
    causes a transition to XL0:Idle) >>. [reject]

Page: 182
Sequence number: 1
Date: 3/1/2003 11:30:59 AM
Type: Circle
    ACCEPT - DONE
    7.14.1 XL state machine overview
    Figure 75
    The << Enable Disable Link Layer (Disable) >> confirmation needs a cut out from the XL state machine and it needs to touch the
    edge of the state machine box. [accept]
    The statement << (to all states in all state machines, causing transition to XL0:Idle) >> should be changed to << (This parameter
    causes a transition to XL0:Idle) >>. [reject]

Page: 183
Sequence number: 1
Date: 3/1/2003 11:30:14 AM
Type: Circle
    ACCEPT - DONE
    7.14.1 XL state machine overview
    Figure 76
    The << Enable Disable Link Layer (Disable) >> confirmation needs a cut out from the XL state machine and it needs to touch the
    edge of the state machine box. [accept]

The statement << (to all states in all state machines, causing transition to XL0:Idle) >> should be changed to << (This parameter causes a transition to XL0:Idle) >>. [reject]

Page: 183
Sequence number: 2
Date: 3/1/2003 11:23:42 AM
Type: Note
    ACCEPT - DONE (included that XL transmitter handles rate matching)
    7.14.2 XL0:Idle state (before this section)
    There needs to be a section added here they gives the XL transmitter and XL receiver information (i.e., the green arrows). This section would be very similar to 7.13.2 SL transmitter and receiver.

Page: 184
Sequence number: 4
Date: 2/10/2003 3:30:44 PM
Type: Highlight
    ACCEPT - DONE (kept Otherwise)
    7.14.2.1 State description
    The statement << Otherwise, this state shall repeatedly send a Transmit Idle Dword parameter to the XL transmitter. >> should be << This state shall request idle dwords be transmitted by repeatedly sending a Transmit Idle Dword parameter to the XL transmitter (see 7.3). >> and should be it's own paragraph.

Page: 184
Sequence number: 5
Date: 2/10/2003 3:09:02 PM
Type: Highlight
    ACCEPT - DONE (kept as is here)
    ACCEPT - DONE
    7.14.2.1 State description
    The statement << that occurs when there is no pending or active connection >> should be << that is used when the XL state machine is activated and there is no pending or active connection >>. This should be the same wording that is used in the SL0 state description in 7.13.3.1.

Page: 184
Sequence number: 6
Date: 2/10/2003 3:09:34 PM
Type: Highlight
    ACCEPT - DONE
    7.14.2.1 State description
    The statement << Transmit Broadcast Primitive parameter >> should be << Transmit Broadcast Primitive request >> .

Page: 184
Sequence number: 7
Date: 2/10/2003 3:10:00 PM
Type: Highlight
    REJECT (too verbose)
    7.14.2.1 State description
    The statement << this state shall send a Transmit BROADCAST parameter to the XL transmitter. >> should be << this state shall request a BROADCAST be transmitted by sending a Transmit BROADCAST parameter to the XL transmitter. >>

Page: 184
Sequence number: 8
Date: 2/21/2003 7:39:17 PM
Type: Note
    ACCEPT - DONE (added into all the transitions out of XL0)
    7.14.2 XL0:Idle state
    There is not description of what occurs when the Enable Disable SAS Link (Enable) parameter is received. This needs to be fixed.

Page: 184
Sequence number: 9
Date: 2/27/2003 5:56:09 PM
Type: Note
    REVIEW PROTOCOL WG
    ACCEPT - DONE
    7.14.2 XL0:Idle state
    There is not description of what causes an Open Address Frame parameter to be sent to the XL5 state. This needs to be fixed.

Page: 184
Sequence number: 10

Date: 2/21/2003 7:33:12 PM
Type: Highlight
    REJECT
    7.14.2.2 Transition XL0:Idle to XL1:Request_Path
    The statement << shall occur when the following conditions are met: >> should be << shall occur if: >>.

Page: 184
Sequence number: 11
Date: 2/27/2003 5:53:00 PM
Type: Circle
    ACCEPT - DONE
    7.14.2.2 Transition XL0:Idle to XL1:Request_Path
    The is nothing in figure 74 that shows a Transmit Open or a
    Transmit Break. This needs to be fixed.

Page: 184
Sequence number: 12
Date: 2/21/2003 7:34:25 PM
Type: Strikeout
    ACCEPT - DONE
    7.14.2.2 Transition XL0:Idle to XL1:Request_Path
    The following should be deleted << from another phy via the expander connection router >> as the general rule is that we do not
    state where things come from in state diagrams.

Page: 184
Sequence number: 13
Date: 2/21/2003 7:36:05 PM
Type: Strikeout
    ACCEPT - DONE
    7.14.2.2 Transition XL0:Idle to XL1:Request_Path
    The following should be deleted << from another phy via the expander connection router >> as the general rule is that we do not
    state where things come from in state diagrams. Several of the deletions I am suggesting in 7.14 look like they should reference a
    section that describes the interaction between expander objects

Page: 184
Sequence number: 14
Date: 2/21/2003 7:36:26 PM
Type: Strikeout
    ACCEPT - DONE
    7.14.2.3 Transition XL0:Idle to XL5:Forward_Open
    The following should be deleted << from another phy via the expander connection router >> as the general rule is that we do not
    state where things come from in state diagrams.

Page: 184
Sequence number: 15
Date: 2/21/2003 7:36:33 PM
Type: Strikeout
    ACCEPT - DONE
    7.14.2.3 Transition XL0:Idle to XL5:Forward_Open
    The following should be deleted << from another XL state machine via the expander connection
    router >> as the general rule is that we do not state where things come from in state diagrams.

Page: 184
Sequence number: 16
Date: 2/21/2003 7:36:44 PM
Type: Highlight
    REJECT
    7.14.2.3 Transition XL0:Idle to XL5:Forward_Open
    The statement << shall occur when the following conditions are met: >> should be << shall occur if: >>.

Page: 184
Sequence number: 17
Date: 1/24/2003 7:52:22 PM
Type: Highlight
    ACCEPT - DONE
    7.14.2.4 Transition XL0:Idle to XL9:Break
    The statement << shall occur when a BREAK Received parameter is received. >> should be << shall occur after receiving a
    BREAK Received parameter. >>

Page: 184
Sequence number: 18
Date: 2/21/2003 7:37:11 PM
Type: Highlight
ACCEPT - DONE
7.14.2.5 Transition XL0:Idle to XL10:Break_Wait
The statement << shall occur when a Transmit Break indication is received from another XL state machine via the expander connection router. >> should be << shall occur after receiving a Transmit Break indication. >>.

Page: 184
Sequence number: 19
Date: 2/21/2003 7:41:51 PM
Type: Highlight
ACCEPT - DONE (partially. Changed whens to ifs. Added "repeatedly" to explain the AIP(NORMAL) usage. Removed froms.)
7.14.3.1 State description
The statements << This state shall send the following parameters to the XL transmitter:
a) Transmit AIP (WAITING ON PARTIAL) when an Arbitrating (Waiting On Partial) confirmation is received from the expander connection manager;
b) Transmit AIP (WAITING ON PARTIAL) when an Arbitrating (Blocked On Partial) confirmation is received from the expander connection manager;
c) Transmit AIP (WAITING ON CONNECTION) when an Arbitrating (Waiting On Connection) confirmation is received from the expander connection manager; or
d) Transmit AIP (NORMAL). >> should be << This state shall request:
a) an AIP (WAITING ON PARTIAL) be transmitted by sending a Transmit AIP (WAITING ON PARTIAL) parameter to the XL transmitter if an Arbitrating (Waiting On Partial) confirmation is received;
b)an AIP (WAITING ON PARTIAL) be transmitted by sending a Transmit AIP (WAITING ON PARTIAL) parameter to the XL transmitter if an Arbitrating (WBlocked On Partial) confirmation is received;
c)an AIP (WAITING ON CONNECTION) be transmitted by sending a Transmit AIP (WAITING ON CONNECTION) parameter to the XL transmitter if an Arbitrating (Waiting On Connection) confirmation is received;
d)an AIP (NORMAL) be transmitted by sending a Transmit AIP(NORMAL) if an ????? is received;

Page: 184
Sequence number: 20
Date: 2/10/2003 3:15:36 PM
Type: Highlight
REJECT (wrong)
7.14.3.1 State description
The statement << Request Path request >> should be << Request Path confirmation >>.

Page: 185
Sequence number: 3
Date: 3/2/2003 12:01:42 PM
Type: Note
ACCEPT - DONE (word in terms of the other two. 1st paragraph start when BOP is received. last paragraph based on receiving some other. Tim H will provide wording for all of XL1).
7.14.3 XL1:Request_Path state
The way Arbitrating (Block On Partial) is used is not consistent with the way confirmations and parameters are used in the rest of this standard. It is acting more like a signal is this description. This needs to be fixed. There needs to be two arguments; one for Blocked On Partial and another called something like Partial Cleared.
The descriptions would then say that the timer starts on Arbitration (Blocked On Partial) and if no Arbitrating (Partial Cleared) is received before the timer timers out then xyz happens.

Page: 185
Sequence number: 4
Date: 2/10/2003 3:18:23 PM
Type: Highlight
REJECT (want to avoid the standard "sent" word here)
7.14.3.1 State description
The statement << status is conveyed to the expander >> should be << status is sent to the expander >>.

Page: 185
Sequence number: 5
Date: 2/27/2003 6:03:13 PM
Type: Note
REJECT (it is in the figure already)
7.14.3 XL1:Request_Path state
There was no description of the Arb Reject parameter shown in figure 74 in this section.

Page: 185

Sequence number: 6
Date: 1/24/2003 7:54:17 PM
Type: Strikeout
    ACCEPT - DONE
    7.14.3.2 Transition XL1:Request_Path to XL2:Request_Open
    The following should be deleted << from the expander connection manager. >> should be deleted as the general rule is that we
    do not state where things come from in state diagrams.

Page: 185
Sequence number: 7
Date: 2/21/2003 7:45:41 PM
Type: Strikeout
    ACCEPT - DONE
    7.14.3.2 Transition XL1:Request_Path to XL2:Request_Open
    The following should be deleted << from the expander connection manager. >> should be deleted as the general rule is that we
    do not state where things come from in state diagrams.

Page: 185
Sequence number: 8
Date: 2/21/2003 7:45:38 PM
Type: Strikeout
    ACCEPT - DONE
    7.14.3.2 Transition XL1:Request_Path to XL2:Request_Open
    The following should be deleted << from the expander connection manager. >> should be deleted as the general rule is that we do
    not state where things come from in state diagrams.

Page: 185
Sequence number: 9
Date: 2/10/2003 3:13:42 PM
Type: Circle
    ACCEPT - DONE (also changed "after this state receives" to "after receiving")
    7.14.3.2 Transition XL1:Request_Path to XL2:Request_Open
    7.14.3.3 Transition XL1:Request_Path to XL4:Open_Reject
    7.14.3.4 Transition XL1:Request_Path to XL0:Idle
    7.14.3.5 Transition XL1:Request_Path to XL9:Break
    The term < when >> should be << after >>.

Page: 185
Sequence number: 10
Date: 2/10/2003 3:29:22 PM
Type: Highlight
    ACCEPT - DONE
    7.14.4.1 State description
    The statement << This state shall repeatedly send a Transmit Idle Dword parameter to the XL transmitter. >> should be << This
    state shall request idle dwords be transmitted by repeatedly sending a Transmit Idle Dword parameter to
    the XL transmitter (see 7.3). >>.

Page: 185
Sequence number: 11
Date: 2/27/2003 6:01:43 PM
Type: Note
    ACCEPT - DONE (but no Transmit Open indication here)
    7.14.4 XL2:Request_Open state
    The Transmit Idle Dword parameter, the Transmit Open request (?), and Transmit Open indication (?) are missing from figure 75.
    This needs to be fixed.

Page: 185
Sequence number: 12
Date: 2/27/2003 5:57:44 PM
Type: Highlight
    ACCEPT - DONE
    7.14.4.1 State description
    The statement << This state shall send a Transmit >> give no indication as to when this is supposed to happen. I am guessing the
    statement should be << Upon entry into this state, this state shall send a Transmit >>.

Page: 185
Sequence number: 13
Date: 2/21/2003 7:44:12 PM
Type: Strikeout

REJECT (shows the relationship from the request to the indication)
7.14.4.1 State description
The statement << received by the destination phy as a Transmit Open indication. >> should be deleted.

Page: 185
Sequence number: 14
Date: 2/10/2003 3:20:03 PM
Type: Strikeout
    ACCEPT - DONE
    7.14.4 XL2:Request_Open state
    The statement << Transmit Open request/indication >> should be << Transmit Open request >>.

Page: 185
Sequence number: 15
Date: 2/27/2003 5:57:10 PM
Type: Highlight
    ACCEPT - DONE ("after sending a Transmit Open request.")
    7.14.4.2 Transition XL2:Request_Open to XL3:Open_Confirm_Wait
    The statement << This transition shall occur after the OPEN address frame has been forwarded to a destination phy. >> should be << This transition shall occur after sending an OPEN address frame transmitted by sending a Transmit OPEN Address Frame parameter to the XL transmitter of a destination phy. >>

Page: 185
Sequence number: 16
Date: 2/21/2003 7:42:32 PM
Type: Strikeout
    ACCEPT - DONE
    7.14.3.1 State description
    The statement << from the expander connection manager. >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 186
Sequence number: 2
Date: 2/27/2003 6:08:30 PM
Type: Highlight
    ACCEPT - DONE (changed to "After sending a Transmit OPEN_ACCEPT parameter.")
    7.14.5.3 Transition XL3:Open_Confirm_Wait to XL7:Connected
    There is no << OPEN_ACCEPT Transmitted >> parameter in figure 75.

Page: 186
Sequence number: 3
Date: 3/1/2003 4:47:39 PM
Type: Square
    REJECT (shall sends go here)
    7.14.5.1 State description
    Most of what is in the following statements should be placed in the section that describe the transitions as the receipt of the various confirmation (if they really are configurations) and parameter cause the state transitions It also needs to be reworded to match the wording used in the other state diagram sections << This state shall send the following parameters to the XL transmitter:
    a) Transmit AIP (NORMAL) when an Arb Status (Normal) confirmation is received;
    b) Transmit AIP (WAITING ON PARTIAL) when an Arb Status (Waiting On Partial) confirmation is received;
    c) Transmit AIP (WAITING ON CONNECTION) when an Arb Status (Waiting On Connection) confirmation is received;
    d) Transmit AIP (WAITING ON DEVICE) when an Arb Status (Waiting On Device) confirmation is received;
    e) Transmit OPEN_ACCEPT when an Open Accept confirmation is received;
    f) Transmit OPEN_REJECT when an Open Reject confirmation is received; or
    g) Transmit Idle Dword when none of the previous conditions are present.
    This state shall send a Transmit Break request to a destination phy when a BREAK Received parameter is received. >>

Page: 186
Sequence number: 4
Date: 2/10/2003 3:32:07 PM
Type: Highlight
    ACCEPT - DONE
    7.14.5.1 State description
    The statement << g) Transmit Idle Dword when none of the previous conditions are present. >> should be << This state shall request idle dwords be transmitted by repeatedly sending a Transmit Idle Dword parameter to the XL transmitter (see 7.3). >>.

Page: 186
Sequence number: 5

Date: 2/27/2003 6:06:50 PM
Type: Highlight
    ACCEPT - DONE (but it's a confirmation not a request)
    7.14.5.1 State description
    The statement << Arb Status (Waiting on Partial) is received, >> should be << Arb Status (Waiting on Partial) request is received,
    >>

Page: 186
Sequence number: 6
Date: 3/1/2003 4:47:04 PM
Type: Highlight
    ACCEPT - DONE
    7.14.5.1 State description
    The statement << Otherwise, this state shall send a Phy Status (Partial Pathway) confirmation to the expander connection
    manager. >> Is not precise in that it gives no information as to when the Phy Status (Partial Pathway) confirmation is to be sent.

Page: 186
Sequence number: 7
Date: 2/21/2003 7:46:08 PM
Type: Strikeout
    ACCEPT - DONE
    7.14.5.2 Transition XL3:Open_Confirm_Wait to XL0:Idle
    The statement << from a destination phy, >> should be deleted.

Page: 186
Sequence number: 8
Date: 2/21/2003 7:46:47 PM
Type: Strikeout
    ACCEPT - DONE
    7.14.5.2 Transition XL3:Open_Confirm_Wait to XL0:Idle
    The statement << from a destination phy, >> should be deleted.

Page: 186
Sequence number: 9
Date: 2/21/2003 7:46:52 PM
Type: Strikeout
    ACCEPT - DONE
    7.14.5.2 Transition XL3:Open_Confirm_Wait to XL0:Idle
    The statement << from a destination phy, >> should be deleted.

Page: 186
Sequence number: 10
Date: 2/21/2003 7:49:22 PM
Type: Strikeout
    ACCEPT - DONE
    77.14.5.3 Transition XL3:Open_Confirm_Wait to XL7:Connected
    The statement << from a destination phy, >> should be deleted.

Page: 186
Sequence number: 11
Date: 2/21/2003 7:49:38 PM
Type: Strikeout
    ACCEPT - DONE
    7.14.5.5 Transition XL3:Open_Confirm_Wait to XL10:Break_Wait
    The statement << from a destination phy, >> should be deleted.

Page: 186
Sequence number: 12
Date: 2/27/2003 6:05:11 PM
Type: Circle
    ACCEPT - DONE (fixed picture. Actually the pictures are wrong. they are confirmations and need to be shown passed up. The
    expander function needs to be below the XL not above it)
     7.14.5.2 Transition XL3:Open_Confirm_Wait to XL0:Idle
    7.14.5.3 Transition XL3:Open_Confirm_Wait to XL7:Connected
    According to Figure 75 the term << confirmation >> in these sections should be << request >>.

Page: 186
Sequence number: 13
Date: 3/1/2003 4:45:46 PM

Type: Circle
    REJECT
    7.14.5.2 Transition XL3:Open_Confirm_Wait to XL0:Idle
    There is no parameter in figure 75 that shows anything about << path resources >> being released. This needs to be fixed.

Page: 186
Sequence number: 14
Date: 2/27/2003 6:09:32 PM
Type: Highlight
    ACCEPT - DONE ("after sending a Transmit Break request.")
    7.14.5.4 Transition XL3:Open_Confirm_Wait to XL9:Break
    The statement << after a BREAK Received parameter is received and a Transmit Break request has been sent to a destination phy. >> should be << after receiving BREAK Received parameter and requesting a BREAK be transmitted by sending a Transmit BREAK parameter to the XL transmitter of a destination phy. >>

Page: 186
Sequence number: 15
Date: 2/27/2003 6:10:05 PM
Type: Highlight
    ACCEPT - DONE ("after receiving a Transmit Break indication.")
    7.14.5.5 Transition XL3:Open_Confirm_Wait to XL10:Break_Wait
    The statement << occur when a Transmit Break indication is received >> should be << occur after receiving a Transmit Break request. >>.

Page: 186
Sequence number: 16
Date: 3/1/2003 4:44:54 PM
Type: Note
    ACCEPT - DONE (changed to "argument")
    7.14.6.1 State description
    There is no Arb Reject confirmation in figure 74. There is an Arb Reject parameter passed from the XL1 state. But that is not described in the XL1 state. This needs to be fixed.

Page: 186
Sequence number: 17
Date: 3/1/2003 4:42:09 PM
Type: Note
    REJECT (state descriptions describe shall sends)
    7.14.6.1 State description
    Most of what is in the following statements should be placed in the section that describe the transitions as the receipt of the various confirmation (if they really are configurations) and parameter cause the state transitions It also needs to be reworded to match the wording used in the other state diagram sections
    << This state shall send the following parameters to the XL transmitter:
    a) Transmit OPEN_REJECT (NO DESTINATION) when an Arb Reject (No Destination) confirmation is received from the expander connection manager;
    b) Transmit OPEN_REJECT (BAD DESTINATION) when an Arb Reject (Bad Destination) confirmation is received from the expander connection manager;
    c) Transmit OPEN_REJECT (CONNECTION RATE NOT SUPPORTED) when an Arb Reject (Bad Connection Rate) confirmation is received from the expander connection manager;
    d) Transmit OPEN_REJECT (PATHWAY BLOCKED) when an Arb Reject (Pathway Blocked) confirmation is received from the expander connection manager. >>

Page: 186
Sequence number: 18
Date: 2/10/2003 3:21:20 PM
Type: Highlight
    ACCEPT - DONE
    7.14.6.1 State description
    The statement << Thist state shall >> should be << This state shall >>

Page: 186
Sequence number: 19
Date: 2/21/2003 7:50:05 PM
Type: Strikeout
    ACCEPT - DONE
    7.14.6.1 State description
    The statement << from the expander connection manager;>> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 186
Sequence number: 20
Date: 2/21/2003 7:50:12 PM
Type: Strikeout
ACCEPT - DONE
7.14.6.1 State description
The statement << from the expander connection manager; >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 187
Sequence number: 2
Date: 3/1/2003 4:58:35 PM
Type: Note
ACCEPT - DONE (the address frame is an argument with the transition. Added idle dwords paragraph.)
7.14.7 XL5:Forward_Open state
The is an << Open Address Frame >> parameter and a << Transmit Idle Dword >> parameter in figure 75 for this state that are not described in this section. That needs to be fixed.

Page: 187
Sequence number: 3
Date: 2/21/2003 7:52:11 PM
Type: Highlight
ACCEPT - DONE (deleted "received from..." the frame is an argument to the Transmit Open)
7.14.7.1 State description
The statement << frame indicated by the Transmit Open indication received from a source phy >> does not make any sense. I'm not sure how to fix it but it must be fixed.

Page: 187
Sequence number: 4
Date: 2/21/2003 7:53:06 PM
Type: Highlight
ACCEPT - DONE (track with other comment)
7.14.7.1 State description
There is no << Transmit Open indication >> shown in figure 75. This needs to be fixed.

Page: 187
Sequence number: 5
Date: 3/1/2003 4:55:18 PM
Type: Highlight
ACCEPT - DONE (upon entry)
7.14.7.1 State description
The statement << This state shall send a Transmit OPEN Address Frame parameter to the XL transmitter with the fields set to the values specified by the >> has some problems. There is no indication as to where or what event causes what is stated to occur. This needs be fixed. Then it needs to be reworded to something like << After (trigger event) this state shall request an OPEN address frame be transmitted by sending a Transmit OPEN Address Frame parameter to the XL transmitter. The Transmit OPEN Address Frame arguments shall be set to the values specified by the Transmit Open indication. >>

Page: 187
Sequence number: 6
Date: 3/1/2003 4:58:13 PM
Type: Highlight
ACCEPT - DONE (after receiving OPEN Address Frame Transmitted)
How does this state know when an << OPEN address frame has been transmitted. >> when there are no Open Address Frame Transmitted parameters as inputs? This needs to be fixed.

Page: 187
Sequence number: 7
Date: 2/10/2003 3:32:18 PM
Type: Highlight
ACCEPT - DONE
7.14.8.1 State description
The statement << This state shall transmit idle dwords. >> >> should be << This state shall request idle dwords be transmitted by repeatedly sending a Transmit Idle Dword parameter to
the XL transmitter (see 7.3). >>.

Page: 187
Sequence number: 8
Date: 2/27/2003 6:15:44 PM
Type: Circle

ACCEPT - DONE (added OPEN_NN Received to figure and use that phrase in text)
7.14.8.1 State description
There is no OPEN_ACCEPT or OPEN_REJECT parameters shown in figure 75. This needs to be corrected.

Page: 187
Sequence number: 9
Date: 3/1/2003 4:48:49 PM
Type: Square
REJECT (shall sends go here)
7.14.8.1 State description
Most of what is in the following statements should be placed in the section that describe the transitions as the receipt of the various confirmation (if they really are configurations) and parameter cause the state transitions It also needs to be reworded to match the wording used in the other state diagram sections
<< This state shall send the following responses through the expander connection router to a source phy,
received by the source phy as confirmations:
a) Open Accept when OPEN_ACCEPT is received;
b) Open Reject when OPEN_REJECT is received;
c) Backoff Retry when a higher priority OPEN address frame is received (see 7.12.3) and the source SAS address and connection rate of the received OPEN address frame are not equal to the destination
SAS address and connection rate of the transmitted OPEN address frame; or
d) Backoff Reverse Path when a higher priority OPEN address frame is received (see 7.12.3) and the source SAS address and connection rate of the received OPEN address frame are equal to the destination
SAS address and connection rate of the transmitted OPEN address frame.

Page: 187
Sequence number: 10
Date: 3/1/2003 4:48:41 PM
Type: Highlight
REJECT ("Arb Status" is not transmitted by anything, it's an internal signal. Fine as is.)
7.14.8.1 State description
The statement << This state shall send the following arbitration responses through the expander connection router to a source phy, received by the source phy as confirmations:
a) Arb Status (Waiting On Device) when an AIP Received parameter has not been received;
b) Arb Status (Normal) when an AIP (NORMAL) Received parameter is received;
c) Arb Status (Waiting On Partial) when an AIP (WAITING ON PARTIAL) Received parameter is received;
d) Arb Status (Waiting On Connection) when an AIP (WAITING ON CONNECTION) Received parameter is received; and
e) Arb Status (Waiting On Device) when an AIP (WAITING ON DEVICE) Received parameter is received.
>> should be << This state shall request:
a) an Arb Status (Waiting On Device) be transmitted by sending an Arb Status (Waiting On Device) parameter to the XL transmitter if an AIP Received parameter is not received; >>This gives no indication as to when the parameter that is not received is checked or under what conditions it is considered not received <<
b)an Arb Status (Normal) be transmitted by sending an Arb Status (Normal) parameter to the XL transmitter if an AIP (NORMAL) Received parameter is received;
c)an Arb Status (Waiting On Partial) be transmitted by sending an Arb Status (Waiting On Partial) parameter to the XL transmitter if an AIP (WAITING ON PARTIAL) Received parameter is received;
d)an Arb Status (Waiting On Connection) be transmitted by sending an Arb Status (Waiting On Connection) if an AIP (WAITING ON CONNECTION) Received parameter is received; and
e)an Arb Status (Waiting On Device) be transmitted by sending an Arb Status (Waiting On Device) if an AIP (WAITING ON DEVICE) Received parameter is received. >>.

Page: 187
Sequence number: 11
Date: 2/21/2003 7:50:19 PM
Type: Strikeout
ACCEPT - DONE
7.14.6.1 State description
The statement << from the expander connection manager; >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 187
Sequence number: 12
Date: 2/21/2003 7:50:27 PM
Type: Strikeout
ACCEPT - DONE
7.14.6.1 State description
The statement << from the expander connection manager; >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 188

Sequence number: 4
Date: 3/1/2003 5:20:26 PM
Type: Highlight
    ACCEPT - DONE (used repeatedly)
    7.14.8.1 State description
    The statement << Otherwise, this state shall send a Phy Status (Partial Pathway) confirmation to the expander connection
    manager. >> Is not precise in that it gives no information as to when the Phy Status (Partial Pathway) confirmation is to be sent.

Page: 188
Sequence number: 5
Date: 2/27/2003 6:19:35 PM
Type: Highlight
    REJECT (comment doesn't match highlighted text)
    7.14.8.1 State description
    The statement << Arb Status (Waiting on Partial) is received, >> should be << Arb Status (Waiting on Partial) request is received,
    >>

Page: 188
Sequence number: 6
Date: 3/1/2003 5:00:44 PM
Type: Highlight
    REJECT (it's not talking about a transition.)
    7.14.8.1 State description
    The statement << This state shall send a Transmit Break request to a source phy when a BREAK Received parameter is
    received. >> needs to be moved into the relevant state transition. And reworded to the standard wording.

Page: 188
Sequence number: 7
Date: 2/27/2003 6:17:59 PM
Type: Highlight
    REJECT
    7.14.8.2 Transition XL6:Open_Response_Wait to XL0:Idle
    The statement << The XL7:XL0 transition shall occur after one of the following conditions are met: >> should be << This transition
    shall occur after: >>.

Page: 188
Sequence number: 8
Date: 3/1/2003 5:06:23 PM
Type: Highlight
    ACCEPT - DONE (moved path resource release rules into state description, simplified transition to just after sending one of the two
    responses)
    7.14.8.2 Transition XL6:Open_Response_Wait to XL0:Idle
    The statement << OPEN_REJECT is received, Open Reject response has been sent to a source phy, and path resources have
    been released; >> should be << an OPEN_REJECT is received, and after requesting an Open Reject be transmitted by sending
    an Open Reject response to the XL transmitter of a source phy and after path resources have been released >>
    Also, there is nothing in figure 75 that would indicate what parameter is used to determine that << resources have been released
    >>.

Page: 188
Sequence number: 9
Date: 3/1/2003 5:07:46 PM
Type: Highlight
    ACCEPT - DONE
    7.14.8.2 Transition XL6:Open_Response_Wait to XL0:Idle
    The statement << received OPEN address frame >> should be << received OPEN Address Frame Received parameter >>

Page: 188
Sequence number: 10
Date: 3/1/2003 5:08:09 PM
Type: Highlight
    ACCEPT - DONE (moved rules into state description. You're on your own w.r.t. path resources).
    7.14.8.2 Transition XL6:Open_Response_Wait to XL0:Idle
    The statement << a Backoff Retry response has been sent
    to a source phy, and path resources have been released. >> should be << and after requesting an Backoff Retry be transmitted by
    sending a Backoff Retry response to the XL transmitter of a source phy and after path resources have been released >>
    Also, there is nothing in figure 75 that would indicate what parameter is used to determine that << resources have been released
    >>.

Page: 188

Sequence number: 11
Date: 3/1/2003 5:09:23 PM
Type: Highlight
    ACCEPT - DONE
    7.14.8.3 Transition XL6:Open_Response_Wait to XL2:Request_Open
    The statement << received OPEN address frame >> should be << received OPEN Address Frame Received parameter >>

Page: 188
Sequence number: 12
Date: 2/27/2003 6:17:38 PM
Type: Highlight
    REJECT (there's no such thing as transmitting a Backoff Reverse Path)
    7.14.8.3 Transition XL6:Open_Response_Wait to XL2:Request_Open
    The statement << and Backoff Reverse Path response has been sent to a source phy.>> should be << and after requesting a
    Backoff Reverse Path be transmitted by sending a Backoff Reverse Path response to the XL transmitter of a source phy >>

Page: 188
Sequence number: 13
Date: 2/21/2003 7:55:31 PM
Type: Highlight
    REJECT (but shortened to just "after sending")
    7.14.8.5 Transition XL6:Open_Response_
    The statement << occur after a BREAK is received and Transmit Break response is sent to a source phy. >> should be << after
    receiving BREAK Received parameter and requesting a BREAK be transmitted by sending a Transmit BREAK parameter to the
    XL transmitter of a source phy. >>

Page: 188
Sequence number: 14
Date: 2/21/2003 7:54:53 PM
Type: Highlight
    REJECT (it's an indication not a request)
    7.14.8.6 Transition XL6:Open_Response_Wait to XL10:Break_Wait
    The statement << occur when a Transmit Break indication is received >> should be << occur after receiving a Transmit Break
    request. >>.

Page: 188
Sequence number: 15
Date: 2/21/2003 7:54:28 PM
Type: Strikeout
    ACCEPT - DONE
    7.14.8.6 Transition XL6:Open_Response_Wait to XL10:Break_Wait
    The statement << from a source phy. >> should be deleted.

Page: 188
Sequence number: 16
Date: 3/1/2003 5:16:46 PM
Type: Highlight
    ACCEPT - DONE (but kept here)
    7.14.9.1 State description
    The statement << This state shall send a Transmit Break request to a connected phy when a BREAK Received parameter is
    received.. >> needs to be moved into the relevant state transition. And reworded to the standard wording.

Page: 188
Sequence number: 17
Date: 3/1/2003 5:16:55 PM
Type: Highlight
    ACCEPT - DONE (but kept here)
    7.14.9.1 State description
    The statement << This state shall send a Transmit Close request to a connected phy when a CLOSE Received parameter is
    received >> needs to be moved into the relevant state transition. And reworded to the standard wording.

Page: 188
Sequence number: 18
Date: 3/1/2003 5:21:27 PM
Type: Square
    ACCEPT - DONE (reworded)
    7.14.9.1 State description
    The statements << This state shall transmit all dwords received by the Transmit Dword indication from a connected phy via the
    expander connection router.

This state shall send all valid dwords received by the SAS phy through the expander connection router to a connected phy using the Transmit Dword request with the exception of BREAK and CLOSEes. >> are very confusing. The indications, responses, and parameters need to be more clearly defined as to which cause what action. This needs to be fixed.

Page: 188
Sequence number: 19
Date: 3/1/2003 5:23:12 PM
Type: Strikeout
ACCEPT - DONE
7.14.9.2 Transition XL7:Connected to XL8:Close_Wait
The statement << from a connected phy via the expander connection router. >> needs to be deleted.

Page: 188
Sequence number: 20
Date: 3/1/2003 5:22:54 PM
Type: Highlight
REJECT (no, the state this transition is going to, XL8, will send the Transmit CLOSE parameter. This state just exists when the indication shows up.)
7.14.9.1 State description
The statement << Tis transition shall occur when a Transmit Close indication is received >> should be This transition shall occur after receiving a Transmit Close indication and after requesting a Transmit Close be transmitted by sending a Transmit Close parameter to the XL transmitter of a connected phy. >>

Page: 188
Sequence number: 21
Date: 3/1/2003 5:17:51 PM
Type: Highlight
ACCEPT - DONE (added repeatedly)
7.14.9.1 State description
The statement << This state shall send a Phy Status (Connected) confirmation to the expander connection manager. >> gives no indication as to what event triggers the confirmation being sent. This needs to be fixed.

Page: 189
Sequence number: 1
Date: 2/10/2003 3:42:31 PM
Type: Highlight
ACCEPT - DONE (based on after sending the request alone)
7.14.9.3 Transition XL7:Connected to XL9:Break
The statement << occur when a BREAK Received parameter is received. >> should be << after receiving BREAK Received parameter and requesting a BREAK be transmitted by sending a Transmit BREAK parameter to the XL transmitter. >>

Page: 189
Sequence number: 2
Date: 2/10/2003 3:41:40 PM
Type: Highlight
REJECT (indication is the proper term for input versions)
7.14.9.4 Transition XL7:Connected to XL10:Break_Wait
The statement << occur when a Transmit Break indication is received >> should be << occur after receiving a Transmit Break request. >>.

Page: 189
Sequence number: 3
Date: 2/21/2003 7:56:32 PM
Type: Strikeout
ACCEPT - DONE
7.14.9.4 Transition XL7:Connected to XL10:Break_Wait
The statement << from a connected phy via the
expander connection router. >> should be deleted.

Page: 189
Sequence number: 4
Date: 2/21/2003 7:55:56 PM
Type: Strikeout
ACCEPT - DONE
7.14.10.4 Transition XL8:Close_Wait to XL10:Break_Wait
The statement << from a connected phy via the
expander connection router. >> should be deleted.

Page: 189

Sequence number: 5
Date: 2/10/2003 3:41:12 PM
Type: Highlight
    REJECT (it's called an indication when it is the input version)
    7.14.10.4 Transition XL8:Close_Wait to XL10:Break_Wait
    The statement << occur when a Transmit Break indication is received >> should be << occur after receiving a Transmit Break
    request. >>

Page: 189
Sequence number: 6
Date: 1/24/2003 7:57:04 PM
Type: Highlight
    ACCEPT - DONE (but it's a Transmit Break request to the internals, not a Transmit Break to the XL transmitter)
    7.14.10.3 Transition XL8:Close_Wait to XL9:Break
    The statement << occur when a BREAK Received parameter is received. >> should be << after receiving BREAK Received
    parameter and requesting a BREAK be transmitted by sending a Transmit BREAK parameter to the XL transmitter. >>

Page: 189
Sequence number: 7
Date: 3/4/2003 3:04:54 PM
Type: Highlight
    ACCEPT - DONE (after sending a Transmit Close and releasing...)
    7.14.10.2 Transition XL8:Close_Wait to XL0:Idle
    The statement << after a CLOSE has been both transmitted and received and after path resources
    have been released for this connection. >> should be << after receiving a Close Received parameter, after requesting a CLOSE
    be transmitted by sending a Transmit Close to the XL transmitter of a connected phy, and after sending a Transmit Close request
    to the ???? . The expander device shall transmit the same CLOSE primitive that was received (e.g. CLOSE
    (NORMAL) forwarded as CLOSE (NORMAL)). >>.

Page: 189
Sequence number: 8
Date: 2/10/2003 3:38:54 PM
Type: Highlight
    REJECT
    7.14.10.1 State description
    The statement << This state shall send a Transmit Break request to a connected phy when a BREAK Received parameter is
    received. >> needs to be moved into the relevant state transition. And reworded to the standard wording.

Page: 189
Sequence number: 9
Date: 2/10/2003 3:38:40 PM
Type: Highlight
    REJECT
    The statement << This state shall send a Transmit Close request to a connected phy when a CLOSE Received parameter is
    received. The expander device shall transmit the same CLOSE primitive that was received (e.g. CLOSE
    (NORMAL) forwarded as CLOSE (NORMAL)). >> needs to be moved into the relevant state transition. And reworded to the
    standard wording.

Page: 189
Sequence number: 10
Date: 2/10/2003 3:38:14 PM
Type: Highlight
    REJECT (just being in the state suffices)
    The statement << This state shall send a Transmit >> gives no indication as to when this is supposed to occur. This needs to be
    fixed.

Page: 189
Sequence number: 11
Date: 2/10/2003 3:32:29 PM
Type: Highlight
    ACCEPT - DONE
    7.14.10.1 State description
    The statement << then shall repeatedly send a
    Transmit Idle Dword parameter to the XL transmitter. >> should be << then this state shall request idle dwords be transmitted by
    repeatedly sending a Transmit Idle Dword parameter to
    the XL transmitter (see 7.3). >>.

Page: 189
Sequence number: 12

Date: 2/10/2003 3:37:59 PM
Type: Highlight
    REJECT (just being in the state suffices)
    7.14.10.1 State description
    The statement << This state shall send a Phy Status (Connected) confirmation to the expander connection manager. >> gives no indication as to what event triggers the confirmation being sent. This needs to be fixed.

Page: 189
Sequence number: 13
Date: 3/1/2003 5:29:03 PM
Type: Square
    ACCEPT - DONE (reworded)
    7.14.10.1 State description
    The statements << This state shall send all valid dwords received by the SAS phy through the expander connection router to a connected phy using the Transmit Dword request with the exception of BREAK and CLOSEes. >> are very confusing. The indications, responses, and parameters need to be more clearly defined as to which cause what action. This needs to be fixed.

Page: 189
Sequence number: 14
Date: 2/10/2003 3:37:15 PM
Type: Highlight
    ACCEPT - DONE (removed "any" - beyond that is up to the implementer)
    7.14.11.1 State description
    How does this happen? << releases any path resources. >>

Page: 189
Sequence number: 15
Date: 2/10/2003 3:36:53 PM
Type: Highlight
    REJECT
    7.14.11.1 State description
    The statement << This state shall send a Transmit BREAK parameter to the XL transmitter. >> needs to be moved into the relevant state transition. And reworded to the standard wording.

Page: 189
Sequence number: 16
Date: 2/10/2003 3:36:40 PM
Type: Highlight
    ACCEPT - DONE
    The statement << This transition shall occur after transmitting a BREAK. >> should be << This transition shall occur after requesting a BREAK be transmitted by sending a Transmit BREAK parameter to the XL transmitter. >>

Page: 189
Sequence number: 17
Date: 2/10/2003 3:35:16 PM
Type: Highlight
    ACCEPT - DONE (removed "any". The meaning is up to the implementer.)
    7.14.12.1 State description
    How does this happen? << releases any path resources. >>

Page: 189
Sequence number: 18
Date: 2/10/2003 3:34:16 PM
Type: Highlight
    REJECT (why be so verbose?)
    The statement << send a Transmit BREAK parameter to the XL transmitter. >> should be << request a BREAK be transmitted by sending a Transmit BREAK parameter to the XL transmitter.

Page: 190
Sequence number: 3
Date: 1/25/2003 4:12:38 PM
Type: Strikeout
    ACCEPT - DONE
    7.14.12.2 Transition XL10:Break_Wait to XL0:Idle
    The statement << whichever occurs first. >> should be deleted.

Page: 190
Sequence number: 4
Date: 2/4/2003 6:23:46 PM

Type: Highlight
    REJECT (paragraph being deleted per Brian Day comment)
    7.15 Rate matching
    The statement << on any potential
    intermediate physical link. >> should be << on any physical link that makes up any potential pathway >>.

Page: 190
Sequence number: 5
Date: 2/18/2003 3:31:53 PM
Type: Strikeout
    REJECT (helps explain why we have this bizzare rotation)
    7.15 Rate matching
    The statement << to reduce EMI. >> should be deleted. As that information is not needed.

Page: 190
Sequence number: 6
Date: 2/4/2003 6:31:42 PM
Type: Circle
    REJECT (but redrew figure show the phys are shown left-to-right and the timelines are labeled)
    Figure 77
    This figure would be clearer if the phy-expander-phy boxes where removed and the arrows from the text point to the correct blobs.

Page: 190
Sequence number: 7
Date: 2/4/2003 6:28:00 PM
Type: Strikeout
    ACCEPT - DONE
    7.15 Rate matching
    The term << immediately >> should be deleted.

Page: 190
Sequence number: 8
Date: 2/4/2003 6:28:31 PM
Type: Highlight
    ACCEPT - DONE (changed to "forwarding")
    The statement << after seeing an OPEN_ACCEPT. >> should be << after transmitting (receiving ??) an OPEN_ACCEPT >>. I'm
    not sure which is correct but I don't think expanders are going to have eyes that will see things.

Page: 190
Sequence number: 9
Date: 2/21/2003 8:05:35 PM
Type: Note
    ACCEPT - DONE (start after the EOAF. No rate matching mentioned during the OPEN itself. No requirement that ALIGNs or
    normal dword be sent first.)
    7.15 Rate matching
    ****
    There is no description about when the source is supposed to start transmitting at the link rate sent in the OPEN. This needs to be
    specified here.

Page: 191
Sequence number: 2
Date: 2/18/2003 3:41:40 PM
Type: Highlight
    REJECT (better as is)
    7.16.2 Full duplex
    The statement << so the DONE (NORMAL) may be followed
    by RRDYs, ACKs, and NAKs. >> should be << allowing RRDYs, ACKs, and NAK to follow a DONE (NORMAL). >>

Page: 191
Sequence number: 3
Date: 2/18/2003 3:49:24 PM
Type: Strikeout
    ACCEPT - DONE (didn't delete, but removed shall, changed 28 bytes to "too short", and added xref to SSP_RF state machine)
    7.16.3 SSP frame transmission
    The statement << The link layer shall
    check that the number of data dwords between the SOF and EOF is at least 28 bytes and that the CRC is
    valid. >> should be deleted as the requirement is contains in the state descriptions.

Page: 191

Sequence number: 4
Date: 2/18/2003 4:01:32 PM
Type: Highlight
 ACCEPT - DONE (but the This prevents is actually for the initiator "shall never refuse" sentence in the paragraph, not the target "may refuse to" sentence. Prefaced the first sentence with "To prevent deadlocks..." and moved the target "may" rule to its own paragraph.)
 7.16.4 SSP flow control
 The statement << An SSP target port or an SSP target/initiator port acting in its target role may refuse to provide credit for any reason, including because it needs to transmit a frame itself. This prevents deadlocks where both ports are waiting on the other to provide credit. >> should be
 << To prevent deadlocks where both an SSP target port and an SSP initiator port are waiting on the other to provide credit an SSP target port or an SSP target/initiator port acting in its target role may refuse to provide credit for any reason, including because it needs to transmit a frame itself. >>

Page: 191
Sequence number: 5
Date: 1/24/2003 7:57:58 PM
Type: Highlight
 ACCEPT - DONE
 7.16.4 SSP flow control
 The statement << be interlocked. >> should be << be interlocked and which shall be non-interlocked >>.

Page: 193
Sequence number: 2
Date: 2/18/2003 7:07:35 PM
Type: Highlight
 ACCEPT - DONE
 7.16.6 Preparing to close an SSP connection
 The statement << 1 ms; the ACK/NAK count >> should be << 1 ms and as a result the ACK/NAK count >>.

Page: 193
Sequence number: 3
Date: 1/22/2003 9:56:19 AM
Type: Highlight
 ACCEPT - DONE
 7.16.6 Preparing to close an SSP connection
 The is a space missing at the end if this sentence << channel.Once a port >>.

Page: 193
Sequence number: 4
Date: 1/24/2003 8:04:35 PM
Type: Highlight
 ACCEPT - DONE
 7.16.6 Preparing to close an SSP connection
 I believe the may in the statement << it may close the
 connection by transmitting the CLOSE >> should be a shall.

Page: 194
Sequence number: 6
Date: 2/10/2003 1:20:28 PM
Type: Strikeout
 REJECT (fine for a state machine documented elsewhere)
 7.16.7.1 Overview
 The statement << from the SL state machine >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 194
Sequence number: 7
Date: 2/10/2003 1:20:34 PM
Type: Strikeout
 REJECT (fine for a state machine documented elsewhere)
 7.16.7.1 Overview
 The statement << from the SL state machine >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 194
Sequence number: 8
Date: 2/10/2003 1:20:07 PM
Type: Strikeout

REJECT (fine for an overview)
7.16.7.1 Overview
The statement << from the SSP_D1:DONE_Wait state >> as the general rule is that we do not state where things come from in state diagrams.

Page: 194
Sequence number: 9
Date: 2/10/2003 1:20:11 PM
Type: Strikeout
REJECT (fine for an overview)
7.16.7.1 Overview
The statement << from the SSP_D1:DONE_Wait state >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 197
Sequence number: 3
Date: 3/1/2003 11:42:04 AM
Type: Note
ACCEPT - DONE
7.16.7 SSP link layer (SSP) state machines
There needs to be a section added after figure 84 and before 7.16.7.2 to describe the SSP transmitter and SSP receiver.
Something like this needs to be here . << The SSP state machine sends the following parameters to the SSP transmitter:
a, b, c list of outputs
The SSP state machine receives the following parameters from the SSP receiver:
a, b, c list of inputs >> in addition there should be wording like that in section 7.13.2.

Page: 199
Sequence number: 6
Date: 2/10/2003 2:22:11 PM
Type: Strikeout
ACCEPT - DONE
7.16.7.5.1 State description
The statement << from the port layer >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 199
Sequence number: 7
Date: 2/10/2003 2:12:56 PM
Type: Highlight
ACCEPT - DONE
7.16.7.4.1 State description
The statement << A DONE (ACK/NAK TIMEOUT) confirmation informs >> should be << A DONE Received (ACK/NAK TIMEOUT) >>.

Page: 200
Sequence number: 8
Date: 2/10/2003 2:24:55 PM
Type: Highlight
REJECT (getting rid of SOF/.../EOF name)
7.16.7.7.1 State description
The statement << that the frame has been >> should be << that the SOF/frame/EOF have been >>.

Page: 202
Sequence number: 6
Date: 1/31/2003 6:06:43 PM
Type: Strikeout
ACCEPT - DONE
7.16.7.11 SSP_RIM1:Rcv_Interlock_Monitor state
The statement << from the SSP_TAN1:Idle state >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 202
Sequence number: 7
Date: 1/31/2003 6:07:05 PM
Type: Strikeout
ACCEPT - DONE
7.16.7.11 SSP_RIM1:Rcv_Interlock_Monitor state
The statement << from the SSP_RF1:Rcv_Frame state >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 203
Sequence number: 1
Date: 1/31/2003 6:07:40 PM
Type: Strikeout
    ACCEPT - DONE
    7.16.7.14.1 State description
    The statement << from the SSP_RF1:Rcv_Frame state. >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 204
Sequence number: 3
Date: 2/10/2003 2:48:23 PM
Type: Highlight
    REJECT (no "translation" is occurring. However, this whole paragraph is reworded with the STP/SATA bridge terminology).
    7.17.1 STP frame transmission
    The statement << Table 84 shows a target port transmitting a SATA frame to an expander port. >> should be << Table 84 shows the expander port or STP initiator port translation of a SATA frame or primitive to an STP frame or primitive when the STP frame or primitive is received from a SATA target >>.

Page: 204
Sequence number: 4
Date: 2/20/2003 9:32:16 AM
Type: Highlight
    ACCEPT - DONE (Deleted the path phrase; no need to mention intermediate expanders here. Reworded "solely" to "In this example, ... to send just one frame")
    7.17.1 STP frame transmission
    The statement << on the path to the STP initiator port solely for the frame. >> should be << on the pathway to the STP initiator port. >>. I don't understand what << solely for the frame >> means. It doesn't seems to imply that every frame requires an open to be transmitted which should not be correct.

Page: 204
Sequence number: 5
Date: 2/10/2003 2:48:58 PM
Type: Highlight
    ACCEPT - DONE (reworded whole paragraph)
    7.17.1 STP frame transmission
    The statement << Table 85 shows an STP initiator port transmitting a frame, with the expander device attached to the SATA target port opening a connection solely for the frame. >>
    should be
    << Table 85 shows the expander port translation of a STP frame or primitive to an SATA frame or primitive when the STP frame or primitive is received from an STP initiator port or expander port. The STP initiator port opens a connection to an expander port on a pathway to the expander. >>   I don't understand what << solely for the frame >> means. It doesn't seems to imply that every frame requires an open to be transmitted which should not be correct.

Page: 205
Sequence number: 2
Date: 2/10/2003 2:57:21 PM
Type: Highlight
    ACCEPT - DONE
    7.17.2 STP flow control
    The statement << number of dwords it must store in an internal buffer if it can do so without exceeding >> should be << number of dwords it is required to store in an internal buffer if it does so without exceeding >>.

Page: 205
Sequence number: 3
Date: 2/17/2003 2:41:11 PM
Type: Highlight
    ACCEPT - DONE
    7.17.2 STP flow control
    The statement << during which each expander device must accept incoming data dwords into a buffer. >> should be << during which each expander device shall accept incoming data dwords into a buffer. >>.

Page: 205
Sequence number: 4
Date: 2/10/2003 2:55:42 PM
Type: Highlight
    ACCEPT - DONE (but reworded for STP/SATA bridge)
    7.17.1 STP frame transmission

The statement << CLOSE on the expander >> should be << CLOSE at the expander >>.

Page: 205
Sequence number: 5
Date: 2/10/2003 2:55:45 PM
Type: Highlight
> ACCEPT - DONE (but reworded for STP/SATA bridge)
> 7.17.1 STP frame transmission
> The statement << CLOSE on the expander >> should be << CLOSE at the expander >>.

Page: 205
Sequence number: 6
Date: 2/10/2003 2:55:53 PM
Type: Highlight
> ACCEPT - DONE (but reworded for STP/SATA bridge)
> 7.17.1 STP frame transmission
> The statement << While the connection is open, the expander device is not involved. >> should be << While the connection is open, the expander device passes through all dwords without modification. >>

Page: 207
Sequence number: 4
Date: 1/25/2003 11:49:08 AM
Type: Highlight
> REJECT (whole paragraph deleted anyway)(could add a see SATA xref)
> 7.17.3 Preparing to close an STP connection
> The term << command-tag
> queuing >> is not used anywhere else in this document. Either it needs to be defined or deleted.

Page: 207
Sequence number: 5
Date: 1/25/2003 11:49:26 AM
Type: Highlight
> REJECT (whole paragraph deleted)
> 7.17.3 Preparing to close an STP connection
> The statement << An expander device may issue CLOSE at the end of each frame, after a time out waiting for another frame, after every n frames, after a certain time period, after a SATA_CONT is detected, after a SATA_HOLD is detected. >> should be an a,b,c list and needs an << or >> between the last two cases.

Page: 208
Sequence number: 3
Date: 2/1/2003 4:34:21 PM
Type: Strikeout
> REJECT (SL to SMP communication froms allowed)
> 7.18.4.1 Overview
> The statement << from the SL state machine >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 208
Sequence number: 4
Date: 2/1/2003 4:34:27 PM
Type: Strikeout
> REJECT (SL to SMP communication froms allowed)
> 7.18.4.1 Overview
> The statement << from the SL state machine >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 208
Sequence number: 5
Date: 2/1/2003 4:34:34 PM
Type: Strikeout
> REJECT (SL to SMP communication froms allowed)
> 7.18.4.1 Overview
> The statement << from the SL state machine >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 208
Sequence number: 6
Date: 1/25/2003 11:54:53 AM
Type: Strikeout

ACCEPT - DONE
7.18.4.1 Overview
The statement << from the SMP_IL3:Rcv_response_Frame state >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 208
Sequence number: 7
Date: 1/25/2003 11:54:57 AM
Type: Strikeout
ACCEPT - DONE
7.18.4.1 Overview
The statement << from the SMP_IL3:Rcv_response_Frame state >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 208
Sequence number: 8
Date: 1/25/2003 11:55:07 AM
Type: Strikeout
ACCEPT - DONE
7.18.4.1 Overview
The statement << from the SMP_TL2:Wait_transmit_frame state >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 208
Sequence number: 9
Date: 1/25/2003 11:55:02 AM
Type: Strikeout
ACCEPT - DONE
7.18.4.1 Overview
The statement << from the SMP_TL1:Wait_originate_frame state >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 210
Sequence number: 2
Date: 3/1/2003 4:03:14 PM
Type: Note
ACCEPT - DONE
7.18.4 SMP link layer (SMP) state machines
There needs to be a section added after figure 84 and before 7.16.7.2 to describe the SMP transmitter and SMP receiver.
Something like this needs to be here . << The SMP state machine sends the following parameters to the SMP transmitter:
a, b, c list of outputs
The SMP state machine receives the following parameters from the SMP receiver:
a, b, c list of inputs >> in addition there should be wording like that in section 7.13.2

Page: 211
Sequence number: 3
Date: 1/25/2003 11:57:35 AM
Type: Strikeout
ACCEPT - DONE
7.18.4.2.3.1 State description
The statement <<from the port layer >> should be deleted as the general rule is that we do not state where things come from in state diagrams.

Page: 213
Sequence number: 2
Date: 3/1/2003 4:05:15 PM
Type: Highlight
ACCEPT - DONE (tracking with other comment)
8 Port layer
This section should be entirely replaced with document 03-024 plus figures.

Page: 215
Sequence number: 5
Date: 3/1/2003 4:06:39 PM
Type: Highlight
REFER PORT WG - TODO
8.3.1 Overview
global
In some places within this document AWT is used and in other places << arbitration wait timer >> is used. This needs to be made

consistent. I vote for fewer acronyms.

Page: 216
Sequence number: 11
Date: 3/1/2003 4:07:49 PM
Type: Note
    REFER PORT WG - TODO
    Figure 91
    Some of the text on the arrows needs to be positioned better. For example: the << Phy Enabled >> text entering into PL_OC1
    covers most of the arrow, it is not clear which transition the << (requests to each phy) from the PL_OC2 is attached to, and the
    name of the state machine should be across the top as in all the other state diagrams.

Page: 217
Sequence number: 4
Date: 3/1/2003 4:10:44 PM
Type: Note
    REFER PORT WG - TODO (recommend not changing for frame-content arguments)
    8.3.3.1.1 State description overview
    I thought all arguments had the first letter of each word capitalized. None of these do. This should be made consistent.

Page: 228
Sequence number: 5
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE (it's the retransmit bit)
    Table 88
    There is no description of the << TIMEOUT >> bit, This needs to be fixed.

Page: 229
Sequence number: 6
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    Table 89
    ****
    I thought we outlawed 0 length data frames. I think the IU size for DATA should be 1 to 1 024.

Page: 229
Sequence number: 7
Date: 2/2/2003 11:13:54 AM
Type: Highlight
    ACCEPT - DONE (removed sentence; changed Name column to Name of frame; added "frame" after each)
    9.2.1 SSP frame format
    Why not put this information into table 89 << An SSP frame containing a COMMAND information unit (IU) is called a COMMAND
    frame; an SSP frame containing a TASK IU is called a TASK frame; etc. >> or make it an a,b,c list. But in any case list them all.

Page: 229
Sequence number: 8
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE (the TIMEOUT bit in the table should be this bit)
    9.2.1 SSP frame format
    I don't see any bit named this in table 88. It needs to be added or this paragraph needs to be deleted << The RETRANSMIT bit
    may be set to one for RESPONSE frames and shall be set to zero for all other frame types. This field indicates the frame is a
    retransmission after the target port timed out waiting for the ACK or NAK for its previous attempt to transmit the frame. >>. If it
    stays then the term << field >> in the second sentence needs to be changed to << bit >>.

Page: 229
Sequence number: 9
Date: 2/2/2003 11:10:32 AM
Type: Highlight
    REJECT (no improvement)
    9.2.1 SSP frame format
    The statement << The TAG field allows the initiator port to establish a context for commands and task management functions. >>
    should be << The TAG field is an value assigned by the application client and sent to the initiator port in the SCSI command
    information unit and the task management information unit. The tag is used to establish a context between different commands
    and different task management functions. >>

Page: 229

Sequence number: 10
Date: 1/22/2003 6:07:54 PM
Type: Highlight
    ACCEPT - DONE ("established by the connection".)
    9.2.1 SSP frame format
    The statement << that is unique for the I_T nexus. >> should be << that is unique for the I_T nexus defined by the source SAS address and the destination SAS address. >>.

Page: 229
Sequence number: 11
Date: 2/2/2003 11:08:31 AM
Type: Highlight
    REJECT (semicolons join related sentences)
    9.2.1 SSP frame format
    The statement << SAM-3; the TAG field >> should be <<SAM-3. The TAG field >>.

Page: 229
Sequence number: 12
Date: 1/6/2003 6:16:00 PM
Type: Strikeout
    ACCEPT - DONE (changed to "more easily". The field is not strictly necessary to establish a context, it's just an assist.)
    9.2.1 SSP frame format
    Delete the term << quickly >> as the is no time reference as to how quick quick is.

Page: 229
Sequence number: 13
Date: 1/22/2003 6:05:54 PM
Type: Highlight
    ACCEPT - DONE (overcome by rewrite)
    9.2.1 SSP frame format
    The statement << that need this field >> should be << that use this field >>.

Page: 229
Sequence number: 14
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    9.2.1 SSP frame format
    The statement << set a value that is unique for the I_T nexus. >> should be << set it to a value that is unique for each I_T nexus. >>

Page: 229
Sequence number: 15
Date: 1/22/2003 6:05:41 PM
Type: Highlight
    ACCEPT - DONE (overcome by a rewrite of this paragraph)
    9.2.1 SSP frame format
    The statement << need this field >> should be << use this field >>.

Page: 229
Sequence number: 16
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    REJECT - this is the only case; it's not an example, so e.g. is not appropriate.
    9.2.1 SSP frame format
    The statement << frame (due to a >> should be << frame (e.g., due to >>.

Page: 229
Sequence number: 27
Date: 2/15/2003 5:47:38 PM
Type: Highlight
    ACCEPT - DONE (per Jan WG: let both initiator and target set it arbitrarily except for XFER_RDY -> DATA. Use recepient shall ignore wording. No need to say a target not needing it shall use FFFFh - any value is fine. IBM complained about that resolution; Feb 11 call changed it to may or may not check and defined the result - RESPONSE frame with INVALID FIELD - instead. Also, handling of reserved field checking was noted as missing; that will be added via another comment. New text is in 03-091.)
    9.2.1 SSP frame format
    ****
    The statement <<The target port shall set this field to FFFFh for all frames other than XFER_RDY frames. >> should be deleted.
    The tag should have meaning to the target only. The current requirement suggests that the initiator may expect and verify that the

tag is FFFFh for non-XFER_RDY frames. This should not happen.

Some targets implementations would prefer to use target port transfer tag to keep track of frames. That makes it easy to associate a frame in an analyzer trace (read data, response, etc.) with a particular command.

Page: 230
Sequence number: 5
Date: 1/22/2003 6:16:33 PM
Type: Strikeout
    REJECT (this emphasizesthat this layer, the transport layer, is not using the CRC field, even though it shows up in the transport layer data structures.)
    9.2.1 SSP frame format
    The statement << not the transport layer. >> is redundant and should be deleted.

Page: 230
Sequence number: 6
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    9.2.2.1 COMMAND information unit
    The term << performed >> should be << processed >>.

Page: 230
Sequence number: 7
Date: 1/6/2003 6:16:00 PM
Type: Strikeout
    REJECT - mirrors wording in SPC-3
    9.2.2.1 COMMAND information unit
    The term << SCSI >> should be deleted as it is redundant with SPC-2.

Page: 230
Sequence number: 8
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    9.2.2.1 COMMAND information unit
    The term << specifies >> should be << contains >>.

Page: 231
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    The statement << For example, a six-byte CDB occupies the first six bytes of the CDB field; the remaining ten bytes are reserved and the ADDITIONAL CDB BYTES field is not present. >> should be << (e.g., a six-byte CDB occupies the first six bytes of the CDB field; the remaining ten bytes are reserved and the ADDITIONAL CDB BYTES field is not present). >>

Page: 231
Sequence number: 2
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    9.2.2.2 TASK information unit
    The << performed >> should be << processed >>.

Page: 232
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    9.2.2.2 TASK information unit
    The term << specifies >> should be << contains >>.

Page: 232
Sequence number: 2
Date: 2/15/2003 4:08:33 PM
Type: Strikeout
    REJECT - the reference should be SAM-3 not SPC-2, and the SCSI wording is copied from SPC-2/3 (but moot after sentence replaced with a new rule)

9.2.2.2 TASK information unit
The term << SCSI >> should be deleted as it is redundant with SPC-2.

Page: 232
Sequence number: 3
Date: 1/22/2003 6:20:05 PM
Type: Highlight
ACCEPT - DONE (changed to "set to the value of the [xyz] field")
Table 93
global
In the description column there are several cases where small caps is used when they should not be. Small caps should only be used when referencing the name of a field not the contains of the field. For example <<
The task manager shall perform the ABORT TASK SET task management function with L set to LOGICAL UNIT NUMBER >>
should be << The task manager shall perform the ABORT TASK SET task management function with L set to logical unit number >> .

Page: 232
Sequence number: 4
Date: 1/6/2003 6:16:00 PM
Type: Highlight
ACCEPT - DONE
9.2.2.2 TASK information unit
The statement << The TARGET RESET task management function defined in SAM-3 is not supported. >> should be a footnote in table 91.

Page: 233
Sequence number: 6
Date: 2/2/2003 12:11:10 PM
Type: Highlight
ACCEPT - DONE
9.2.2.3 XFER_RDY information unit
The term << indicates >> should be << contains >>.

Page: 233
Sequence number: 7
Date: 2/2/2003 12:41:27 PM
Type: Highlight
REVIEW EDITORS WG
ACCEPT - DONE (changed to "contains...app client buffer offset of the segment of write data")
9.2.2.3 XFER_RDY information unit
The statement << initial application client buffer offset of the write data >> implies that all XFER_RDYs for a given I_T_L_Q nexus will have the same value. That does not seem right. Is it?

Page: 233
Sequence number: 8
Date: 1/6/2003 6:16:00 PM
Type: Strikeout
REJECT - don't want it to sound like data is just transferred, either. There is not an e.g. here implying DATA frames are one possible option.
9.2.2.3 XFER_RDY information unit
The statement << (using DATA frames). >> seems redundant and could be interpreted to means that there is another way to to move data besides DATA frames.

Page: 233
Sequence number: 9
Date: 1/6/2003 6:16:00 PM
Type: Highlight
ACCEPT - DONE (changed "indicates how many" to "contains the number of")
9.2.2.3 XFER_RDY information unit
The term << indicates >> should be << contains >>.

Page: 233
Sequence number: 10
Date: 1/6/2003 6:16:00 PM
Type: Strikeout
REJECT - see nearby same comment
9.2.2.3 XFER_RDY information unit
The statement << (using DATA frames). >> seems redundant and could be interpreted to means that there is another way to to move data besides DATA frames.

Page: 233
Sequence number: 11
Date: 1/22/2003 6:21:25 PM
Type: Highlight
ACCEPT - DONE
9.2.2.3 XFER_RDY information unit
The paragraph << The initial XFER_RDY frame for a given command shall set the relative offset to the value of the FIRST BURST SIZE field in the Disconnect-Reconnect mode page (see 10.1.1.1.5). If any additional XFER_RDY frames are required, the RELATIVE OFFSET field shall be set to the value of the previous XFER_RDY frames relative offset plus the previous XFER_RDY frames write data length. >> need to move up under the relative offset field paragraph.

Page: 233
Sequence number: 12
Date: 1/22/2003 6:20:30 PM
Type: Highlight
ACCEPT - DONE (Requested Offset)
Table 94
****
The field name << RELATIVE OFFSET >> is a problem because when this table is combined with the header information (in table 88) you then have two fields with exactly the same name. So things get confusing real fast. I recommend changing the name of the field in XFER_RDY to something like << XFER_RDY RELATIVE OFFEST >>.

Page: 234
Sequence number: 2
Date: 2/28/2003 6:09:33 PM
Type: Highlight
ACCEPT - DONE (they're synonyms - what's wrong with constrained? changed anyway)
9.2.2.4 DATA information unit
The statement << constrained by >> should be << limited to >>.

Page: 234
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Highlight
REJECT - this makes it sound like just the value is important, when the association to a specific XFER_RDY frame is the key point
9.2.2.4 DATA information unit
The statement << The DATA frame shall only contain write data for a single XFER_RDY frame. >> should be << The DATA frame shall contain no more write data than was indicated in the WRITE DATA LENGTH field of a single XFER_RDY frame. >>.

Page: 235
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Strikeout
REJECT - but replaced with field names (see Intel comment)
9.2.2.5.1 RESPONSE information unit overview
This should be deleted << which defines the format and content of the response IU. >> as this information is in the table.

Page: 235
Sequence number: 2
Date: 1/6/2003 6:16:00 PM
Type: Highlight
ACCEPT - DONE
9.2.2.5.1 RESPONSE information unit overview
The statement << and if an error occurs >> should be << and in response to any errors that occur >>.

Page: 236
Sequence number: 2
Date: 1/6/2003 6:16:00 PM
Type: Strikeout
ACCEPT - DONE
9.2.2.5.3 RESPONSE information unit RESPONSE_DATA format
The term << certain >> should be deleted as it add a level in uncertainty to the standard.

Page: 237
Sequence number: 1
Date: 1/14/2003 11:19:02 AM
Type: Highlight
ACCEPT - DONE (Jan WG: The sense data list length field shall not be larger than 1000 (see table 89).)

9.2.2.5.4 RESPONSE information unit SENSE_DATA format
This seems like a strange value to pick << than 1 000 and shall >> why not 1024? Unless there is some reason it should be changed to 1 024.

Page: 237
Sequence number: 2
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    9.2.3 Frame sequences
    The statement << sequence. The transport protocol services (see 10.1.1) invoked by the application layer are also shown. >>
    should be << sequence and the transport protocol services (see 10.1.1) invoked by the application layer. >>.

Page: 237
Sequence number: 3
Date: 1/16/2003 7:48:31 PM
Type: Note
    ACCEPT - DONE (with frame rather than IU)
    Figures 94 - 97
    Put the term << IU >> after all the IU names (e.g., TASK IU, RESPONSE IU).

Page: 237
Sequence number: 4
Date: 1/22/2003 6:39:08 PM
Type: Note
    ACCEPT - DONE (also mention that connections may come and go at any time)
    9.2.3 Frame sequences
    ****
    Somewhere in this section there should be a paragraph that states the following :
    - that commands can be sent any time.
    - When commands are queued data may be transferred for any command at any time.
    - Responses may be returned in any order.

Page: 238
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    9.2.3 Frame sequences
    The statement << sequence. The transport protocol services (see 10.1.1) invoked by the application layer are also shown. >>
    should be << sequence and the transport protocol services (see 10.1.1) invoked by the application layer. >>.

Page: 238
Sequence number: 2
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    9.2.3 Frame sequences
    The statement << sequence. The transport protocol services (see 10.1.1) invoked by the application layer are also shown. >>
    should be << sequence and the transport protocol services (see 10.1.1) invoked by the application layer. >>.

Page: 239
Sequence number: 2
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    9.2.3 Frame sequences
    The statement << sequence. The transport protocol services (see 10.1.1) invoked by the application layer are also shown. >>
    should be << sequence and the transport protocol services (see 10.1.1) invoked by the application layer. >>.

Page: 239
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE (changed to 'times out waiting for")
    9.2.4.3 XFER_RDY frame
    The statement << and does not receive an ACK or NAK, it shall close >> should be << and times out waiting for ACK or NAK it
    shall close >>.

Page: 240
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE (changed to 'times out waiting for")
    9.2.4.4 DATA frame
    The statement << and does not receive an ACK or NAK, it shall close >> should be << and times out waiting for ACK or NAK it
    shall close >>.

Page: 240
Sequence number: 4
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE (changed to 'times out waiting for")
    9.2.4.4 DATA frame
    The statement << and does not receive an ACK or NAK, it shall abort >> should be << and times out waiting for ACK or NAK it
    shall abort >>

Page: 240
Sequence number: 5
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    9.2.4.5 RESPONSE frame
    There is no bit named << RETRANSMIT bit >> in the SSP frame. This needs to be fixed.

Page: 240
Sequence number: 6
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    9.2.4.5 RESPONSE frame
    The statement << RETRANSMIT bit of one, and it >> should be << RETRANSMIT bit set to one, and it >>

Page: 241
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    9.2.5.2 Initiator port error handling
    The statement << is not twelve bytes long, >> should be << is not 12 bytes long, >>.

Page: 241
Sequence number: 2
Date: 1/16/2003 8:03:14 PM
Type: Note
    REJECT - remain silent (initiator handling of bizarre errors need not be specified)
    9.2.5.2 Initiator port error handling
    The last three paragraphs all need a statement about what the initiator does if it does receive a RESPONSE. I believe << discard it
    >> is the right answer but it needs to be stated.

Page: 242
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.1 Overview
    The statement << SSP transport layer contains state >> should be << SSP transport layer (ST) contains state >>.

Page: 242
Sequence number: 2
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    REJECT
    The statement << perform the following functions: >> should be << run in parallel to: >>.

Page: 242
Sequence number: 3
Date: 1/6/2003 6:16:00 PM

Type: Strikeout
    REJECT
    9.2.6.2.1 Overview
    The statement << (initiator send frame) >> should be deleted.

Page: 242
Sequence number: 4
Date: 1/6/2003 6:16:00 PM
Type: Strikeout
    REJECT
    9.2.6.2.1 Overview
    The statement << (initiator process response) >> should be deleted.

Page: 242
Sequence number: 5
Date: 2/8/2003 2:09:52 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.2.1 Overview
    The statement << (initiator process response) >> should be deleted.

Page: 242
Sequence number: 6
Date: 2/8/2003 2:12:47 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.2.1 Overview
    The statement << (initiator send frame) >> should be deleted.

Page: 242
Sequence number: 7
Date: 1/6/2003 6:16:00 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.2.1 Overview
    The statement << (initiator send frame) >> should be deleted.

Page: 242
Sequence number: 8
Date: 2/8/2003 2:12:38 PM
Type: Strikeout
    REJECT
    9.2.6.2.1 Overview
    The statement << (initiator receive data) >> should be deleted.

Page: 242
Sequence number: 9
Date: 2/8/2003 2:12:09 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.2.1 Overview
    The statement << (initiator frame router) >> should be deleted.

Page: 242
Sequence number: 10
Date: 2/8/2003 2:12:01 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.2.1 Overview
    The statement << (initiator frame router) >> should be deleted.

Page: 242
Sequence number: 11
Date: 2/8/2003 2:11:29 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.2.1 Overview
    The statement << (initiator frame router) >> should be deleted.

Page: 242
Sequence number: 12
Date: 1/6/2003 6:16:00 PM
Type: Strikeout
    REJECT
    9.2.6.2.1 Overview
    The statement << (initiator frame router) >> should be deleted.

Page: 242
Sequence number: 13
Date: 2/8/2003 2:09:21 PM
Type: Strikeout
    REJECT
    9.2.6.2.1 Overview
    The statement << from the SCSI
    initiator devices application layer, >> should be deleted as we do not indicate where things come from only where they go to.

Page: 242
Sequence number: 14
Date: 2/8/2003 2:09:37 PM
Type: Strikeout
    REJECT
    9.2.6.2.1 Overview
    The statement << from the ST_IFR (initiator frame router) state machine >> should be deleted as we do not indicate where things
    come from only where they go to.

Page: 242
Sequence number: 15
Date: 2/8/2003 2:10:30 PM
Type: Strikeout
    REJECT
    9.2.6.2.1 Overview
    The statement << from the ST_IFR (initiator frame router) state machine >> should be deleted as we do not indicate where things
    come from only where they go to.

Page: 242
Sequence number: 16
Date: 2/8/2003 2:10:38 PM
Type: Strikeout
    REJECT
    9.2.6.2.1 Overview
    The statement << from the ST_IFR (initiator frame
    router) state machine >> should be deleted as we do not indicate where things come from only where they go to.

Page: 242
Sequence number: 17
Date: 2/8/2003 2:10:45 PM
Type: Strikeout
    REJECT
    9.2.6.2.1 Overview
    The statement << from the ST_ISF (initiator send frame) state machine. >> should be deleted as we do not indicate where things
    come from only where they go to.

Page: 242
Sequence number: 18
Date: 2/8/2003 2:11:17 PM
Type: Strikeout
    REJECT (but dropped "state machine")
    9.2.6.2.1 Overview
    The statement << from the port layer state machine >> should be deleted as we do not indicate where things come from only
    where they go to.

Page: 242
Sequence number: 19
Date: 2/8/2003 12:36:20 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6 SSP transport layer state machines
    global in 9.2.6

The term << port layer state machines >> should in most if not all cases be << port layer >>.

Page: 243
Sequence number: 2
Date: 1/6/2003 6:16:00 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.2.1 Overview
    The statement << (initiator process response) >> should be deleted.

Page: 243
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.2.1 Overview
    The statement << (initiator receive data) >> should be deleted.

Page: 243
Sequence number: 4
Date: 2/8/2003 2:16:53 PM
Type: Strikeout
    REJECT (but deleted state machine)
    9.2.6.2.1 Overview
    The statement <<
    from the port layer state machine. >> should be deleted as we do not indicate where things come from only where they go to.

Page: 243
Sequence number: 5
Date: 2/8/2003 2:15:07 PM
Type: Strikeout
    REJECT
    9.2.6.2.1 Overview
    The statement << from the SCSI initiator device's application layer >> should be deleted as we do not indicate where things come from only where they go to.

Page: 244
Sequence number: 8
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.2.1 Overview
    The term << describes >> should be << shows >>.

Page: 244
Sequence number: 9
Date: 2/8/2003 2:18:47 PM
Type: Square
    REJECT (that's what SAM-3 calls it, and Ralph rejected suggestions to rename the protocol services)
    Figure 98
    The term << Request >> should be deleted from the << Send Task Management Request >>

Page: 245
Sequence number: 2
Date: 2/9/2003 12:29:53 PM
Type: Strikeout
    REJECT (paragraph deleted)
    9.2.6.2.2.1 State description
    The statement << from the SCSI initiator device's application layer >> should be deleted.

Page: 245
Sequence number: 3
Date: 2/9/2003 12:29:38 PM
Type: Strikeout
    REJECT (paragraph deleted)
    9.2.6.2.2.1 State description
    The statement << from the ST_IFR (initiator frame router) state machine. >> should be deleted.

Page: 245

Sequence number: 4
Date: 2/9/2003 12:29:14 PM
Type: Strikeout
    REJECT (kept something similar as paragraph moved to ST_ISF overview section)
    9.2.6.2.2.1 State description
    The statement << from the
    ST_ISF2:Prepare_Command_Request state, >> should be deleted.

Page: 245
Sequence number: 5
Date: 2/9/2003 12:29:22 PM
Type: Strikeout
    REJECT (kept something similar as paragraph moved to ST_ISF overview section)
    9.2.6.2.2.1 State description
    The statement << from the
    ST_ISF3:Prepare_Send_Data_Out state. >> should be deleted.

Page: 245
Sequence number: 6
Date: 2/28/2003 5:49:23 PM
Type: Square
    ACCEPT - DONE (movement done; changed activated and initiated to started throughout)
    9.2.6.2.2.1 State description
    and global
    The paragraph <<The ST_ISF state machine shall be initiated when a Send SCSI Command or a Send Task Management
    Request transport protocol service request is received from the SCSI initiator device's application layer or when an XFER_RDY
    Arrived parameter is received from the ST_IFR (initiator frame router) state machine. >>
    does not belong here. It should be part of the overview for the state machine. This is only supposed to be information about the
    state not the state machine. And should be changed to << The ST_ISF state machine shall be activated when a Send SCSI
    Command or a Send Task Management Request transport protocol service request is received or when an XFER_RDY Arrived
    parameter is received. >>

Page: 245
Sequence number: 7
Date: 2/9/2003 12:28:39 PM
Type: Square
    ACCEPT - DONE
    9.2.6.2.2.1 State description
    The paragraph <<This state shall be entered when either a COMMAND or TASK frame is received from
    theST_ISF2:Prepare_Command_Request state, or when a DATA frame is received from the ST_ISF3:Prepare_Send_Data_Out
    state. >> should be << This state is the initial state and is the state that is used after the ST_ISF state machine has been
    activated. >>

Page: 245
Sequence number: 8
Date: 2/8/2003 2:59:17 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.2.2.1 State description
    The statement << A Send SCSI Command or a Send Task Management Request transport protocol service request includes the
    following to be used >> should be << A Send SCSI Command transport protocol service request or a Send Task Management
    protocol service request includes the following to be used >>

Page: 245
Sequence number: 9
Date: 2/3/2003 3:04:53 PM
Type: Highlight
    REJECT (whole sentence being deleted)
    9.2.6.2.2.1 State description
    The statement << The request may >> should be << The transport protocol service request may >>.

Page: 245
Sequence number: 10
Date: 2/8/2003 2:59:38 PM
Type: Highlight
    REJECT
    9.2.6.2.2.1 State description
    It looks like the term << request: >> should be << transport protocol service request >> in all cases in this section. This needs to be
    fixed.

Page: 245
Sequence number: 11
Date: 2/9/2003 12:26:53 PM
Type: Highlight
 ACCEPT - DONE (already in transition, so just deleted this)
 9.2.6.2.2.1 State description
 The statement << If the ST_ISF state machine was initiated as the result of receiving a transport protocol service request, then this state shall transition to the ST_ISF2:Prepare_Command_Request state.>> belongs in the transition description not here.

Page: 245
Sequence number: 12
Date: 2/9/2003 12:25:08 PM
Type: Note
 REJECT
 9.2.6.2.2.1 State description
 The term << initiated >> should be << activated >> in this section.

Page: 245
Sequence number: 13
Date: 2/15/2003 5:54:35 PM
Type: Note
 ACCEPT - DONE (upgrade to a shall to match 10.1.3 and 9.2.5.2)
 9.2.6.2.2.1 State description
 ****
 I don't like the mays in item a) and item b). Why is this a may instead of a shall?

Page: 246
Sequence number: 2
Date: 2/2/2003 3:34:26 PM
Type: Strikeout
 ACCEPT - DONE
 9.2.6.2.2.1 State description
 The statement << from the port layer state machine. >> should be deleted.

Page: 246
Sequence number: 3
Date: 2/9/2003 12:32:18 PM
Type: Square
 ACCEPT - DONE (merged 12 byte check and wriet data length check into transition)
 9.2.6.2.2.1 State description
 The statement << e) If the length of the XFER_RDY frame is 12 bytes, the write data length is correct, and an ACK Transmitted confirmation has been received, then this state shall transition to theST_ISF3:Prepare_Send_Data_Out state. >> belongs in the transition description. It should be moved there.

Page: 246
Sequence number: 4
Date: 2/9/2003 12:32:53 PM
Type: Highlight
 REJECT
 9.2.6.2.2.1 State description
 The statement << If this state is entered from the ST_ISF2:Prepare_Command_Request state, then this state shall send a Transmit Frame (Interlocked) request to the port layer state machine. >> should be << Upon entry into this state from the ST_ISF2:Prepare_Command_Request state, this state shall send a Transmit Frame (Interlocked) request to the port layer state machine. >>

Page: 246
Sequence number: 5
Date: 2/9/2003 12:32:59 PM
Type: Highlight
 REJECT
 9.2.6.2.2.1 State description
 The statement << If this state is entered from the ST_ISF3:Prepare_Send_Data_Out state, then this state shall send a Transmit Frame (Non-interlocked) request to the port layer state machine. >> should be << Upon entry into this state from the ST_ISF3:Prepare_Send_Data_Out state, this state shall send a Transmit Frame (Non-Interlocked) request to the port layer state machine. >>

Page: 246
Sequence number: 6

Date: 2/9/2003 12:33:23 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.2.2.1 State description
    The statement << from this state >> should be deleted.

