

IEEE P1394b SCAT (Sorted by STATUS)

SCATNo	Title	Owner	DateEntered	StatusDate
4	Standby Proxy Self-ID	Colin Whitby-Strevens	12/10/1998	8/24/1999
Description				
Proxy self-ID packets for "leaf" nodes in standby				
Status				
A-OPEN				
NextActions				
08/24/99: When LPS becomes active, a restoring PHY will send an unsolicited register zero to the link. The uncle node has no idea which of the 16 ports of the nephew node is the connected port. Context of the port connection may be something of interest to the bridge portal. 07/21/99: Mostly done. A bit more work to close. Will be complete for 0.8; 06/09/99: No Status change (with the exception of correct wording for the 4/28/99 status); 4/28/99: Standby is now in the draft; There is some outstanding work to be completed before standby is completely incorporated in the draft; 1) the draft must now incorporate the notion of proxying the node-id for the leaf node in standby; 2) getting restore information for the restoring leaf node; 4/8/99: Awaiting approval of proposal at April meeting. 3/24/99: Write-up complete - Presentation given at 3/23 plenary. Need to include Standby				

SCATNo	Title	Owner	DateEntered	StatusDate
21	Bridge Liaison	David Wooten	12/10/1998	7/19/1999
Description				
1394.1 liaison as required				
Status				
A-OPEN				
NextActions				
7/19/99: Still liaisioning; 06/09/99: Keep on keeping on - this is going to be open until the lights go out on IEEE P1394b or until it is "too damn late" to work with 1394.1 because they are taking too long and 1394b needs to close.				

SCATNo	Title	Owner	DateEntered	StatusDate
57	Inherited p1394a timing parameters	Colin Whitby-Strevens	7/6/1999	7/6/1999
Description				
Make certain Table 8-14 constants in 1394a 3.0 are adjusted to be proper for p1394b				
Status				
A-OPEN				
NextActions				
07/21/91: Jerry will focus on constants related to gap count; A general review will take place at the page turner. The purpose is that current (legacy) OS count ping software does the correct thing and results in the proper value.				

SCATNo	Title	Owner	DateEntered	StatusDate
62	UTP Signal Detect Timing	Colin-Alistair	10/1/1999	10/1/1999
Description				
The signal detect timing for UTP are far too low for Upstarts to work.				
Status				
A-OPEN				
NextActions				
10/01/99: Colin will meet with Alistair to determine what can be done about this. Current timings have been set for adequate noise filtering.				

SCATNo	Title	Owner	DateEntered	StatusDate
13	PHY-Link electrical specs.	David Wooten	12/10/1998	9/17/1999
Description				
<p>Include 802.3 spec information for S800 and below; Document integrated link/Beta-PHY; The strategy is:a) reuse the 1394a link-phy electrical if possible including isolation, up to speed s800 (100Mhz); b) leverage the 802.3Z GMII spec and change signal names to cover un-isolated to S800; c) initial assumption is that speeds above S800 will use integrated link and Phy and the protocol is sufficient.</p>				
Status				
B-WIP				
NextActions				
<p>09/17/99: The impedance matching on FR4 is about 70 ohms, therefore, there will (may) be some slight variations in the Beta electrical transmit amplitude. David Wooten will modify existing drawings to show the variance and point out that the system implementor must resolve the design for sufficient signal strength to the receiver; 07/21/99: PIL Electricals (Pint & Lreq) are all that remains; 06/09/99 Work continues - progress being made; 4/28/98: Tony finish this up next week and send it off to Eric; David Wooten suggested he socialize it among a few SCAT folks first; 4/8/99: We may recommend adopt "A" electricals for S800 PHY/Link interface (this may mean giving up on isolation); Tony will have this complete by next Thursday (4/15); 3/24/99: Next Actions to be taken: 1) Evaluate the current 1394a link-phy electrical spec and determine if it will suffice or can be edited for use up to S800. If so move to 1394B draft; 2)If the 1394a spec will not work continue efforts to get editable version of the 802.3Z GMII spec and modify signal names and exact frequencies to match 1394B; 3) Post the plenary discussion to the link-phy reflector and a summary to the 1394B reflector.</p>				

SCATNo	Title	Owner	DateEntered	StatusDate
32	B.O.S.S. Validation	Accelerations	2/10/1999	6/9/1999
Description				
<p>Validate that B.O.S.S. will support border node functionality</p>				
Status				
B-WIP				
NextActions				
<p>06/09/99: Once Issue #31 has been completed, the validation will occur. This should be completed (done) by the August Plenary); 03/24/99: See Next Actions in SCAT #30</p>				