Page: 246
Sequence number: 7
Date: 2/9/2003 12:33:38 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.2.2.1 State description
    The statement << (initiator process response) >> should be deleted.

Page: 246
Sequence number: 8
Date: 2/9/2003 12:34:27 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.2.2.1 State description
    The statement << After sending a Transmit Frame request this state shall wait for a Transmission Status confirmation. If the
    confirmation is not Transmission Status (Frame Transmitted), >> should be << After sending a Transmit Frame request to the port
    layer this state shall wait for a Transmission Status confirmation. If the confirmation is not Transmission Status (Frame
    Transmitted) confirmation, >>

Page: 246
Sequence number: 9
Date: 2/9/2003 12:34:55 PM
Type: Square
    REJECT (terminate is fine. Putting it here is fine; it's something that happens in this state.)
    9.2.6.2.2.1 State description
    The statement << After sending a Delivery Failure parameter to the ST_IPR state machine, the ST_ISF state machine shall
    terminate. >> does not belong here. It should be part of the overview for the state machine. This is only supposed to be information
    about the state not the state machine. It should also be reword to remove the << terminate >> term. Maybe stopped or removed or
    deactivated.

Page: 246
Sequence number: 10
Date: 2/9/2003 12:35:58 PM
Type: Highlight
    ACCEPT - DONE (changed to shall... if there is more data to transfer. Vague but accurate.)
    9.2.6.2.2.1 State description
    ***
    The may in the statement << If the transmitted frame was a DATA frame, then this state may transition to the >> seems like there
    should be more description. The transition either occurs or it does not occur.
    Also this whole paragraph should be down in the transition section. This needs to be fixed.

Page: 246
Sequence number: 11
Date: 2/20/2003 9:31:35 AM
Type: Square
    ACCEPT - DONE (deleted the first one. The text location kind of implies termination for different reasons, but we'll assume that
    sequencing is unimportant for these rules)
    9.2.6.2.2.1 State description
    The statement << After sending a Delivery Failure parameter to the ST_IPR state machine, the ST_ISF state machine shall
    terminate. >> is a duplicate of what is stated just above and does not belong here. It should be in the state machine overview.

Page: 246
Sequence number: 12
Date: 2/9/2003 12:38:15 PM
Type: Highlight
    REJECT (it's up to this layer to decide to cancel a request for whatever reason. SAM doesn't describe timeouts (yet) in its Execute
    Command model.)
    9.2.6.2.2.1 State description
    ***
    The may in the statement <<This state may also send a Cancel request to the port layer state >> seems like there should be more
    description. The transition either occurs or it does not occur.

Page: 246

Sequence number: 13
Date: 2/9/2003 12:38:30 PM
Type: Highlight
    REJECT (only happens in this state)
    9.2.6.2.2.1 State description
    The statement << The ST_ISF state machine shall terminate upon receipt of a Cancel Acknowledge confirmation. >> does not
    belong here. It should be in the state machine overview.

Page: 246
Sequence number: 14
Date: 2/9/2003 12:39:01 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.2.2.2 Transition ST_ISF1:Send_Frame to ST_ISF2:Prepare_Command_Request
    The statement << occur after a Send SCSI Command or Send Task Management Request transport protocol service request has
    been received. >> should be << occur after receiving a Send SCSI Command or Send Task Management Request transport
    protocol service request. >>.

Page: 247
Sequence number: 7
Date: 2/9/2003 11:04:33 AM
Type: Highlight
    ACCEPT - DONE (changed some ands to ifs too)
    9.2.6.2.2.3 Transition ST_ISF1:Send_Frame to ST_ISF3:Prepare_Send_Data_Out
    The statement << a) an ACK Received confirmation has been received for a COMMAND frame for a data-out operation and the
    first burst size is not zero;
    b) an XFER_RDY Arrived parameter has been received, all required values are present and correct, and an ACK Transmitted
    confirmation has been received; or
    c) a Transmission Status (Frame Transmitted) confirmation for a Transmit Frame (Non-interlocked) request has been received and
    the number of data bytes that has been transmitted for the request is less than the first burst size or the write data length. >>
    should be
    << a) receiving an ACK Received confirmation for a COMMAND frame for a data-out operation if the first burst size is not zero;
    b) receiving an XFER_RDY Arrived parameter with all required values present and correct, and after receiving an ACK
    Transmitted confirmation; or
    c) receiving a Transmission Status (Frame Transmitted) confirmation for a Transmit Frame (Non-interlocked) request if the number
    of data bytes that has been transmitted for the Transmit Frame (Non-interlocked) request is less than the first burst size or the write
    data length. >>

Page: 247
Sequence number: 8
Date: 2/9/2003 11:05:03 AM
Type: Strikeout
    REJECT (important to say where the values came from)
    9.2.6.2.3.1 State description
    The statement << received from the SCSI initiator device's application layer >> should be deleted.

Page: 247
Sequence number: 9
Date: 2/9/2003 11:05:17 AM
Type: Strikeout
    REJECT (important to say where they came from)
    9.2.6.2.3.1 State description
    The statement << received from the SCSI initiator device's application layer >> should be deleted.

Page: 247
Sequence number: 10
Date: 1/30/2003 4:23:27 PM
Type: Highlight
    ACCEPT - DONE ("after constructing")
    9.2.6.2.3.2 Transition ST_ISF2:Prepare_Command_Request to ST_ISF1:Send_Frame
    The statement << after the ST_ISF2:Prepare_Command_Request state >> should be <<after this state >>.

Page: 247
Sequence number: 11
Date: 2/9/2003 11:05:59 AM
Type: Strikeout
    REJECT (but changed parens to comma)
    9.2.6.2.4.1 State description
    The statement << (these were

received either from the SCSI initiator device's application layer or included in an XFER_RDY Arrived
parameter): >> should be deleted.

Page: 248
Sequence number: 2
Date: 2/9/2003 10:57:47 AM
Type: Highlight
    ACCEPT - DONE (deleted whole paragraph and added data to the first a)b)c) list. Saying it shall generate fill bytes should be
    enough here. The definitions of those fields need to be referenced to understand them anyway.)
    9.2.6.2.4.1 State description
    In what case would the following statement not be true? << If all of the data for the request is not included in the
    frame, the number of data bytes in the frame shall be a multiple of four, and the number of fill bytes shall be zero. >> If it is always
    true or is described somewhere else then it should be deleted.

Page: 248
Sequence number: 3
Date: 1/30/2003 4:23:51 PM
Type: Highlight
    ACCEPT - DONE ("after constructing")
    9.2.6.2.4.2 Transition ST_ISF3:Prepare_Send_Data_Out to ST_ISF1:Send_Frame
    The statement << after the ST_ISF3:Prepare_Send_Data_Out state has >> should be << after this state has >>.

Page: 248
Sequence number: 4
Date: 2/8/2003 2:49:20 PM
Type: Square
    ACCEPT - DONE
    9.2.6.2.5.1 State description
    The statement << The ST_IRD state machine shall be initiated when a Data-In Arrived parameter is received. >> should be in the
    state machine overview not here.

Page: 248
Sequence number: 5
Date: 2/8/2003 2:55:43 PM
Type: Square
    REJECT (it happens after this state does something)
    9.2.6.2.5.1 State description
    The statement << This state machine shall terminate after sending the parameter. >> should be in the state machine overview not
    here.

Page: 248
Sequence number: 6
Date: 2/8/2003 2:57:24 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.2.5.2 Transition ST_IRD1:Receive_Data_In to ST_IRD2:Process_Received_Data_In
    The statement << by the ST_IRD1:Receive_Data_In has been >> should be << by this state has been >>.

Page: 248
Sequence number: 7
Date: 2/8/2003 2:55:35 PM
Type: Square
    REJECT (it happens after this state does something)
    9.2.6.2.6 ST_IRD2:Process_Received_Data_In state
    The statement << The ST_IRD state machine shall terminate after the data-in data is processed. >> should be in the state
    machine overview not here.

Page: 248
Sequence number: 8
Date: 2/8/2003 2:50:17 PM
Type: Square
    REJECT (this is the overview, there being only one state)
    9.2.6.2.7 ST_IPR1:Process_Received_Response state
    The statement << The ST_IPR state machine shall be initiated when a Response Arrived parameter is received or a Delivery
    Failure parameter is received. >> should be in the state machine overview not here.

Page: 249
Sequence number: 3
Date: 2/8/2003 2:55:55 PM

Type: Square
    REJECT (it happens after this state does something)
    9.2.6.2.7 ST_IPR1:Process_Received_Response state
    The statement << The ST_IPR state machine shall terminate after sending a confirmation.>> should be in the state machine
    overview not here.

Page: 249
Sequence number: 4
Date: 2/9/2003 10:52:06 AM
Type: Highlight
    ACCEPT - DONE (bit was incorrectly called TIMEOUT in the frame header table; RETRANSMIT is the correct name)
    9.2.6.2.7 ST_IPR1:Process_Received_Response state
    The statement << of the RETRANSMIT bit. >> is a problem because there is no RETRANSMIT bit . This needs to be fixed.

Page: 249
Sequence number: 5
Date: 2/8/2003 2:50:40 PM
Type: Square
    REJECT (this is the overview, there being only one state)
    9.2.6.2.8 ST_IFR1:Initiator_Frame_Router state
    The statement << The ST_IFR state machine shall be initiated when:
    a) an Accept_Reject OPENs request is received;
    b) a Frame Received confirmation is received;
    c) a DONE Received confirmation is received; or
    d) a hard reset occurs. >> should be in the state machine overview not here.

Page: 249
Sequence number: 6
Date: 2/9/2003 10:52:19 AM
Type: Highlight
    REJECT
    9.2.6.2.8 ST_IFR1:Initiator_Frame_Router state
    The statement << If the ST_IFR state machine was initiated as the result of receiving >> should be << If this state initially received
    >>.

Page: 249
Sequence number: 7
Date: 2/9/2003 10:52:52 AM
Type: Highlight
    REJECT (this is a one-state state machine so this IS the overview)
    9.2.6.2.8 ST_IFR1:Initiator_Frame_Router state
    The statement << The ST_IFR state machine shall terminate
    after sending an Accept_Reject OPENs request to the port layer state machine. >> should be in the state machine overview not
    here.

Page: 250
Sequence number: 11
Date: 2/2/2003 3:39:31 PM
Type: Strikeout
    REJECT (helpful for overview)
    9.2.6.3.1 Overview
    The statement << from the port layer state machine >> should be deleted.

Page: 250
Sequence number: 12
Date: 2/2/2003 3:41:43 PM
Type: Strikeout
    REJECT (fine for overview)
    9.2.6.3.1 Overview
    The statement <<from the SCSI target device's application layer >> should be deleted.

Page: 250
Sequence number: 13
Date: 2/2/2003 3:42:26 PM
Type: Strikeout
    REJECT (fine for overview)
    9.2.6.3.1 Overview
    The statement <<from the SCSI target device's application
    layer; >> should be deleted.

Page: 250
Sequence number: 14
Date: 2/9/2003 10:45:07 AM
Type: Highlight
    REJECT
    9.2.6.2.8 ST_IFR1:Initiator_Frame_Router state
    The statement << If the ST_IFR state machine was initiated as the result of receiving >> should be << If this state initially received
    >>.

Page: 250
Sequence number: 15
Date: 2/8/2003 2:25:36 PM
Type: Highlight
    REJECT (deleting entire paragraph)
    9.2.6.2.8 ST_IFR1:Initiator_Frame_Router state
    The statement << If the ST_IFR state machine was initiated as the result of receiving >> should be << If this state initially received
    >>.

Page: 250
Sequence number: 16
Date: 2/9/2003 10:45:16 AM
Type: Highlight
    REJECT
    9.2.6.2.8 ST_IFR1:Initiator_Frame_Router state
    The statement << If the ST_IFR state machine was initiated as the result of a >> should be << If this state initially received a >>.

Page: 250
Sequence number: 17
Date: 2/9/2003 10:45:33 AM
Type: Highlight
    REJECT (this is a one-state state machine, so this IS the overview)
    9.2.6.2.8 ST_IFR1:Initiator_Frame_Router state
    All these << terminate >>s are a problem because the state machine comings and goings should be specified in the state
    machines overview.

Page: 250
Sequence number: 18
Date: 3/5/2003 4:38:15 PM
Type: Highlight
    ACCEPT - DONE (change to "valid state machine" rather than "existing" since state machines are "created" on the fly sometimes.)
    9.2.6.2.8 ST_IFR1:Initiator_Frame_Router state
    The statement << specify an existing state machine, >> should be << specify an active state machine >>.

Page: 250
Sequence number: 19
Date: 2/8/2003 2:56:02 PM
Type: Square
    REJECT (it happens after this state does something)
    9.2.6.2.8 ST_IFR1:Initiator_Frame_Router state
    The statement << The ST_IFR state machine shall terminate after sending a parameter to another state machine. >> should be in
    the state machine overview not here.

Page: 250
Sequence number: 20
Date: 2/9/2003 10:45:47 AM
Type: Strikeout
    REJECT
    9.2.6.3.1 Overview
    The statement << (target frame router) >> should be deleted.

Page: 250
Sequence number: 21
Date: 2/9/2003 10:46:02 AM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.3.1 Overview
    The statement << (target transport server) >> should be deleted.

Page: 250
Sequence number: 22
Date: 2/9/2003 10:46:42 AM
Type: Strikeout
    REJECT (when moved to the correct section it's an appropriate use)
    9.2.6.3.1 Overview
    The statement << (target transport server) >> should be deleted.

Page: 250
Sequence number: 23
Date: 2/2/2003 3:42:34 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.3.1 Overview
    The term << several >> should be deleted. in item d)

Page: 251
Sequence number: 4
Date: 2/2/2003 3:44:07 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.1 Overview
    The term << describes >> should be << shows >>.

Page: 251
Sequence number: 5
Date: 2/2/2003 3:50:00 PM
Type: Circle
    ACCEPT - DONE (used correct connector style so arcs appear)
    Figure 99
    Either all the crossing lines need hops or none should have them. For this figure it looks like none would be OK.

Page: 251
Sequence number: 6
Date: 2/9/2003 10:30:40 AM
Type: Highlight
    REJECT (this is the SAM-3 name)
    Figure 99
    The term << Request >> in the << task Management Request Received >> should be deleted.

Page: 252
Sequence number: 6
Date: 2/2/2003 3:57:57 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.3.2 ST_TFR1:Target_Frame_Router state
    The statement << from the SCSI target device's application layer, >> should be deleted.

Page: 252
Sequence number: 7
Date: 2/2/2003 3:31:52 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.3.2 ST_TFR1:Target_Frame_Router state
    The statement << from the port layer state machine, >> should be deleted.

Page: 252
Sequence number: 8
Date: 2/2/2003 3:29:28 PM
Type: Square
    REJECT - this IS the overview (it's a one state state machine. Added "machine" to the header.
    9.2.6.3.2 ST_TFR1:Target_Frame_Router state
    The statement << The ST_TFR state machine shall be initiated when:
    a) an Accept_Reject OPENs request is received;
    b) a Frame Received confirmation is received; or
    c) a hard reset occurs. >> should be in the state machine overview not here.

Page: 252
Sequence number: 9

Date: 2/2/2003 3:57:27 PM
Type: Square
    REJECT (this IS the overview)
    9.2.6.3.2 ST_TFR1:Target_Frame_Router state
    The statement << Each indication or parameter shall contain the content of the SAS frame.
    The ST_TFR state machine shall terminate after sending a Data-Out Arrived parameter or transport protocol
    service indication. >> should be in the state machine overview not here.

Page: 252
Sequence number: 10
Date: 2/2/2003 3:26:28 PM
Type: Highlight
    ACCEPT - DONE ("this state" accepted, "but key "initiated as the result of")
    9.2.6.3.2 ST_TFR1:Target_Frame_Router state
    The statement << If the ST_TFR state machine was initiated as the result of receiving >> should be << If this state initially received
    >>.

Page: 252
Sequence number: 11
Date: 2/2/2003 3:26:31 PM
Type: Highlight
    ACCEPT - DONE ("this state" accepted, "but key "initiated as the result of")
    9.2.6.3.2 ST_TFR1:Target_Frame_Router state
    The statement << If the ST_TFR state machine was initiated as the result of receiving >> should be << If this state initially received
    >>.

Page: 252
Sequence number: 12
Date: 2/2/2003 3:26:36 PM
Type: Highlight
    ACCEPT - DONE ("this state" accepted, "but key "initiated as the result of")
    9.2.6.3.2 ST_TFR1:Target_Frame_Router state
    The statement << If the ST_TFR state machine was initiated as the result of receiving >> should be << If this state initially received
    >>.

Page: 252
Sequence number: 13
Date: 2/2/2003 3:57:03 PM
Type: Highlight
    REJECT (this IS the overview)
    9.2.6.3.2 ST_TFR1:Target_Frame_Router state
    All these << terminate >>s are a problem because the state machine comings and goings should be specified in the state
    machines overview.

Page: 252
Sequence number: 14
Date: 2/2/2003 3:56:47 PM
Type: Highlight
    ACCEPT - DONE ("as send a corresponding Accept_Reject OPENs)
    9.2.6.3.2 ST_TFR1:Target_Frame_Router state
    The statement << with the received attribute to the port layer state machine. >> should be << with the attribute received with the
    Accept_Reject OPEN to the port layer state machine. >>

Page: 252
Sequence number: 15
Date: 2/2/2003 3:55:43 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.2 ST_TFR1:Target_Frame_Router state
    The statement << the length of the information unit is [28 + (4 x
    additional CDB length)] bytes. >> should be << the length of the information unit (see 9.2.5.1) >>. All the length rules are specified
    elsewhere and should not be here.

Page: 252
Sequence number: 16
Date: 2/2/2003 3:55:01 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.2 ST_TFR1:Target_Frame_Router state

The statement << the length of the information unit is 28 bytes. >> should be << the length of the information unit (see 9.2.5.1) >>. All the length rules are specified elsewhere and should not be here.

Page: 252
Sequence number: 17
Date: 2/2/2003 3:53:35 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.2 ST_TFR1:Target_Frame_Router state
    The statement << information unit is not 28 bytes, >> should be << information unit is not correct, >>

Page: 252
Sequence number: 18
Date: 2/2/2003 3:55:53 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.2 ST_TFR1:Target_Frame_Router state
    The statement << If it conflicts, this state may send a Response >> should be << If the tag is checked and it conflicts this state shall send a >>. There should no requirement for checking but if checked and there is a error then the response should be a shall.

Page: 252
Sequence number: 19
Date: 2/28/2003 3:21:46 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.2 ST_TFR1:Target_Frame_Router state
    The statement << hard reset, then the ST_TFR state >> should be << HARD_RESET Received confirmation , then the ST_TFR state >>

Page: 252
Sequence number: 20
Date: 2/2/2003 3:51:35 PM
Type: Highlight
    REJECT (only the ones named in SAM are "transport protocol service requests". Everything else follow's SAS's plain request terminology.)
    9.2.6.3.2 ST_TFR1:Target_Frame_Router state
    Global
    It looks like the term << request: >> when used in relation to requests from the application layer should be << transport protocol service request >> in all cases in this section. This needs to be fixed.

Page: 252
Sequence number: 21
Date: 2/2/2003 3:26:44 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.2 ST_TFR1:Target_Frame_Router state
    The statement << then the ST_TFR state machine shall discard >> should be << then this state machine shall discard >>.

Page: 252
Sequence number: 22
Date: 2/2/2003 3:26:51 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.2 ST_TFR1:Target_Frame_Router state
    The statement << then the ST_TFR state machine shall discard >> should be << then this state machine shall discard >>.

Page: 253
Sequence number: 1
Date: 1/30/2003 4:09:06 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.3.3.2 Transition ST_TTS1:Target_Request_Response_Router to ST_TTS2:Send_Frame
    The statement << from the SCSI target device's application layer. >> should be deleted.

Page: 253
Sequence number: 2
Date: 1/30/2003 4:08:37 PM
Type: Strikeout
    ACCEPT - DONE

9.2.6.3.3.3 Transition ST_TTS1:Target_Request_Response_Router to ST_TTS4:Receive_Data_Out
The statement << from the SCSI target device's application layer. >> should be deleted.

Page: 253
Sequence number: 3
Date: 1/30/2003 4:08:27 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.3.3.4 Transition ST_TTS1:Target_Request_Response_Router to ST_TTS7:Prepare_Response
    The statement << from the SCSI target device's application layer. >> should be deleted.

Page: 253
Sequence number: 4
Date: 2/2/2003 4:18:27 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.3.4.1 State description
    The statement << This state is entered when a DATA frame is received from the ST_TTS3:Prepare_Send_Data_In state, when an
    XFER_RDY frame is received from the ST_TTS4:Receive_Data_Out state, when a RESPONSE frame is received from the
    ST_TTS7:Prepare_Response state, or after the ST_TTS7:Prepare_Response state has determined that the vendor-specific
    number of retries for a RESPONSE frame has been exceeded. >> should be deleted as we do not describe entry conditions.

Page: 253
Sequence number: 5
Date: 1/30/2003 4:11:00 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.3.3.1 State description
    The statement << from the SCSI target
    device's application layer: >> should be deleted.

Page: 253
Sequence number: 6
Date: 2/2/2003 4:17:25 PM
Type: Square
    ACCEPT - DONE (Created an overview for it)
    9.2.6.3.3.1 State description
    The statement << The ST_TTS state machine shall be initiated when one of the following is received from the SCSI target
    device's application layer:
    a) a Send Data-In transport protocol service request;
    b) a Receive Data-Out transport protocol service request;
    c) a Task Management Function Executed transport protocol service response; or
    d) a Send Command Complete transport protocol service response. >> should be in the state machine overview not here.

Page: 253
Sequence number: 7
Date: 1/30/2003 4:10:42 PM
Type: Highlight
    REJECT (it's already overly redundant to even mention these fields.)
    9.2.6.3.3.1 State description
    The list << a) connection rate;
    b) initiator connection tag;
    c) destination SAS address; and
    d) source SAS address. >>should be moved into the lists for each of the protocol services. I know this will create the same entries
    in each but it would be clearer.

Page: 253
Sequence number: 8
Date: 1/30/2003 4:09:53 PM
Type: Strikeout
    REJECT (these add on to the initial a)b)c) list just above)
    9.2.6.3.3.1 State description
    Delete << also >> and add in the complete list.

Page: 253
Sequence number: 9
Date: 1/30/2003 4:09:59 PM
Type: Strikeout
    REJECT (these add on to the initial a)b)c) list just above)

9.2.6.3.3.1 State description
Delete << also >> and add in the complete list.

Page: 253
Sequence number: 10
Date: 1/30/2003 4:10:05 PM
Type: Strikeout
    REJECT (these add on to the initial a)b)c) list just above)
    9.2.6.3.3.1 State description
    Delete << also >> and add in the complete list.

Page: 253
Sequence number: 11
Date: 1/30/2003 4:07:19 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.3.2 Transition ST_TTS1:Target_Request_Response_Router to ST_TTS2:Send_Frame
    The statement << after the ST_TTS1:Target_Request_Response_Router state has received a Send Data-In transport protocol
    service request >> should be << after receiving a Send Data-In transport protocol service request. >>

Page: 253
Sequence number: 12
Date: 1/30/2003 4:07:40 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.3.3 Transition ST_TTS1:Target_Request_Response_Router to ST_TTS4:Receive_Data_Out
    The statement << after the ST_TTS1:Target_Request_Response_Router state has received a
    Receive Data-Out transport protocol service request >> should be << after receiving a Receive Data-Out transport protocol service
    request. >>

Page: 253
Sequence number: 13
Date: 1/30/2003 4:07:48 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.3.4 Transition ST_TTS1:Target_Request_Response_Router to ST_TTS7:Prepare_Response
    The statement << after the ST_TTS1:Target_Request_Response_Router state has received a Task
    Management >> should be << after receiving a Task
    Management >>.

Page: 254
Sequence number: 6
Date: 2/2/2003 3:34:44 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.3.4.1 State description
    The statement << from the
    port layer state machine. >> should be deleted.

Page: 254
Sequence number: 7
Date: 2/2/2003 3:34:52 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.3.4.1 State description
    The statement << from the port layer state machine. >> should be deleted.

Page: 254
Sequence number: 8
Date: 3/8/2003 3:19:34 PM
Type: Square
    ACCEPT - DONE (but moved to state transition, not state overview)
    9.2.6.3.4.1 State description
    If the TTS state machine was initiated as the result of this state receiving a Send Data-In transport protocol
    service request, the specified values are included with the request, and this state has received an ACK
    Transmitted confirmation, then this state shall transition to the ST_TTS3:Prepare_Send_Data_In state. >>
    should be in the state machine overview not here.

Page: 254

Sequence number: 9
Date: 2/9/2003 10:26:46 AM
Type: Highlight
ACCEPT - DONE
9.2.6.3.4.1 State description
The statement << state shall receive >> should be << state shall wait for receipt >>.

Page: 254
Sequence number: 10
Date: 2/15/2003 6:06:18 PM
Type: Highlight
ACCEPT - DONE (deleted; already in state transition)
9.2.6.3.4.1 State description
The statement << If the frame transmitted was a DATA frame, then this state may transition to the
ST_TTS3:Prepare_Send_Data_In state after receiving a Transmission Status (Frame Transmitted)
confirmation. >> should be moved to the relevant state transition description.

Page: 254
Sequence number: 11
Date: 2/15/2003 6:04:47 PM
Type: Highlight
ACCEPT - DONE (transition already covers it)
9.2.6.3.4.1 State description
The statement << If the confirmation is ACK Received and the transmitted frame was an XFER_RDY frame, then this state shall
transition to the ST_TTS4:Receive_Data_Out state. >> should be moved to the relevant state transition description.

Page: 254
Sequence number: 12
Date: 2/15/2003 6:05:14 PM
Type: Highlight
REJECT (no specific transition is being described so this is harmless here)
9.2.6.3.4.1 State description
The statement << If the frame transmitted was an XFER_RDY frame or a RESPONSE frame, then this state shall wait to receive
an ACK Received, NAK Received, or Connection Failed confirmation before transitioning from this state. >> should be moved to
the relevant state transition description.

Page: 254
Sequence number: 13
Date: 2/9/2003 10:30:03 AM
Type: Highlight
ACCEPT - DONE (reworded quite a bit to get rid of "confirmation transmission status parameter")
9.2.6.3.4.1 State description
The statement << one of the following: >> should be << one of the following occurs >>.

Page: 255
Sequence number: 1
Date: 2/2/2003 3:35:06 PM
Type: Strikeout
ACCEPT - DONE
9.2.6.3.4.1 State description
The statement << from the port layer state machine. >> should be deleted.

Page: 255
Sequence number: 2
Date: 2/2/2003 3:35:16 PM
Type: Strikeout
ACCEPT - DONE
9.2.6.3.4.4 Transition ST_TTS2:Send_Frame to ST_TTS7:Prepare_Response The statement << from
the port layer state machine: >> should be deleted.

Page: 255
Sequence number: 3
Date: 2/2/2003 4:31:38 PM
Type: Square
REJECT (it only happens in this state)
9.2.6.3.4.1 State description
The statement << The ST_TTS state machine shall terminate after sending the Data-In Delivered confirmation. >> should be in
the state machine overview not here.

Page: 255
Sequence number: 4
Date: 2/2/2003 4:31:49 PM
Type: Highlight
    REJECT (it only happens in this state)
    9.2.6.3.4.1 State description
    The statement << The ST_TTS state machine terminates upon receipt of a Cancel Acknowledge confirmation >> should be in the
    state machine overview not here.

Page: 255
Sequence number: 5
Date: 2/9/2003 10:18:02 AM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.4.2 Transition ST_TTS2:Send_Frame to ST_TTS3:Prepare_Send_Data_In
    The statement << this state receives >> should be << receiving >>

Page: 255
Sequence number: 6
Date: 2/9/2003 10:17:55 AM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.4.2 Transition ST_TTS2:Send_Frame to ST_TTS3:Prepare_Send_Data_In
    The statement << this state receives >> should be << receiving >>

Page: 255
Sequence number: 7
Date: 1/30/2003 4:24:35 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.4.3 Transition ST_TTS2:Send_Frame to ST_TTS4:Receive_Data_Out
    The statement << this state has received >> should be << receiving >>

Page: 255
Sequence number: 8
Date: 2/8/2003 5:00:10 PM
Type: Highlight
    ACCEPT - DONE (changed to "received from the application layer")
    9.2.6.3.5.1 State description
    The statement << the tag received from the ST_TTS2:Send_Frame state to construct the frame. >> should be << the received tag
    to construct the frame. >>.

Page: 255
Sequence number: 9
Date: 1/30/2003 4:24:59 PM
Type: Highlight
    ACCEPT - DONE ("after constructing")
    9.2.6.3.5.2 Transition ST_TTS3:Prepare_Send_Data_In to ST_TTS2:Send_Frame
    The statement << after the ST_TTS3:Prepare_Send_Data_In state has >> should be << after this state has >>.

Page: 256
Sequence number: 4
Date: 2/9/2003 10:16:52 AM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.3.6.1 State description
    The statement << This state is entered after one of the following occurs:
    a) a Receive Data-Out service request is received from the ST_TS1:Request_Response_Router state;
    b) a DATA frame is received from the ST_TFR (target frame router) state machine;
    c) an ACK Received confirmation for an XFER_RDY frame was received from the
    ST_TTS2:Send_Frame state;
    d) an XFER_RDY frame has been constructed by the ST_TTS5:Prepare_XFER_RDY state; or
    e) data-out data has been processed by the ST_TTS6:Process_Received_Data_Out state. >> should be deleted as we do not
    describe entry conditions.

Page: 256
Sequence number: 5
Date: 2/2/2003 3:35:25 PM
Type: Strikeout

ACCEPT - DONE
9.2.6.3.6.1 State description
The statement << from the port layer state machine >> should be deleted.

Page: 256
Sequence number: 6
Date: 2/2/2003 3:35:33 PM
Type: Strikeout
ACCEPT - DONE
9.2.6.3.6.1 State description
The statement << from the ST_TFR state machine. >> should be deleted.

Page: 256
Sequence number: 7
Date: 2/2/2003 4:13:51 PM
Type: Strikeout
ACCEPT - DONE
9.2.6.3.6.1 State description
The statement << from the ST_TFR1:Target_Frame_Router state. >> should be deleted.

Page: 256
Sequence number: 8
Date: 2/9/2003 10:01:13 AM
Type: Highlight
ACCEPT - DONE (and included first burst handling text too)
9.2.6.3.6.1 State description
The statement << If this state was entered as the result of receiving a Receive Data-Out service request from the
ST_TS1:Request_Response_Router state then this state shall transition to the
ST_TTS5:Prepare_XFER_RDY state. >> should be moved to the relevant state transition description.

Page: 256
Sequence number: 9
Date: 1/30/2003 4:19:06 PM
Type: Highlight
REJECT (it terminates after this state does that)
9.2.6.3.6.1 State description
The statement << The ST_TTS state machine shall terminate after sending the confirmation. >> should be in the state machine
overview not here.

Page: 256
Sequence number: 10
Date: 1/30/2003 4:18:59 PM
Type: Highlight
REJECT (it terminates after this state does that)
9.2.6.3.6.1 State description
The statement << The ST_TTS state machine shall terminate after
sending the confirmation. >> should be in the state machine overview not here.

Page: 256
Sequence number: 11
Date: 1/30/2003 4:18:53 PM
Type: Highlight
REJECT (it terminates after this state does that)
9.2.6.3.6.1 State description
The statement << The
ST_TTS state machine shall terminate after sending the confirmation. >> should be in the state machine overview not here.

Page: 256
Sequence number: 12
Date: 1/30/2003 4:18:47 PM
Type: Highlight
REJECT (it terminates after this state does that)
9.2.6.3.6.1 State description
The statement << The
ST_TTS state machine shall terminate after sending the confirmation. >> should be in the state machine overview not here.

Page: 256
Sequence number: 13
Date: 2/9/2003 10:16:24 AM

Type: Highlight
    ACCEPT - DONE
    9.2.6.3.6.1 State description
    The statement << If the target transport tag value matches the value sent with the corresponding XFER_RDY frame, and the
    length of the data does not exceed that specified by the XFER_RDY frame that requested the data, then this
    state shall transition to the ST_TTS6:Process_Received_Data_Out state. >> should be moved to the relevant state transition
    description.

Page: 256
Sequence number: 14
Date: 2/9/2003 10:16:10 AM
Type: Highlight
    ACCEPT - DONE (deleted this arc entirely; let TTS5 go directly to TTS2)
    9.2.6.3.6.1 State description
    The statement << If this state is entered from the ST_TTS5:Prepare_XFER_RDY state, then this state shall transition to the
    ST_TTS2:Send_Frame state. >> should be moved to the relevant state transition description.

Page: 256
Sequence number: 15
Date: 1/30/2003 4:19:28 PM
Type: Highlight
    REJECT (it terminates after this state does that)
    9.2.6.3.6.1 State description
    The statement << The ST_TTS
    state machine shall terminate after sending the confirmation. >> should be in the state machine overview not here.

Page: 257
Sequence number: 1
Date: 2/2/2003 4:32:50 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.3.6.4 Transition ST_TTS4:Receive_Data_Out to ST_TTS6:Process_Received_Data_Out
    The statement << from the ST_TFR (target frame router) state machine. >> should be deleted.

Page: 257
Sequence number: 2
Date: 2/2/2003 4:26:02 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.3.9.1 State description
    The statement << by this state from the ST_TFR state machine. >> should be deleted.

Page: 257
Sequence number: 3
Date: 2/8/2003 3:46:06 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.3.9.1 State description
    The statement << This state is entered after one of the following occurs:
    a) a Response Data parameter is received by this state from the ST_TFR state machine;
    b) a Task Management Function Executed transport protocol service response was received by the
    ST_TTS1:Target_Request_Response_Router state from the SCSI target device's application layer;
    c) a Send Command Complete transport protocol service response was received by the
    ST_TTS1:Target_Request_Response_Router state from the SCSI target device's application layer; or
    d) the ST_TTS2:Send_Frame state receives something other than a Transmission Status (Frame Transmitted)
    confirmation followed by an ACK Received confirmation for a RESPONSE frame from the port
    layer state machine (i.e., the frame transmission was unsuccessful). >> should be deleted as we do not describe entry conditions.

Page: 257
Sequence number: 4
Date: 2/2/2003 4:26:26 PM
Type: Square
    ACCEPT - DONE (moved to new overview section)
    9.2.6.3.9.1 State description
    The statement << If not already running, the ST_TTS state machine shall be initiated when a Response Data parameter is
    received. >> should be in the state machine overview not here.

Page: 257
Sequence number: 5

Date: 1/30/2003 4:13:06 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.6.2 Transition ST_TTS4:Receive_Data_Out to ST_TTS2:Send_Frame
    The statement << This transition shall occur after this state has received an XFER_RDY frame from the
    ST_TTS5:Prepare_XFER_RDY state. >> should be << This transition shall occur if this state is entered from the
    ST_TTS5:Prepare_XFER_RDY state. >>

Page: 257
Sequence number: 6
Date: 1/30/2003 4:13:57 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.6.4 Transition ST_TTS4:Receive_Data_Out to ST_TTS6:Process_Received_Data_Out
    The statement << after the ST_TTS4:Receive_Data_Out state receives a Data-Out Arrived parameter >> should be << after
    receiving a Data-Out Arrived parameter >>

Page: 257
Sequence number: 7
Date: 1/30/2003 4:13:32 PM
Type: Highlight
    ACCEPT - DONE
    The statement << This transition shall occur after a Receive Data-Out transport protocol service request has been received by the
    ST_TTS4:Receive_Data_Out state from the ST_TTS1:Request_Response_Router state. >> should be << This transition shall
    occur if this state is entered from the ST_TTS1:Request_Response_Router state. >>

Page: 257
Sequence number: 8
Date: 1/30/2003 4:14:36 PM
Type: Highlight
    ACCEPT - DONE (changed to "after constructing")
    9.2.6.3.7.2 Transition ST_TTS5:Prepare_XFER_RDY to ST_TTS4:Receive_Data_Out
    The statement << after the ST_TTS5:Prepare_XFER_RDY state has >> should be << after this state has >>.

Page: 258
Sequence number: 3
Date: 2/8/2003 4:18:21 PM
Type: Strikeout
    ACCEPT - DONE (this is actually one of those odd "receiving stuff with a transition" scenarios. Reworded to say "if this state
    machine receives" which avoids the transition-with-contents issue.")
    9.2.6.3.9.1 State description
    The statement << from the ST_TTS1:Target_Request_Response_Router state, >> should be deleted.

Page: 258
Sequence number: 4
Date: 2/2/2003 3:36:27 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.3.9.1 State description
    The statement << from the port layer state machine >> should be deleted.

Page: 258
Sequence number: 5
Date: 2/8/2003 3:47:37 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.3.9.1 State description
    The statement << from the ST_TFR state
    machine, >> should be deleted.

Page: 258
Sequence number: 6
Date: 2/8/2003 3:47:47 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.3.9.1 State description
    The statement << from the ST_TFR state
    machine, >> should be deleted.

Page: 258
Sequence number: 7
Date: 2/8/2003 4:55:30 PM
Type: Highlight
REJECT (convention seems to be to use lowercase here... see list above. It's not a field reference, it's the name of a single bit value)
9.2.6.3.9.1 State description
The term << retransmit >> as in retransmit bit should be in small caps.

Page: 259
Sequence number: 4
Date: 1/30/2003 4:26:49 PM
Type: Strikeout
REJECT - why?
9.3.2 SATA tunneling for multiple STP initiator ports
The statement << from an STP initiator
port, >> should be deleted.

Page: 259
Sequence number: 5
Date: 1/30/2003 4:22:46 PM
Type: Highlight
ACCEPT - DONE ("after constructing")
9.2.6.3.9.2 Transition ST_TTS7:Prepare_Response to ST_TTS2:Send_Frame
The statement << after the ST_TTS7:Prepare_Response state has >> should be << after this state has >>.

Page: 259
Sequence number: 6
Date: 2/15/2003 6:15:05 PM
Type: Highlight
ACCEPT - DONE
9.3.2 SATA tunneling for multiple STP initiator ports
Why is the term << PHY OPERATION >> in small caps? I don't think it should be.

Page: 259
Sequence number: 7
Date: 1/6/2003 6:16:00 PM
Type: Highlight
ACCEPT - DONE
9.3.2 SATA tunneling for multiple STP initiator ports
The statement << In this state, >> should be << Under these conditions, >>.

Page: 259
Sequence number: 8
Date: 2/15/2003 6:15:13 PM
Type: Highlight
ACCEPT - DONE
9.3.2 SATA tunneling for multiple STP initiator ports
Why is the term << PHY OPERATION >> in small caps? I don't think it should be.

Page: 259
Sequence number: 9
Date: 2/15/2003 6:18:28 PM
Type: Highlight
ACCEPT - DONE (reworded in terms of receives, since it's describing requirements on the recipient)
9.3.2 SATA tunneling for multiple STP initiator ports
This statement << STP initiator port issues an >> should be << STP initiator port sends an >>

Page: 259
Sequence number: 10
Date: 2/15/2003 6:15:27 PM
Type: Highlight
ACCEPT - DONE
9.3.2 SATA tunneling for multiple STP initiator ports
Why is the term << PHY OPERATION >> in small caps? I don't think it should be.

Page: 259
Sequence number: 11
Date: 2/15/2003 6:14:44 PM

Type: Highlight
    ACCEPT - DONE
    9.3.2 SATA tunneling for multiple STP initiator ports
    Why is the term << PHY OPERATION >> in small caps? I don't think it should be.

Page: 259
Sequence number: 12
Date: 2/15/2003 6:17:16 PM
Type: Highlight
    ACCEPT - DONE (added to acronym list)
    9.3.3 BIST Activate FIS
    The acronym << BIST >> is not in the acronyms list. It needs to be added or removed from here.

Page: 260
Sequence number: 4
Date: 1/30/2003 4:28:59 PM
Type: Highlight
    REJECT (but reworded whole paragraph in terms of SMP target ports)
    9.4.1 SMP overview
    The statement << Other target ports >> should be << Target ports >>.

Page: 260
Sequence number: 5
Date: 1/22/2003 5:38:38 PM
Type: Highlight
    ACCEPT - DONE (globally changed target port to SMP target port or SSP target port or STP target port, and initiator port to SMP
    initiator port or SSP initiator port or STP initiator port)
    Figure 100
    The label << Target port >> should be << Expander port or Target port >>.

Page: 260
Sequence number: 6
Date: 1/30/2003 4:28:10 PM
Type: Highlight
    REJECT - "determined by" is too active a verb for this - sounds like the function is going to do something to figure it out. "based
    on" works better.
    9.4.2 SMP_REQUEST frame
    The statement << length is based on the function >> should be << length is based on the function >> length is determined by the
    selected function >>.

Page: 260
Sequence number: 7
Date: 1/30/2003 5:01:10 PM
Type: Note
    ACCEPT - DONE
    Table 102
    There needs to be a row labeled << Fill bytes if Needed >> added to this table.

Page: 261
Sequence number: 5
Date: 1/30/2003 5:03:18 PM
Type: Highlight
    ACCEPT - DONE ("by the SMP target port")
    9.4.3 SMP_RESPONSE frame
    global for SMP
    The statement << the target port >> should be << the target port or expander port >> or << destination port >>

Page: 261
Sequence number: 6
Date: 1/6/2003 6:16:00 PM
Type: Note
    ACCEPT - DONE
    Table 103
    There needs to be a row labeled << Fill bytes if Needed >> added to this table.

Page: 261
Sequence number: 7
Date: 1/6/2003 6:16:00 PM
Type: Note

ACCEPT - DONE
9.4.3 SMP_RESPONSE frame
There is no description of what the << FUNCTION >> field is. This needs to be fixed.

Page: 261
Sequence number: 8
Date: 1/6/2003 6:16:00 PM
Type: Highlight
ACCEPT - DONE (with no xref)
9.4.3 SMP_RESPONSE frame
The statement << requested, and are described in the
model section. >> should be << requested (see x.x.x.). >>

Page: 262
Sequence number: 1
Date: 1/30/2003 5:24:21 PM
Type: Highlight
REJECT (request in the generic state machine sense)
9.4.4.1 Overview
The statement << that process requests from the management application layer and >> should be << that process management requests and >> .

Page: 262
Sequence number: 2
Date: 1/30/2003 5:24:25 PM
Type: Highlight
REJECT (request in the generic state machine sense)
9.4.4.2.1 Overview
The statement << processes requests from the management application layer. >> should be << processes management requests. >>.

Page: 262
Sequence number: 3
Date: 1/30/2003 5:23:20 PM
Type: Highlight
ACCEPT - DONE
9.4.4.2.1 Overview
The term << communicated >> should be << sent >>.

Page: 262
Sequence number: 4
Date: 1/30/2003 5:23:49 PM
Type: Highlight
ACCEPT - DONE
9.4.4.2.1 Overview
The statement << in a return confirmation. >> should be <<as a confirmation. >>.

Page: 263
Sequence number: 4
Date: 1/30/2003 5:24:53 PM
Type: Strikeout
ACCEPT - DONE
9.4.4.2.2.1 State description
The statement << from the management application layer. >> should be deleted.

Page: 263
Sequence number: 5
Date: 2/28/2003 4:38:54 PM
Type: Highlight
ACCEPT - DONE
9.4.4.2.2.1 State description
The statement << of values to be used in the CONNECTION RATE, INITIATOR
CONNECTION TAG, DESTINATION SAS ADDRESS, and SOURCE SAS ADDRESS fields in the OPEN address frame, and
the FUNCTION and ADDITIONAL REQUEST BYTES fields in the SMP_REQUEST frame. >> should list the actual values, not the
fields they go into, in an a,b,c list like the ones in the several of the other ST state descriptions.

Page: 264
Sequence number: 5
Date: 2/28/2003 4:51:46 PM

Type: Strikeout
REJECT
9.4.4.2.4.1 State description
The statement << from the port layer >> should be deleted.

Page: 264
Sequence number: 6
Date: 1/30/2003 5:38:03 PM
Type: Highlight
ACCEPT - DONE
9.4.4.3.1 Overview
The statement << is communicated from the port layer and that confirmation is sent to the management
application layer. >> should be << is sent to the management
application layer. >>.

Page: 264
Sequence number: 7
Date: 2/28/2003 4:51:28 PM
Type: Strikeout
ACCEPT - DONE
using the following arguments received with the transition into this state:
a) function; and
b) additional request bytes.
9.4.4.2.3.1 State description
The statement << received in the MT_ID1:Idle to MT_ID2:Send transition, >> should be deleted.

Page: 264
Sequence number: 8
Date: 2/28/2003 4:51:12 PM
Type: Highlight
ACCEPT - DONE (as a)b) list)
9.4.4.2.3.1 State description
The statement << frame using the function and additional request bytes arguments >> should be << frame using the received
function and additional request bytes arguments >>

Page: 264
Sequence number: 9
Date: 2/28/2003 4:53:16 PM
Type: Highlight
ACCEPT - DONE (reword like previous sentence)
9.4.4.2.3.1 State description
The statement << used for the CONNECTION RATE, INITIATOR CONNECTION TAG, DESTINATION SAS ADDRESS, and
SOURCE SAS ADDRESS fields in the OPEN address frame >> should list the actual values, not the fields they go into, in an a,b,c
list like the ones in the several of the other ST state descriptions.

Page: 264
Sequence number: 10
Date: 1/30/2003 5:36:19 PM
Type: Highlight
ACCEPT - DONE
The statement << after a Transmission Status (SMP Frame Transmitted) confirmation is received. >> should be << after receiving
a Transmission Status (SMP Frame Transmitted) confirmation. >>.

Page: 264
Sequence number: 11
Date: 2/28/2003 4:46:51 PM
Type: Highlight
REJECT (but reworded per standard timer convention)
9.4.4.2.4.1 State description
The statement << This state shall initialize a SMP frame receive time out timer to a vendor-specific time and start the timer upon
entry into this state. >> should be << Upon
entry into this state, this state shall initialize a SMP frame receive time out timer to a vendor-specific time and start the timer. >>

Page: 264
Sequence number: 12
Date: 2/28/2003 4:46:10 PM
Type: Highlight
REJECT (but reworded to get rid of the "has sent" implied shalls. Moved all the "if ... then this state shall" rules into the state
description. Simplified the transition text to just be "if this state has sent" each of the possibilities)

9.4.4.2.4.2 Transition MT_ID3:Receive to MT_ID1:Idle
The statement
<< a) an Frame Received (SMP) confirmation is received, and, as a result, this state has sent an SMP Frame Pair Sent/Received confirmation to the management application layer;
b) a Connection Closed or Frame Received (SMP Failure) confirmation is received, and, as a result, this state has sent an SMP Frame Tx/Rcv Failure confirmation to the management application layer; or
c) the SMP frame receive time out timer is exceeded before a SMP Frame Pair Sent/Received confirmation is received, and, as a result, this state has sent an SMP Frame Receive Time out confirmation to the management application layer and has sent an SMP Transmit Break request to the port layer. >> should be
<< a) receiving a Frame Received (SMP) confirmation and after sending an SMP Frame Pair Sent/Received confirmation to the management application layer;
b) receiving a Connection Closed or Frame Received (SMP Failure) confirmation and after sending an SMP Frame Tx/Rcv Failure confirmation to the management application layer; or
c) the SMP frame receive time out timer times out before a SMP Frame Pair Sent/Received confirmation is received and after this state has sent an SMP Frame Receive Timeout confirmation to the management application layer and has sent an SMP Transmit Break request to the port layer. >>

Page: 264
Sequence number: 13
Date: 2/28/2003 4:47:10 PM
Type: Highlight
    ACCEPT - DONE
    9.4.4.3.1 Overview
    The term << forwards >> should be << sends >>.

Page: 265
Sequence number: 3
Date: 1/30/2003 5:38:35 PM
Type: Strikeout
    ACCEPT - DONE
    9.4.4.3.2.1 State description
    The statement << from the port layer. >> should be deleted.

Page: 265
Sequence number: 4
Date: 1/30/2003 5:43:39 PM
Type: Strikeout
    ACCEPT - DONE
    9.4.4.3.3.1 State description
    The statement << from the management application layer. >> should be deleted.

Page: 265
Sequence number: 5
Date: 1/30/2003 5:40:16 PM
Type: Highlight
    ACCEPT - DONE (added shall send to the state description, and based this just on after sending)
    9.4.4.3.2.2 Transition MT_TD1:Idle to MT_TD2:Respond
    The statement << occur after an Frame Received (SMP) confirmation is received, and, as a result, this state
    has sent an SMP Frame Received confirmation to the >> should be << occur after receiving a Frame Received (SMP)
    confirmation   and after sending an SMP Frame Received confirmation to the >>

Page: 265
Sequence number: 6
Date: 1/30/2003 5:41:05 PM
Type: Highlight
    ACCEPT - DONE (slightly different)
    9.4.4.3.3.1 State description
    The statement << Upon receipt, this state
    shall send a Transmit Frame (SMP) request to the port layer. >> should be a new paragraph and changed to << This state
    shall send a Transmit Frame (SMP) request to the port layer after receiving a Tx SMP Frame request. >>.

Page: 265
Sequence number: 7
Date: 2/28/2003 4:54:45 PM
Type: Highlight
    REJECT (but moved shalls into state description and simplified transition text)
    9.4.4.3.3.2 Transition MT_TD2:Respond to MT_TD1:Idle
    The statement
    << a) a Transmission Status (SMP Frame Transmitted) confirmation is received; or

b) a Connection Closed confirmation is received, and, as a result, this state has sent an SMP Connection Closed confirmation to the management application layer. >> should be <<
a) receiving a Transmission Status (SMP Frame Transmitted) confirmation ; or
b) receiving a Connection Closed confirmation and after sending an SMP Connection Closed confirmation to the management application layer. >>.

Page: 267
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    10.1.1.1 Transport protocol services overview
    The statement << and how each
    transport protocol service is implemented in SSP. >> should be << and the SSP implementation of each
    transport protocol service. >>.

Page: 267
Sequence number: 2
Date: 1/6/2003 6:16:00 PM
Type: Strikeout
    REJECT - requests and confirmations are only used by state machines. This is not referencing a specific state machine.
    10.1.1.1 Transport protocol services overview
    The terms << state machines >> should be deleted as we don't normally refer to state machines only layers.

Page: 267
Sequence number: 3
Date: 2/1/2003 1:58:33 PM
Type: Highlight
    ACCEPT - DONE
    10.1.1.2 Send SCSI Command transport protocol service
    The statement << protocol service request to have an initiator port >> should be << protocol service request to request an initiator
    port >>

Page: 268
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    REJECT - no improvement
    10.1.1.2 Send SCSI Command transport protocol service
    The statement << shows how the arguments to the Send SCSI Command transport protocol service are used. >> should be <<
    shows the usage of the Send SCSI Command transport protocol service arguments. >>.

Page: 268
Sequence number: 2
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    REJECT - no improvement
    10.1.1.3 SCSI Command Received transport protocol service
    The statement << shows how the arguments to the SCSI Command Received transport protocol service are
    determined. >> should be << shows the usage of the SCSI Command Received transport protocol service arguments >>

Page: 268
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Strikeout
    REJECT - the only other place is 9.2.5.1 which is a summary of error handling with cross references to the home of each rule.
    This is the "normative" location for this rule (bridging to SAM-3) and is pointed to by 9.2.4.5 and elsewhere.
    10.1.1.3 SCSI Command Received transport protocol service
    The statement << If a target port calls SCSI Command Received () with a TAG already in use (i.e., an overlapped command), the
    device server responses are defined in SAM-3. >> should be deleted as the tag checking rules are defined elsewhere in this
    document.

Page: 269
Sequence number: 2
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    REJECT - no improvement
    10.1.1.4 Send Command Complete transport protocol service
    The statement << shows how the arguments to the Send Command Complete transport protocol service are used. >> should be

<< shows the usage of the Send Command Complete transport protocol service arguments. >>.

Page: 269
Sequence number: 3
Date: 2/1/2003 1:58:45 PM
Type: Highlight
    ACCEPT - DONE
    10.1.1.4 Send Command Complete transport protocol service
    The statement << have a target port transmit >> should be << request a target port transmit >>.

Page: 270
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    REJECT - no improvement
    10.1.1.5 Command Complete Received transport protocol service
    The statement << shows how the arguments to the Command Complete Received transport protocol service are
    determined. >> should be << shows the usage of the Command Complete Received transport protocol service arguments. >>.

Page: 270
Sequence number: 2
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE (globally)
    10.1.1.6 Send Data-In transport protocol service
    The term << I_T_L_Q >> should be << I_T_L_Q nexus >> in all cases.

Page: 270
Sequence number: 3
Date: 2/1/2003 1:59:16 PM
Type: Highlight
    ACCEPT - DONE
    10.1.1.6 Send Data-In transport protocol service
    The statement << have a target port transmit >> should be << request a target port transmit >>.

Page: 271
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    REJECT - no improvement
    10.1.1.6 Send Data-In transport protocol service
    The statement << shows how the arguments to the Send Data-In transport protocol service are used. >> should be << shows the
    usage of the Send Data-In transport protocol service arguments. >>.

Page: 271
Sequence number: 2
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    REJECT - no improvement
    10.1.1.7 Data-In Delivered transport protocol service
    The statement << shows how the arguments to the Data-In Delivered transport protocol service are determined. >> should be <<
    shows the usage of the Data-In Delivered transport protocol service arguments. >>.

Page: 271
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE (globally)
    10.1.1.8 Receive Data-Out transport protocol service
    The term << I_T_L_Q >> should be << I_T_L_Q nexus >> in all cases.

Page: 271
Sequence number: 4
Date: 1/6/2003 6:16:00 PM
Type: Square
    ACCEPT - DONE (changed "returned" to "completed successfully" - this means the device server is waiting for the function call to
    be invoked by the target port.)
    10.1.1.8 Receive Data-Out transport protocol service
    The statement << A device server shall not call Receive Data Out () for a given I_T_L_Q until Data Out Received () has returned

for the previous Receive Data Out () call (i.e., no XFER_RDY until all write DATA frames for the previous XFER_RDY frame, if any, and has provided link layer acknowledgement for all of the previous write DATA frames for that I_T_L_Q). >> does not parse I think it should be << A device server shall not call Receive Data Out () for a given I_T_L_Q nexus until Data Out Received () has been returned for the previous Receive Data Out () call (i.e., no XFER_RDY sent until all write DATA frames for the previous XFER_RDY frame, if any, and have been provided by link layer acknowledgements for all of the previous write DATA frames for that I_T_L_Q nexus). >>

Page: 271
Sequence number: 5
Date: 2/1/2003 1:59:25 PM
Type: Highlight
    ACCEPT - DONE
    10.1.1.7 Data-In Delivered transport protocol service
    The statement << have a target port transmit >> should be << request a target port transmit >>.

Page: 272
Sequence number: 2
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    REJECT - no improvement
    10.1.1.8 Receive Data-Out transport protocol service
    The statement << shows how the arguments to the Receive Data-Out transport protocol service are used. >> should be << shows the usage of the Receive Data-Out transport protocol service arguments. >>.

Page: 272
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    REJECT - no improvement
    10.1.1.9 Data-Out Received transport protocol service
    The statement << shows how the arguments to the Data-Out Received transport protocol service are determined. >> should be << shows the usage of the Data-Out Received transport protocol service arguments. >>.

Page: 272
Sequence number: 4
Date: 2/1/2003 1:59:50 PM
Type: Highlight
    ACCEPT - DONE
    10.1.1.10 Send Task Management Request transport protocol service
    The statement << have an initiator port transmit >> should be << request an initiator port transmit >>.

Page: 273
Sequence number: 2
Date: 2/1/2003 2:00:24 PM
Type: Highlight
    ACCEPT - DONE
    10.1.1.12 Task Management Function Executed transport protocol service
    The statement << have a target port transmit >> should be << request a target port transmit >>.

Page: 273
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    REJECT - no improvement
    10.1.1.10 Send Task Management Request transport protocol service
    shows how the arguments to the Send Task Management Request transport protocol service are used. >> should be << shows the usage of the Send Task Management Request transport protocol service arguments. >>.

Page: 273
Sequence number: 4
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    REJECT - no improvement
    10.1.1.11 Task Management Request Received transport protocol service
    The statement << shows how the arguments to the Task Management Request Received transport protocol service are determined. >> should be << shows the usage of the Task Management Request Received transport protocol service arguments. >>.

Page: 273

Sequence number: 5
Date: 1/30/2003 2:39:36 PM
Type: Strikeout

ACCEPT - DONE (delete this paragraph. There are no such rules in either SAM-3.)

10.1.1.11 Task Management Request Received transport protocol service

The statement << If a target port calls Task Management Request Received () with a TAG already in use, the device server responses are defined in SAM-3. >> should be deleted as the tag checking rules are defined elsewhere in this document.

Page: 274
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Highlight

REJECT - no improvement

10.1.1.12 Task Management Function Executed transport protocol service

The statement << shows how the arguments to the Task Management Function Executed transport protocol service are used. >> should be << shows the usage of the Task Management Function Executed transport protocol service arguments. >>.

Page: 275
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Highlight

REJECT - no improvement

10.1.1.13 Received Task Management Function-Executed transport protocol service

The statement << shows how the arguments to the Received Task Management Function-Executed transport protocol service are determined. >> should be << shows the usage of the Received Task Management Function-Executed transport protocol service arguments. >>.

Page: 275
Sequence number: 2
Date: 1/6/2003 6:16:00 PM
Type: Note

ACCEPT - DONE

10.1.2 Device server error handling

The information in this section could be placed in a single table. This should make the presentation of the error information easier to determine.

<< If a device server calls Receive Data-Out () and receives a Delivery Result that indicate a deliver failure the device server shall respond as shown in table xx.

Table xx - Response to Delivery Result DELIVERY FAILURE

Columns would be: Delivery Result : Status : Sense Key : Additional sense code: >>

Page: 276
Sequence number: 2
Date: 1/30/2003 2:27:49 PM
Type: Strikeout

ACCEPT - DONE (per Jan WG - keep the list but as an example)

10.1.3 Application client error handling

The statement << it determines the ACK for the RESPONSE frame was seen by the target port. This is indicated by: >> should be deleted. The workings of the lower layers is not needed here.

JanWG: Change to:

shall not use the tag until it determines the tag is no longer in use by the logical unit (e.g., the ACK for the RESPONSE frame was seen by the target port). Examples of ways the app client may determine when a tag may be reused are:

a) b) c)

Page: 276
Sequence number: 3
Date: 2/1/2003 2:06:24 PM
Type: Square

REVIEW PROTOCOL WG

ACCEPT - DONE (A table doesn't help; changed the wording a bit.)

The statement << If an application client calls Send SCSI Command () and an initiator port calls Command Complete Received () and delivers a Service Response of Service Delivery of Target Failure - ACK/NAK Timeout, the application client shall send a QUERY TASK task management function with Send Task Management Request () to determine whether the command was received successfully. If Received Task Management Function Executed () returns a Service Response of FUNCTION SUCCEEDED, the application client shall assume the

command was delivered successfully. If it returns a Service Response of FUNCTION COMPLETE, and Command Complete Received () has not yet been called a second time for the command in question, the application client shall assume the command was not delivered successfully and may reuse the tag. >>

is very awkward. There must be a better way to present this information. May by some kind of table like the one suggested in the target error handling suggested in the above comment.

Page: 277
Sequence number: 2
Date: 1/6/2003 6:16:00 PM
Type: Highlight
ACCEPT - DONE (data that shall be returned is described)
10.1.5.1 INQUIRY command
The statement << is modified as described >> should be << by a SAS device is described >>.

Page: 277
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Highlight
ACCEPT - DONE
10.1.5.4 START STOP UNIT command
The statement << are modified as described >> should be << by a SAS device is described >>.

Page: 279
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Highlight
ACCEPT - DONE
10.1.6.1.3 MAXIMUM CONNECT TIME LIMIT field
The statement << (i.e., a value of one in this field specifies that the time shall be
less than or equal to 100 µs, a value of two in this field specifies that the time shall be less than or equal to 200
µs, etc.). >> should be << (e.g., a value of one in this field specifies that the time shall be
less than or equal to 100 µs, a value of two in this field specifies that the time shall be less than or equal to 200
µs). >>

Page: 279
Sequence number: 2
Date: 1/6/2003 6:16:00 PM
Type: Highlight
ACCEPT - DONE
10.1.6.1.4 MAXIMUM BURST SIZE field
The statement << (i.e., a value of one in this field specifies that the number
of bytes transferred to the initiator port for the nexus shall be less than or equal to 512, a value of two in this
field specifies that the number of bytes transferred to the initiator port for the nexus shall be less than or equal
to 1 024, etc.). >> should be << (e.g., a value of one in this field specifies that the number
of bytes transferred to the initiator port for the nexus shall be less than or equal to 512, a value of two in this
field specifies that the number of bytes transferred to the initiator port for the nexus shall be less than or equal
to 1 024). >>

Page: 279
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Highlight
ACCEPT - DONE (added "frame" after XFER_RDY wherever it was not already followed by "information unit" or used in a signal
name)
10.1.6.1.5 FIRST BURST SIZE field
The term << XFER_RDY frame >> is << XFER_RDY >> in many other places in the standard. This needs to be stated one way. I
believe just << XFER_RDY >> is used everywhere else.

Page: 279
Sequence number: 4
Date: 1/6/2003 6:16:00 PM
Type: Highlight
ACCEPT - DONE
10.1.6.1.5 FIRST BURST SIZE field
The statement << (i.e., a value of one in this field specifies that the number of bytes transferred by the initiator port shall be less
than or equal to 512, a value of two in this field specifies that the number of bytes transferred by the initiator port shall be less than
or equal to 1 024, etc.). >> should be << (e.g., a value of one in this field specifies that the number of bytes transferred by the
initiator port shall be less than or equal to 512, a value of two in this field specifies that the number of bytes transferred by the
initiator port shall be less than or equal to 1 024). >>

Page: 279
Sequence number: 5
Date: 1/6/2003 6:16:00 PM
Type: Highlight

ACCEPT - DONE
10.1.6.1.5 FIRST BURST SIZE field
The statement << size, i.e., an initiator port shall transmit no
data frames to the target port before receiving an XFER_RDY frame. >> should be << size (i.e., an initiator port shall transmit no
data frames to the target port before receiving an XFER_RDY frame). >>

Page: 281
Sequence number: 3
Date: 1/30/2003 1:45:04 PM
Type: Highlight
ACCEPT - DONE ("create" doesn't work. Changed to "recognizing")
10.1.6.2.2 Protocol-Specific Port mode page - short format
The statement << connection time outs before treating it as an I_T nexus loss >> should be << connection time outs before
creating an I_T nexus loss >>

Page: 281
Sequence number: 4
Date: 1/14/2003 11:14:51 AM
Type: Highlight
ACCEPT - DONE
10.1.6.2.2 Protocol-Specific Port mode page - short format
****
The statement << If the mode page is implemented, the default setting shall be 2 000 ms. >>is a problem. We have never specified
a default value for a more page value. Why are we going it here? I don't believe we should start now. We could possibly
recommend the value in a note. Reword to << Note xx: If this mode page is implemented a non-zero default value should be
specified. It is recommend that this value be 2 000 ms. >>

Page: 281
Sequence number: 5
Date: 1/30/2003 1:46:51 PM
Type: Highlight
REJECT (but changed to "never recognize an I_T nexus loss". Details about specific OPEN_REJECTs belong in the port layer.)
10.1.6.2.2 Protocol-Specific Port mode page - short format
The statement << indicates the target port shall never consider rejections an I_T nexus loss. >> should be << indicates the target
port shall not stop retrying OPEN_REJECT (NO DESTINATION), OPEN_REJECT (CONNECTION RATE NOT SUPPORTED)
connection requests.

Page: 281
Sequence number: 6
Date: 2/8/2003 12:18:52 PM
Type: Strikeout
REJECT - there is an SMP table with a field like number of phys that are not followed by descriptors. Why not make it clear? If the
field were called "number of phy mode descriptors" I would agree (but I don't want to rename it to that)
10.1.6.2.3 Protocol-Specific Port mode page - Phy Control And Discover subpage
The statement << and indicates the number of SAS
phy mode descriptors that follow. >> is obvious and should be deleted.

Page: 282
Sequence number: 1
Date: 2/15/2003 2:59:19 PM
Type: Highlight
REJECT - listing all the fields that way will take 1/4 of a page while conveying little useful information. These paragraphs just say
they're defined elsewhere.
10.1.6.2.3 Protocol-Specific Port mode page - Phy Control And Discover subpage
The statement << The PHY IDENTIFIER field, ATTACHED DEVICE TYPE field, NEGOTIATED PHYSICAL LINK RATE field,
ATTACHED SSP INITIATOR bit, ATTACHED STP INITIATOR bit, ATTACHED SMP INITIATOR bit, ATTACHED SSP TARGET
bit, ATTACHED STP TARGET bit, ATTACHED SMP TARGET bit, ATTACHED SAS ADDRESS field, SAS ADDRESS field,
HARDWARE MINIMUM PHYSICAL LINK RATE field, and HARDWARE MAXIMUM PHYSICAL LINK RATE field are defined in the
SMP DISCOVER function (see 10.3.1.4). >> needs to made into an a,b,c list.

Page: 283
Sequence number: 1
Date: 1/30/2003 1:37:33 PM
Type: Highlight
REJECT (the list would take as much space as the table; it's just a redirection to another section anyway)
10.1.6.2.3 Protocol-Specific Port mode page - Phy Control And Discover subpage
The statement << The PHY OPERATION field, PROGRAMMED MINIMUM PHYSICAL LINK RATE field, and PROGRAMMED
MAXIMUM
PHYSICAL LINK RATE field are defined in the SMP PHY CONTROL function >> . >> needs to made into an a.b.c list.

Page: 283
Sequence number: 2
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    REJECT - this terminology works better for multiprotocol devices
    Table 124
    The term << Protocol-specific log parameter >> should be changed to << SAS log parameter >> in all cases.

Page: 284
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    REJECT
    Table 125
    The term << Protocol-specific log parameter >> should be changed to << SAS log parameter >> in all cases.

Page: 285
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    Table 126
    Left justify all the entries in the << Description >> column.

Page: 286
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    REJECT
    10.1.7.1 Protocol-Specific log page for SAS
    The statement << The PHY IDENTIFIER field, ATTACHED DEVICE TYPE
    field, NEGOTIATED PHYSICAL LINK RATE field, ATTACHED SSP
    INITIATOR bit, ATTACHED STP INITIATOR bit, ATTACHED SMP INITIATOR bit, ATTACHED SSP TARGET bit, ATTACHED
    STP TARGET bit, ATTACHED SMP TARGET bit, ATTACHED SAS ADDRESS field, and SAS ADDRESS field are defined in the
    SMP DISCOVER function (see 10.3.1.4). >> needs to made into an a,b,c list.

Page: 287
Sequence number: 6
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    REJECT
    10.1.7.1 Protocol-Specific log page for SAS
    The statement << The INVALID DWORD COUNT field, DISPARITY ERROR COUNT field, LOSS OF DWORD
    SYNCHRONIZATION field, and PHY RESET PROBLEM COUNT field are each defined in the SMP REPORT PHY ERROR LOG
    response data (see 10.3.1.5). >> needs to made into an a,b,c list.

Page: 287
Sequence number: 7
Date: 2/3/2003 2:14:31 PM
Type: Square
    ACCEPT - DONE (this was intended to be a brief overview of the spinup concept. Changed to:
    The logical unit uses NOTIFY (ENABLE SPINUP) to:
    a) automatically spin-up after power on; and
    b) delay spin-ups requested by START STOP UNIT commands.
)
    10.1.8 SCSI power condition states
    The statement << a) after power on, if the target device has not received a START STOP UNIT command with the START bit set
    to zero, transition to the active power condition state after receiving NOTIFY (ENABLE_SPINUP). The target device automatically
    transitions after power on without waiting for the application client; and
    b) after power on, if the target device has previously received a START STOP UNIT command with the START bit set to zero when
    it receives a START STOP UNIT command with the START bit set to one, spin-up after receiving the next NOTIFY
    (ENABLE_SPINUP). The application client's request is effectively delayed until NOTIFY (ENABLE_SPINUP) arrives. >> makes no
    sense in the context of this section. Something is wrong here and I have no idea what is going on here. This needs to be fixed.

Page: 287
Sequence number: 8
Date: 1/6/2003 6:16:00 PM
Type: Strikeout

REJECT - the fact that it is a superset is important
10.1.8 SCSI power condition states
The statement << The SA_PC
state machine is an enhanced version of the logical unit power condition state machines described in SPC-3, SBC-2, and RBC. >>
doesn't add anything to SAS and should be deleted.

Page: 287
Sequence number: 9
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    10.1.8 SCSI power condition states
    The list of state machines needs cross-references and an indication of the initial state.

Page: 288
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Note
    ACCEPT - DONE
    Figure 103
    This drawing needs the orange background and the state machine title in it like all the other state machine drawings in this
    document.

Page: 288
Sequence number: 4
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    REJECT - states are not always zero time, transitions are. The whole idea of a state is that it is "maintaining state" for some period
    of time
    10.1.8.1.1 State description
    The statement << This state shall be entered upon power on. This state consumes zero time. >> should be << Upon power on this
    state shall be entered. >> All states are zero time so there is no need to state it here.

Page: 289
Sequence number: 8
Date: 1/25/2003 4:51:27 PM
Type: Highlight
    REJECT
    10.1.8.2.2 Transition SA_PC_1:Active to SA_PC_2:Idle
    The term << expires.>> should be << timed out >>.

Page: 289
Sequence number: 9
Date: 1/25/2003 4:51:16 PM
Type: Highlight
    REJECT
    10.1.8.2.3 Transition SA_PC_1:Active to SA_PC_3:Standby
    The term << expires.>> should be << timed out >>

Page: 289
Sequence number: 10
Date: 1/25/2003 4:51:07 PM
Type: Highlight
    REJECT
    10.1.8.3.3 Transition SA_PC_2:Idle to SA_PC_3:Standby
    The term << expires.>> should be << timed out >>.

Page: 290
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    REJECT - that requirement is for SBC-2 to state, not this standard.
    10.1.8.5.1 State description
    The statement << This state is only implemented >> should be << This state shall only implemented >>

Page: 291
Sequence number: 10
Date: 1/6/2003 6:16:00 PM
Type: Highlight

ACCEPT - DONE
10.1.8.6.1 State description
The statement << This state is only implemented >> should be << This state shall only implemented >>.

Page: 291
Sequence number: 11
Date: 2/1/2003 2:08:53 PM
Type: Highlight
REVIEW PROTOCOL WG
REJECT (It is indeed the transition or perhaps the entry into the state that causes excess power, not the fact of being in the new state itself (idle might use 1 W, idle->active might use 50 W for a brief period, then active might drop to 15 W.)
10.1.8.6.2 Transition SA_PC_5:Active_Wait to SA_PC_1:Active
****
The statement << the device does not temporarily consume additional power during the transition to SA_PC_1:Active. >> should be << the device does not temporarily consume additional power as a result of a transition to SA_PC_1:Active. >> but I don't understand what this is all about. The statement itself tells me nothing. This needs to be fixed.

Page: 291
Sequence number: 12
Date: 1/25/2003 4:51:53 PM
Type: Highlight
REJECT
10.1.8.6.3 Transition SA_PC_5:Active_Wait to SA_PC_3:Standby
The term << expires.>> should be << timed out >>

Page: 291
Sequence number: 13
Date: 1/25/2003 4:52:02 PM
Type: Highlight
REJECT
10.1.8.6.5 Transition SA_PC_5:Active_Wait to SA_PC_6:Idle_Wait
The term << expires.>> should be << timed out >>.

Page: 291
Sequence number: 14
Date: 1/6/2003 6:16:00 PM
Type: Highlight
ACCEPT - DONE
10.1.8.7.1 State description
The statement << This state is only implemented >> should be << This state shall only implemented >>

Page: 291
Sequence number: 15
Date: 1/22/2003 5:40:16 PM
Type: Highlight
REJECT (going with expires everywhere)
10.1.8.7.3 Transition SA_PC_6:Idle_Wait to SA_PC_3:Standby
The term << expires.>> should be << timed out >>

Page: 292
Sequence number: 2
Date: 1/6/2003 6:16:00 PM
Type: Highlight
ACCEPT - DONE (but added VPD to the acronym list and "(VPD)" to the 1.1.9 section header, its first use)
10.1.9 SCSI vital product data
The statement << the Device Identification vital product data (VPD) page (83h) >> should be << the Device Identification VPD page (83h) >>

Page: 292
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Highlight
ACCEPT - DONE (twice)
Table 128
The statement << The IDENTIFIER field contains the SAS address of the target port being used to run the INQUIRY command. >> should be << The IDENTIFIER field contains the SAS address of the target port though which the INQUIRY command was received. >>

Page: 294

Sequence number: 2
Date: 2/1/2003 2:22:49 PM
Type: Strikeout

REJECT (this explains why the CRC field, owned by the link layer, is shown in this application layer section. Added xref to SMP link layer; added similar sentence for SMP FRAME TYPE and transport layer.)
10.3.1.1 Function overview
The statement << The CRC field is included in each frame, although that field is parsed by the link layer. >> should be deleted as it is information that is stated else where and should not be here.

Page: 296
Sequence number: 6
Date: 1/6/2003 6:16:00 PM
Type: Highlight

ACCEPT - DONE
10.3.1.2 REPORT GENERAL function
The statement << 1) Table 131 defines the response format. >> should not have a << 1) >> in it. This needs to be fixed.

Page: 296
Sequence number: 7
Date: 1/6/2003 6:16:00 PM
Type: Highlight

ACCEPT - DONE
10.3.1.2 REPORT GENERAL function
The statement << for either of the following reasons: >> should be << for the following reasons: >>

Page: 296
Sequence number: 8
Date: 1/6/2003 6:16:00 PM
Type: Note

ACCEPT - DONE
10.3.1.2 REPORT GENERAL function
The << EXPANDER ROUTE INDEXES field >> and the << CONFIGURABLE ROUTE TABLE>> need some cross references to where the expander route table is defined and the configurable route table is defined.

Page: 297
Sequence number: 4
Date: 1/6/2003 6:16:00 PM
Type: Highlight

ACCEPT - DONE
10.3.1.2 REPORT GENERAL function
<< table that
shall be configured. >> should be << table that
is required to be configured. >>

Page: 298
Sequence number: 4
Date: 1/22/2003 9:35:00 AM
Type: Highlight

ACCEPT - DONE (Jan WG; with mods per 03-060; George will propose that SPC-3 use "shall" here too)
10.3.1.3 REPORT MANUFACTURER INFORMATION function
****
The statement << The vendor identification string should be one defined >> should be << The vendor identification string shall be as defined >>

Page: 299
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Highlight

ACCEPT - DONE
10.3.1.4 DISCOVER function
The statement << by the phy, as well as the routing attribute supported >> should be << by the phy and the routing attribute supported >>

Page: 299
Sequence number: 4
Date: 2/28/2003 3:32:58 PM
Type: Highlight

ACCEPT - DONE (this is hard to search for. Hope all of them are fixed.)
10.3.1.4 DISCOVER function

Global
The usage of small caps should be limited to field names only. The use when talking about the value is not correct (e.g., NUMBER OF PHYS and FUNCTION RESULT) here. This needs to be fixed.

Page: 301
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    10.3.1.4 DISCOVER function
    The statement << complete (when a SAS device is attached) or after the initial Register - Device to Host FIS has been received (when a SATA device is attached). >> should be << complete if a SAS device is attached or after the initial Register - Device to Host FIS has been received if a SATA device is attached. >>

Page: 301
Sequence number: 4
Date: 1/21/2003 7:10:12 PM
Type: Highlight
    ACCEPT - DONE (see Vixel comment: second sentence removed, "method" added into descriptions in table)
    10.3.1.4 DISCOVER function
    The statement << The ROUTING ATTRIBUTE field shall not change based on the attached device type. The routing method used by the expander connection manager shall change based on the attached device type as described in table 137. >> If not clear as to the point that is trying to be made. This needs to be fixed or deleted.

Page: 302
Sequence number: 6
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE (see Maxtor resolution)
    10.3.1.4 DISCOVER function
    In the statement << link rate if they have been >> what it the << they >> referring to. This needs to be fixed.

Page: 302
Sequence number: 7
Date: 2/8/2003 12:20:44 PM
Type: Strikeout
    REJECT (without that phrase the whole note is meaningless, and the group at least at one time felt the note was worth maintaining)
    Table 139
    The statement << in its local data structures >> should be deleted as that kind of data structure is not defined anywhere.

Page: 302
Sequence number: 8
Date: 1/6/2003 6:16:00 PM
Type: Note
    REJECT - these sentences just refer to the other bits for their meaning. Will add cross references to the IDENTIFY address frame.
    10.3.1.4 DISCOVER function
    All the << The xxx bit indicates the xxx value received during the link reset sequence. >> should be for example<< An ATTACHED SSP INITIATOR bit set to one indicates an SSP initiator is attached. An ATTACHED SSP INITIATOR bit set to zero indicates an SSP initiator is not attached. >>

Page: 302
Sequence number: 9
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    10.3.1.4 DISCOVER function
    The statement << completes, when a SAS device is attached; >> should be << completes if a SAS device is attached; >>

Page: 302
Sequence number: 10
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    10.3.1.4 DISCOVER function
    The statement << completes, when a SATA device is attached; >> should be << completes if a SATA device is attached; >>

Page: 303
Sequence number: 4
Date: 1/29/2003 12:44:29 PM

Type: Highlight
ACCEPT - DONE (Jan WG Note added for a recommended default)
10.3.1.4 DISCOVER function
The statement << The default value for PARTIAL PATHWAY TIMEOUT VALUE shall be 7 µs. >> is a problem. We have never specified a default value for a mode page value. Why are we going it here? I don't believe we should start now. We could possibly recommend the value in a note. Reword to << Note xx: If this function is implemented a it is recommend that this value be 7 µs. >>

Page: 305
Sequence number: 5
Date: 1/6/2003 6:16:00 PM
Type: Highlight
ACCEPT - DONE
10.3.1.5 REPORT PHY ERROR LOG function
The statement << have been received (outside of phy reset sequences). >> should be << have been received outside of phy reset sequences. >>

Page: 305
Sequence number: 6
Date: 1/6/2003 6:16:00 PM
Type: Highlight
ACCEPT - DONE
10.3.1.5 REPORT PHY ERROR LOG function
The statement << have been received (outside of phy reset sequences). >> should be << have been received outside of phy reset sequences. >>

Page: 305
Sequence number: 7
Date: 1/6/2003 6:16:00 PM
Type: Highlight
ACCEPT - DONE
10.3.1.5 REPORT PHY ERROR LOG function
The statement << has been lost (outside of phy reset sequences). >> should be << has been lost outside of phy reset sequences. >>.

Page: 307
Sequence number: 3
Date: 1/6/2003 6:16:00 PM
Type: Highlight
ACCEPT - DONE (with "may be used")
10.3.1.7 REPORT ROUTE INFORMATION function
The statement << This function is used primarily as a diagnostic tool to resolve
topology issues. >> should be << This function is used to resolve topology issues. >>

Page: 308
Sequence number: 2
Date: 1/6/2003 6:16:00 PM
Type: Highlight
ACCEPT - DONE
10.3.1.7 REPORT ROUTE INFORMATION function
The statement << the table routing attribute (see 4.x.x.x) the >> needs a real cross reference.

Page: 312
Sequence number: 4
Date: 1/6/2003 6:16:00 PM
Type: Highlight
ACCEPT - DONE
10.3.1.8 CONFIGURE ROUTE INFORMATION function
The statement << the table routing attribute (see 4.x.x.x) the >> needs a real cross reference.

Page: 312
Sequence number: 5
Date: 1/29/2003 6:30:50 PM
Type: Note
REJECT - in this response there is no such data to worry about - just the CRC (moot with combined table)
Table 152
What happened to the << rest of data is invalid. >> statement in the two descriptions. It should be stated here also.

Page: 314
Sequence number: 1

Date: 1/21/2003 4:41:38 PM
Type: Highlight
   ACCEPT - DONE
   10.3.1.9 PHY CONTROL function
   The << PROGRAMMED MINIMUM PHYSICAL LINK RATE field >> and << PROGRAMMED MAXIMUM PHYSICAL LINK RATE
   field >> need to be described in separate paragraphs.