SCATNo	Title	Owner	DateEntered	StatusDate
36	Fan-out PHY Protocols	Sean Killeen	3/24/1999	8/23/1999
Description				
A PHY may serve as a "port fan-out" device which interconencts with an integrated beta-only PHY & link to in such a fashion to consume a single node. Resolve for LinkOn, etc.				
Status				
B-WIP				
NextActions				
8/23/99: There is still descriptive text which must be inserted into the draft. Estimated completion is within two weeks - the text will be in draft 0.90; 07/19/99: An additional SCAT item (#58) was created as a result of discussing this item. Specifically: Sort-Out Cycle Start; 06/09/99: There will be one ID when a FOP is connected to the beta-only port on the PIL. The PHY portion of the PIL when a FOP is connected is "silent" during tree-ID and send the PHY in the PIL and the FOP appear as a single PHY, there are side-band signals of "LREQ" and "PINT"; 4/8/99: LinkOn will be sent to the Fan-Out PHY; Proposals: a) Fan-Out PHY includes an optional LinkOn signal pin; b) Node ID's will not be shared (one for each PHY); c) When FOP receives a grant that would cause its LinkOn to assert it will assert the LinkOn signal; FOP will deassert LinkOn upon establishing communication over a vendor defined Port (where communication could be as early as the first tone received from that port); 3/24/99: External PHY/Link interface limited to S800. S1600 r via integrated solution.				

SCATNo	Title	Owner	DateEntered	StatusDate
53	Withdrawn Requests	Jerry Hauck	6/9/1999	8/24/1999
Description				
When a grant is received and it is not wanted, what should be done? There is a proposed solution: transmit a NULL packet. The issue is that when a grant is received there may be a case when other nodes on the bus see Data_prefix and they need to be allowed to go idle.				
Status				
B-WIP				
NextActions				
08/24/99: Three proposals have submitted. Each is being analyzed for the most robust solution; 07/21/99: There is 'C-Code' in place (in the draft) which endeavors to deal with this, however, Jerry surfaced an issue (as revealed in the simulations): the link generates a request and the PHY forwards the request after which the link goes off line. When the PHY receives the GRANT, the link is unable to take the grant and the PHY has no idea what to do about - a portion of the bus "hung" (doing nothing) while another portion of the bus simply goes on quite happy - Jerry will resolve a solution to this issue. 06/09/99: Jerry to validate solution and submit to editor for inclusion in the draft.				

SCATNo	Title	Owner	DateEntered	StatusDate
55	Resolving Loss of Synch	Arbitration	6/17/1999	9/17/1999
Description				
Superseding issue # 37. Identify and deal with all problems concerning loss of sync.: 1) Packet Truncation (#37); Delay after PHY Packet (#40);				
Status				
B-WIP				
NextActions				
9/17/99: A transition to disconnected state will occur and start-up will be invoked; If start-up fails, the Peer Port Incapability flag is set and a new name given to this flag; 07/21/99: Jerry Hauck will consult Alistair Coles and bound the issue				

SCATNo	Title	Owner	DateEntered	StatusDate
58	Sort-out Cycle Start	Colin Whitby-Strevens	7/19/1999	7/21/1999
Description				
The 'C-Code' must be updated to reflect the proper management of Cycle Start.				
Status				
B-WIP				
NextActions				
07/21/99: There are no significant issue to be resolved. Simply, there is some work which must be done (nothing to be discussed). Colin will have this completed in draft 0.80.				

SCATNo	Title	Owner	DateEntered	StatusDate
59	Readdressing MAX_SPEED	John Fuller	7/19/1999	8/24/1999
Description				
If we have a B link, B-PHY and "A" software stack, what will the software stack do with MAX_SPEED value of 3'b111.				
Status				
B-WIP				
NextActions				
08/24/99: John Fuller asked George. George uses the information from the 1394-1995 draft (wrong answer). John will address "fixing" this; 07/19/99: to pass this issue to John Fuller for resolution.				

SCATNo	Title	Owner	DateEntered	StatusDate
6	Signal Detect Plus	UTP	12/10/1998	9/17/1999
Description				
Resolve signal detect and related issues for UTP-5				
Status				
C-AIP				
NextActions				
09/17/99: The text has been incorporated into draft 0.85, however, the parameters are not appropriate; There is an issue; Numbers have been changed they will not work; Table 9-6 "Signal Detect Timing Values" must be re-visited (they are too slow for upstarts to work); Colin will query Eric (and the reflector) as to why the values were changed; 7/21/99: Draft contains an editorial note (a bit of progress), however, the content from Alistair has not yet been incorporated. 06/09/99: Alistair has handed over ownership of the chapter to Eric Hannah. Alistair had not yet placed his proposal in the draft and Eric note that it had not been included. Colin will send an e-mail to both Eric and Alistair. The action here is to have Eric put into the draft Alistair's proposal. 4/8/99: Not yet done. May get done before the next draft of the spec. 3/24/99: No change - Alistair to update contents of next draft				

SCATNo	Title	Owner	DateEntered	StatusDate
18	Beta Copper Connector	Max Bassler	12/10/1998	7/21/1999
Description				
Two connectors: 1) Lower Cost than existing 4-pin 2) No power; 3) With power. 4) Neither no larger than existing 4-pin 5) More robust than existing 6) better EMI/RFI characteristics than current 4-pin 7) S800 and higher 8) LOW COST				
Status				
C-AIP				
NextActions				
07/21/99: Copperheads have all input and corrections included in Proposal 3 (presented at plenary on 20 July). Clause 4 will contain this information 0.80; 06/09/99: Progress continues, presentations being made to SCAT and Plenary; 4/28/99: Proposed plug/socket is a bit larger than existing 4-pin connector; Other requirements have yet to be examined; Some members of Copperheads continue to believe beta only copper plug/socket requirements still not been communicated to the Copperheads task group; 3/24/99: Max's AR is to write down Copperhead guidance questions for SCAT group to respond to. Copperheads to respond to constraints listed in this SCAT description.				

SCATNo	Title	Owner	DateEntered	StatusDate
19	Loop Healing	David Wooten	12/10/1998	9/17/1999
Description				
Changes are needed in Tree-ID such as to support loop healing				
Status				
C-AIP				
NextActions				
09/17/99: All 'C-Code' has been implemented into draft 0.85; 08/24/99: Colin has an Action Item to place the Loop healing text into the Upstarts chapter since that is where the work is actually being done. 07/21/99: With the information presented at the 20 July plenary, all that remains is to clean up the appropriate and put into place the 'C-Code'; 4/30/99: Per e-mail from Colin, the secretary was reminded that the owner for this issue item was transferred to David Wooten at the Plenary; 4/28/99: Ed admits that there never were any real notes (other than a brief list of requirements - which were published) from the initial debate of loop healing methods (occurring at Tempe) and, since all those donating to the confusion have not yet brought forward any written (documented) proposal which contains anything of real solution substance, we all stand in wait for the first contributor to step forward (among them are Jerry, Dr. James, and Colin); Jerry has something, however, he continues to tantalize the group with small tidbits while he completes his IP filing. Suffice it to say, Ed's portion of this is complete. David Wooten has strongly encouraged Mr. Hauck to bring forth his proposal (real soon, like 4/29/99) or this issue will be deprecated; 3/24/99: Ed McDonnell will document "loop healing party" notes and socialize them on the SCAT e-mail distribution list. Jerry & Colin				

SCATNo	Title	Owner	DateEntered	StatusDate
27	Summary Clause	Eric Hannah	12/10/1998	9/17/1999
Description				
Write clause three (Summary)				
Status				
C-AIP				
NextActions				
09/17/99: Steve Bard must submit synopsis of Standby; David Wooten has AR to submit synopsis of PIL/FOP model; All prior to 10/7/99; 08/24/99: E written this. There are a couple of issues to be resolved (editorial in nature) to be completed in Draft 0.90; 07/19/99: Eric Hannah owns this and is writ clause; 03/24/99 - No Change. 2/28/99: David will find an owner before the spec closes.				