Page: 314
Sequence number: 2
Date: 1/6/2003 6:16:00 PM
Type: Highlight
   REJECT (but raises a bigger issue filed as a PostLB comment)
   10.3.1.9 PHY CONTROL function
   The statement << may be set beforehand >> should be << may be sent in an operation other than a LINK RESET operation before
   a LINK RESET is sent. >>

Page: 316
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Note
   ACCEPT - DONE (this response frame doesn't have any "rest of data" to worry about, so removed it from 10h. This comment
   prompted adding it to one of the REPORT PHY SATA results).
   Table 157
   What happened to the << rest of data is invalid. >> statement in the two descriptions. It should be stated here also.

Page: 319
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Note
   ACCEPT - DONE
   A.1 Compliant jitter test pattern (CJTPAT)
   The statements << The second column (8b data dword) lists the >> and << The third column (Scrambler output dword) lists >> and
   << The fourth column (Scrambled 8b data dword) shows >> need to reference the table to which they are referencing.

Page: 326
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Highlight
   ACCEPT - DONE (deleted the whole paragraph)
   C.1 CRC generator and checker implementation examples
   The statement << 1, 2, and 3 below are included to provide a validation >> needs a more precise. The reference to <<below >>
   needs to be more accurate.

Page: 330
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Highlight
   ACCEPT - DONE
   D.1 Hashing overview
   The statement << 4.2.2 describes hashed SAS addresses >> should be << See 4.2.2 for a description of the hashed SAS
   addresses >>

Page: 330
Sequence number: 2
Date: 1/20/2003 6:12:26 PM
Type: Note
   REJECT (all the decimal points are lined up, which makes these bizarre ISO formatted numbers more readable)
   Table D.1
   Center all the cells.

Page: 331
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Highlight
   ACCEPT - DONE also changed the may later in the sentence
   D.3 Hash generation
   The statement << length can be treated as >> should be << length is treated as >>.

Page: 332

Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    D.5 Hash implementation with XORs
    The statement << 24-bit HASHED SAS ADDRESS field for the SSP frame >> should be << 24-bit hashed SAS address for the
    SSP frame >> .

Page: 336
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Strikeout
    ACCEPT - DONE
    E.1 Scrambler implementation in C
    The term << specified >> should be deleted.

Page: 340
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    REJECT - why use 11 characters when 4 suffice?
    F.3 Byte and bit ordering
    The statement << Thus, the first byte contains the least >> should be << As a result the first byte contains the least >>

Page: 360
Sequence number: 1
Date: 1/6/2003 6:16:00 PM
Type: Highlight
    ACCEPT - DONE
    H.1 Overview
    The statement << Hamming distance (the number of bits different in two patterns) of at least >> should be << Hamming distance
    (i.e., the number of bits different in two patterns) of at least >>.

Page: 366
Sequence number: 1
Date: 1/25/2003 4:56:59 PM
Type: Highlight
    ACCEPT - DONE ("initialize before use")
    I.2 Header file
    The statement << SMP Request, must be initialized >> should be << SMP Request, is initialized >>.

Page: 369
Sequence number: 1
Date: 1/25/2003 4:57:33 PM
Type: Highlight
    ACCEPT - DONE ("initialize before use")
    I.2 Header file
    The statement << SMP Response, must be initialized >> should be << SMP Response, is initialized >>

Page: 370
Sequence number: 1
Date: 1/25/2003 4:58:21 PM
Type: Highlight
    ACCEPT - DONE
    I.2 Header file
    The statement << file will perform the >> should be << file performs the >>.

Page: 371
Sequence number: 2
Date: 1/30/2003 11:00:33 AM
Type: Highlight
    ACCEPT - DONE
    I.3 Source file
    The statement << change primitives will initiate >> should be << change primitives initiate >>.

Page: 371
Sequence number: 3
Date: 1/25/2003 5:04:32 PM
Type: Highlight

ACCEPT - DONE
I.3 Source file
The statement << discover information will end up >> should be << discover information ends up >>.

Page: 372
Sequence number: 1
Date: 1/25/2003 5:05:06 PM
Type: Highlight
ACCEPT - DONE
I.2 Header file
The statement << expander in the chain must be configured >> should be << expander in the chain is configured >>.

Page: 373
Sequence number: 1
Date: 1/25/2003 5:07:15 PM
Type: Highlight
ACCEPT - DONE (removed warning)
I.2 Header file
The statement << production code must handle >> should be << production code handles >>. Requirements cannot be in an informative annex.

Page: 373
Sequence number: 2
Date: 1/25/2003 5:06:29 PM
Type: Highlight
ACCEPT - DONE (this isn't a requirement it's a warning that the code isn't complete here. Removed, however.)
I.2 Header file
The statement << production code must handle >> should be << production code handles >>. Requirements cannot be in informative annex.

Page: 374
Sequence number: 1
Date: 1/25/2003 5:08:01 PM
Type: Highlight
ACCEPT - DONE
I.3 Source file
The statement << this routine will add a SAS Address >> should be << this routine adds a SAS Address >>.

Page: 374
Sequence number: 2
Date: 1/25/2003 5:08:04 PM
Type: Highlight
ACCEPT - DONE
I.3 Source file
The statement << this routine will add a SASAddress >> should be << this routine adds a SASAddress >>.

Page: 374
Sequence number: 3
Date: 1/25/2003 5:08:07 PM
Type: Highlight
ACCEPT - DONE
I.3 Source file
The statement << this routine will reset the ChainEntry >> should be << this routine resets the ChainEntry >>.

Page: 375
Sequence number: 1
Date: 1/25/2003 5:08:12 PM
Type: Highlight
ACCEPT - DONE
I.3 Source file
The statement << this routine will get the route index >> should be << this routine gets the route index >>.

Page: 375
Sequence number: 2
Date: 1/25/2003 5:08:15 PM
Type: Highlight
ACCEPT - DONE
I.3 Source file
The statement << this routine will get the >> should be << this routine gets the >>.

Page: 379
Sequence number: 1
Date: 1/25/2003 5:09:13 PM
Type: Highlight
    ACCEPT - DONE
    I.3 Source file
    The statement << this routine will append >> should be << this routine appends >>.

Page: 380
Sequence number: 1
Date: 1/25/2003 5:09:23 PM
Type: Highlight
    ACCEPT - DONE
    I.3 Source file
    The statement << DiscoverProcess will get >> should be << DiscoverProcess gets >>.

Page: 380
Sequence number: 2
Date: 1/25/2003 5:09:51 PM
Type: Highlight
    ACCEPT - DONE
    I.3 Source file
    The statement << we find will naturally move >> should be << we find naturally moves >>.

Page: 382
Sequence number: 4
Date: 1/6/2003 6:16:00 PM
Type: Note
    REJECT - I see no such header with Acrobat 5.0.5
    Annex J
    There seems to a bogus frame title at the end of the document. It shows up as an << untitled >> entry in the bookmarks list in
    Acrobat which seems to be hyper linked to something on page 172.

Author: INTC

Page: ii
Sequence number: 2
Date: 12/30/2002 10:44:33 AM
Type: Highlight
    ACCEPT - DONE
    Front matter
    HIS s/b IHS

Page: iii
Sequence number: 3
Date: 1/7/2003 11:09:04 AM
Type: Highlight
    ACCEPT - DONE (see IBM and LSI comments)
    Abstract
    "Serial ATA compatible physical layer": partly true, but overly
    limited. Implies that SATA is used as-is, across the board.
    Expand/clarify.

Page: iv
Sequence number: 1
Date: 1/7/2003 11:13:31 AM
Type: Highlight
    ACCEPT - DONE (changed to 2003)
    ANSI stuff
    2002 s/b 2003 or 200x

Page: xxxi
Sequence number: 1
Date: 1/7/2003 1:52:38 PM
Type: Highlight

ACCEPT - DONE (spaces after figure number)
TOC
Fix para formatting for Annex TOC entries

Page: xxxiii
Sequence number: 5
Date: 1/7/2003 1:52:56 PM
Type: Highlight
    ACCEPT - DONE (removed "of "instead to match other standards)
    Foreword
    Fix 'of it' or reword for clarification from
    "At the time of it approved this standard, INCITS had the
    following members:"
        to
    "At the time of standard approval, INCITS had the following members:"

Page: 5
Sequence number: 5
Date: 2/6/2003 11:45:47 AM
Type: Highlight
    ACCEPT - DONE (new ATA terminology per Mark Evans proposal. George won't allow us to use quotes around referenced terms.)
    3.1.3 ATA device
    NOTE 4
    "uses the term device": place single quotes around words
    when the word itself is referenced:
        the term 'device', the term 'target device'

Page: 5
Sequence number: 6
Date: 2/6/2003 11:45:07 AM
Type: Highlight
    ACCEPT - DONE (new ATA terminology per Mark Evans proposal)
    3.1.4 ATA domain
    "(ATA) service delivery subsystem": Clarify whether this has the
    same defn as the SCSI SDS

Page: 5
Sequence number: 7
Date: 2/6/2003 11:44:45 AM
Type: Highlight
    ACCEPT - DONE (new ATA terminology per Mark Evans proposal)
    3.1.6 ATA initiator port
    "Equivalent to a host adapter": 'initiator port' is an abstraction,
    'host adapter' is, at least in one sense, a
    piece of hardware.   Clarify model, and that
    reference to 'HA' is to the term 'HA', not a thing. (FRAG)

Page: 5
Sequence number: 8
Date: 1/7/2003 2:12:59 PM
Type: Highlight
    ACCEPT - DONE
    3.1.3 ATA device
    NOTE 4
    GLOBAL
    "ATA/ATAPI V1": Be consistent w/ 2.4, which uses ATAPI-7 (GLOBAL)

Page: 5
Sequence number: 9
Date: 2/6/2003 11:44:38 AM
Type: Highlight
    ACCEPT - DONE (new ATA terminology per Mark Evans proposal)
    3.1.9 ATA target port
    "task router" does not appear in ATAPI7. Use correct ATA terminology.

Page: 5
Sequence number: 10
Date: 2/6/2003 1:58:55 PM
Type: Highlight

ACCEPT - DONE
3.1.14 byte
8 s/b 'eight'

Page: 5
Sequence number: 11
Date: 2/6/2003 1:59:01 PM
Type: Highlight
ACCEPT - DONE
3.1.15 character
10 s/b 'ten'

Page: 6
Sequence number: 13
Date: 2/7/2003 5:24:40 PM
Type: Highlight
ACCEPT - DONE (application client runs the discover process - fixed globally)
3.1.30 discover process
management application client: Clarify whether 'process' means 'algorithm' or some executing code.

Page: 6
Sequence number: 14
Date: 1/22/2003 9:49:51 AM
Type: Highlight
ACCEPT - DONE (delete it. That will mean no special meaning)
3.1.25 device
'A physical entity' seems quite vague. Clarify whether that is the intent.

Page: 6
Sequence number: 15
Date: 1/7/2003 2:18:28 PM
Type: Highlight
ACCEPT - DONE
3.1.34 (Page 6) dword synchronization
Add '(see 6.9)'

Page: 7
Sequence number: 12
Date: 12/30/2002 1:45:08 PM
Type: Highlight
ACCEPT - DONE
3.1.45 expander route index
Fix typo -- change "a" to "an"

Page: 7
Sequence number: 13
Date: 3/2/2003 12:29:11 PM
Type: Highlight
ACCEPT - DONE (make "with" the most common usage throughout)(still broken)
3.1.47 fanout expander device
'no phys with subtractive' - ambiguous. Change 'with' to 'having'

Page: 7
Sequence number: 14
Date: 2/6/2003 3:47:57 PM
Type: Highlight
ACCEPT - DONE
3.1.40 (Page 7) expander device
Make defn more generic - It provides connectivity by routing frames.

Page: 7
Sequence number: 15
Date: 2/7/2003 11:01:50 AM
Type: Highlight
ACCEPT - DONE (new generic definition)
3.1.43 (Page 7) expander port
"A SAS expander device object that routes SSP, SMP, and STP frames
to and from physical links or to internal initiator ports and/or
target ports. Contains one or more phys."

Either add: 'routes primitives, primitive sequences and other frames
too.' or make more generic by not listing every function.

Page: 8
Sequence number: 12
Date: 3/8/2003 3:52:55 PM
Type: Highlight
    ACCEPT - DONE (lacking response from Cris Simpson, added "usually relaying a request")
    3.1.62 indication
    indication: Defn is same as for 'confirmation'.
    Clarify whether they are identical.

Page: 9
Sequence number: 14
Date: 1/20/2003 6:08:39 PM
Type: Highlight
    ACCEPT - DONE (changed to lowercase p-like)
    3.1.95 reflection coefficient
    This is the upper-case greek letter "gamma". It normally
    represents a complex number indicating phase as well as
    magnitude. Later, the char 'rho' is used, representing abs val.

Page: 9
Sequence number: 15
Date: 2/7/2003 6:49:25 PM
Type: Highlight
    ACCEPT - DONE (reworded to match new object hierarchy)
    3.1.84 phy
    "interfaces to a service delivery subsystem" Please confirm
    intent that phy is outside the SDS.

Page: 9
Sequence number: 16
Date: 3/8/2003 3:52:29 PM
Type: Highlight
    ACCEPT - DONE (lacking input from Cris Simpson, added "usually in response to an indication")
    3.1.98 response
    response: Confirm intent that this be interchangable with 'request'

Page: 9
Sequence number: 17
Date: 3/3/2003 11:25:41 AM
Type: Highlight
    ACCEPT - DONE (added potential pathway term, made glossary entries match section 4.x)
    3.1.83 (Page 9) pathway
    "A set of physical links between a SAS initiator port and a
    SAS target port"
    Use defn from 4.1.12:
      "A pathway is the physical route of a connection."

Page: 9
Sequence number: 18
Date: 1/7/2003 2:45:33 PM
Type: Highlight
    REJECT - consecutive may mislead because of interspersed ALIGNs. The cross reference defines it in detail.
    3.1.91 (Page 9) primitive sequence
    "A set of primitives" change to
      "A set of one or more consecutive primitives"

Page: 9
Sequence number: 19
Date: 3/8/2003 3:51:37 PM
Type: Highlight
    ACCEPT - DONE (lacking input from Cris Simpson, added "usually initiating some action")
    3.1.96 (Page 9) request:
    "request" has the same definition as "response"
    Clarify the difference between the two.

Page: 9

Sequence number: 20
Date: 2/7/2003 6:48:29 PM
Type: Highlight
REJECT
3.1.100 (Page 9) SAS device
"an ATA device" - Change 'device' to 'object'

Page: 10
Sequence number: 8
Date: 2/7/2003 6:50:56 PM
Type: Highlight
REJECT (SAS port and expander port kept separate in new model)
3.1.104 SAS port
an expander port is also a SAS port, although it doesn't have a
SAS address. Add 'expander port'.

Page: 10
Sequence number: 9
Date: 2/7/2003 6:50:34 PM
Type: Highlight
ACCEPT - DONE (new ATA wording rewrote this)
3.1.102 (Page 10) SAS initiator device:
a SMP initiator device is also a SAS initiator device

Page: 10
Sequence number: 10
Date: 2/7/2003 6:50:28 PM
Type: Highlight
ACCEPT - DONE (new ATA wording rewrote this)
3.1.106 (Page 10) SAS target device:
Add SSP, SMP, STP target devices, and initiators.

Page: 11
Sequence number: 10
Date: 2/28/2003 2:57:23 PM
Type: Highlight
ACCEPT - DONE (phy definition fixed and this definition rewritten)
3.1.127 service delivery subsystem
'service requests' SDS defn appears to be at odds with that
implied by 'phy' defn wrt abstraction level. Clarify.

Page: 11
Sequence number: 11
Date: 2/20/2003 9:27:57 AM
Type: Highlight
REJECT (but definition rewritten by PHY WG)
3.1.129 spread spectrum clocking
increase -> widen

Page: 11
Sequence number: 12
Date: 2/20/2003 9:28:15 AM
Type: Highlight
ACCEPT - DONE (included in definition rewritten by PHY WG)
3.1.129 spread spectrum clocking
peaks -> peak amplitude

Page: 11
Sequence number: 13
Date: 1/7/2003 3:03:12 PM
Type: Highlight
REJECT - we don't do anything to break linked command usage
3.1.141 task
"linked commands" - remove if linked cmds not supported

Page: 11
Sequence number: 14
Date: 1/22/2003 10:40:30 AM
Type: Highlight

ACCEPT - DONE
3.1.128 (Page 11) speed negotiation sequence
"determine the highest common supported physical link rate"
    change to
"negotiate the operational physical link rate"

Page: 11
Sequence number: 15
Date: 1/7/2003 3:00:39 PM
Type: Highlight
    ACCEPT - DONE
    3.1.128 speed negotiation sequence
     'where' s/b 'by which'

Page: 13
Sequence number: 5
Date: 1/20/2003 6:08:08 PM
Type: Highlight
    ACCEPT - DONE
    3.2 symbols and abbreviations
    The lower-case greek letter "rho" is normally used to
    represent the "absolute" reflection coefficient (real
    ratio of incident   to reflected voltage). It looks
    like an italics lower-case   roman letter 'p'.

Page: 17
Sequence number: 7
Date: 2/28/2003 3:19:16 PM
Type: Highlight
    ACCEPT - DONE (change to message everywhere)
    3.5.3 Parameters, requests, indications, confirmations, and responses
    ***
      "Parameters":   Incorrect use of the term 'parameter' to mean 'signal',
    'notification', or 'indication' (in the generic sense). Replace
    with one of these or an appropriate term that better reflects what's
    really being passed. If nothing else, call it a 'message' or an
    'object', so that it can carry multiple parameters, as is the actual case.

Page: 19
Sequence number: 4
Date: 1/23/2003 2:36:07 PM
Type: Highlight
    REJECT (expander device is not a SAS device, but contains one. Changed to match new glossary definition.)
    4.1.1 (Page19) Architecture overview
    "A SAS device (see 4.1.4) is an ATA device or SCSI
    device with ports in a SAS domain:"
    Expander device is also a SAS device as defined
    on page 9, 3.1.100 SAS device.

Page: 19
Sequence number: 5
Date: 1/23/2003 2:36:45 PM
Type: Highlight
    REJECT (yes they are; fixed the phy definition, which should help reduce confusion)
    4.1.1 (Page 19) Architecture overview
    "The service delivery subsystem in a SAS domain
    may include expander devices"
    Expander devices are not part of the "service delivery subsystem.
    Expander device interfaces to the SAS service delivery subsystem.
    This is also shown in Figure 4 on page 20.

Page: 21
Sequence number: 10
Date: 1/23/2003 3:15:11 PM
Type: Highlight
    ACCEPT - DONE
    4.1.3 (Page 21) Ports (narrow ports and wide ports)
    "A port may contain one or more phys." should be
    A port contains one or more phys.

Page: 21
Sequence number: 11
Date: 1/23/2003 3:14:47 PM
Type: Highlight
    ACCEPT - DONE (rewritten)
    4.1.3 Ports (narrow ports and wide ports)
    ***
    Clarify whether the SAS address of the port or the device.

Page: 23
Sequence number: 3
Date: 1/22/2003 3:04:46 PM
Type: Highlight
    REJECT (but the SP state machine supports both modes, and this is a common question)(whole section deleted anyway)
    4.1.5 Initiator devices
    "Initiator ports may support SSP and/or STP and/or SATA."
    SAS initiator does not support native SATA as stated below -
    "Initiator ports supporting SATA are outside the scope of
    this standard."

Page: 24
Sequence number: 7
Date: 1/22/2003 3:06:24 PM
Type: Highlight
    REJECT (whole section being deleted)
    4.1.6 Target devices
    Figure 9
    Target device: Figure doesn't match text. Figure should show
    SATA target device/port, perhaps as a separate block attached to the Service delivery subsystem.

Page: 24
Sequence number: 8
Date: 1/22/2003 3:06:39 PM
Type: Highlight
    REJECT (whole section being deleted)
    4.1.6 Target devices
    SAS target device does not support SATA, it can support ATA target.
    Confusing.

Page: 25
Sequence number: 8
Date: 3/3/2003 6:08:02 PM
Type: Highlight
    ACCEPT - DONE (reworded a bit)
    4.1.8.2 Edge expander device set
    This sentence needs to be clarified in terms of the phys of other
    edge expander devices that the phys that support table routing
    can be attached to (eg., direct routing, subtractive routing,
    table routing, or all of the above) Figure 11 implies that
    it would only attach to a subtractive port.

Page: 25
Sequence number: 9
Date: 3/8/2003 12:24:32 PM
Type: Highlight
    ACCEPT - DONE (fixed phy definition)
    4.1.8.1 Expander device overview
    "Expander devices are part of the service delivery subsystem"
    appears to be in conflict with glossary defn for phy. Clarify SDS model.

Page: 25
Sequence number: 10
Date: 2/8/2003 11:14:41 AM
Type: Highlight
    ACCEPT - DONE (changed glossary to "may contain subtractive routing attributes")
    4.1.8.1 Expander device overview
    subtractive routing attribute defined in Clause 3 and general concept is clear; however, the delineation between edge/fanout due
    to subtractive routing is unclear. Conflicts with defn for 'edge expander device'. Please clarify.

glossary is:
An expander device containing phys with subtractive routing attributes (see 4.1.8.1).

Page: 25
Sequence number: 11
Date: 1/17/2003 4:49:12 PM
Type: Highlight
REJECT (this is true)
4.1.8 (Page 25) Expander device overview
"Expander devices are part of the service delivery subsystem."
 - expander is not part of the service delivery subsystem as
shown in Fig. 4 on page 20. Expander interface to the service
delivery subsystem.

Page: 25
Sequence number: 12
Date: 3/3/2003 6:38:38 PM
Type: Highlight
ACCEPT - DONE (Added "SAS" to the main bubble, added separate bubble for SATA devices connected to the new STP/SATA
bridge object)
4.1.8.1 Expander device overview
Fig 10 (Pae 25) Expander device
Expander only interface to SATA target. The diagram is
not clear that it seems it also allows the expander device
interface to SATA initiators, SATA expander ports.

Page: 25
Sequence number: 13
Date: 1/17/2003 4:33:15 PM
Type: Highlight
REJECT (we once tried to call that an edge router, but the WG preferred to keep it in the edge expander device class)
4.1.8.1 Expander device overview
"There are two types of expander devices differentiated by the
routing attributes of their phys, edge expander
devices and fanout expander devices."
The expander device which is not the leaf edge expander within the edge expander set behaves differently than an edge expander
and fanout expander. It has the routing capability as the fanout expander but it also has a subtractive port which fanout expander
does not have. Thus, there are THREE types.

Page: 25
Sequence number: 14
Date: 3/3/2003 6:00:38 PM
Type: Highlight
REJECT (mentioning edge expander device sets in parallel with edge expander devices would be more confusing, leading the
reader to believe they're different. A set may have just one e.e.device and rule b) works fine with that.)
4.1.8.2 (Page 25) Edge expander device set
"attached to the phys supporting subtractive routing on another
edge expander device set;"
  change to
"attached to the phys supporting subtractive routing on another
edge expander or edge expander device set;"
  to make it clear even an edge expander is a subset of
edge expander set

Page: 26
Sequence number: 5
Date: 3/3/2003 6:23:37 PM
Type: Highlight
ACCEPT - DONE (reworded to management application client within the SAS domain. No mention of where it is.)
4.1.8.3 (Page 26) Configurable expander device
"Expander devices with a configurable route table [MAY]
depend on the application client within one or more initiator
devices to use the discover process (see 4.6.11.5)
to configure the expander route table."
The edge expander set can self-initialize itself.

Page: 27
Sequence number: 2
Date: 1/23/2003 4:26:47 PM

Type: Highlight
    ACCEPT - DONE
    4.1.9 Domains
    Figure 12
    Add 'STP' targ port.

Page: 27
Sequence number: 3
Date: 1/23/2003 4:24:29 PM
Type: Highlight
    ACCEPT - DONE (add some SMP boxes and add note that normally SMP targets are inside the cloud)
    4.1.9 Domains
    Figure 12
    Also need to show SMP connections in the SAS domain.

Page: 27
Sequence number: 4
Date: 1/23/2003 4:27:40 PM
Type: Highlight
    REJECT (the "other expander ports" phrase covers STP passthru)(but whole paragraph deleted anyway)
    4.1.9 (Page 27) Domains
    "The expander port attached to a SATA target port
    translates STP to SATA;"
    It should also mention the case where the expander attached to a
    STP target port where the expander only need to pass thru STP traffic.

Page: 28
Sequence number: 5
Date: 1/23/2003 4:30:02 PM
Type: Highlight
    REJECT (An edge expander device set is not an edge expander device. An edge expander device set is not a SAS device. An
    edge expander device is not a SAS device (although it contains one). Each edge expander device has its own SAS address. Thus,
    an edge expander device set has lots of SAS addresses.)
    4.1.10 (Page 28) Expander device topologies
    Clarify:
    Is edge expander device set a _single_ SAS device?
    Probably not because edge expander device set has one or more device name?

Page: 29
Sequence number: 5
Date: 1/23/2003 4:47:51 PM
Type: Highlight
    ACCEPT - DONE (add "temporary." Pull in second sentence from the glossary too (not necessarily as the 2nd sentence here;
    wording changes may be appropriate))
    4.1.11 (Page 29) Connections
    "A connection is an association between an initiator port and
    a target port."
    A "connection" is a physical path that is logically established and
    has the right to pass information between the initiator and the
    target as only as the logical establishment is maintained. Clarify.
    3.1.x has "A temporary association between an initiator port and a target port (see 7.12). During a
    connection all transmitted dwords are associated with the I_T nexus formed by that initiator port and target
    port."

Page: 30
Sequence number: 11
Date: 1/23/2003 5:04:53 PM
Type: Highlight
    ACCEPT - DONE
    4.1.11
    Connections "to pathway" changed to "the pathway"

Page: 31
Sequence number: 5
Date: 3/2/2003 3:39:07 PM
Type: Highlight
    ACCEPT - DONE (rewritten. pull the 4.1.12 definition into 3.1.83, but change "required" to "used" in both places)
    4.1.12 Pathways
    "the pathway consists of all the physical links required to route

dwords between the initiator phy and the target phy"
Definition is not quite the same as defined in 3.1.83 on page 9 which says:
A set of physical links between a SAS initiator port and a SAS target port (see 4.1.12).

Page: 31
Sequence number: 6
Date: 3/2/2003 3:38:47 PM
Type: Highlight
    ACCEPT - DONE (port/device clarified in IDENTIFY description, note added here about addresses.)
    4.1.10 Expander device topologies
    Figure 17 - Multiple connections on wide ports
    Initiator
    ***
    This Initiator shows two ports. The Expander device has two
    corresponding Expander ports. CLARIFY how the expander can determine
    there are two ports if the initiator reports the same "device"
    SAS address in the Identify address frame on all 6 phys?
    Need an overview of multi-ported devices and usage of
    device & port SAS addresses.

Page: 33
Sequence number: 2
Date: 2/9/2003 4:20:01 PM
Type: Highlight
    ACCEPT - DONE (add Device name section 4.2.x and make sure it points to the VPD page for targets. Removed this paragraph;
    put the appropriate shalls in the Device name and Port identifier sections. Moved Note 7 into the Device names section.)
    4.2.2 SAS addresses
    ***
    Specify which one is reported when device has multple ports in the same domain.

Page: 34
Sequence number: 4
Date: 2/9/2003 4:29:06 PM
Type: Highlight
    ACCEPT - DONE (Add ref to IDENTIFY and OPEN address frames where port identifiers are used. In the new Device name
    section, reference IDENTIFY where the device name is used.)
    4.2.5 Port identifiers
    ***
    Clarify whether this is the SAS address reported in the Identify
    message, or is it the "device" SAS address?

Page: 49
Sequence number: 13
Date: 1/7/2003 6:24:28 PM
Type: Highlight
    ACCEPT - DONE (broadcast primitive processor)
    4.6.1 Expander device model overview
    bullet a).C)
    Is this the "Broadcast" Primitive Processor? If so, I think the
    original "Broadcast" was clearer. If not, then
    the "BPP" acronym doesn't match. Other places including
    the Acronym glossary in section 3.2, and section 4.6.5,
    "BPP" continues to be referred to as the "Broadcast Primitive Processor".

Page: 49
Sequence number: 14
Date: 3/5/2003 3:59:04 PM
Type: Highlight
    ACCEPT - DONE (added more examples to and reworded the port section earlier)
    4.6.1 Expander device model overview (c):
    ***
    Clarify how the expander determines how to group phys under ports. If it's based on the SAS address reported in the Identify
    address frame, all phys attached to the same "device" must form a single port?

Page: 51
Sequence number: 2
Date: 1/24/2003 9:49:58 AM
Type: Highlight
    ACCEPT - DONE (change SL_IR to Broadcast)

4.6.5 Broadcast primitive processor (BPP):
I don't believe "SL_IR primitive requests" has been defined anywhere.
Does it include RESET? ALIGN? BROADCAST primitives? If there is a
subset of all the primitives that applies that's different from
the BROADCAST primitives defined in section 7.1, they ought to be
so designated as SL_IR primitive requests in section 7.1. If
"SL_IR primitive requests" are the same thing as "Broadcast
Primitives", then the text here should use the same term.

Page: 55
Sequence number: 4
Date: 1/24/2003 10:07:23 AM
Type: Highlight
    ACCEPT - DONE
    4.6.9 Expander connection router interface
    Table 24
    Transmit Close
    Replace "an CLOSE" with "a CLOSE"

Page: 57
Sequence number: 1
Date: 3/5/2003 2:29:02 PM
Type: Note
    ACCEPT - DONE (text added to the introduction of "Configurable" that expander devices with phys with the table routing attribute
    phys may be configurable. If so, they depend on an app client in the domain to program the table. If not, then an app client/SMP
    initiator port is required inside the expander device itself.)
    4.6.11.1
    Define a method for identifying/reporting this case for self-initialized.

Page: 59
Sequence number: 4
Date: 12/30/2002 11:15:46 AM
Type: Highlight
    ACCEPT - DONE
    4.6.11.4 Expander route index order
    change "has" to "have"

Page: 61
Sequence number: 2
Date: 1/24/2003 11:04:02 AM
Type: Highlight
    ACCEPT - DONE
    4.6.11.4 Expander route index order
    "U" should be changed to "V" ***

Page: 76
Sequence number: 3
Date: 1/20/2003 5:12:27 PM
Type: Highlight
    REJECT (per PHY WG)
    5.7.3.3 Jitter Tolerance Masks
    change "Z1" to "Z1tol"

Page: 77
Sequence number: 6
Date: 1/20/2003 5:44:09 PM
Type: Highlight
    ACCEPT - DONE
    5.7.4 Transmitted Signal Characteristics
    General comment: A 3Gb PHY hitting maximum specs for compliance point
    CT will not be able to pass both bit rate r/f times. Reduce min r/f
    time for 1,5 from 133 to 67ps.

Page: 81
Sequence number: 4
Date: 1/31/2003 5:32:34 PM
Type: Highlight
    ACCEPT - DONE
    5.7.9 Impedence specifications

Table 39 - Impedance requirements footnote f:
The text uses an upper-case greek letter "gamma" that normally
represents a complex number. To represent the "magnitude" of
the reflection coefficient, use the lower-case greek letter "rho".

Page: 81
Sequence number: 5
Date: 1/20/2003 6:09:01 PM
Type: Highlight
　　ACCEPT - DONE
　　5.7.9 Impedance specifications
　　Table 39 - Impedance requirements footnote f:
　　The text uses an upper-case greek letter "gamma" that normally
　　represents a complex number. To represent the "magnitude"
　　of the reflection coefficient, use the lower-case greek letter "rho".

Page: 82
Sequence number: 10
Date: 1/20/2003 5:38:34 PM
Type: Note
　　REJECT (per phy WG)
　　5.7.11 Transmitter characteristics
　　Clarify whether both cases must pass, or whether one or the
　　other is sufficient.

Page: 104
Sequence number: 7
Date: 1/9/2003 4:08:54 PM
Type: Note
　　ACCEPT - DONE (deleted)
　　6.6.4.2
　　table 49 Footnoote
　　The reference doesn't appear to be applied to anything.
　　In any case the comment doesn't belong with this table as
　　it is defined as the SAS speed negotiation.
　　Correct ref or delete.

Page: 108
Sequence number: 3
Date: 1/8/2003 6:38:57 PM
Type: Highlight
　　ACCEPT - DONE (it's really OOB_COMINIT)
　　6.8.1 Overview
　　"SP0:SAS_PowerOn state" is not defined anywhere within
　　the document. Define this state.

Page: 108
Sequence number: 4
Date: 1/17/2003 2:21:49 PM
Type: Note
　　REJECT (but added cross ref after SP_DWS reference)
　　6.8.1 Overview
　　Define 'DWS' in clause 3

Page: 109
Sequence number: 9
Date: 1/9/2003 6:03:44 PM
Type: Highlight
　　REJECT (we're not trying to list all entry actions like timer controls...just signals to other state machines that may be generated)
　　6.8.2 OOB sequence states
　　Fig 56
　　Entry action is not listed as described in 6.8.2.2.1 on page 110.

Page: 109
Sequence number: 10
Date: 1/8/2003 6:41:58 PM
Type: Highlight
　　REJECT (The state description below says "send this and wait..)
　　6.8.2 OOB sequence states

Fig 56
"Transmit COMSAS"
When should this action be executed? Clarify.

Page: 109
Sequence number: 11
Date: 1/9/2003 6:04:08 PM
Type: Highlight
REJECT (we're not trying to list all entry actions like timer controls...just signals to other state machines that may be generated)
6.8.2 OOB sequence states
Fig 56
SP7:OOB_AwaitCOMSAS entry action is not listed as
described in 6.8.2.7.1 on page 111

Page: 109
Sequence number: 12
Date: 1/9/2003 4:51:08 PM
Type: Highlight
REJECT (state description describes when... this just shows the signals that might come out of the states)
6.8.2 OOB sequence states
Fig 56
The "Broadcast Event Notify" transition looks like an
unconditional jump in the state diagram, but it
actually only transit if all the conditions list
in 6.8.2.7.2 are true.
It is very misleading as shown in the state diagram.

Page: 109
Sequence number: 13
Date: 1/9/2003 6:06:01 PM
Type: Highlight
REJECT (we used to have Verilog style equations and output definitions, and the complaint was they were too informative. Now
we have minimal text descriptions and get complaints from some that they're still too much and others that they're not enough.)
6.8.2 OOB sequence states
Fig 56 SAS phy (SP) state machine - OOB sequence states
With all the missing transition conditions and entry action
conditions, it makes this state diagram practically useless.
Add complete details or remove so as not to cause confusion.

Page: 109
Sequence number: 14
Date: 1/8/2003 6:41:10 PM
Type: Highlight
REJECT (yes. The state description below says "send this and wait. That means send it one time upon entry.)
6.8.2 OOB sequence states
Fig 56
"Transmit COMINIT"
When should this action be executed? When entering SP1?

Page: 109
Sequence number: 15
Date: 1/9/2003 4:50:36 PM
Type: Highlight
REJECT (state description describes when these are sent)
6.8.2 OOB sequence states
Fig 56
"PhyNotReady"
When should this action be executed?
When entering SP1?

Page: 110
Sequence number: 8
Date: 1/9/2003 6:09:03 PM
Type: Highlight
REJECT (when we had full equations this was specified. The text describes how multiple arcs are chosen when more than one is
possible.)
6.8.2.1.2 Transition SP1:OOB_COMINIT to SP2:OOB_AwaitCOMX
"a COMINIT Transmitted parameter and does not receive
a COMINIT Detected parameter."

In Fig 56 on page 109, the transition condition
only listed "COMINIT Transmitted"parameter"

Page: 110
Sequence number: 9
Date: 1/9/2003 6:09:11 PM
Type: Highlight
    REJECT (when we had full equations this was specified. The text describes how multiple arcs are chosen when more than one is
    possible.)
    6.8.2.1.3
    "a COMINIT Detected parameter and does not receive a
    COMINIT Transmitted parameter"
    In Fig 56 on page 109, the transition condition only
    listed " COMINIT Detected"

Page: 110
Sequence number: 10
Date: 1/10/2003 2:38:28 PM
Type: Highlight
    ACCEPT - DONE
    6.8.2.2.1 State description
    Ambiguous: COMINIT and COMSAS could be read as modifiers for 'timeout'.
    Add 'detect' after each.

Page: 110
Sequence number: 11
Date: 2/21/2003 2:59:35 PM
Type: Highlight
    REJECT (figures don't show rules)(but sentence deleted later)
    6.8.2.3.1 State description
    "but the COMINIT initiated in
    SP1:OOB_COMINIT has not been completely transmitted."
    This condition is not shown in state diagram Fig 56 on page 109.

Page: 110
Sequence number: 12
Date: 1/10/2003 2:43:04 PM
Type: Highlight
    REJECT (when we had full equations this was specified. The text describes how multiple arcs are chosen when more than one is
    possible. However, did change "does not " to "has not".)
    6.8.2.4.2 Transition SP4:OOB_COMSAS to SP5:OOB_AwaitCOMSAS_Sent
    "and does not receive a COMSAS Transmitted parameter."
    This condition is not listed in the transition in Fig. 56 on 109,
    which may cause race condition in SM.

Page: 111
Sequence number: 5
Date: 1/10/2003 2:43:11 PM
Type: Highlight
    REJECT (when we had full equations this was specified. The text describes how multiple arcs are chosen when more than one is
    possible. However, did change "does not " to "has not")
    6.8.2.4.4
    "and does not receive a COMSAS Detected parameter."
    This transition condition is not listed in Fig 56 on page 109

Page: 111
Sequence number: 6
Date: 1/10/2003 2:26:58 PM
Type: Highlight
    REJECT (this is the only one like this, and this sentence provides that warning)
    6.8.2.6.2 (Page 111)
    "The COMSAS Completed parameter may be received before
    this state is entered."
    How long does this COMSAS Completed
    or other completed/transmitted/detected) signal stay valid
    after the event?
    Since this is the only place in this state machine description
    where receiving "before" the state is OK. Does it mean that all
    other detection/transmitted/etc. paramters are required to be valid

only after the corresponding state has been entered?

Page: 111
Sequence number: 7
Date: 1/24/2003 6:25:45 PM
Type: Highlight
    ACCEPT - DONE (reworded as "receipt of a COMSAS Detected parameter")
    6.8.2.7.1 State description
    In Fig 56 on page 109, it states "COMSAS detected",
    is "received" the same as "detected?

Page: 112
Sequence number: 3
Date: 1/24/2003 6:27:06 PM
Type: Highlight
    ACCEPT - DONE (now transitions to a new state based on other comments)
    6.8.2.7.5 Transition SP7:OOB_AwaitCOMSAS to SAS_AwaitNoCOMX
    Change "SAS_AwaitNoCOMX" to "SP2:SAS_AwaitCOMX"

Page: 113
Sequence number: 6
Date: 1/11/2003 3:57:57 PM
Type: Highlight
    REJECT (diagram just shows what signals come from what states, not when)
    Figure 57 (Page 113)
      When should "Transmit ALIGN1" should be sent?
      The text in 6.8.3.4.1 says "repeatedly send", but this is not
    reflected in this state diagram.

Page: 113
Sequence number: 7
Date: 2/16/2003 10:08:42 AM
Type: Highlight
    ACCEPT - DONE (changed to "speed negotiation failed")
    6.8.3 SAS speed negotiation states
    Figure 57
    "No more rates" is not even close to what is
    described in 6.8.3.7.2 on page 116. Clarify.

Page: 114
Sequence number: 21
Date: 1/17/2003 2:15:35 PM
Type: Highlight
    REJECT (See other idle comment)
    6.8.3.1.1 (Page 114)
    "During this state idle shall be transmitted."
    This requirement is not listed in the state diagram
    state SP8 in Fig 57 on page 113

Page: 114
Sequence number: 22
Date: 2/21/2003 2:40:26 PM
Type: Highlight
    ACCEPT - DONE (yes. initialized and start chosen as the general convention)
    6.8.3.2.1 (Page 114)
    Clarify:
    Is "enabled" the same as "started"?

Page: 114
Sequence number: 23
Date: 1/17/2003 2:15:14 PM
Type: Highlight
    REJECT (see other idle comment)
    6.8.3.2.1
    "During this state idle shall be transmitted."
    This requirement is not listed in the state diagram state
    SP8 in Fig 57 on page 113

Page: 114

Sequence number: 24
Date: 2/4/2003 7:11:49 PM
Type: Highlight
    ACCEPT - DONE (have timers start not enable globally)
    6.8.3.3.1 (Page 114)
    Need clarification:
    Is "enabled" the same as "started"?

Page: 114
Sequence number: 25
Date: 1/25/2003 4:45:02 PM
Type: Highlight
    ACCEPT - DONE (delete whole sentence)
    6.8.3.3.1 (Page 114) State description
    "if synchronization occurs before the SNLT expires."
       Need to clarify what "synchronization" means, I think it is trying
    to say either "ALIGN0 Detected" or "ALIGN1 Detected". Usually
    the word "synchronizatin" means something else. This sentence
    can be deleted because the same action is clearly described in
    6.8.3.3.2 and 6.8.3.3.3 .
       Also, missing transition if only SNLT expires and
    no "synchronization" in this state?

Page: 115
Sequence number: 14
Date: 2/21/2003 2:56:49 PM
Type: Highlight
    ACCEPT - DONE (delete sentence)
    6.8.3.4.1
    "This state is exited when the SNTT expires or when ALIGN (1)
    primitives are received before the SNLT timer expires."
    This same information is repeated at 6.8.3.4.2

Page: 115
Sequence number: 15
Date: 2/21/2003 2:57:22 PM
Type: Highlight
    REJECT (but deleted sentence)
    6.8.3.5.1 (Page 115)
    "This state is reached after ALIGN (1) has been both
    transmitted and received."
       This sentence is not describing the same behavior as
    shown in the state diagram - Fig 57 on page 113.
       Change to:
    "This state is reached after ALIGN(1) has been recovered before the SNLT timer expires"

Page: 116
Sequence number: 7
Date: 2/21/2003 4:38:35 PM
Type: Highlight
    ACCEPT - DONE ("at the rate established in the previous speed negotiation window.")
    6.8.3.8.1
    "While in this state dwords from the link layer are transmitted
    at the negotiated physical link rate."
    Who (in what state/state machine) is responsible to tell the
    PHY what the negotiated link rate is? Clarify.

Page: 118
Sequence number: 9
Date: 2/4/2003 6:50:17 PM
Type: Highlight
    ACCEPT - DONE
    6.8.4 SATA host emulation states
    Figure 58
    SP16:SATA_COMWAKE
    Missing input parameter "COMWAKE Transmitted" with dotted
    line unfilled arrow into SP16.

Page: 118
Sequence number: 10
Date: 2/4/2003 6:50:00 PM
Type: Highlight
REJECT (text describes the order requirements)
6.8.4 SATA host emulation states
Figure 58 - SAS phy (SP) state machine - SATA host emulation states
SP20: SATA_AdjustSpeed
dotted unfilled arrow with parameter (Transmit D10.2)
    and
dotted unfilled arrow with parameter (Set Rate)
    It seems it may have to send "Set Rate" parameter before
"Transmit D10.2", please clarify.

Page: 119
Sequence number: 12
Date: 1/10/2003 10:49:18 AM
Type: Highlight
REJECT (figure just shows the possible signals not the details. That's what this text is for)
6.8.4.4.1 State description
"a) repeatedly send a Transmit D10.2 parameter to the SP transmitter"
    "repeatedly send" is not shown in the state diagram in Fig 58
as a condition required for transmitting D10.2

Page: 119
Sequence number: 13
Date: 1/17/2003 1:52:27 PM
Type: Highlight
REJECT (but will make timers stand out better in the text and may add timer arcs to figures in SAS-2)
6.8.4.4.1 State description
***
GLOBAL
"b) start the ALIGN detect timeout timer"
    It looks like this is a state entry action and it
is not listed in the state diagram in Fig 58
    THIS IS one of a pattern of incomplete definitions due to the
assumption of hidden, underlying state machines. Need to explicitly
identify these implicit state machines and the signals/messages they
exchange with other SMs.

Page: 119
Sequence number: 14
Date: 2/21/2003 5:04:29 PM
Type: Highlight
ACCEPT - DONE (changed COMWAKE to "after entry into this state. State diagrams don't show when their signals are sent.
Changed 20 G1 dwords to COMWAKE response time and added that to a timing table above, defined as 533 ns.)
6.5.4.4.1 State description
"The SAS device shall start transmitting D10.2 characters no
later than 20 G1 dwords (i.e. 533 ns) after COMWAKE was deasserted"
    Use of COMWAKE is confusing - sometimes parms are received,
sometimes CW is 'deasserted' - what is it?   [agree]
    This seems as a state entry action and it does not show the
relation of transmitting D10.2 characters no later than 20 G1
dwords after COMWAKE was deasserted in the state diagram in Fig 58. [reject]
    Since not all SAS implementation required to support G1 speed,
this state should not specify requirement in "G1 dwords", instead
it should just specify time - 533 ns. [accept; check what SATA intends]

Page: 119
Sequence number: 15
Date: 1/22/2003 9:41:55 AM
Type: Highlight
ACCEPT - DONE (made into an ordered list)
must set the rate before transmitting the 10.2s

Page: 137
Sequence number: 9
Date: 1/22/2003 9:48:47 AM
Type: Highlight

ACCEPT - DONE (change "init sequence" to "link reset sequence". This is not concerned with the higher level software.)
7.1.4.4 BROADCAST
If an expander's routing tables are configured by initiators,
how does an expander know the initialization sequence has
completed? Clarify.

Page: 138
Sequence number: 12
Date: 1/6/2003 1:31:04 PM
Type: Highlight
ACCEPT - DONE
7.1.4.9 NOTIFY
NOTIFY (ENABLE_SPINUP)
Add correct reference for TBD.

Page: 138
Sequence number: 13
Date: 1/22/2003 9:48:13 AM
Type: Highlight
ACCEPT - DONE (change "accept" to "honor" and "all target ports equivalently")
7.1.4.9 Notify
Meaning of 'accept' here requires clarification.

Page: 141
Sequence number: 4
Date: 2/17/2003 1:58:25 PM
Type: Highlight
REJECT (other comment resolution on this sentence adds an xref to the SSP state machine which should suffice)
7.1.5.3 DONE
Table 63
Ack/NAK TIMEOUT
"is going to" Sentence s/b xref to where the behavior is defined

Page: 142
Sequence number: 6
Date: 1/6/2003 1:42:19 PM
Type: Highlight
ACCEPT - DONE
7.1.6.3 SATA_HOLD and SATA_HOLDA
"...transmitting a SATA_HOLD." should be changed to
"...receiving an SATA_HOLD"

Page: 162
Sequence number: 8
Date: 1/22/2003 9:47:11 AM
Type: Highlight
ACCEPT - DONE ("If any of the prospective... does not support")
7.12.2.1 Connection Request
"If none of the prospective intermediate physical links [does not]
support the requested connection rate, ..."
  Remove "does not"

Page: 166
Sequence number: 10
Date: 2/21/2003 7:23:53 PM
Type: Highlight
ACCEPT - DONE (requests to devices not in the fanout expander routing tables cause the fanout expander to returns NO DEST,
and requests to devices in the fanout tables but not currently attached to an edge expander return BAD DEST)
7.12.4.2 Edge Expander Devices
Par. 5, last sentence
"When a fanout expander device is in the domain, an
OPEN_REJECT (NO DESTINATION) is returned."
"is returned" - who returns?

Page: 166
Sequence number: 11
Date: 2/21/2003 7:27:04 PM

Type: Highlight
ACCEPT - DONE (delete this table. Chapter 4 has much more details on the model for routing tables. Add cross reference to Ch 4. Check all the paragraphs here looking for out of date text.)
7.12.4.2 Edge expander devices
The simple edge expander device routing table described
in table 80 needs to be reconciled with the expander
routing table described in "4.6.11.3 Expander route table."
Text needs to describe when it's appropriate to use the simpler
table vs. the more complex table and what the restrictions are
if a simpler approach is used.

Page: 174
Sequence number: 11
Date: 1/17/2003 1:04:23 PM
Type: Highlight
REJECT (missing SOAFs just mean the frame data looks like idle dwords. The EOAF is then ignored.)
7.13.3.1 State Description
par. 7 . (i.e) Explanation missing regarding what should be done about
data dwords transmitted between consecutive EOAFs. SOAFs is clear.
(Multiple occurrences)

Page: 191
Sequence number: 6
Date: 1/22/2003 9:46:13 AM
Type: Highlight
ACCEPT - DONE ("Receiving ports shall acknowledge frames within 1 ms if not discarded as described in 7.x.x.x with either ...")
7.16.3 SSP frame transmission
"Every frame shall be acknowledged" By whom? Place the requirement on something.

Page: 191
Sequence number: 7
Date: 1/22/2003 9:44:10 AM
Type: Highlight
ACCEPT - DONE (rename section "transmission and reception". Also done in SMP and STP sections.)
7.16.3 SSP frame transmission
Create new subclause for frame reception.

Page: 191
Sequence number: 8
Date: 2/18/2003 4:02:16 PM
Type: Highlight
ACCEPT - DONE ("Every frame not discarded as described in 7.16.7.9". See other comment)
7.16.3 SSP frame transmission
  "Every frame shall be acknowledged" conflicts with
7.16.7.9, which describes some frames that are dropped.
Qualify with 'valid' or something.

Page: 198
Sequence number: 2
Date: 2/25/2003 3:21:24 PM
Type: Highlight
(ACCEPT - call the signals between peers "messages". General term for request, indication, confirmation, and response is
"interlayer messages" too (not used much in that context)).
7.16.7.2 SSP_TIM1:Tx_Interlock_Monitor state
'When the number of EOF Transmitted parameters received' - These
are signals, indications, something. They are not parameters.
Use an appropriate term, see ANSI IT Dictionary.

Page: 213
Sequence number: 3
Date: 1/6/2003 1:17:15 PM
Type: Highlight
ACCEPT - DONE
8.1 Overview
"PC_OC" s/b replaced with "PL_OC"

Page: 213
Sequence number: 4
Date: 3/1/2003 4:04:51 PM

Type: Highlight
    REFER PORT WG - TODO
    8.1 Overview
    'establish port connections and disconnections' - Sounds awk
    to establish a disconn. Reword.

Page: 213
Sequence number: 5
Date: 3/1/2003 4:04:45 PM
Type: Highlight
    REFER PORT WG - TODO
    8.2 Overview
    'pass transmit data, receive data'   AWK - reword.
    Suggest 'data for transmission, received data'

Page: 213
Sequence number: 6
Date: 3/1/2003 4:04:40 PM
Type: Highlight
    REFER PORT WG - TODO
    8.1 Overview
    '...form the port layer' AWK. Rearrange sentence.
    Suggest 'The port layer consists of...'

Page: 214
Sequence number: 7
Date: 3/1/2003 4:05:36 PM
Type: Highlight
    REFER PORT WG - TODO
    8.2.2 Bus inactivity time limit timer
    ALL OTHER TIMERS
    'The timer shall count down' - specify when
    (or include xref to spec, here, 8.4.4.1)it starts.
    (For this and all other defined timers)

Page: 217
Sequence number: 5
Date: 12/30/2002 1:30:39 PM
Type: Highlight
    ACCEPT - DONE
    8.3.2.2 Transition PL_OC1:Idle to PC_OC2:Overall_Control
    In this heading, the heading number is duplicated and PC_OC2
    should be changed to PL_OC2

Page: 217
Sequence number: 6
Date: 1/8/2003 9:36:04 AM
Type: Highlight
    ACCEPT - DONE
    8.3.3.1.1 State Description Overview
    PM_PM should change to PL_PM

Page: 217
Sequence number: 7
Date: 2/16/2003 11:28:45 AM
Type: Highlight
    REJECT (they are treated as separate arguments)
    8.3.3.1.1 State description overview
    The Tx Frame parameter
    "following arguments: Balance Required or Balance Not Required"
    BR and BNR are not arguments, they are possible values of an argument
    that should be called 'Balance Requirement' or something similar.
    Correct.

Page: 217
Sequence number: 8
Date: 3/1/2003 4:10:08 PM
Type: Highlight
    REJECT (no it's intra-port layer as used here)

8.3.3.1.1 State description overview
GLOBAL
"parameter" s/b 'request' as per 4.3.3.2 .

Page: 217
Sequence number: 9
Date: 3/1/2003 4:09:43 PM
Type: Highlight
REFER PORT WG - TODO
8.3.3.1.2 Keep track of connections/frame requests
"Keep track of connections/frame requests" is the first
time I've seen an imperative used as a subclause title.
Replace with   "Connection frame/request tracking"

Page: 217
Sequence number: 10
Date: 3/1/2003 4:09:38 PM
Type: Highlight
REFER PORT WG - TODO
8.3.3.1.2 Keep track of connections/frame requests
"A phy is available if it is not processing a Tx Frame"
What if it has lost sync, etc? Add defn for 'available'
or qualify. Clarify.

Page: 217
Sequence number: 11
Date: 3/1/2003 4:09:33 PM
Type: Highlight
REFER PORT WG - TODO
8.3.3.1.1 State description overview
GLOBAL
The information ("parameters/arguments" to/from
various state machines and layers) discussed throughout
this clause needs to be defined as per 3.7.
Very confusing: for example, "parameter shall include as arguments:"

Page: 218
Sequence number: 6
Date: 3/1/2003 4:12:24 PM
Type: Highlight
REFER PORT WG - TODO
8.3.3.1.4 SSP wide port rules
Multiple in subclause
"An initiator port shall not transmit ...for which...transmitting
a frame [ ]" Add "on another phy".

Page: 218
Sequence number: 7
Date: 3/1/2003 4:12:17 PM
Type: Highlight
REFER PORT WG - TODO (there's both a parameter and a request with that name. Sorry.)
8.3.3.1.3 Select a request to process and the phy on which to process it
GLOBAL
"Tx Frame request" Elsewhere, Tx Frame is called a
parameter. Change all occurences to 'request'.

Page: 218
Sequence number: 8
Date: 3/1/2003 4:12:02 PM
Type: Highlight
REFER PORT WG - TODO (no they're different)
8.3.3.1.3 Select a request to process and the phy on which to process it
1)
Is 'Tx Frame request' the same as 'Transmit Frame request' above?
If so, be consistent in usage, if not, add some modifier to
one to make the distinction clear.

Page: 218
Sequence number: 9

Date: 3/1/2003 4:11:46 PM
Type: Highlight
    REFER PORT WG - TODO
    8.3.3.1.3 Select a request to process and the phy on which to process it
    "A destination is considered the same" - AWK
    suggest:
      "Destinations are considered to be identical if they have
    the same protocol and SAS address."

Page: 218
Sequence number: 10
Date: 3/1/2003 4:11:41 PM
Type: Highlight
    REFER PORT WG - TODO
    8.3.3.1.2 Keep track of connections/frame requests
    "This state shall consider a phy as having an active connection"
    Drop "shall consider" and define it:
    "A phy has an active connection when..."

Page: 219
Sequence number: 3
Date: 2/16/2003 11:29:13 AM
Type: Highlight
    ACCEPT - DONE
    8.3.3.1.5 Filling in the Tx Frame arguments
    3d para
    "Balanced" Remove 'd'

Page: 219
Sequence number: 4
Date: 3/1/2003 4:14:27 PM
Type: Highlight
    REFER PORT WG - TODO
    8.3.3.1.5 Filling in the Tx Frame arguments
    3d para
    "argument" -> 'value'
    (This appears to be redundant to 8.3.3.1.1)
    Confusing use of 'argument' and 'parameter'

Page: 219
Sequence number: 5
Date: 3/1/2003 4:14:15 PM
Type: Highlight
    REFER PORT WG - TODO
    8.3.3.1.5 Filling in the Tx Frame arguments
    "are transferred to the selected PL_PM's AWT timer and
    PBC counter" By whom? The PL_PM, or the PL_OC2? Clarify.

Page: 219
Sequence number: 6
Date: 3/1/2003 4:14:20 PM
Type: Highlight
    REFER PORT WG - TODO
    8.3.3.1.5 Filling in the Tx Frame arguments
    "are not received" Place reqmt on sender that it not
    send, or clarify that these are not present within TxFrame,
    or are ignored on receipt.

Page: 219
Sequence number: 7
Date: 3/1/2003 4:14:09 PM
Type: Highlight
    REFER PORT WG - TODO
    8.3.3.1.5 Filling in the Tx Frame arguments
    "are received as arguments"
      s/b
    "are present in "

Page: 219

Sequence number: 8
Date: 3/1/2003 4:14:05 PM
Type: Highlight
    REFER PORT WG - TODO (agree)
    8.3.3.1.5 Filling in the Tx Frame arguments
    "a corresponding PL_OC Retry Frame AWT timer"
    Provide separate text listing all architectural timers and their
    functions.

Page: 219
Sequence number: 9
Date: 3/1/2003 4:13:55 PM
Type: Highlight
    REFER PORT WG - TODO
    8.3.3.1.5 Filling in the Tx Frame arguments
    The I_T nexus loss
    "The selected PL_PM timer shall be set" Express in
    active voice (who shall?).

Page: 219
Sequence number: 10
Date: 3/1/2003 4:13:50 PM
Type: Highlight
    REFER PORT WG - TODO
    8.3.3.1.5 Filling in the Tx Frame arguments
    "state (i.e, either stopped,"
    Clarify that you are defining the possible states or ref
    where defined. "i.e." is a bit too casual.

Page: 219
Sequence number: 11
Date: 3/1/2003 4:13:45 PM
Type: Highlight
    REFER PORT WG - TODO
    8.3.3.1.5 Filling in the Tx Frame arguments
    'are read from'   Use active voice.

Page: 219
Sequence number: 12
Date: 3/1/2003 4:13:41 PM
Type: Highlight
    REFER PORT WG - TODO
    8.3.3.1.5 Filling in the Tx Frame arguments
    "is updated"   Use active voice.

Page: 220
Sequence number: 1
Date: 3/1/2003 4:15:11 PM
Type: Highlight
    REFER PORT WG - TODO
    8.3.3.1.6 Confirmations
    "to finish servicing each Transmit Frame request." Unclear -
    is this how THIS state completes the request, or does it
    tells the Transport layer to do so? Clarify.

Page: 220
Sequence number: 2
Date: 3/1/2003 4:15:05 PM
Type: Highlight
    REFER PORT WG - TODO
    8.3.3.1.6 Confirmations
    "Since the transport layer responses ...are instantaneous"
    'are returned immediately' seems better if the intent is
    (response returned as soon as request received). Clarify.

Page: 220
Sequence number: 3
Date: 3/1/2003 4:14:59 PM
Type: Highlight

REFER PORT WG - TODO
8.3.3.1.6 Confirmations
Need comma after e.g.
"to continue" may be clearer.

Page: 220
Sequence number: 4
Date: 3/1/2003 4:14:52 PM
Type: Highlight
    REFER PORT WG - TODO
    8.3.3.1.6 Confirmations
    "parameter" -> "confirmation"?

Page: 220
Sequence number: 5
Date: 3/1/2003 4:14:48 PM
Type: Highlight
    REFER PORT WG - TODO
    8.3.3.1.6 Confirmations
    Table 86 header
    "parameter" s/b 'value' or 'code'

Page: 221
Sequence number: 4
Date: 3/1/2003 4:15:33 PM
Type: Highlight
    REFER PORT WG - TODO
    8.3.3.1.7 Handling Cancel requests
    "Cancel request for a specific Transmit Frame request"
    There is no listing I could find of the arguments to a
    Cancel request. Add xref to that defn.   Clarify the means
    by which a specific TF request is identified.

Page: 221
Sequence number: 5
Date: 3/1/2003 4:15:23 PM
Type: Highlight
    REFER PORT WG - TODO
    8.3.3.1.7 Handling Cancel requests
    "send a Cancel Acknowledge...and terminate"
    Either change order to (terminate, ack), or add prohibition
    on beginning TF processing.

Page: 221
Sequence number: 6
Date: 3/1/2003 4:15:27 PM
Type: Highlight
    REFER PORT WG - TODO
    8.3.3.1.7 Handling Cancel requests
    "layer, this frame is currently" Ambig.
    s/b " layer and the specified frame "? Clarify.

Page: 221
Sequence number: 7
Date: 3/1/2003 4:15:18 PM
Type: Highlight
    REFER PORT WG - TODO
    8.3.3.1.7 Handling Cancel requests
    "layer, this frame is currently"   AMBIG
    s/b " layer and the specified frame "? Clarify.

Page: 225
Sequence number: 5
Date: 3/1/2003 4:17:40 PM
Type: Highlight
    REFER PORT WG - TODO
    8.4.3.1.4 Open Failed handling
    "parameter" - confirmation?

Page: 227
Sequence number: 1
Date: 12/30/2002 11:28:40 AM
Type: Highlight
    ACCEPT - DONE
    9.1 Transport layer overview
    clarify:
     "only receives from the link layer those frames that are to be ACKed."

Page: 229
Sequence number: 17
Date: 1/6/2003 10:39:04 AM
Type: Highlight
    ACCEPT - DONE (added xref to 9.2.4.5 RESPONSE error handling)
    9.2.1 SSP frame format
    RETRANSMIT
    "may be set to one"
    Add xref or "shall be set to one" when a RESP frame is a retrans.

Page: 229
Sequence number: 18
Date: 1/6/2003 10:37:11 AM
Type: Highlight
    ACCEPT - DONE
    9.2.1 SSP frame format
    For DATA
    "to that" s/b "to the tag"

Page: 229
Sequence number: 19
Date: 1/17/2003 12:14:12 PM
Type: Highlight
    REJECT (paragraph being redone, targets always allowed to use the field)
    9.2.1 SSP frame format
    TP Xfer Tag
    "need" s/b "use"
    (We don't care if they NEED it, just whether they use it)

Page: 229
Sequence number: 20
Date: 1/17/2003 12:13:44 PM
Type: Highlight
    REJECT (the whole paragraph is being redone, and targets are allowed to set the field any time)
    9.2.1 SSP frame format
    TPXfer Tag
    "do not need this field" Clarify whether TP can
    use it sometime, but not other times. or say "use"

Page: 229
Sequence number: 21
Date: 1/17/2003 12:01:25 PM
Type: Highlight
    REJECT (Jan WG disk drives don't need)
    9.2.1 SSP frame format
    Table 89 - FRAME TYPE field
    ***
    Max data frame size of 1024 is inefficient for block-sizes greater
    than 512 bytes. This is a serious problem for systems that
    use data-integrity guards on a block-by-block basis. Recommend
    the max DATA IU payload accommodate two blocks with a
    generously-sized block-guard (16-bytes). Change (1 024) to (1 056).

Page: 230
Sequence number: 9
Date: 1/6/2003 10:44:53 AM
Type: Highlight
    ACCEPT - DONE ("..shall transfer data beginning on a dword boundary...". Kept the i.e.)
    9.2.1 SSP frame format
    DATA frames

"each DATA frame shall begin on a dword boundary"
It's the TRANSFER, frame. Drop (i.e.)

Page: 230
Sequence number: 10
Date: 12/30/2002 2:04:44 PM
Type: Highlight
ACCEPT - DONE (a SAM-3 reference was meant)
9.2.1.1 COMMAND information unit
"SPC-2" if referencing SAM-3, why not SPC-3, especially
when ref'd on next page. Be consistent. Suggest SPC-3.

Page: 230
Sequence number: 11
Date: 12/30/2002 1:37:57 PM
Type: Highlight
ACCEPT - DONE (globally for all occurrences of [0-9]<space>[0-9] except in the 8b10b tables)
9.2.1 SSP frame format
The INFORMATION UNIT field
1
024   - Make space non-breaking (ctrl-space)

Page: 231
Sequence number: 3
Date: 1/6/2003 10:50:05 AM
Type: Highlight
ACCEPT - DONE (also in 9.2.2.1)
9.2.2.2 TASK information unit
"request a" s/b "request that a"

Page: 233
Sequence number: 13
Date: 1/6/2003 10:57:47 AM
Type: Highlight
REJECT (but changed "begin" wording a bit)
9.2.2.3 XFER_RDY information unit
"each DATA frame shall begin on a dword boundary"
Remove (ie)

Page: 233
Sequence number: 14
Date: 1/6/2003 10:57:05 AM
Type: Highlight
REJECT (but changed "aligned" to "multiple")
9.2.2.3 XFER_RDY information unit
"non-dword aligned write data length"
A length does not have alignment.
Remove the paren statement.

Page: 233
Sequence number: 15
Date: 1/6/2003 10:56:26 AM
Type: Highlight
ACCEPT - DONE (target port)
9.2.2.3 XFER_RDY information unit
GLOBAL
"frame for a given command shall set"
Frames don't set themselves. Place the reqmt on some port.

Page: 235
Sequence number: 3
Date: 1/6/2003 11:22:07 AM
Type: Highlight
ACCEPT - DONE (added all the field names in the intro to the DATAPRES field. The descriptions are in subsequent sections)
9.2.2.5.1 RESPONSE information unit overview
Table 96 - RESPONSE information unit
STATUS - Following text does not give ref to where
STATUS values defined. (make sure for all fields)

Page: 236
Sequence number: 3
Date: 1/6/2003 12:25:01 PM
Type: Highlight
    ACCEPT - DONE (for all 3 sections, used a)b)c) lists to highlight that they're based on DATAPRES)
    9.2.2.5.3 RESPONSE information unit RESPONSE_DATA format
    "The SENSE DATA field shall not be present."
    Make clear that this and related reqmts are conditional
    on the DATAPRES == RESP_DATA, and not global. Suggest
    unordered list under "If the DATAPRES..."

Page: 237
Sequence number: 5
Date: 1/13/2003 6:02:38 PM
Type: Highlight
    ACCEPT - DONE (removed it)
    Table 99
    9.2.2.5.3 RESPONSE information unit RESPONSE_DATA format
    "NO FAILURE, when responding to a COMMAND frame"
    Response data would not be returned if there was no
    error. Remove this.

Page: 237
Sequence number: 6
Date: 1/6/2003 12:26:27 PM
Type: Highlight
    ACCEPT - DONE (a)b)c) list format)
    9.2.2.5.4 RESPONSE information unit SENSE_DATA format
    "The RESPONSE DATA LIST LENGTH field shall be set to zero"
    Make clear that thes reqmts are conditional on DATAPRES value.

Page: 239
Sequence number: 4
Date: 1/6/2003 12:48:57 PM
Type: Highlight
    ACCEPT - DONE
    9.2.4.1 COMMAND frame
    "whether ...received or not" 'Whether' is sufficient to
    cover both cases. Drop "or not".

Page: 239
Sequence number: 5
Date: 1/6/2003 12:48:39 PM
Type: Highlight
    ACCEPT - DONE
    9.2.4.1 COMMAND frame
    "command [ ] was ACKed" add "frame"

Page: 239
Sequence number: 6
Date: 1/6/2003 12:48:12 PM
Type: Highlight
    REJECT - (no unit attention, just a CHECK CONDITION for the command involved. "Returning CHECK CONDITION status" is
    higher level than returning a RESPONSE frame with CHECK CONDITION status and avoids needing to mention opening a new
    connection and other details.)
    9.2.4.3 XFER_RDY frame
    "close the connection ..return a [ ] CHECK CONDITION status"
    Does this mean "generate a UA"?
    Add "a RESPONSE FRAME with" (MULTIPLE places)
    Does it establish a new connection to send the RESPONSE? Clarify.

Page: 239
Sequence number: 7
Date: 1/6/2003 12:42:29 PM
Type: Highlight
    ACCEPT - DONE (changed to 'times out waiting for')
    9.2.4.3 XFER_RDY frame
    "does not receive an ACK or NAK"
     Over what time period? Clarify.

Page: 240
Sequence number: 7
Date: 2/2/2003 2:36:35 PM
Type: Highlight
    ACCEPT - DONE (for too short for LUN field, too short for CDB, and additional cdb mismatch, generate a RESPONSE IU with a
    RESPONSE CODE indicating INVALID FRAME. In ch10 protocol services, this means a service delivery subsystem failure.)
    9.2.5.1 Target port error handling
    "too short to contain a LUN field"
      Be explicit - state number of bytes.

Page: 240
Sequence number: 8
Date: 2/2/2003 2:36:26 PM
Type: Highlight
    ACCEPT - DONE (for too short for LUN field, too short for CDB, and additional cdb mismatch, generate a RESPONSE IU with a
    RESPONSE CODE indicating INVALID FRAME. In ch10 protocol services, this means a service delivery subsystem failure.)
    9.2.5.1 Target port error handling
    "contains a LUN field but is too small to contain a CDB"
    If frame is malformed, how could you say it has LUN but not CDB?
    Replace this with a list of sizes, in bytes, and the appropriate
    responses.

Page: 240
Sequence number: 9
Date: 1/6/2003 12:55:38 PM
Type: Highlight
    REJECT - the crossreference has that rule
    9.2.5.1 Target port error handling
    "OVERLAPPED COMMANDS DETECTED"
      State (non) requirements on checking.

Page: 240
Sequence number: 10
Date: 1/6/2003 12:52:31 PM
Type: Highlight
    ACCEPT - DONE (changed several others in this section)
    9.2.5.1 Target port error handling
    'TAG that is already in use' - Should be small caps only if
    referring to the field, but not to the value. Correct.

Page: 241
Sequence number: 3
Date: 2/15/2003 5:51:26 PM
Type: Highlight
    ACCEPT - DONE (per Jan WG; 03-088 makes this request from SPC-3)
    9.2.5.1 Target port error handling
    ILLEGAL TARGET PORT TRANSFER TAG - Although the tag may be invalid, there's no indication that it's illegal.
    Rename ASC - use INVALID.

Author: KnowledgeTek

Page: 8
Sequence number: 13
Date: 1/7/2003 2:39:21 PM
Type: Highlight
    ACCEPT - DONE (figure 3 is backwards)
    3.1.62 indication:
    The definition says < passed from lower layer... >
    3.5.1 State machine convetions overview, Figure 3 shows < indication from upper layer... >

Page: 9
Sequence number: 21
Date: 1/7/2003 2:42:14 PM
Type: Highlight
    ACCEPT - DONE (figure is wrong)

3.1.98 response:
definition says < passed from a higher layer...>
3.5.1 State machine conventions overview, figure3
says < to upper layer...>

Page: 53
Sequence number: 2
Date: 12/31/2002 1:35:11 PM
Type: Highlight
ACCEPT - DONE (phy status)
4.6.7 Expander device interface detail
Figure 27
'Link Status' sb 'Phy Status' or Table 23 needs to change its entries to 'Link Status'

Page: 53
Sequence number: 3
Date: 12/31/2002 1:34:05 PM
Type: Highlight
ACCEPT - DONE
4.6.7 Expander device interface detail
Figure 27
All of the requests and indications using "Send" sb "Transmit" or Table 24 should change its entries to "Send".
There are eight occurences of "Send" in this figure that should change to "Transmit"

Page: 53
Sequence number: 4
Date: 1/11/2003 5:16:49 PM
Type: Highlight
ACCEPT - DONE
Send

Page: 53
Sequence number: 5
Date: 12/31/2002 1:34:25 PM
Type: Highlight
ACCEPT - DONE
Send

Page: 53
Sequence number: 6
Date: 12/31/2002 1:34:28 PM
Type: Highlight
ACCEPT - DONE
Send

Page: 53
Sequence number: 7
Date: 12/31/2002 1:34:32 PM
Type: Highlight
ACCEPT - DONE
Send

Page: 53
Sequence number: 8
Date: 12/31/2002 1:34:09 PM
Type: Highlight
ACCEPT - DONE
Send

Page: 53
Sequence number: 9
Date: 12/31/2002 1:34:14 PM
Type: Highlight
ACCEPT - DONE
Send

Page: 53
Sequence number: 10
Date: 1/11/2003 5:16:45 PM

Type: Highlight
    ACCEPT - DONE
    Send

Page: 57
Sequence number: 2
Date: 3/5/2003 2:22:37 PM
Type: Highlight
    ACCEPT - DONE (added "or internal SAS devices" to the direct routing method.)
    4.6.11.1 Routing attributes and methods
    4th paragraph
    The following paragraph implies that the routing will be either table OR direct, not both:
    "A phy that has the table routing attribute allows the expander connection manager to use one of the following
    methods to route connection requests:
    a) the table routing method if attached to an expander device; or
    b) the direct routing method if attached to an end device."
    4.6.11.2 Expander device connection request routing
    2nd paragraph
    This paragraph says that if the "DISABLE ROUTE ENTRY bit" is set the entry is ignored (I assume that means the connection
    request will get an OPEN_REJECT response???):
    "If the destination SAS address of a connection request matches the attached SAS address of an expander
    route entry and the DISABLE ROUTE ENTRY bit is set to one in the expander route entry, then the expander
    connection manager shall ignore the expander route entry."
    4.6.11.3 Expander route table
    10th paragraph
    This paragraph states that the"attached" expander's entry is disabled(I assume this means directly attached and not cascaded
    expanders beyond the one directly attached???):
    "If the discover process detects an expander route table entry that references the SAS address of an attached
    edge expander device, it shall set the DISABLE ROUTE ENTRY bit to one in the expander route table entry."
    Given the above, how can access to internal devices (i.e., SMP Target function) that share the expanders SAS address be
    accomplished?

Page: 61
Sequence number: 3
Date: 3/5/2003 4:10:43 PM
Type: Highlight
    REJECT (the directly attached SAS address is NOT part of the route table. It's part of direct routing not table routing. Made that
    clearer in the text and the examples.)
    4.6.11.4 Expander route index order
    Table 26 - Expander route table levels.
    The first entry in the table for level one should be the expander SAS address of expander N. Level two entries should begin with
    the device SAS addresses attached to phy0 of expander N. etc.... There is only one Level 1 entry per phy. I believe the whole
    table is wrong...
    (I'm assuming the text is correct in paragraph 2, including numbered list, of the same clause???).
    That text follows here:
    For purposes of configuring the expander route table, the edge expander devices attached to the phy are
    assigned levels:
    1) the attached edge expander device is considered level 1;
    2) devices attached to it are considered level 2;
    3) devices attached to level 2 edge expander devices are considered level 3; and
    4) etc.

Page: 63
Sequence number: 1
Date: 12/28/2002 2:49:20 PM
Type: Highlight
    4.6.11.4
    Table 27 - Expander route table entries for edge expander E0 phy 0
    see comments for table 26
    The level 1 entries should be the devices attached to the E0 phy 0, that is edge expander E1.
    Level 2 entries are the devices attached to edge expander E1 (i.e., D1,1... D1,Y)
    I'm assuming the text is correct in the 2nd paragraph, including numbered list, of the same clause.

Page: 63
Sequence number: 2
Date: 12/15/2002 11:57:10 PM
Type: Highlight
    4.6.11.4
    Table 28 - Expander route table entries for fanout expander device F phy 0

See comment on table 27, same type of errors apply to this table.

Page: 64
Sequence number: 1
Date: 2/9/2003 5:33:24 PM
Type: Highlight
REJECT (all application clients running the discover process have to fill in the tables the same way, or multiple initiators would confuse each other. The level-order traversal has each initiator gingerly probe the domain closest-to-furthest)
4.6.11.5 Discover process
1st paragraph
"The order of traversal shall be to discover:
1) the expander device to which the initiator port is attached;
2) every device attached to that expander device; and
3) as each expander device is found, every device attached to that expander device."
The above requires traversal to go down each phy to end before moving to the next phy. This seems to complicate the process of building the routing table entries since the order is based on level. Why the requirement as stated???

Page: 99
Sequence number: 3
Date: 1/8/2003 2:52:16 PM
Type: Highlight
ACCEPT - DONE (removed the times altogether. Also reformatted the picture a bit to show locking on the nth rate not the 2nd rate)
6.6.2.2 SATA speed negotiation sequence (informative)
Figure 49
Time reference is incorrect. 533 ns sb 53,3 ns

Page: 108
Sequence number: 5
Date: 1/8/2003 6:29:33 PM
Type: Highlight
ACCEPT - DONE (should be SP1:OOB_COMINIT)
6.8.1 Overview
A reference is made to "SP0:SAS_PowerOn state" in the thrid paragraph. This state does not appear in the state figures nor is there a state description of function or how it transistions to other states. Nor is it listed in the preceeding paragraph of SP states.

Page: 110
Sequence number: 13
Date: 1/22/2003 10:19:41 AM
Type: Highlight
REJECT (yes that is the intent for the first two; once a Transmit COMxxx is sent, COMxxx Transmitted ought to show up. The last one is waiting on COMSAS Completed after COMSAS Detected. If this hangs forever, it means the bus is hung sending ALIGN bursts. I think reset as the only out is acceptable.)
6.8.2.3 SP3:OOB_AwaitCOMINIT_Sent state
6.8.2.5 SP5:OOB_AwaitCOMSAS_Sent state
6.8.2.6 SP6:OOB_AwaitNoCOMSAS state
The above states have only one way out. If that event doesn't occur it appears the only way out is reset. Is that the intent???

Page: 114
Sequence number: 27
Date: 2/21/2003 5:06:44 PM
Type: Highlight
ACCEPT - DONE (gave it a mixed case name. It comes with the transition [very bizarre but we're stuck with that sometimes])
6.8.3.1.1 State description
4th paragraph, item b)
states:
"to the value of the speed negotiation window received as an argument."
This "argument" is not shown in the state diagram figure 57 nor is there an indication of where it comes from.

Page: 115
Sequence number: 16
Date: 12/31/2002 1:31:34 PM
Type: Highlight
ACCEPT - DONE
6.8.3.6.2 Transition SP13:SAS_Pass to SP8:SAS_Start
1st paragraph, item a)
SN_start state sb SP8:SAS_Start state.

Page: 117
Sequence number: 4

Date: 2/5/2003 10:04:28 AM
Type: Highlight
    REJECT (yes, SAS initiators can attach directly to SATA drives. That becomes outside the scope of this standard. However, the SP state machine is integrated and handles both (for both initiators and expanders), since there is nothing in SATA that we can clearly "join in progress" to handle the rest of the link reset sequence.)
    6.8.4 SATA host emulation states
    1st paragragh
    states:
    ...(an initiator device...
    Is this allowed????

Page: 215
Sequence number: 6
Date: 12/31/2002 1:30:29 PM
Type: Underline
    ACCEPT - DONE
     8.3.1Overview
    Paragragph 3
    Sentence 2
    PL_PM1:Idle sb PL_OC1:Idle

Page: 216
Sequence number: 12
Date: 12/31/2002 1:29:46 PM
Type: Highlight
    ACCEPT - DONE
    Clause 8.3.2.1 & 8.3.2.2
    8.3.2.1 & 8.3.2.2 is repeated in the clause heading

Page: 216
Sequence number: 13
Date: 12/31/2002 1:29:49 PM
Type: Highlight
    ACCEPT - DONE
    8.3.2 repeated

Page: 217
Sequence number: 12
Date: 12/31/2002 1:29:53 PM
Type: Highlight
    ACCEPT - DONE
    Clause 8.3.2.1 & 8.3.2.2
    8.3.2.1 & 8.3.2.2 is repeated in the clause heading

Page: 217
Sequence number: 13
Date: 12/31/2002 1:29:41 PM
Type: Highlight
    ACCEPT - DONE
    8.3.3.1.1 State description overview
    1st paragraph
    PM_PM sb PL_PM

Page: 233
Sequence number: 16
Date: 12/31/2002 1:29:13 PM
Type: Highlight
    ACCEPT - DONE
    9.2.2.4 DATA information unit
    2nd paragraph, last sentence states:
    "The minimum size of the data IU is one byte."
    9.2.1 SSP frame format
    Table 89 states:
    "0 - 1024 bytes" under infomation unit size.
    Assumming text takes precedence over tables and the text is correct, Table 89 needs to be fixed.

Page: 260
Sequence number: 8
Date: 12/31/2002 1:29:00 PM

Type: Highlight
    ACCEPT - DONE
    9.4.2 SMP_Request Frame
    1 023 bytes sb 1 024 bytes.

Page: 261
Sequence number: 9
Date: 12/31/2002 1:21:55 PM
Type: Highlight
    ACCEPT - DONE
    9.4.3 SMP_RESOPONSE Frame
    1 023 bytes sb 1 024 bytes

Page: 298
Sequence number: 5
Date: 12/31/2002 1:28:51 PM
Type: Highlight
    ACCEPT - DONE (removed paragraph)
    10.3.1.3 REPORT MANUFACTURER INFORMATION function.
    This paragraph does not apply and should be deleted or the field does apply and needs to be added to table 133.
    The ADDITIONAL LENGTH field indicates the length in bytes of the parameters, including the ADDITIONAL
    LENGTH field. If the ADDITIONAL REQUEST BYTES of the SMP_REQUEST is too small to transfer all of the
    parameters, the ADDITIONAL LENGTH shall not be adjusted to reflect the truncation.