SCATNo	Title	Owner	DateEntered	StatusDate
40	Delay after any PHY packet	Colin Whitby-Strevens	4/28/1999	8/23/1999
Description				
Because PHY packets are wrapped with an extra quadlet (T-Code E), it is not good to be too speedy with another packet. There needs to be a short del a PHY packet to allow for the wrapper to be created and the subsequent packet passed forward.				
Status				
C-AIP				
NextActions				
08/23/99: There will be a 320 nS delay after every PHY Packet (from last bit of last PHY packet to first bit of next packet - this is guaranteed by the s (source PHY); 07/19/99: The current (0.70) draft of the standard has the complete (and accurate) description, however, additional work remains: the c and the 'C-Code' must be developed.; 06/17/99: This issue has been identified as an arb state machine problem ans ownership has been transferred from Port to Aribtrations; 06/09/99: Need to provide sufficient space before a packet to provide four symbols (1 quadlet) at the receiver)more than the spac provided by SCAT Issue #41) - implement in the 'C-Code'; 4/28/99: All PHY packets shall be sent with legacy S100 timings. Alistair shall document thi requirement in clause 10.				

SCATNo	Title	Owner	DateEntered	StatusDate
43	Lack of Recovery from Loss of Sync	Jerry Hauck	4/28/1999	9/17/1999
Description				
Now that border nodes are better understood, Jerry Hauck believes there are some open issues when a Beta node, when transmitting a packet to a D/S cl though a border node, loses sync with the border node.				
Status				
C-AIP				
NextActions				
09/17/99: A transition to disconnected state will occur and start-up will be invoked; If start-up fails, the Peer Port Incapability flag is set and a new nam be given to this flag; Colin to integrate 'C-Code' for this into the draft; 8/23/99: Bus Reset - go to disconnect, bring it back up through upstarts. - with caveat: is it necessary to distinguish between unable to recover from loss of sync or 'twas never able to establish a good speed between the two connecti 7/19/99: Jerry is still working on this. 06/09/99: There has been no code written (yet) to determine the behavior of a beta node which loses sync on its port as it is repeating a packet out its other ports.				

SCATNo	Title	Owner	DateEntered	StatusDate
44	Beta Cable Construction	Copperheads	4/30/1999	7/21/1999
Description				
The draft shall include two examples of beta cable construction – one which shows parameter compliance using a short distance cable and one which demonstrates parameter compliance using a longer distance (not long haul) cable. The short distance cable should be as close in length to the predominant cable length available in the 4-pin market today. The shorter cable may be in the neighborhood of 1.6 meters. Another method may be to simply use Kirchoff's law for 28 AWG power cables and determine the length over which 1.5 AMPS may be delivered before unacceptable losses occur and then ba a bit from that (this length would be something over 1.6 meters).				
Status				
C-AIP				
NextActions				
07/21/99: SC Pin issues closed at plenary; Galvanic isolation issues closed, all other points of proposal 3 accepted at plenary; awaiting clause 4 submissi draft 0.80 of the standard; 07/19/99: Max will submit material showing all Beta/Bilingual cable plug/socket information for inclusion in draft 0.80 (avail for discussion at the August meeting in Portland, OR); 06/09/99: David Wooten to ask Max what are the constraints which resulted in a 2 meter cable i latest coperheads beta proposal? Dick posted an e-mail on the reflector (07 June 1999) in which he listed all cables available from Sony. Eric Anderson supplemented the information with a 3.5 meter cable available some time back but is no longer available today. 04/30/99: Dick Scheel to obtain Sony 1 cable data (e.g. what cable configurations does Sony make available to the market). Dick will also bring a Sony cable to the next SCAT meeting.				

SCATNo	Title	Owner	DateEntered	StatusDate
61	Deletable Symbols	Colin Whitby-Strevens	8/23/1999	9/17/1999
Description				
There is a need to have symbols which may be deleted. FIFOs should not overflow when they are repeating packets. They may overflow because they are working "slower" than someone else.				
Status				
C-AIP				
NextActions				
9/17/99: Two timings shall be entered into the draft. Both shall be a time of 17 nanoseconds (nominal) The first shall be called DELETEABLE_SYMBOL_TIME and shall be the time for which deletable symbols are transmitted at the start of a packet on every port by the PHY originates the packet; The second shall be called FIFO_WATERMARK_TIME and is the amount of data in the FIFO (expressed in clocks) before which data in the FIFO is repeated; There may be a need for an additional constant which counts depth (number of bytes) of the FIFO before the data in the FIFO is repeated. When either this constant or the FIFO_WATERMARK_TIME is achieved data in the FIFO is repeated; 8/23/99: 1) Evaluate the behavior of the current specification when using two deletable symbols at a single speed (a slower speed and a faster speed); 2) Validate behavior of the may/must algorithm and investigate how to architect it; 3) Work through the results of item 1 and 2 - validate all combinations of link and packet speeds				

SCATNo	Title	Owner	DateEntered	StatusDate
1	1394a start-up Alignment	Upstarts	12/10/1998	4/28/1999
Description				
Fix start-up to align with P1394a when it has been completed				
Status				
Y-DONE				
NextActions				
4/28/99: Incorporated the Hard Disable bit in the draft; The hard disable bit is set/reset via software; 4/8/99: Deferred until Colin is able to report. 3/24/99: Waiting for 1394a port state machine to stabilize; 2) what to do on disable; 3) Is toning operational during disable or is INT_ENABLE used to control toning during disable 4) better distinction between port state machine and arbitration state machine				

SCATNo	Title	Owner	DateEntered	StatusDate
2	Root Contention Time	Eric Hannah	12/10/1998	6/7/1999
Description				
Verify that root contention time values will work with long haul. The time constants chosen were selected for 50 meters. Beyond 50 meters, new constants need to be determined.				
Status				
Y-DONE				
NextActions				
06/07/99: Draft 0.60 incorporates the changes; 4/28/99: Current draft does not have the changes incorporated. The next draft will contain new values contention times for distances less than 50 meters. 4/8/99: Eric will change next draft. ROOT_CONTENTEND_SLOW will be 3.2 us Min and 3.22 us max.; 3/24/99: Subject to Upstart support, the method suggested in Alistair's e-mail of March 15, 1999 (Subject: Re: Continue of Loop Breaking in 1394b) continued to resolve root contention. Tentatively, increase the time until a better solution comes later.				

SCATNo	Title	Owner	DateEntered	StatusDate
3	PHY Register Map	PHY-Link	12/10/1998	2/10/1999
Description				
Complete design of register map (to include speed limit bits in port registers - settable by firmware, as well as other required bits)				
Status				
Y-DONE				
NextActions				
None				

SCATNo	Title	Owner	DateEntered	StatusDate
5	Port Interface	B-Port	12/10/1998	6/17/1999
Description				
Fix & Document Port interfaces (and filtered input from Simulations); Control Codes delivered to Mike and Steve.				
Status				
Y-DONE				
NextActions				
06/17/99: The "living document" is to be updated at a lower priority - it would be nice to have in the July draft; 06/09/99: Colin & Mike have been using document and they have yet to find any errors. 4/8/99: Alistair has 'living' document. Chapter has been extensively revised. Awaiting review by Jerry. Put something in the next rev. of the spec. 3/24/99: Update as appropriate as information comes forth from simulations				

SCATNo	Title	Owner	DateEntered	StatusDate
8	UTP Electrical	UTP	12/10/1998	6/9/1999
Description				
Complete UTP electrical Specs				
Status				
Y-DONE				
NextActions				
06/09/99: Eric has completed this; 04/08/99: When provided by Alistair, Eric will update spec and mask. 3/24/99 No Change - 2/10/99: Alistair to get n Eric to simulate/validate them				

SCATNo	Title	Owner	DateEntered	StatusDate
9	Jitter Budgets	Colin Whitby-Stevens	12/10/1998	9/17/1999
Description				
Finalize jitter budgest and specifications for all speeds and media (except UTP5).				
Status				
Y-DONE				
NextActions				
09/17/999: This has been incorporated into draft 0.85; 8/23/99: This was reopended to take care of the electricals for S400 Beta; 07/21/99: All work h done and waiting for Eric to to incorporate into the draft specification the latest jitter budget numbers - waiting review; 06/09/99: Continue to track Fib Channel and update as required; 4/8/99 - On Agenda for 4/22/99; 3/24/99 - Colin has posted jitter tables to web site. Folks to validate that numbers are correct. Colin needs to verify test patterns. Will plagiarize from fibre channel test patterns.				

SCATNo	Title	Owner	DateEntered	StatusDate
10	Standby Start-up	Upstarts	12/10/1998	6/9/1999
Description				
Upstarts complete standby interaction				
Status				
Y-DONE				
NextActions				
06/09/99: This has been incorporated into the draft specification; 4/8/99 - Colin Colin to do implementation proposal upon completion upon completi SCAT #1				

SCATNo	Title	Owner	DateEntered	StatusDate
11	Standby Codes	B-Port	12/10/1998	3/24/1999
Description				
Standby encoding signaling				
Status				
Y-DONE				
NextActions				
Codes have been distributed				