Page: 305
Sequence number: 8
Date: 12/31/2002 1:28:25 PM
Type: Highlight
    ACCEPT - DONE (they stop at the maximum and do not wrap)
    10.3.1.5 REPORT PHY ERROR LOG function
    None of the following fields indicates if the field wraps or freezes at max count.
    INVALID DWORD COUNT
    DISPARITY ERROR COUNT
    LOSS OF DWORD SYNCHRONIZATION COUNT
    PHY RESET PROBLEM COUNT

Page: 315
Sequence number: 2
Date: 1/9/2003 5:56:09 PM
Type: Highlight
    ACCEPT - DONE (it is updated regardless)
    10.3.1.9 PHY CONTROL function
    PARTIAL PATHWAY TIMEOUT VALUE description does not state if this value is always update or not regardless of phy operation
    requested.

Author: LSI Day

Page: 30
Sequence number: 13
Date: 2/16/2003 11:41:29 AM
Type: Note
    ACCEPT - DONE
    4.1.11 Connections
    page 30
    In second paragraph from end, should read "...links that make up the pathway..." (change "to" to "the")

Page: 138
Sequence number: 17
Date: 2/16/2003 11:41:29 AM
Type: Note
    ACCEPT - DONE (should ALIGN have a table too?)
    7.1.4.9 NOTIFY
    page 138.
    The NOTIFY does not have a table as the other primitives, and should be added.

Page: 142

Sequence number: 8
Date: 2/17/2003 4:31:27 PM
Type: Note
ACCEPT - DONE (rewritten and moved to 7.16.2 STP flow control section. Added "When transmitting a frame, " to head the sentence and corrected "transmitting" to "receiving." Also describe "when receiving a frame". Made the rules 19 and 21 for interop with loose SATA spec.)
7.1.6.3 SATA_HOLD and SATA_HOLDA
page 142
The first sentence is incorrect. Replace sentence with "An expander device running SATA protocol shall transmit a SATA_HOLDA within 20 dwords of receiving a SATA_HOLD when it is the source of the data dwords of the frame."

Page: 143
Sequence number: 12
Date: 2/16/2003 11:41:29 AM
Type: Note
ACCEPT - DONE (change to "shall not transmit SATA_X_RDY or SATA_R_RDY on the SATA physical link until...")
7.1.6.4 SATA_R_RDY and SATA_X_RDY
page 143
Last sentence should start "Expander or initiator devices..."

Page: 149
Sequence number: 2
Date: 2/16/2003 11:41:29 AM
Type: Note
ACCEPT - DONE (per other comment, just removed that sentence.)
7.7.1 Address frame overview
page 149.
Only ALIGNS should be allowed inside address frames. Change third sentence to "Except for ALIGN, primitives may not be inserted in the address frame."

Page: 153
Sequence number: 5
Date: 2/24/2003 12:08:01 AM
Type: Note
REJECT (but deleted the conflicting paragraph in 7.15. 7.15 should be fixed and this paragraph is correct. If there is one possible 3 Gbps path, the initiator should be allowed to request it, even if 1.5 Gbps paths might be available along the way. It may request 1.5 if it cares more about connecting that getting a certain rate.)
7.7.3 OPEN address frame
page 153.
Middle of page, sentence starting "When requesting a connection to a target port..." conflicts with section 7.15. Change sentence to "When requesting a connection to a target port, an initiator port shall set the CONNECTION RATE field to the slowest negotiated physical link rate on any potential intermediate physical link."

Page: 157
Sequence number: 16
Date: 3/3/2003 10:15:38 AM
Type: Note
REJECT (SL_IR wouldn't parse the ALIGN if it saw it. Saying ignore doesn't preclude other receivers from seeing it. Whole paragraph deleted anyway.)
7.8.6 SL_IR transmitter and receiver
page 157
ALIGNs are allowed inside of address frames. Change wording in second paragraph to "... a primitive other than ALIGN is requested ...".
Change wording in third paragraph to "... shall ignore any primitive other than ALIGN received inside ..."

Page: 163
Sequence number: 29
Date: 2/16/2003 11:41:29 AM
Type: Note
ACCEPT - DONE (Jan WG agreed AWT should be mandatory)
7.12.3 Arbitration fairness
page 163
AWT is mandatory. Change start of second paragraph to "Each initiator port, target port, and expander port shall include an arbitration wait timer ..."
Change start of third paragraph to "Initiator ports and target ports shall implement arbitration wait timers. They shall set the timer ..."

Page: 174
Sequence number: 12

Date: 3/1/2003 6:08:34 PM
Type: Note
    REJECT (the SL receiver doesn't care about ALIGNs and NOTIFYs. A receiver closer to the physical link picks them off.)
    7.13.2 SL transmitter and receiver
    page 174
    ALIGNs are allowed inside of address frames.
    Change wording in second paragraph to "... a primitive other than ALIGN is requested ...".
    Change wording in third paragraph to "... shall ignore any primitive other than ALIGN received inside ..."

Page: 175
Sequence number: 2
Date: 2/16/2003 11:41:29 AM
Type: Note
    ACCEPT - DONE
    7.13.4.1 State description
    page 175
    Last paragraph has a misformatted sentence with c).

Page: 190
Sequence number: 11
Date: 2/16/2003 11:41:29 AM
Type: Note
    ACCEPT - DONE (globally fixed "an SATA" to "a SATA")
    7.15 Rate matching
    page 190
    Last paragraph should read "... port discovers a SATA target ..." (change "an" to "a")

Page: 193
Sequence number: 7
Date: 2/16/2003 11:41:29 AM
Type: Note
    ACCEPT - DONE
    7.16.6 Preparing to close an SSP connection
    page 193
    Last paragraph needs to include CREDIT_BLOCKED. Change wording to "... may transmit ACK, NAK, RRDY, and CREDIT_BLOCKED ..."

Page: 194
Sequence number: 10
Date: 2/16/2003 11:41:29 AM
Type: Note
    ACCEPT - DONE
    7.16.7.1 Overview
    page 194
    Sentence starting with "The SSP_RF state machine ..." should read "... if those frames were successfully or unsucessfully received." (Add "ly")

Page: 201
Sequence number: 4
Date: 2/16/2003 11:41:29 AM
Type: Note
    ACCEPT - DONE
    7.16.7.8 SSP_TF4:Indicate_Done_Tx state
    page 201.
    Item c) should start "Wait For DONE (Credit Timeout) ...".

Page: 202
Sequence number: 8
Date: 2/16/2003 11:41:29 AM
Type: Note
    ACCEPT - DONE
    7.16.7.12.2 Transition SSP_TC1:Idle to SSP_TC2:Indicate_Credit_Tx
    page 202
    Add another sentence "This transition shall pass a CREDIT_BLOCKED argument to the Indicate_Credit_Tx state if a Rx Credit Status (Blocked) parameter was received."

Page: 207
Sequence number: 9
Date: 2/16/2003 11:41:29 AM

Type: Note
    ACCEPT - DONE (but change "manages the STP connection requests" to "manages affiliations")
    7.17.3 Preparing to close an STP connection
    page 207
    In second paragraph, expander behavior regarding multi initiator ports is incorrect or misleading. Replace entire paragraph with:
    "In a SCSI domain with a single initiator port, when a SATA target port transmits an SATA_X_RDY, the expander device may use
    the time between SATA_X_RDY and SATA_R_RDY to insert an OPEN address frame to open a connection to the initiator port. In
    a SAS domain with multiple initiator ports, the expander device manages the STP connection requests (see 9.3.2). Only data
    FISes are subject to flow control, so the expander device shall be capable of accepting a whole register FIS frame."

Page: 207
Sequence number: 10
Date: 2/16/2003 11:41:29 AM
Type: Note
    ACCEPT - DONE
    7.17.3 Preparing to close an STP connection
    page 207
    Third paragraph starting "An expander device may issue CLOSE ..." conflicts with first paragraph. Remove entire paragraph.

Page: 214
Sequence number: 8
Date: 3/1/2003 4:05:28 PM
Type: Note
    REFER PORT WG - TODO
    8.2.1 Timers and counters overview
    page 214
    Parentheses in item c) conflicts with section 4.5. Remove words in parentheses.

Page: 215
Sequence number: 7
Date: 3/1/2003 4:06:29 PM
Type: Note
    REFER PORT WG - TODO
    8.2.5 Arbitration wait time (AWT) timer
    page 215
    Add sentence at end "The AWT timer shall not be incremented past 7FFFh."

Page: 216
Sequence number: 14
Date: 2/16/2003 11:41:29 AM
Type: Note
    ACCEPT - DONE (it was pointing down not right)
    Figure 91
    page 216
    Arrowhead missing between PL_OC1 and PL_OC2

Page: 217
Sequence number: 14
Date: 2/16/2003 11:41:29 AM
Type: Note
    ACCEPT - DONE
    8.3.3.1.1 State description overview
    page 217
    Replace "PM_PM" with "PL_PM".

Page: 218
Sequence number: 11
Date: 3/1/2003 4:11:35 PM
Type: Note
    REFER PORT WG - TODO (agree)
    8.3.3.1.3 Select a request to process and the phy on which to process it
    page 218
    Second paragraph, should also take the initiator bit into account.
    Change sentence to "A destination is considered the same if it has the same SAS address, initiator bit, and protocol."

Page: 221
Sequence number: 8
Date: 2/16/2003 11:41:29 AM
Type: Note

ACCEPT - DONE
8.4.1 Overview
page 221.
Last sentence on page. Change "PL_PM1" to "PL_PM1:Idle".

Page: 226
Sequence number: 13
Date: 3/1/2003 4:18:11 PM
Type: Note
REFER PORT WG - TODO
8.4.4.1 State Description
page 226.
Fifth paragraph on page is incorrectly issuing Disable Tx Frames for any DONE Received. Correct condition is already covered in fourth paragraph. Remove entire paragraph.

Page: 228
Sequence number: 7
Date: 2/16/2003 11:41:29 AM
Type: Note
ACCEPT - DONE
9.2.1 SSP Frame Format
page 228
Replace "TIMEOUT" with "RETRANSMIT" in table 88.

Page: 229
Sequence number: 26
Date: 2/16/2003 11:41:29 AM
Type: Note
ACCEPT - DONE
9.2.1 SSP Frame Format
page 229
Change Information unit size in table 89 for DATA from "0 to 1024" to "1 to 1024"

Page: 246
Sequence number: 15
Date: 3/8/2003 2:56:38 PM
Type: Note
ACCEPT - DONE (reworded to support data frame pipelining. This is not well written - really need to describe a queue of frames and mark them completed as the ACKs or NAKs arrive. Maybe in SAS-2.)
9.2.6.2.2.1 State Description
page 246
Seventh paragraph (starting with "After receiving ...") and eighth paragraph (starting with "If the transmitted frame ...") are redundant, and transport should wait for port layer confirmation regardless of whether it is data-out or data-in operation.
Change 7th paragraph to read as
"After receiving a Transmission Status (Frame Transmitted) confirmation for a COMMAND or TASK frame, this state shall then wait for one of the following confirmations from the port layer state machine before transitioning from this state:"
Remove eighth paragraph.

Page: 250
Sequence number: 24
Date: 2/16/2003 11:41:29 AM
Type: Note
ACCEPT - DONE (with slight rewrite; also in ST_TFR)
Page 250
9.2.6.2.8 ST_IFR1:Initiator_Frame_Router state, sixth paragraph
Reword first sentence:
If the frame type is correct relative to the confirmation, then this state may check that the hashed source SAS address and the hashed destination SAS address in the frame match the source SAS address of the port transmitting the frame and the destination SAS address of the port receiving the frame for the current connection.

Page: 252
Sequence number: 23
Date: 2/16/2003 11:41:29 AM
Type: Note
ACCEPT - DONE (with slight rewrite; also in ST_IFR)
Page 252
9.2.6.3.2 ST_TFR1:Target_Frame_Router state, sixth paragraph
Reword first sentence:
If the frame type is correct relative to the confirmation, then this state may check that the hashed source SAS address and the

hashed destination SAS address in the frame match the source SAS address of the port transmitting the frame and the destination SAS address of the port receiving the frame for the current connection.

Page: 264
Sequence number: 14
Date: 2/16/2003 11:41:29 AM
Type: Note
    ACCEPT - DONE (and mention that it shall be set to one)
    9.4.4.2.3.1 State description
    page 264
    Add INITIATOR field into sentence, to read "... CONNECTION RATE, INITIATOR, INITIATOR CONNECTION TAG, ..."

Page: 264
Sequence number: 15
Date: 3/5/2003 4:31:22 PM
Type: Note
    ACCEPT - DONE (check globally for past tense in transitions. Moved the "shall send" rules into the state description and simplified the transition descriptions in many cases.)
    9.4.4.2.4.2 Transition MT_ID3:Receive to MT_ID1:Idle
    page 264
    Change all occurances of "has sent" to "shall send" in items a), b), and c).

Page: 264
Sequence number: 16
Date: 2/16/2003 11:41:29 AM
Type: Note
    ACCEPT - DONE
    9.4.4.3.1 Overview
    page 264
    Change item b) from "MT_TD2:Send" to "MT_TD2:Respond"

Page: 276
Sequence number: 5
Date: 2/16/2003 11:41:29 AM
Type: Note
    ACCEPT - DONE (the list downgraded to a list of examples)
    10.1.3 Application client error handling
    page 276
    Last paragraph implies a specific implementation, and does not cover the cases when the connection is broken. Recommend to remove last paragraph.
    Alternately say that the method the application client uses to reuse tags is outside the scope of this standard.

Page: 324
Sequence number: 7
Date: 2/16/2003 11:41:29 AM
Type: Note
    ACCEPT - DONE (all 3 parts)
    Annex B
    page 324
    Replace references to figures A.1 and A.2 to B.1 and B.2 respectively. (DONE)
    In Figure B.1, sequence for Phy A Tx/ Phy B Rx should say "Not supported by phy A". (DONE)
    For consistency, swap the sequences so that Figures B.1 and B.2 are consistent as far as which Rx/Tx is shown on top. (In B.1, Phy A Rx is shown on top, where in B.2 Phy A Tx is shown on top).   (DONE)

Author: LSI Hoglund

Page: 6
Sequence number: 17
Date: 2/16/2003 11:41:41 AM
Type: Note
    ACCEPT - DONE (rewritten with "may contain")
    3.1.35 edge expander device
    page 6
    Definition suggests subtractive routing ports are required by edge expander - this is not the case. A simple expander may only support direct attachment.

Page: 7
Sequence number: 16
Date: 2/16/2003 11:41:41 AM
Type: Note
    ACCEPT - DONE
    3.1.39 expander connection router
     page 7
    typo: acronym (ER) should be (ECR)

Page: 8
Sequence number: 16
Date: 2/16/2003 11:41:41 AM
Type: Note
    ACCEPT - DONE (but not applying to definition of invalid dword, since K28.6 is purposely introducing an invalid dword.)
    Global
    There are many places which state that K28.5 and K28.3 are the only two control characters used by SAS. SATA_ERROR has
    been defined using K28.6. Globally add K28.6 as a legal control character.

Page: 30
Sequence number: 14
Date: 2/16/2003 11:41:41 AM
Type: Note
    ACCEPT - DONE (deleted current list; replaced by sentence relating connections to SSP, STP, or SMP)
    4.1.11 Connections
    page 30
    abc list of connection types is incomplete - either remove or add all possible types, i.e SMP initiator port to expander SMP target
    port (or SMP through expander to another expander, etc)

Page: 40
Sequence number: 2
Date: 2/16/2003 11:41:41 AM
Type: Note
    REJECT (it is complete for all the signals coming from SP. There's on more from SL_DWS. The rest are for XL to XL
    communication, which is not detailed in these tables.)
    4.3.3.1 Table 10; page 40
    Broadcast Event Notify (type) list incomplete (should be consistent with Table 25).

Page: 49
Sequence number: 19
Date: 2/16/2003 11:41:41 AM
Type: Note
    ACCEPT - DONE
    4.6.1 Expander device model overview
    page 49
    a) C) SL_IR primitive processor - typo: should be broadcast primitive processor   (DONE)

Page: 49
Sequence number: 21
Date: 2/16/2003 11:41:41 AM
Type: Note
    4.6.1 Expander device model overview
    page 49
    also, c) an expander port available per phy - what does this mean? is this necessary? either clarify or remove.

Page: 51
Sequence number: 4
Date: 2/16/2003 11:41:41 AM
Type: Note
    ACCEPT - DONE
    4.6.5 Broadcast primitive processor
    page 51
    typo: replace SL_IR with broadcast (twice).

Page: 53
Sequence number: 11
Date: 2/16/2003 11:41:41 AM
Type: Note
    ACCEPT - DONE
    4.6.7 Figure 27

page 53
update diagram text:
change Link Status to Phy Status
change Send Open to Transmit Open
change Send Close to Transmit Close
change Send Break to Transmit Break
change Send Dword to Transmit Dword

Page: 114
Sequence number: 28
Date: 2/21/2003 2:39:44 PM
Type: Note
    ACCEPT - DONE (track with other comment)
    6.8.3.3 SP10:SAS_AwaitALIGN state
    page 114
    Agree with editor's note regarding the closer coordination between SP and DWS state machines to detect ALIGNs and ALIGN1s.
    Prefer that more than a single ALIGN or ALIGN1 required to advance SP, i.e. use filtering provided by the DWS process.

Page: 115
Sequence number: 19
Date: 2/21/2003 3:04:11 PM
Type: Note
    ACCEPT - DONE (this must be the "incorporate editors note comment. Track with other comment)
    6.8.3.4 SP11:SAS_AwaitALIGN1 state
    page 114
    Same comment as for 6.8.3.3.

Page: 140
Sequence number: 4
Date: 2/17/2003 1:53:57 PM
Type: Note
    REJECT (the "or"ed ones can never happen simultaneously so placing a priority requirement on them is going too far.)
    7.1.4.11 OPEN_REJECT
    page 140
    Priority list for expander devices transmitting OPEN_REJECT is ambiguous.
    Clarify using the following priorities:
    1) OPEN_REJECT(BAD DESTINATION)
    2) OPEN_REJECT(NO DESTINATION)
    3) OPEN_REJECT(CONNECTION RATE NOT SUPPORTED)
    4) OPEN_REJECT(STP RESOURCES BUSY)
    5) OPEN_REJECT(PATHWAY BLOCKED)

Page: 163
Sequence number: 31
Date: 2/16/2003 11:41:41 AM
Type: Note
    ACCEPT - DONE (shall wins)
    7.12.3 Arbitration fairness
    pages 163-164
    Resolve apparent inconsistency between Paragraph 2 which states expander port may include an arbitration wait timer and
    Paragraph 5 which states that expander ports shall include arbitration wait timers.

Page: 165
Sequence number: 15
Date: 2/19/2003 3:54:09 PM
Type: Note
    ACCEPT - DONE (several times in this section)
    7.12.3.1.3 Partial Pathway Timer
    page 165
    Partial Pathway Timeout timers are maintained by each expander phy, not by the expander connection manager. Replace
    expander connection manager with expander phy.

Page: 204
Sequence number: 6
Date: 2/16/2003 11:41:41 AM
Type: Note
    ACCEPT - DONE (inserted before the wait for SATA_R_RDY)
    7.17.1 STP frame transmission
    page 204

Tables 84 and 85 should show where OPEN_ACCEPT occurs relative to the frame transmission.

Page: 205
Sequence number: 7
Date: 2/17/2003 4:21:07 PM
Type: Note
    ACCEPT - DONE (added a paragraph on SATA_R_IP)
    7.17.2 STP flow control
    page 205
    Text description correlates well with Figure 86 as far as getting into the HOLD condition but recommend including more text describing the process of releasing the HOLD condition.

Page: 207
Sequence number: 11
Date: 2/16/2003 11:41:41 AM
Type: Note
    REJECT (Brian Day's rewrite accepted instead)
    7.17.3 Preparing to close an STP connection
    page 207
    Remove Paragraph 2, starting with "In a SCSI domain." - it is misleading and provides no normative content.
    Recommend restricting when expander device may issue CLOSE to only include the first three cases listed (end of each frame, timeout waiting for another frame, after every n frames).

Page: 259
Sequence number: 14
Date: 2/16/2003 11:41:41 AM
Type: Note
    ACCEPT - DONE
    9.3.1 Initial FIS
    typo: SMP REPORT SATA PORT should be SMP REPORT PHY SATA.

Author: LSI Jenkins

Page: 72
Sequence number: 1
Date: 2/16/2003 11:41:37 AM
Type: Highlight
    ACCEPT - DONE (thanks)
    5.7 Driver and receiver electrical characteristics
    For what it's worth, an acquaintance of mine who was not involved with the drafting of the SAS spec reviewed this document on behalf of another company. He offered the unsolicited comment that this was a quite well written specification. ...Just thought I'd pass that along.

Page: 77
Sequence number: 1
Date: 2/16/2003 11:41:37 AM
Type: Highlight
    ACCEPT - DONE
    5.7.4 Transmitted signal characteristics
    Table 35 — Transmitted signal characteristics at Tx compliance points
    133 ps (0.2 UI) provides no overlap with required 3Gbps max rise time. I believe the initial intent was to track SATA. However, the SATA min risetime at 1.5Gbps is being changed to 100 ps (0.15 UI). I propose that SAS change this value to 67 ps (0.1 UI) at 1.5 Gbps, allowing extra room for higher performance devices.
    I also propose that the minimum rise/fall time of 67 ps (0.2 UI) at 3 Gbps be changed to 50 ps (0.15 UI) for similar reasons.

Page: 78
Sequence number: 1
Date: 2/21/2003 3:49:08 PM
Type: Highlight
    ACCEPT - DONE (per phy call 2/21 they are not intended to line up with SATA values because the SATA values are not high enough. However, they have been defined better.)
    5.7.4 Transmitted signal characteristics
    Table 36 — Delivered signal characteristic at Rx compliance points (part 2 of 2)
    "OOB detect guaranteed on (eye opening) ... OOB detect guaranteed off signal level "
    It is unclear to me a) how to interpret these values, and b) how they are meant to line up (if at all) with the SATA spec values. The signal characteristic names suggest that the first spec is the eye opening of a minimum valid signal, while the second spec is the

absolute peak-peak voltage of noise which must be ignored. This is fine, but it is unclear how this relates to footnote c which seems to be describing something different.

Regarding lining up with SATA, that document specifies "squelch detector threshold" with a min/max of 50/200 mVp-p.

Apologies for having no clear recommended change, but it seems that a 120 mV required noise tolerance does not compare well with SATA's threshold range of 50 to 200 mV.

Author: LSI Lohmeyer

Page: iii
Sequence number: 1
Date: 2/19/2003 6:46:19 PM
Type: Note

ACCEPT - DONE (contents merged with IBM comment)

Abstract

The abstract is incomplete. SAS also defines a physical layer and a management protocol (SMP). Consider replacing the existing abstract with:

This standard specifies the functional requirements for the Serial Attached SCSI (SAS) physical interconnect, which is compatible with the Serial ATA physical interconnect. It also specifies three transport protocols, one to transport SCSI commands, another to transport Serial ATA commands to multiple target devices, and a third to support interface management.

Page: ix
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight

ACCEPT - DONE

1.19 Revision Information

sas-r02c in 1.19 should be sas-r03, but all of the revision history needs to be removed for public review anyway.

Page: xxxiii
Sequence number: 1
Date: 2/19/2003 6:37:44 PM
Type: Note

ACCEPT - DONE (in three columns)

Foreword

I think it is appropriate to give a credit to the Serial Attached SCSI Working Group, which did the initial SAS proposal. This credit should go after the T10 member list.

Possible wording:

The Serial Attached SCSI Working Group provided the initial proposal for this standard. This Working Group consisted of the following member companies: <<<This list needs to be reviewed for accuracy>>>

Adaptec Corp.
Amphenol
BREA Technologies
Compaq Computer Corp.
Crossroads Systems, Inc.
Cypress Semiconductor
Data Transit Corp.
Dell
Eurologic Systems Limited
FCI
Fujitsu Limited
Hewlett Packard Co.
Hitachi America, Ltd.
IBM Corp.
I-TECH Corp.
KnowledgeTek, Inc.
LSI Logic Corp.
Marvell Technology Group Ltd.
Maxtor Corp.
Molex Inc.
NEC Electronics
QLogic Corp.
Seagate Technology
Serverworks
Sierra Logic
Silicon Image
Western Digital

Page: 5
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE (new ATA terminology per Mark Evans proposal)
    3.1.8 ATA target device and 3.1.9 ATA target port
    See previous comment.

Page: 5
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE (new ATA terminology per Mark Evans proposal. ATA target device only has one ATA target port, so they ARE
    both equivalent.)
    3.1.8 ATA target device and 3.1.9 ATA target port
    Since both ATA target device and ATA target port are equivalent to a device in ATA, does this mean that ATA target devices and
    ATA target ports are equivalent? If not, then one of these things is not equivalent to an ATA device.

Page: 6
Sequence number: 5
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE
    3.1.32 downstream phy
    Replace "direction frame transmission" with "direction of frame transmission"

Page: 6
Sequence number: 6
Date: 3/8/2003 12:23:39 PM
Type: Highlight
    REVIEW PROTOCOL WG
    REJECT (but general issue addressed with virtual phy/internal SAS device concept. SAS devices are the generic term, which may
    be in end devices or expander devices.)
    3.1.37 end device
    Delete "that is not contained within an expander device".
    This is the first of several comments on "internal devices" and "internal ports". The current working draft does not use this
    terminology consistently and needs a number of changes no matter how the problem is solved.
    I prefer a solution that acknowledges that internal devices are just like external devices except for their lack of phys and does not
    attempt to merge internal devices into the expander device definition.
    Places I addressed in my comments:
    3.1.37 end device
    3.1.40 expander device
    3.1.43 expander port
    3.1.66+ internal device
    3.1.70 link
    3.1.73+ logical link
    3.1.82 partial pathway
    3.1.83 pathway
    4.1.3 Ports (narrow ports and wide ports)
    4.6.1 Expander device model overview
    4.1.8.1 Expander device overview
    4.1.8.2 Edge expander device set: 3rd paragraph. Is 64
        the maximum number of phys or devices?
    4.1.8.2 Edge expander device set, Figure 11 - Edge expander device set
    4.1.12 Pathways
    4.4.2 Hard reset - fifth paragraph
    5.3.2.1 SAS plug connector overview
    Places possibly needing additional changes:
    4.1.8.2 Edge expander device set: 1st paragraph; 2nd sentence.
        Address internal devices?
    4.1.8.3 Configurable expander device: 1st paragraph; last sentence.
        Does the ECM route requests to non-phys?
    4.1.9 Domains, Figure 12 - Domains and connections. Should internal
       devices be shown?
    4.1.10 Expander device topologies: 3rd paragraph.
    4.1.10 Expander device topologies, Figures 14-16 Should internal
       devices be shown?
    4.1.11 Connections, Figure 17   Should internal devices be shown?

7.7.2 IDENTIFY address frame, Table 73 - Device types and paragraph
    above the table
7.12.4.2 Edge expander devices, Table 80
10.3.1 SMP functions. We may need to revise or add functions to
    properly support internal devices.
10.3.1.2 REPORT GENERAL response (in particular, the NUMBER OF PHYS
    field may need clarification and we may need to add a
    field for the number of internal ports).
10.3.1.4 DISCOVER function, Table 138 may need a clarification

Page: 7
Sequence number: 4
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE
    3.1.55 hash function
    Replace "and that reduces" with "reducing"

Page: 7
Sequence number: 5
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    REJECT (but rewritten)
    3.1.40 expander device
    Replace the last sentence with:
    "An expander device supports SMP via an internal SMP target device. However, this internal device is logically considered outside
    the expander device. Other internal devices (e.g., a SCSI device supporting enclosure services) may also be packaged with
    expander devices, however these devices are also logically considered outside the expander device."

Page: 7
Sequence number: 6
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    REJECT (but rewritten based on other comments)
    3.1.43 expander port
    Replace "physical links or to internal initiator ports and/or target ports. Contains one or more phys." with "links. Contains zero or
    more phys."

Page: 8
Sequence number: 4
Date: 3/8/2003 3:56:53 PM
Type: Note
    REJECT (avoided using "internal device" or "internal SAS device anywhere obviating the need for this term)
    After 3.1.66
    Add a new definition:
    "3.1.66+ internal device: An end device that is physically packaged with an expander device and uses a logical link."

Page: 8
Sequence number: 5
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    REJECT (but deleted "link" altogether. Changed some remaining uses to "physical link" throughout the document.)
    3.1.70 link
    Replace "physical link" with "physical or logical link".

Page: 8
Sequence number: 6
Date: 2/16/2003 11:41:33 AM
Type: Note
    REJECT (we don't need to name that link since there are no specs on it and no references to it. We just say an internal phy
    attaches to an internal SAS port.)
    After 3.1.73
    Add a new definition:
    "3.1.73+ logical link: For internal devices, the virtual link from the expander port to the internal device port. Contains no phys."

Page: 9
Sequence number: 4
Date: 2/16/2003 11:41:33 AM
Type: Highlight

REJECT (just leaving OOB here alone in both 3.1.80 and 3.1.81)
3.1.81 OOB signal
Replace "out-of-band (OOB)" with "OOB".

Page: 9
Sequence number: 5
Date: 2/16/2003 11:41:33 AM
Type: Highlight
REJECT (just leaving OOB here alone in both 3.1.80 and 3.1.81)
3.1.80 OOB sequence
Replace "OOB" with "out-of-band (OOB)".

Page: 9
Sequence number: 6
Date: 2/16/2003 11:41:33 AM
Type: Strikeout
REJECT - we don't use link alone
3.1.82 partial pathway
Delete "physical".

Page: 9
Sequence number: 7
Date: 2/16/2003 11:41:33 AM
Type: Strikeout
REJECT - we don't use link alone
3.1.83 pathway
Delete "physical".

Page: 10
Sequence number: 3
Date: 2/16/2003 11:41:33 AM
Type: Highlight
REJECT (why expand each and/or into lots of text more prone to errors?)
3.1.101 SAS domain
Global
Replace "an ATA domain and/or a SCSI domain" with an ATA domain, a SCSI domain, or both domains".
This comment applies to all occurrences of and/or.

Page: 10
Sequence number: 4
Date: 2/16/2003 11:41:33 AM
Type: Note
ACCEPT - DONE
3.1.122 Serial ATA (SATA)
Add "(see 2.4)" to the end of the definition.

Page: 11
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Note
REJECT - use "set of protocols and the interconnect"
3.1.124 Serial Attached SCSI (SAS)
This definition is confusing in that this standard defines three protocols (SSP, STP, and SMP) plus a physical transport.
It may be easiest just to delete this definition.

Page: 12
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Note
ACCEPT - DONE
3.2 Symbols and abbreviations
Add:
EMI   electromagnetic interference
EMI is referenced in 7.15.

Page: 15
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight

ACCEPT - DONE (removed second sentence; small caps is correct)
3.4 Editorial conventions
The first sentence after Table 2 is redundant with the last sentence of the third paragraph. Delete one of these sentences.
Why does one have NAME in small caps and the other is lower-case?

Page: 17
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
3.5.2 Transitions
In the last paragraph of this subclause, replace "valid in entry" with "valid upon entry".

Page: 17
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
3.5.3 Parameters, requests, etc.
In the last paragraph of this subclause, replace "onto" with "to".

Page: 17
Sequence number: 3
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
3.6 Bit and byte ordering
In the fourth paragraph, replace "non-monotonically" with "non-sequentially".

Page: 18
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Note
ACCEPT - DONE
3.7 Notation for procedures and functions
In the first procedure (Procedure Name), the parenthesis do not match. If the Search example below is correct, then there is an extra right parenthesis after input-2.

Page: 21
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
4.1.3 Ports (narrow ports and wide ports)
In the third paragraph, replace "with one phy" with "with only one phy".

Page: 21
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Note
4.1.3 Ports (narrow ports and wide ports)
Rename this subclause:
4.1.3 Ports (narrow ports, wide ports, and internal ports)
Add the following paragraph:
"An internal port in an expander device does not contain a phy and is used to connect to an internal device."

Page: 24
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
REJECT (STP target ports are allowed)(whole section being deleted anyway)
4.1.6 Target devices
Figure 9 - Target device
The text "STP and SMP" is too close to the line.

Page: 24
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Note

REJECT (STP target ports are allowed)(whole section being deleted anyway)
4.1.6 Target devices
Figure 9 - Target device
Don't most ATA targets use SATA protocol instead of STP protocol?
Also, see the related comment at 4.1.11 Connections.

Page: 25
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Note
    ACCEPT - DONE
    4.1.8.1 Expander device overview
    Figure 10 - Expander Device
    Modify the figure to show the required SMP target port. The internal expander ports should be included in the Expander device
    (shaded box) while the target and initiator internal ports should be outside the shaded box.

Page: 25
Sequence number: 2
Date: 3/8/2003 12:26:16 PM
Type: Highlight
    REJECT (but replaced with virtual phy/internal port/internal SAS device concept)
    4.1.8.1 Expander device overview
    Replace the second sentence of the first paragraph with:
    "Expander devices include one or more internal expander ports connected to internal devices. These internal ports use a logical
    link that does not contain phys. All expander devices have one internal expander port connected to an internal SMP target port.
    They may have additional internal expander ports connected to internal initiator ports or internal target ports (e.g., a SCSI
    enclosure services target device)."

Page: 25
Sequence number: 3
Date: 3/3/2003 6:10:34 PM
Type: Highlight
    ACCEPT - DONE ("number of SAS addresses used by")
    4.1.8.2 Edge expander device set
    Third paragraph. Should this maximum be the number of devices or phys?

Page: 26
Sequence number: 3
Date: 2/16/2003 11:41:33 AM
Type: Note
    REJECT (but deleted this anyway)
    4.1.8.2 Edge expander device set
    Figure 11 - Edge expander device set
    Show the internal target port outside the Edge expander device set box.

Page: 30
Sequence number: 5
Date: 2/16/2003 11:41:33 AM
Type: Note
    ACCEPT - DONE (list removed in favor of generic SSP, STP, and SMP references. We can't say ATA initiator any more.)
    4.1.11 Connections
    In the first list, it appears that a connection type has been omitted:
    d) ATA initiator port(s) using STP to ATA target port(s) using STP.
    If this connection type is not intended to be supported, then delete STP target ports from the second paragraph in 4.1.6 and from
    Figure 9

Page: 31
Sequence number: 3
Date: 3/2/2003 3:37:44 PM
Type: Highlight
    ACCEPT - DONE (tracking with another comment)
    4.1.11 Connections
    In the third list, why does item d) appear on the next page? There is plenty of room to place it on the same page with the first three
    list items.

Page: 31
Sequence number: 4
Date: 3/2/2003 3:03:13 PM
Type: Highlight

4.1.12 Pathways
Is there a pathway to an internal target device? If so, then the first paragraph needs some changes to accommodate targets without phys. I suggest re-wording the second paragraph of this paragraph as follows:
"In the case where there are expander devices between an initiator and a target, the pathway consists of all the links required to route dwords between the initiator and the target."

Page: 32
Sequence number: 2
Date: 3/2/2003 3:40:46 PM
Type: Note
    ACCEPT - DONE (figure redrawn)
    4.1.12 Pathways
    Figure 18 - Pathways
    The pathway lines and arcs obscure the physical link lines. Consider moving them a bit above or below the physical link lines.

Page: 32
Sequence number: 3
Date: 3/2/2003 3:40:33 PM
Type: Highlight
    ACCEPT - DONE (reordered sections and added xref)
    4.1.12 Pathways
    Add a forward reference from the e.g. in the first paragraph under Figure 18 to the subclause on connections: (see 7.12).

Page: 32
Sequence number: 4
Date: 3/2/2003 3:01:18 PM
Type: Strikeout
    REJECT (we don't have non-physical links)
    4.1.12 Pathways
    Delete "physical" from the paragraph after figure 18.

Page: 49
Sequence number: 1
Date: 3/5/2003 3:58:09 PM
Type: Note
    ACCEPT - DONE (change to "stop transmitting valid dwords")
    4.4.2 Hard Reset
    The second paragraph, first sentence is ambiguous. What exactly does "stop transmitting" mean? Is this the Tx Off Voltage in table 35? If so, add a forward reference. What are the timing requirements to stop transmitting?

Page: 49
Sequence number: 2
Date: 3/6/2003 9:49:00 AM
Type: Highlight
    ACCEPT - DONE (worded differently, merging other comments)
    4.4.2 Hard Reset
    Delete the second sentence of the fifth paragraph and add the following two paragraphs after the fifth paragraph:
    "If the port is an internal port within an expander device and the internal port is connected to an internal SCSI device, this causes a Transport Reset event notification to the SCSI application layer (see 10.1.4); the SCSI device shall perform the actions defined for hard reset in SAM-3.
    If the port is an internal port within an expander device and the internal port is connected to an internal ATA device, the ATA device shall perform the actions defined for power-on or hardware reset in ATA."

Page: 49
Sequence number: 3
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    4.6.1 Expander device model overview
    First list, item d). Replace "internal" with "internal expander port providing a connection for an internal SMP target port."

Page: 50
Sequence number: 1
Date: 3/5/2003 4:09:44 PM
Type: Note
    ACCEPT - DONE (the "port" boxes should all have "more than one" constructs. Also, the external phy "more than one" boxes should be on the bottom right to match other such figures)
    4.6.1 Expander device model overview
    Figure 25
    Is there some reason that only one SATA port is shown? Don't ports automatically configure to the protocol of the attached device?

Page: 50
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    4.6.1 Expander device model overview
    Replace "the following:" with "additional internal expander ports providing connections for:"

Page: 66
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Note
    ACCEPT - DONE (Reject size, accept color suggestion. Size will vary depending on needs of the figure rather than size
    consistancy from figure to figure.)
    5.2 SAS cables and connectors
    Figure 33
    Where SAS uses the same connector as in SATA, the color and size should match the corresponding connector in figure 31. Thus
    the SATA-style host plug connector should be dark green and be the same size as the dark green signal host plug connector in
    figure 31.
    The signal portions of the SAS internal cable connectors need to be shown in pink (just like the SATA internal cable) and the end
    that plugs into the target device needs to be the same width as the SAS plug connector.

Page: 67
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Note
    ACCEPT - DONE (per PHY WG. Accept. Type of connector: SAS internal cable SATA-style signal cable receptacle, Reference:
    SATA, Attaches to: SATA-style host plug, Reference SATA.)
    5.2 SAS cables and connectors
    Table 29 - Connectors
    Add rows for the SATA-style host plug connector and the SATA-style signal cable receptacle. References should be to SATA for
    the connector drawings and to 5.4.1 for pin assignments.

Page: 67
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE
    5.2 SAS cables and connectors
    Penultimate paragraph. Replace "second" with "secondary".

Page: 67
Sequence number: 3
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE (per SAS PHY WG
    Change text to: "SAS target devices supporting internal interconnection of physical link(s) and power...")
    5.3.2.1 SAS plug connector overview
    This subclause uses "internal ports" for a different concept than used elsewhere in the standard. I recommend replacing "internal
    ports" with "internal connections".

Page: 67
Sequence number: 4
Date: 2/16/2003 11:41:33 AM
Type: Strikeout
    ACCEPT - DONE
    5.3.3 SAS internal cable receptacle connector
    In list item b, delete "only".

Page: 67
Sequence number: 5
Date: 2/16/2003 11:41:33 AM
Type: Strikeout
    ACCEPT - DONE
    5.3.4 SAS backplane receptacle connector
    In list item b, delete "only".

Page: 67
Sequence number: 6

Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
5.3.2.1 SAS plug connector overview
Since 5.3.2.1 is the only subclause under 5.3.2, promote this subclause.

Page: 68
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Note
REJECT (per PHY WG. You are correct that the signals do not cross, but they do not cross because the pin signal assignments are different for an initiator and a target. Unlike SATA, with SAS there is a target connector and an initiator connector. We did not see the merit of the comment and did not understand why it was made except for possible confusion with the original SAS pinout when the initiator and target pin assignments were different.))
5.3.5 SAS internal connector pin assignments
In the first paragraph under table 30, the second sentence is either not true or misleading. The Rx and Tx signals are not crossed in the SAS internal cable assembly using the SATA-style signal cable receptacle on one end and the SAS internal cable receptacle on the other end (see figure 34).

Page: 69
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE (per PHY WG but as should rather than It is recommended.   Accept
Add sentence:
It is recommended that external cables be labeled to indicate how many physical links are included (e.g., X1, X2, X3, and X4 on each connector's housing).)
5.3.8 SAS external connector pin assignments
We should recommend that external cables be labeled to indicate how many physical links are included (e.g., X1, X2, X3, and X4 on each connector's overmolding).

Page: 71
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE (per phy WG, removed whole secod half of sentence including all color references)
5.6 READY LED pin
Replace "shall" with "should". The visual output color is not important to the operation of the interface.

Page: 71
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE (although compond adjectives may use extra hyphens, they don't have to. Nevertheless, removed everywhere not used preceding a noun.)
5.6 READY LED pin
Global
List item d), last sentence. Replace "vendor-specific" with "vendor specific".
Global comment: There is no hyphen if these words are not used as an adjective modifying a noun. There are also many places in the document where the hyphen needs to be added because vendor-specific is used as an adjective modifying a noun.

Page: 86
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE (globally)
6.2.1 Encoding overview
Global
Replace "10 bit" with "10-bit" whenever this phrase is used as an adjective to modify characters or bytes.
This comment also applies to the occurrences of "8 bit", which should be changed to "8-bit".

Page: 100
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
6.6.3 SAS to SATA phy reset sequence
The text (two paragraphs above Figure 50 - SAS to SATA OOB sequence) says that the SAS phy responds with COMRESET. However figure 50 shows a COMWAKE at this point.

Page: 100
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE (hot-plug timeout is currently in the speed negotiation sequence timing table. It is really related to the phy reset sequence, not just the speed negotiation sequence. I think a new phy reset sequence timing table should be created in 6.6.1 that includes the hot-plug timeout. Then, this is no longer a forward reference. Tom agrees)
6.6.4.1 SAS OOB sequence
Add forward reference in first paragraph: "hot-plug timeout (see table 49)".

Page: 101
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE (reworded if phrases to the front of each of a) and b))
6.6.4.1 SAS OOB sequence
In the first list, shouldn't item a) be: "... has not yet transmitted a COMINIT, followed by a COMSAS; or"

Page: 104
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE (create a timing table in 6.6.2 for this. SATA unfortunately doesn't refer to this time by name - the 880 is embedded in the state machine description. We don't want to do that.)
6.6.4.2 SAS speed negotiation sequence
Table 49 - SAS speed negotiation sequence timing specs (last row)
What is a SATA speed negotiation parameter doing in a SAS speed negotiation table? Either put this parameter in a different table or name of this table appropriately (e.g., delete "SAS").

Page: 109
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
6.8.2 OOB sequence states
Figure 56 - SAS phy (SP) state machine - OOB sequence states
The "COMSAS Transmitted" parameter into the SP3:OOB_AwaitCOMINIT_Sent should be "COMINIT Transmitted".

Page: 111
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
6.8.2.7.2 Transition SP7:OOB_AwaitCOMSAS to SP1:OOB_COMINIT
List item a) is missing the verb "is". It should read: "a) this device is in..."

Page: 112
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE (changed to the new SP2 state)
6.8.2.7.5 Transition SP7:OOB_AwaitCOMSAS to SAS_AwaitNoCOMX
Where does this transition really go? The subclause title is missing the state descriptor. Figure 56 shows this transition going to SP2:OOB_AwaitCOMx.

Page: 114
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Note
ACCEPT - DONE (track with other comment)
Editor's Notes
Global
Obviously, the four editor's notes need to be resolved and removed.

Page: 115
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight

ACCEPT - DONE
6.8.3.4.1 State description
Second paragraph should read: "This state shall repeatedly send a Transmit ALIGN1 parameter..."

Page: 115
Sequence number: 2
Date: 2/20/2003 5:22:20 PM
Type: Highlight
ACCEPT - DONE (no note)
6.8.3.4.3 Transition SP11:SAS_AwaitALIGN1 to SP14:SAS_ AwaitSNW
Replace "SNTT" with "SNLT".
Should we add a note to clarify that this transition is not taken if ALIGN1 is detected after SNLT expires and before SNTT expires?

Page: 115
Sequence number: 3
Date: 2/20/2003 5:23:17 PM
Type: Highlight
ACCEPT - DONE
6.8.3.5.2 Transition SP12:SAS_AwaitALIGN1 to SP13:SAS_Pass
Replace "if" with "after".

Page: 115
Sequence number: 4
Date: 2/21/2003 5:09:41 PM
Type: Highlight
ACCEPT - DONE (defined in an i.e. as ever going from SP14:SAS_Fail to SP8:SAS_Start)
6.8.3.6.2 Transition SP13:SAS_Pass to SP8:SAS_Start
The term "fallen back" is not defined. Should it be defined as an SP14 to SP2 transition?
"Fallen back" also appears in 6.8.3.6.3.

Page: 116
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE (deleted duplicate sentence)
6.8.3.8.1 State description
The last sentence of the last paragraph is redundant with the previous paragraph.

Page: 118
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
6.8.4 SATA host emulation states
Third paragraph: Replace "specification" with "standard".

Page: 118
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Note
ACCEPT - DONE
6.8.4 SATA host emulation states
Figure 58 - SAS phy (SP) state machine - SATA host emulation states
State SP16 needs a COMWAKE Transmitted input parameter (see 6.8.4.1.2).

Page: 118
Sequence number: 3
Date: 2/16/2003 11:41:33 AM
Type: Note
ACCEPT - DONE
6.8.4 SATA host emulation states
Figure 58 - SAS phy (SP) state machine - SATA host emulation states
State SP17 needs a COMWAKE Detected input parameter (see 6.8.4.2.2).

Page: 118
Sequence number: 4
Date: 2/16/2003 11:41:33 AM
Type: Note
ACCEPT - DONE

6.8.4 SATA host emulation states
Figure 58 - SAS phy (SP) state machine - SATA host emulation states
State SP18 needs a COMWAKE Completed input parameter (see 6.8.4.3.2).

Page: 119
Sequence number: 1
Date: 2/20/2003 5:24:10 PM
Type: Highlight
ACCEPT - DONE (ALIGN0 Received parameter)
6.8.4.4.1 State description
In list item c, replace "ALIGN" with "ALIGN0".

Page: 119
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE ("after entry into this state.")
6.8.4.4.1 State description
Should the last word of this subclause be "completed"? If not, define "deasserted".

Page: 120
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
6.8.4.6.1 State description
Replace "ALIGN0s" with "ALIGN0".

Page: 120
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
6.8.4.7.3 Transition SP22:SATA_PHY_Ready to SP24:SATA_PM_Partial
Change this subclause name to "Transition SP22:SATA_PHY_Ready to SP23:SATA_PM_Partial" (i.e., SP24 should be SP23).

Page: 120
Sequence number: 3
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
6.8.4.7.4 Transition SP22:SATA_PHY_Ready to SP23:SATA_PM_Slumber
Change this subclause name to "Transition SP22:SATA_PHY_Ready to SP24:SATA_PM_Slumber" (i.e., SP23 should be SP24).

Page: 120
Sequence number: 4
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
6.8.4.7.2 Transition SP22:SATA_PHY_Ready to SP1:Reset
Change this subclause name to "Transition SP22:SATA_PHY_Ready to SP1:OOB_COMINIT" (i.e., Reset should be
OOB_COMINIT).

Page: 120
Sequence number: 5
Date: 2/16/2003 11:41:33 AM
Type: Highlight
REJECT (but corrected picture to match this text)
6.8.4.8.2 Transition SP23:SATA_PM_Partial to SP16:SATA_COMWAKE
Change the name of this subclause to "Transition SP23:SATA_PM_Partial to SP17:SATA_AwaitCOMWAKE".

Page: 120
Sequence number: 6
Date: 2/20/2003 5:25:33 PM
Type: Highlight
ACCEPT - DONE (both sections; rewritten as This state waits for ... parameter or ... request.)
6.8.4.8.1 State description
6.8.4.9.1 State description
Replace "Exit from this state is driven from" with "This state is exited upon".

Page: 123
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE
    6.9.2.1 State description
    Replace "upon power on loss or previous dword synchronization" with "upon power on or loss of previous dword synchronization."

Page: 123
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Note
    ACCEPT - DONE
    6.9.3 SP1_DWS1:Valid1 state
    This transition needs to be added to the text:
    6.9.3.3 Transition SP_DWS1:Valid1 to SP_DWS0:AcquireSync
    "This transition shall occur when an invalid dword is detected."

Page: 123
Sequence number: 3
Date: 2/21/2003 6:23:47 PM
Type: Highlight
    ACCEPT - DONE (reworded to "if this state machine has received"... they arrive when this state machine is in SP_DWS0 not this
    state (in practice, they'll be level-sensitive signals))
    6.9.5.1 State description
    The text refers to a PhyReady (SAS) parameter and to a PhyReady (SATA) parameter as being inputs to this state. However,
    neither is shown in figure 59. These parameters should be added to the figure.

Page: 124
Sequence number: 1
Date: 2/21/2003 6:32:16 PM
Type: Highlight
    ACCEPT - DONE (reworded as just "This state is reached when a valid dword has been received after three invalid dwords had
    been received." [three/two/or one as appropriate])
    6.9.7.1 State description
    6.9.9.1 State description
    6.9.11.1 State description
    Replace the first sentence with: "This state is reached if a valid dword is received while in the previous state. Receiving another
    valid dword in this state nullifies the previous invalid dword. "

Page: 128
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE
    7.1.2 Primitive summary
    Table 51
    Table 52
    Table 53
    Note c in the three primitive tables omits single primitive from the list of primitive types. Add "as a single primitive," to the list in note
    c for each table.

Page: 137
Sequence number: 3
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE (reworded as "Processed the same... by end devices" to match other tables)
    7.1.4.4 BROADCAST
    Table 59 - BROADCAST primitives
    Replace "process the same" with "process this primitive the same".

Page: 138
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE
    7.1.4.6 EOAF (End of address frame)
    The link to 7.4 is wrong. Replace it with a link to 7.7.

Page: 138
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Strikeout
 ACCEPT - DONE
 7.1.4.9 NOTIFY
 Last sentence of third paragraph. Delete "as described in TBD" or fill in a valid TBD.

Page: 138
Sequence number: 3
Date: 2/16/2003 11:41:33 AM
Type: Highlight
 REJECT - there's no real prohibition against sending it to other types of SAS devices. Only SSP targets require it.
 7.1.4.9 NOTIFY
 In the fourth paragraph, replace "while" with "only while".

Page: 140
Sequence number: 1
Date: 2/17/2003 1:53:36 PM
Type: Highlight
 ACCEPT - DONE (Either:
 a) no such destination device; or
 b) the SAS address is valid for a SATA target device attached to an expander device, but the initial Register FIS has not been
 successfully received.
)
 7.1.4.11 OPEN_REJECT
 Table 62 - OPEN_REJECT retry primitives
 The wording in the description of OPEN_REJECT (NO DESTINATION) is confusing. I think you should replace "devices" with
 "device" in the third line, but perhaps there is a better change.

Page: 141
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
 ACCEPT - DONE
 7.1.4.12 SOAF (Start of address frame)
 The link to 7.4 is wrong. Replace it with a link to 7.7.

Page: 142
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
 REJECT (no, normal ERROR is used in that case)
 7.1.6.1 SATA_ERROR
 In the first paragraph, isn't SATA_ERROR also sent when forwarding dwords from a SATA link to a SAS link and an invalid dword
 is received?

Page: 142
Sequence number: 3
Date: 2/16/2003 11:41:33 AM
Type: Highlight
 ACCEPT - DONE
 7.1.6.2 SATA_PMACK, SATA_PMNAK, SATA_PMREQ_P, and SATA_PMREQ_S (Power management
 acknowledgements and requests)
 The link to 7.4 is not correct. I think 7.9 is the correct link.

Page: 143
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
 ACCEPT - DONE
 7.2 Clock skew management
 In the second paragraph, replace "To solve this," with "To solve this problem,".

Page: 143
Sequence number: 3
Date: 2/16/2003 11:41:33 AM
Type: Highlight

ACCEPT - DONE
7.2 Clock skew management
In the second paragraph, replace "strip it out" with "strip them out".

Page: 143
Sequence number: 4
Date: 2/17/2003 4:32:30 PM
Type: Highlight
ACCEPT - DONE (changed to "that arrive in")
7.2 Clock skew management
In the second paragraph, replace "make it to" with "are placed into".

Page: 144
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Strikeout
ACCEPT - DONE (added "a phy" before "that is" so it doesn't look like i.e. is being replicated)
7.2 Clock skew management
Paragraph above Table 66. Change "(i.e., that is not..." to "(i.e., not...".

Page: 146
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
7.4.2 CRC generation
In the sentence above 7.4.3, the link to 6.5 is wrong. I think it should be to 7.6, Bit order of CRC and Scrambler.

Page: 147
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
7.4.3 CRC checking
In the penultimate paragraph, the link to 6.5 is wrong. I think it should be to 7.6, Bit order of CRC and Scrambler.

Page: 147
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE (removed paragraph)
7.4.3 CRC checking
In the last paragraph, the link to Annex B is wrong. I think it should be to Annex C, CRC.

Page: 147
Sequence number: 3
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
7.5 Scrambling
In the paragraph above table 69, the reference to 6.5 is wrong. I think it should be to 7.6, Bit order of CRC and Scrambler.

Page: 147
Sequence number: 4
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
7.5 Scrambling
In the first paragraph, second sentence, replace "issues" with "EMI issues".

Page: 150
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
REJECT (if we put the range here it's bound to change)
7.7.1 Address frames overview
In the paragraph below table 71, replace "entire address frame" with "address frame (bytes 0 through 27)".

Page: 152

Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Note
    ACCEPT - DONE
    7.7.3 OPEN address frame
    The descriptions of the fields in table 74 should be re-ordered to match the order of the fields in the table.

Page: 154
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE
    7.8.1 Overview
    In the penultimate paragraph, replace "it" with "the additional IDENTFY address frame".

Page: 154
Sequence number: 2
Date: 2/17/2003 5:30:09 PM
Type: Strikeout
    ACCEPT - DONE
    7.8.2 Initiator device specific rules
    7.8.3 Fanout expander device specific rules
    7.8.4 Edge expander device specific rules
    Delete "specific" from each of these subclause titles.

Page: 155
Sequence number: 1
Date: 2/21/2003 7:14:01 PM
Type: Highlight
    ACCEPT - DONE (with rewording per other comments)
    7.8.2 Initiator device specific rules
    Replace the second paragraph with "When the discover process is done after a link reset sequence, the application client within an
    initiator device discovers all the devices in the SAS domain. When the discover process is done after a BROADCAST (CHANGE),
    the application client within an initiator device determines what has changed in the SAS domain.".

Page: 155
Sequence number: 2
Date: 2/17/2003 5:30:38 PM
Type: Strikeout
    ACCEPT - DONE
    7.8.4 Edge expander device specific rules
    Assuming my previous comment on the 7.8.2 title is accepted, delete "specific" in the second paragraph of this subclause.

Page: 155
Sequence number: 3
Date: 2/16/2003 11:41:33 AM
Type: Strikeout
    ACCEPT - DONE
    7.8.5.1 Overview
    Delete reference to 7.8; we are already in subclause 7.8.

Page: 157
Sequence number: 1
Date: 3/1/2003 6:16:43 PM
Type: Highlight
    ACCEPT - DONE (the only primitive possible is HARD_RESET and it cannot be sent at the wrong time. Removed this text)
    7.8.6 SL_IR transmitter and receiver
    In the paragraph below the list, what should the SL_IR transmitter do if a primitive is requested to be transmitted while sending an
    IDENTIFY address frame? Discard the primitive or store it until the EOAF?

Page: 157
Sequence number: 2
Date: 3/1/2003 6:16:02 PM
Type: Highlight
    REJECT (no explanation for 8th dword planned. It's an escape valve in case the EOAF is lost)
    7.8.6 SL_IR transmitter and receiver
    The last sentence of the last paragraph is not clear. We need to explain what is magical about the 8th data dword.

Page: 158

Sequence number: 1
Date: 2/19/2003 5:48:31 PM
Type: Highlight
    ACCEPT - DONE
    7.8.6.1.4.2 Transition SL_IR_TIR3:Transmit_Hard_Reset to SL_IR_TIR3:Completed
    Replace "SL_IR_TIR3:Completed" with "SL_IR_TIR4:Completed" in the title of this subclause.

Page: 159
Sequence number: 1
Date: 2/19/2003 5:49:00 PM
Type: Highlight
    ACCEPT - DONE
    7.8.6.2.3.1 State description
    In the last paragraph, replace "illegal" with "invalid".

Page: 159
Sequence number: 2
Date: 2/19/2003 5:52:16 PM
Type: Highlight
    ACCEPT - DONE (removed from figure)
    7.8.6.3.2 SL_IR_IRC1:Idle state
    The state diagram (figure 67) shows an identify 'Timeout' parameter confirmation leaving this state, but it is not described. I think it
    was moved to the SL_IR_IRC2 state and should be deleted from this state in the state diagram.

Page: 160
Sequence number: 2
Date: 2/19/2003 6:08:39 PM
Type: Highlight
    ACCEPT - DONE (Identification Sequence Complete now there)
    7.8.6.3.3.1 State description
    The first list item talks about an "Identify Sequence Complete confirmation". However this confirmation does not appear in figure
    67. Please add it to the figure.

Page: 160
Sequence number: 3
Date: 2/19/2003 5:58:08 PM
Type: Highlight
    REJECT (it is in the figure; the top blue dashed arrow going into SL_IR_IRC2 from the middle state machine)
    7.8.6.3.3.1 State description
    The penultimate paragraph talks about an "Identify Received parameter". However this parameter does not appear in figure 67.
    Please add it to the figure.

Page: 160
Sequence number: 4
Date: 2/19/2003 6:08:19 PM
Type: Highlight
    ACCEPT - DONE
    7.8.6.3.3.1 State description
    The penultimate paragraph talks about an "HARD_RESET Received confirmation". However this confirmation appears under the
    SL_IR_IRC1:Idle state in figure 67. Please move it to the SL_IR_IRC2:Wait state in the figure.

Page: 160
Sequence number: 5
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE
    7.9 Power management
    Replace the last sentence of the third paragraph with "If one of these primitives arrives while an STP connection is open, it may
    forward the primitive to the STP initiator port.".

Page: 161
Sequence number: 1
Date: 2/17/2003 5:31:33 PM
Type: Strikeout
    ACCEPT - DONE
    7.11 Domain changes
    Assuming my previous comment regarding the title of subclause 7.8.2 is accepted, delete "specific" from the 5th paragraph.

Page: 161

Sequence number: 2
Date: 2/17/2003 5:31:27 PM
Type: Strikeout
ACCEPT - DONE
7.11 Domain changes
Assuming my previous comment regarding the title of subclause 7.8.3 is accepted, delete "specific" from the 6th paragraph.

Page: 161
Sequence number: 3
Date: 2/17/2003 5:31:21 PM
Type: Strikeout
ACCEPT - DONE
7.11 Domain changes
Assuming my previous comment regarding the title of subclause 7.8.4 is accepted, delete "specific" from the 7th paragraph.

Page: 162
Sequence number: 2
Date: 2/17/2003 5:39:24 PM
Type: Highlight
ACCEPT - DONE (reworded)
7.12.2.1 Connection request
In the last paragraph, second sentence, replace "does not support" with "supports".

Page: 163
Sequence number: 2
Date: 2/17/2003 5:42:18 PM
Type: Highlight
ACCEPT - DONE (reworded as singular not plural)
7.12.2.2 Connection request responses
Table 78 - Connection request responses
In the description of AIP, the sentence beginning with "While the expander..." is not worded correctly. The number of expander devices (plural) does not match it (singular). Replace "it returns an AIP" with "they return AIPs".

Page: 163
Sequence number: 3
Date: 2/17/2003 5:43:22 PM
Type: Note
REJECT (no, it's an open choice)
7.12.2.2 Connection request responses
Is there an order of precedence to the list future connection rates in the penultimate paragraph?

Page: 163
Sequence number: 4
Date: 2/19/2003 12:33:54 PM
Type: Note
ACCEPT - DONE (paragraph being deleted because it is not a complete list of acceptance requirements.)
7.12.2.2 Connection request responses
Last paragraph. Shouldn't the list of reasons to transmit OPEN_ACCEPT include that the INITIATOR bit is in an acceptable state as documented in 7.7.3?

Page: 163
Sequence number: 5
Date: 3/5/2003 3:25:57 PM
Type: Highlight
ACCEPT - DONE (add definitions of deadlock and livelock to ch3)
7.12.3 Arbitration fairness
Fourth paragraph, last word. The term "livelocks" should either be eliminated (it is only used here) or a definition should be included.

Page: 163
Sequence number: 30
Date: 2/16/2003 11:41:33 AM
Type: Note
ACCEPT - DONE (made subsequent section at the same level)
7.12.3 Arbitration fairness
page 163
Hanging paragraph.

Page: 164

Sequence number: 1
Date: 2/19/2003 12:43:51 PM
Type: Highlight
    ACCEPT - DONE (yes, added "and the opposite initiator bit")
    7.12.3 Arbitration fairness
    Paragraph 6. Do we also need to specify that the INITIATOR field is compatible with the role we were requesting?

Page: 168
Sequence number: 1
Date: 2/19/2003 4:25:19 PM
Type: Highlight
    ACCEPT - TODO (review in last edit)
    7.12.5 Abandoning a connection request
    The paragraph just below table 81 and above figure 69 breaks unnaturally across a page boundary, with the last two lines on the
    next page even though there is plenty of space on the previous page.

Page: 174
Sequence number: 1
Date: 3/1/2003 6:11:45 PM
Type: Note
    ACCEPT - DONE (changes per other comments)
    7.13.2 SL transmitter and receiver
    The last two paragraphs of this subclause are nearly identical to the last two paragraphs in 7.8.6 and thus have the same issues
    identified there. These paragraphs need similar changes.

Page: 174
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    REJECT (this sentence deleted instead)
    7.13.3.1 State description
    In the third paragraph, neither of the confirmations listed are shown in figure 72. Please add them to the figure.

Page: 177
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE (by is bye bye)
    7.13.5.1 State description
    Replace "by by" by "by" in the second paragraph.

Page: 177
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE (removed 1/2/3/4 list and reworded)
    7.13.5.2 Transition SL2:Selected to SL0:Idle
    Each of the 4 conditions has an English problem with the phrase ", then after". The problem can be corrected by replacing ", then"
    with " and" in four places.

Page: 178
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE
    7.13.6.1 State description
    Add either "(see SATA)" or "(see 7.17.4)" at the end of the fourth paragraph.

Page: 180
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Strikeout
    ACCEPT - DONE
    7.14.1 Overview
    In the paragraph after the first list, delete "an after receiving".

Page: 184
Sequence number: 1
Date: 2/21/2003 7:35:11 PM

Type: Highlight
ACCEPT - DONE (Tracking with another comment)
7.14.2.2 Transition XL0:Idle to XL1:Request_Path
Item b) references a Transmit Break indication, but the indication does not appear as an input to the XL0:Idle state in figure 74. Please add it.

Page: 184
Sequence number: 2
Date: 2/21/2003 7:35:24 PM
Type: Highlight
ACCEPT - DONE (tracking with another comment)
7.14.2.2 Transition XL0:Idle to XL1:Request_Path
Item a) references a Transmit Open indication, but the indication does not appear as an input to the XL0:Idle state in figure 74. Please add it.

Page: 184
Sequence number: 3
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE (yes; also initiator connection tag)
7.14.3.1 State description
Should the second list include the INITIATOR bit?

Page: 185
Sequence number: 1
Date: 2/27/2003 6:04:07 PM
Type: Highlight
ACCEPT - DONE
7.14.4.1 State description
In the second paragraph, the Transmit Idle Dword parameter is referenced, but it does not appear for this state in figure 75. Please add it to the figure.

Page: 185
Sequence number: 2
Date: 2/27/2003 6:03:59 PM
Type: Highlight
ACCEPT - DONE
7.14.4.1 XL2 State description
In the third paragraph, the Transmit Open request is referenced, but it does not appear for this state in figure 75. Please add it to the figure.

Page: 187
Sequence number: 1
Date: 3/1/2003 4:55:10 PM
Type: Highlight
ACCEPT - DONE (changed to the transition into this state)
7.14.7.1 State description
In the first paragraph, the Transmit Open indication is referenced, but it does not appear in figure 75 for this state. Please add it to the figure.

Page: 188
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
7.14.8.2 Transition XL6:Open_Response_Wait to XL0:Idle
The link (see 7.12.3) does not work.

Page: 188
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
7.14.8.3 Transition XL6:Open_Response_Wait to XL2:Request_Open
The link (see 7.12.3) does not work.

Page: 188
Sequence number: 3
Date: 3/1/2003 4:59:21 PM

Type: Highlight
REJECT (but pulled all the invalid dword replacement functionality into this section, eliminating the need for any such link)
7.14.9.1 State description
In the fourth paragraph, replace "section 7.12.4" with "subclause 7.12.4." Also, make the link work.

Page: 193
Sequence number: 1
Date: 2/18/2003 7:08:34 PM
Type: Highlight
ACCEPT - DONE
7.16.6 Preparing to close an SSP connection
The last two sentences of the last paragraph are run together. Add a space.

Page: 194
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
7.16.7.1 Overview
In the paragraph beginning with "The SSP_TF state machine's...", replace "it" with "is".

Page: 194
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE (per Mark Evans' suggested wording)
7.16.7.1 Overview
In the paragraph beginning with "The SSP_RF state machine's...", replace "successful or unsuccessful received." with "successfully or unsuccessfully received.".

Page: 195
Sequence number: 1
Date: 3/1/2003 11:41:45 AM
Type: Highlight
REJECT (maybe something can be done for SAS-2. The state machine itself is labeled part 1 which will have to suffice.)
7.16.7.1 Overview
Figure 82
(and Global)
The SSP_TF3 state is split between two figures (not even consecutive figures). This is very confusing because there is no visual clue in the figure that the state is continued elsewhere. We should add some clue that it is continued somewhere else (perhaps the horizontal bar under the state name or the vertical bar should be dashed).

Page: 202
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
7.16.7.11 SSP_RIM1:Rcv_Interlock_Monitor state
In the fourth paragraph, replace "Received Frames" with "Frame Received".

Page: 204
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
7.17.1 STP frame transmission
Table 84 - SATA target port transmitting a frame
It the title of the second column, replace "or STP" with "or to STP".

Page: 204
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE (throughout tables 84 and 85)
7.17.1 STP frame transmission
Table 84 - SATA target port transmitting a frame
Table 85 - STP initiator port transmitting a frame
"<repeats>" needs a better definition. If it means that the SATA_X_RDY primitive repeats, then replace it with "<SATA_X_RDY repeats>".

Page: 205
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
REJECT (but new wording per IBM comment)
7.17.1 STP frame transmission
Last paragraph, third sentence.
Replace "...involved." with "...involved (except to repeat dwords)."

Page: 207
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
7.17.3 Preparing to close an STP connection
Second paragraph.
Replace "SCSI domain" with SAS domain".

Page: 211
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE (data dwords)
7.18.4.3.1.1 State description
Third paragraph. Replace "dword" with "dwords".

Page: 211
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
7.18.4.3.1.2 Transition SMP_TL1:Wait_originate_frame to SMP_TL2:Wait_transmit_frame
The first sentence of the first paragraph would be clearer if another "after" were included after the "and" as follows: "...after a valid
SMP request frame is received and after sending..."

Page: 214
Sequence number: 1
Date: 3/1/2003 4:05:47 PM
Type: Highlight
REFER PORT WG - TODO
8.2.4 I_T nexus loss timer
In list item a), replace "counting and assigned an expired status;" with "counting and shall be assigned an expired status;"

Page: 214
Sequence number: 2
Date: 3/1/2003 4:05:53 PM
Type: Highlight
REFER PORT WG - TODO
8.2.4 I_T nexus loss timer
In list item b), replace "and assigned" with "and shall be assigned".

Page: 214
Sequence number: 3
Date: 3/1/2003 4:05:42 PM
Type: Highlight
REFER PORT WG - TODO
8.2.4 I_T nexus loss timer
First paragraph, first sentence. Replace "is" with "shall be" or "may be", depending on whether this timer is mandatory or optional.
Depending on this choice, the second sentence of this paragraph should start with "It shall be:" or "If implemented, it is:".

Page: 215
Sequence number: 1
Date: 3/1/2003 4:07:14 PM
Type: Note
REFER PORT WG - TODO (agree)
8.3.1 Overview
In the second list (of states), add references to 8.3.2 for the PL_OC1:Idle state and to 8.3.3 for the PL_OC2:Overall_Control state.

Page: 215
Sequence number: 2
Date: 3/1/2003 4:07:02 PM
Type: Highlight
REFER PORT WG - TODO (should have said PL_OC1:Idle)
8.3.1 Overview
In the last paragraph, last sentence. How can the Overall_Control state machine transition to the PL_PM1:Idle state, which is in another state machine? Should this sentence read, "The state machine shall transition to the PL_OC2:Overall_Control state after receiving a Phy Enabled confirmation from any phy assigned to the port."?

Page: 216
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Strikeout
ACCEPT - DONE
8.3.2 8.3.2 PL_OC1:Idle state
Delete redundant subclause number.

Page: 216
Sequence number: 3
Date: 2/16/2003 11:41:33 AM
Type: Strikeout
ACCEPT - DONE
8.3.2.1 8.3.2.1 State description
Delete redundant subclause number.

Page: 217
Sequence number: 1
Date: 3/1/2003 4:11:16 PM
Type: Highlight
REFER PORT WG - TODO
8.3.3.1.1 State description overview
The example in the first line is an exhaustive list. Replace "e.g.," with "i.e.,".

Page: 217
Sequence number: 2
Date: 3/1/2003 4:11:10 PM
Type: Strikeout
ACCEPT - DONE
8.3.2.2 8.3.2.2 Transition PL_OC1:Idle to PC_OC2:Overall_Control
Delete redundant subclause number.

Page: 218
Sequence number: 1
Date: 3/1/2003 4:13:35 PM
Type: Highlight
REFER PORT WG - TODO (agree)
8.3.3.1.4 SSP wide port rules
First paragraph. Add forward reference to COMMAND frames subclause after "COMMAND frames". That is, "(see 9.2.4.1)".

Page: 218
Sequence number: 2
Date: 3/1/2003 4:13:29 PM
Type: Highlight
REFER PORT WG - TODO (agree)
8.3.3.1.4 SSP wide port rules
Second paragraph. Add forward reference to TASK frame subclause after "TASK frame". That is, "(see 9.2.4.2)".

Page: 218
Sequence number: 3
Date: 3/1/2003 4:13:24 PM
Type: Highlight
REFER PORT WG - TODO (agree)
8.3.3.1.4 SSP wide port rules
Fifth paragraph. Add forward reference to DATA frame subclause after "DATA frame". That is, "(see 9.2.4.4)".

Page: 218
Sequence number: 4
Date: 3/1/2003 4:13:16 PM

Type: Highlight
    REFER PORT WG - TODO (agree)
    8.3.3.1.4 SSP wide port rules
    Sixth paragraph. Add forward reference to RESPONSE frame subclause after "RESPONSE frame". That is, "(see 9.2.4.5)".

Page: 219
Sequence number: 1
Date: 3/1/2003 4:14:38 PM
Type: Highlight
    REFER PORT WG - TODO
    8.3.3.1.5 Filling in the Tx Frame arguments
    In list item a), shouldn't "should" be "shall"?

Page: 221
Sequence number: 1
Date: 3/1/2003 4:15:51 PM
Type: Highlight
    REFER PORT WG - TODO
    8.3.3.1.6 Confirmations
    Global
    In the last paragraph of this subclause, replace "running" with "running,".
    Global: While English allows the last comma before an "and" or "or" to be omitted, it is less ambiguous to include the comma. This
    is especially true for lists within lists. This comment may apply elsewhere.

Page: 221
Sequence number: 2
Date: 3/1/2003 4:15:59 PM
Type: Note
    REFER PORT WG - TODO (agree)
    8.4.1 Overview
    In the second list (of states), add references:
    a) PL_PM1:Idle (see 8.4.2);
    b) PL_PM2:ReqWait (see 8.4.3);
    c) PL_PM3:Connected (see 8.4.4); and
    d) PL_PM4:Wait_For_Close (see 8.4.5).

Page: 224
Sequence number: 2
Date: 3/1/2003 4:17:27 PM
Type: Highlight
    REFER PORT WG - TODO (you could get that response even if asking for an SSP connection, so have to handle it)
    8.4.3.1.2 PL_PM I_T nexus loss timer
    First paragraph. This paragraph deals with SSP ports. Why is item d), which is an STP confirmation, in the list?

Page: 225
Sequence number: 1
Date: 3/1/2003 4:18:00 PM
Type: Highlight
    REFER PORT WG - TODO
    8.4.3.1.4 Open Failed handling
    In the first paragraph, fourth line, replace "Open Failure confirmation" with "Open Failed confirmation".

Page: 225
Sequence number: 2
Date: 3/1/2003 4:17:56 PM
Type: Highlight
    REFER PORT WG - TODO
    8.4.3.1.4 Open Failed handling
    Table 87 - Retry Frame conditions
    In Table 87, is it obvious what is done if the I_T nexus loss timer has expired and an Open Failed (Pathway Blocked) confirmation
    is received? If not, add a row to this table describing this case.

Page: 226
Sequence number: 1
Date: 3/1/2003 4:19:22 PM
Type: Highlight
    REFER PORT WG - TODO
    8.4.4.1 State description
    The eighth paragraph refers to a DONE (ACK/NAK TIMEOUT) Received confirmation, which does not appear in figures 92 nor 93.

Should the "DONE Transmitted" confirmation in figure 93 be "DONE Received"? If so, fix figure 93 and change the confirmation in this paragraph to be "DONE Received (ACK/NAK TIMEOUT) confirmation".

Page: 226
Sequence number: 2
Date: 3/1/2003 4:19:17 PM
Type: Highlight
    REFER PORT WG - TODO
    8.4.4.1 State description
    Ninth paragraph. This paragraph refers to a DONE Received confirmation going to the application layer and to a DONE Received confirmation coming from the link layer. Neither appears in figures 92 and 93.

Page: 226
Sequence number: 3
Date: 3/1/2003 4:19:12 PM
Type: Highlight
    REFER PORT WG - TODO
    8.4.4.1 State description
    Tenth paragraph. The "Close Connection request" in the third sentence does not appear in figures 92 nor 93.

Page: 226
Sequence number: 4
Date: 3/1/2003 4:19:08 PM
Type: Highlight
    REFER PORT WG - TODO
    8.4.4.1 State description
    Last paragraph. The "Close Connection request" in the second sentence does not appear in figures 92 nor 93.

Page: 228
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE (it's the retransmit bit)
    9.2.1 SSP frame format
    Table 88 - SSP frame format
    Byte 10 includes a TIMEOUT bit that is not described.

Page: 229
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE (the TIMEOUT bit should have been RETRANSMIT)
    9.2.1 SSP frame format
    The fourth paragraph below Table 89 refers to a RETRANSMIT bit, but this bit does not appear in Table 88. Where does it go?

Page: 230
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE
    9.2.1 SSP frame format
    Penultimate paragraph. Find some way to prevent the 1 024 from wrapping from one line to the next line.

Page: 233
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE
    9.2.2.3 XFER_RDY information unit
    First paragraph under table 94. The reference to 10.1.1.1.5 is wrong and the link does not work. I think this reference should be to 10.1.6.1.5.

Page: 233
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE
    9.2.2.3 XFER_RDY information unit
    Last paragraph. The reference to 10.1.1.1.5 is wrong and the link does not work. I think this reference should be to 10.1.6.1.5.

Page: 244
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight

ACCEPT - DONE (the UnOrderList0Reset paragraph tag was marked to "Keep with next" which is unnecessary)
9.2.6.2.1 Overview
The penultimate paragraph wraps unnaturally to the top of a new page when there is plenty of room for it on the previous page.

Page: 244
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight

ACCEPT - DONE (but then decided to remove it entirely)
9.2.6.2.1 Overview
Figure 98 - SSP transport layer (ST) state machines - initiator device
Replace "DONE (ACK/NAK TIMEOUT) Received" with "DONE Received (ACK/NAK TIMEOUT)".

Page: 246
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight

REJECT (this is making sure the ACK went out for the XFER_RDY)
9.2.6.2.2.1 State description
In item e) describing the XFER_RDY Arrived parameter, replace "ACK Transmitted" with "ACK Received".

Page: 247
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight

REJECT (this is waiting to ensure the ACK is sent out for the XFER_RDY before starting to send data frames)
9.2.6.2.2.3 Transition ST_ISF1:Send_Frame to ST_ISF3:Prepare_Send_Data_Out
In item b) of the list, replace "ACK Transmitted" with "ACK Received".

Page: 247
Sequence number: 2
Date: 2/28/2003 5:39:58 PM
Type: Highlight

ACCEPT - DONE (values)
9.2.6.2.3.1 State description
In the second paragraph, replace "the following received" with "the following fields received".

Page: 247
Sequence number: 3
Date: 2/28/2003 5:39:41 PM
Type: Highlight

ACCEPT - DONE (values)
9.2.6.2.3.1 State description
In the third paragraph, replace "the following received" with "the following fields received".

Page: 247
Sequence number: 4
Date: 2/28/2003 5:39:29 PM
Type: Highlight

ACCEPT - DONE (values)
9.2.6.2.3.1 State description
In the fourth paragraph, replace "the following" with "the following fields".

Page: 247
Sequence number: 5
Date: 2/28/2003 5:39:19 PM
Type: Highlight

ACCEPT - DONE (values)
9.2.6.2.4.1 State description
In the first paragraph, replace "the following" with "the following fields".

Page: 247
Sequence number: 6
Date: 2/28/2003 5:39:03 PM

Type: Highlight
ACCEPT - DONE ("values")
9.2.6.2.4.1 State description
In the second paragraph, replace "the following" with "the following fields".

Page: 248
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE (removed this transition altogether)
9.2.6.2.5.2 Transition ST_IRD1:Receive_Data_In to ST_IRD2:Process_Received_Data_In
Don't we only want to make this transition after verifying that everything is correct with the received DATA frame?
Replace "...any value...has..." with "...all values...have...".

Page: 249
Sequence number: 1
Date: 2/28/2003 5:38:16 PM
Type: Highlight
ACCEPT - DONE
9.2.6.2.8 ST_IFR1:Initiator_Frame_Router state
First paragraph, item d). Replace "a hard reset occurs" with "a HARD_RESET Received indication is received".

Page: 250
Sequence number: 1
Date: 3/1/2003 4:36:40 PM
Type: Highlight
REJECT (but deleted hard reset from here. Added separate paragraph forwarding HARD_RESET Received upstream)
9.2.6.2.8 ST_IFR1:Initiator_Frame_Router state
Third paragraph. Replace "Frame Received (Frame Failed) or a
hard reset," with "Frame Received (Frame Failed) indication or a
HARD_RESET Received indication,".

Page: 250
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE (deleting entire paragraph. This was passing up DONE Received (ACK/NAK Timeout vs. normal) status so the
application could decide when to reuse tags. Responses to other comments make that vendor-specific, so we can remove this
confirmation.)
9.2.6.2.8 ST_IFR1:Initiator_Frame_Router state
Fourth paragraph. How shall this state "notify the application layer"? I presume it needs to send a some kind of confirmation to the
application layer.

Page: 250
Sequence number: 3
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
9.2.6.2.8 ST_IFR1:Initiator_Frame_Router state
Item c) in the last list. Replace "Data-in parameter" with "Data-in Arrived parameter"

Page: 252
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
REJECT - hard reset is more than a signal
9.2.6.3.2 ST_TFR1:Target_Frame_Router state
First paragraph, item c). Replace "a hard reset occurs" with "a HARD_RESET Received indication is received".

Page: 252
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
REJECT - hard reset is more than a signal
9.2.6.3.2 ST_TFR1:Target_Frame_Router state
Third paragraph. Replace "a hard reset" with "a HARD_RESET Received indication".