SCATNo	Title	Owner	DateEntered	StatusDate
12	Arbitration Tokens	B-Port	12/10/1998	3/24/1999
Description				
Arbitration Token Completion				
Status				
Y-DONE				
NextActions				
If new codes are needed they will be given or their need will be negotiated				

SCATNo	Title	Owner	DateEntered	StatusDate
15	B.O.S.S. Port & PHY-Link	Accelerations	12/10/1998	6/9/1999
Description				
Interface with B-Port connections & PHY-Link sub-layer				
Status				
Y-DONE				
NextActions				
06/09/99: The write up has been completed and Sean has the information. In fact, a presentation was made by Colin to the general membership at the 03/24/99: Write it up and send it to Sean - to be completed 4/7/99				

SCATNo	Title	Owner	DateEntered	StatusDate
16	Beta mode media dependent speed for new beta & unspec	Colin Whitby-Strevens	12/10/1998	4/28/1999
Description				
Shall Beta mode support S100 through S400 on all media types? S100 & S200 not wanted on GOF. The issue is regarding a Bi-lingual PHY capable of S400, or, perhaps S200, it would be nice if it were able to operate in Beta mode when able.				
Status				
Y-DONE				
NextActions				
4/28/99: Minimum speed for 1394b beta only keyed copper connector shall be S400 (same as GOF); Maximum allowed speed shall be S3200; Other connectors (out of scope for this standard) have a minimum of S400 and maximum is undefined; 3/24/99: Max Bassler is to discover what is the lowest the Consumer Electronic folks would like to see on Beta mode only?				

SCATNo	Title	Owner	DateEntered	StatusDate
17	Beta PHY ID	Colin Whitby-Strevens	12/10/1998	7/19/1999
Description				
Need a mechanism to identify Maximum Legacy Path Speed to be used at self ID time.				
Status				
Y-DONE				
NextActions				
07/19/99: This has been implemented in the 'C-Code' and is in the current (0.70) draft standard - a 1394a link is considered a legacy path; 06/09/99: Overchanged from Jerry Hauck to Colin Whitby-Strevens; 4/28/99: The draft spec must be cleaned up such that an "A-Link" interfaced to a "B-PHY" shall not be faster than S400. A beta-only PHY mated with an "A-Link" shall not be faster than S400; 3/24/99: Colin: add a bit identifying connection to a "B" PHY; Alistair: S100 legacy packet format, beta originators will include a speed code, A B PHY generating an S100 packet when connected to an A link will not generate a speed code.				

SCATNo	Title	Owner	DateEntered	StatusDate
20	Cycle Start Tokens	Michael D. Johas Teener	12/10/1998	3/24/1999
Description				
Send out a conventional Cycle Start packet appended onto it is a cycle start token. The token is there to help the PHYs keep their phase straight (and on border node) - need two tokens from Alistair (or a better way to do this).				
Status				
Y-DONE				
NextActions				
03/24/99: Mike will get tokens from Alistair. This is expected to be documented by [standard answer: soon] end of next week (2/26). March 1st will be the date when ALL tokens have been requested of Alistair.				

SCATNo	Title	Owner	DateEntered	StatusDate
22	Speed Map	David Wooten	12/10/1998	4/30/1999
Description				
Resolve speed map issues				
Status				
Y-DONE				
NextActions				
4/30/99: 1) Plenary Announcement: 1394b will not support a speed map. 2) Seek volunteer to write a white paper (informative annex) on speed discovery which does use a speed map. Not required for draft closure.				

SCATNo	Title	Owner	DateEntered	StatusDate
25	PHY Test modes	Lou Fasano	12/10/1998	6/9/1999
Description				
Develop and document PHY Test Modes				
Status				
Y-DONE				
NextActions				
06/09/99: With what has been completed by Colin, the requirements have been met. Additional material shall be considered out of scope unless 2/3 vote accepts it.; 4/30/99: Per e-mail from Colin, some of this requirement is now met by the jitter test patterns which are in the 0.6 draft. Is more needed?; 4/28/99: Lou will contact Eric Hannah and solicit Eric for a formal proposal; Lou pointed out that the extensions to this SCAT item were advanced by Eric Hannah's suggestion of 4/8/99 - what Eric suggested is not what Dave Johnson (TI) originally had in mind; The question is, do the PHY vendors want to go the extra step and standardize the methods used for PHY validation (knowing that all PHY vendors do their own thing to perform that task now); 4/28/99: proposal from Eric Hannah: a) Two PHYs share a common connection; b) One PHY is loaded with a set of register values determined to create a worst case scenario (created via some internal generation mechanism); c) the other PHY is programmed with a respondent set of register values designed to test for a "stress transaction" (also created via some internal generation mechanism); d) the stress transaction is passed between each PHY; e) each PHY contains a "Success/Fail" report mechanism; It was suggested Lou communicate with Dave Johnson (TI) and return with a proposal; 2/18/99: Lou will contact Eric				