Page: 254
Sequence number: 1

Date: 2/16/2003 11:41:33 AM
Type: Strikeout
    ACCEPT - DONE (magic is good)
    9.2.6.3.4.1 State description
    Second paragraph. Minimally, delete "this state" as the Send Data-In transport protocol service request was not received by this
    state. However, this correction implies that the ST_TTS2 state magically knows how the ST_TTS1 state got started. It is probably
    better to say, "If this state was entered from the ST_TTS1:Request_Response_Router state, ..."

Page: 254
Sequence number: 2
Date: 2/28/2003 5:26:46 PM
Type: Highlight
    ACCEPT - DONE (change to "and this state has received an ACK Transmitted confirmation for each frame previously received
    (i.e., received with a Data-Out Arrived message)" in both paragraphs above. Add note that these rules are mainly for wide port
    hopping. Check first paragraph on the page too.)
    9.2.6.3.4.1 State description
    Fifth paragraph. Replace "ACK Transmitted" with "ACK Received".

Page: 254
Sequence number: 3
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.4.1 State description
    Seventh paragraph. It seems odd to say this state shall receive a Transmission Status confirmation from another state machine.
    Perhaps we should say "this state shall wait to receive".

Page: 254
Sequence number: 4
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.4.1 State description
    Tenth paragraph. Same problem with "this state shall receive".

Page: 256
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.6.1 State description
    Second paragraph. Replace "ST_TS1" with "ST_TTS1".

Page: 256
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.6.1 State description
    First paragraph, item a). Replace "ST_TS1" with "ST_TTS1".

Page: 259
Sequence number: 3
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE
    9.3.2 SATA tunneling for multiple STP initiator ports
    Second paragraph, item d). Replace "CLOSE CLEAR AFFILIATION)" with "CLOSE (CLEAR AFFILIATION)".

Page: 264
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
    ACCEPT - DONE
    9.4.4.2.3.2 Transition MT_ID2:Send to MT_ID1:Idle
    Replace "and sending" with "and after sending".

Page: 264
Sequence number: 2

Date: 2/16/2003 11:41:33 AM
Type: Highlight
   ACCEPT - DONE
   9.4.4.3.1 Overview
   Replace "MT_TD2:Send" with "MT_TD2:Respond".

Page: 269
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
   ACCEPT - DONE
   10.1.1.5 Command Complete Received transport protocol service
   First paragraph. Replace "not" with "to".

Page: 272
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
   ACCEPT - DONE
   10.1.1.10 Send Task Management Request transport protocol service
   Replace the service request with the correct one:
   "Send Task Management Request (IN (Nexus, Function Identifier))"

Page: 273
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
   ACCEPT - DONE
   10.1.1.11 Task Management Request Received transport protocol service
   Replace the service indication with the correct one:
   "Task Management Request Received (IN (Nexus, Function Identifier))"

Page: 274
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
   ACCEPT - DONE
   10.1.1.12 Task Management Function Executed transport protocol service
   Replace the service response with the correct one:
   "Task Management Function Executed (IN (Nexus, Service Response))"

Page: 274
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
   ACCEPT - DONE
   10.1.1.13 Received Task Management Function-Executed transport protocol service
   Replace the service confirmation with the correct one:
   "Received Task Management Function Executed (IN (Nexus, Service Response))"

Page: 276
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
   REVIEW PROTOCOL WG
   ACCEPT - DONE (non-breaking space placed before each "()". It's debatable whether the () are even needed.)
   10.1.3 Application client error handling
   Third paragraph. The "()" should not be allowed to wrap onto a new line. Does Frame have an equivalent function to Word's
   non-breaking space?

Page: 277
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
   ACCEPT - DONE
   10.1.6.1.1 Disconnect-Reconnect mode page overview
   First paragraph. Replace "(e.g., as if the mode page is implemented and the field is set to zero)" with "(i.e., as if the field in the
   mode page is implemented and the field is set to zero)".

Page: 287
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Note
ACCEPT - DONE
10.1.8 SCSI power condition states
To be consistent with the other subclauses in this standard, add forward references (with links) to the relevant subclauses in the second list (items a through g should point to 10.1.8.1 through 10.1.8.7).

Page: 288
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
10.1.8 SCSI power condition states
Figure 103 — SCSI application layer power condition (SA_PC) state machine for SAS
This state machine looks different from the other state machines. Minimally add the gold box.

Page: 289
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
REJECT (already ref SPC-3 in the state description text)
10.1.8.2.2 Transition SA_PC_1:Active to SA_PC_2:Idle
Item c). Replace "Power Condition mode page idle timer expires" with "Power Condition mode page idle condition timer (see SPC-3) expires".

Page: 289
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
REJECT (already ref SPC-3 in the state description text)
10.1.8.2.3 Transition SA_PC_1:Active to SA_PC_3:Standby
Item c). Replace "Power Condition mode page standby timer expires" with "Power Condition mode page standby condition timer (see SPC-3) expires".

Page: 289
Sequence number: 3
Date: 2/16/2003 11:41:33 AM
Type: Highlight
REJECT (already ref SPC-3 in the state description text)
10.1.8.3.3 Transition SA_PC_2:Idle to SA_PC_3:Standby
Item c). Replace "Power Condition mode page standby timer expires" with "Power Condition mode page standby condition timer (see SPC-3) expires".

Page: 291
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
REJECT - already referenced in the intro
10.1.8.6.3 Transition SA_PC_5:Active_Wait to SA_PC_3:Standby
Item c). Replace "Power Condition mode page standby timer expires" with "Power Condition mode page standby condition timer (see SPC-3) expires".

Page: 291
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
REJECT - already referenced in the intro
10.1.8.6.5 Transition SA_PC_5:Active_Wait to SA_PC_6:Idle_Wait
Item c). Replace "Power Condition mode page idle timer expires" with "Power Condition mode page idle condition timer (see SPC-3) expires".

Page: 291
Sequence number: 3
Date: 2/16/2003 11:41:33 AM
Type: Highlight
REJECT - already referenced in the intro
10.1.8.7.3 Transition SA_PC_6:Idle_Wait to SA_PC_3:Standby

Item c). Replace "Power Condition mode page standby timer expires" with "Power Condition mode page standby condition timer (see SPC-3) expires".

Page: 299
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE (Jan WG; removed all the function result text from each function and moved into 10.3.1.1 big table for all functions. In that table, PHY DOES NOT EXIST is used whenever appropriate.)
10.3.1.4 DISCOVER function
Second paragraph below table 134. Why not use a FUNCTION RESULT of PHY DOES NOT EXIST, which we define in table 136?

Page: 302
Sequence number: 3
Date: 2/28/2003 3:32:07 PM
Type: Highlight
ACCEPT - TODO (check wrapping in last edit)
10.3.1.4 DISCOVER function
The paragraph between tables 138 and 139 wraps onto the next page even though there is room on the previous page for the whole paragraph.

Page: 311
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
10.3.1.8 CONFIGURE ROUTE INFORMATION function
Second paragraph below table 150. The link to 9.4.4.2 is wrong and does not work.

Page: 312
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE (fixed the reference)
10.3.1.8 CONFIGURE ROUTE INFORMATION function
Third paragraph below table 150. Either find the subclause number for the see 4.x.x.x reference or delete it.

Page: 312
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
10.3.1.8 CONFIGURE ROUTE INFORMATION function
Paragraph between tables 151 and 152. The reference to table 149 should be to table 152.

Page: 324
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
B.1 SAS phy reset sequence examples
In the first paragraph, replace "Figure A.1" with "Figure B.1".

Page: 324
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
B.1 SAS phy reset sequence examples
In the first paragraph below figure B.1, replace "Figure A.2" with "Figure B.2".

Page: 324
Sequence number: 3
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE (An ordered list works much better. Also tossed the "valid" and "invalid" wording.)
B.1 SAS phy reset sequence examples
First paragraph, last sentence. This sentence does not make sense. Consider replacing "...(invalid), that phy then selects..." with "...(invalid). Both phys then select...".

Page: 325
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE (An ordered list works much better. Also tossed the "valid" and "invalid" wording.)
B.1 SAS phy reset sequence examples
Paragraph above Figure B.2, last sentence. This sentence does not make sense. Consider replacing "...invalid), that phy then selects..." with "...invalid). Both phys then select...".

Page: 377
Sequence number: 1
Date: 2/16/2003 11:41:33 AM
Type: Highlight
ACCEPT - DONE
Annex I
Global
There are several places where C comments wrap to the next line. This code will not compile correctly. We need to correct these wrapping comments.

Page: 382
Sequence number: 2
Date: 2/16/2003 11:41:33 AM
Type: Note
ACCEPT - DONE (tracking with another comment)
Annex J SAS logo
Figure J.1 — SAS logo
We should change this logo to match the one selected by the SCSI Trade Association.

Author: MSFT

Page: 259
Sequence number: 13
Date: 3/5/2003 4:33:22 PM
Type: Note
ACCEPT - DONE (Bill Galloway's proposal added "An affiliation established when the command is transmitted should be kept until all frames for the command have been delivered. This avoids confusing the SATA device, which only knows about one SATA host. STP initiator ports may keep affiliations for longer tenures, but this is discouraged." which should help).
.3.2 SATA tunneling for multiple initiator ports
The affiliation mechanism creates a policy that encourages initiators to
fight over resources. The policy that multiple initiators shouldn't be actively connecting to an STP target shouldn't be enforced by hardware. It
should be a usage convention.
[key concern is resources coming and going as seen by an OS]

Author: MXO

Page: i
Sequence number: 1
Date: 2/28/2003 6:13:24 PM
Type: Note
REJECT (Enable Disable SAS Link is an intra-layer signal from SL_IR to SL and XL. Enable Disable Link Layer is a inter-layer signal from SP_DWS to SL_IR. They're not the same.)
Global
Replace "Enable Disable SAS Link (Enable)" with "Enable Disable Link Layer (SAS Enable)".

Page: i
Sequence number: 2
Date: 2/28/2003 6:13:11 PM
Type: Note
REJECT (Enable Disable SAS Link is an intra-layer signal from SL_IR to SL and XL. Enable Disable Link Layer is a inter-layer signal from SP_DWS to SL_IR. They're not the same.)

Global
Replace "Enable Disable SAS Link (Disable)" with "Enable Disable Link Layer (Disable)".

Page: i
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE (changed where it is clear, e.g. SMP requests and SMP responses. Mode pages go both directions, so neither is more correct; changed to "contains" or "means" in several instances. Address frames come from any type of device; since "indicate" was predominent, left them alone.)
Global
Replace "indicate" and all of its forms by the correct form of "specify" when the value or action originates with the initiator.

Page: x
Sequence number: 1
Date: 2/20/2003 9:27:02 AM
Type: Note
ACCEPT - DONE
Table of contents, 4.3.3.4 Signals between link layer, port layer, and management application layer for all protocols
Align the page number properly.

Page: xvi
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE (track with IBM comment)
Table of contents, 7.8.6.2.3.2 Transition SL_IR_RIF2:Receive_Identify_Frame to SL_IR_RIF3:Completed
Align the page number properly.

Page: xix
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE (track with IBM comment)
Table of contents, 7.18.4.2.2.2 Transition SMP_IL2:Indicate_frame_tx to SMP_IL3:Rcv_response_frame
Align the page number properly.

Page: xx
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE (track with IBM comment)
Table of contents, 9.2.6.2.2.2 Transition ST_ISF1:Send_Frame to ST_ISF2:Prepare_Command_Request
Align the page number properly.

Page: xxi
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE (track with IBM comment)
Table of contents, 9.2.6.2.3.2 Transition ST_ISF2:Prepare_Command_Request to ST_ISF1:Send_Frame
Align the page number properly.

Page: xxi
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE (track with IBM comment)
Table of contents, 9.2.6.3.6.3 Transition ST_TTS4:Receive_Data_Out to ST_TTS5:Prepare_XFER_RDY
Align the page number properly.

Page: xxi
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE (track with IBM comment)
Table of contents, 9.2.6.3.7.2 Transition ST_TTS5:Prepare_XFER_RDY to ST_TTS4:Receive_Data_Out
Align the page number properly.

Page: 6
Sequence number: 7
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE (definition from FC-MJSQ letter ballot.)
3.1.24 deterministic jitter
Rewrite this definition to be something like: "Jitter from all sources for which the probability of a variation in interval occurring outside the specified bounds is zero. These sources include duty cycle distortion, data dependent jitter, sinusoidal dependent jitter, and jitter uncorrelated to the data."

Page: 8
Sequence number: 7
Date: 3/5/2003 5:02:50 PM
Type: Highlight
REJECT (no, the expander model uses it too)
3.1.62 indication
In this standard an indication is passed from a transport layer to an application layer only.

Page: 9
Sequence number: 8
Date: 2/16/2003 11:40:39 AM
Type: Highlight
REJECT - expander state machines use it too
3.1.98 response
In this standard a response is passed from an application layer to a transport layer only.

Page: 11
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE (with specific wording from the OPEN address frame field definition)
Definitions, 3.1.x
Add a definition for pathway blocked count something like the following, "Pathway blocked count (PBC): the number of times that a pathway has been blocked when attempting to open a connection."

Page: 17
Sequence number: 4
Date: 3/3/2003 5:55:00 PM
Type: Strikeout
REJECT
3.5.2 Transitions, third paragraph
Delete the word "fully".

Page: 21
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE
4.1.3 Ports (narrow ports and wide ports), NOTE 6
In the first sentence replace "primarily" with "e.g.,"

Page: 34
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE
4.2.3 Hashed SAS address
Add the following paragraph at the end of this clause: "Annex D contains information on SAS address hashing."

Page: 39
Sequence number: 1
Date: 3/8/2003 12:27:37 PM
Type: Note
ACCEPT - DONE (not blindly replace, but merge in some of the proposal. The proposal lists state names receiving each signal. The tables are hard enough to keep updated as is. Perhaps a better suggestion is to remove these tables altogether.)
4.3.3 Signals between state machines
Replace this clause with T10/03-023r0.

Page: 49

Sequence number: 4
Date: 2/16/2003 11:40:39 AM
Type: Highlight

4.5 I_T nexus loss, first paragraph
Change the first sentence from, "When a port receives OPEN_REJECT (NO DESTINATION), OPEN_REJECT (CONNECTION RATE NOT
SUPPORTED), or an open connection timeout in response to a connection request, it shall retry the connection request until:"
to something like,
 "When a port receives OPEN_REJECT (NO DESTINATION), OPEN_REJECT (CONNECTION RATE NOT SUPPORTED), or an
open connection timeout in response to a connection request, it shall retry the connection request. After receiving an
OPEN_REJECT (NO DESTINATION) or after an open connection time out, the port shall use the same OPEN address frame to
retry the connection. After receiving an OPEN_REJECT (CONNECTION RATE NOT SUPPORTED), the port shall send a new
OPEN address frame with the connection rate changed as described in 7.12.2.2. The connection request shall be retried until:"

Page: 65
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Highlight

ACCEPT - DONE (per SAS PHY WG Accept except use "(see SATA)" instead of "(for reference)" at the end of the sentence.)
5.1 SATA cables and connectors (informative), first paragraph
Figure 31 doesn't really show the cables and connectors, so the first sentence should be changed to something like, "Figure 31
shows a schematic representation of the cables and connectors defined by SATA (for reference)."

Page: 65
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Highlight

ACCEPT - DONE (per SAS PHY WG
Accept except use "analogous" for "equivalent" or "analogue".)
5.1 SATA cables and connectors (informative), first paragraph
The second sentence implies too much of a similarity between SATA and SAS devices. Either delete this sentence or change it to
something like, "A SATA host is an analogue to a SAS initiator device; a SATA device is an analogue to a SAS target device.

Page: 66
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Highlight

ACCEPT - DONE (per SAS PHY WG)
5.2 SAS cables and connectors
As above, Figure 32 doesn't really show the cables and connectors, so the sentence should be changed to something like, "Figure
32 shows a schematic representation of the cables and connectors defined in this standard to support an external environment."

Page: 71
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Highlight

ACCEPT - DONE
5.6 READY LED pin, first paragraph
Change "turn on" to "activate".

Page: 71
Sequence number: 4
Date: 2/16/2003 11:40:39 AM
Type: Highlight

ACCEPT - DONE
5.6 READY LED pin, second paragraph
In the second sentence change "when the READY LED signal is raised" to "when the READY LED signal is asserted."

Page: 71
Sequence number: 5
Date: 2/16/2003 11:40:39 AM
Type: Highlight

REJECT (but per PHY WG deleted whole sentence)
5.6 READY LED pin, third paragraph
Change the second sentence to: "The READY LED circuitry in the target device shall be ground tolerant since this pin may be
connected by a system directly to power supply ground."

Page: 71
Sequence number: 6

Date: 2/16/2003 11:40:39 AM
Type: Highlight
    REJECT (but sentence deleted)
    5.6 READY LED pin, fifth paragraph
    Change "turn on" to "activate".

Page: 71
Sequence number: 7
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    ACCEPT - DONE
    5.6 READY LED pin, bulleted list, item a)
    Change the second sentence to: "In this state the target device may be removed with no danger of mechanical or electrical
    damage;"

Page: 71
Sequence number: 8
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    ACCEPT - DONE (per SAS PHY WG, change to:
    When processing a command, the target device shall toggle the READY LED signal in a vendor-specified manner (e.g., the LED is
    usually on, but is momentarily off when commands are processed);)
    5.6 READY LED pin, bulleted list, item c)
    The second sentence ("When processing a command, the target device shall negate READY LED for a period long enough to be
    detected by an observer (i.e., LED is usually on, but flashes off when commands are processed);" is vague in the extreme. At least
    add some "example" times.

Page: 71
Sequence number: 9
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    REJECT (but sentence deleted)
    5.6 READY LED pin, fifth paragraph
    Change "...may optionally be driven..." to "...may be driven..."

Page: 71
Sequence number: 10
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    ACCEPT - DONE (per phy WG, change to:
    If the target device is formatting the media, it shall toggle the READY LED signal in a vendor-specific manner (e.g., with each
    cylinder change on a disk drive).)
    5.6 READY LED pin, bulleted list, item d)
    The first sentence ("If the target device is formatting the media, it shall toggle READY LED between asserted and negated at
    significant intervals during the format operation (e.g., with each cylinder change on a disk drive)." is also vague in the extreme.
    What is a "significant interval". At least add some "example" times.

Page: 74
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    ACCEPT - DONE (per phy WG)
    5.7.3.1 Eye masks overview, first paragraph
    In the last sentence change "sigma" to "standard deviations".

Page: 77
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    ACCEPT - DONE
    SAS PHY WG
    5.7.4 page 77
    Table 35
    Change Note c:
    ... unpowered or during idle time of an OOB signal.
    5.7.4 Transmitted signal characteristics, Table 35 - Transmitted signal characteristics at Tx compliance points
    In note c) change "...logically turned off..." to "...not being driven..."

Page: 82

Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    ACCEPT - DONE (changed satisfies to is given by)
    5.7.11 Transmitter characteristics, fourth paragraph
    In the last sentence replace "...satisfies the following equation." with "...shall satisfy the following equation."

Page: 82
Sequence number: 2
Date: 2/21/2003 4:31:06 PM
Type: Highlight
    ACCEPT - DONE (equation completely rewritten by phy WG).
    5.7.11 Transmitter characteristics
    Replace the equation after the fourth paragraph with:
    | S21 | = -{20 log10 (e)} {[6,5 x 10^-6 (f^0,5)] + [2,0 x 10^-10 (f)] + [3,3 x 10^-20 (f^2)]} dB

Page: 82
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Note
    ACCEPT - DONE (per phy WG, Add text at the end of the last sentence in the paragraph so that the sentence reads: "A
    compliance interconnect is any physical interconnect with equal or greater loss at frequencies from 150 MHz to 3,0 GHz and that
    also meets the ISI loss requirements shown in figures 42 and 43.")
    5.7.11 Transmitter characteristics, fifth paragraph
    Add text at the end of the last sentence in the paragraph so that the sentence reads: "A compliance interconnect is any physical
    interconnect with equal or greater loss at all frequencies than that required by the TCTF and that also meets the ISI loss
    requirements shown in figures 42 and 43."

Page: 82
Sequence number: 4
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    ACCEPT - DONE (per phy WG Delete "an" to resolve MXO comment)
    5.7.10 Electrical TxRx connections, first paragraph
    Change "media" to "medium" (AN electrically conductive MEDIUM).

Page: 86
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    ACCEPT - DONE
    6.2 Encoding (8b10b), 6.2.1 Encoding overview, first paragraph
    In the first sentence, change "10 bit" to "10-bit". There are four additional occurrences of different values in this clause to change.
    There are no other occurrences of this in the draft.

Page: 86
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    ACCEPT - DONE
    6.2 Encoding (8b10b), 6.2.1 Encoding overview, second paragraph
    Change "four byte" to "four-byte".

Page: 86
Sequence number: 4
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    ACCEPT - DONE
    6.2 Encoding (8b10b), 6.2.1 Encoding overview, third paragraph after Table 40 - Special character usage
    Change "10 bit" to "10-bit".

Page: 86
Sequence number: 5
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    ACCEPT - DONE
    6.2 Encoding (8b10b), 6.2.1 Encoding overview, third paragraph after Table 40 - Special character usage
    Change "8 bit" to "8-bit".

Page: 86
Sequence number: 6
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE
6.2 Encoding (8b10b), 6.2.1 Encoding overview, third paragraph after Table 40 - Special character usage
Change "10 bit" to "10-bit".

Page: 86
Sequence number: 7
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE (added definitions for disparity and running disparity from FC-FS. Changed several uses of "disparity" to
"running disparity" throughout SAS to match the definitions.)
6.2 Encoding (8b10b), 6.2.1 Encoding overview, third paragraph
The term "disparity" is introduced without definition. Either add definitions for the various forms of "disparity", or reference 6.3.3
Valid and invalid transmission characters.

Page: 86
Sequence number: 8
Date: 2/16/2003 11:40:39 AM
Type: Strikeout
REJECT (it's a significant increase, why not communicate that)
6.2.2 8b10b coding introduction, second paragraph
In the second sentence, delete the word "greatly".

Page: 86
Sequence number: 9
Date: 2/16/2003 11:40:39 AM
Type: Strikeout
REJECT (any pattern is recognizable. The fact that a comma is all zeros makes it easy to detect with simpler logic.)
6.2.2 8b10b coding introduction, second paragraph
In the third sentence, delete the word "easily".

Page: 87
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE (and following sentence too. D vs. K is always used in the Dxx.y format; I don't think this section applies to
normal data references)
6.2.3 8b10b encoding notation conventions, fourth paragraph
Delete the sentence, "The control variable is typically not specified." Item a) in the following bulleted list states what the values of
the control variable are.

Page: 97
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - TODO (check in last edit)
6.5 Out of band (OOB) signals, third paragraph after Table 48 - OOB signal receiver requirements
Delete the page break in this paragraph.

Page: 100
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE (enters the SATA speed negotiation sequence after COMWAKE)
6.6.3 SAS to SATA phy reset sequence, sixth paragraph
In the last sentence delete the word "normal" or describe an abnormal SATA reset sequence.

Page: 109
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE
6.8.2 OOB sequence states, Figure 56 - SAS phy (SP) state machine - OOB sequence states
Add a "Broadcast Event Notify" confirmation from SP1:OOB_COMINIT (this has the argument Phy Not Ready).

Page: 109

Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Highlight
REVIEW PROTOCOL WG
ACCEPT - DONE (moved SP1 to SP0, SP2 to SP1, created new SP2 to serve as a return path which honors COMINIT but not COMSAS)
6.8.2 OOB sequence states, Figure 56 - SAS phy (SP) state machine - OOB sequence states
The COMSAS detect timeout transition from SP7:OOB_AwaitCOMSAS cannot go to SP2:OOB_AwaitCOMX because this would cause another COMSAS to be transmitted. Add another state to which this transition goes where the timer resides. Then, after the timer expires, a hot-plug timeout would cause a transition to SP1:OOB_COMINIT.

Page: 110
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE (global)
6.8.2.1 SP1:OOB_COMINIT state, 6.8.2.1.1 State description
Change "PhyNotReady" to "Phy Not Ready".

Page: 110
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE (as "In expander devices,... Notify (Phy Not Ready) ...")
6.8.2.1 SP1:OOB_COMINIT state, 6.8.2.1.1 State description
Add "This state shall send a Broadcast Event Notify confirmation to the expander function."

Page: 112
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE (changed to the new SP2 state)
6.8.2.7.5 Transition SP7:OOB_AwaitCOMSAS to SAS_AwaitNoCOMX
Based on a previous comment, this transition should be deleted (also, there is no SAS_AwaitNoCOMX state).

Page: 115
Sequence number: 5
Date: 2/21/2003 2:51:21 PM
Type: Highlight
ACCEPT - DONE
6.8.3.4 SP11:SAS_AwaitALIGN1 state, 6.8.3.4.1 State description, second paragraph
Change "ALIGN0" to "ALIGN1".

Page: 123
Sequence number: 4
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE
6.9.3 SP_DWS1:Valid1 state
There is a transition description missing. Add: "6.9.4.3 Transition SP_DWS1:Valid1 to SP_DWS0:AcquireSync, This transition shall occur when an invalid dword is detected."

Page: 127
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Highlight
REJECT - fine as is
7.1.1 Primitives overview, first paragraph
Change the second sentence to: "Primitives are neither big-endian nor little-endian; they shall be interpreted as first, second, third, and last bytes.

Page: 137
Sequence number: 4
Date: 2/17/2003 1:00:12 PM
Type: Highlight
ACCEPT - DONE
7.1.4.4 BROADCAST, second paragraph after Table 59 - BROADCAST primitives
In the last sentence change "dropped" to "ignored".

Page: 138
Sequence number: 4
Date: 2/17/2003 1:05:56 PM
Type: Highlight
ACCEPT - DONE (added "for clock skew management and rate matching. Did not put in the i.e.)
7.1.4.9 NOTIFY, first paragraph
It could be problematic to send a NOTIFY during the phy reset sequence. Therefore, change the first sentence to: "A NOTIFY may be sent in place of an ALIGN during rate matching and clock skew management (i.e., a NOTIFY shall not be sent in place of an ALIGN during character and dword alignment during the phy reset sequence."

Page: 139
Sequence number: 1
Date: 2/17/2003 1:51:17 PM
Type: Note
ACCEPT - DONE (but point to 7.11.2.2 not 4.5)
7.1.4.11 OPEN_REJECT, Table 61 - OPEN_REJECT abandon primitives, description for OPEN_REJECT (CONNECTION RATE NOT SUPPORTED)
Add a parenthetical something like the following to the last sentence, "(the connection shall be retried as described in 4.5)."

Page: 139
Sequence number: 2
Date: 2/17/2003 1:45:25 PM
Type: Highlight
ACCEPT - DONE ("would have to be routed")
7.1.4.11 OPEN_REJECT, Table 61 - OPEN_REJECT abandon primitives
In the description of OPEN_REJECT (BAD DESTINATION) change "needs to be routed" to "is to be routed".

Page: 142
Sequence number: 4
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE
7.1.5.6 RRDY (Receiver ready), Table 65 - RRDY primitives
Delete RRDY (RESERVED 2) as there is no such primitive.

Page: 144
Sequence number: 2
Date: 2/17/2003 4:44:16 PM
Type: Highlight
REJECT (the note is correct as written, but the transmit rule needs to say that's for transmitting to SATA only. Add "The ALIGNs received by the expander device containing the STP/SATA bridge may not arrive in pairs" to start the note. Pull the the last sentence out of the note into the paragraph above.)
7.2 Clock skew management, note 19
Delete this note. An expander device may delete all ALIGNs only so long as the rules described in Table 66 are met.

Page: 145
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Strikeout
ACCEPT - DONE
7.4.2 CRC generation, NOTE 21
Delete the word "simply".

Page: 147
Sequence number: 5
Date: 2/16/2003 11:40:39 AM
Type: Strikeout
ACCEPT - DONE
7.4.3 CRC checking
Delete the last paragraph ("Annex B contains examples of CRC generation/checker implementations.") as this is already stated in the Overview clause (see 7.4.1).

Page: 151
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE
7.7.2 IDENTIFY address frame
Reorder the paragraphs below Table 73 - Device types such that the descriptions of the fields are in the common-practice order of

their appearance in the table (i.e., top to bottom and left to right).

Page: 151
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Note
    ACCEPT - DONE
    7.7.2 IDENTIFY address frame
    Add the following paragraph after Table 73 - Device types: "The ADDRESS FRAME TYPE field shall be set to 0h."

Page: 152
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Note
    ACCEPT - DONE
    7.7.3 OPEN address frame
    Reorder the paragraphs below Table 74 - OPEN address frame format such that the descriptions of the fields are in the
    common-practice order of their appearance in the table (i.e., top to bottom and left to right).

Page: 155
Sequence number: 4
Date: 2/21/2003 7:14:08 PM
Type: Highlight
    ACCEPT - DONE (with rewording per other comments)
    7.8.2 Initiator device specific rules, second paragraph
    Reword this to: "When a discover process is performed after a link reset sequence, the application client may discover all of the
    devices in the SAS domain. When a discover process is performed after a BROADCAST (CHANGE), the application client may
    determine what has changed in the SAS domain."

Page: 155
Sequence number: 5
Date: 3/5/2003 8:42:35 AM
Type: Highlight
    ACCEPT - DONE (and moved to 4.6.11.3 Expander route table section. Change to _may_ disable the port attached to the
    already-seen SAS address. If it does choose to do so, it shall disable all phys attached to that SAS address but the lowest
    numbered phy on the expander device with the lowest SAS address.)
    7.8.2 Initiator device specific rules, fourth paragraph
    Reword this to: "If during the discover process (see 4.6.11.5) the application client detects two ports with the same SAS address, it
    has found a routing loop. To break the loop the application client shall use the CONFIGURE ROUTE INFORMATION function (see
    10.3.1.8) to disable the expander port through which the duplicate SAS address was detected."

Page: 156
Sequence number: 1
Date: 3/1/2003 6:17:55 PM
Type: Highlight
    REJECT (this state machine is not used for SATA; SATA spec covers that mode)
    7.8.5 Identification and hard reset (SL_IR) state machines, 7.8.5.1 Overview, Figure 67 - SAS link layer identification and hard
    reset (SL_IR) state machines
    In the SL_IR_TIR1 state: delete "(SAS Enable)" as the argument for this confirmation may be either (SAS Enable) or (SATA
    Enable).

Page: 156
Sequence number: 2
Date: 3/1/2003 6:17:52 PM
Type: Highlight
    REJECT (this state machine is not used for SATA; SATA spec covers that mode)
    7.8.5 Identification and hard reset (SL_IR) state machines, 7.8.5.1 Overview, Figure 67 - SAS link layer identification and hard
    reset (SL_IR) state machines
    In the SL_IR_RIF1 state: delete "(SAS Enable)" as the argument for this confirmation may be either (SAS Enable) or (SATA
    Enable).

Page: 156
Sequence number: 3
Date: 3/1/2003 6:18:03 PM
Type: Highlight
    REJECT (this state machine is not used for SATA; SATA spec covers that mode)
    7.8.5 Identification and hard reset (SL_IR) state machines, 7.8.5.1 Overview, Figure 67 - SAS link layer identification and hard
    reset (SL_IR) state machines
    In the SL_IR_IRC1 state: delete "(SAS Enable)" as the argument for this confirmation may be either (SAS Enable) or (SATA

Enable).

Page: 156
Sequence number: 4
Date: 2/19/2003 5:38:41 PM
Type: Note
ACCEPT - DONE
7.8.5 Identification and hard reset (SL_IR) state machines, 7.8.5.1 Overview, Figure 67 - SAS link layer identification and hard reset (SL_IR) state machines
In the SL_IR_IRC2 state: Add a "HARD_RESET Received" confirmation from this state to the upper layers. This is already partly in the text for this state, and another Maxtor comment to the text clarifies this.

Page: 156
Sequence number: 5
Date: 2/19/2003 5:38:20 PM
Type: Note
ACCEPT - DONE
7.8.5 Identification and hard reset (SL_IR) state machines, 7.8.5.1 Overview, Figure 67 - SAS link layer identification and hard reset (SL_IR) state machines
In the SL_IR_IRC2 state: add the "Identification Sequence Complete" confirmation to the management application layer. This is described in the corresponding text for this state.

Page: 157
Sequence number: 3
Date: 3/1/2003 6:15:25 PM
Type: Highlight
ACCEPT - DONE (deleted paragraph; SL_IR state machines handle frame parsing)
7.8.6 SL_IR transmitter and receiver, third paragraph
Reword this to: "The SL_IR receiver shall ignore any primitives received inside an OPEN address frame (i.e., after an SOAF but before the subsequent EOAF) except SOAF and BREAK. If a receiver receives a second SOAF after receiving an SOAF but before receiving a subsequent EOAF, then the receiver shall ignore the dwords before the second SOAF (i.e., the receiver shall consider the second SOAF as the start of a new IDENTIFY address frame). If a receiver receives a BREAK after receiving an SOAF but before receiving a subsequent EOAF, then the receiver shall ignore the dwords before the BREAK (i.e., ignore the IDENTIFY address frame)."

Page: 160
Sequence number: 6
Date: 2/28/2003 12:47:43 PM
Type: Highlight
ACCEPT - DONE (got rid of the "to" so it's implicitly to the next layer.)
7.8.6.3.3 SL_IR_IRC2:Wait state, 7.8.6.3.3.1 State description, fourth paragraph
Change "management application layer" to "port layer". Other Maxtor comments have the port layer sending this to the transport layer, then to the application layer.

Page: 161
Sequence number: 4
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE (request THAT an expander device set) (but whole section deleted)
7.10 Near-end analog loopback test, second paragraph after Figure 68 - Test modes
Change "...device set..." to "...device to set..."

Page: 161
Sequence number: 5
Date: 2/16/2003 11:40:39 AM
Type: Highlight
REJECT (whole section deleted)
7.10 Near-end analog loopback test, third paragraph after Figure 68 - Test modes
Change "...the application client shall transmit a BREAK or CLOSE..." to "...the application client shall request that a BREAK or CLOSE be transmitted..."

Page: 162
Sequence number: 3
Date: 2/17/2003 5:40:07 PM
Type: Highlight
ACCEPT - DONE
7.12.2.1 Connection request, third paragraph
Delete the clause "but they may do so" at the end of the third sentence.

Page: 162
Sequence number: 4
Date: 2/17/2003 5:34:59 PM
Type: Highlight
    ACCEPT - DONE
    7.12.2.1 Connection request, second paragraph
    Change the last phrase in the second sentence from "...decides to abandon the connection request with BREAK." to "...abandons the connection request with BREAK."

Page: 162
Sequence number: 5
Date: 2/17/2003 5:39:04 PM
Type: Highlight
    ACCEPT - DONE (reworded)
    7.12.2.1 Connection request, fourth paragraph
    The second sentence is incorrect. Change it to: "If none of the intermediate physical links support the requested connection rate, the expander device shall return OPEN_REJECT (CONNECTION RATE NOT SUPPORTED)."

Page: 163
Sequence number: 6
Date: 2/19/2003 11:25:29 AM
Type: Highlight
    ACCEPT - DONE (without acronym)
    7.12.3 Arbitration fairness, second paragraph
    Change "arbitration wait timer" to "AWT timer."

Page: 163
Sequence number: 7
Date: 2/19/2003 11:25:17 AM
Type: Highlight
    ACCEPT - DONE (without acronym)
    7.12.3 Arbitration fairness, second paragraph
    Change "arbitration wait timer" to "AWT timer."

Page: 163
Sequence number: 8
Date: 2/19/2003 11:25:47 AM
Type: Highlight
    ACCEPT - DONE (without acronym)
    7.12.3 Arbitration fairness, third paragraph
    Change "arbitration wait timer" to "AWT timer."

Page: 163
Sequence number: 9
Date: 2/19/2003 11:25:51 AM
Type: Highlight
    ACCEPT - DONE (without acronym)
    7.12.3 Arbitration fairness, third paragraph
    Change "arbitration wait timer" to "AWT timer."

Page: 163
Sequence number: 10
Date: 2/19/2003 11:25:56 AM
Type: Highlight
    ACCEPT - DONE (without acronym)
    7.12.3 Arbitration fairness, fourth paragraph
    Change "arbitration wait timer" to "AWT timer."

Page: 163
Sequence number: 11
Date: 2/17/2003 5:44:14 PM
Type: Highlight
    REJECT (this is a target only rule. Change "the target" to "a SAS target.")
    7.12.2.2 Connection request responses, third paragraph
    Change "...the target port shall set the connection rate for future requests..." to "...the source port shall set the connection rate for future requests..."

Page: 164
Sequence number: 2

Date: 2/19/2003 11:26:32 AM
Type: Highlight
    ACCEPT - DONE (without acronym)
    7.12.3 Arbitration fairness, fifth paragraph
    Change "arbitration wait timer" to "AWT timer."

Page: 167
Sequence number: 1
Date: 3/5/2003 3:24:45 PM
Type: Highlight
    ACCEPT - DONE (instead, just deleted the row. Anything not mentioned is implicitly gnored.)
    7.12.5 Abandoning a connection request, Table 81 - Abandon connection request responses, second row
    Change the entry in the Response column to "Open response (see 7.12.2)". Change the entry in the Description column to "An
    open response arrived after the BREAK was sent. The originator shall ignore the response."

Page: 167
Sequence number: 2
Date: 2/21/2003 7:30:16 PM
Type: Highlight
    REJECT (it is always the fanout expander device here. Using bloated full names everywhere decreases readability.)
    7.12.4.3 Fanout expander devices
    There are too many "its" (and other wrongness) in this clause. Change it to be something like: "When a fanout expander device
    receives a connection request, the fanout expander shall determine if a pathway exists to the destination device by comparing the
    destination SAS address of the request to the SAS addresses of the devices to which the fanout expander's phys are attached.
    For all phys that are attached to edge expander devices, the fanout expander shall compare the destination SAS address to all of
    the enabled SAS addresses in the expander route table.
    [new paragraph] If the expander device discovers that there are one or more pathways to the device having the destination SAS
    address, then the expander device shall arbitrate for access and forward the connection request. [new paragraph] If the expander
    device does not discover a pathway to the device having the destination SAS address, then the expander device shall reply to the
    source of the connection request with OPEN_REJECT (NO DESTINATION). If the destination phy is in the same expander port as
    the source phy, the expander device shall reply to the source with OPEN_REJECT (BAD DESTINATION)."

Page: 167
Sequence number: 3
Date: 2/21/2003 7:30:54 PM
Type: Highlight
    ACCEPT - DONE
    7.12.5 Abandoning a connection request, first paragraph after Table 81 - Abandon connection request responses
    Change the last phrase from "...not the target port." to "...not the destination port."

Page: 174
Sequence number: 3
Date: 3/1/2003 6:11:26 PM
Type: Highlight
    ACCEPT - DONE (per 2/25 WG meeting, deleted this paragraph. The SL state machine parses incoming frames dword-by-dword;
    the receiver doesn't parse the frame and need any such rule)
    7.13.2 SL transmitter and receiver, third paragraph
    Reword this paragraph to: "The SL receiver shall ignore any primitives received inside an OPEN address frame (i.e., after an
    SOAF but before the subsequent EOAF) except SOAF and BREAK. If a receiver receives a second SOAF after receiving an
    SOAF but before receiving a subsequent EOAF, then the receiver shall ignore the dwords before the second SOAF (i.e., the
    receiver shall consider the second SOAF as the start of a new IDENTIFY address frame). If a receiver receives a BREAK after
    receiving an SOAF but before receiving a subsequent EOAF, then the receiver shall ignore the dwords before the BREAK (i.e.,
    ignore the IDENTIFY address frame)."

Page: 176
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    REJECT (trying to keep the protocols separate from source/vs destination)
    7.13.4.4 Transition SL1:ArbSel to SL3:Connected, second paragraph
    Delete the comma in "(STP, Source Opened)".

Page: 176
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    REJECT (trying to keep the protocols separate from source/vs destination)
    7.13.4.4 Transition SL1:ArbSel to SL3:Connected, third paragraph
    Delete the comma in "(SSP, Source Opened)".

Page: 176
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Highlight
REJECT (trying to keep the protocols separate from source/vs destination)
7.13.4.4 Transition SL1:ArbSel to SL3:Connected, fourth paragraph
Delete the comma in "(SMP, Source Opened)".

Page: 177
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Highlight
REJECT (trying to keep the protocols separate from source/vs destination)
7.13.5.3 Transition SL2:Selected to SL3:Connected, first bulleted list
In item b): delete the comma in "(SSP, Destination Opened)".

Page: 177
Sequence number: 4
Date: 2/16/2003 11:40:39 AM
Type: Highlight
REJECT (trying to keep the protocols separate from source/vs destination)
7.13.5.3 Transition SL2:Selected to SL3:Connected, second bulleted list
In item b): delete the comma in "(SMP, Destination Opened)".

Page: 177
Sequence number: 5
Date: 2/16/2003 11:40:39 AM
Type: Highlight
REJECT (trying to keep the protocols separate from source/vs destination)
7.13.5.3 Transition SL2:Selected to SL3:Connected, third bulleted list
In item b): delete the comma in "(STP, Destination Opened)".

Page: 190
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Highlight
REJECT (paragraph being deleted per Brian Day comment)
7.15 Rate matching, first paragraph
Change the first part of the first sentence from "Initiator ports shall use SMP to discover the negotiated physical link rate..." to
"Initiator ports shall discover the negotiated physical link rate..." There are other methods besides SMP that an initiator may use,
and targets are not required to support SMP.

Page: 194
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE
7.16.7 SSP link layer (SSP) state machines, 7.16.7.1 Overview, ninth paragraph
Change the first sentence to: "The SSP_RF state machine's function is to receive frames and to determine whether or not those
frames were received successfully."

Page: 199
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE
7.16.7.4 SSP_D1:DONE_Wait state, 7.16.7.4.1 State description, last paragraph
Change "DONE (ACK/NAK TIMEOUT) confirmation" to DONE Received (ACK/NAK TIMEOUT) confirmation".

Page: 199
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE (with e.g. rather than i.e.)
7.16.7.4 SSP_D1:DONE_Wait state, 7.16.7.4.1 State description, last paragraph
Add an "i.e." in the last clause: "...other DONE Received confirmations (i.e., DONE Received (Close Connection) and DONE
Received (Credit Timeout)) may be used by the application layer to decide when to reuse tags."

Page: 199
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Highlight
     ACCEPT - DONE
     7.16.7.5.2 Transition SSP_TF1:Connected_Idle to SSP_TF2:Tx_Wait, second paragraph
     Change "Tx Frame (Balanced)" to "Tx Frame (Balance Required)".

Page: 199
Sequence number: 4
Date: 2/16/2003 11:40:39 AM
Type: Highlight
     ACCEPT - DONE
     7.16.7.5.2 Transition SSP_TF1:Connected_Idle to SSP_TF2:Tx_Wait, second paragraph
     Change "Tx Frame (Nonbalanced)" to "Tx Frame (Balance Not Required)".

Page: 201
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Highlight
     ACCEPT - DONE
     7.16.7.9 SSP_RF1:Rcv_Frame state, first bulleted list
     Change item c) from "Received Frame" to "Frame Received".

Page: 210
Sequence number: 1
Date: 2/19/2003 11:11:53 AM
Type: Note
     ACCEPT - DONE
     7.18.4 SMP link layer (SMP) state machines, 7.18.4.1 Overview, Figure 89 - SMP link layer (SMP) state machines – target device
     Add a "Frame Transmitted" confirmation from the SMP_TL2 state to the port layer.

Page: 213
Sequence number: 1
Date: 3/1/2003 4:05:21 PM
Type: Note
     REFER PORT WG - TODO
     8 Port layer
     Replace this clause as described in T10/03-024r0.

Page: 216
Sequence number: 4
Date: 3/1/2003 4:08:59 PM
Type: Highlight
     REFER PORT WG - TODO
     8.3 Port layer overall control (PL_OC) state machine, 8.3.1 Overview, Figure 91 - Port layer overall control (PL_OC) state machine
     In the PL_OC2 state: delete the confirmation "Port Ready" as there is no text that describes what this is supposed to be.

Page: 216
Sequence number: 5
Date: 3/1/2003 4:08:51 PM
Type: Note
     REFER PORT WG - TODO
     8.3 Port layer overall control (PL_OC) state machine, 8.3.1 Overview, Figure 91 - Port layer overall control (PL_OC) state machine
     In the PL_OC2 state: add a Phy Enabled confirmation from the link layer to this state, as a second Phy Enabled may be received
     after transition from PL_OC1 to PL_OC2.

Page: 216
Sequence number: 6
Date: 3/1/2003 4:08:37 PM
Type: Note
     REJECT (wrong signals)
     8.3 Port layer overall control (PL_OC) state machine, 8.3.1 Overview, Figure 91 - Port layer overall control (PL_OC) state machine
     In the PL_OC1 state: add a Enable Disable Link Layer (Enable) confirmation from the link layer to this state. This may also cause
     the transition to PL_OC2.

Page: 216
Sequence number: 7
Date: 3/1/2003 4:08:29 PM

Type: Note
    REJECT (wrong signals)
    8.3 Port layer overall control (PL_OC) state machine, 8.3.1 Overview, Figure 91 - Port layer overall control (PL_OC) state machine
    In the PL_OC2 state: add a Enable Disable Link Layer (Enable) confirmation from the link layer, as a second Phy Enabled may be
    received after transition from PL_OC1 to PL_OC2.

Page: 216
Sequence number: 8
Date: 3/1/2003 4:08:17 PM
Type: Note
    REJECT (the port layer works off Phy Enabled/Disabled not Enable Disable Link Layer)
    8.3 Port layer overall control (PL_OC) state machine, 8.3.1 Overview, Figure 91 - Port layer overall control (PL_OC) state machine
    Add a Enable Disable Link Layer (Disable) confirmation from the link layer to this state machine (i.e., to all states in the state
    machine).

Page: 216
Sequence number: 9
Date: 3/1/2003 4:09:19 PM
Type: Note
    REFER PORT WG - TODO (agree)
    8.3 Port layer overall control (PL_OC) state machine, 8.3.1 Overview, Figure 91 - Port layer overall control (PL_OC) state machine
    Add a HARD_RESET Received confirmation from the link layer to this state machine (i.e., to all states in the state machine).

Page: 216
Sequence number: 10
Date: 3/1/2003 4:09:11 PM
Type: Note
    REFER PORT WG - TODO (agree)
    8.3 Port layer overall control (PL_OC) state machine, 8.3.1 Overview, Figure 91 - Port layer overall control (PL_OC) state machine
    In the PL_OC1 state: add a HARD_RESET Received confirmation going from this state to the transport layer.

Page: 222
Sequence number: 1
Date: 3/1/2003 4:16:22 PM
Type: Note
    REJECT (wrong signal)
    8.4 Port layer phy manager (PL_PM) state machine, 8.4.1 Overview, Figure 92 - Port layer phy manager (PL_PM) state machine
    (part 1)
    Add a Enable Disable Link Layer (Disable) confirmation from the link layer to this state machine (i.e., to all states in the state
    machine).

Page: 222
Sequence number: 2
Date: 3/1/2003 4:16:12 PM
Type: Note
    REFER PORT WG - TODO (agree)
    8.4 Port layer phy manager (PL_PM) state machine, 8.4.1 Overview, Figure 92 - Port layer phy manager (PL_PM) state machine
    (part 1)
    Add a HARD_RESET Received confirmation received by this state machine (i.e., to all states in the state machine) from the link
    layer.

Page: 223
Sequence number: 1
Date: 3/1/2003 4:16:54 PM
Type: Highlight
    REFER PORT WG - TODO
    8.4 Port layer phy manager (PL_PM) state machine, 8.4.1 Overview, Figure 93 - Port layer phy manager (PL_PM) state machine
    (part 2)
    Delete the "Connection Failed" confirmation from this figure.

Page: 223
Sequence number: 2
Date: 3/1/2003 4:16:49 PM
Type: Highlight
    REFER PORT WG - TODO
    8.4 Port layer phy manager (PL_PM) state machine, 8.4.1 Overview, Figure 93 - Port layer phy manager (PL_PM) state machine
    (part 2)
    The DONE Transmitted confirmation would be better shown in part 1 as it results in a Disable Tx Frames parameter being sent to
    the PL_OC state machine.

Page: 223
Sequence number: 3
Date: 3/1/2003 4:16:44 PM
Type: Note
REFER PORT WG - TODO
8.4 Port layer phy manager (PL_PM) state machine, 8.4.1 Overview, Figure 93 - Port layer phy manager (PL_PM) state machine (part 2)
Add a DONE Received confirmation from the link layer to this state.

Page: 228
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE
9.2 SSP transport layer, 9.2.1 SSP frame format, Table 88 - SSP frame format
Change "TIMEOUT" to "RETRANSMIT" as it is described in the text that follows the table.

Page: 229
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE (with "is" not "shall")
9.2.1 SSP frame format, fourth paragraph below Table 89 - FRAME TYPE field
Change the first part of the sentence to: "The RETRANSMIT bit may be set to one for RESPONSE frames (see 9.2.4.5)..." The RETRANSMIT bit SHALL be set to one in RESPONSE frames under certain conditions (see 9.2.4.5)."

Page: 229
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Strikeout
ACCEPT - DONE (changed to "more easily")
9.2.1 SSP frame format, ninth paragraph below Table 89 - FRAME TYPE field
In the first sentence delete "quickly".

Page: 229
Sequence number: 4
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE (paragraph being rewritten)
9.2.1 SSP frame format, ninth paragraph below Table 89 - FRAME TYPE field
In the fourth sentence change "Target ports that do not need this field... " to "Target ports that do not use this field... "

Page: 230
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE
9.2.1 SSP frame format
Add the following paragraph as next to last in the clause: "Fill bytes shall be included so that the CRC field is aligned on a four byte boundary. The contents of the fill bytes are vendor-specific."

Page: 230
Sequence number: 3
Date: 3/1/2003 4:26:08 PM
Type: Highlight
ACCEPT - DONE (added "of"s)
9.2.1 SSP frame format, next-to-last paragraph
Change the parenthetical to "(1 024 bytes of data plus a 24-bytes header plus a 4-byte CRC)."

Page: 236
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note
REJECT - the fields are defined in the NO_DATA and SENSE_DATA sections
9.2.2.5.1 RESPONSE information unit overview
Add a new last paragraph in this clause: "For description of the content of the STATUS field see SAM-3. For description of the content of the SENSE DATA field see SPC-3."

Page: 243
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note
    ACCEPT - DONE (the UnOrderList0Reset paragraph tag was marked to "Keep with next" which is unnecessary)
    9.2.6.2 Initiator device state machines, 9.2.6.2.1 Overview
    After the paragraph describing the ST_IFR state machine: there is a superfluous page break.

Page: 244
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Note
    ACCEPT - DONE
    9.2.6.2 Initiator device state machines, 9.2.6.2.1 Overview, Figure 98 - SSP transport layer (ST) state machines - initiator device
    In the ST_ISF1 state: add an "ACK Transmitted" confirmation from the port layer. There is already text that describes this.

Page: 244
Sequence number: 4
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    ACCEPT - DONE
    9.2.6.2 Initiator device state machines, 9.2.6.2.1 Overview, Figure 98 - SSP transport layer (ST) state machines - initiator device
    In the ST_IFR1 state: delete the confirmation "DONE (ACK/NAK TIMEOUT) Received" as there are no words describing this, and
    there is already an (ACK/NAK TIMEOUT) argument for the Transmission Status confirmation.

Page: 244
Sequence number: 5
Date: 2/28/2003 6:01:18 PM
Type: Highlight
    REJECT (per 2/25 WG, move Nexus Lost into ST_IPR1 which processes the Delivery Failure. 2/28: see no need to move it, leave
    here.)
    9.2.6.2 Initiator device state machines, 9.2.6.2.1 Overview, Figure 98 - SSP transport layer (ST) state machines - initiator device
    In the ST_ISF1 state: delete the confirmation "Nexus Lost". If there is a Transmission Status with an argument other than (Frame
    Transmitted), this state sends a Delivery Failure (Service Delivery Subsystem Failure) parameter to the ST_IPR state machine.
    This results in that state machine sending this information to the application layer.

Page: 245
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note
    REJECT (port layer rewrite not sharing I_T nexus loss counts with transport layer any more)
    9.2.6.2.2 ST_ISF1:Send_Frame state, 9.2.6.2.2.1 State description, second bulleted list
    Add: I_T nexus loss count.

Page: 249
Sequence number: 2
Date: 2/28/2003 12:51:56 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.2.8 ST_IFR1:Initiator_Frame_Router state, first bulleted list
    Change "a hard reset occurs" to "a HARD_RESET Received confirmation is received." Other Maxtor proposals and comments
    supplement this change.

Page: 250
Sequence number: 4
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    ACCEPT - DONE
    9.2.6.2.8 ST_IFR1:Initiator_Frame_Router state, fifth paragraph
    Change "ACK/NAK balanced)" to "(ACK/NAK Balanced)".

Page: 250
Sequence number: 5
Date: 2/28/2003 5:37:09 PM
Type: Highlight
    REJECT
    9.2.6.2.8 ST_IFR1:Initiator_Frame_Router state, fifth paragraph
    Change the first occurrence of "(ACK/NAK Not Balanced)" to "Received (ACK/NAK Unbalanced)".

Page: 250
Sequence number: 6
Date: 2/28/2003 5:37:00 PM
Type: Highlight
    REJECT
    9.2.6.2.8 ST_IFR1:Initiator_Frame_Router state, fifth paragraph
    Change the second occurrence of "(ACK/NAK Not Balanced)" to "Received (ACK/NAK Unbalanced)".

Page: 250
Sequence number: 7
Date: 2/28/2003 12:52:56 PM
Type: Highlight
    REJECT (but deleted and added separate paragraph forwarding it upstream)
    9.2.6.2.8 ST_IFR1:Initiator_Frame_Router state, third paragraph
    Change "hard reset" to "HARD_RESET Received confirmation." Other Maxtor proposals and comments supplement this change.

Page: 250
Sequence number: 8
Date: 2/16/2003 11:40:39 AM
Type: Note
    REJECT (Those are part of transport protocol service requests. Added "requests" alongside "responses")
    9.2.6.3 Target device state machines, 9.2.6.3.1 Overview, first bulleted list
    Item a) is missing from the list. Insert the following: "a) receives and processes data-in and data-out delivery service requests from the SCSI target application layer;"

Page: 251
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note
    ACCEPT - DONE
    9.2.6.3 Target device state machines, 9.2.6.3.1 Overview, Figure 99 - SSP transport layer (ST) state machines - target device
    In the ST_TTS2 state: add an "ACK Transmitted" confirmation from the port layer. There is already text that describes this.

Page: 251
Sequence number: 2
Date: 2/28/2003 5:36:32 PM
Type: Highlight
    REJECT (Nexus Lost is in the proper location)
    9.2.6.3 Target device state machines, 9.2.6.3.1 Overview, Figure 99 - SSP transport layer (ST) state machines - target device
    In the ST_TTS2 state, delete the "Nexus Lost" confirmation to the application layer. This information is sent to the application layer via the Data-In Delivered confirmation.

Page: 252
Sequence number: 3
Date: 2/28/2003 5:36:21 PM
Type: Highlight
    REJECT
    9.2.6.3.2 ST_TFR1:Target_Frame_Router state, fourth paragraph
    Change "(ACK/NAK Not Balanced)" to "Received (ACK/NAK Unbalanced)".

Page: 252
Sequence number: 4
Date: 2/28/2003 2:43:06 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.2 ST_TFR1:Target_Frame_Router state, first bulleted list
    Change "a hard reset occurs" to "a HARD_RESET Received confirmation is received." Other Maxtor proposals and comments supplement this change.

Page: 252
Sequence number: 5
Date: 2/28/2003 3:21:39 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.2 ST_TFR1:Target_Frame_Router state, third paragraph
    Change "hard reset" to "HARD_RESET Received confirmation." Other Maxtor proposals and comments supplement this change.

Page: 254
Sequence number: 5

Date: 2/28/2003 5:35:26 PM
Type: Highlight
REJECT (I think we do want to show a transport to application signal called Nexus Lost to match SAM-3.)
9.2.6.3.4 ST_TTS2:Send_Frame state, 9.2.6.3.4.1 State description
Delete the ninth paragraph ("If the confirmation is Transmission Status (Open Failed) and it includes an I_T Nexus Lost argument, this state
shall send a Nexus Lost confirmation to the application layer.") This information is sent to the application layer via the Data-In Delivered confirmation.

Page: 260
Sequence number: 1
Date: 2/28/2003 10:57:46 AM
Type: Highlight
REJECT (but added "Fill bytes, if needed" row to the table so it's clear where they go)
9.4.2 SMP_REQUEST frame, fourth paragraph after Table 102 - SMP_REQUEST frame format
Change to: "Fill bytes shall be included at the end of the data in the ADDITIONAL REQUEST BYTES field so that the CRC field is aligned on a four byte boundary. The contents of the fill bytes are vendor-specific.."

Page: 260
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE (added "of"s)
9.4.2 SMP_REQUEST frame, third paragraph after Table 102 - SMP_REQUEST frame format
Change the parenthetical to "(1 024 bytes of data plus a 24-bytes header plus a 4-byte CRC)."

Page: 260
Sequence number: 11
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE
9.4.2 SMP_REQUEST frame, second paragraph after Table 102 - SMP_REQUEST frame format
Change to: "The FUNCTION field specifies which function is being requested (see 10.3.1.1).

Page: 260
Sequence number: 12
Date: 2/28/2003 5:18:26 PM
Type: Highlight
ACCEPT - DONE (added with an xref to ch 10 error list)
9.4.2 SMP_REQUEST frame, second paragraph after Table 102 - SMP_REQUEST frame format
Add "If the value in the FUNCTION field is not supported, then the target port shall return a FUNCTION RESULT of SMP FUNCTION FAILED in the RESPONSE frame."

Page: 260
Sequence number: 13
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE
9.4.2 SMP_REQUEST frame, first paragraph after Table 102 - SMP_REQUEST frame format
Change to: "The SMP FRAME TYPE field shall be set to 40h specifying that this is an SMP_REQUEST frame.

Page: 260
Sequence number: 14
Date: 2/28/2003 5:18:16 PM
Type: Highlight
ACCEPT - DONE (make the transport layer do the check and reply with BREAK rather than with a frame (for both target and initiator receiving the wrong frame type))
9.4.2 SMP_REQUEST frame, first paragraph after Table 102 - SMP_REQUEST frame format
Add " If the SMP FRAME TYPE field is not set to 40h, then the target port shall return a FUNCTION RESULT of SMP FUNCTION FAILED in the RESPONSE frame."

Page: 261
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE (but worded as being responded to)
9.4.3 SMP_RESPONSE frame
Add a new second paragraph after Table 103 - SMP_RESPONSE frame format: "The FUNCTION field specifies which function is being requested (see 10.3.1.1)."

Page: 261
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE
9.4.3 SMP_RESPONSE frame, second paragraph after Table 104 - Function results
Change to: "Fill bytes shall be included at the end of the data in the ADDITIONAL REQUEST BYTES field so that the CRC field is aligned on a four byte boundary. The contents of the fill bytes are vendor-specific.."

Page: 261
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE (added "of"s)
9.4.3 SMP_RESPONSE frame, first paragraph after Table 104 - Function results
Change the parenthetical to "(1 024 bytes of data plus a 24-bytes header plus a 4-byte CRC)."

Page: 278
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE
10.1.6.1.1 Disconnect-Reconnect mode page overview, second paragraph after Table 119 - Disconnect-Reconnect mode page for SSP
Change to: "The PAGE CODE (PS) field shall be set to 02h and the PAGE LENGTH field shall be set to 0Eh."

Page: 280
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE
10.1.6.2.2 Protocol-Specific Port mode page - short format
Add a paragraph after Table 121 - Protocol-Specific Port Control mode page for SAS SSP - short format: "The PARAMETERS SAVEABLE (PS) bit is defined in SPC-3."

Page: 280
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE
10.1.6.2.2 Protocol-Specific Port mode page - short format
Add a paragraph after the description of the SPF field after Table 121 - Protocol-Specific Port Control mode page for SAS SSP - short format: "The PAGE CODE field shall be set to 19h."

Page: 280
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE (removed all the rejects in favor of a xref to 8.2.4 which lists them)
10.1.6.2.2 Protocol-Specific Port mode page - short format, second paragraph after Table 121 - Protocol-Specific Port Control mode page for SAS SSP - short format
Delete OPEN_REJECT (CONNECTION RATE NOT SUPPORTED). Other comments make it so that this is no longer a reason for I_T nexus loss.

Page: 281
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE
10.1.6.2.3 Protocol-Specific Port mode page - Phy Control And Discover subpage
Add a paragraph after Table 122 - Protocol-Specific Port Control mode page for SAS SSP - Phy Control And Discover subpage: "The PARAMETERS SAVEABLE (PS) bit is defined in SPC-3."

Page: 281
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE

10.1.6.2.3 Protocol-Specific Port mode page - Phy Control And Discover subpage
Add a paragraph after the description of the SPF field after Table 122 - Protocol-Specific Port Control mode page for SAS SSP - Phy Control And Discover subpage: "The PAGE CODE field shall be set to 19h."

Page: 287
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Note
REJECT (deleted paragraphs. Replaced by shorter paragraph. Not supposed to be an a) b) list without a : introducing them anyway.)
10.1.8 SCSI power condition states, first bulleted list
Add a line feed before item a).

Page: 287
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Highlight
REJECT (deleted paragraph. Replaced by shorter paragraph.)
10.1.8 SCSI power condition states, first bulleted list
Change the text in item a) to: "After power on, if the target device has not received a START STOP UNIT command with the START bit set to zero, the target device transitions to the active power state after receiving an ENABLE SPINUP. The target device transitions to the active state after power on without waiting for an action by the application client."

Page: 287
Sequence number: 4
Date: 2/16/2003 11:40:39 AM
Type: Highlight
REJECT (deleted paragraph. Replaced by shorter paragraph.)
10.1.8 SCSI power condition states, first bulleted list
Change the text in item b) to: "After power on, if the target device receives a START STOP UNIT command with the START bit set to zero before receiving an ENABLE SPINUP, the target device shall wait to transition to the active power state until receiving a START STOP UNIT command with the START bit set to one and an ENABLE SPINUP. This delays the application client's request until the NOTIFY (ENABLE_SPINUP) arrives."

Page: 289
Sequence number: 4
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE
10.1.8.2.2 Transition SA_PC_1:Active to SA_PC_2:Idle, and several other places in this clause
"FORCE IDLE" is named "FORCE_IDLE_0" in the proposal to include this in SBC-2 (02-464).

Page: 289
Sequence number: 5
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE
10.1.8.2.3 Transition SA_PC_1:Active to SA_PC_3:Standby, and several other places in this clause
"FORCE STANDBY" is named "FORCE_STANDBY_0" in the proposal to include this in SBC-2 (02-464).

Page: 289
Sequence number: 6
Date: 2/16/2003 11:40:39 AM
Type: Highlight
REJECT (leave details to SBC/SPC)
10.1.8.2.3 Transition SA_PC_1:Active to SA_PC_3:Standby, bulleted list
Change item c) to: "the STANDBY bit is set to one in the Power Condition mode page, the standby condition timer is not disabled by a START STOP UNIT command, and the standby condition timer is zero."

Page: 289
Sequence number: 7
Date: 2/16/2003 11:40:39 AM
Type: Highlight
REJECT - I'd rather keep the details of expiration in the SPC-3 model/bit descriptions
10.1.8.3.3 Transition SA_PC_2:Idle to SA_PC_3:Standby, bulleted list
Change item c) to: "the STANDBY bit is set to one in the Power Condition mode page, the standby condition timer is not disabled by a START STOP UNIT command, and the standby condition timer is zero"

Page: 290

Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note

ACCEPT - DONE (per Jan CAP WG discussion)
10.1.8.4.3 Transition SA_PC_3:Standby to SA_PC_5:Active_Wait, bulleted list
Add an item to the list: "a START STOP UNIT command with the START bit set to one is received."

Page: 290
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Note

ACCEPT - DONE (per Jan CAP WG discussion)
10.1.8.5.2 Transition SA_PC_4:Stopped to SA_PC_3:Standby, bulleted list
Add an item to the list: "a START STOP UNIT command with the POWER CONDITION field set to FORCE_STANDBY_0 is received."

Page: 291
Sequence number: 4
Date: 2/16/2003 11:40:39 AM
Type: Note

ACCEPT - DONE (per Jan CAP WG discussion).
10.1.8.5.4 Transition SA_PC_4:Stopped to SA_PC_6:Idle_Wait, bulleted list
Add an item to the list: "a START STOP UNIT command with the POWER CONDITION field set to FORCE_IDLE_0 is received."

Page: 291
Sequence number: 5
Date: 2/16/2003 11:40:39 AM
Type: Highlight

REJECT - the idle bit could be set to 1 yet the standby timer could still expire. It depends on what the timers are programmed to. I'd rather just say "the timer expires" here are let the bit definitions/model section in SPC-3 describe what that means.
10.1.8.6.3 Transition SA_PC_5:Active_Wait to SA_PC_3:Standby, bulleted list
Change item c) to: "the IDLE bit is set to zero in the Power Condition mode page, the STANDBY bit is set to one in the Power Condition mode page, the standby condition timer is not disabled by a START STOP UNIT command, and the standby condition timer is zero."

Page: 291
Sequence number: 6
Date: 2/16/2003 11:40:39 AM
Type: Note

REJECT (Active to Standby doesn't do this. Covered by "timer expires")
10.1.8.6.3 Transition SA_PC_5:Active_Wait to SA_PC_3:Standby, bulleted list
Add item d) to the list: "the IDLE bit is set to zero in the Power Condition mode page, the STANDBY bit is set to one in the Power Condition mode page, the standby condition timer is zero, and a command completes."

Page: 291
Sequence number: 7
Date: 2/16/2003 11:40:39 AM
Type: Note

REJECT - this is covered by "idle timer expires"
10.1.8.6.5 Transition SA_PC_5:Active_Wait to SA_PC_6:Idle_Wait, bulleted list
Add item d) to the list: "the IDLE bit is set to one in the Power Condition mode page, the idle condition timer is not disabled by a START STOP UNIT command, and the idle condition timer is zero."

Page: 291
Sequence number: 8
Date: 2/16/2003 11:40:39 AM
Type: Highlight

REJECT - this is covered by "the standby timer expires." The idle bit could be set to 1 yet the standby timer could still expir so this is incomplete. Let the bit definitions/model section in SPC-3 describe what that means.
10.1.8.7.3 Transition SA_PC_6:Idle_Wait to SA_PC_3:Standby,
bulleted list
Change item c) to: " the IDLE bit is set to zero in the Power Condition mode page, the STANDBY bit is set to one in the Power Condition mode page, the standby condition timer is not disabled by a START STOP UNIT command, and the standby condition timer is zero."

Page: 291
Sequence number: 9
Date: 2/16/2003 11:40:39 AM
Type: Note

REJECT (Idle to Standby doesn't do this.)
10.1.8.7.3 Transition SA_PC_6:Idle_Wait to SA_PC_3:Standby, bulleted list
Add item d) to the list: "the IDLE bit is set to zero in the Power Condition mode page, the STANDBY bit is set to one in the Power Condition mode page, the standby condition timer is zero, and a command completes."

Page: 295
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note
    ACCEPT - DONE
    10.3.1.2 REPORT GENERAL function
    Add two paragraphs after Table 130 - REPORT GENERAL request:
    1) "The SMP FRAME TYPE field shall be set to 40h (see 9.4.2)." and
    2) "The FUNCTION field shall be set to 00h (see 9.4.2)."

Page: 296
Sequence number: 4
Date: 2/16/2003 11:40:39 AM
Type: Note
    ACCEPT - DONE
    10.3.1.2 REPORT GENERAL function
    Add two paragraphs after Table 131 - REPORT GENERAL response:
    1) "The SMP FRAME TYPE field shall be set to 41h." and
    2) "The FUNCTION field shall be set to 00h."

Page: 296
Sequence number: 5
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    ACCEPT - DONE
    10.3.1.2 REPORT GENERAL function, paragraph before Table 131 - REPORT GENERAL response
    Remove the indent from, remove the bulleted number from, and add a line feed after this sentence.

Page: 297
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note
    ACCEPT - DONE
    10.3.1.3 REPORT MANUFACTURER INFORMATION function
    Add two paragraphs after Table 132 - REPORT MANUFACTURER INFORMATION request
    1) "The SMP FRAME TYPE field shall be set to 40h (see 9.4.2)." and
    2) "The FUNCTION field shall be set to 01h (see 9.4.2)."

Page: 297
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    REJECT - only "edge routers" have to have tables. An edge device could have only direct routing ports and thus no table.
    10.3.1.2 REPORT GENERAL function, fifth paragraph after Table 131 - REPORT GENERAL response
    Change the first part of the sentence from, "If an edge expander device supports an expander route table, then..." to "For an edge expander device," as an edge expander shall support this field.

Page: 297
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    ACCEPT - DONE
    10.3.1.2 REPORT GENERAL function, sixth paragraph after Table 131 - REPORT GENERAL response
    Change the first part of the sentence from, "If a fanout expander device supports an expander route table, then..." to "For an fanout expander device," as a fanout expander shall support this field.

Page: 298
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note
    ACCEPT - DONE
    10.3.1.3 REPORT MANUFACTURER INFORMATION function
    Add two paragraphs after Table 133 - REPORT MANUFACTURER INFORMATION response
    1) "The SMP FRAME TYPE field shall be set to 41h." and

2) "The FUNCTION field shall be set to 01h."

Page: 298
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    ACCEPT - DONE
    10.3.1.3 REPORT MANUFACTURER INFORMATION function
    After Table 133 - REPORT MANUFACTURER INFORMATION response: delete the paragraph describing the ADDITIONAL
    LENGTH field, as there is no field of this name in table 133.

Page: 299
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Note
    ACCEPT - DONE
    10.3.1.4 DISCOVER function
    Add two paragraphs after Table 134 - DISCOVER request:
    1) "The SMP FRAME TYPE field shall be set to 40h (see 9.4.2)." and
    2) "The FUNCTION field shall be set to 10h (see 9.4.2)."

Page: 300
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note
    ACCEPT - DONE
    10.3.1.4 DISCOVER function
    Add two paragraphs after Table 134 - DISCOVER response:
    1) "The SMP FRAME TYPE field shall be set to 41h." and
    2) "The FUNCTION field shall be set to 10h."

Page: 301
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    ACCEPT - DONE (also rearranged OPEN and IDENTIFY address frame fields in ch7)
    10.3.1.4 DISCOVER function, after Table 137 - Routing attributes
    Move the description of the ATTACHED DEVICE TYPE field to be before the description of the ROUTING ATTRIBUTE field so
    that they are in the common-practice order of their appearance in the table (i.e., top to bottom and left to right).

Page: 301
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    ACCEPT - DONE
    10.3.1.4 Discover, paragraph after Table 138 - Attached device types
    The second sentence is unclear. Reword this to be something like: "The negotiated physical link rate may be less than the
    programmed minimum physical link rate or greater than the programmed maximum physical link rate if one of the programmed
    rates has been changed since the link reset sequence."

Page: 302
Sequence number: 4
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    ACCEPT - DONE
    10.3.1.4 DISCOVER function
    Part one: change the order of the following field descriptions so that they are in the common-practice order of their appearance in
    the table (i.e., top to bottom and left to right): PROGRAMMED MINIMUM PHYSICAL LINK RATE, HARDWARE MINIMUM
    PHYSICAL LINK RATE, PROGRAMMED MAXIMUM PHYSICAL LINK RATE, and HARDWARE MAXIMUM PHYSICAL LINK
    RATE.

Page: 302
Sequence number: 5
Date: 2/16/2003 11:40:39 AM
Type: Highlight
    REJECT - duplicate comment
    10.3.1.4 Discover, paragraph after Table 138 - Attached device types
    Part two of the previous comment, and move this part of the sentence to be with the previous part.

Page: 303
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE
10.3.1.4 DISCOVER function
Part two: change the order of the following field descriptions so that they are in the common-practice order of their appearance in the table (i.e., top to bottom and left to right): PROGRAMMED MINIMUM PHYSICAL LINK RATE, HARDWARE MINIMUM PHYSICAL LINK RATE, PROGRAMMED MAXIMUM PHYSICAL LINK RATE, and HARDWARE MAXIMUM PHYSICAL LINK RATE.

Page: 303
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE
10.3.1.5 REPORT PHY ERROR LOG function
Add two paragraphs after Table 141 - REPORT PHY ERROR LOG request:
1) "The SMP FRAME TYPE field shall be set to 40h (see 9.4.2)." and
2) "The FUNCTION field shall be set to 11h (see 9.4.2)."

Page: 303
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE
10.3.1.5 REPORT PHY ERROR LOG function, first paragraph after Table 141 - REPORT PHY ERROR LOG request
Add a sentence to the paragraph: "If the value is not within the range of zero to NUMBER OF PHYS (see 9.4.4.2), the target port shall return a FUNCTION RESULT of SMP FUNCTION FAILED in the response frame."

Page: 304
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE
10.3.1.5 REPORT PHY ERROR LOG function
Add two paragraphs after Table 142 - REPORT PHY ERROR LOG response:
1) "The SMP FRAME TYPE field shall be set to 41h." and
2) "The FUNCTION field shall be set to 11h."

Page: 305
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE
10.3.1.6 REPORT PHY SATA function
Add two paragraphs after Table 144 - REPORT PHY SATA request:
1) "The SMP FRAME TYPE field shall be set to 40h (see 9.4.2)." and
2) "The FUNCTION field shall be set to 12h (see 9.4.2)."

Page: 305
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE
10.3.1.5 REPORT PHY ERROR LOG function
Add the following paragraph after the paragraph describing the FUNCTION RESULT field: "The PHY IDENTIFIER field indicates the phy (see 4.2.6) for which physical configuration link information is being returned."

Page: 305
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE
10.3.1.5 REPORT PHY ERROR LOG function, the three paragraphs below Table 143 - Function results for REPORT PHY ERROR LOG
Delete the parentheses around the phrase "outside of phy reset sequences".

Page: 306

Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note

ACCEPT - DONE
10.3.1.6 REPORT PHY SATA function
Add two paragraphs after Table 145 - REPORT PHY SATA response:
1) "The SMP FRAME TYPE field shall be set to 41h." and
2) "The FUNCTION field shall be set to 12h."

Page: 306
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Note

ACCEPT - DONE
10.3.1.6 REPORT PHY SATA function, first paragraph after Table 144 - REPORT PHY SATA request
Add a sentence to the paragraph: "If the value is not within the range of zero to NUMBER OF PHYS (see 9.4.4.2), the target port
shall return a FUNCTION RESULT of SMP FUNCTION FAILED in the response frame."

Page: 307
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note

ACCEPT - DONE
10.3.1.6 REPORT PHY SATA function
Add the following paragraph after Table 146 - Function results for REPORT PHY SATA: "The PHY IDENTIFIER field indicates the
phy (see 4.2.6) for which physical configuration link information is being returned."

Page: 307
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Strikeout

ACCEPT - DONE
10.3.1.7 REPORT ROUTE INFORMATION function, first paragraph
In the last sentence, delete "primarily".

Page: 308
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note

ACCEPT - DONE
10.3.1.7 REPORT ROUTE INFORMATION function
Add two paragraphs after Table 147 - REPORT ROUTE INFORMATION request:
1) "The SMP FRAME TYPE field shall be set to 40h (see 9.4.2)." and
2) "The FUNCTION field shall be set to 13h (see 9.4.2)."

Page: 309
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note

ACCEPT - DONE
10.3.1.7 REPORT ROUTE INFORMATION function
Add two paragraphs after Table 148 - REPORT ROUTE INFORMATION response:
1) "The SMP FRAME TYPE field shall be set to 41h." and
2) "The FUNCTION field shall be set to 13h."

Page: 311
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Note

ACCEPT - DONE
10.3.1.8 CONFIGURE ROUTE INFORMATION function
Add two paragraphs after Table 150 - CONFIGURE ROUTE INFORMATION request:
1) "The SMP FRAME TYPE field shall be set to 40h (see 9.4.2)." and
2) "The FUNCTION field shall be set to 90h (see 9.4.2)."

Page: 312
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Note

ACCEPT - DONE
10.3.1.8 CONFIGURE ROUTE INFORMATION function
Add two paragraphs after Table 151 - CONFIGURE ROUTE INFORMATION response:
1) "The SMP FRAME TYPE field shall be set to 41h." and
2) "The FUNCTION field shall be set to 90h."

Page: 313
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE
10.3.1.9 PHY CONTROL function
Add two paragraphs after Table 153 - PHY CONTROL request:
1) "The SMP FRAME TYPE field shall be set to 40h (see 9.4.2)." and
2) "The FUNCTION field shall be set to 91h (see 9.4.2)."

Page: 313
Sequence number: 2
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE
10.3.1.9 PHY CONTROL function
After Table 153 - PHY CONTROL request: move the paragraph describing the CRC field to the end of the clause so that it is in the common-practice order of its appearance in the table (i.e., top to bottom and left to right).

Page: 313
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE
10.3.1.9 PHY CONTROL function, first paragraph after Table 153 - PHY CONTROL request
Add a sentence to the paragraph: "If the value is not within the range of zero to NUMBER OF PHYS (see 9.4.4.2), the target port shall return a FUNCTION RESULT of SMP FUNCTION FAILED in the response frame."

Page: 315
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE
10.3.1.9 PHY CONTROL function
Add two paragraphs after Table 156 - PHY CONTROL response:
1) "The SMP FRAME TYPE field shall be set to 41h." and
2) "The FUNCTION field shall be set to 91h."

Page: 317
Sequence number: 1
Date: 2/16/2003 11:40:39 AM
Type: Highlight
ACCEPT - DONE
A.1 Compliant jitter test pattern (CJTPAT), first paragraph
In the first sentence change "low-density pattern" to "low transition density pattern" in two places.

Page: 317
Sequence number: 2
Date: 2/16/2003 11:50:16 AM
Type: Highlight
ACCEPT - DONE (per Alvin, kept same wording but moved paragraph above the table.)
A.1 Compliant jitter test pattern (CJTPAT), paragraph below Table A.1- CJTPAT for RD+
Change this paragraph to be something like: "If the same 8b characters are used when there is negative running disparity (RD-) and when there is positive running disparity, the resulting 10b pattern generated for each disparity type is different. 8b characters used when there is RD- may not provide the critical phase shifts as the same characters used when there is RD+. To achieve the same phase shift effects with RD- as with RD+, a different 8b pattern is required to be used for each disparity type."

Page: 382
Sequence number: 3
Date: 2/16/2003 11:40:39 AM
Type: Note
ACCEPT - DONE (tracking with another comment)
Annex J, Figure J.1 - SAS logo

Replace the old logo with the new logo.

Author: PostLB

Page: iv
Sequence number: 2
Date: 2/3/2003 2:46:56 PM
Type: Note

    ACCEPT - DONE
    change the 7-point blank text line to 10 points at the top of page iv (to match a common font size in the rest of the document)

Page: x
Sequence number: 4
Date: 1/7/2003 12:58:15 PM
Type: Highlight

    ACCEPT - DONE
    Global
    Move top right header to the right margin (the text containing 21 November 2002)
    it's 0.2 inches too far to the left

Page: 4
Sequence number: 3
Date: 3/4/2003 6:15:08 PM
Type: Note

    ACCEPT - DONE (change first two to ATA/ATAPI-7 Volume 3 and move into normative references)
    2.4 Other references
    Change some of the SATA references to ATA/ATAPI-7 Volume 3 now that T13 has started its SATA incorporation

Page: 5
Sequence number: 17
Date: 3/5/2003 3:55:49 PM
Type: Note

    ACCEPT - DONE
    3.1 Definitions
    Add command descriptor block (CDB)

Page: 5
Sequence number: 18
Date: 3/5/2003 3:55:49 PM
Type: Note

    ACCEPT - DONE
    3.1 Definitions
    Add compliant jitter test pattern (CJTPAT)

Page: 6
Sequence number: 18
Date: 2/20/2003 9:33:24 AM
Type: Strikeout

    ACCEPT - DONE
    3.1.32 downstream phy:
    Rewrite of STP flow control gets rid of use of this term; delete.

Page: 6
Sequence number: 19
Date: 3/2/2003 12:27:10 PM
Type: Note

    ACCEPT - DONE
    Global
    Change active connection, open connection, etc to just "connection" everywhere appropriate
    Use "connection is established" when needed

Page: 7
Sequence number: 17
Date: 1/30/2003 5:51:48 PM
Type: Highlight

    ACCEPT - DONE

3.1.58 I_T_L_Q nexus
replace this with "tagged task" to match SAM-3 definition. Better to relate to an object than a 64-bit number.

Page: 7
Sequence number: 18
Date: 3/3/2003 11:22:43 AM
Type: Note
ACCEPT - DONE
Correct (see x.y) vs . See x.y. usage for each definition. Use (see x.y) when following a term being referenced (e.g. link reset sequence (see x.y) points to the link reset sequence section. Use "See x.y" when it's a reference for the whole glossary entry itself. e.g. xyz: abc def. See x.y. points to a section about xyz.)

Page: 7
Sequence number: 19
Date: 2/7/2003 6:45:16 PM
Type: Strikeout
ACCEPT - DONE
3.1.52 hard reset sequence
remove this text, which is not in most other sequence definitions:
following the SAS speed negotiation sequence

Page: 8
Sequence number: 17
Date: 2/7/2003 5:57:07 PM
Type: Highlight
ACCEPT - DONE
3.1.78 nexus
Change queue tag to tagged task to better match SAM-3's I_T_L_Q definition (although this nexus definition differs from SAM-3's nexus definition)

Page: 8
Sequence number: 18
Date: 2/7/2003 6:45:43 PM
Type: Strikeout
ACCEPT - DONE
3.1.59 identification sequence
remove this text, which is not in most other sequence definitions:
following the SAS speed negotiation sequence

Page: 8
Sequence number: 19
Date: 3/2/2003 12:30:46 PM
Type: Highlight
ACCEPT - DONE
3.1.65 initiator phy
Global
Get rid of this and use SAS initiator phy throughout

Page: 9
Sequence number: 23
Date: 2/7/2003 6:36:07 PM
Type: Highlight
REJECT (but replaced by definition referring to transceiver.)
3.1.84 phy
SAS device object that interfaces..., or an expander device object (i.e., expander phy) that is part of the service delivery subsystem.

Page: 9
Sequence number: 24
Date: 1/29/2003 12:24:47 PM
Type: Highlight
ACCEPT - DONE
3.1.91/92 programmed physical link rate
Add cross references to the SMP function and the mode page

Page: 9
Sequence number: 25
Date: 3/3/2003 2:56:39 PM
Type: Note
ACCEPT - DONE (for "physical phy". Don't both putting the transceiver in UML.)

2/25 WG
make the phy contain a transceiver and include in UML

Page: 11
Sequence number: 16
Date: 2/7/2003 6:47:36 PM
Type: Strikeout
   ACCEPT - DONE
   3.1.128 speed negotiation sequence
   Delete:
   Part of the phy reset sequence
   to match other sequence definitions

Page: 11
Sequence number: 17
Date: 3/2/2003 2:36:22 PM
Type: Highlight
   ACCEPT - DONE
   3.1.139 target phy:
   Global
   Get rid of this and use SAS target phy throughout.

Page: 11
Sequence number: 18
Date: 2/20/2003 9:33:24 AM
Type: Note
   ACCEPT - DONE
   3.1.xxx
   Add SSP phy, STP phy, SMP phy, SSP initiator phy, SSP target phy, STP initiator phy, STP target phy, SMP initiator phy, SMP
   target phy

Page: 12
Sequence number: 5
Date: 2/5/2003 10:12:06 AM
Type: Note
   ACCEPT - DONE
   3.2 Symbols and abbreviations
   Add CJTPAT

Page: 12
Sequence number: 6
Date: 2/20/2003 9:33:24 AM
Type: Strikeout
   ACCEPT - DONE
   3.1.151 upstream phy:
   Rewrite of STP flow control gets rid of use of this term; delete.

Page: 12
Sequence number: 7
Date: 3/5/2003 3:55:49 PM
Type: Highlight
   ACCEPT - DONE
   3.1.150 unit interval:
   add (UI) to glossary header

Page: 12
Sequence number: 8
Date: 3/5/2003 3:55:49 PM
Type: Note
   ACCEPT - DONE
   3.2 Symbols and abbreviations
   Add cross references to 3.1.xxx for every acronym which expands to a term defined in 3.1.

Page: 13
Sequence number: 6
Date: 1/25/2003 4:41:07 PM
Type: Highlight
   ACCEPT - DONE (PPT acronym later removed altogether)
   3.2 Symbols and abbreviations

PPT   timer should be timeout

Page: 13
Sequence number: 7
Date: 1/25/2003 4:40:54 PM
Type: Highlight
    ACCEPT - DONE
    3.2 Symbols and abbreviations
    PPT is only used about six times in this standard; remove the acronym

Page: 13
Sequence number: 8
Date: 2/5/2003 10:10:48 AM
Type: Note
    ACCEPT - DONE
    3.2 Symbols and abbreviations
    Add Rx and Tx

Page: 14
Sequence number: 3
Date: 3/3/2003 11:21:05 AM
Type: Highlight
    ACCEPT - DONE
    3.3.10 restricted
    Add "or for use in other data structures in this standard."
    and remove "SCSI" from "SCSI standards"

Page: 14
Sequence number: 4
Date: 1/25/2003 4:30:51 PM
Type: Highlight
    ACCEPT - DONE
    3.4 Editorial conventions
    SCSI mode pages, SCSI log pages are mixed-case not uppercase

Page: 14
Sequence number: 5
Date: 1/25/2003 4:31:20 PM
Type: Note
    ACCEPT - DONE
    add mixed-case convention for
    parameters, requests, confirmations, responses, indications, and timers

Page: 14
Sequence number: 6
Date: 3/5/2003 3:55:49 PM
Type: Strikeout
    ACCEPT - DONE
    3.3.7 obsolete
    remove SCSI from "SCSI standards"

Page: 15
Sequence number: 4
Date: 12/30/2002 10:41:07 AM
Type: Highlight
    ACCEPT - DONE
    3.4 Editorial conventions
    Table 1 should be Table 2

Page: 16
Sequence number: 7
Date: 3/1/2003 4:38:28 PM
Type: Note
    ACCEPT - DONE
    3.5.1 State machine conventions overview
    Add "event notification" along with confirmation and response

Page: 17
Sequence number: 8

Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    3.5.3 Parameters, ...and responses
    Add "event notifications" to this discussion

Page: 18
Sequence number: 2
Date: 1/25/2003 11:20:15 AM
Type: Highlight
    ACCEPT - DONE
    Mirroring an ENDL comment in the definitions section,
    Contains should be "This list contains"

Page: 20
Sequence number: 7
Date: 1/23/2003 2:38:04 PM
Type: Note
    ACCEPT - DONE (labeled as "SCSI device name")
    the SCSI device also has a SAS address (retrieve with VPD from a target...)

Page: 20
Sequence number: 8
Date: 1/22/2003 10:52:01 AM
Type: Highlight
    ACCEPT - DONE (1..* for now)
    0..* should be 1..* since SMP targets must be included.
    If Steve's proposal is accepted, this could be exactly one unless virtual phys are present

Page: 20
Sequence number: 9
Date: 1/22/2003 10:54:59 AM
Type: Note
    ACCEPT - DONE (make the SCSI boxes all higher than the SAS boxes so the inheritance arrows go in the bottom of the SCSI
    boxes.

Page: 20
Sequence number: 10
Date: 1/22/2003 12:53:16 PM
Type: Note
    ACCEPT - DONE
    Use the CIM color convention of green for aggregation lines and blue for inheritance lines

Page: 20
Sequence number: 11
Date: 1/23/2003 2:38:40 PM
Type: Note
    ACCEPT - DONE
    Change the SAS address in the SCSI port to "SCSI port identifier". Pure SCSI objects don't know anything about SAS attributes.

Page: 21
Sequence number: 13
Date: 2/8/2003 11:12:36 AM
Type: Note
    ACCEPT - DONE
    4.1.2 Physical links and phys
    Add reference to the hardware/programmed minimum/maximum physical link rate fields, which specify or indicate the physical link
    rates.

Page: 23
Sequence number: 9
Date: 1/23/2003 3:32:56 PM
Type: Note
    ACCEPT - DONE
    4.1.4 SAS devices
    Move the "In figures which contains ports but not phys" sentence into the SAS port section, not the SAS device section

Page: 25
Sequence number: 16

Date: 3/5/2003 3:55:49 PM
Type: Note
    ACCEPT - DONE
    4.1.8.2 Edge expander device set
    Put the text mentioning that constructing a set is outside the scope of the standard here before describing the properties of a set.

Page: 31
Sequence number: 7
Date: 3/2/2003 3:36:50 PM
Type: Note
    REJECT (but added some wide port circles and a note about the addresses)
    show the IDENTIFY addresses here

Page: 31
Sequence number: 8
Date: 3/5/2003 3:55:49 PM
Type: Note
    ACCEPT - DONE
    4.1.12 Pathways
    Move pathway section above connection section, and focus on potential pathways rather than (completed) pathways.

Page: 34
Sequence number: 7
Date: 2/9/2003 4:25:01 PM
Type: Highlight
    ACCEPT - DONE
    4.2.3 Hashed SAS address
    to help optional
    addresses DSS comment in D.1

Page: 34
Sequence number: 8
Date: 1/23/2003 5:51:46 PM
Type: Highlight
    ACCEPT - DONE
    4.2.2 SAS address
    IEEE COMPANY IDENTIFIER small caps without 'field"

Page: 34
Sequence number: 9
Date: 1/23/2003 5:59:01 PM
Type: Note
    ACCEPT - DONE
    4.2.4 Port names
    Note about lack of port names
    Don't mention login non-existence; only helpful to someone with iSCSI, SRP, or FC experience

Page: 34
Sequence number: 10
Date: 2/9/2003 6:09:08 PM
Type: Note
    ACCEPT - DONE
    4.2.5 Port identifiers
    Add a reference to the VPD page, since target point identifiers can be retrieved.

Page: 35
Sequence number: 4
Date: 3/2/2003 3:41:01 PM
Type: Note
    ACCEPT - DONE (added expander figure)
    4.3.1 State machine overview
    the expander state machine stack is not described here
    The expander stack with an attached SATA device is also a bit different

Page: 35
Sequence number: 5
Date: 2/20/2003 9:33:24 AM
Type: Note
    ACCEPT - DONE

4.3.1 State machine overview
Make the port box encompass the transport layer state machines.
Then remove the source SAS address as an argument from application layer to transport layer in ch9/ch10.
This avoids some error cases - what if the application layer sent the wrong source address to a port?

Page: 45
Sequence number: 2
Date: 2/20/2003 9:33:24 AM
Type: Highlight
    ACCEPT - DONE
    4.3.3.4 Signals for all protocols
    Table 18 - Confirmations
    Change
    identify sequence
    to
    identification sequence

Page: 49
Sequence number: 20
Date: 1/25/2003 4:42:44 PM
Type: Note
    ACCEPT - DONE
    Global: change all timers to "expire"   There is inconsistent usage.

Page: 49
Sequence number: 22
Date: 1/25/2003 4:43:07 PM
Type: Note
    Global
    Figure out where to define expires as "goes to zero"
    also clarify count-up vs count-down timers

Page: 49
Sequence number: 23
Date: 1/28/2003 12:32:34 PM
Type: Highlight
    for SCSI initiator ports should be a "should" not a "shall"
    (from Brian Day)

Page: 50
Sequence number: 7
Date: 2/9/2003 6:09:08 PM
Type: Highlight
    ACCEPT - DONE
    4.6.1 Expander device model overview
    Figure 25 - Expander device model
    Change
    SAS expander
    to
    expander
    (several times in figure)

Page: 50
Sequence number: 8
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE
    4.6.1 Expander device model overview
    Figure 25 - Expander device model
    Use more lower case in EF names

Page: 52
Sequence number: 2
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE
    4.6.6 Expander device interfaces
    Use more acronyms in figure 27 - Expander device interfaces

Page: 53
Sequence number: 12
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE
    4.6.7 Expander device interface detail
    Use more acronyms in figure 27 - Expander device interface detail

Page: 53
Sequence number: 13
Date: 3/5/2003 3:55:49 PM
Type: Note
    ACCEPT - DONE
    4.6.7 Expander device interface model
    Change Phy Status from a request to a response

Page: 53
Sequence number: 14
Date: 3/5/2003 3:55:49 PM
Type: Note
    ACCEPT - DONE
    4.6.7 Expander device interface detail
    Move this and the interface sections to become subsections under "Expander device interface"
    4.6.6 Expander device interface
    4.6.6.1 ...overview
    4.6.6.2 .... detail
    4.6.6.3 ECM interface
    4.6.6.4 ECR interface
    4.6.6.5 BPP interface

Page: 54
Sequence number: 2
Date: 3/2/2003 12:18:58 PM
Type: Note
    ACCEPT - DONE
    4.6.8 ECM interface
    Split table 23 into separate request and confirmation tables.

Page: 54
Sequence number: 3
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    4.6.8 Expander connection manager interface
    Just use the ECM acronym; stop redefining it

Page: 54
Sequence number: 4
Date: 3/5/2003 3:55:49 PM
Type: Square
    ACCEPT - DONE
    4.6.8 Expander connection manager interface
    Table 23 - ECM interface
    Change Phy Status from a request to a response.

Page: 55
Sequence number: 5
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE
    4.6.9 ECR interface
    Split table 24 into separate request/indication and confirmation/response tables

Page: 55
Sequence number: 6
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    4.6.9 Expander connection router interface

Just use the ECR acronym; stop redefining it

Page: 56
Sequence number: 1
Date: 2/9/2003 6:09:08 PM
Type: Highlight
    ACCEPT - DONE
    4.6.10 Broadcast primitive processor interface
    In "sequence complete"
    capitalize S and C

Page: 56
Sequence number: 2
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE
    4.6.10 BPP interface
    Split table 25 into separate request and indication tables.
    and
    Change "Request/indication" to just request or indication as appropriate.

Page: 56
Sequence number: 3
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    4.6.10 Broadcast primitive processor
    Just use the BPP acronym; stop redefining it

Page: 56
Sequence number: 4
Date: 3/5/2003 3:55:49 PM
Type: Square
    ACCEPT - DONE
    4.6.10 BPP interface (removed specific types)
    Add additional reserved types, or remove the specific types from this list

Page: 57
Sequence number: 4
Date: 1/29/2003 3:41:46 PM
Type: Highlight
    ACCEPT - DONE
    4.6.11.2 Expander device connection request routing
    ATTACHED SAS ADDRESS should be routed SAS address
    and it probably shouldn't be small caps (it's not exactly a field. It's a value in an internal data structure.)

Page: 57
Sequence number: 5
Date: 1/29/2003 3:41:28 PM
Type: Highlight
    ACCEPT - DONE
    4.6.11.2 Expander device connection request routing
    attached SAS address should be routed SAS address
    Also change of to in

Page: 57
Sequence number: 6
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    4.6.11.2 Expander device connection request routing
    Item 1 "route to a phy with a direct routing attribute... when the SAS address...matches the attached SAS address"
    A phy with table routing also follows this rule (the attached address is not in the table), so add "or table routing attribute"

Page: 58
Sequence number: 3
Date: 1/31/2003 3:45:48 PM
Type: Note
    ACCEPT - DONE

4.6.11.3 Expander route table
Figure 28 - expander route table example
change <= to symbol in figure

Page: 58
Sequence number: 4
Date: 3/5/2003 3:55:49 PM
Type: Note
    ACCEPT - DONE
    4.6.11.3 Expander route table
Move the paragraphs describing rules for the discover process into the discover process section. Keep this section short; just describe the route table itself, not the rules for filling it.

Page: 58
Sequence number: 5
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    4.6.11.2 Expander device connection request routing
    Change "illegal expander phy
attachment," to "any other combination of expander phy attachment (e.g. table to table or direct to anything)" to tie this into the previous a)b)c) list and highlight the important "illegal" cases.

Page: 58
Sequence number: 6
Date: 3/5/2003 3:55:49 PM
Type: Strikeout
    ACCEPT - DONE
    4.6.11.3 Expander route table
Delete "An expander device is considered cascaded to another expander device when the expander device table routing phy is attached to the subtractive routing phy of another edge expander device."
This belongs on the expander topology section if anywhere (another comment resolution deletes the next paragraph, which is the only place "cascade" is used)

Page: 59
Sequence number: 6
Date: 2/8/2003 11:40:57 AM
Type: Highlight
    ACCEPT - DONE
    4.6.11.3 expander route table
    expander route table entry
    should be
    expander route entry
    several times in 4.6.xx.xx

Page: 59
Sequence number: 7
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    4.6.11.4 Expander route index order
    "the first N entries shall be the SAS addresses of
    the devices attached to the attached edge expander device, ordered from phy 0 through phy N."
    isn't clear that there is an entry per phy, whether or not something is attached. Change to
    "the first N entries shall be used for expander phy 0 through expander phy N. If a phy is attached to a device, the expander route entry shall contain the SAS address of the device. If the phy is not attached to a device, the expander route entry shall be disabled."

Page: 59
Sequence number: 8
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    4.6.11.4 Expander route index order
    Change "another" to "an". Route tables could be in fanout expanders too - "another edge" is wrong.

Page: 59
Sequence number: 9
Date: 3/5/2003 3:55:49 PM
Type: Note

ACCEPT - DONE
4.6.11.4 Expander route index order
Add "level 0" terminology to make the rest of the wording clearer

Page: 60
Sequence number: 1
Date: 3/5/2003 3:55:49 PM
Type: Note
    Figure 29 - Expander route index levels
    Show the contents of the routing table ("Entries for W") to make the figure more self-explanatory

Page: 61
Sequence number: 5
Date: 1/24/2003 10:58:35 AM
Type: Note
    ACCEPT - DONE
    4.6.11.4 Expander route index order
    Table 26 - expander route table levels
    delete extra blank rows

Page: 61
Sequence number: 6
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    4.6.11.4 Expander route index order
    Table 26 - Expander route table levels
    Change column header from:
    Routed SAS address description
    to
    Expander route entry

Page: 62
Sequence number: 1
Date: 1/31/2003 3:45:48 PM
Type: Note
    ACCEPT - DONE
    4.6.11.4 Expander route index order
    figure 30 - Expander route index order
    change <= to symbol

Page: 64
Sequence number: 3
Date: 3/5/2003 3:55:49 PM
Type: Note
    ACCEPT - DONE
    4.6.11.5 Discover process
    Move this section up ahead of the expander route index order section.

Page: 64
Sequence number: 4
Date: 3/5/2003 3:55:49 PM
Type: Note
    ACCEPT - DONE
    4.6.11.5 Discover process
    Add some paragraphs mentioning what to do when each device is visited. For expander devices, use SMP REPORT GENERAL
    and DISCOVER to determine what is attached. If a configurable expander is found, configure it. If an end device is found, SMP
    queries are optional.

Page: 65
Sequence number: 6
Date: 3/4/2003 6:15:54 PM
Type: Note
    ACCEPT - DONE
    5 Physical layer
    Add a 5.1 Physical layer overview with some introduction

Page: 66
Sequence number: 5

Date: 1/31/2003 3:57:32 PM
Type: Highlight
ACCEPT - DONE
SAS PHY WG
5.2 page 66
Replace "the connectors" with "a schematic representation of the cables and connectors"

Page: 67
Sequence number: 13
Date: 3/4/2003 6:16:23 PM
Type: Strikeout
REFER PROTOCOL WG TODO (2/25 WG - last edit)
delete this? <<SAS connectors should be marked with the SAS logo (see Annex J).>>

Page: 71
Sequence number: 22
Date: 1/20/2003 4:27:50 PM
Type: Highlight
ACCEPT - DONE
SAS PHY WG
5.6 page 71
Change "may" to "shall", requiring all targets to provide READY LED.

Page: 71
Sequence number: 23
Date: 1/20/2003 4:37:03 PM
Type: Note
ACCEPT - DONE
SAS PHY WG
5.6 page 71
Change table 32 to the following (=< used for less than or equal to symbol):
Driver state Test condition Requirement
Negated (LED off) 0 =<V OH =<3,6 V -100 uA < I OH < 100 uA
Asserted (LED on) I OL = 15 mA 0 =<V OL =<0,225 V

Page: 71
Sequence number: 24
Date: 1/20/2003 4:39:23 PM
Type: Note
ACCEPT - DONE
SAS PHY WG
5.6 page 71
Delete sentence after table 32 based on change of section name

Page: 72
Sequence number: 11
Date: 2/9/2003 11:23:16 AM
Type: Note
ACCEPT - DONE (per Joint WG minutes in Jan: The group agreed to add the following:
These signal specifications are consistent with using good quality cable assemblies constructed with shielded
twinex cable with 24 gauge solid wire up to eight meters in length without using any form of equalization (e.g.,
transmitter pre-emphasis, receiver adaptive equalization, or passive cable equalization).
George noted that the wire gauge has to be stated in ISO phrasing.)
next to cable length text, mention that STP flow control assumes a 50 ns cable propagation delay (one-way).
Cables that support STP shall not exceed that delay(unless the receiver has more buffers than specified by the equations).

Page: 72
Sequence number: 12
Date: 1/20/2003 4:50:17 PM
Type: Note
ACCEPT - DONE
SAS PHY WG
5.6 page 72
Change "mechanical damage" to "mechanical or electrical damage".

Page: 74
Sequence number: 7
Date: 1/31/2003 4:54:18 PM
Type: Highlight

ACCEPT - DONE
SAS PHY WG
5.7.2 General interface specification
Table 34, Page 74
Change to: Unit interval (UI) (nominal)

Page: 74
Sequence number: 8
Date: 1/31/2003 4:54:42 PM
Type: Highlight
ACCEPT - DONE
SAS PHY WG
5.7.2 General interface specification
Table 34, Page 74
Change to: Media impedance (nominal)

Page: 76
Sequence number: 4
Date: 1/20/2003 5:11:24 PM
Type: Highlight
ACCEPT - DONE (per
SAS PHY WG
5.7.3.3 page 76
...table 36 and Z1tol and Z1op shall be defined from these slopes as follows:

Page: 76
Sequence number: 5
Date: 2/1/2003 1:50:33 PM
Type: Note
ACCEPT - DONE
5.7.3.3 Jitter tolerance masks
Format Z1tol equation using Equation editor

Page: 76
Sequence number: 6
Date: 2/9/2003 3:04:20 PM
Type: Highlight
ACCEPT - DONE
5.7.4 Transmitted signal characteristics
Change
SAS expander
to
expander

Page: 77
Sequence number: 8
Date: 1/31/2003 2:45:55 PM
Type: Strikeout
ACCEPT - DONE
SAS PHY WG
7.5.4 page 77
Table 35
delete
Condition a) to be included as note f in table 35 as follows:
The maximum difference in the average differential voltage (D.C. offset) component between the burst times and the idle times of an OOB signal.
Add line to table with Signal characteristic = OOB offset delta (with a reference to note f), Units = mV, and values for 1,5 and 3,0 Gbps of +/- 25.

Page: 77
Sequence number: 9
Date: 1/31/2003 2:45:42 PM
Type: Strikeout
ACCEPT - DONE
SAS PHY WG
7.5.4 page 77
Table 35
Condition b) and c) to be included as note g in table 35 as follows:
The maximum difference in the average of the common mode voltage between the burst times and the idle times of an OOB signal.

Add line to table with Signal characteristic = OOB Common mode delta (with a reference to note g), Units = mV, and value for 1,5 and 3,0 Gbps of +/- 50.

Page: 77
Sequence number: 10
Date: 1/31/2003 2:45:47 PM
Type: Strikeout
ACCEPT - DONE
SAS PHY WG
7.5.4 page 77
Characteristic requirements moved into table 35. Delete this text.

Page: 78
Sequence number: 3
Date: 2/16/2003 11:40:20 AM
Type: Square
ACCEPT - DONE
5.7.5 Received signal characteristics
Table 36 - Delivered signal characteristic
Some of the Jitter Units cells are blank; change to N/A

Page: 79
Sequence number: 3
Date: 1/31/2003 3:32:40 PM
Type: Note
ACCEPT - DONE
5.7.6 Jitter
Table 37 - Jitter compliance points
The notes need to be referenced.
a - general
b - general
c - total jitter columns
d - total jitter columns
e - deterministic and total columns
f - total jitter columns

Page: 79
Sequence number: 4
Date: 1/31/2003 3:45:21 PM
Type: Note
ACCEPT - DONE
5.7.7 Jitter tolerance
Table 38 - Jitter tolerance compliance points
Note a is not referenced but should be

Page: 81
Sequence number: 6
Date: 2/1/2003 1:50:01 PM
Type: Note
ACCEPT - DONE
5.7.9 Impedance specifications
Format C equation in footnote using Equation editor

Page: 82
Sequence number: 12
Date: 2/1/2003 1:49:22 PM
Type: Note
ACCEPT - DONE
5.7.11 Transmitter characteristics
Format S21 equation using Equation editor

Page: 84
Sequence number: 1
Date: 1/31/2003 5:33:17 PM
Type: Highlight
ACCEPT - DONE
5.7.12 Receiver characteristics
10 -12 remove space

Page: 86
Sequence number: 11
Date: 2/6/2003 11:17:41 AM
Type: Highlight
    ACCEPT - DONE (only when a dash follows the 8, though)
    6.2.2 8b10b coding introduction
    Change all the "eight-"s in this section to "8" since 10 is expressed as "10"
    (also see INTC comment in glossary)

Page: 86
Sequence number: 12
Date: 2/6/2003 11:12:24 AM
Type: Highlight
    ACCEPT - DONE
    6.2.2 8b10b coding introduction
    an 10-bit should be a 10-bit

Page: 86
Sequence number: 13
Date: 2/8/2003 11:40:57 AM
Type: Note
    ACCEPT - DONE
    6.2.1 Encoding overview
    Table 40 - Special character usage
    add K28.6 since ERROR uses it (to table and text)

Page: 87
Sequence number: 2
Date: 1/11/2003 5:14:32 PM
Type: Highlight
    ACCEPT - DONE
    6.2.3 8b10b encoding conventions
    this specification should be this standard

Page: 91
Sequence number: 1
Date: 2/7/2003 6:02:36 PM
Type: Highlight
    ACCEPT - DONE
    6.3.3.1 Valid and invalid transmission characters
    add K28.6

Page: 92
Sequence number: 2
Date: 1/24/2003 12:14:23 PM
Type: Highlight
    ACCEPT - DONE
    Table 45 - delayed code violation example
    Change "character" labels to "first character" "second character" and "third character"

Page: 94
Sequence number: 2
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    6.5 OOB signals
    SAS devices
    should be
    Phys compliant with this standard
    (from Vixel)

Page: 95
Sequence number: 3
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    6.5 OOB signals
    future generations of SAS devices.
    to

phys compliant with future generations of this standard
(from Vixel)

Page: 97
Sequence number: 8
Date: 1/8/2003 2:04:14 PM
Type: Highlight
    ACCEPT - DONE
    6.5 OOB signals
    Table 48 OOB signal receiver requirements
    The number 1008 needs a space after the 1 to follow ISO format

Page: 97
Sequence number: 10
Date: 1/8/2003 2:27:11 PM
Type: Highlight
    ACCEPT - DONE
    6.5 OOB signals
    Delete COMINIT Completed as it is not used

Page: 97
Sequence number: 11
Date: 1/24/2003 12:46:48 PM
Type: Note
    ACCEPT - DONE
    Word this in terms of negation time, not "greater than proceeding idle time"
    They happen to match now, but that's not necessarily true.

Page: 97
Sequence number: 12
Date: 1/24/2003 12:43:47 PM
Type: Note
    ACCEPT - DONE (had to split into two tables to fit)
    idle time mays should be:
    >= 55 ns and < 175 ns
    >= 175 ns and < 525 ns (propose to SATA)
    >= 525 ns and < 1575 ns (propose to SATA)
    idle time shalls should be:
    >= 101,3 ns and <= 112 ns
    >= 304 ns and <= 336 ns
    >= 911,7 ns and <= 1008 ns
    negation time shall should be:
    > 175 ns
    > 525 ns
    > 1575 ns

Page: 97
Sequence number: 13
Date: 1/24/2003 12:48:43 PM
Type: Highlight
    ACCEPT - DONE
    6.5 OOB signals
    After table 48 OOB signal receiver requirements
    "not an error to receive more than six"
    should be four, since this is the receiver section

Page: 97
Sequence number: 14
Date: 3/4/2003 6:25:33 PM
Type: Note
    ACCEPT - DONE
    6.5 OOB signals
    incorporate 03-096 which adds receiver requirements on the burst times.
    (from George Penokie)

Page: 98
Sequence number: 5
Date: 2/9/2003 3:08:01 PM
Type: Highlight

ACCEPT - DONE
6.6.1 Overview
Change
Overview
to
Phy reset sequences overview

Page: 98
Sequence number: 6
Date: 2/21/2003 2:37:22 PM
Type: Strikeout
ACCEPT - DONE
Delete "(i.e., from initiator phy to expander phy, expander phy to expander phy, or
expander phy to target phy)."
which seems to assume a certain topology.

Page: 100
Sequence number: 6
Date: 1/24/2003 2:47:51 PM
Type: Highlight
ACCEPT - DONE (removed sentence. The phy reset section overview says this now)
6.6.4.1 SAS OOB sequence
Is hot-plug timeout a shall or a should? (see comment in timing table)

Page: 101
Sequence number: 3
Date: 1/8/2003 5:35:44 PM
Type: Highlight
ACCEPT - DONE
6.6.4.1 SAS OOB sequence
phys should be phy (two times)

Page: 101
Sequence number: 4
Date: 1/24/2003 2:52:13 PM
Type: Note
ACCEPT - DONE
add a description of replying to a COMSAS directly with COMSAS

Page: 102
Sequence number: 5
Date: 1/11/2003 5:13:03 PM
Type: Highlight
ACCEPT - DONE (removed Scenario 3)
6.6.4.1 SAS OOB sequence
Figure 51 - SAS to SAS OOB sequence
Scenario 3: start should be starts

Page: 104
Sequence number: 11
Date: 1/24/2003 3:06:49 PM
Type: Note
ACCEPT - DONE (removed receiver times altogether)
Table 49 - SAS speed negotiation sequence timing specifications
Some of these receiver times might not be used in the standard. Or it's not clearly differentiated when the transmit times apply and
when the receive times apply.

Page: 104
Sequence number: 12
Date: 1/24/2003 3:06:36 PM
Type: Highlight
ACCEPT - DONE
6.6.4.2 SAS speed neg sequence
Table 49 - SAS speed neg
Rate change delay should be "Rate change delay time (RCDT)" to match the other names

Page: 104
Sequence number: 13
Date: 1/9/2003 3:46:16 PM

Type: Highlight
    ACCEPT - DONE
    6.6.4.2 SAS speed neg
    Table 49 - SAS speed neg
    Replace speed negotiation window time with a version in units of OOBI.

Page: 106
Sequence number: 6
Date: 1/21/2003 4:10:41 PM
Type: Highlight
    ACCEPT - DONE
    6.6.4.2 SAS speed negotiation sequence
    Figure 54 - SAS speed negotiation
    Bx should be Rx

Page: 106
Sequence number: 7
Date: 1/24/2003 4:03:16 PM
Type: Highlight
    ACCEPT - DONE
    6.6.5 Phy reset sequence after device is attached
    There is no such thing as a COMINIT sequence. Change to COMINIT signal. Global change for COMxxx sequence.

Page: 107
Sequence number: 5
Date: 2/16/2003 10:03:05 AM
Type: Highlight
    ACCEPT - DONE (deleted the offending statement)
    6.6.5 Phy reset after device is attached
    "bypassing the normal
    requirement that COMINIT be both transmitted and received."
    with the changes earlier, this is not a violation of the "Normal"requirement anymore

Page: 107
Sequence number: 6
Date: 2/21/2003 8:01:46 PM
Type: Highlight
    ACCEPT - DONE
    6.7 SP transmitter and receiver
    Change
    ALIGN0 Detected;
    to
    ALIGN0 Received
    convention is primitives are Received; OOB signals are Detected/Completed

Page: 107
Sequence number: 7
Date: 2/21/2003 8:01:46 PM
Type: Highlight
    ACCEPT - DONE
    6.7 SP transmitter and receiver
    Change
    ALIGN1 Detected;
    to
    ALIGN1 Received
    convention is primitives are Received; OOB signals are Detected/Completed

Page: 108
Sequence number: 6
Date: 1/8/2003 6:38:16 PM
Type: Highlight
    ACCEPT - DONE
    6.8 SP state machine
    Add a cross reference to the first reference to SP_DWS state machine

Page: 108
Sequence number: 7
Date: 2/9/2003 6:09:08 PM
Type: Highlight

ACCEPT - DONE
6.8.1 Overview
Change
Overview
to
SP state machine overview

Page: 110
Sequence number: 14
Date: 2/9/2003 5:42:14 PM
Type: Highlight
    ACCEPT - DONE
    6.8.2.2.1 SP2:OOB_AwaitCOMX state description
    initialized and enabled
    should be
    initialized and started

Page: 111
Sequence number: 8
Date: 1/10/2003 5:11:59 PM
Type: Highlight
    ACCEPT - DONE
    6.8.2.6.1 State description (SP6)
    Reword "waits for COMSAS to be completely received." like the others

Page: 113
Sequence number: 9
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE (added labels)
    6.8.3 SAS speed negotiation states
    Figure 57 - SAS SN states
    The transitions out of SP13:SAS_Pass and SP14:SAS_Fail lack labels

Page: 113
Sequence number: 10
Date: 3/1/2003 4:38:28 PM
Type: Note
    ACCEPT - DONE
    6.8.3 SAS speed negotiation states
    Figure 57 - SN states
    Add cutout and to all states input

Page: 115
Sequence number: 17
Date: 1/6/2003 9:29:43 AM
Type: Highlight
    ACCEPT - DONE
    6.8.3.5.2 Transition SP12:SAS_AwaitALIGN1 to ...
    SP12:SAS_AwaitALIGN1 should be SP12:SAS_AwaitSNW
    (from muikien_kirk@adaptec.com)

Page: 115
Sequence number: 18
Date: 1/6/2003 9:29:49 AM
Type: Highlight
    ACCEPT - DONE
    6.8.3.4.3 Transition SP11:SAS_AwaitALIGN1 to SAS_AwaitSNW
    SP14:SAS_ AwaitSNW should be SP12:SAS_AwaitSNW (without the space and 14 changed to 12)
    (from muikien_kirk@adaptec.com)

Page: 117
Sequence number: 5
Date: 3/5/2003 3:55:49 PM
Type: Note
    ACCEPT - DONE
    6.8.4 SATA host emulation states
    Change SAS device to phy in this paragraph
    (from Vixel)

Page: 118
Sequence number: 11
Date: 2/4/2003 6:57:13 PM
Type: Note
    ACCEPT - DONE
    6.8.4 SATA host emulation states
    Figure 58 - SP state machine SATA host emulation states
    The SP23:SATA_PM_Partial to to SP17:SATA_AwaitCOMWAKE arc should go to SP16:SATA_COMWAKE
    and
    The SP24:SATA_PM_Slumber to SP17:SATA_AwaitCOMWAKE arc should go to SP16:SATA_COMWAKE

Page: 118
Sequence number: 12
Date: 2/9/2003 3:05:20 PM
Type: Highlight
    ACCEPT - DONE
    6.8.4 SATA host emulation states
    Change
    SAS expander
    to
    expander

Page: 118
Sequence number: 13
Date: 3/1/2003 4:38:28 PM
Type: Note
    ACCEPT - DONE
    6.8.4 SATA host emulation states
    Figure 57 - SATA host emulation states
    Add cutout and to all states input

Page: 119
Sequence number: 16
Date: 3/5/2003 3:55:49 PM
Type: Note
    ACCEPT - DONE
    6.8.4.4.1 SP19
    Change SAS device to phy
    (from Vixel)

Page: 120
Sequence number: 21
Date: 1/11/2003 5:13:03 PM
Type: Highlight
    ACCEPT - DONE
    6.8.4.6.2 SP21:SATA_TransmitALIGN to SP22:SATA_PHY_Ready
    when should be if

Page: 121
Sequence number: 8
Date: 2/9/2003 6:09:08 PM
Type: Highlight
    ACCEPT - DONE
    6.9.1 Overview
    Change
    Overview
    to
    SP_DWS state machine overview

Page: 121
Sequence number: 9
Date: 3/8/2003 12:22:29 PM
Type: Note
    6.9 SP_DWS state machine
    ***
    The incoming dword architecture is not clear.
    This would work:
    SP_DWS sends each Dword Received to the link layer SL_IR, which sends it to SL or XL after finishing the identification

sequence.
SL sends it to SSP, STP, or SMP after establishing the corresponding type of connection, ignoring invalid dwords.
XL sends it to the ECR (after establishing a connection), changing to ERROR or SATA_ERROR as needed.

Page: 123
Sequence number: 20
Date: 3/4/2003 6:38:02 PM
Type: Note
ACCEPT - DONE (done with move to XL of ERROR generation.)
6.9 SP_DWS
when moving the ERROR/SATA_ERROR stuff into XL, make sure that incoming ERROR is converted to SATA_ERROR (along with incoming invalid dwords).

Page: 127
Sequence number: 3
Date: 2/7/2003 6:05:39 PM
Type: Highlight
ACCEPT - DONE
7.1.1 Primitives overview
this standard
needs a closing)

Page: 127
Sequence number: 4
Date: 3/4/2003 6:38:46 PM
Type: Note
ACCEPT - DONE
7 Link layer
Add a 7.1 Link layer overview section with a very short introduction

Page: 131
Sequence number: 3
Date: 1/24/2003 6:38:31 PM
Type: Highlight
ACCEPT - DONE
7.1 Primitives
and global
Change NOTIFY (ENABLE_SPINUP) to NOTIFY (ENABLE SPINUP) - the underscore is not used inside parenthesis

Page: 135
Sequence number: 9
Date: 2/17/2003 12:08:48 PM
Type: Note
ACCEPT - DONE (variety of examples added to the picture, but none of the invalid types)
7.1.3.4 Triple primitive sequence
Figure 61 - Triple primitive sequence
label the 3 CLOSEs only as the triple primitive sequence.
Change CLOSE to "Triple type of primitive"
idle to "another dword"
show another 3 after them
Then show only one or two idles and mark that the second ones aren't in a second example
Do the same kind of changes for the redundant section

Page: 135
Sequence number: 10
Date: 1/24/2003 6:39:45 PM
Type: Highlight
ACCEPT - DONE
7.1.3.4 Triple primitive sequence
CLOSE should be CLOSE (NORMAL))

Page: 135
Sequence number: 11
Date: 2/17/2003 12:03:39 PM
Type: Note
ACCEPT - DONE (the redundant example shows Redundant A and Redundant B to imply that they are different)
Note: back to back BROADCAST primitives are not detected
somehow...

Page: 136
Sequence number: 3
Date: 2/17/2003 12:08:11 PM
Type: Note
　　ACCEPT - DONE (made a bit more complicated that suggested. Shows a variety of examples)
　　7.1.3.5 Redundant primitive sequences
　　Figure 62
　　keep this picture simpler than the triple picture
　　show where the receiver detects after 3
　　don't use BROADCAST, use Redundant type of primitive

Page: 136
Sequence number: 4
Date: 2/20/2003 9:33:24 AM
Type: Note
　　ACCEPT - DONE
　　7.1.4.2 ALIGN
　　Add a table of the 4 ALIGN primitives.

Page: 136
Sequence number: 5
Date: 2/20/2003 9:33:24 AM
Type: Highlight
　　ACCEPT - DONE
　　7.1.4.2 ALIGN
　　Expand the list of what ALIGNs are used for to add OOB signals. Split clock skew management and rate matching into separate
　　rows.

Page: 136
Sequence number: 6
Date: 3/5/2003 3:55:49 PM
Type: Highlight
　　ACCEPT - DONE
　　7.1.4.2 ALIGN
　　SAS devices
　　should be
　　Phys
　　(from Vixel)

Page: 137
Sequence number: 11
Date: 2/9/2003 12:14:25 PM
Type: Highlight
　　ACCEPT - DONE
　　7.1.4.4 BROADCAST
　　Change "end devices" and "initiator ports and target ports" to "SAS ports" in this section. Broadcast primitives should be
　　forwarded to SAS ports inside expander devices, not just those in end devices.
　　Potential confusion: "expander port" is not a "SAS port" - expander ports must not treat the reserved primitives the same. To help,
　　add (i.e. SAS initiator ports and SAS target ports) after "SAS ports" in the table

Page: 138
Sequence number: 18
Date: 2/20/2003 9:33:24 AM
Type: Highlight
　　ACCEPT - DONE
　　7.1.4.9 NOTIFY
　　***
　　"NOTIFY shall not be transmitted until at least three
　　ALIGNs have been transmitted since the previous NOTIFY."
　　This is just to reduce EMI issues. Different NOTIFYs could be interspersed without causing problems. Reword to "a specific
　　NOTIFY shall not be transmitted a second time until... ALIGNs or different NOTIFYs"

Page: 139
Sequence number: 7
Date: 2/17/2003 1:52:14 PM
Type: Note
　　ACCEPT - DONE (Jan WG treat as OPEN_REJECT (WRONG DESTINATION))
　　what if OPEN_REJECT (STP RESOURCES BUSY) is the reply to an SSP or SMP request?

Page: 139
Sequence number: 8
Date: 2/17/2003 1:48:33 PM
Type: Highlight
    ACCEPT - DONE (changed from expander phy to destination phy)
    7.1.4.11 OPEN_REJECT
    Table 61 - OPEN_REJECT abandon primitives
    originator could be destination phy for a native STP target

Page: 139
Sequence number: 9
Date: 2/20/2003 9:33:24 AM
Type: Square
    ACCEPT - DONE
    7.1.4.11 OPEN_REJECT
    Table 61 - OPEN_REJECT abandon primitives
    Fill in the blank "originator" cells with "Unknown"

Page: 140
Sequence number: 5
Date: 2/20/2003 9:33:24 AM
Type: Square
    ACCEPT - DONE
    7.1.4.11 OPEN_REJECT
    Table 62 - OPEN_REJECT retry primitives
    Fill in the blank "originator" cells with "Unknown"

Page: 142
Sequence number: 7
Date: 2/20/2003 9:30:29 AM
Type: Note
    REVIEW PROTOCOL WG (review the new 7.16.2)
    ACCEPT - DONE (per Jan WG. Moved all the rules to 7.16.2 STP flow control. For receiving from SATA links, must accept 21
    dwords. For transmitting to SATA, must reply with HOLDA within 19 dwords. For receiving from SAS links, must accept 20 + 4n
    dwords. For transmitting to SAS links, must reply within 20 dwords.)
    7.1.6.3 SATA_HOLD and HOLDA
    SATA's 20 dwords is too loose. Should we mandate stopping transmitting within 19 to meet a receiver expectation of 20?
    26.667 ns for one primitive (At 1.5 Gbps)
    5 ns/m delay   10 m external cable => 2 dwords at 1.5 Gbps; 4 at 3.0 Gbps
    Receive buffer approach:
    1. STP data receivers shall accept (20 + 4n) dwords after sending HOLD (4n = 8 at 3 Gbps, 4 at 1.5 Gbps)
    2. STP data transmitters shall send no more than 20 dwords after receiving HOLD
    Mention that round-trip is used to select 4. This also/mostly goes into 7.17.2.
    outside the scope: SATA link from expander to SATA drive follows SATA rules (should transmit only 19 dwords and receive 21 to
    be safe)

Page: 142
Sequence number: 9
Date: 2/17/2003 2:02:58 PM
Type: Highlight
    ACCEPT - DONE
    7.1.6.3 and global
    Change SATA protocol to just SATA

Page: 142
Sequence number: 10
Date: 2/7/2003 6:13:10 PM
Type: Note
    ACCEPT - DONE
    7.1.6.1 SATA_ERROR
    Add that an incoming ERROR is also forwarded as a SATA_ERROR

Page: 144
Sequence number: 7
Date: 2/17/2003 4:45:24 PM
Type: Highlight
    ACCEPT - DONE
    7.2 Clock skew managmeent
    Change data to dwords (i.e., is not the original source of the data)

Page: 144
Sequence number: 8
Date: 2/17/2003 4:44:59 PM
Type: Highlight
    ACCEPT - DONE
    7.2 Clock skew management
    around table 66
    data sb dword all over on this page

Page: 144
Sequence number: 9
Date: 1/25/2003 11:01:51 AM
Type: Highlight
    ACCEPT - DONE
    7.2 clock skew management
    for expander devices forwarding dwords from SAS phys to SAS phys

Page: 144
Sequence number: 10
Date: 2/1/2003 1:48:43 PM
Type: Note
    ACCEPT - DONE
    7.4 CRC
    Format all equations with division using Equation editor

Page: 144
Sequence number: 11
Date: 3/5/2003 3:55:49 PM
Type: Note
    ACCEPT - DONE (added a definition sentence)
    7.3 Idle links
    This section lacks a definition of the term "idle dword."

Page: 147
Sequence number: 15
Date: 1/31/2003 3:45:48 PM
Type: Highlight
    ACCEPT - DONE
    7.5 Scrambling
    Table 68 - Scrambling types
    Data should be Type

Page: 147
Sequence number: 16
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    7.5 Scrambling
    ALIGN in CONT description
    add "or NOTIFY"

Page: 150
Sequence number: 3
Date: 1/24/2003 7:12:51 PM
Type: Highlight
    ACCEPT - DONE (actually Restricted)
    Make this Ignored

Page: 150
Sequence number: 4
Date: 1/24/2003 7:10:17 PM
Type: Note
    ACCEPT - DONE
    change Ignored fields to Restricted. The IDENTIFY frame is the source for them, and should set them to 0 so other data structures
    can fill them in.

Page: 151
Sequence number: 6

Date: 1/24/2003 7:08:29 PM
Type: Note
    ACCEPT - DONE
    7.7.3 OPEN address frame
    Add CRC field paragraph.

Page: 151
Sequence number: 7
Date: 2/9/2003 12:13:41 PM
Type: Strikeout
    ACCEPT - DONE
    7.7.2 IDENTIFY address frame
    Table 73 - Attached device type
    Delete only since other comments make end devices distinct from with expander devices

Page: 151
Sequence number: 8
Date: 2/21/2003 7:02:25 PM
Type: Note
    ACCEPT - DONE (changed to port references)
    7.7.2 IDENTIFY address frame
    drop the target/initiator device references

Page: 152
Sequence number: 4
Date: 1/24/2003 7:03:09 PM
Type: Highlight
    ACCEPT - DONE
    7.7.3 OPEN address frame
    Table 74 - OPEN address frame format
    Delete (MSB) and (LSB)

Page: 152
Sequence number: 5
Date: 1/24/2003 7:05:47 PM
Type: Highlight
    ACCEPT - DONE (per Jan WG)
    Change all Reserved fields here to COMPATIBLE FEATURES
    Transmitters shall set these to zero.
    Recipient shall not check these fields.

Page: 152
Sequence number: 6
Date: 3/4/2003 6:43:15 PM
Type: Note
    ACCEPT - DONE (changed to port throughout this section)
    7.7.3 OPEN address frame
    "device" seems to be used wrong here

Page: 153
Sequence number: 6
Date: 3/4/2003 6:44:27 PM
Type: Note
    ACCEPT - DONE (reworded to use "potential pathway" term. Drop the wide and narrow sentences that are more confusing than
    helpful)
    check use of pathway vs. wide links
    Is pathway only one physical link in the wide link (implied by ch4), or is it all the physical links in the wide link (implied by here)?
    ch4 wins.
    "to a value supported by a potential pathway. For each wide link in a potential pathway, ..."
    Use potential pathway throughout where needed

Page: 153
Sequence number: 7
Date: 1/24/2003 7:17:23 PM
Type: Strikeout
    ACCEPT - DONE (Per 1/21 SAS call, delete this sentence.)
    "The requested connection rate shall not exceed the slowest negotiated physical link rate along the pathway."

Page: 153

Sequence number: 8
Date: 2/15/2003 2:50:06 PM
Type: Note
    ACCEPT - DONE (per Feb 11 call)
    7.7.3 OPEN address frame
    Table 76 - Connection rate
    ***
    Change 0h and 1h to 8h and 9h (for 1.5 Gbps and 3.0 Gbps) to match DISCOVER and PHY CONTROL functions (which also need
    to change to match)

Page: 154
Sequence number: 8
Date: 1/24/2003 7:08:11 PM
Type: Note
    ACCEPT - DONE
    7.7.3 OPEN address frame
    Add CRC field paragraph.

Page: 154
Sequence number: 9
Date: 2/9/2003 6:09:08 PM
Type: Highlight
    ACCEPT - DONE
    7.8.1 Overview
    Change
    Overview
    to
    Identification and hard reset sequence overview

Page: 154
Sequence number: 10
Date: 2/9/2003 6:09:08 PM
Type: Square
    ACCEPT - DONE
    7.7.3 OPEN address frame
    Reword in terms of port identifiers of SAS port. The source address is from the originator not the port transmitting (expanders port
    don't change it as they forward connection requests).

Page: 154
Sequence number: 11
Date: 3/2/2003 1:58:47 PM
Type: Note
    ACCEPT - DONE (per 2-24 WG)
    7.8.2 Initiator specific rules
    Downgrade "shall perform" to "should perform"
    (from Bob Nixon, Emulex)

Page: 154
Sequence number: 12
Date: 3/8/2003 12:22:29 PM
Type: Note
    REFER PROTOCOL WG (I agree)
    7.8 Identification and hard reset sequence
    ***
    A 2 ms delay should always begin the identiifcation sequence, to allow for tolerances in the ending time of the speed negotiation
    sequences.
    (from Maxtor)

Page: 155
Sequence number: 14
Date: 2/9/2003 6:09:08 PM
Type: Highlight
    ACCEPT - DONE
    7.8.5.1 Overview
    Change
    Overview
    to
    SL_IR state machine overview

Page: 155
Sequence number: 15
Date: 2/20/2003 9:33:24 AM
Type: Note

    ACCEPT - DONE
    7.8.3 Fanout expander device rules
    Change
    identify sequence
    to
    identification sequence

Page: 155
Sequence number: 16
Date: 2/20/2003 9:33:24 AM
Type: Note

    ACCEPT - DONE
    7.8.4 Edge expander rules
    Change
    identify sequence
    to
    identification sequence

Page: 155
Sequence number: 17
Date: 3/5/2003 3:55:49 PM
Type: Note

    ACCEPT - DONE
    7.8.2 Initiator device specific rules
    Move the discover process paragraph about disabling loops into the discover process section in chapter 4. It really applies to
    management app clients in fanout expanders too, so is misplaced here.

Page: 156
Sequence number: 11
Date: 2/20/2003 9:33:24 AM
Type: Strikeout

    ACCEPT - DONE
    7.8.5.1 SL_IR state machine
    Figure 67 - SL_IR state machine
    Remove
    Identify Timeout
    from SL_IR_IRC1. It's not in the text and SL_IR_IRC2 provides it.

Page: 156
Sequence number: 12
Date: 3/1/2003 4:38:34 PM
Type: Note

    ACCEPT - DONE (per 2/25)
    7.8.5.1 SL_IR
    and global
    add HARD_RESET Received to each layer so it can be sent to the SCSI application layer as Transport Reset. Each layer make
    time to forward it up after clearing itself.)

Page: 157
Sequence number: 17
Date: 2/9/2003 6:09:08 PM
Type: Highlight

    ACCEPT - DONE
    7.8.6.1 Overview
    Change
    Overview
    to
    SL_IR_TIR state machine overview

Page: 158
Sequence number: 12
Date: 2/9/2003 6:09:08 PM
Type: Highlight

    ACCEPT - DONE
    7.8.6.2.1 Overview

Change
Overview
to
SL_IR_RIF state machine overview

Page: 159
Sequence number: 8
Date: 2/9/2003 6:09:08 PM
Type: Highlight
ACCEPT - DONE
7.8.6.3.1 Overview
Change
Overview
to
SL_IR_IRC state machine overview

Page: 160
Sequence number: 18
Date: 2/6/2003 11:05:45 AM
Type: Highlight
ACCEPT - DONE
7.9 Power management
Add SSP in front of target ports

Page: 160
Sequence number: 19
Date: 2/20/2003 9:33:24 AM
Type: Strikeout
ACCEPT - DONE
7.8.6.3.3.1 SL_IR_IRC2 state description
Delete:
indicating that
the identify sequence has completed,
which is redundant with the signal name itself

Page: 160
Sequence number: 20
Date: 2/20/2003 9:33:24 AM
Type: Underline
ACCEPT - DONE
7.8.6.3.3.2 SL_IR_IRC2 to SL_IR_IRC3
Change
identify sequence
to
identification sequence

Page: 160
Sequence number: 21
Date: 2/20/2003 9:33:24 AM
Type: Strikeout
ACCEPT - DONE
7.9 Power management
Remove:
An expander device may intercept SATA register FIS transfers and hide any SATA target device support for
interface power management in the SCONTROL and SSTATUS registers.
That are registers in the HBA, not fields from the SATA device.

Page: 161
Sequence number: 9
Date: 3/1/2003 4:38:34 PM
Type: Highlight
ACCEPT - DONE
7.11 Domain changes
discovery process
should be
discover process

Page: 162
Sequence number: 14

Date: 2/9/2003 6:09:08 PM
Type: Highlight
    ACCEPT - DONE
    7.12.1 Connection overview
    Change
    Connection
    to
    Connections

Page: 163
Sequence number: 33
Date: 2/19/2003 11:19:25 AM
Type: Note
    ACCEPT - DONE
    7.12.3 Arbitration fairness
    Change "initiator port, target port" to "SAS port"
    and change "Initiator ports and target ports" to "SAS ports"

Page: 163
Sequence number: 34
Date: 2/8/2003 11:40:57 AM
Type: Note
    ACCEPT - DONE
    Change
    Initiator ports and target ports
    to
    SAS ports (i.e. SAS initiator ports and SAS target ports)
    throughout this section

Page: 164
Sequence number: 13
Date: 2/20/2003 9:33:24 AM
Type: Note
    ACCEPT - DONE
    7.12.3.1.1 Arbitration overview
    Convert the arbitration priority list into a table of concatenations like the pathway recovery priority. Call it Arbitration priority.

Page: 165
Sequence number: 16
Date: 2/19/2003 1:54:21 PM
Type: Highlight
    ACCEPT - DONE (added "recommended")
    7.12.3.1.3 Partial Pathway Timer
    Per an IBM comment in the SMP PHY control section, the 7 µs default needs to change to a recommended default not a required
    default.

Page: 165
Sequence number: 17
Date: 2/20/2003 9:33:24 AM
Type: Highlight
    ACCEPT - DONE
    7.12.3.1.4 Pathway Recover
    For "Pathway Recovery Priority"
    use lowercase throughout this section

Page: 165
Sequence number: 18
Date: 2/20/2003 9:33:24 AM
Type: Highlight
    ACCEPT - DONE
    7.12.3.1.3 Partial Pathway Timer
    Rename section
    to
    Partial Pathway Timeout timer

Page: 166
Sequence number: 12
Date: 2/20/2003 9:33:24 AM
Type: Strikeout

ACCEPT - DONE
7.12.3.1.4 Pathway recovery
Delete the last setnence
"If the
PATHWAY BLOCKED COUNT fields match, then the comparison ..."
which is unnecessary (and too far removed from the table of the priority field concatenation to make sense here)

Page: 166
Sequence number: 13
Date: 3/8/2003 12:22:29 PM
Type: Note
REFER PROTOCOL WG
7.12.4.2 Edge expander devices
***
If a match occurs on a subtractive routing method port that is the same port on which the connection request arrived, NO
DESTINATION needs to be returned rather than BAD DESTINATION.
If the match is on a table routing or direct routing port, then BAD DESTINATION is appropriate.

Page: 169
Sequence number: 9
Date: 3/2/2003 2:07:54 PM
Type: Highlight
ACCEPT - DONE ("considered broken due to loss of dword synchronization")
7.12.6 Breaking a connection
disconnection at the PHY
layer
makes no sense
(from George Penokie)

Page: 169
Sequence number: 10
Date: 3/5/2003 3:55:49 PM
Type: Highlight
REVIEW PROTOCOL WG
ACCEPT - DONE
Table 82 - Break connection responses
***
"The originating port shall assume the connection has been broken."
This "should" also trigger a link reset sequence, since a valid running XL or SL should always reply to BREAK with a BREAK after
a connection has been opened. No response means something is wrong.

Page: 170
Sequence number: 6
Date: 2/9/2003 6:09:08 PM
Type: Highlight
ACCEPT - DONE
7.13.1 Overview
Change
Overview
to
SL state machine overview

Page: 170
Sequence number: 7
Date: 2/16/2003 11:40:20 AM
Type: Highlight
ACCEPT - DONE
7.12.7 Closing a connection
Expanders (now STP target ports) are not allowed to originate CLOSE (CLEAR AFFILIATION) on their own. Split into initiator
sentence and STP target port sentence.

Page: 170
Sequence number: 8
Date: 2/16/2003 11:40:20 AM
Type: Square
ACCEPT - DONE
7.12.7 Closing a connection
Move protocol-specific sentences into protocol-specific sections 7.16.6, 7.17.3, and 7.18.3
Move the picture as is into 7.16.6. Replace with simpler picture showing only CLOSE (not DONE) - show both sequential and

concurrent CLOSEs.

Page: 170
Sequence number: 9
Date: 2/16/2003 11:40:20 AM
Type: Highlight
ACCEPT - DONE
7.12.7 Closing a connection
Change
primitives
to
dwords
(not just primitives matter)

Page: 171
Sequence number: 4
Date: 2/9/2003 12:11:24 PM
Type: Note
ACCEPT - DONE
7.13.1 SL state machine overview
add open timeout timer, close timeout timer, and break timeout timer to a list in front of this state machine?

Page: 173
Sequence number: 2
Date: 3/1/2003 4:38:28 PM
Type: Note
ACCEPT - DONE
Figure 73 - SL state machine part 2
add cutouts to be consistent

Page: 174
Sequence number: 13
Date: 2/3/2003 3:13:07 PM
Type: Highlight
ACCEPT - DONE
7.13.3.2 SL0:Idle to SL1:ArbSel
link rate should be connection rate

Page: 174
Sequence number: 14
Date: 2/3/2003 3:33:44 PM
Type: Highlight
ACCEPT - DONE
7.13.3.2 SL0:Idle to SL1:ArbSel
reword
<<is received and an
.. is received.>> to <<receiving both...and...>

Page: 174
Sequence number: 15
Date: 2/3/2003 3:33:36 PM
Type: Highlight
ACCEPT - DONE
7.13.3.2 SL0:Idle to SL2:Selected
reword
<<is received and an
.. is received.>> to <<receiving both...and...>

Page: 174
Sequence number: 16
Date: 3/8/2003 4:03:56 PM
Type: Note
REFER PROTOCOL WG
7.13.2 SL transmitter and receiver
***
Going into March T10 week, there is still debate on how BREAK should be handled. 03-120 proposes ignoring it inside an OPEN
address frame (the correct answer)

Page: 175

Sequence number: 3
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    7.13.4.1 SL1
    Change "request a ... by sending" to just "send"

Page: 176
Sequence number: 4
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.13.4.4 SL1 to SL3
    Change:
    "transition shall pass .. to ..."
    to:
    "to transition shall include ..."

Page: 176
Sequence number: 5
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.13.4.4 SL1 to SL3
    Change:
    "transition shall pass .. to ..."
    to:
    "to transition shall include ..."

Page: 176
Sequence number: 6
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.13.4.4 SL1 to SL3
    Change:
    "transition shall pass .. to ..."
    to:
    "to transition shall include ..."

Page: 176
Sequence number: 7
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    7.13.4.3 SL1 to SL2
    Change
    Source Port Hashed Value argument (i.e., hashed value of
    the source port identifier), and the Destination Port Hashed Value argument (i.e., hashed value of the source
    destination identifier)
    to
    "Hashed Source SAS Address and Hashed Destination SAS Address"

Page: 176
Sequence number: 8
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    7.13.4.3 SL1 to SL2
    Change
    Source Port Hashed Value argument (i.e., hashed value of
    the source port identifier), and the Destination Port Hashed Value argument (i.e., hashed value of the source
    destination identifier)
    to
    "Hashed Source SAS Address and Hashed Destination SAS Address"

Page: 177
Sequence number: 7
Date: 3/1/2003 5:56:58 PM

Type: Note
    ACCEPT - DONE (slipped into SL2:SL0 transition text, following the local convention)
    7.13.5 SL2:Selected state
    This state machine needs to own the affiliation status for the port.
    This state needs to describe returning OPEN_REJECT (STP RESOURCES BUSY) when opened by an STP initiator which is not affiliated.

Page: 177
Sequence number: 8
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.13.5.3 SL2 to SL3
    Change:
    "transition shall pass .. to ..."
    to:
    "to transition shall include ..."

Page: 177
Sequence number: 9
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.13.5.3 SL2 to SL3
    Change:
    "transition shall pass .. to ..."
    to:
    "to transition shall include ..."

Page: 177
Sequence number: 10
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.13.5.3 SL2 to SL3
    Change:
    "transition shall pass .. to ..."
    to:
    "to transition shall include ..."

Page: 177
Sequence number: 11
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    7.13.4.2 SL2
    Change "request a ... by sending" to just "send"

Page: 177
Sequence number: 12
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    7.13.4.2 SL2
    Change "request a ... by sending" to just "send"

Page: 177
Sequence number: 13
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    7.13.4.2 SL2:SL0
    Change "request a ... by sending" to just "send"

Page: 177
Sequence number: 14
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE

7.13.4.2 SL2:SL0
        Change "request a ... by sending" to just "send"

Page: 177
Sequence number: 15
Date: 3/5/2003 3:55:49 PM
Type: Highlight
        ACCEPT - DONE
        7.13.4.2 SL2:SL0
        Change "request a ... by sending" to just "send"

Page: 177
Sequence number: 16
Date: 3/5/2003 3:55:49 PM
Type: Highlight
        ACCEPT - DONE
        7.13.4.2 SL2:SL0
        Change "request a ... by sending" to just "send"

Page: 177
Sequence number: 17
Date: 3/5/2003 3:55:49 PM
Type: Highlight
        ACCEPT - DONE
        7.13.4.3 SL2:SL3
        Change "request a ... by sending" to just "send"

Page: 177
Sequence number: 18
Date: 3/5/2003 3:55:49 PM
Type: Highlight
        ACCEPT - DONE
        7.13.4.3 SL2:SL3
        Change "request a ... by sending" to just "send"

Page: 177
Sequence number: 19
Date: 3/5/2003 3:55:49 PM
Type: Highlight
        ACCEPT - DONE
        7.13.4.3 SL2:SL3
        Change "request a ... by sending" to just "send"

Page: 178
Sequence number: 2
Date: 2/16/2003 11:40:20 AM
Type: Highlight
        ACCEPT - DONE
        7.13.6.1 SL3:Connected state description
        This state requests
        to
        This state shall request

Page: 178
Sequence number: 3
Date: 3/5/2003 3:55:49 PM
Type: Highlight
        ACCEPT - DONE
        7.13.7.1 SL4
        Change "request a ... by sending" to just "send"

Page: 178
Sequence number: 4
Date: 3/5/2003 3:55:49 PM
Type: Highlight
        ACCEPT - DONE
        7.13.7.1 SL4
        Change "request a ... by sending" to just "send"

Page: 178
Sequence number: 5
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    7.13.7.2 SL4:SL0
    Change "request a ... by sending" to just "send"

Page: 179
Sequence number: 2
Date: 2/9/2003 6:09:08 PM
Type: Highlight
    ACCEPT - DONE
    7.14.1 Overview
    Change
    Overview
    to
    XL state machine overview

Page: 179
Sequence number: 3
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    7.13.8.1 SL5
    Change "request a ... by sending" to just "send"

Page: 179
Sequence number: 4
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    7.13.8.1 SL5
    Change "request a ... by sending" to just "send"

Page: 179
Sequence number: 5
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    7.13.9.1 SL6
    Change "request a ... by sending" to just "send"

Page: 180
Sequence number: 8
Date: 3/5/2003 3:55:49 PM
Type: Note
    ACCEPT - DONE
    7.14.1 XL overview
    Change Phy Status from a request to a response throughout this section

Page: 180
Sequence number: 9
Date: 3/5/2003 3:55:49 PM
Type: Square
    ACCEPT - DONE
    7.14.1 XL state machine overview
    All the signals to/from the ECM, ECR, and BPP can be deleted in favor of the more detailed lists in chapter 4.

Page: 181
Sequence number: 2
Date: 3/1/2003 4:38:28 PM
Type: Note
    ACCEPT - DONE
    Figure 74 - XL state machine part 1
    Request Path, Arb Reject, etc. should be going down/coming from below

Page: 181
Sequence number: 3

Date: 3/5/2003 3:55:49 PM
Type: Note
    ACCEPT - DONE
    7.14.1 XL overview
    Figure 74 - XL part 1
    delete the arguments passed with transitions - just rely on the text to describe them (convention in other state diagrams)
    (from George Penokie)

Page: 182
Sequence number: 2
Date: 3/1/2003 4:38:28 PM
Type: Note
    ACCEPT - DONE
    Figure 75 - XL state machine part 2
    Transmit Break and Phy Status etc. should be requests going down

Page: 182
Sequence number: 3
Date: 3/5/2003 3:55:49 PM
Type: Note
    ACCEPT - DONE
    7.14.1 XL overview
    Figure 75 - XL part 2
    delete the arguments passed with transitions - just rely on the text to describe them (convention in other state diagrams)
    (from George Penokie)

Page: 183
Sequence number: 3
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    Figure 76 - XL part 3
    Change Close to CLOSE

Page: 183
Sequence number: 4
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    Figure 76 - XL part 3
    Change Close to CLOSE

Page: 183
Sequence number: 5
Date: 3/1/2003 4:38:28 PM
Type: Note
    ACCEPT - DONE
    Figure 76 - XL state machine part 3
    Transmit Break, Transmit Break, etc. should be going down/coming from below

Page: 184
Sequence number: 21
Date: 3/8/2003 12:31:17 PM
Type: Note
    ACCEPT - DONE (Tim Hoglund provided changes.)
    7.14.2 XL0:Idle state
    remove the XL0:Idle to XL9:Break transition. Don't want to reply to an inbound BREAK with one. Should work the same as SL
    which ignores them in its idle state.
    Also need to add XL3 to XL1 direct transition (see figuresin the end) and remove Transmit Break references above
    Tim will provide the list of changes

Page: 186
Sequence number: 21
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    7.14.5.1 XL3
    Phy Status confirmation
    should be a request.

Page: 186
Sequence number: 22
Date: 3/1/2003 4:38:28 PM
Type: Note
    ACCEPT - DONE
    7.14.5.2 XL3 to XL0
    Lowercase the a's and an's in the a)b)c) list.

Page: 186
Sequence number: 23
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    7.14.6.1 XL4:Open_Reject state description
    "the following"
    should be "one of the following"
    and c) needs an ; or at the end of it

Page: 188
Sequence number: 22
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    7.14.8.1 XL6
    Phy Status confirmation
    should be a request.

Page: 188
Sequence number: 23
Date: 3/1/2003 4:38:28 PM
Type: Note
    ACCEPT - DONE
    7.14.9.1 XL7
    Phy Status confirmation
    should be a request.

Page: 188
Sequence number: 24
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    7.14.8.2 XL6:XL0
    Change
    The XL7:XL0 transition
    to
    this transition
    wrong number and obsolete format

Page: 189
Sequence number: 19
Date: 3/1/2003 5:28:51 PM
Type: Note
    ACCEPT - DONE
    7.14.10.1 XL8:Close_Wait needs to mention invalid dwords too
    pull out ERROR stuff from DWS; just have it output valid dword or invalid dword.
    Let this state machine convert invalid dwords to ERROR or SATA_ERROR as appropriate.

Page: 189
Sequence number: 20
Date: 2/9/2003 12:12:18 PM
Type: Highlight
    REJECT (but moved time reference to intro table instead)
    millisecond should be ms

Page: 189
Sequence number: 21
Date: 3/1/2003 4:38:28 PM
Type: Note

ACCEPT - DONE
7.14.10.1 XL8
Phy Status confirmation
should be a request.

Page: 190
Sequence number: 12
Date: 2/4/2003 6:23:51 PM
Type: Note
ACCEPT - DONE
Delete this paragraph, which conflicts with 7.7.3 (Brian Day's comment)

Page: 190
Sequence number: 13
Date: 3/1/2003 4:38:28 PM
Type: Note
ACCEPT - DONE
7.15 Rate matching
Move this section earlier, ahead of the SL and XL sections.
In expanders, the XL state machine enforces rate matching, so the description of it should be ahead of the XL section. Putting it between SL and XL would seem odd, so before SL should do.

Page: 190
Sequence number: 14
Date: 3/8/2003 12:31:33 PM
Type: Note
ACCEPT - TODO (per 2/25 meeting. Rules put here for now but need to move to port layer.)
add rules that wide ports shall not reject connection requeests based on their outgoing requests, and that if multiple connections are established a wide port shall transmit at least one frame before closing one fo the connections).
Move these rules to the port layer when the rewrite is stable - they're not really link layer rules.

Page: 191
Sequence number: 9
Date: 2/20/2003 9:33:24 AM
Type: Note
ACCEPT - DONE
7.16.2 SSP frame transmission and reception
add CREDIT_BLOCKED to the list of primitives that may follow a DONE

Page: 191
Sequence number: 10
Date: 2/20/2003 9:33:24 AM
Type: Highlight
ACCEPT - DONE
7.16.2 SSP frame transmission and reception
DONE (NORMAL)
to
DONE in this section, since these statements are true for other versions of DONE

Page: 192
Sequence number: 1
Date: 3/1/2003 5:48:54 PM
Type: Highlight
ACCEPT - DONE (changed almost all "SSP port"s to "SSP phy"s)
7.16.5 Interlocked frames
SSP port
to
SSP phy (or similar)
throughout this section. Interlock rules are per-connection not crossing wide links

Page: 193
Sequence number: 8
Date: 3/5/2003 4:28:07 PM
Type: Note
ACCEPT - DONE (added text to SL_IR, SL, SSP, and SMP receiver sections)
7.16.7.1 SSP line layer overview
somewhere here, and in SMP link layer, and maybe XL link layer needs to say:
Unless otherwise stated within the state description, all disparity errors, illegal characters, and unexpected primitives (i.e., any primitive not described in the description of the NNN state) received within any NNN state shall be ignored.

Page: 193
Sequence number: 9
Date: 2/9/2003 6:09:08 PM
Type: Highlight
    ACCEPT - DONE
    7.16.7.1 Overview
    Change
    Overview
    to
    SSP link layer state machines overview

Page: 193
Sequence number: 10
Date: 2/18/2003 7:07:01 PM
Type: Highlight
    ACCEPT - DONE
    7.16.6 Preparing to close an SSP connection
    Change
    shall transmit DONE
    to
    should transmit DONE
    The port layer triggers this, and it says should

Page: 193
Sequence number: 11
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.6 Preparing to close an SMP connection
    Change
    Preparing to close
    to
    Closing
    and pull in protocol-specific CLOSE text from 7.12.7 Closing a connection section

Page: 193
Sequence number: 12
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.6 Preparing to close an SSP connection
    imbalanced
    to
    not balanced

Page: 194
Sequence number: 11
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE
    7.16.7 SSP state machines
    Create a separate subclause for each state machine, and move each state machine overview into the first subclause of that
    subclause.
    This will match all other state machines in the document

Page: 195
Sequence number: 2
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.1 SSP state machines overview
    and global
    Change
    Tx Balanced Status
    to
    Tx Balance Status
    everywhere

Page: 195
Sequence number: 3
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.1 SSP state machines
    Figure 82 - SSP state machines
    Change
    EOF Transmitted
    to
    Frame Transmitted

Page: 196
Sequence number: 1
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.1 SSP state machines overview
    and global
    Change
    Rx Balanced Status
    to
    Rx Balance Status
    everywhere

Page: 197
Sequence number: 4
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE
    7.16.7.1 SSP state machine
    Figure 84 SSP link layer state machine part 3
    and related text
    Change Transmit SOF/frame/EOF to Transmit Frame
    Change SOF/frame/EOF Transmitted to Frame Transmitted
    This matches the style used in SL_IR and SMP state machines and looks more like a parameter name

Page: 197
Sequence number: 5
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.2 SSP_TIM state
    Change balance and unbalance references in this subclause to
    "ACK/NAK count is {not} balanced"

Page: 197
Sequence number: 6
Date: 2/18/2003 7:09:50 PM
Type: Highlight
    ACCEPT - DONE
    7.16.7.2 SSP_TIM Tx Interlock Monitor state
    Change
    EOF Transmitted
    to
    Frame Transmitted

Page: 197
Sequence number: 7
Date: 2/18/2003 7:09:58 PM
Type: Highlight
    ACCEPT - DONE
    7.16.7.2 SSP_TIM Tx Interlock Monitor state
    Change
    EOF Transmitted
    to
    Frame Transmitted

Page: 197

Sequence number: 8
Date: 2/18/2003 7:10:04 PM
Type: Highlight
    ACCEPT - DONE
    7.16.7.2 SSP_TIM Tx Interlock Monitor state
    Change
    EOF Transmitted
    to
    Frame Transmitted

Page: 198
Sequence number: 3
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.2 SSP_TIM state
    Change balance and unbalance references in this subclause to
    "ACK/NAK count is {not} balanced"

Page: 198
Sequence number: 4
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.2 SSP_TIM state
    Change balance and unbalance references in this subclause to
    "ACK/NAK count is {not} balanced"

Page: 198
Sequence number: 5
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.2 SSP_TIM state
    Change balance and unbalance references in this subclause to
    "ACK/NAK count is {not} balanced"

Page: 198
Sequence number: 6
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.2 SSP_TIM state
    Change balance and unbalance references in this subclause to
    "ACK/NAK count is {not} balanced"

Page: 198
Sequence number: 7
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.2 SSP_TIM state
    Change balance and unbalance references in this subclause to
    "ACK/NAK count is {not} balanced"

Page: 198
Sequence number: 8
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.2 SSP_TIM state
    Change balance and unbalance references in this subclause to
    "ACK/NAK count is {not} balanced"

Page: 199
Sequence number: 8
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE

7.16.7.5.3 SSP_TF1 to SSP_TF4:Indicate_Done_Tx
"this transition shall pass ... to the Tx_Wait state."
How can a transition pass something to another state? Change the "shall pass ... to ... state" to "shall include ...".

Page: 199
Sequence number: 9
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.5.2 SSP_TF1 to SSP_TF2
    Change
    this transition shall pass a Close Connection argument to the
    Tx_Wait state.
    to
    this transition shall include a Close Connection argument

Page: 199
Sequence number: 10
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.5.2 SSP_TF1 to SSP_TF2
    Change:
    this transition shall pass a Transmit Unbalanced Frame
    argument to the Tx_Wait state.
    to
    shall include a Transmit Unbalanced Frame argument.

Page: 199
Sequence number: 11
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.5.2 SSP_TF1 to SSP_TF2
    Change
    transition shall pass a Transmit Balanced Frame
    argument to the Tx_Wait state.
    to
    transition shall include a Transmit Balanced Frame
    argument

Page: 199
Sequence number: 12
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.5.2 SSP_TF1 to SSP_TF2
    Change
    Transmit Balanced Frame
    to
    Transmit Frame Balance Required

Page: 199
Sequence number: 13
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.5.2 SSP_TF1 to SSP_TF2
    Change
    Transmit Unbalanced Frame
    to
    Transmit Frame Balance Not Required

Page: 199
Sequence number: 14
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.6.1 SSP_TF2 state description

Change
Transmit Balanced Frame
to
Transmit Frame Balance Required

Page: 199
Sequence number: 15
Date: 2/16/2003 11:40:20 AM
Type: Highlight
　　ACCEPT - DONE
　　7.16.7.6.1 SSP_TF2 state description
　　Change
　　Transmit Nonbalanced Frame
　　to
　　Transmit Frame Balance NotRequired

Page: 199
Sequence number: 16
Date: 2/16/2003 11:40:20 AM
Type: Highlight
　　ACCEPT - DONE
　　7.16.7.6.2 SSP_TF2 to SSP_TF3
　　Change
　　Transmit Balanced Frame
　　to
　　Transmit Frame Balance Required

Page: 200
Sequence number: 9
Date: 2/16/2003 11:40:20 AM
Type: Highlight
　　ACCEPT - DONE
　　7.16.7.6.3 SSP_TF2 to SSP_TF4
　　Change:
　　"transition shall pass .. to ..."
　　to:
　　"to transition shall include ..."

Page: 200
Sequence number: 10
Date: 2/16/2003 11:40:20 AM
Type: Highlight
　　ACCEPT - DONE
　　7.16.7.6.3 SSP_TF2 to SSP_TF4
　　Change:
　　"transition shall pass .. to ..."
　　to:
　　"to transition shall include ..."

Page: 200
Sequence number: 11
Date: 2/16/2003 11:40:20 AM
Type: Highlight
　　ACCEPT - DONE
　　7.16.7.6.3 SSP_TF2 to SSP_TF4
　　Change:
　　"transition shall pass .. to ..."
　　to:
　　"to transition shall include ..."

Page: 200
Sequence number: 12
Date: 2/16/2003 11:40:20 AM
Type: Highlight
　　ACCEPT - DONE
　　7.16.7.6.3 SSP_TF2 to SSP_TF4
　　Change:
　　"transition shall pass .. to ..."
　　to:

"to transition shall include ..."

Page: 200
Sequence number: 13
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.6.3 SSP_TF2 to SSP_TF4
    In
    "is received"
    add "parameter" before "is"

Page: 200
Sequence number: 14
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.6.2 SSP_TF2 to SSP_TF3
    Change
    Transmit Nonbalanced Frame
    to
    Transmit Frame Balance Not Required

Page: 200
Sequence number: 15
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.6.3 SSP_TF2 to SSP_TF4
    Change
    Transmit Nonbalanced Frame
    to
    Transmit Frame Balance Not Required

Page: 200
Sequence number: 16
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.6.3 SSP_TF2 to SSP_TF4
    Change
    Transmit Nonbalanced Frame
    to
    Transmit Frame Balance Not Required

Page: 200
Sequence number: 17
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.6.3 SSP_TF2 to SSP_TF4
    Change
    Transmit Balanced Frame
    to
    Transmit Frame Balance Required

Page: 200
Sequence number: 18
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.6.3 SSP_TF2 to SSP_TF4
    Change
    Transmit Balanced Frame
    to
    Transmit Frame Balance Required

Page: 200
Sequence number: 19

Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.7 SSP_TF3
    Change Transmit SOF/frame/EOF
    to
    Transmit Frame

Page: 200
Sequence number: 20
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.7 SSP_TF3
    Change Transmit SOF/frame/EOF
    to
    Transmit Frame

Page: 200
Sequence number: 21
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.7 SSP_TF3
    Change SOF/frame/EOF Transmitted
    to
    Frame Transmitted

Page: 200
Sequence number: 22
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.7 SSP_TF3
    Change SOF/frame/EOF Transmitted
    to
    Frame Transmitted

Page: 200
Sequence number: 23
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.2 SSP_TIM Tx Interlock Monitor state
    Change
    EOF Transmitted
    to
    Frame Transmitted
    (it is equivalent in all respects to Frame Transmitted from the SSP receiver, so it seems ok for them to have the same name)

Page: 200
Sequence number: 24
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    7.16.7.8 SSP_TF4
    Change "request a ... by sending" to just "send"

Page: 200
Sequence number: 25
Date: 3/8/2003 12:22:29 PM
Type: Note
    ACCEPT - DONE (added some shall occurs)
    7.16.7.6.3 SSP_TF2:Tx_Wait to SSP_TF4:Indicate_DONE_Tx
    ***
    There is no "transition shall occur" in this section. Just a lot of text on what arguments are passed in the transition.
    (from George Penokie)

Page: 201

Sequence number: 5
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.9 SSP_RF1 state
    Unbalanced should be Not Balanced

Page: 201
Sequence number: 6
Date: 2/16/2003 11:40:20 AM
Type: Square
    ACCEPT - DONE
    7.16.7.9 SSP_RF1 Receive Frame state
    ***
    This is broken:
    "If the frame CRC is good and the frame contained no invalid data dwords, this state shall send the Frame Received (Successful)
    parameter to the SSP_TAN1:Idle state and:
    a) if the last Rx Credit Status parameter received had an argument of Credit Extended send the Frame Received (ACK/NAK
    Balanced) confirmation to the port layer; or
    b) if the last Rx Credit Status parameter received had an argument of Credit Exhausted send a Frame Received (ACK/NAK
    Unbalanced) confirmation to the port layer."
    It is confusing the concepts of credit (RRDY granted or not) with Balance (ACK/NAKs matching or not for interlocking certain
    frames).
    If there is no credit available, a frame cannot be received (the purpose of credit is indicating a frame could be accepted into a
    buffer).   That is already mentioned earlier.
    This paragraph needs to describe receiving frames with or without balance, and pass that up to the port layer.

Page: 202
Sequence number: 9
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.12.2 SSP_TC1 to SSP_TC2
    Change:
    "transition shall pass .. to ..."
    to:
    "to transition shall include ..."

Page: 202
Sequence number: 10
Date: 2/19/2003 10:55:06 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.11 SSP_RIM1 state
    Change
    Unbalanced
    to
    Not Balanced

Page: 202
Sequence number: 11
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    7.16.7.13.1 SSP_TC2
    Change "request a ... by sending" to just "send"

Page: 202
Sequence number: 12
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    7.16.7.13.1 SSP_TC2
    Change "request a ... by sending" to just "send"

Page: 202
Sequence number: 13
Date: 3/8/2003 4:06:53 PM
Type: Note

REFER PROTOCOL WG
7.16.7.14 SSP_TAN1 state machine
***
The TC1 and TC2 states should be merged into one. As written, the state machine goes to TC2 and waits for an RRDY Transmitted. While waiting, it will miss incoming Frame Transmitted signals which trigger incoming Credit Status messages (that only TC1 looks at). A single state pseudo-state machine should suffice for the TC functionality.

Page: 203
Sequence number: 2
Date: 2/16/2003 11:40:20 AM
Type: Highlight
ACCEPT - DONE
7.16.7.14.2 SSP_TAN1 to SSP_TAN2
Change:
"transition shall pass .. to ..."
to:
"to transition shall include ..."

Page: 203
Sequence number: 3
Date: 2/16/2003 11:40:20 AM
Type: Highlight
ACCEPT - DONE
7.16.7.14.2 SSP_TAN1 to SSP_TAN2
Change:
"transition shall pass .. to ..."
to:
"to transition shall include ..."

Page: 203
Sequence number: 4
Date: 3/5/2003 3:55:49 PM
Type: Highlight
ACCEPT - DONE
7.16.7.15.1 SSP_TAN2
Change "request a ... by sending" to just "send"

Page: 203
Sequence number: 5
Date: 3/5/2003 3:55:49 PM
Type: Highlight
ACCEPT - DONE
7.16.7.15.1 SSP_TAN2
Change "request a ... by sending" to just "send"

Page: 203
Sequence number: 6
Date: 3/8/2003 4:10:26 PM
Type: Note
REFER PROTOCOL WG
7.16.7.14 SSP_TAN1 state machine
***
The TAN1 and TAN2 states should be merged into one. As written, the state machine goes to TAN2 and waits for an ACK Transmitted. While waiting, it will miss incoming Frame Transmitted signals (that only TAN1 looks at). A single state pseudo-state machine should suffice for the TAN functionality.

Page: 204
Sequence number: 7
Date: 3/1/2003 4:38:34 PM
Type: Highlight
ACCEPT - DONE (redid the table as a figure, showing idle dwords before OPEN_ACCEPT)
7.17.1 STP frame transmission
The expander shall not send SATA_X_RDY until after receiving the OPEN_ACCEPT
(from Bill Galloway)

Page: 204
Sequence number: 8
Date: 3/1/2003 4:38:28 PM
Type: Note

ACCEPT - DONE
7.17.1 STP frame transmission
Table 84 - SATA target port transmitting a frame
Redo this table as a figure, showing both directions on both physical links. Move down below the open and close sections.

Page: 204
Sequence number: 9
Date: 3/1/2003 4:38:28 PM
Type: Note
ACCEPT - DONE
7.17.1 STP frame transmission
Table 85 - SATA initiator port transmitting a frame
Redo this table as a figure, showing both directions on both physical links. Move down below the open and close sections.

Page: 205
Sequence number: 8
Date: 2/20/2003 9:33:24 AM
Type: Note
ACCEPT - DONE (per Jan WG discussion)
7.17.2 STP flow control
***
Major rewrite needed to implement the (20 + 4n) rule described in comment in 7.1.6.3 SATA_HOLD and SATA_HOLDA.
All rules moved out of 7.1.6.3 to here. New rules for SAS and SATA receivers and transmitters.
Figure updated to match.

Page: 206
Sequence number: 1
Date: 2/20/2003 9:33:24 AM
Type: Note
ACCEPT - DONE
7.17.2 STP flow control
Figure 86 - STP expander device buffering
Use red-based colors for HOLD and green-based for R_IP.

Page: 206
Sequence number: 2
Date: 2/20/2003 9:33:24 AM
Type: Note
ACCEPT - DONE
7.17.2 STP flow control
Figure 86 - STP expander device buffering
Show data dword latency steps at the top; it doesn't flow through as smoothly as indicated.

Page: 206
Sequence number: 3
Date: 2/20/2003 9:33:24 AM
Type: Note
ACCEPT - DONE
7.17.2 STP flow control
Figure 86 - STP expander device buffering
Use different shades of blue for different data dword sources at bottom.

Page: 206
Sequence number: 4
Date: 2/20/2003 9:33:24 AM
Type: Note
ACCEPT - DONE
7.17.2 STP flow control
Figure 86 - STP expander device buffering
Add comments to buffers at top.

Page: 206
Sequence number: 5
Date: 2/20/2003 9:33:24 AM
Type: Note
ACCEPT - DONE
7.17.2 STP flow control
Figure 86 - STP expander device buffering
Get rid of upstream/downstream terminology, which is no longer used in the text.

Page: 207
Sequence number: 12
Date: 3/1/2003 3:41:48 PM
Type: Note
    ACCEPT - DONE
    7.17.4 STP link layer
    Mention that this is modified to talk to a port layer, talk to the SL state machine for connection management, and implement
    affiliations.

Page: 207
Sequence number: 13
Date: 3/1/2003 4:02:43 PM
Type: Highlight
    ACCEPT - DONE
    initiator could be a target too... change to STP ports
    (global search for STP initiator and check if targets are also possible)

Page: 207
Sequence number: 14
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.18.3 Preparing to close an SMP connection
    Change
    Preparing to close
    to
    Closing
    and pull in protocol-specific CLOSE text from 7.12.7 Closing a connection section

Page: 207
Sequence number: 15
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    7.17.3 Preparing to close an STP connection
    Change
    Preparing to close
    to
    Closing
    and pull in protocol-specific CLOSE text from 7.12.7 Closing a connection section

Page: 207
Sequence number: 16
Date: 2/20/2003 9:33:24 AM
Type: Highlight
    ACCEPT - DONE
    7.17.3 Preparing to close an STP connection
    "An initiator or expander device shall transmit CLOSE after receiving a CLOSE."
    This sounds like CLOSE is a reply when it could cross on the wire. Add "if it has not already transmitted CLOSE."

Page: 208
Sequence number: 11
Date: 1/25/2003 11:53:02 AM
Type: Highlight
    ACCEPT - DONE
    7.18.4.1 Overview (SMP link layer)
    Enable Disable SSP should be Enable Disable SMP (two times on the page)

Page: 208
Sequence number: 12
Date: 2/9/2003 6:09:08 PM
Type: Highlight
    ACCEPT - DONE
    7.18.4.1 Overview
    Change
    Overview
    to
    SMP link layer state machines overview

Page: 208
Sequence number: 13
Date: 2/16/2003 11:40:20 AM
Type: Strikeout
    ACCEPT - DONE
    7.18.3 Preparing to close an SMP connection
    Since NEA loopback was removed, Delete:
    The source device and destination device may leave the connection open to run loopback tests (see 7.10).

Page: 209
Sequence number: 2
Date: 2/8/2003 11:41:02 AM
Type: Note
    ACCEPT - DONE
    7.18.4.1 SMP link layer overview
    Move the initiator picture into the initiator subclause

Page: 210
Sequence number: 3
Date: 2/1/2003 3:55:21 PM
Type: Note
    ACCEPT - DONE
    7.18.4.1 SMP link layer overview
    Move the target picture into the target subclause

Page: 210
Sequence number: 4
Date: 2/1/2003 4:36:05 PM
Type: Highlight
    ACCEPT - DONE (renamed but kept SMP_IL and SMP_TL acronyms)
    7.17.4.2 SMP Initiator Link state machine
    reword names of the SMP state machines (Link is misused)

Page: 210
Sequence number: 5
Date: 3/1/2003 4:03:02 PM
Type: Note
    ACCEPT - DONE
    7.18.4.1 SMP link layer target picture
    Request Break and Request Close are broken; states within the same state machine don't send parameters to each other

Page: 210
Sequence number: 6
Date: 2/20/2003 9:33:24 AM
Type: Strikeout
    ACCEPT - DONE
    7.18.4.2 SMP_IL1 state
    Delete:
    and there is
    no active connection.
    This state machine would not be here if there was no connection.
    (from IBM)

Page: 211
Sequence number: 4
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    7.18.4.2.2.1 SMP_IL2
    Change "request a ... by sending" to just "send"

Page: 212
Sequence number: 1
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE
    7.18.4.3.2.1 SMP_TL2
    Change "request a ... by sending" to just "send"

Page: 213
Sequence number: 7
Date: 2/9/2003 6:09:08 PM
Type: Highlight
    ACCEPT - DONE
    8.1 Overview
    Change
    Overview
    to
    Port layer overview

Page: 214
Sequence number: 9
Date: 2/9/2003 6:09:08 PM
Type: Strikeout
    ACCEPT - DONE
    8.2 Port layer timers and counters
    Delete:
    Port layer

Page: 215
Sequence number: 8
Date: 2/9/2003 6:09:08 PM
Type: Strikeout
    ACCEPT - DONE
    8.3.1 Overview
    Change
    Overview
    to
    PL_OC state machine overview

Page: 221
Sequence number: 9
Date: 2/9/2003 6:09:08 PM
Type: Strikeout
    ACCEPT - DONE
    8.4.1 Overview
    Change
    Overview
    to
    PL_PM state machine overview

Page: 229
Sequence number: 28
Date: 1/25/2003 11:59:10 AM
Type: Note
    ACCEPT - DONE
    9.2.1 SSP frame format
    Target port transfer tag paragraph
    "unique for the I_T nexus" is wrong - it should be "unique for the L_Q portion of the nexus." The connection tag is unique for the
    I_T; an SSP frame is sent inside a connection, so the I_T is already known. This is used to distinguish between L_Qs.

Page: 229
Sequence number: 29
Date: 1/23/2003 1:31:50 PM
Type: Note
    ACCEPT - DONE
    9.2.1 SSP frame format
    Table 89 - frame type field
    Add a "Reference" column

Page: 229
Sequence number: 30
Date: 2/2/2003 11:08:16 AM
Type: Note
    ACCEPT - DONE
    Mention that the TASK frame TAG field serves as the optional Association argument in SAM

Page: 230
Sequence number: 13
Date: 1/22/2003 5:50:09 PM
Type: Highlight
    ACCEPT - DONE
    9.2.1 SSP Frame header
    is should be contains

Page: 230
Sequence number: 14
Date: 2/2/2003 12:12:04 PM
Type: Highlight
    ACCEPT - DONE
    9.2.1 SSP frame format
    Relative offset field paragraph
    indicates should be contains

Page: 231
Sequence number: 6
Date: 2/8/2003 11:40:57 AM
Type: Highlight
    ACCEPT - DONE
    9.2.2.1 COMMAND information unit
    ordered attribute
    should be
    ordered task attribute

Page: 232
Sequence number: 5
Date: 2/15/2003 4:08:01 PM
Type: Highlight
    ACCEPT - DONE (but whole sentence changed later)
    9.2.2.2 TASK information unit
    SPC-2 should be SAM-3

Page: 232
Sequence number: 10
Date: 2/2/2003 2:59:13 PM
Type: Note
    ACCEPT - DONE
    9.2.2.2 TASK information unit
    Table 93 - Task management functions
    Add columns showing when LOGICAL UNIT NUMBER and TAG OF TASK TO BE MANAGED fields are used

Page: 235
Sequence number: 4
Date: 2/2/2003 12:42:20 PM
Type: Note
    ACCEPT - DONE (per Jan WG)
    9.2.2.5.1 RESPONSE IU overview
    Add:
    The maximum size of the response IU is the maximum size of any IU
    in an SSP frame (see 9.2.1).

Page: 235
Sequence number: 5
Date: 2/16/2003 11:40:20 AM
Type: Strikeout
    ACCEPT - DONE
    9.2.2.5 RESPONSE information unit
    Remove LIST from SENSE DATA LIST LENGTH and RESPONSE DATA LIST LENGTH.
    That was the term used by SRP. However, the fields they apply to are called SENSE DATA and RESPONSE DATA not SENSE
    DATA LIST and RESPONSE DATA LIST.

Page: 237
Sequence number: 7
Date: 1/6/2003 12:26:10 PM
Type: Highlight
    ACCEPT - DONE

9.2.2.5.4 REPONSE information unit SENSE_DATA format
In the SENSE DATA paragraph, change contains to shall contain to match the wording in the other paragraphs.

Page: 237
Sequence number: 10
Date: 1/22/2003 3:43:24 PM
Type: Highlight
    ACCEPT - DONE
    9.2.3 Frame sequences
    Change Initiator port to SSP initiator port and Target port to SSP target port in all the frame sequence figures (94, 95, 96, 97)

Page: 239
Sequence number: 9
Date: 3/5/2003 4:41:09 PM
Type: Note
    ACCEPT - DONE (changed to "and does not receive" with an e.g. of times out, or the connection is broken)
    9.2.4 SSP transport layer handling of link layer errors
    Everywhere this says "and times out waiting for an ACK or NAK" it also needs to include loss of dword synchronization (phy layer problems) and BREAK before an ACK or NAK (which the transport layer passes to the application layer the same as an ACK/NAK timeout) (i.e. any connection closed with ACK/NAK not balanced)
    (from George Penokie IBM)

Page: 239
Sequence number: 10
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE (and does not receive, e.g. ...)
    9.2.4.1 COMMAND frame
    Any where this wording occurs << times out waiting for an ACK or NAK, >> there needs to be a statement added about OOB disconnect and BREAK when ACK/NAK are not balanced.
    (from George Penokie)

Page: 239
Sequence number: 11
Date: 3/5/2003 3:55:49 PM
Type: Highlight
    ACCEPT - DONE (and does not receive, e.g. ...)
    9.2.4.2 TASK frame
    Any where this wording occurs << times out waiting for an ACK or NAK, >> there needs to be a statement added about OOB disconnect and BREAK when ACK/NAK are not balanced.
    (from George Penokie)

Page: 239
Sequence number: 12
Date: 3/5/2003 3:55:49 PM
Type: Note
    ACCEPT - DONE (and does not receive, e.g. ...)
    9.2.4.3 XFER_RDY frame
    Any where this wording occurs << times out waiting for an ACK or NAK, >> there needs to be a statement added about OOB disconnect and BREAK when ACK/NAK are not balanced.
    (from George Penokie)

Page: 240
Sequence number: 11
Date: 1/6/2003 3:58:16 PM
Type: Highlight
    ACCEPT - DONE (changed to 'times out waiting for")
    9.2.4.5 RESPONSE frame
    Change "does not receive an ACK or NAK" to "times out waiting for an ACK or NAK"

Page: 240
Sequence number: 14
Date: 3/5/2003 3:55:49 PM
Type: Note
    ACCEPT - DONE (and does not receive, e.g. ...)
    9.2.4.4 DATA frame
    Any where this wording occurs << times out waiting for an ACK or NAK, >> there needs to be a statement added about OOB disconnect and BREAK when ACK/NAK are not balanced.
    (from George Penokie)

Page: 240
Sequence number: 15
Date: 3/5/2003 3:55:49 PM
Type: Note
    ACCEPT - DONE (and does not receive, e.g. ...)
    9.2.4.5 RESPONSE frame
    Any where this wording occurs << times out waiting for an ACK or NAK, >> there needs to be a statement added about OOB
    disconnect and BREAK when ACK/NAK are not balanced.
    (from George Penokie)

Page: 241
Sequence number: 5
Date: 2/2/2003 3:04:14 PM
Type: Highlight
    ACCEPT - DONE (Jan WG)
    Change may to shall
    Also change may to shall in the state machine 9.2.6.2.2.1

Page: 241
Sequence number: 6
Date: 2/2/2003 2:51:51 PM
Type: Highlight
    ACCEPT - DONE (changed last "it' to "the command" in 3 paragraphs)
    9.2.5.2 Initiator port error handling
    which it?

Page: 241
Sequence number: 7
Date: 2/15/2003 5:50:51 PM
Type: Highlight
    ACCEPT - DONE (change made. 03-088 makes this request to change names in SPC-3.)
    Rename this to DATA OFFSET ERROR since the relative offset field is being renamed DATA OFFSET or REQUESTED OFFSET
    everywhere else

Page: 241
Sequence number: 8
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE (per Feb 11 call - based on Quantum comment in 9.2.2.2)
    9.2.5.1 Target port error handling
    Add TASK frame with bad LOGICAL UNIT NUMBER - generate a RESPONSE frame with RESPONSE_DATA of INVALID
    LOGICAL UNIT NUMBER

Page: 242
Sequence number: 21
Date: 2/8/2003 12:35:19 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.2.1 Initiator device state machines overview
    delete several

Page: 242
Sequence number: 22
Date: 2/9/2003 12:10:03 PM
Type: Square
    ACCEPT - DONE
    9.2.6.1 SSP transport layer state machines overview
    Simplify this list; merge data services in with the rest of the transport protocol services
    Get rid of initiator/target references

Page: 242
Sequence number: 23
Date: 2/9/2003 6:09:08 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.2.1 Overview
    Change
    Overview

to
<new title> overview

Page: 242
Sequence number: 24
Date: 2/9/2003 6:09:08 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.1 Overview
    Change
    Overview
    to
    SSP transport layer state machines overview

Page: 242
Sequence number: 25
Date: 3/5/2003 4:40:17 PM
Type: Note
    ACCEPT - TODO (needs to coordinate with port layer)
    9.2.6 SSP transport layer state machines
    ***
    Need to clarify that the confirmations from the port layer to the SSP transport layer like Transmission Status always contain the
    destination SAS address and tag, so they can be routed to the appropriate per-tag state machines.
    The frame router could do this, but that would change every confirmation into a parameter going into the other states.

Page: 244
Sequence number: 10
Date: 2/9/2003 12:10:03 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.2.1 ST state machines overview
    Figure 96 - ST initiator device
    move Delivery Failure near the source of the arrow

Page: 244
Sequence number: 11
Date: 3/1/2003 4:38:28 PM
Type: Note
    ACCEPT - DONE
    9.2.6.2.1 ST_I state machines
    Add Transport Reset indication going upstream from ST_IFR1

Page: 245
Sequence number: 14
Date: 1/30/2003 3:26:53 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.2.2.1 ST_ISF1 state description
    delete the in "tag of the task to be managed" to match the field name

Page: 245
Sequence number: 15
Date: 1/30/2003 3:54:10 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.2.2.1 ST_ISF1: state description
    The 2nd+ a)b) lists both need to include logical unit number (it's missing in the Send Task Management list) and should list it
    ahead of the tag (Send SCSI Command has it second not first)

Page: 245
Sequence number: 16
Date: 2/8/2003 3:00:34 PM
Type: Strikeout
    ACCEPT - DONE
    Delete
    The request may also contain the initiator connection tag to be used in any OPEN address frame.
    The a)b) list above already includes initiator connection tag

Page: 245

Sequence number: 17
Date: 2/20/2003 9:33:24 AM
Type: Strikeout
ACCEPT - DONE
9.2.6.2.2 ST_ISF1 state description
Remove
d) source SAS address.
as an argument from the application layer (part of making the transport layer part of the port object)

Page: 246
Sequence number: 16
Date: 2/8/2003 11:40:57 AM
Type: Highlight
ACCEPT - DONE
9.2.6.2.2.1 ST_ISF1 Overview
attribute
should be
parameter

Page: 246
Sequence number: 17
Date: 2/20/2003 9:33:24 AM
Type: Underline
ACCEPT - DONE
9.2.6.2.2.1 ST_ISF1 state description
After
e) source SAS address.
add "set to the SAS address of the SSP initiator port"
(part of making the transport layer part of the port object)

Page: 246
Sequence number: 18
Date: 3/1/2003 4:38:34 PM
Type: Note
ACCEPT - DONE (also changed "Acknowledgement" to "Acknowledge" in a few places)
9.2.6 SSP transport layer
and global
Change Cancel Acknowledge into Transmission Status (Cancel Acknowledge)
this means every Transmit Frame just gets one kind of response

Page: 247
Sequence number: 12
Date: 1/30/2003 3:56:30 PM
Type: Highlight
ACCEPT - DONE
9.2.6.2.3.1 ST_ISF2 state description
The first two a)b) lists should include logical unit number and include it before tag

Page: 247
Sequence number: 13
Date: 1/30/2003 3:58:03 PM
Type: Highlight
ACCEPT - DONE
9.2.6.2.4.1 ST_ISF3 state description
logical unit number should be included ahead of tag;

Page: 247
Sequence number: 14
Date: 2/9/2003 12:10:03 PM
Type: Highlight
ACCEPT - DONE
9.2.6.2.4 ST_ISF3
and global
Change
Prepare_Send_Data_Out
to
Prepare_Data_Out
to match other states and simplify

Page: 247
Sequence number: 15
Date: 2/9/2003 12:10:03 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.2.3 ST_ISF2
    and global
    Change
    Prepare_Command_Request
    to
    Prepare_Command_Task
    to match other states and simplify

Page: 248
Sequence number: 9
Date: 2/9/2003 12:10:03 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.2.6 ST_IRD2
    and global
    Change:
    Process_Received_Data_In
    to:
    Process_Data_In
    to match other states and simplify

Page: 248
Sequence number: 10
Date: 2/9/2003 12:10:03 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.2.7 ST_IPR1
    and global
    Change
    Process_Received_Response
    to
    Process_Response
    to match other states and simplify

Page: 248
Sequence number: 11
Date: 2/9/2003 12:10:03 PM
Type: Square
    ACCEPT - DONE
    9.2.6.2.6 ST_IRD2:Process_Received_Data_In
    and global
    The ST_IRD2:Process_Received_Data_In state does nothing useful and can be merged into the ST_IRD1 state. This reduces the
    ST_IRD state machine to a single state. The name should be changed from IRD to IPD (initiator process data). Update figures
    and all references to ST_IRD.

Page: 249
Sequence number: 8
Date: 2/8/2003 2:30:41 PM
Type: Strikeout
    ACCEPT - DONE
    Delete:
    a DONE Received confirmation is received;
    Based on other comments, it is vendor-specific how an initiator decides to reuse tags. The state machines in the standard won't
    pass up DONEs for this purpose.

Page: 250
Sequence number: 25
Date: 2/2/2003 4:28:30 PM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.3 Target device state machines overview
    With SAS's bizarre state machines, there are cases where ST_TTS1 is not the initial state. Delete "(initial state)".

Page: 250

Sequence number: 26
Date: 2/9/2003 12:10:03 PM
Type: Note
    ACCEPT - DONE
    The target state machines do not comprehend first burst. They need to.
    When Receive Data-Out arrives, it must be serviced first from the first burst data buffer. When that runs out, XFER_RDYs are generated.
    Data-Out may appear before the first Receive Data-Out call, so the state machine has to be ready to go to TTS4 immediately.
    TTS4 needs to save the first burst data in a buffer.
    Changes include:
    * Change the Prepare_XFER_RDY outbound transition from Receive_Data_Out to Send_Frame directly. There is no sense in going back to Receive_Data_Out; it does no work. Remove the Receive_Data_Out to Send_Frame transition.
    * Keep the entry to Receive_Data_out from the frame router. This lets it check the first burst amount before deciding if an XFER_RDY is necessary.
    * Let the TTS state machine start in TTS4 if first burst data arrives.

Page: 250
Sequence number: 27
Date: 2/9/2003 6:09:08 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.1 Overview
    Change
    Overview
    to
    <new title> overview

Page: 250
Sequence number: 28
Date: 3/1/2003 4:38:28 PM
Type: Note
    ACCEPT - DONE
    9.2.6.2.8 ST_IFR1 state
    Add Transport Reset indication going upstream from ST_IFR1 when HARD_RESET Received arrives

Page: 250
Sequence number: 29
Date: 3/1/2003 4:38:28 PM
Type: Note
    ACCEPT - DONE (delete the Frame Received (Frame Failed) portion)
    9.2.6.2.8 ST_IFR1
    Remove Frame Failed - it's a nonexistent signal

Page: 252
Sequence number: 24
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE (per Feb 11 call - based on Quantum comment in 9.2.2.2)
    9.2.6.3.2 ST_TFR1 state
    Add check for TASK frame with bad LOGICAL UNIT NUMBER - generate a RESPONSE frame with RESPONSE_DATA of INVALID LOGICAL UNIT NUMBER

Page: 252
Sequence number: 25
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE (per discussion on Feb 11 call, based on target port transfer tag discussion in 03-091)
    9.2.6.3.2 ST_TFR1 Target Frame Router state
    Add an optional check that reserved fields are zero. If not, Response Data (Invalid Frame) may be sent.

Page: 253
Sequence number: 14
Date: 1/30/2003 3:49:59 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.3.1 ST_TTS1 state description
    Change I_T_L_x nexus (e.g., tag) to "tag" in all the a)b) lists in this section.
    The first list mentions the source/destination SAS addresses, which form the I_T portion. The 2nd-4th lists should just say "tag" to match the initiator wording (and avoid confusion with the Nexus and Association arguments described in ch 10)

Page: 253
Sequence number: 15
Date: 1/30/2003 3:51:11 PM
Type: Note
    ACCEPT - DONE
    9.2.6.3.3.1 ST_TTS1 state description
    The 2nd-4th a)b) lists needs to include the logical unit number, which is needed for the frame headers

Page: 253
Sequence number: 16
Date: 2/9/2003 12:49:44 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.3 ST_TTS1
    and global
    Rename:
    ST_TTS1:Target_Request_Response_Router
    and ST_TTS1:Request_response_Router
    (inconsistent and verbose)
    to:
    ST_TTS1:Start

Page: 253
Sequence number: 17
Date: 2/20/2003 9:33:24 AM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.3.1 ST_TTS1 state description
    remove
    d) source SAS address.
    as an argument from the application layer (part of making the transport layer part of the port object)

Page: 254
Sequence number: 14
Date: 2/28/2003 5:19:47 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.4.1 ST_TTS2 state description
    e) source SAS address.
    add: set to the SAS address of the SSP target port
     (part of making the transport layer part of the port object)

Page: 254
Sequence number: 15
Date: 3/1/2003 4:38:34 PM
Type: Highlight
    ACCEPT - DONE (2/25 WG)
    <<an ACK Received confirmation>> should be <all the ACK Received confirmations for all the frames transmitted...>

Page: 254
Sequence number: 16
Date: 3/5/2003 4:37:13 PM
Type: Highlight
    ACCEPT - DONE (2/25 WG reworded in terms of transition from TTS5 not TTS4, and added "received ACK Transmitted for each
    DATA frame received with a Data-Out Arrived message" to clarify how pipelining must stop before sending XFER_RDY).
    ACK Transmitted
    see comment below

Page: 254
Sequence number: 17
Date: 3/8/2003 12:38:26 PM
Type: Note
    ACCEPT - DONE (up to port layer to check names of its signals now)
    Ensure Nexus Lost argument name matches port layer.

Page: 255
Sequence number: 10
Date: 1/30/2003 4:00:57 PM

Type: Note
    ACCEPT - DONE
    9.2.6.3.5.1 ST_TTS3 state description
    should mention logical unit number along with tag

Page: 255
Sequence number: 11
Date: 2/9/2003 12:10:03 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.5.1 ST_TTS3 State description
    Change:
    to be used in the frame:
    to:
    when constructing the frame

Page: 255
Sequence number: 12
Date: 2/9/2003 12:10:03 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.5 ST_TTS3
    and Global
    Rename:
    Prepare_Send_Data_In
    to:
    Prepare_Data_In
    to match other state names and simplify

Page: 255
Sequence number: 13
Date: 2/9/2003 12:10:03 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.4.2 TTS2 to TTS3
    if this state receives
    should be
    after receiving
    to match previous two IBM comments

Page: 255
Sequence number: 14
Date: 2/9/2003 12:10:03 PM
Type: Square
    ACCEPT - DONE
    9.2.6.3.5.1 TTS3 state description
    Add data to the list. It is arguably implied by the first paragraph. To parallel the initiator Data_Out preparation, though, it belongs
    in this list.

Page: 255
Sequence number: 15
Date: 3/1/2003 4:38:34 PM
Type: Strikeout
    ACCEPT - DONE (2/25 WG)
    delete <<and an ACK Received
    confirmation>> so data frames can be pipelined

Page: 256
Sequence number: 16
Date: 2/9/2003 12:10:03 PM
Type: Note
    ACCEPT - DONE
    9.2.6.3.6 ST_TTS4
    Second paragraph
    Remove "from the ST_TS1:Request_Response_Router state"

Page: 256
Sequence number: 17
Date: 2/9/2003 12:10:03 PM

Type: Highlight
    ACCEPT - DONE
    9.2.6.3.6.1 TTS4 state description
    "If the value does not match"
    is unclear; does not match what?
    Change to "is invalid" which is equally vague but not obviously broken.

Page: 256
Sequence number: 18
Date: 2/9/2003 12:10:03 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.6.1 ST_TTS4 State description
    Change
    DATA frame from the ST_TFR state machine,
    to
    Data-Out Arrived parameter

Page: 256
Sequence number: 19
Date: 2/9/2003 12:10:03 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.6.1 ST_TTS4 State description
    Change
    DATA frame from the ST_TFR state machine,
    to
    Data-Out Arrived parameter

Page: 256
Sequence number: 20
Date: 2/9/2003 12:10:03 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.6.1 ST_TTS4 State description
    Change
    DATA frame from the ST_TFR state machine,
    to
    Data-Out Arrived parameter

Page: 256
Sequence number: 21
Date: 2/9/2003 12:10:03 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.6.1 ST_TTS4 State description
    Change
    DATA frame from the ST_TFR state machine,
    to
    Data-Out Arrived parameter

Page: 256
Sequence number: 22
Date: 2/9/2003 12:10:03 PM
Type: Note
    ACCEPT - DONE
    9.2.6.3.6.1 ST_TTS4 state description
    Combine the four long paragraphs about receiving Data-Out Arrived into an a)b)c)d) list.

Page: 257
Sequence number: 9
Date: 1/30/2003 4:03:04 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.7.1 ST_TTS5 state description
    logical unit should appear alognside tag;

Page: 257
Sequence number: 10

Date: 2/8/2003 5:07:41 PM
Type: Highlight
    ACCEPT - DONE
    Change:
    Receive
    Data-Out transport protocol service request
    to:
    application layer
    to match other wording and simplify

Page: 257
Sequence number: 11
Date: 2/8/2003 4:58:11 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.7.1 ST_TTS5 state description
    Change:
    to be used in the frame:
    to:
    when constructing the frame

Page: 257
Sequence number: 12
Date: 2/9/2003 12:10:03 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.8 ST_TTS7
    and Global
    Change:
    Process_Received_Data_Out
    to:
    Process_Data_Out
    to match other state names and simplify

Page: 257
Sequence number: 13
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.7 ST_TTS5
    in "following received"
    add values

Page: 258
Sequence number: 8
Date: 2/8/2003 4:53:34 PM
Type: Highlight
    ACCEPT - DONE (also made it clear that Response Data includes a logical unit number and tag.)
    9.2.6.3.9.1 ST_TTS7 state description
    "this state shall use the tag received in the parameter."
    contradicted by "this state shall use the following received from the application layer" in the next paragraph.

Page: 258
Sequence number: 9
Date: 1/30/2003 4:06:11 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.9.1 ST_TTS7 state description
    logical unit number should appear alongside tag

Page: 258
Sequence number: 10
Date: 2/8/2003 11:41:02 AM
Type: Strikeout
    ACCEPT - DONE
    9.2.6.3.9.1 ST_TTS7:Prepare_Response
    remove
    d) ... from the port
    layer state machine

Page: 258
Sequence number: 11
Date: 2/8/2003 4:02:46 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.9 ST_TTS7
    Convert these sentences into a table.

Page: 258
Sequence number: 12
Date: 2/8/2003 4:45:46 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.9.1 ST_TTS7 State overview
    status needs a semicolon

Page: 258
Sequence number: 13
Date: 2/9/2003 12:10:03 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.9.1 ST_TTS7 State description
    Change:
    to be used in the frame:
    to:
    when constructing the frame

Page: 258
Sequence number: 14
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE (per Feb 11 call - based on Quantum comment in 9.2.2.2)
    9.2.6.3.9.1 ST_TTS7:Prepare_Response state description
    Add Invalid Logical Unit Number handling - generate a RESPONSE frame with RESPONSE_DATA of INVALID LOGICAL UNIT
    NUMBER

Page: 258
Sequence number: 15
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.9 ST_TTS7
    in "the following received"
    add values

Page: 259
Sequence number: 15
Date: 2/15/2003 6:12:56 PM
Type: Note
    ACCEPT - DONE
    9.3.4 STP transport layer state machines
    Mention that this is modified to interface to the port layer

Page: 259
Sequence number: 16
Date: 2/28/2003 11:19:54 AM
Type: Note
    ACCEPT - DONE (incorporated 03-109r1 per 2/25 WG. Based on task file register support; more than one means no affiliations,
    only one means affiliations required.)
    9.3.2 SATA tunneling for multiple STP initiator ports
    Add comment that native STP devices should not support affiliations. (phrase as affiliations are only an expander function)
    They can put in a virtual phy and support SMP. DISCOVER and PHY CONTROL to the virtual phy could control the affiliations.

Page: 259
Sequence number: 17
Date: 1/29/2003 3:28:36 PM
Type: Highlight
    ACCEPT - DONE

9.3.2 SATA tunneling for multiple STP initiator ports
Rename this to "affiliations"

Page: 259
Sequence number: 18
Date: 2/15/2003 6:12:33 PM
Type: Note
    ACCEPT - DONE
    The format of 9.4.x differs from the SSP frame format and should be restructured as follows:
    9.4.1 SMP frame format (describe an SMP frame with just SMP FRAME TYPE, FUNCTION, and CRC fields). Include the frame
    type codes in the table listing SMP_REQUEST and SMP_RESPONSE. Mention that other codes are reserved.
    9.4.2, 9.4.3 SMP_REQUEST and SMP_RESPONSE (as is)
    9.4.4 Sequence of SMP frames (move the frame sequence picture into here)
    9.4.5 SMP transport layer state machines (as is)

Page: 259
Sequence number: 19
Date: 2/9/2003 6:09:08 PM
Type: Highlight
    ACCEPT - DONE
    9.4.1 SMP Overview
    Change
    SMP overview
    to
    SMP transport layer overview

Page: 259
Sequence number: 20
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE (per Feb 11 call)
    9.3.2 SATA tunneling for multiple STP initiator ports
    Change the rules so link resets DO cause affiliation loss in all cases except SMP LINK RESET requests.

Page: 260
Sequence number: 15
Date: 1/31/2003 3:45:48 PM
Type: Highlight
    ACCEPT - DONE
    9.4.2 SMP_REQUEST frame
    Add a sentence indicating who sends this frame and what it is for. (like SMP_RESPONSE and all the SSP frames do)

Page: 262
Sequence number: 6
Date: 2/9/2003 3:06:00 PM
Type: Highlight
    ACCEPT - DONE
    9.4.4.1 SMP transport layer state machine overview
    Change
    SAS expander
    to
    expander

Page: 262
Sequence number: 7
Date: 2/9/2003 6:09:08 PM
Type: Highlight
    ACCEPT - DONE
    9.4.4.1 Overview
    Change
    Overview
    to
    SMP transport layer state machines overview

Page: 262
Sequence number: 8
Date: 2/9/2003 6:09:08 PM
Type: Highlight
    ACCEPT - DONE

9.4.4.2.1 Overview
Change
Overview
to
SMP initiator port state machine overview

Page: 262
Sequence number: 9
Date: 3/1/2003 4:38:28 PM
Type: Strikeout
ACCEPT - DONE
9.4.4.1 SMP transport layer state machines overview
delete "Each SAS expander device shall contain an MT_TD state machine. Other device types may contain MT_TD and/or MT_ID state machines." after changing to SMP [target/initiator] port terminology.

Page: 263
Sequence number: 6
Date: 2/16/2003 11:40:20 AM
Type: Highlight
ACCEPT - DONE
9.5.5.2.2.2 MT_ID1 to MT_ID2
Change:
"transition shall pass .. to ..."
to:
"to transition shall include ..."

Page: 263
Sequence number: 7
Date: 2/20/2003 9:33:24 AM
Type: Note
ACCEPT - DONE
9.4.4.2.2.1 MT_ID1 state description
Remove source sas address field as an argument from the application layer (part of making the transport layer part of the port object)

Page: 263
Sequence number: 8
Date: 2/20/2003 9:33:24 AM
Type: Highlight
ACCEPT - DONE
9.4.4.2.2.2 Transition MT_ID1 to MT_ID2
After
d) source SAS address;
add: set to the SAS address of the SMP initiator port
(part of making the transport layer part of the port object)

Page: 264
Sequence number: 17
Date: 2/9/2003 3:00:49 PM
Type: Highlight
ACCEPT - DONE
9.4.4.3 Expander device and target device state machine
Rename to "SMP target port transport layer state machine"
Also check initiator name

Page: 264
Sequence number: 18
Date: 2/9/2003 6:09:08 PM
Type: Highlight
ACCEPT - DONE
9.4.4.3.1 Overview
Change
Overview
to
SMP target port state machine overview

Page: 264
Sequence number: 19
Date: 2/20/2003 9:33:24 AM

Type: Note
　　ACCEPT - DONE
　　9.4.4.2.3.1 MT_ID2:Send state description
　　Add that source SAS address shall be set to the SAS address fo the SMP intiiator port
　　(part of making the transport layer part of the port object)

Page: 266
Sequence number: 2
Date: 2/9/2003 6:09:08 PM
Type: Highlight
　　ACCEPT - DONE
　　10.1.1.1 Transport protocol services overview
　　Change
　　Transport protocol services overview
　　to
　　SCSI transport protocol services overview

Page: 266
Sequence number: 3
Date: 3/1/2003 4:38:34 PM
Type: Note
　　ACCEPT - DONE
　　10 Application layer
　　Add 10.1 Application layer overview
　　with a brief introduction

Page: 269
Sequence number: 5
Date: 2/2/2003 2:38:16 PM
Type: Highlight
　　ACCEPT - DONE
　　10.1.1.4 Send Command Complete
　　one and the RESPONSE CODE field is INVALID FRAME
　　(see comments in 9.2.5.1)

Page: 270
Sequence number: 5
Date: 2/8/2003 11:41:02 AM
Type: Highlight
　　ACCEPT - DONE
　　10.1.1.5 Command Complete Received
　　one and the RESPONSE CODE field is INVALID FRAME
　　(see comments in 9.2.5.1)

Page: 272
Sequence number: 5
Date: 12/30/2002 6:05:57 PM
Type: Highlight
　　ACCEPT - DONE
　　10.1.1.8 Receive Data-Out
　　Table 112 - Receive Data-Out args
　　usd should be used

Page: 272
Sequence number: 6
Date: 2/1/2003 2:02:44 PM
Type: Note
　　ACCEPT - DONE (put in [Association] argument to carry the TAG field, which might make it into SAM-3. Let the transport layer
　　state machine just refer to "tag" and "tag of task to be managed" - it was not using "Nexus" so shouldn't be confused.)
　　10.1.1.10 Send Task Management Request transport protocol service
　　and other sections
　　the Q is really the "tag of task to be managed" field not the "tag" field

Page: 273
Sequence number: 6
Date: 1/30/2003 3:40:32 PM
Type: Highlight
　　ACCEPT - DONE
　　10.1.1.10 Send Task Management Request

and other sections
Both I_T_L and I_T_L_Q are supported (I_T would be too if TARGET RESET were supported).

Page: 274
Sequence number: 5
Date: 1/30/2003 2:38:19 PM
Type: Highlight
    ACCEPT - DONE (Jan WG: make TASK MANAGEMENT FUNCTION FAILED map to service delivery or target failure in Task
    Management Function Executed and Received Task Management Function Executed)
    10.1.1.12 Task Management Function Executed
    Table 116 - Task Management Function Executed arguments
    "d) The RESPONSE
    frame SNSVALID bit is set to one."
    is this the correct indication of severe failure for a task management function?

Page: 275
Sequence number: 4
Date: 3/1/2003 4:38:28 PM
Type: Note
    ACCEPT - DONE
    10.1.2 Device server error handling
    10.1.3 Application client error handling
    Move application client section before the device server section

Page: 278
Sequence number: 2
Date: 2/8/2003 11:49:39 AM
Type: Highlight
    ACCEPT - DONE
    10.1.6.1 Disconnect-Reconnect mode page
    Change specifies to contains or means several times in this section.

Page: 279
Sequence number: 8
Date: 2/9/2003 6:09:08 PM
Type: Highlight
    ACCEPT - DONE
    10.1.6.2.1 Overview
    Change
    Overview
    to
    Protocol-Specific Port mode page overview

Page: 280
Sequence number: 4
Date: 2/2/2003 12:14:08 PM
Type: Highlight
    ACCEPT - DONE
    10.1.6.2.2 Protocol-specific port mode page - short format
    indicates how long
    should be
    contains the time

Page: 281
Sequence number: 7
Date: 12/31/2002 1:11:02 PM
Type: Highlight
    ACCEPT - DONE
    Table 122 - Protocol-specific port Control mode page -Phy Control and Discover subpage
    The byte numbers are off. Byte 4 should be byte 2. 2 more reserved bytes are needed to keep the mode descriptors starting on
    byte 8.

Page: 282
Sequence number: 2
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE (per Feb 11 call)
    10.1.6.2.3 Protocol-Specific Port mode page PHY CONTROL and DISCOVER subpage
    Swap ATTACHED SAS ADDRESS and SAS ADDRESS

Page: 282
Sequence number: 3
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE (per Feb 11 call)
    10.1.6.2.3 Protocol-Specific Port mode page PHY CONTROL and DISCOVER subpage
    Add ATTACHED PHY IDENTIFIER

Page: 282
Sequence number: 4
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE (per Feb 11 call)
    10.1.6.2.3 Protocol-Specific Port mode page PHY CONTROL and DISCOVER subpage
    Move 24..31 down and match new DISCOVER layout

Page: 286
Sequence number: 2
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE (per Feb 11 call)
    10.1.7.1 Protocol-Specific log page
    Swap SAS ADDRESS and ATTACHED SAS ADDRESS

Page: 286
Sequence number: 3
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE (per Feb 11 call)
    10.1.7.1 Protocol-Specific log page
    Add ATTACHED PHY IDENTIFIER

Page: 286
Sequence number: 4
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE (per Feb 11 call)
    10.1.7.1 Protocol-Specific log page
    Add reserved bytes before INVALID DWORD COUNT to leave room for a full IDENTIFY frame

Page: 288
Sequence number: 5
Date: 1/30/2003 1:31:48 PM
Type: Highlight
    ACCEPT - DONE
    10.1.8 Power condition states
    Figure 103 - SA_PC state machine
    Change devices to logical units in the notes

Page: 291
Sequence number: 16
Date: 3/1/2003 4:38:28 PM
Type: Note
    ACCEPT - DONE (throughout this section)
    10.1.7.6 SA_PC_5:Active_Wait
    While in this state, media access commands shall return NOT READY/INITIALIZING COMMAND REQUIRED.
    For transitions into this state based on START STOP UNIT, mention that the command shall not complete with GOOD status until
    Active is reached.
    (from George Penokie)

Page: 291
Sequence number: 17
Date: 3/1/2003 4:38:28 PM
Type: Note
    ACCEPT - DONE (throughout this section)
    10.1.7.7 SA_PC_6:Idle_Wait
    While in this state, media access commands shall return NOT READY/INITIALIZING COMMAND REQUIRED.
    For transitions into this state based on START STOP UNIT, mention that the command shall not complete with GOOD status until

Idle is reached.
(from George Penokie)

Page: 292
Sequence number: 4
Date: 1/31/2003 3:45:48 PM
Type: Strikeout
    ACCEPT - DONE
    10.1.8.7.5 Idle_Wait to Active_Wait
    Delete
    b) a START STOP UNIT command with the POWER CONDITION field set to FORCE ACTIVE is received; or
    there is no such setting called "FORCE ACTIVE"

Page: 294
Sequence number: 3
Date: 2/9/2003 6:09:08 PM
Type: Highlight
    ACCEPT - DONE
    10.3.1.1 Function overview
    Change
    Function overview
    to
    SMP function overview

Page: 295
Sequence number: 2
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE (per Feb 11 call)
    10.3.1.2 REPORT GENERAL function
    Change
    This function may
    implemented by any type of device and should be implemented by expander devices.
    to:
    shall be implemented by all SMP target ports.

Page: 298
Sequence number: 6
Date: 2/25/2003 8:06:59 PM
Type: Note
    REJECT
    ASCII strings shouldn't have (MSB)/(LSB) labels. Strings are arrays of 8-bit bytes. Each byte has an MSB/LSB. The string
    doesn't as a whole. [an array of dwords wouldn't be labeled thusly]

Page: 299
Sequence number: 5
Date: 2/2/2003 12:18:01 PM
Type: Highlight
    ACCEPT - DONE
    10.3.1.4 DISCOVER function
    indicates should be specifies

Page: 299
Sequence number: 6
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE (per Feb 11 call)
    10.3.1.4 DISCOVER function
    Change:
    This function shall be implemented by all expander devices and shall
    not be implemented by other types of devices.
    to:
    shall be implemented by all SMP target ports.

Page: 300
Sequence number: 2
Date: 1/25/2003 5:39:50 PM
Type: Highlight
    ACCEPT - DONE

10.3.1.4 DISCOVER function
Change SATA TARGET to SATA DEVICE

Page: 300
Sequence number: 3
Date: 1/21/2003 7:12:05 PM
Type: Highlight
    ACCEPT - DONE
    10.3.1.4 DISCOVER function
    Change Reserved bit to ATTACHED SATA HOST
    An ATTACHED SATA HOST bit of one indicates a SATA host is attached. A bit of zero ...
    NOTE: Support for SATA hosts is outside the scope of this standard.
    (from Bill Galloway, Pivot3)

Page: 300
Sequence number: 4
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE (per Feb 11 call)
    10.3.1.4 DISCOVER function
    Add ATTACHED PHY IDENTIFIER which is being added to the IDENTIFY address frame

Page: 300
Sequence number: 5
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE (per Feb 11 call)
    10.3.1.4 DISCOVER function
    Swap ATTACHED SAS ADDRESS and SAS ADDRESS to match IDENTIFY address frame better

Page: 300
Sequence number: 6
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE (per Feb 11 call)
    10.3.1.4 DISCOVER function
    Move 32..39 down to 40..47 to avoid contaminating the IDENTIFY region. Move vendor-specific fields to the bottom.

Page: 300
Sequence number: 7
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE
    10.3.1.4 DISCOVER function
    Move ROUTING ATTRIBUTE down out of the IDENTIFY region

Page: 300
Sequence number: 8
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE
    10.3.1.4 DISCOVER function
    Add a PHY CHANGE COUNT field per 03-089

Page: 301
Sequence number: 6
Date: 2/6/2003 10:54:44 AM
Type: Strikeout
    ACCEPT - DONE
    10.3.1.4 DISCOVER function
    Table 138 - Attached device type
    Delete only since other comments make end devices distinct from with expander devices

Page: 302
Sequence number: 11
Date: 1/29/2003 3:52:15 PM
Type: Note
    ACCEPT - DONE ("address provided for')
    10.3.1.4 DISCOVER function

Mention what the ATTACHED SAS ADDRESS field contains if a SATA target is attached

Page: 302
Sequence number: 13
Date: 1/29/2003 3:51:15 PM
Type: Highlight
ACCEPT - DONE
10.3.1.4 DISCOVER function
The a) b) list belongs to ATTACHED SAS ADDRESS, not SAS ADDRESS. The SAS ADDRESS field itself should always be known. The Attached field changes based on identification/OOB sequences.

Page: 302
Sequence number: 14
Date: 2/15/2003 2:49:53 PM
Type: Note
ACCEPT - DONE (per Feb 11 call)
10.3.1.4 DISCOVER function
***
Change 4h and 5h to 8h and 9h (for 1.5 Gbps and 3.0 Gbps)

Page: 302
Sequence number: 15
Date: 3/1/2003 4:38:34 PM
Type: Highlight
ACCEPT - DONE
10.3.1.4 DISCOVER function
discovery process
should be
discover process

Page: 303
Sequence number: 5
Date: 1/21/2003 4:43:05 PM
Type: Note
ACCEPT - DONE
10.3.1.5 DISCOVER function
The default value shall be the hardware ... physical link rate.

Page: 303
Sequence number: 6
Date: 2/28/2003 3:31:52 PM
Type: Note
ACCEPT - DONE (per 1/28 call)
10.3.1.4 DISCOVER function
or DISCOVER page, make 0 value on the programmed rates mean "not programmable"

Page: 303
Sequence number: 7
Date: 2/2/2003 12:18:59 PM
Type: Highlight
ACCEPT - DONE
10.3.1.5 REPORT PHY ERROR LOG
indicates should be specifies

Page: 303
Sequence number: 8
Date: 2/7/2003 1:52:18 PM
Type: Note
ACCEPT - DONE
10.3.1.4 DISCOVER function
***
Table 140 - Hardware and programmed physical link rates
5h and 6h should be 8h and 9h to match the negotiated physical link rate field.

Page: 305
Sequence number: 9
Date: 2/16/2003 11:40:20 AM
Type: Highlight
ACCEPT - DONE (per Feb 11 call)

10.3.1.6 REPORT PHY SATA function
Change:
This function
shall be implemented by expander devices supporting attachment to SATA target devices. This function shall
not be implemented by any other type of device.
to:
implemented by SMP target ports that are part of STP/SATA bridges in expander devices and by SMP target ports in SAS devices
also containing STP target ports. This function shall not be implemented by any other type of SMP target port.

Page: 306
Sequence number: 3
Date: 2/2/2003 12:19:39 PM
Type: Highlight
ACCEPT - DONE
10.3.1.6 REPORT PHY SATA
indicates should be specifies

Page: 307
Sequence number: 4
Date: 12/30/2002 2:30:56 PM
Type: Highlight
ACCEPT - DONE
Table 146 - Function results for REPORT PHY SATA
11h PHY DOES NOT SUPPORT SATA should mention "rest of data is invalid"

Page: 307
Sequence number: 5
Date: 2/8/2003 12:21:27 PM
Type: Note
ACCEPT - DONE (and posted to T10 list)
10.3.1.6 REPORT PHY SATA
dump PHY NOT SATA result - the first byte in the REGISTER FIS field indicates if it's not a usable SATA device
dump SATA RESET HALTED result - DISCOVER's negotiated link rate field indicates spinup hold
PHY DOES NOT SUPPORT SATA means everything is invalid like most other function results

Page: 307
Sequence number: 6
Date: 1/29/2003 5:41:36 PM
Type: Highlight
ACCEPT - DONE
10.3.1.6 REPORT PHY SATA
Note 25
00b should be 000b and add an (i.e. no device attached)

Page: 307
Sequence number: 7
Date: 2/16/2003 11:40:20 AM
Type: Highlight
ACCEPT - DONE
10.3.1.6 REPORT PHY SATA function
"The contents of the REGISTER DEVICE TO HOST FIS field shall remain constant"
is not quite true; the rest of the paragraph gives special rules for byte 0. Reword to "The remaining bytes" and place after the byte
0 discussion.

Page: 307
Sequence number: 8
Date: 2/16/2003 11:40:20 AM
Type: Highlight
ACCEPT - DONE
10.3.1.6 REPORT PHY SATA function
Change:
The STP SAS ADDRESS field contains the "SAS address that is used when a SATA target device is attached to
the specified phy."
to
"the SAS address of the STP target port that contains the specified phy"
This handles native STP better

Page: 308
Sequence number: 4

Date: 1/29/2003 6:30:23 PM
Type: Highlight
    ACCEPT - DONE (moved into 10.3.1.1 combined table with these changes)
    10.3.1.7 REPORT ROUTE INFORMATION
    delete
    "for any EXPANDER ROUTE INDEX with the
    indicated phy identifier."
    just the shall return is enough.
    Plus, the EXPANDER ROUTE INDEX should have been smallcaps.

Page: 308
Sequence number: 5
Date: 2/2/2003 12:20:53 PM
Type: Highlight
    ACCEPT - DONE
    10.3.1.7 REPORT ROUTE INFORMATION
    indicates should be specifies (several places in the request description)

Page: 309
Sequence number: 2
Date: 12/30/2002 10:41:13 AM
Type: Highlight
    ACCEPT - DONE
    10.3.1.7 REPORT ROUTE INFORMATION
    Table y should be Table 148

Page: 309
Sequence number: 3
Date: 2/7/2003 11:18:01 AM
Type: Highlight
    ACCEPT - DONE
    10.3.1.7 REPORT ROUTE INFORMATION
    ROUTE should be EXPANDER ROUTE
    throughout this subclause

Page: 310
Sequence number: 1
Date: 1/29/2003 6:26:44 PM
Type: Highlight
    ACCEPT - DONE
    10.3.1.7 REPORT ROUTE INFORMATION
    Change "shall not be used" to "ecm shall not use" (get rid of passive tense to match the previous sentence)

Page: 311
Sequence number: 3
Date: 2/2/2003 12:22:12 PM
Type: Highlight
    ACCEPT - DONE
    10.3.1.8 CONFIGURE ROUTE INFORMATION
    indicates should be specifies (3 times in request)

Page: 311
Sequence number: 4
Date: 2/8/2003 11:40:57 AM
Type: Highlight
    ACCEPT - DONE
    10.3.1.8 CONFIGURE ROUTE INFORMATION
    ROUTE should be EXPANDER ROUTE
    throughout this subclause

Page: 312
Sequence number: 7
Date: 1/31/2003 3:45:48 PM
Type: Highlight
    ACCEPT - DONE
    10.3.1.8 CONFIGURE ROUTE INFORMATION
    Change "shall not be used" to "ecm shall not use" (get rid of passive tense to match the previous sentence)

Page: 313

Sequence number: 4
Date: 1/29/2003 12:20:15 PM
Type: Note
    ACCEPT - DONE (put in a 0 value for the link rates, and an enable bit for PPTV)
    10.3.1.9 PHY control function
    Options discussed at Jan WG:
    * write enable bits for min+max rate, and pptv in byte 11 (Bill votes for this) DISCOVER returns these as 1 if they are writable.
    or:
    phy operations of:
    set PPTV (uses pptv field)
    link reset (uses rate field)
    hard reset (uses rate field)
    or:
    phy operation to return changeable fields like mode pages

Page: 313
Sequence number: 5
Date: 2/2/2003 12:23:53 PM
Type: Highlight
    ACCEPT - DONE
    10.3.1.9 PHY CONTROL
    indicates should be specified several times in the request section

Page: 313
Sequence number: 6
Date: 2/6/2003 9:28:23 AM
Type: Highlight
    ACCEPT - DONE
    10.3.1.9 PHY CONTROL function
    Table 153 - PHY CONTROL request
    row for byte 39 should be two rows for 37-39

Page: 314
Sequence number: 3
Date: 1/29/2003 12:07:53 PM
Type: Highlight
    ACCEPT - DONE (make value of 0h be "no change")
    10.3.1.9 PHY CONTROL function
    The programmed link rate fields shall be set in the same request where a LINK RESET or HARD RESET operation is invoked.
    There's no code that means "no change".

Page: 314
Sequence number: 4
Date: 2/15/2003 2:51:13 PM
Type: Note
    ACCEPT - DONE (complete immediately)
    10.3.1.9 PHY CONTROL
    Do LINK RESET and HARD RESET take time, or do they complete immediately?
    Email discussion agrees they complete immediately; add such wording to the descriptions.

Page: 314
Sequence number: 5
Date: 2/16/2003 11:40:20 AM
Type: Note
    ACCEPT - DONE (Feb 11 call - no, return SMP FUNCTION FAILED if attempted)
    10.3.1.9 PHY CONTROL function
    Should the PHY CONTROL phy operations of LINK RESET, HARD RESET, and DISABLE be allowed to be performed on the phy which is being used to
    receive the PHY CONTROL request?

Page: 315
Sequence number: 3
Date: 1/30/2003 10:13:51 AM
Type: Note
    REJECT (added an enable bit for updating PPTV instead of a new phy operation)
    10.3.1.9 PHY control function
    Option discussed at Jan protocol WG: add a PHY OPERATION to set the PPTV. Only if that is selected is this field honored.

Page: 315

Sequence number: 4
Date: 1/29/2003 12:41:58 PM
Type: Highlight
    ACCEPT - DONE
    10.3.1.9 PHY CONTROL
    partial pathway timeout value paragraph
    after zero, add (i.e., 0 us) so the time stands out

Page: 315
Sequence number: 5
Date: 2/15/2003 2:50:31 PM
Type: Note
    ACCEPT - DONE (per Feb 11 call)
    10.3.1.9 PHY CONTROL function
    ***
    Table 155 - Programmed physical link rate
    5h and 6h should be 8h and 9h to match the DISCOVER function negotiated physical link rate field.

Page: 330
Sequence number: 3
Date: 12/30/2002 2:17:26 PM
Type: Highlight
    ACCEPT - DONE
    D.3 Hash generation
    show should be shown

Page: 330
Sequence number: 5
Date: 1/23/2003 1:44:43 PM
Type: Highlight
    ACCEPT - DONE
    D.2 Hash collision probability
    and global
    vendor specific should be
    vendor-specific

Page: 330
Sequence number: 6
Date: 1/23/2003 1:45:36 PM
Type: Highlight
    ACCEPT - DONE
    D.2 Hash collision probability
    Four models were used for the models for the simulations.
    Add : and an a)b)c)d) list of the four models.

Page: 330
Sequence number: 7
Date: 2/9/2003 6:09:08 PM
Type: Highlight
    ACCEPT - DONE
    D.1 Hashing overview
    Change
    Hashing overview
    to
    SAS address hashing overview

Page: 331
Sequence number: 2
Date: 1/23/2003 1:47:59 PM
Type: Highlight
    ACCEPT - DONE
    Figure D.1 BCH code generator
    The text is 12 pt and should be 10 pt

Page: 333
Sequence number: 1
Date: 1/24/2003 9:10:22 AM
Type: Note
    ACCEPT - DONE

D.6 Hash examples
Add all-0s and all-Fs examples
Add some examples that hash to the same value

Page: 336
Sequence number: 2
Date: 12/30/2002 1:15:12 PM
Type: Highlight
    ACCEPT - DONE
    E Scrambling
    Figure E.1 — Scrambler
    Figure is using 8 point font; should be 10 point.

Page: 336
Sequence number: 3
Date: 12/30/2002 1:15:03 PM
Type: Note
    ACCEPT - DONE
    E Scrambling
    Hanging paragraph at top of annex

Page: 336
Sequence number: 4
Date: 1/8/2003 1:27:12 PM
Type: Note
    ACCEPT - DONE
    E Scrambling
    figure E.1 Scrambler
    Need to add an arrow on the line going into the left side of
    the Context register box

Page: 339
Sequence number: 2
Date: 2/16/2003 11:40:20 AM
Type: Highlight
    ACCEPT - DONE
    F.3 Byte and bit ordering
    Move this section back into chapter 7, since it is normative for STP. (see comments in that section)

Page: 343
Sequence number: 2
Date: 12/30/2002 10:29:31 AM
Type: Highlight
    ACCEPT - DONE
    G Expander handling of connections
    G.1 Overview
    Table G.1 - Column descriptions
    RX should be Rx, TX should be Tx

Page: 343
Sequence number: 3
Date: 2/9/2003 3:01:28 PM
Type: Highlight
    ACCEPT - DONE
    G.1 Expander handling of connections overview
    Change
    SAS expander
    to
    expander

Page: 343
Sequence number: 4
Date: 2/9/2003 6:09:08 PM
Type: Highlight
    ACCEPT - DONE
    G.1 Overview
    Change
    Overview
    to

Expander handling of connections overview

Page: 343
Sequence number: 5
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    G.1 Overview
    Change
    Phy
    to
    Expander phy

Page: 343
Sequence number: 6
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    G.1 Overview
    Change
    Phy
    to
    Expander phy

Page: 343
Sequence number: 7
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    G.1 Overview
    Change
    Phy
    to
    Expander phy

Page: 343
Sequence number: 8
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    G.1 Overview
    Change
    Phy
    to
    Expander phy

Page: 343
Sequence number: 9
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    G.1 Overview
    Change
    Phy
    to
    Expander phy

Page: 343
Sequence number: 10
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    G.1 Overview
    Change
    Phy
    to
    Expander phy

Page: 343

Sequence number: 11
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    G.1 Overview
    Change
    Phy
    to
    Expander phy

Page: 343
Sequence number: 12
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    G.1 Overview
    Change
    Phy
    to
    Expander phy

Page: 343
Sequence number: 13
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    G.1 Overview
    Change
    Phy
    to
    Expander phy

Page: 343
Sequence number: 14
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    G.1 Overview
    Change
    Phy
    to
    Expander phy

Page: 343
Sequence number: 15
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    G.1 Overview
    Change
    Phy
    to
    Expander phy

Page: 343
Sequence number: 16
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    G.1 Overview
    Change
    Phy
    to
    Expander phy

Page: 343
Sequence number: 17
Date: 3/1/2003 4:38:28 PM
Type: Highlight

ACCEPT - DONE
G.1 Overview
Change
Phy
to
Expander phy

Page: 343
Sequence number: 18
Date: 3/1/2003 4:38:28 PM
Type: Highlight
ACCEPT - DONE
G.1 Overview
Change
Phy
to
Expander phy

Page: 345
Sequence number: 2
Date: 3/1/2003 4:38:28 PM
Type: Highlight
ACCEPT - DONE
G.2 Connection request - Open Accept
and other sections
In all the figure titles, change the format from
Open accept
to
Connection request - OPEN_ACCEPT

Page: 345
Sequence number: 3
Date: 3/1/2003 4:38:28 PM
Type: Highlight
ACCEPT - DONE
G.2 Connection request - Open accept
and other sections
In all the section headers, change the format to use primitive names OPEN_ACCEPT and lowercase

Page: 345
Sequence number: 4
Date: 3/8/2003 12:22:29 PM
Type: Note
ACCEPT - DONE
G.2 Connection request - Open accept
Add spaces to all the req/rsp and cnf/ind message names. Change "wait on device" to "(Waiting On Device)"

Page: 346
Sequence number: 1
Date: 3/8/2003 12:22:29 PM
Type: Note
ACCEPT - DONE
G.3 Connection request - Open reject
Add spaces to all the req/rsp and cnf/ind message names. Change "wait on device" to "(Waiting On Device)"

Page: 347
Sequence number: 1
Date: 3/8/2003 12:22:29 PM
Type: Note
ACCEPT - DONE
G.4 Connection request - Open reject by expander
Add spaces to all the req/rsp and cnf/ind message names. Change "wait on device" to "(Waiting On Device)"

Page: 348
Sequence number: 1
Date: 3/1/2003 4:38:28 PM
Type: Note
ACCEPT - DONE
G.5 Connection request - arbitration lost

Figure G.5
Phy [Y] Tx should switch from idle dwords to AIP(NORMAL) as the XL1:Request_Path state is entered, then revert back to idle dwords while back in XL0.

Page: 348
Sequence number: 2
Date: 3/8/2003 12:22:29 PM
Type: Note
    ACCEPT - DONE
    G.5 Connection request - Arbitration lost
    Add spaces to all the req/rsp and cnf/ind message names. Change "wait on device" to "(Waiting On Device)"

Page: 349
Sequence number: 1
Date: 3/8/2003 12:22:29 PM
Type: Note
    ACCEPT - DONE
    G.6 Connection request - Backoff and retry
    Add spaces to all the req/rsp and cnf/ind message names. Change "wait on device" to "(Waiting On Device)"

Page: 349
Sequence number: 2
Date: 3/8/2003 12:22:29 PM
Type: Note
    ACCEPT - DONE
    G.6 Connection request - Backoff and retry
    To reflect the letter ballot changes in XL to avoid the step through XL0:Idle when backing off, remove the XL0:Idle steps; go directly to XL1

Page: 350
Sequence number: 1
Date: 3/8/2003 12:22:29 PM
Type: Note
    ACCEPT - DONE
    G.7 Connection request - Backoff and reverse path
    Add spaces to all the req/rsp and cnf/ind message names. Change "wait on device" to "(Waiting On Device)"

Page: 350
Sequence number: 2
Date: 3/8/2003 12:22:29 PM
Type: Note
    ACCEPT - DONE
    G.7 Connection request - Backoff and reverse path
    To reflect the letter ballot changes in XL to avoid the step through XL0:Idle when backing off, remove the XL0:Idle steps; go directly to XL5

Page: 351
Sequence number: 1
Date: 3/8/2003 12:22:29 PM
Type: Note
    ACCEPT - DONE
    G.8 Connection close - single step
    Add spaces to all the req/rsp and cnf/ind message names. Change "wait on device" to "(Waiting On Device)"

Page: 352
Sequence number: 1
Date: 3/8/2003 12:22:29 PM
Type: Note
    ACCEPT - DONE
    G.9 Connection close - simultaneous
    Add spaces to all the req/rsp and cnf/ind message names. Change "wait on device" to "(Waiting On Device)"

Page: 353
Sequence number: 1
Date: 3/8/2003 12:22:29 PM
Type: Note
    ACCEPT - DONE
    G.10 Break handling during arbitration
    Add spaces to all the req/rsp and cnf/ind message names. Change "wait on device" to "(Waiting On Device)"

Page: 358
Sequence number: 1
Date: 3/1/2003 4:38:28 PM
Type: Note
    ACCEPT - DONE
    G.15 STP connection close - originated by expander
    Get rid of whitespace in XL req/rsp column

Page: 359
Sequence number: 1
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    G.16 Pathway blocked and recover example
    Change Connection Manager to ECM

Page: 359
Sequence number: 2
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    G.16 Pathway blocked and recover example
    Change Connection Manager to ECM

Page: 359
Sequence number: 3
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    G.16 Pathway blocked and recover example
    Change Connection Manager to ECM

Page: 359
Sequence number: 4
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    G.16 Pathway blocked and recover example
    Change Connection Manager to ECM

Page: 359
Sequence number: 5
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    G.16 Pathway blocked and recover example
    Change Connection Manager to ECM

Page: 359
Sequence number: 6
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    G.16 Pathway blocked and recover example
    Change Connection Manager to ECM

Page: 359
Sequence number: 7
Date: 3/1/2003 4:38:28 PM
Type: Highlight
    ACCEPT - DONE
    G.16 Pathway blocked and recover example
    Change Connection Manager to ECM

Page: 359
Sequence number: 8
Date: 3/1/2003 4:38:28 PM
Type: Highlight

ACCEPT - DONE
G.16 Pathway blocked and recover example
Change Connection Manager to ECM

Page: 359
Sequence number: 9
Date: 3/1/2003 4:38:28 PM
Type: Highlight

ACCEPT - DONE
G.16 Pathway blocked and recover example
Change
expander
to
expander device

Page: 359
Sequence number: 10
Date: 3/1/2003 4:38:28 PM
Type: Highlight

ACCEPT - DONE
G.16 Pathway blocked and recover example
Change
recover
to
recovery

Page: 359
Sequence number: 11
Date: 3/1/2003 4:38:28 PM
Type: Note

ACCEPT - DONE
G.16 Pathway blocked and recover example
add request, confirmation, etc. after each signal reference

Page: 360
Sequence number: 2
Date: 2/9/2003 6:09:08 PM
Type: Highlight

ACCEPT - DONE
H.1 Overview
Change
Overview
to
Primitive encoding overview

Page: 363
Sequence number: 1
Date: 2/9/2003 6:09:08 PM
Type: Highlight

ACCEPT - DONE
I.1 Overview
Change
Overview
to
Discover process example implementation overview

Page: 363
Sequence number: 2
Date: 3/8/2003 12:34:35 PM
Type: Note

ACCEPT - DONE
I.2 Header file and I.3 Source file
make sure Courier font is used

Author: relliott

Page: 64
Sequence number: 5
Date: 3/8/2003 4:00:47 PM
Type: Note
    REFER PROTOCOL WG
    4.6.11.5 Discover process
    Add a paragraph mentioning that the discover process may be aborted and restarted if CHANGE is received
    (from Bob Nixon, Emulex)

Page: 116
Sequence number: 8
Date: 3/8/2003 4:01:36 PM
Type: Note
    REFER PROTOCOL WG (I agree)
    6.8.3.8 SP15:SAS_PHY_Ready state
    Because of clock tolerances and COMSAS detect tolerance, there is an issue with IDENTIFY being transmitted before the receiver
    has not yet reached SP15. One solution is to delay transmitting IDENTIFY for 2 usec. Another solution is to allow IDENTIFY
    detection as soon as incoming dword sync is achieved (even if the phy is still sending ALIGNs for its SNTT.)
    (from Bruce Leshay, Maxtor)

Page: 139
Sequence number: 10
Date: 3/8/2003 4:02:46 PM
Type: Note
    REFER PROTOCOL WG (maybe WRONG DESTINATION would be better?)
    7.1.4.11 OPEN_REJECT
    ***
    03-119 proposes adding invalid initiator connection tag to the list of reasons for PROTOCOL NOT SUPPORTED
    (from Brian Day, LSI Logic)

Page: 199
Sequence number: 17
Date: 3/8/2003 4:04:55 PM
Type: Note
    REFER PROTOCOL WG
    7.16.7.4 SSP_D state machine
    concern expressed on T10 reflector about a race condition between the DONE Timeout timer and the Credit Blocked Timeout timer
    (from Brian Day, LSI)

Author: SEG Coomes

Page: ix
Sequence number: 3
Date: 2/16/2003 11:41:02 AM
Type: Highlight
    ACCEPT - DONE
    1.19 Revision sas-r02c (21 November 2002)
    "sas-r02c"
    s.b.
    "sas-r03"

Page: 11
Sequence number: 6
Date: 2/16/2003 11:41:02 AM
Type: Highlight
    ACCEPT - DONE
    Global: To be compatible with ATA terminology
    STP initiator port
    s.b.
    STP host port

Page: 11
Sequence number: 7
Date: 2/16/2003 11:41:02 AM
Type: Highlight
    ACCEPT - DONE

Global: To be compatible with ATA terminology
STP target port
s.b.
STP device port

Page: 13
Sequence number: 2
Date: 2/16/2003 11:41:02 AM
Type: Strikeout
ACCEPT - DONE (drop the - 3)
3.2 Symbols and abbreviations
The - 3 in the abbreviation for SCSI s.b. dropped to be consistent with 1 Scope.

Page: 21
Sequence number: 7
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE (reword to: This creates a wide link if more than two phys are so attached or a narrow link if only two phys are so attached.)
4.1.3 Ports (narrow ports and wide ports)
Change:
are
To:
is

Page: 30
Sequence number: 8
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE
4.1.11 Connections
Change:
to
To:
the

Page: 88
Sequence number: 1
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE
6.3.3.1 Definitions
Change:
an primitive
To:
a primitive

Page: 97
Sequence number: 3
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE
6.5 Out of band (OOB) signals
Change:
proceeding
To:
preceding

Page: 101
Sequence number: 2
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE (reworded if phrases to the front of each of a) and b))
6.6.4.1 SAS OOB sequence
Change:
COMSAS,
To:
COMINIT;

Page: 102
Sequence number: 2
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE (with arrow from A's COMINIT not B's COMINIT to B's COMSAS)
6.5 Out of band (OOB) signals Figure 51Scenario 2:
The figure shows a sequence, COMINIT from B to COMSAS from A to COMSAS from B. By definition, B may send its COMSAS
after sending and receiveing COMINIT. B may send COMSAS even if it does not receive a COMSAS from A.
The figure should be changed:
Remove the arrow from A's COMSAS to B's COMSAS and
add an arrow form B's COMINIT to B's COMSAS.

Page: 102
Sequence number: 3
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE (a dfiferent scenario 3 is needed)
6.5 Out of band (OOB) signals Figure 51Scenario 3:
This scenario is not very interesting. It is just a flip of senario 2. Delete?

Page: 104
Sequence number: 2
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE (SATA WG confirms this is really a minimum not a maximum and it should be based on 32768 UI(OOB))
SATA uses both 440 and 880 for this value. Question sent to Knut about which is correct. Might call it "Await ALIGN Timeout".
6.6.4.2 SAS speed negotiation sequence, Table 49 — SAS speed. .
The value of ALIGN detect timeout maximum needs a tolerance. A minimum value is also required. The current requirement would
allow a phy to not wait.

Page: 104
Sequence number: 3
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE (deleted note a)
6.6.4.2 SAS speed negotiation sequence, Table 49 — SAS speed. .
Note "a" is not referenced in the table.

Page: 121
Sequence number: 1
Date: 2/16/2003 11:41:02 AM
Type: Highlight
REJECT (fix in SAS-2 perhaps)
6.9 SAS phy dword synchronization (SP_DWS) state machine
The DWS state machine starts with a state 0. Other state machines start with state 1.

Page: 131
Sequence number: 1
Date: 2/16/2003 11:41:02 AM
Type: Highlight
REJECT (Jan WG)
7.1.2 Primitive summary, Table 54
It would be better if the 2nd character of the CLS primitives were unique from BREAK, ERROR, and HARD_RESET. Since there
are multiple CLS primitives, the 3rd and 4th characters will be used to distinguish the types. It would be simpler for the hardware if
the 2nd character for CLS (D02.0) was unique from the other primitives.

Page: 131
Sequence number: 2
Date: 2/16/2003 11:41:02 AM
Type: Highlight
REJECT (Jan WG - too many OPEN_REJECTs to fit in one set of encodings)
7.1.2 Primitive summary, Table 54
It would be better if the 2nd character of the OPEN_REJECT primitives were the same rather than D31.4 and D29.7.

Page: 133
Sequence number: 1
Date: 2/16/2003 11:41:02 AM
Type: Highlight
REJECT (Jan WG)

7.1.2 Primitive summary, Table 55
It would be better if the 2nd character of the NAK primitives were unique from ACK, CREDIT_BLOCKED, and RRDY. Since there are multiple NAK primitives, the 3rd and 4th characters will be used to distinguish the types. It would be simpler for the hardware if the 2nd character for CLS was unique from the other primitives.

Page: 143
Sequence number: 5
Date: 2/16/2003 11:41:02 AM
Type: Highlight
    ACCEPT - DONE (with transmitting not originating)
    7.2 Clock skew management
    Change: "devices" to: "originating devices"

Page: 144
Sequence number: 3
Date: 2/16/2003 11:41:02 AM
Type: Highlight
    ACCEPT - DONE
    7.4.1 CRC Overview
    3rd paragraph
    "Annex B contains. . ."
    s.b.
    "Annex C contains. . ."

Page: 145
Sequence number: 2
Date: 2/16/2003 11:41:02 AM
Type: Highlight
    REJECT - such an "initial value" assumes a certain implementation. This section has generic equations which do assume any implementation.
    7.4.2 CRC generation
    Add a subclause:
    7.4.x CRC initial value
    The CRC value shall be initialized with a value of FFFFFFFFh before the calculation begins.

Page: 147
Sequence number: 8
Date: 2/16/2003 11:41:02 AM
Type: Highlight
    ACCEPT - DONE (Replace paragraph and table with: The polynomial shall be applied to the lower 16 bits of the 32-bit dword being transmitted or received first; the polynomial is then applied to the upper 16 bits. See 7.6 for details on how ...   Move the STP bit ordering figures into 7.6 from the informative annex. Move the STP CRC figure into 7.x too.)
    7.5 Scrambling
    There is no endianness to the scrambling process. Scrambling operates on the parallel 32 bits of a dword. Both SAS and SATA process the bits of a dword without regard to the byte significates the same way, lower 16 bits followed by the upper 16 bits.
    Delete this sentence and Table 69— Scrambling endianness.

Page: 147
Sequence number: 9
Date: 2/16/2003 11:41:02 AM
Type: Highlight
    ACCEPT - DONE (removed paragraph)
    7.4.3 CRC Checking
    "Annex B contains. . ."
    s.b.
    "Annex C contains. . ."

Page: 147
Sequence number: 10
Date: 2/16/2003 11:41:02 AM
Type: Highlight
    ACCEPT - DONE (Jan WG: accept without the e.g.)
    7.5 Scrambling
    Srambling works for all repeating patterns.
    Change:
    long strings of zeros or ones
    To:
    long strings of repeating patterns, e.g., all zeros and ones,

Page: 147
Sequence number: 11
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE (deleted entire i.e. since it's hard to describe all the cases)
7.5 Scrambling
change
(i.e., between
frames),
to:
(i.e., between
frames and not seding primitives)

Page: 147
Sequence number: 12
Date: 3/8/2003 12:30:39 PM
Type: Highlight
ACCEPT - TODO (Jim Coomes will investigate how to word this in mathematical equations. Need to make sure the width of the scrambler polynomial is handled correctly too. Clarifications about 16-bit calculations added.)
7.5 Scrambling
The initialize value is determined by the scrambler implementation, serial or parallel. Also, a clarification:
Change to:
The data scrambling value shall be initialized at each SOF, SOAF, and SATA_SOF by both the transmitter and receiver. The data being transmitted shall be XORed with the data scrambling value by the transmitter, and the data being received shall be XORed with the data scrambling value by the receiver. The initial value is selected to produce the required scramblilng value for the first value following a reset , e.g., any SOF or device reset (see Annex E). For a given dword displacement from the last data scrambling value reset , the data scrambling value is the same.

Page: 153
Sequence number: 1
Date: 2/17/2003 5:15:13 PM
Type: Highlight
ACCEPT - DONE (in 4.1.11 Connections, add an introduction to connection rate and include this rule with Jim's comment. Point to 4.1.11 from here and from 7.15 Rate matching).
7.7.3 OPEN address frame
for clarification add:
This support may use rate matching.

Page: 154
Sequence number: 3
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE (keep this wording. Make a table with 0000, 7FFF, 8000, maybe 8001h, and FFFFh values in it.. Check rest of document for SCALE bit and AWT field references.)
7.7.3 OPEN address frame
The concept of the scale bit is confusing to implementors. Suggest dropping the scale bit and describing the behavior of a 16 bit AWT by range:
The ARBITRATION WAIT TIME field indicates how long the port transmitting the OPEN address frame has been waiting for a connection request to be accepted. For values from 0000h to 7FFFh the AWT increments in 1 usec steps. For values from 8000h to FFFFh the AWT increments in 1 msec steps. The maximum value represents 32 767 ms + 32 768 µs.
Also, delete table 77, the scale bit in table 74.

Page: 155
Sequence number: 6
Date: 3/5/2003 8:38:07 AM
Type: Highlight
ACCEPT - DONE(per 2/25; reworded)
7.8.3 Fanout expander device specific rules
The identify sequence completes of a port by port basis and there is no global indication of when it complete for all ports on the expander.
Suggest:
"After completing the identify sequence on a port, the expander connection manager within a fanout expander device shall process connection requests from the attached device on the port. The connection manager may return OPEN_REJECT (NO DESTINATION) if internal initialization is not complete."

Page: 155
Sequence number: 7
Date: 3/5/2003 8:38:15 AM
Type: Highlight

ACCEPT - DONE (per 2/25; reworded)
7.8.4 Edge expander device specific rules
same comment as for 7.8.3 -The identify sequence completes of a port by port basis and there is no global indication of when it complete for all ports on the expander.
Suggest:
"After completing the identify sequence on a port, the expander connection manager within a edge expander device shall process connection requests from the attached device on the port. The connection manager may return OPEN_REJECT (NO DESTINATION) if internal initialization is not complete."

Page: 161
Sequence number: 6
Date: 2/16/2003 11:41:02 AM
Type: Highlight
REJECT (Jan WG removed NEA altogether)
7.10 Near-end analog loopback test
Targets should be allowed to perform loopback also.
change to:
"This test mode may be invoked in initiator or target devices using vendor-specific means."
also add a paragraph:
"Once the test is completed in a target device, the target phy shall start a phy reset sequence."

Page: 163
Sequence number: 12
Date: 2/17/2003 5:46:48 PM
Type: Highlight
REJECT (deleting whole paragraph which is incomplete and unnecessary)
7.12.2.2 Connection request responses
The OPEN may require a rate match that is not support by the recepient.
Add: "if the requested connection rate is supported."

Page: 163
Sequence number: 13
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE (make it required for everyone)
7.12.3 Arbitration fairness
may should be shall. Optional implementation may/will lead to non-interoperable devices. Also if optional, the behavior has to be described in the rest of the document.

Page: 163
Sequence number: 14
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE (but weakened the shall set to zero since unfairness is allowed)
7.12.3 Arbitration fairness
The AWT has to be mandatory.
Chnane to:
Initiator ports and target ports shall set the arbitration wait timer to zero for fair operation and start the timer when they transmit the first OPEN address frame for the connection request.

Page: 163
Sequence number: 15
Date: 3/5/2003 3:27:17 PM
Type: Highlight
REJECT (7.7.3 describes the field values in an OPEN address frame; this section describes the counter itself.)
7.12.3 Arbitration fairness
This is duplicated in 7.7.3. Delete here.
The arbitration wait timer shall count in microseconds from 0 µs to 32 767 µs and in milliseconds from 32 768 µs to 32 767 ms + 32 768 µs.

Page: 163
Sequence number: 16
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE (but as >= 8000h rather than > 7FFFh)
7.12.3 Arbitration fairness
In conjunction with a comment in 7.7.3 to rmove the scale bit:
Change to:
However, unfair ports shall not set the ARBITRATION WAIT TIME field to a value greater than 7FFFh; this limits the amount of

unfairness and helps prevent livelocks.

Page: 163
Sequence number: 17
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE (per Jan WG)
7.12.2.2 Connection request responses
***The retry delay timer greatly complicates selecting another transfer request for a queue. If a request to a different destination
has to be selected, a good deal of hardware is required. If done by a processor, the performance would be poor.
Suggest deleting the retry delay. If the expander gets congested, buy more capacity.

Page: 164
Sequence number: 3
Date: 2/19/2003 1:43:18 PM
Type: Highlight
REVIEW PROTOCOL WG (ok to mandate forgetting the request if the inbound open has a different rate?)
ACCEPT - DONE (removed connection rate altogether)
7.12.2.2 Connection request responses
change:
matching PROTOCOL and CONNECTION RATE fields.
to:
a matching PROTOCOL field and a supported connection rate.

Page: 164
Sequence number: 4
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE
7.12.3 Arbitration fairness
Change:
the timer
To:
The arbitration wait timer

Page: 164
Sequence number: 5
Date: 2/19/2003 1:47:50 PM
Type: Highlight
ACCEPT - DONE (winner of longest comment?)
7.12.3.1.1 Arbitration overview
This subclause uses "primitive" in a different meaning than the rest of the draft. Also, it is an overview and should not present the
attribute/confirmation details. Suggest a rewrite to:
The expander connection manager shall arbitrate and assign or deny path resources for connection attempts requested by each
expander phy in response to receiving valid OPEN address frames.
Arbitration includes adherence to the SAS arbitration fairness algorithm and path recovery. Path recovery is used to avoid potential
deadlock scenarios within the SAS topology by deterministically choosing which partial pathway(s) to tear down to allow at least
one connection to complete.
The expander connection manager responds to connection request with arbitration won, lost, and reject to the requesting phy.
Each path request contains the Arbitration Wait Time and the Source SAS Address arguments from the received OPEN address
frame.
If two path requests contend, the winner shall be determined by comparing OPEN address frame field values in this order:
1) largest Arbitration Wait Time;
2) largest Source SAS Address; and
3) largest Connection Rate.
The expander connection shall generate the arbitration reject response when any of the following conditions are met:
a) the request does not map to a valid phy;
b) the request specifies an unsupported connection rate; or
c) the request specifies a destination port which contains at least one partial pathway and pathway recovery rules require this
connection request to release path resources.
When two phys receive an OPEN address frame destined for each other, the expander connection manager shall provide an
arbitration lost response to the phy that received the lowest priority OPEN address frame when all of the following conditions are
met:
a) the request is for an available phy at a supported connection rate; and
b) the destination phy of this connection request has received a higher priority OPEN address frame with this phy as its destination.
The expander connection manager shall generate the arbitration won response when all of the following conditions are met:
a) the request maps to an available phy at a supported connection rate; and
b) no higher priority connection requests are present with this phy as the destination.

Page: 164
Sequence number: 6
Date: 2/19/2003 12:42:45 PM
Type: Highlight
    ACCEPT - DONE (added "from the destination SAS port" rather than name specific OPEN_REJECTs.)
    7.12.3 Arbitration fairness
    The AWT is not reset on OPEN_REJECT (PATHWAY BLOCKED). This appears to be the only exception to reseting the timer.
    Add:
    (except OPEN_REJECT (PATHWAY BLOCKED))

Page: 164
Sequence number: 7
Date: 2/19/2003 1:49:11 PM
Type: Highlight
    REJECT (yes they could be the same for two incoming requests from the same direction - e.g. a wide SAS port making two
    simultaneous requests both with AWTs of zero. This rule ensures that the faster one wins.)
    7.12.3.1.1 Arbitration overview
    Why is largest Connection Rate used for compare? Does this mean that AWT and Source SAS address are the same?

Page: 165
Sequence number: 2
Date: 2/16/2003 11:41:02 AM
Type: Highlight
    ACCEPT - DONE
    7.12.3.1.2 Arbitration status
    Change: value
    To: type

Page: 170
Sequence number: 1
Date: 2/16/2003 11:41:02 AM
Type: Highlight
    REJECT
    7.13 SAS link layer state machine for initiator phys and target phys (SL)
    The SL state machine starts with 0 state. Most others start with 1.

Page: 186
Sequence number: 1
Date: 2/16/2003 11:41:02 AM
Type: Highlight
    ACCEPT - DONE
    7.14.6.1 State description
    Spelling:
    Thist should be "This"

Page: 190
Sequence number: 2
Date: 2/16/2003 11:41:02 AM
Type: Highlight
    ACCEPT - DONE
    7.15 Rate matching
    The termination of inserting ALIGNs is not covered.
    Add a sentence:
    The source shall stop inserting ALIGNs for rate matching with the first dword of CLOSE.

Page: 191
Sequence number: 1
Date: 2/18/2003 3:40:46 PM
Type: Strikeout
    ACCEPT - DONE
    7.16.3 SSP frame transmission
    Delete:
    NAK means the frame was received with an error;
    NAK (CRC ERROR) is the only defined NAK.

Page: 207
Sequence number: 3
Date: 2/19/2003 10:58:08 AM
Type: Highlight

REJECT (whole paragraph deleted)
7.17.3 Preparing to close an STP connection
Change:
detected, after
To:
detected or after

Page: 209
Sequence number: 1
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE (can do in this picture by just making it square. Trouble for some other pictures though.)
7.18.4.1 Overview, Table 88
Round corners of white box to match format of other state machines

Page: 214
Sequence number: 4
Date: 3/1/2003 4:06:23 PM
Type: Highlight
REFER PORT WG - TODO
8.2.2 Bus inactivity time limit timer
This timer is optional by definition in SCSI.
Add text:
Support for the bus inactivity timer is optional. The Disconnect-Reconnect mode page may be accessed to determine support for this timer. When this timer is not supported, the bus inactivity timer shall not be treated as expired in this standard.

Page: 214
Sequence number: 5
Date: 3/1/2003 4:06:17 PM
Type: Highlight
REFER PORT WG - TODO
8.2.3 Maximum connect time limit timer
Add text:
Support for the maximum connect time limit timer is optional. The Disconnect-Reconnect mode page may be accessed to determine support for this timer. When this timer is not support, the maximum connect time limit timer shall not be treated as expired in this standard.

Page: 214
Sequence number: 6
Date: 3/1/2003 4:06:05 PM
Type: Highlight
REFER PORT WG - TODO
8.2.4 I_T nexus loss timer
Add text:
Support for the I_T nexus loss timer is optional. The Protocol-Specific Port mode page may be accessed to determine support for this timer see 10.1.6.2. When this timer is not support, the I_T nexus loss timer shall not be treated as expired in this standard.

Page: 215
Sequence number: 3
Date: 3/1/2003 4:07:35 PM
Type: Highlight
REFER PORT WG - TODO (agree)
8.2.5 Arbitration wait time (AWT) timer
Add a sentence:
Support of the AWT is mandatory.

Page: 215
Sequence number: 4
Date: 3/1/2003 4:07:24 PM
Type: Highlight
REFER PORT WG - TODO (agree)
8.2.6 Pathway blocked count (PBC) counter
Add a sentence:
Support of the PBC is mandatory.

Page: 226
Sequence number: 11
Date: 3/1/2003 4:18:22 PM
Type: Highlight

REFER PORT WG - TODO
8.4.4.1 State description
second to last paragraph
The shall in the following sentence is misleading for an optional timer.
the bus inactivity time limit timer shall be initialized
suggest:
the bus inactivity time limit timer if supported shall be initialized

Page: 226
Sequence number: 12
Date: 3/1/2003 4:18:17 PM
Type: Highlight
REFER PORT WG - TODO
8.4.4.1 State description
last paragraph
The shall in the following sentence is misleading for an optional timer.
the maximum connect time timer shall be initialized
suggest:
initializedthe maximum connect time timer if supported shall be initialized

Page: 229
Sequence number: 5
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE (it's the bit mislabeled TIMEOUT in the table)
9.2.1 SSP frame format
The RETRANSMIT bit is in the text but not in Table 88. Is the function out?

Page: 230
Sequence number: 4
Date: 2/16/2003 11:41:02 AM
Type: Strikeout
ACCEPT - DONE (moved most of the definition to 9.2.2.4 and put xrefs here to there and there to here. Deleted the redundant
sentence.)
9.2.1 SSP frame format
Delete. This sentence is redundant with the last paragragh in 9.2.2.4 DATA information unit.

Page: 233
Sequence number: 3
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE (see IBM comment)
9.2.2.3 XFER_RDY information unit - Table 94 — XFER_RDY information unit
The use of the same field name, RELATIVE OFFSET, in the header and XFR_RDY is confusing. Suggest:
XFR_RDY_OFFSET,
REQUEST_OFFSET,
STARTING_OFFSET,
etc.
RELATIVE OFFSET

Page: 233
Sequence number: 4
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE
9.2.2.3 XFER_RDY information unit
reference to 10.1.1.1.5
should be 10.1.6.1.5

Page: 233
Sequence number: 5
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE
9.2.2.3 XFER_RDY information unit
reference to 10.1.1.1.5
should be 10.1.6.1.5

Page: 234

Sequence number: 1
Date: 2/16/2003 11:41:02 AM
Type: Strikeout
    ACCEPT - DONE
    9.2.2.4 DATA information unit
    Delete: This sentence is redundant with the first paragraph on the page.

Page: 239
Sequence number: 1
Date: 2/16/2003 11:41:02 AM
Type: Strikeout
    REJECT - that is indeed the intention. There are no more frame transmissions allowed if ACK or NAK are not balanced.
    9.2.4.1 COMMAND frame
    Delete:
    in the next connection
    This would mean the initiator would have to shutdown any queued transfer request to satisfy the next connection requirement.

Page: 260
Sequence number: 3
Date: 2/16/2003 11:41:02 AM
Type: Highlight
    ACCEPT - DONE
    9.4.2 SMP_REQUEST frame
    Why is this not 1 024?

Page: 261
Sequence number: 4
Date: 2/16/2003 11:41:02 AM
Type: Highlight
    ACCEPT - DONE
    9.4.3 SMP_RESPONSE frame
    Why is this not 1 024?

Page: 263
Sequence number: 3
Date: 2/16/2003 11:41:02 AM
Type: Highlight
    ACCEPT - DONE (removed here, and mentioned later in Transmit Frame () call that it must be set to FFFFh)
    9.4.4.2.2.2 Transition MT_ID1:Idle to MT_ID2:Send
    Why is the initiator connection tag included when the SMP transfer is interlocked?

Page: 287
Sequence number: 5
Date: 2/16/2003 11:41:02 AM
Type: Highlight
    REJECT
    10.1.8 SCSI power condition states
    SA_PC state machine numbering is not consistent with other state machines. SA_PC state machine start with "0", others start with "1".

Page: 305
Sequence number: 4
Date: 2/28/2003 3:31:42 PM
Type: Highlight
    ACCEPT - DONE (tie it to Enable Disable Link Layer output of the SP state machine.)
    10.3.1.5 REPORT PHY ERROR LOG function
    The meaning of "outside of phy reset sequences" is not specific.
    Suggest substituting:
    "while PhyReady is valid from the SP state machine" each counter in this clause to be more specific.

Page: 324
Sequence number: 5
Date: 2/16/2003 11:41:02 AM
Type: Highlight
    ACCEPT - DONE
    B.1 SAS phy reset sequence examples
    Figure A.1
    S.B.
    Figure B.1

Page: 324
Sequence number: 6
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE
B.1 SAS phy reset sequence examples
Figure A.2
S.B.
Figure B.2

Page: 327
Sequence number: 1
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE
C.3 CRC implementation with XORs
Change:
These equations generate the 32 bit CRC for frame transmission.
To:
These equations generate the multiplier function shown in figures C.1 and C.2.

Page: 339
Sequence number: 1
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE
F.1 STP differences from SATA
Add:
h) BIST activated frames not supported.

Page: 341
Sequence number: 1
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE
F.3 Byte and bit ordering, Figure F2
change byte order to:
(4th : 3rd : 2nd : 1st)
to match Figure F.3

Page: 341
Sequence number: 2
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE
F.3 Byte and bit ordering, Figure F2
change byte order to:
(1st : 2nd : 3rd : 4th)
to match Figure F.3

Page: 343
Sequence number: 1
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE
G.1 Overview, Table G.1
For completeness, continue table to include representations for PHYs W & Z…should be a cut-and-paste of what's there with a
replacement of X->W and Y->Z plus device A -> C and B->D.

Page: 345
Sequence number: 1
Date: 2/16/2003 11:41:02 AM
Type: Highlight
ACCEPT - DONE (in table G.1 instead of here)
G.2 Connection request - Open accept, Figure G.2
Add reference Fig 26 and Fig 27 to help the reader understand how to interpret req/rsp and cnf/ind columns in the figures.

Page: 371

Sequence number: 1
Date: 2/16/2003 11:41:02 AM
Type: Highlight
    ACCEPT - DONE
    I.3 Source file
    Should:
    header file
    Be:
    code file

Author: SEG Cox

Page: 67
Sequence number: 7
Date: 2/16/2003 11:41:24 AM
Type: Strikeout
    ACCEPT - DONE (per PHY WG - with only added to prev line too)
    5.3.3 SAS internal cable receptacle connector
    "only" is unnecessary in this sentence and should be removed.

Page: 67
Sequence number: 8
Date: 2/16/2003 11:41:24 AM
Type: Strikeout
    ACCEPT - DONE
    5.3.4 SAS backplane receptacle connector
    "only" is unnecessary in this sentence and should be removed.

Page: 70
Sequence number: 2
Date: 2/16/2003 11:41:24 AM
Type: Circle
    ACCEPT - DONE (per phy WG)
    5.4.1 SAS internal cables
    Figure 34 — SAS internal cable assembly and destination pin assignments
    P11 is not bidirectional should only have one arrow on the far end.

Page: 70
Sequence number: 3
Date: 2/16/2003 11:41:24 AM
Type: Circle
    ACCEPT - DONE
    5.4.1 SAS internal cables
    Figure 34 — SAS internal cable assembly and destination pin assignments
    These grounds should have an arrow on both ends as they are a shield rather than a directional signal or power function.

Page: 70
Sequence number: 4
Date: 2/16/2003 11:41:24 AM
Type: Circle
    ACCEPT - DONE
    5.4.1 SAS internal cables
    Figure 34 — SAS internal cable assembly and destination pin assignments
    These grounds should have an arrow on both ends as they are a shield rather than a directional signal or power function.

Page: 70
Sequence number: 5
Date: 2/16/2003 11:41:24 AM
Type: Circle
    ACCEPT - DONE
    5.4.1 SAS internal cables
    Figure 34 — SAS internal cable assembly and destination pin assignments
    These grounds should have an arrow on both ends as they are a shield rather than a directional signal or power function.

Page: 72
Sequence number: 4

Date: 2/16/2003 11:41:24 AM
Type: Highlight
ACCEPT - DONE (per phy WG)
5.7.2 General interface specification
Change "interoperability" to "compliance"

Page: 72
Sequence number: 5
Date: 2/16/2003 11:41:24 AM
Type: Highlight
ACCEPT - DONE (per phy WG)
5.7.2 General interface specification
Change "conforming" to "compliant"

Page: 72
Sequence number: 6
Date: 2/16/2003 11:41:24 AM
Type: Highlight
ACCEPT - DONE
5.7.1 Compliance points
Change "physical definition" to "description" as this is consistent with the column label in Table 33.

Page: 77
Sequence number: 3
Date: 2/16/2003 11:41:24 AM
Type: Highlight
ACCEPT - DONE
5.7.4 Transmitted signal characteristics
Table 35 — Transmitted signal characteristics at Tx compliance points
***
Change 133 to 67

Page: 93
Sequence number: 1
Date: 2/16/2003 11:41:24 AM
Type: Circle
ACCEPT - DONE
6.4 Bit order
Figure 44 — SAS bit transmission logic
Correct figure so that 16 is horizontal like the rest of the numbers instead of vertical.

Page: 96
Sequence number: 1
Date: 2/16/2003 11:41:24 AM
Type: Highlight
ACCEPT - DONE (also added cross reference to first use of transmitter, receiver, and state machine, and changed "SAS phy" to "SP" after this)
6.5 Out of band (OOB) signals
Change "SP" to "SAS phy (SP)", as this is the first occurence.

Page: 97
Sequence number: 4
Date: 2/16/2003 11:41:24 AM
Type: Highlight
ACCEPT - DONE
6.5 Out of band (OOB) signals
This is more clear if the two cases are put in the opposite order and "then" should be "than". Replace the highlighted text with:
"A receiver shall not detect the same OOB signal again until it has detected lack of transitions for a time greater than the proceeding idle time (i.e., a COMINIT negation time for a COMINIT idle time or a COMSAS negation time for a COMSAS idle time) or has detected a different OOB signal (e.g., if the idle time changes).

Page: 98
Sequence number: 2
Date: 2/16/2003 11:41:24 AM
Type: Highlight
ACCEPT - DONE
6.5 Out of band (OOB) signals
Change "SAS phy (SP)" to "SP"

Page: 98
Sequence number: 3
Date: 2/16/2003 11:41:24 AM
Type: Circle
    ACCEPT - DONE
    6.5 Out of band (OOB) signals
    Figure 47 — OOB signal detection
    Bracket 6 is o the wrong side of the burst. It should be at the trailing edge instead of the leading edge.

Page: 100
Sequence number: 4
Date: 2/16/2003 11:41:24 AM
Type: Strikeout
    ACCEPT - DONE
    6.6.3 SAS to SATA phy reset sequence
    This does not have to be a "legacy" device.

Page: 106
Sequence number: 2
Date: 2/21/2003 3:50:48 PM
Type: Highlight
    ACCEPT - DONE (made the change)
    6.6.5 Phy reset sequence after device is attached
    GEnder is wrong. Change "into a receptacle." to "onto a plug."

Page: 106
Sequence number: 3
Date: 2/16/2003 11:41:24 AM
Type: Highlight
    REJECT (a phy does not ignore incoming COMINITs while waiting through its hot-plug timeout)
    6.6.5 Phy reset sequence after device is attached
    This explanation needs additional detail to be clear. Make the following changes to the text by adding additional information and
    delting "after the attachment".
    In this example, SAS phy B is attached to SAS phy A some time before SAS phy B's second hot-plug timeout occurs, but while
    SAS phy A is still in a hot-plug timeout and unable to detect a valid COMINIT from SAS phy B. SAS phy A completes its hot-plug
    timeout and transmits COMINIT. SAS phy B's OOB detection circuitry detects a COMINIT, ...

Page: 107
Sequence number: 3
Date: 2/16/2003 11:41:24 AM
Type: Highlight
    ACCEPT - DONE (the labels are broken; "Rx" on the left is not true until time y... I don't think it matters if A is attached to B or B is
    attached to A. Tx and Rx lines separated.)
    6.6.5 Phy reset sequence after device is attached
    Figure 55 — Hot-plug and the phy reset sequence
    Change "SAS phy A attached to SAS phy B" to "SAS phy B attached to SAS phy A. Phy A and Phy B Rx signals are not present
    until this time."

Page: 107
Sequence number: 4
Date: 2/21/2003 3:45:13 PM
Type: Circle
    ACCEPT - DONE
    6.6.5 Phy reset sequence after device is attached
    Figure 55 — Hot-plug and the phy reset sequence
    The "Time y" arrowhead should be on the other side of the squiggle to have the event illustrated later in the timing sequence.

Page: 321
Sequence number: 1
Date: 2/16/2003 11:41:24 AM
Type: Highlight
    ACCEPT - DONE
    A.1 Compliant jitter test pattern (CJTPAT)
    Case of the next to the last character is incorrect. 35B5A9Edh should be 35B5A9EDh

Page: 322
Sequence number: 1
Date: 2/16/2003 11:41:24 AM
Type: Highlight

ACCEPT - DONE
A.1 Compliant jitter test pattern (CJTPAT)
Case of the next to the last character is incorrect. 8CF328Eah should be 8CF328EAh

Page: 323
Sequence number: 1
Date: 2/16/2003 11:41:24 AM
Type: Highlight
ACCEPT - DONE
A.1 Compliant jitter test pattern (CJTPAT)
Case of the next to the last character is incorrect. AFF087Ebh should be AFF087EBh

Page: 323
Sequence number: 2
Date: 2/16/2003 11:41:24 AM
Type: Highlight
ACCEPT - DONE
A.1 Compliant jitter test pattern (CJTPAT)
Case of the next to the last character is incorrect. E21035Efh should be E21035EFh

Author: SEG Houlder

Page: 6
Sequence number: 8
Date: 2/16/2003 11:41:08 AM
Type: Strikeout
ACCEPT - DONE (delete it. That will mean no special meaning)
3.1.25 device: A physical entity.
Delete this definition of device. SAM-x, SPC-x, SPI-x, etc. have gotten along fine without defining device even though they all use the word hundreds of times. The given definition is so broad that it isn't helpful anyway.

Page: 6
Sequence number: 9
Date: 2/16/2003 11:41:08 AM
Type: Highlight
ACCEPT - DONE
Synonymous with SAS domain.
The definition for domain should be more general purpose because several types of domains are referred to in SAS. Use the definition of domain from SAM-2 -- "An I/O system consisting of a set of devices that interact with one another by means of a service delivery subsystem" with the acronym SCSI removed so the definition can be applied to "ATA domain" which also appears in this draft.

Page: 7
Sequence number: 7
Date: 2/16/2003 11:41:08 AM
Type: Highlight
ACCEPT - DONE
expander connection router (ER):
Change ER to ECR to be consistent withother references to this item.

Page: 8
Sequence number: 8
Date: 3/2/2003 1:00:56 PM
Type: Highlight
ACCEPT - DONE (deleted the alias - use SAS initiator device everywhere)
3.1.64 initiator device
Synonymous with
This is not accurate or useful. use the generic "initiator device" description here (which can also be applied to ATA initiator device) and change "SAS initiator device" to "an initiator device in SAS domain".

Page: 8
Sequence number: 9
Date: 3/2/2003 1:00:51 PM
Type: Highlight
ACCEPT - DONE (deleted the alias - use SAS initiator port everywhere)
3.1.66 initiator port

Synonymous with
This is not accurate or useful. use the generic "initiator port" description here (which can also be applied to ATA initiator port) and
change "SAS initiator port" to "an initiator port in SAS domain".

Page: 9
Sequence number: 9
Date: 2/16/2003 11:41:08 AM
Type: Highlight
    REJECT - this is the correct direction
    higher layer state machine to a lower layer
    This wording is identical to "request" definition!! I think you mean "lower layer state machine to higher layer"

Page: 10
Sequence number: 5
Date: 2/16/2003 11:41:08 AM
Type: Highlight
    REJECT - it's referring to the SATA document
    defined by SATA.
    replace with "protocol defined by SATA industry group".

Page: 11
Sequence number: 4
Date: 3/2/2003 1:01:19 PM
Type: Highlight
    ACCEPT - DONE (deleted the alias - use SAS target device everywhere)
    3.1.138 target device
    Synonymous with
    This is not accurate or useful. use the generic "target device" description here (which can also be applied to ATA target device)
    and change "SAS target device" to "a target device in SAS domain".

Page: 11
Sequence number: 5
Date: 3/2/2003 1:01:37 PM
Type: Highlight
    ACCEPT - DONE (deleted the alias - use SAS target port everywhere)
    3.1.140 target port
    Synonymous with
    This is not accurate or useful. use the generic "target port" description here (which can also be applied to ATA target port) and
    change "SAS target port" to "a target port in SAS domain".

Page: 13
Sequence number: 1
Date: 2/16/2003 11:41:08 AM
Type: Highlight
    ACCEPT - DONE (also fixed millivolt and nanofarad)
    millisecond (10-6 seconds)
    Should be 10-3 seconds.

Page: 14
Sequence number: 1
Date: 2/16/2003 11:41:08 AM
Type: Highlight
    ACCEPT - DONE
    not::
    remove the extra : after the word not.

Page: 15
Sequence number: 3
Date: 2/16/2003 11:41:08 AM
Type: Strikeout
    ACCEPT - DONE
    Fields containing only one bit are usually referred to as the name bit instead of the name field.
    Remove this sentence - it is redundant with sentence 2 paragraphs earlier (paragraph starting with "Names of fields are ..").

Page: 21
Sequence number: 4
Date: 2/16/2003 11:41:08 AM
Type: Highlight
    ACCEPT - DONE (added "8b10b coding" to definitions)

8b10b coded
This term should be defined in definitions clause (3.1).

Page: 21
Sequence number: 5
Date: 2/16/2003 11:41:08 AM
Type: Highlight
    REJECT (the attached phys might have the same SAS address in a physical loopback configuration, so "different" is not
    necessarily true. Note 6 describes that scenario.)
    4.1.3 Ports
    Replace "a SAS" with " a different SAS".

Page: 27
Sequence number: 1
Date: 2/16/2003 11:41:08 AM
Type: Highlight
    ACCEPT - DONE (new "bridge" object created as requested; paragraph deleted, new picture added including bridge)
    4.1.9 Domains
    are not required to
    Change to "do not". I contend that something that translates SSP to SATA is a bridge device, not an expander.

Page: 29
Sequence number: 1
Date: 2/16/2003 11:41:08 AM
Type: Note
    ACCEPT - DONE (added note that the top edge expander devices are using subtractive routing to each other)
    Should there be more rules to define an "edge expander device set"? For instance, it is not clear to me why this group of 6 edge
    expander devices is considered to be two edge expander device sets instead of one edge expander device set. I'm sure there must
    be a way to connect the 6 edge expander devices so that they are considered to be one expander device set.

Page: 30
Sequence number: 6
Date: 2/16/2003 11:41:08 AM
Type: Highlight
    ACCEPT - DONE (overcome by rewrite)
    port(s);
    change to "port(s) using SSP;".

Page: 30
Sequence number: 7
Date: 2/16/2003 11:41:08 AM
Type: Highlight
    ACCEPT - DONE (list removed; generic SSP, STP, and SMP references put in place)
    Should an example d) be added to describe a SCSI initiator port to expander port(s) using SMP?
    If this is inperpreted as a complete list of allowed connection types, the example must be added.

Page: 69
Sequence number: 2
Date: 2/16/2003 11:41:08 AM
Type: Highlight
    REJECT (per PHY WG Reject. Table 31 is sufficient reference.)
    5.3.6 SAS external cable plug connector
    Table 31 defines
    change to "Table 31 in clause 5.3.8 defines .." for clarity. Change both occurrances on this page.

Page: 70
Sequence number: 1
Date: 2/16/2003 11:41:08 AM
Type: Highlight
    ACCEPT - DONE
    itnernal
    spelling should be "internal".

Page: 71
Sequence number: 11
Date: 2/16/2003 11:41:08 AM
Type: Highlight
    ACCEPT - DONE
    The LED and the current limiting resistor may be external to the target device.

***Change this to read " The LED and the current limiting circuitry shall be external to the target device." The standard must definitely state where the current limiting circuirty and the LED are located.

Page: 72
Sequence number: 2
Date: 2/16/2003 11:41:08 AM
Type: Highlight
    ACCEPT - DONE (changed to "exceed")
    operate within
    ***Change to "meet". The word within is ambiguous.

Page: 72
Sequence number: 3
Date: 2/16/2003 11:41:08 AM
Type: Highlight
    ACCEPT - DONE
    that
    Replace with "this".

Page: 73
Sequence number: 1
Date: 2/16/2003 11:41:08 AM
Type: Note
    REJECT (per phy WG)
    Figures 35 and 36 seem out of place here. Should they be moved to the Test Loads clause or somewhere else?

Page: 74
Sequence number: 2
Date: 2/16/2003 11:41:08 AM
Type: Highlight
    ACCEPT - DONE (per phy WG)
    5.7.3.1 Eye masks overview
    change to "limits imposed on the signal at that particular compliance point". The added clarification is considered significant by Al Kramer.

Page: 79
Sequence number: 1
Date: 2/16/2003 11:41:08 AM
Type: Highlight
    ACCEPT - DONE
    SAS PHY WG
    5.7.7 page 79
    Table 38
    Accept both Seagate comments but impolement as follows:
    Combine notes b/d and c/e as suggested but separate the applied frequency ranges to separate footnotes and reference the new footnotes in the columns where they apply. References to b, c, d, and e will now need two reference designators: one for the text and one for the frequency range. 4 notes changed into 6 notes.
    ***The requirements of both notes b and d should be worded the same except for the swept frequency range (first sentence of each note). Combining requirements of both should make both notes look like this:
    The jitter values given are normative for a combination of deterministic jitter, random jitter, and sinusoidal jitter that receivers shall be able to tolerate without exceeding a BER of 10-12. Receivers shall tolerate sinusoidal jitter of
    progressively greater amplitude at lower frequencies, according to the mask in figure 39 with the same deterministic jitter and random jitter levels as were used in the high frequency sweep.

Page: 79
Sequence number: 2
Date: 2/16/2003 11:41:08 AM
Type: Highlight
    ACCEPT - DONE
    SAS PHY WG
    5.7.7 page 79
    Table 38
    Accept both Seagate comments but impolement as follows:
    Combine notes b/d and c/e as suggested but separate the applied frequency ranges to separate footnotes and reference the new footnotes in the columns where they apply. References to b, c, d, and e will now need two reference designators: one for the text and one for the frequency range. 4 notes changed into 6 notes.
    ***Again the requirements of notes c and e should be combined and applied to both notes:
    No value is given for random jitter. For compliance with this
    standard, the actual random jitter amplitude shall be the value that brings total jitter to the stated value at a probability of 10-12.

The additional 0,1 UI of sinusoidal jitter is added to
ensure the receiver has sufficient operating margin in the presence of external interference.

Page: 97
Sequence number: 2
Date: 2/16/2003 11:41:08 AM
Type: Highlight
    ACCEPT - DONE
    then
    Replace with "than".

Page: 98
Sequence number: 1
Date: 2/16/2003 11:41:08 AM
Type: Highlight
    ACCEPT - DONE (also deleted the references in the SP receiver)
    COMINIT Completed
    This transition is defined here, but is not used anywhere in the SP state machine (figure 56, page 133). Why?

Page: 106
Sequence number: 1
Date: 2/16/2003 11:41:08 AM
Type: Highlight
    REJECT (Figure 53 shows a G2-only phy B talking to a G1, G2, G3 phy A)
    The specification is not clear and does not have an example (either here or in Annex B) of a Phy that may only supports G2, but
    not G1. Thus, the speed negotiation window may be as following: G2 rate, G3 rate, then G2 rate (negotiated rate). Or is this
    protocol allowed?

Page: 107
Sequence number: 1
Date: 2/16/2003 11:41:08 AM
Type: Highlight
    ACCEPT - DONE
    COMINIT Completed;
    This parameter is not used anywhere in SP state machine.

Page: 109
Sequence number: 4
Date: 2/16/2003 11:41:08 AM
Type: Highlight
    ACCEPT - DONE
    Figure 56 SP OOB state machine
    COMSAS Should be "COMINIT".

Page: 109
Sequence number: 17
Date: 2/16/2003 11:41:08 AM
Type: Note
    REJECT (we don't show signals to trigger the timers... the state machine just somehow knows how to run them)
    Figure 56 - SP OOB   (split from another comment)
     SP3:OOB_AwaitCOMINIT_Sent state: There is inconsistency between states: in SP1:OOB_COMINIT state, there is an output
    "Transmit COMINIT" indicating to the SP transmitter to start transmit COMINIT and wait for COMINIT to be transmitted and/or
    received. However, this is no output parameter in the SP7:OOB_AwaitCOMSAS state to start the COMSAS timer, or an output
    parameter in the SP2:OOB_AwaitCOMX to start the hotplug timer.

Page: 113
Sequence number: 1
Date: 3/4/2003 6:33:12 PM
Type: Note
    ACCEPT - DONE (how should we specify sending "idle time" - a Transmit Idle parameter, or just say the SP transmitter does that
    when not instructed to do anything else? 1/17 WG decided to just describe in the SP transmitter.)
    The descriptions for SP8:SAS_Start and SP9:SAS_RateNotSupported indicated that the idle shall be transmitted during these
    states. Some of the other state are self-explanatory. However, clearly defining whether idle should be transmitted for the
    SP14:SAS_Fail or SP13:SAS_Pass would be helpful.

Page: 113
Sequence number: 8
Date: 2/16/2003 11:41:08 AM
Type: Note

REJECT (per Jan WG; they were zero time states so didn't really represent hardware)
Figure 57 - SP SAS state machine (split from another comment)
Additionally, the states such as fallback state and inc_speed states defined in sas_r02.pdf make the speed negotiation state machine a lot more clear, but these states are removed in the current version.

Page: 114
Sequence number: 3
Date: 2/16/2003 11:41:08 AM
Type: Highlight
ACCEPT - DONE (but when the editor's note is deleted this is moot)
(1) SP19:AwiatALIGN should be SP19:SATA_AwiatALIGN [in the editor's note]

Page: 114
Sequence number: 29
Date: 3/7/2003 1:53:10 PM
Type: Note
ACCEPT - DONE (Renamed Enable Disable Link Layer (Disable, SAS Enable, or SATA Enable) to Phy Layer Ready (SAS or SATA) and Phy Layer Not Ready. Merged expander device Phy Not Ready and the new Phy Layer Not Ready; they both work for all devices. Messages to the SP_DWS are now Start DWS and Stop DWS.
Messages from SP_DWS are DWS Lost (DWS had sync and lost it) and DWS Reset (DWS gave up). DWS0 chooses to send DWS_Reset after a vendor-specific time waiting. Otherwise, DWS sends DWS Lost to SP, and SP decides whether to send a new Start DWS or not.
Incorporated editor's note pretty much as written.)
[split from another comment]
(2) This editor's note should be incorporated into the speed negotiation state machine. Additionally, this statement is not very clear whether the DWS state machine should be started for the speed negotiation window (G1 rate, G2 rate, G3 rate, G? rate (negotiated rate)), or the DWS state machine should be started only at the negotiated rate window?

Author: SEG Worden

Page: 16
Sequence number: 1
Date: 2/28/2003 2:54:35 PM
Type: Highlight
ACCEPT - DONE (capitalize Name only)
3.5.1 -State Machine Conventions overview
Figure 3 - State machine conventions
Change <State designator:State_name>
to "STATE DESIGNATOR: State_Name"
also change SMP state machine names to agree with this (Fig 88, 89) and associated text

Page: 16
Sequence number: 2
Date: 2/16/2003 11:41:14 AM
Type: Highlight
REJECT (the label is a brief description - not an "or")
3.5.2 Transitions
change <label, a brief>
to "label, or a breif>

Page: 21
Sequence number: 6
Date: 2/16/2003 11:41:14 AM
Type: Highlight
ACCEPT - DONE (it should be 6.2.1 where "dword" is defined)
4.1.2 Physical links and phys
change <(see 6.1)>
to ???
(the reference is to "dwords" but 6.1 is "Phy layer overview" and not about dwords)

Page: 24
Sequence number: 3
Date: 2/16/2003 11:41:14 AM
Type: Highlight
REJECT (STP target ports are allowed)(whole section being deleted anyway)
4.1.6 Target devices

I think this wording <or STP> shouls be deleted,

Page: 24
Sequence number: 4
Date: 2/16/2003 11:41:14 AM
Type: Highlight
REJECT (STP target ports are allowed)(whole section being deleted anyway)
4.1.6 Target devices
I think this wording <,and STP target ports> should be deleted

Page: 24
Sequence number: 5
Date: 2/16/2003 11:41:14 AM
Type: Highlight
REJECT (STP target ports are allowed)(whole section being deleted anyway)
4.1.6 Target devices
I think this wording < ,STP> should be deleted

Page: 35
Sequence number: 1
Date: 2/27/2003 6:50:26 PM
Type: Note
ACCEPT - DONE (add a similar picture for expanders and emphasize that this picture is for non-expander devices (SAS devices).)
4.3.1 State machine overview ***
Figure 19 - State machines
Figure 20 - Transmit data path and state machines
Figure 23 - STP link STP transport and ATA application layers state machines
For the STP paths, these state machines are only valid for the initiator device. Also, the STP transport layer and the STP link layer
are not documented in this document, and these layers are not the same as the SATA defined layers because they must interface
to the SAS port layer in order to get a port assigned for the transmit function. This is a big hole in this document . In addition this
figure is not valid for target devices. The target device can only be a SATA device with a SATA link layer (which does not support
sending or receiving SAS address frames - which gets you in and out of the SAS link layer (SL)). There is also no port layer in a
SATA device.   the SATA devices have no concept of ports or SAS addressing. Note: These comments are also applicable to
figures 20 and 23.

Page: 36
Sequence number: 1
Date: 2/16/2003 11:41:14 AM
Type: Note
ACCEPT - DONE (crammed in a port layer box)
4.3.2 Transmit data path
Figure 20 transmit datat path and state machines
This picture should have a port layer box between each transport and link layer box

Page: 37
Sequence number: 1
Date: 2/16/2003 11:41:14 AM
Type: Highlight
ACCEPT - DONE (reworded all three figure intros to mention the port layer)
4.3.2 Transmit data path
chnge <link, SSP>
to "link, SSP port, SSP"

Page: 37
Sequence number: 2
Date: 2/16/2003 11:41:14 AM
Type: Highlight
ACCEPT - DONE
4.3.2 Transmit data path
Figure 21title
change <link, SSP>
to "link, SSP port, SSP"

Page: 38
Sequence number: 1
Date: 2/16/2003 11:41:14 AM
Type: Highlight
ACCEPT - DONE
4.3.2 Transmit data path

chnge <link, SMP>
to "link, SMP port, SMP"

Page: 38
Sequence number: 2
Date: 2/16/2003 11:41:14 AM
Type: Highlight
   ACCEPT - DONE
   4.3.2 Transmit data path
   Figure 22title
   change <link, SMP>
   to "link, SMP port, SMP"

Page: 38
Sequence number: 3
Date: 3/2/2003 3:41:19 PM
Type: Note
   REJECT (the DONE primitive is not used in SMP connections)
   4.3.2 Transmit data path
   figure 22 SMP link, SMP transprt ...
   Should't there be a "DONE" box and line like in figure 21 ???

Page: 39
Sequence number: 2
Date: 2/16/2003 11:41:14 AM
Type: Highlight
   ACCEPT - DONE
   4.3.2 Transmit data path
   chnge <link, STP>
   to "link, STP port, STP"

Page: 39
Sequence number: 3
Date: 2/16/2003 11:41:14 AM
Type: Highlight
   ACCEPT - DONE
   4.3.2 Transmit data path
   Figure 23title
   change <link, STP>
   to "link, STP port, STP"

Page: 39
Sequence number: 4
Date: 2/16/2003 11:41:14 AM
Type: Note
   REJECT (this is valid for an STP target too. True it is not describing a pure SATA target + a STP/SATA bridge - but that
   combination should end up with a result that equals this)
   4.3.2 Transmit data path
   Figure 23 - STP link, STP transport and ATA application layer state machines
   Only valid for initiator layer. Figure 23 states that the STP transport and link layer state machines are "based" on the SATA state
   machines but are not documented - especially on how they interface to the port layer . This figure doesn't really agree with figure
   19 - State machines

Page: 42
Sequence number: 1
Date: 2/16/2003 11:41:14 AM
Type: Note
   ACCEPT - DONE
   4.3.3.1 Signals between phy layer and other layers
   Table 13 — Confirmations between SSP link layer, port layer, and SSP transport layer
   add "ACK Transmitted" as a confirmation from the link to the port layer and from the port to the transport layer.

Page: 43
Sequence number: 1
Date: 2/16/2003 11:41:14 AM
Type: Strikeout
   ACCEPT - DONE
   4.3.3.3 Signals between link layer, port layer, and transport layer for SMP
   Table 15 — Confirmations between link layer, port layer, and SMP transport layer

remove <Connection Opened (SMP,Source Opened)>
(this signal is repeated in Table 16 — Confirmations between link layer and port layer

Page: 43
Sequence number: 2
Date: 2/16/2003 11:41:14 AM
Type: Strikeout
    ACCEPT - DONE
    4.3.3.3 Signals between link layer, port layer, and transport layer for SMP
    Table 15 — Confirmations between link layer, port layer, and SMP transport layer
    remove <Connection Closed (Close Timeout)>
    (this signal is repeated in Table 16 — Confirmations between link layer and port layer

Page: 43
Sequence number: 3
Date: 2/16/2003 11:41:14 AM
Type: Strikeout
    ACCEPT - DONE
    4.3.3.3 Signals between link layer, port layer, and transport layer for SMP
    Table 15 — Confirmations between link layer, port layer, and SMP transport layer
    remove <Connection Closed (Close Timeout)>
    (this signal is repeated in Table 16 — Confirmations between link layer and port layer

Page: 43
Sequence number: 4
Date: 2/16/2003 11:41:14 AM
Type: Strikeout
    Timeout)

Page: 43
Sequence number: 5
Date: 2/16/2003 11:41:14 AM
Type: Strikeout
    ACCEPT - DONE
    4.3.3.3 Signals between link layer, port layer, and transport layer for SMP
    Table 15 — Confirmations between link layer, port layer, and SMP transport layer
    remove <Connection Closed (Break Received)>
    (this signal is repeated in Table 16 — Confirmations between link layer and port layer
    Received)

Page: 43
Sequence number: 6
Date: 2/16/2003 11:41:14 AM
Type: Strikeout
    ACCEPT - DONE
    4.3.3.3 Signals between link layer, port layer, and transport layer for SMP
    Table 15 — Confirmations between link layer, port layer, and SMP transport layer
    remove <Connection Closed (Link Broken)>
    (this signal is repeated in Table 16 — Confirmations between link layer and port layer

Page: 43
Sequence number: 7
Date: 2/16/2003 11:41:14 AM
Type: Strikeout
    ACCEPT - DONE
    4.3.3.3 Signals between link layer, port layer, and transport layer for SMP
    Table 15 — Confirmations between link layer, port layer, and SMP transport layer
    remove <Connection Closed (Normal)>
    (this signal is repeated in Table 16 — Confirmations between link layer and port layer

Page: 43
Sequence number: 8
Date: 3/8/2003 12:29:34 PM
Type: Highlight
    REJECT (the SMP transport layers do use Connection Closed as a signal to go back to idle. This is different from SSP.)
    4.3.3.3 Signals between link layer, port layer, and transport layer for SMP
    Table 15 — Confirmations between link layer, port layer, and SMP transport layer
    change <Connection Closed> to "Transmission Status (Connection Lost)

Page: 43
Sequence number: 9
Date: 2/16/2003 11:41:14 AM
Type: Strikeout
ACCEPT - DONE
4.3.3.3 Signals between link layer, port layer, and transport layer for SMP
Table 15 — Confirmations between link layer, port layer, and SMP transport layer
remove <Open Failed (Retry)>
(this signal is repeated in Table 16 — Confirmations between link layer and port layer

Page: 43
Sequence number: 10
Date: 2/16/2003 11:41:14 AM
Type: Strikeout
ACCEPT - DONE
4.3.3.3 Signals between link layer, port layer, and transport layer for SMP
Table 15 — Confirmations between link layer, port layer, and SMP transport layer
remove <Open Failed (Port LayerRequest)>
(this signal is repeated in Table 16 — Confirmations between link layer and port layer

Page: 49
Sequence number: 5
Date: 2/16/2003 11:41:14 AM
Type: Highlight
ACCEPT - DONE
4.6.1 Expander device model overview
change <SL_IR primitive processor (BPP);> to
"broadcast primitive processor (BPP);"

Page: 71
Sequence number: 12
Date: 2/16/2003 11:41:14 AM
Type: Highlight
ACCEPT - DONE
5.6 READY LED pin
Table 32 — Output characteristics of the READY LED signal
change <LED off> to
"LED off / negated"

Page: 71
Sequence number: 13
Date: 2/16/2003 11:41:14 AM
Type: Highlight
ACCEPT - DONE
5.6 READY LED pin
Table 32 — Output characteristics of the READY LED signal
change <LED on> to
"LED on / asserted"

Page: 102
Sequence number: 1
Date: 2/16/2003 11:41:14 AM
Type: Highlight
ACCEPT - DONE
6.6.4.1 SAS OOB sequence
change <as SAS phy.> to
"as SAS phy B."

Page: 107
Sequence number: 2
Date: 2/16/2003 11:41:14 AM
Type: Note
ACCEPT - DONE (Put in separate lines for Phy A Rx and Phy B Rx. There are already words above the figure describing it.).
)
6.6.5 Phy reset sequence after device is attached
Figure 55 — Hot-plug and the phy reset sequence
This figure is not self explainitory. It needs some words to explain what you are trying to portray.

Page: 113

Sequence number: 2
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    ACCEPT - DONE
    6.8.3 SAS speed negotiation states
    Figure 57 — SAS phy (SP) state machine - SAS speed negotiation states
    change <Await_SNW> to
    "AwaitSNW"
    (will then be consistent with text)

Page: 138
Sequence number: 5
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    ACCEPT - DONE
    7.1.4.6 EOAF (End of address frame)
    change <7.4> to "7.7"
    (section 7.4 is about crc)

Page: 138
Sequence number: 6
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    REJECT - The SP_DWS state machine has the text that says bad dwords are replaced by ERROR primitives, and is the correct
    reference.
    7.1.4.7 ERROR
    change <6.9> t o ????
    (6.9 about SAS DWORD synchronization)

Page: 138
Sequence number: 7
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    ACCEPT - DONE
    7.1.4.9 NOTIFY
    change <TBD> to a real reference
    (Should be no TBD's in the spec.)

Page: 140
Sequence number: 2
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    ACCEPT - DONE
    7.1.4.11 OPEN_REJECT
    Table 62 — OPEN_REJECT retry primitives
    change <devices> to "device"

Page: 141
Sequence number: 2
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    ACCEPT - DONE
    7.1.4.12 SOAF (Start of address frame)
    change <7.4> to "7.7"

Page: 142
Sequence number: 5
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    ACCEPT - DONE
    7.1.6.2 SATA_PMACK, SATA_PMNAK, SATA_PMREQ_P, and SATA_PMREQ_S (Power management
    acknowledgements and requests)
    change <7.4> to ????
    (7.4 is about CRC)

Page: 146
Sequence number: 2
Date: 2/16/2003 11:41:14 AM
Type: Highlight

ACCEPT - DONE (should be 7.6)
7.4.2 CRC generation
(last sentence)
change <6.5> to correct reference
(reference should be to dword flow, 6.5 is about OOB signals)

Page: 147
Sequence number: 6
Date: 2/16/2003 11:41:14 AM
Type: Highlight
ACCEPT - DONE
7.4.3 CRC checking
change <6.5> to correct reference
(reference should be to dword flow, 6.5 is about OOB signals)

Page: 147
Sequence number: 7
Date: 2/16/2003 11:41:14 AM
Type: Highlight
ACCEPT - DONE (reference is to 7.6 Bit order)
7.5 Scrambling
change <6.5> to correct reference
(reference should be to dword flow, 6.5 is about OOB signals)

Page: 156
Sequence number: 6
Date: 2/19/2003 5:38:50 PM
Type: Note
ACCEPT - DONE
7.8.5 Identification and hard reset (SL_IR) state machines
7.8.5.1 Overview
Figure 67 — SAS link layer identification and hard reset (SL_IR) state machines
Add a pink "out arrow up" with the text "HARD_RESET Received"
This will agree with Table 18

Page: 156
Sequence number: 7
Date: 2/19/2003 5:01:40 PM
Type: Note
ACCEPT - DONE (but as "Identification Sequence Complete. Modified other uses to match.)
7.8.5 Identification and hard reset (SL_IR) state machines
7.8.5.1 Overview
Figure 67 — SAS link layer identification and hard reset (SL_IR) state machines
Add a pink "out arrow up" with the text "Identify Sequence Complete"
(this will agree with the text in section 7.8.6.3.3.1 and table 18)

Page: 157
Sequence number: 4
Date: 2/28/2003 6:25:10 PM
Type: Highlight
ACCEPT - DONE (there's no way for this state machine to even ask for a primitive after Transmit Address Frame is sent, so this whole paragraph is unnecessary. Deleted it.)
7.8.6 SL_IR transmitter and receiver
change <shall not transmit the indicated primitive>
to "shall transmit the indicated primitive"
(section 7.7.1says that primitives may be inserted inside an address frame)

Page: 174
Sequence number: 4
Date: 3/1/2003 6:10:07 PM
Type: Highlight
ACCEPT - DONE (although I disagree with this. There is no good reason to allow BREAKs inside an OPEN address frame. It may lead to BREAK loops.)
7.13.2 SL transmitter and receiver
change <shall not transmit the indicated primitive>
to "shall transmit the indicated primitive"
(section 7.7.1 says you can)

Page: 174

Sequence number: 5
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    ACCEPT - DONE (deleted this paragraph. SL_IR sends Phy Enabled upstream which should suffice. No need for SSP, SMP, and
    STP link layers to send anything themselves.)
    7.13.3 SL0:Idle state
    7.13.3.1 State description
    <After an Enable Disable SSP Link (Enable) confirmation is received this state shall send an Enable Disable
    SSP Link (Enable) confirmation to the port layer.>
    Three things:
    1) Fig 72 says "SAS Link" (not SSP) and
    2) these say confirmations and if so should be denoted by pink up and down arrows in figure 72
    3) This confirmation is not on the Port layer state machines or mentioned in th eport layer writeup.

Page: 174
Sequence number: 6
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    REJECT (it's the first one listed in table 18)
    7.13.2 SL transmitter and receiver
    <shall send a Change Received
    confirmation>
    (this confirmation is not listed in table 18 - Confirmations between ... or application layer)

Page: 180
Sequence number: 2
Date: 2/16/2003 11:41:14 AM
Type: Strikeout
    ACCEPT - DONE
    7.14 SAS link layer state machine for expander phys (XL)
    7.14.1 Overview
    remove <by receiving an>
    (third paragraph - after k))

Page: 194
Sequence number: 4
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    ACCEPT - DONE (but later removed as there is just one state, no need to name it)
    7.16.7 SSP link layer (SSP) state machines
    7.16.7.1 Overview
    change <The SSP_TCM state machine contains the SP_TCM1:Tx_credit_monitor state> to
    "The SSP_TCM state machine contains the SP_TCM1:Tx_Credit_Monitor state"

Page: 194
Sequence number: 5
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    ACCEPT - DONE (both changes as requested. The SSP transmitter will have a section describing it.)
    i7.16.7 SSP link layer (SSP) state machines
    7.16.7.1 Overview
    <The SSP_TF state machine's function it to control when the SSP_T state machine>
    two things:
    1) change <it> to "is"
    2) change <the SSP_T state machine> to "a SSP transmitter"
     (I can not find a <SSP_T> state machine. Does it need to be defined ? We defined for the SL state machines in Figure 73)

Page: 197
Sequence number: 1
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    REJECT (but changed name of parameter to Transmit Frame)
    7.16.7 SSP link layer (SSP) state machines
    7.16.7.1 Overview
    Figure 84 — SSP link layer (SSP) state machines (part 3 - primitive transmission)
    change <Frame> to
    "frame"
    (see text on section 7.16.7.7)

Page: 197
Sequence number: 2
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    REJECT (but changed name of parameter to Frame Transmitted)
    7.16.7 SSP link layer (SSP) state machines
    7.16.7.1 Overview
    Figure 84 — SSP link layer (SSP) state machines (part 3 - primitive transmission)
    change <Frame> to
    "frame"

Page: 198
Sequence number: 1
Date: 2/19/2003 10:54:10 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.3 SSP_TCM1:Tx_credit_monitor state
    change <TCM1:Tx_credit_monitor state>   to
    CM1:Tx_Credit_Monitor state

Page: 199
Sequence number: 5
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.5.3 Transition SSP_TF1:Connected_Idle to SSP_TF4:Indicate_Done_Tx
    change <Done> to
    "DONE"_

Page: 200
Sequence number: 1
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.6.3 Transition SSP_TF2:Tx_Wait to SSP_TF4:Indicate_Done_Tx
    change <Connection Closed> to "Close Connection"

Page: 200
Sequence number: 2
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    ACCEPT - DONE
    7.16.7.6.3 Transition SSP_TF2:Tx_Wait to SSP_TF4:Indicate_Done_Tx
    change <Done> to
    "DONE"

Page: 200
Sequence number: 3
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    ACCEPT - DONE (also added SSP_TF4)
    7.16.7.6.3 Transition SSP_TF2:Tx_Wait to SSP_TF4:Indicate_Done_Tx
    change <Done> to
    "DONE"

Page: 200
Sequence number: 4
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    ACCEPT - DONE (also added SSP_TF4)
    7.16.7.6.3 Transition SSP_TF2:Tx_Wait to SSP_TF4:Indicate_Done_Tx
    change <Done> to
    "DONE"

Page: 200
Sequence number: 5
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    ACCEPT - DONE (also added SSP_TF4)

7.16.7.6.3 Transition SSP_TF2:Tx_Wait to SSP_TF4:Indicate_Done_Tx
change <Done> to
"DONE"

Page: 200
Sequence number: 6
Date: 2/16/2003 11:41:14 AM
Type: Highlight
ACCEPT - DONE (also added SSP_TF4)
7.16.7.6.3 Transition SSP_TF2:Tx_Wait to SSP_TF4:Indicate_Done_Tx
change <Done> to
"DONE"

Page: 200
Sequence number: 7
Date: 2/16/2003 11:41:14 AM
Type: Highlight
ACCEPT - DONE
7.16.7.8 SSP_TF4:Indicate_Done_Tx state
change <Done> to
"DONE"

Page: 201
Sequence number: 2
Date: 2/16/2003 11:41:14 AM
Type: Highlight
ACCEPT - DONE
7.16.7.8 SSP_TF4:Indicate_Done_Tx state
change <parameter> to
"Wait For DONE (CREDIT TIMEOUT) parameter

Page: 201
Sequence number: 3
Date: 2/16/2003 11:41:14 AM
Type: Highlight
ACCEPT - DONE
7.16.7.9 SSP_RF1:Rcv_Frame state
change <Received Frame> to
"Frame Received"

Page: 202
Sequence number: 2
Date: 2/16/2003 11:41:14 AM
Type: Highlight
ACCEPT - DONE
7.16.7.11 SSP_RIM1:Rcv_Interlock_Monitor state
change <Received Frame> to
"Frame Received"

Page: 202
Sequence number: 3
Date: 2/16/2003 11:41:14 AM
Type: Highlight
ACCEPT - DONE
7.16.7.11 SSP_RIM1:Rcv_Interlock_Monitor state
change <Received Frame> to
"Frame Received"

Page: 202
Sequence number: 4
Date: 2/16/2003 11:41:14 AM
Type: Highlight
ACCEPT - DONE
7.16.7.11 SSP_RIM1:Rcv_Interlock_Monitor state
change <Received Frame> to
"Frame Received"

Page: 202
Sequence number: 5

Date: 2/16/2003 11:41:14 AM
Type: Highlight
   ACCEPT - DONE
   7.16.7.13.1 State description
   change <CREDIT_BLOCKED by sending> to
   "CREDIT_BLOCKED be transmitted by sending"

Page: 208
Sequence number: 1
Date: 2/16/2003 11:41:14 AM
Type: Highlight
   ACCEPT - DONE (renamed all the states to shorter, mixed-case names)
   7.18.4 SMP link layer (SMP) state machines
   7.18.4.1 Overview
   change <Rcv_response_Frame> to
   "Rcv_Response_Frame"
   (in all other state diagrams the first letter of all state names are capitalized - this comment applies to all state names in the SMP
   section and SMP figures)

Page: 208
Sequence number: 2
Date: 2/16/2003 11:41:14 AM
Type: Highlight
   ACCEPT - DONE
   7.18.4 SMP link layer (SMP) state machines
   7.18.4.1 Overview
   change <(see 7.18.4.2)(initial state);> to
   (see 7.18.4.2.1)(initial state);

Page: 217
Sequence number: 3
Date: 3/1/2003 4:10:50 PM
Type: Highlight
   REFER PORT WG - TODO
   8.3.3 PL_OC2:Overall_Control state
   8.3.3.1 State description
   8.3.3.1.1 State description overview
   Delete <a) I_T nexus loss time;>
   and reorder the following arguments restarting at a)

Page: 218
Sequence number: 5
Date: 3/1/2003 4:13:05 PM
Type: Strikeout
   REJECT (these are port layer rules for SSP ports and definitely belong here. More xrefs might help, though.)
   8.3.3.1.4 SSP wide port rules
   (delete all of the following text. these are not wide port rules and none of the terms i.e., COMMAND, QUERY TASK, have been
   defined and are out of context)
   <An initiator port that is a wide port may transmit COMMAND frames on multiple links simultaneously.
   An initiator port shall not transmit a TASK frame requesting a task management function that only affects a
   single I_T_L_Q nexus (e.g., ABORT TASK or QUERY TASK; see SAM-3) specifying an I_T_L_Q nexus for
   which the initiator port is transmitting a frame or is waiting for a link layer acknowledgement for a frame.
   An initiator port shall not transmit a TASK frame requesting a function that only affects an I_T_L nexus (e.g.,
   ABORT TASK SET, CLEAR TASK SET, CLEAR ACA, or LOGICAL UNIT RESET; see SAM-3) specifying an
   I_T_L nexus for which the initiator port is transmitting a frame or is waiting for a link layer acknowledgement
   for a frame.
   An initiator port shall not transmit a TASK frame requesting a function that only affects an I_T nexus (see
   SAM-3) specifying an I_T nexus for which the initiator port is transmitting a frame or is waiting for a link layer
   acknowledgement for a frame.>

Page: 219
Sequence number: 2
Date: 3/1/2003 4:14:32 PM
Type: Note
   REFER PORT WG - TODO
   8.3.3.1.5 Filling in the Tx Frame arguments
   4th paragraph (about I_T nexus loss arguments.
   add
   "For each destination, the PL_OC_I_T nexus loss timer is is stopped, set to zero,and asssigned a stopped status after each

Connection Opened confirmation is received and after each power-on reset or hard reset function is completed "

Page: 221
Sequence number: 3
Date: 3/1/2003 4:15:39 PM
Type: Highlight
    REFER PORT WG - TODO
    8.4 Port layer phy manager (PL_PM) state machine
    8.4.1 Overview
    change <PL_OC state machine;> to
    "transport layer;"

Page: 223
Sequence number: 4
Date: 3/1/2003 4:16:39 PM
Type: Note
    REFER PORT WG - TODO
    8.4 Port layer phy manager (PL_PM) state machine
    8.4.1 Overview
    Figure 93 — Port layer phy manager (PL_PM) state machine (part 2)
    add a pink "In Arrow" here with text of "DONE Received"

Page: 223
Sequence number: 5
Date: 3/1/2003 4:16:34 PM
Type: Note
    REFER PORT WG - TODO
    8.4 Port layer phy manager (PL_PM) state machine
    8.4.1 Overview
    Figure 93 — Port layer phy manager (PL_PM) state machine (part 2)
    add a pink "out Arrow " here with text of "DONE Received"

Page: 223
Sequence number: 6
Date: 3/1/2003 4:16:30 PM
Type: Note
    REFER PORT WG - TODO
    8.4 Port layer phy manager (PL_PM) state machine
    8.4.1 Overview
    Figure 93 — Port layer phy manager (PL_PM) state machine (part 2)
    add a pink down arrow with a "Close Connection" text

Page: 224
Sequence number: 3
Date: 3/1/2003 4:17:00 PM
Type: Highlight
    REFER PORT WG - TODO
    8.4.3.1.3 Connection Opened handling
    change <Tx Frame,> to
    "Tx Frame parameter,"

Page: 225
Sequence number: 3
Date: 3/1/2003 4:17:50 PM
Type: Highlight
    REFER PORT WG - TODO
    8.4.4 PL_PM3:Connected state
    8.4.4.1 State description
    change <This state shall generate a Tx Frame request to the link layer when a Tx Frame parameter is received from the PL_OC
    state machine.> to
    "This state shall generate a Tx Frame (Balanced) request to the link layer when a Tx Frame parameter with a Balance Required
    argument is received from the PL_OC state machine.
    This state shall generate a Tx Frame (Nonbalanced) request to the link layer when a Tx Frame parameter with a Balance Not
    Required argument is received from the PL_OC state machine."

Page: 225
Sequence number: 4
Date: 3/1/2003 4:17:45 PM
Type: Highlight

REFER PORT WG - TODO
8.4.3.1.4 Open Failed handling
change <Tx Frame> to
"Tx Frame parameter"

Page: 226
Sequence number: 5
Date: 3/1/2003 4:19:03 PM
Type: Note
    REFER PORT WG - TODO
    8.4.4.1 State description (-- for PL_PM3: Connected state)
    in the area started by <for SSP ports> add " For SSP and SMP ports, this state shall send a Transmission Status (Connection Lost) confirmation to the transport layer if a Connection Closed (Break Received), Connection Closed (Close Timeout) , or Conection Closed (Link Broken) confirmation is received from the link layer."

Page: 226
Sequence number: 6
Date: 3/1/2003 4:18:58 PM
Type: Note
    REFER PORT WG - TODO
    8.4.4 PL_PM3:Connected state
    8.4.4.1 State description
    insert between c) and d)
    "d) DONE Received"

Page: 226
Sequence number: 7
Date: 3/1/2003 4:18:51 PM
Type: Highlight
    REFER PORT WG - TODO
    8.4.4 PL_PM3:Connected state
    8.4.4.1 State description
    change <d)> to "e"

Page: 226
Sequence number: 8
Date: 3/1/2003 4:18:42 PM
Type: Highlight
    REFER PORT WG - TODO
    8.4.4 PL_PM3:Connected state
    8.4.4.1 State description
    change <e)> to "f"

Page: 226
Sequence number: 9
Date: 3/1/2003 4:18:33 PM
Type: Highlight
    REFER PORT WG - TODO
    8.4.4 PL_PM3:Connected state
    8.4.4.1 State description
    change <Tx Frame> to
    "Tx Frame Request"

Page: 226
Sequence number: 10
Date: 3/1/2003 4:18:27 PM
Type: Highlight
    REFER PORT WG - TODO
    8.4.4 PL_PM3:Connected state
    8.4.4.1 State description
    change <Tx Frame> to
    "Tx Frame Request"

Page: 228
Sequence number: 4
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    ACCEPT - DONE
    9.2.1 SSP frame format

Table 88 — SSP frame format
change <TIMEOUT> to
"RETRANSMIT"
(will make definitions on next page and later text consistent)

Page: 244
Sequence number: 6
Date: 2/16/2003 11:41:14 AM
Type: Strikeout
    ACCEPT - DONE (removed it entirely)
    9.2.6.2 Initiator device state machines
    9.2.6.2.1 Overview
    Figure 98 — SSP transport layer (ST) state machines - initiator device
    remove (ACK/NAK TIMEOUT)

Page: 244
Sequence number: 7
Date: 2/16/2003 11:41:14 AM
Type: Note
    ACCEPT - DONE
    9.2.6.2 Initiator device state machines
    9.2.6.2.1 Overview
    Figure 98 — SSP transport layer (ST) state machines - initiator device
    add a pink in arrow with the nomenclature of "ACK Transmitted"on it
    (i.e. add a "ACK Transmitted " received confirmation here)

Page: 250
Sequence number: 9
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    ACCEPT - DONE
    9.2.6.2.8 ST_IFR1:Initiator_Frame_Router state
    change <Data-in parameter> to
    "Data-in Arrived parameter"

Page: 250
Sequence number: 10
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    ACCEPT - DONE (removed all mention of parameter names here, since this is just the overview).
    9.2.6.3 Target device state machines
    9.2.6.3.1 Overview
    change <Data-Out
    Received> to
    "Data -Out Arrived or Response Data"
    (to be consisten with figure 99 - SSP Transport layer state machine - target device)

Page: 251
Sequence number: 3
Date: 2/16/2003 11:41:14 AM
Type: Note
    ACCEPT - DONE
    9.2.6.3 Target device state machines
    9.2.6.3.1 Overview
    Figure 99 — SSP transport layer (ST) state machines - target device
    add a pink in arrow with the nomenclature of "ACK Transmitted"on it
    (i.e. add a "ACK Transmitted " received confirmation here)

Page: 256
Sequence number: 3
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    ACCEPT - DONE
    9.2.6.3.6 ST_TTS4:Receive_Data_Out state
    9.2.6.3.6.1 State description
    change <ST_TS1 to
    "ST_TTS1"

Page: 263

Sequence number: 1
Date: 3/8/2003 12:37:42 PM
Type: Highlight
    REJECT (needed to go back to idle)
    9.4.4.2.1 Overview (for Initiator device state machine)
    Figure 101 - SMP transport layer state machine - initiator device
    change <Connection Closed> to "Transmission Status"

Page: 263
Sequence number: 2
Date: 3/8/2003 12:37:32 PM
Type: Highlight
    REJECT (need to go back to idle)
    9.4.4.2 Initiator device state machine
    9.4.4.2.1 Overview
    Figure 101 — SMP transport layer state machine - initiator device (MT_ID)
    remove <Connection
    Closed> and th pink arrow

Page: 264
Sequence number: 3
Date: 3/8/2003 12:37:05 PM
Type: Highlight
    REJECT (needed to go back to idle)
    9.4.4.2.3.2 Transition MT_ID2:Send to MT_ID1:Idle
    change <Connection Closed> to "Transmisssion Status (Connection Lost)"

Page: 264
Sequence number: 4
Date: 3/8/2003 12:37:16 PM
Type: Highlight
    REJECT (needed to go back to idle)
    9.4.4.2.4.2 Transition MT_ID3:Receive to MT_ID1:Idle
    change <Connection Closed> to "Transmission Status (Connection Lost)"

Page: 265
Sequence number: 1
Date: 3/8/2003 12:36:49 PM
Type: Highlight
    REJECT (needed to go back to idle)
    9.4.4.3.3.2 Transition MT_TD2:Respond to MT_TD1:Idle
    change <Connection Closed> to "Transmission Status (Connection Lost)"

Page: 265
Sequence number: 2
Date: 3/8/2003 12:36:26 PM
Type: Strikeout
    REJECT (this is needed for SMP to go back to idle)
    9.4.4.3.1 Overview
    Figure 102 — SMP transport layer (MT) state machines - target device
    Remove <Connection Closed> and the input arrow

Page: 266
Sequence number: 1
Date: 2/28/2003 3:43:09 PM
Type: Note
    ACCEPT - DONE (section mentioning the new events notifications added at the end of 10.1. Transport Reset and Nexus Lost
    added from transport layer state machines. Event notification added to glossary and conventions.)
    This section does not talk about receiving from the transport layer the I_T Nexus loss timer expired or not arguments or the
    connection lost arguments and what to do with them. It should be added.

Page: 288
Sequence number: 2
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    ACCEPT - DONE
    10.1.8.1.3 Transition SA_PC_0:Powered_On to SA_PC_5:Active_Wait
    change <SA_PC_5:Active state.> to
    "SA_PC_5:Active_Wait state."

Page: 298
Sequence number: 3
Date: 2/16/2003 11:41:14 AM
Type: Note
    ACCEPT - DONE (removed the field per Jan WG)
    10.3.1.3 REPORT MANUFACTURER INFORMATION function
    the <ADDITIONAL LENGTH field> location is not listed in table 133 - report manufacture information response

Page: 324
Sequence number: 4
Date: 2/16/2003 11:41:14 AM
Type: Highlight
    ACCEPT - DONE
    B.1 SAS phy reset sequence examples
    change <phy B> to
    "phy A" ?????

Author: TXN

Page: 23
Sequence number: 4
Date: 2/16/2003 11:43:07 AM
Type: Note
    ACCEPT - DONE (In figures that show ports but no phys, the phy level of detail is not shown, but the ports always contain one or more phys.>>
    4.1.4 last sentence needs work.
    <<In figures that show ports but no phys, the ports still contain phys and may or may not be wide ports.>>
    should be:
    <<In figures that show ports but no phys, the phy level of detail is not shown, the ports actually contain one or more phys.>>

Page: 23
Sequence number: 5
Date: 2/16/2003 11:43:07 AM
Type: Note
    ACCEPT - DONE (removed whole section)
    4.1.5 and 4.16 first sentence does not make sense in a SAS standard, unless it is explained better.
    SCSI and ATA port that support SMP can be used
    in SAS domains. If a device supports SCSI or ATA without SMP is outside of
    the scope of this standard.

Page: 25
Sequence number: 15
Date: 3/3/2003 5:58:48 PM
Type: Note
    ACCEPT - DONE (but differently. Changed the title of 4.1.8 to be "Expander devices (edge expander devices and fanout expander devices" and just introduce the basic devices there. Moved the edge expander device set discussion into the later "Expander device topologies" section).
    3. Technical 4.1.8 should have a Fan out expander section and a description of the relationship between the expanders in a large configuration. I have seen it in presentations, but there is no clear description of it in the standard.
    There should be a clear definition of a fan out expander as a section.
    4.1.8.1 Expander device overview
    4.1.8.2 Edge expander device set
    4.1.8.3 Configurable expander device

Page: 70
Sequence number: 8
Date: 2/16/2003 11:43:07 AM
Type: Note
    ACCEPT - DONE
    4. Figure 34 the title has internal misspelled

Page: 114
Sequence number: 26
Date: 2/16/2003 11:43:07 AM
Type: Note

ACCEPT - DONE (track with other comment)
5. Technical 6.8.3.3.1, 9.2.4.5 and 9.2.3.9.1 still have an editors note,
this should have been addressed before the letter ballot.

Author: VIXL

Page: 5
Sequence number: 12
Date: 2/16/2003 11:43:01 AM
Type: Highlight
ACCEPT - DONE
Clause 3.1.3
Clause 3.1.5
Clause 3.1.6
Clause 3.1.8
Clause 3.1.9
Add -7 to ATAPI

Page: 5
Sequence number: 13
Date: 2/16/2003 11:43:01 AM
Type: Highlight
ACCEPT - DONE
3.1.5 ATA initiator device
ATAPI should be ATAPI-7

Page: 5
Sequence number: 14
Date: 2/16/2003 11:43:01 AM
Type: Highlight
ACCEPT - DONE
3.1.6 ATA initiator port
ATAPI should be ATAPI-7

Page: 5
Sequence number: 15
Date: 2/16/2003 11:43:01 AM
Type: Highlight
ACCEPT - DONE
3.1.9 ATA target port
ATAPI should be ATAPI-7

Page: 5
Sequence number: 16
Date: 2/16/2003 11:43:01 AM
Type: Highlight
ACCEPT - DONE
3.1.9 ATA target port
ATAPI should be ATAPI-7

Page: 9
Sequence number: 22
Date: 2/16/2003 11:43:01 AM
Type: Highlight
ACCEPT - DONE (defaults clause deleted altogether)
Clause 3.1.92
Should be "minimum"

Page: 15
Sequence number: 5
Date: 2/16/2003 11:43:01 AM
Type: Strikeout
ACCEPT - DONE
Clause 3.4
Remove this sentence.
Duplicate of last sentence in 3rd paragraph of this section.

Page: 20
Sequence number: 2
Date: 2/16/2003 11:43:01 AM
Type: Note
    REJECT - The arrows are correct.
    Clause 4.1.1, Figure 4
    Change direction of all arrows (inheritance) in diagram. They appear to point the wrong way.

Page: 20
Sequence number: 3
Date: 2/16/2003 11:43:01 AM
Type: Note
    REJECT (SAS device may be inside an expander device)
    Clause 4.1.1, Figure 4
    Clarify. What is this modeling, the fact that the Expander is a SAS device, or that an SMP application must reside in an Expander device?
    If this illustrates that an Expander is a SAS device, this line should be an "association", not an "aggregation".

Page: 20
Sequence number: 4
Date: 2/16/2003 11:43:01 AM
Type: Highlight
    ACCEPT - DONE (2..128 per 03-064)
    Clause 4.1.1, Figure 4
    Change to "2..64". see clause 4.1.8.1.

Page: 20
Sequence number: 5
Date: 2/16/2003 11:43:01 AM
Type: Highlight
    ACCEPT - DONE (0..127 with 03-034)
    Clause 4.1.1, Figure 4
    Change to "0..63", should have upper bounds as specified in later clause.

Page: 20
Sequence number: 6
Date: 2/16/2003 11:43:01 AM
Type: Highlight
    ACCEPT - DONE (1..128 per 03-064)
    Clause 4.1.1, Figure 4
    Change to "1..64".

Page: 23
Sequence number: 6
Date: 2/16/2003 11:43:01 AM
Type: Highlight
    REJECT (clause 3 has state machine conventions)
    Clause 4.1.4.
    Move to clause 3.4.

Page: 23
Sequence number: 7
Date: 2/16/2003 11:43:01 AM
Type: Strikeout
    REJECT (the SP state machine supports being a SATA initiator) (whole section deleted anyway)
    Clause 4.1.5
    Remove this. This is outside the scope of the standard.

Page: 23
Sequence number: 8
Date: 2/16/2003 11:43:01 AM
Type: Strikeout
    REJECT (it says it is outside the scope) (whole section deleted anyway)
    Clause 4.1.5
    Remove this. This is outside the scope of the standard.

Page: 34
Sequence number: 6

Date: 2/16/2003 11:43:01 AM
Type: Highlight
REJECT (when a wide-capable port is split into two domains, it ends up with two ports with the same address. This violates the SCSI definition of port name which requires "unique within the protocol". However, did rewrite the note a little bit to explain this scenario better and removed the mention of logins.)
Clause 4.2.4
Change to "Port names are not defined in SAS, because there is no login process in SSP to exchange port names."
Removed part that conflicts with clause 4.2.2, "SAS address shall be worldwide unique."

Page: 36
Sequence number: 3
Date: 2/16/2003 11:43:01 AM
Type: Note
ACCEPT - DONE (added key: dashed means control signal; solid means data path)
Clause 4.3.2, figure 20.
Define what the dashed blue lines mean in these figures, they appear to be used in a different manner than defined in clause 3.5.

Page: 49
Sequence number: 17
Date: 2/16/2003 11:43:01 AM
Type: Highlight
ACCEPT - DONE ("... port. Each phy may then participate in new phy reset sequences and start transmitting.")
Clause 4.4.2
This needs clarification. Does this mean the phy that received the hard reset, or each phy in the port?

Page: 49
Sequence number: 18
Date: 2/16/2003 11:43:01 AM
Type: Highlight
ACCEPT - DONE (should be broadcast primitive processor)
Clause 4.6.1
Clause 4.6.5 (2 instances)
Please provide a definition for "SL_IR primitive".

Page: 51
Sequence number: 3
Date: 2/16/2003 11:43:01 AM
Type: Highlight
ACCEPT - DONE
4.6.5 Broadcast primitive processor
Change SL_IR to BPP

Page: 54
Sequence number: 1
Date: 2/16/2003 11:43:01 AM
Type: Highlight
REJECT (changed the Links to Phys in 4.6.7 instead)
Clause 4.6.8, table 23
(3 instances)
Change "Phy" to "Link" to match terminology used in clause 4.6.7, figure 27 (3 times)

Page: 57
Sequence number: 3
Date: 2/16/2003 11:43:01 AM
Type: Highlight
ACCEPT - DONE
Clause 4.6.11.1
Change "may only" to "shall". "may only " not in list of keywords.

Page: 58
Sequence number: 1
Date: 3/5/2003 2:33:54 PM
Type: Highlight
REJECT (but deleted the two "cascaded" paragraphs here altogether. The definition of expander device topologies already has rules preventing fanouts from being attached to fanouts, so this is redundant.)
Clause 4.6.11.3
This sentence should be clarified, add "together" to the sentence.

Page: 58

Sequence number: 2
Date: 3/5/2003 2:32:37 PM
Type: Strikeout
    REJECT (Jan WG. But reworded in terms of "when constructing a set, this rule shall be honored." and moved into the edge
    expander set definition.)
    Clause 4.6.11.3
    This requirement is an implementation issue and should not be in the standards. Remove this.

Page: 59
Sequence number: 5
Date: 3/5/2003 2:36:21 PM
Type: Highlight
    ACCEPT - DONE (Deleted. This is totally broken. Fanout expanders do this all the time; so do edge routers. It was intended to
    disable route entries if two edge expander sets are attached without subtractive ports. That's covered in another area.)
    Clause 4.6.11.3
    This needs clarification. What is the purpose of setting the DISABLE ROUTE ENTRY bit here? This would seem to preclude
    using the expander SAS address for expander internal ports.

Page: 61
Sequence number: 4
Date: 3/5/2003 2:40:45 PM
Type: Highlight
    REJECT(makes the table too big for the page. But moved ... over to the right for phy numbers, and to the left for devices, and
    added some entries to the figure itself)
    Clause 4.6.11.4
    For clarity and completeness, include expanders X and Y in this example.

Page: 63
Sequence number: 3
Date: 2/16/2003 11:43:01 AM
Type: Highlight
    ACCEPT - DONE (add phy 0 to the introduction)
    Clause 4.6.11.4
    Add a clarification that the route table in the table is for one phy on expander E0.

Page: 64
Sequence number: 2
Date: 3/5/2003 10:26:26 AM
Type: Highlight
    ACCEPT - DONE (add a picture with several levels of mixed expanders and devices, numbering them, to clarify what "level-order"
    means.)
    Clause 4.6.11.5
    Add an example to clarify these rules for order of traversal.

Page: 138
Sequence number: 16
Date: 2/16/2003 11:43:01 AM
Type: Highlight
    ACCEPT - DONE
    Clause 7.1.4.6
    Clause 7.1.4.12
    Change reference to clause 7.7 .

Page: 154
Sequence number: 7
Date: 3/1/2003 6:19:27 PM
Type: Highlight
    ACCEPT - DONE (use "SMP initiator port" and management application client)
    Clause 7.8.2
    Does this requirement preclude an expander from performing the discover process? Does this require an expander to implement a
    full SCSI initiator if it only intends to perform the discover process?
    If so, this needs to be clarified so that an expander can perform the discover process without implementing a full SCSI initiator.

Page: 180
Sequence number: 7
Date: 2/16/2003 11:43:01 AM
Type: Strikeout
    ACCEPT - DONE
    Clause 7.14.1

Extraneous, remove.

Page: 190
Sequence number: 10
Date: 2/18/2003 3:32:21 PM
Type: Highlight
ACCEPT - DONE (add another level of expanders ... sample picture will be provided. Add a sentence mentioning that receivers just discard extra ALIGNs that show up.)
Clause 7.15
It's ambiguous which faster phy does the insertion. Should be the transmitting faster phy?
Also doesn't mention removal of ALIGNs. This should be described.

Page: 297
Sequence number: 5
Date: 2/16/2003 11:43:01 AM
Type: Strikeout
REJECT - DONE (but change "equal to the number of phys" to "equal to the number of addressable phys")
Clause 10.3.1.2
This requirement is an implementation issue and should not be in the standards. Remove this.

Page: 297
Sequence number: 6
Date: 2/16/2003 11:43:01 AM
Type: Strikeout
ACCEPT - DONE (Jan WG vote)
Clause 10.3.1.2
This fanout expander requirement is an implementation issue and should not be in the standards. Remove this.

Page: 301
Sequence number: 5
Date: 2/16/2003 11:43:01 AM
Type: Highlight
ACCEPT - DONE (use the term "method" in the table Descriptions. Change the Name column to use "attribute" too. Then delete this sentence)
Clause 10.3.1.4
This sentence is confusing because of the sentence it immediately follows. It appears to describe something that is not related to the table. It would be clearer if this sentence was made a separate paragraph, or a note.