SCATNo	Title	Owner	DateEntered	StatusDate
28	Beta Speeds Less than S800 on Copper	Copperheads	12/10/1998	3/24/1999
Description				
When connecting a Bi-Lingual socket (new?) to a Beta only socket via a "special" cable, it may be a good thing to support Beta communication at speeds less than S800				
Status				
Y-DONE				
NextActions				
03/24/99: Yes - a bilingual plug/socket is goodness. It may or may not be good to do beta less than S800. Jerry provided his interconnectivity write-up. David presented at the Plenary at work is under way to ratify bilingual speed limits. If the model understood on 2/18/99 is to be followed, Beta only may go up to S400 and go upwards. Discussions at the 3/23/99 plenary may leave the 2/18/99 model no longer valid. There will be, however, a lowest common denominator (speed) between beta and bi-lingual. 2/18/99: Decide: Do we need a bi-lingual socket & plug? Is a beta plug to 6-pin plug cable to be allowed? Jerry to provide interconnectivity write-up and forward to David. David to take to plenary AR to define speed limits for bilingual ports.				

SCATNo	Title	Owner	DateEntered	StatusDate
30	B.O.S.S. State machine & Code	Accelerations	2/10/1999	6/9/1999
Description				
The state machine for B.O.S.S. and the 'C-Code' for B.O.S.S. needs to be completed				
Status				
Y-DONE				
NextActions				
06/09/99: Code complete and has been included in draft spec. 0.60; 03/24/99: 'C'-code yet to be done prior to the June plenary meeting. Presentation given at 3/23/99 plenary. Group to review description.				

SCATNo	Title	Owner	DateEntered	StatusDate
31	B.O.S.S. Border Node	Accelerations	2/10/1999	7/21/1999
Description				
The behavior and operation of a border node needs to be determined				
Status				
Y-DONE				
NextActions				
07/21/99: Complete (with 40 pages of 'C-Code') and is in draft 0.70; 06/09/99: Behavior was presented at the Plenary meeting on 06/08/99, Code will be complete and in the draft prior to the July plenary; 03/24/99: 'C'-code yet to be done prior to the June plenary meeting. Presentation given at 3/23/99 Group to review description.				

SCATNo	Title	Owner	DateEntered	StatusDate
34	Max Packet Size - Async	Eric Hannah	3/12/1999	4/30/1999
Description				
Place into the draft specification the decision to limit asynchronous maximum packet size to 4K bytes				
Status				
Y-DONE				
NextActions				
04/30/99: Per an e-mail from Colin, this issue item is closed (albeit Eric used the value of 2K instead of 4K - the 4K number is the correct number and draft spec shall be updated to reflect this correction).; 03/12/99: Eric to include this information in draft 0.18				

SCATNo	Title	Owner	DateEntered	StatusDate
35	Crossover	Upstarts/UTP	3/23/1999	6/9/1999
Description				
Upstart algorithm to include crossover resolution				
Status				
Y-DONE				
NextActions				
06/09/99: This has been in the draft for a while (since draft 0.17); 03/24/99: Colin to prepare an implementation for Upstarts and put it into the spec.				

SCATNo	Title	Owner	DateEntered	StatusDate
38	Hard_Disable - Default State	Colin Whitby-Stevens	4/13/1999	6/9/1999
Description				
Colin's proposal is for the hard-disable flag to be false, so that the behaviour from the software point of view is as close as possible to 1394a. Seeing a p from Nyu-San, here may be a desire to have the default save more power in the case of the disabled port. Therefore, open discussion and consensus is needed.				
Status				
Y-DONE				
NextActions				
06/09/99: After some discussion, the point being made that software would have to be different than that for A"" and the optional "strap" option no longer becomes optional led the group to determine that the default shall be left to false (zero); 04/30/99: Per an e-mail from Colin, this issue item is nearly done. Left to reach DONE status is to decide whether to change the default value of the Hard Disable bit.				

SCATNo	Title	Owner	DateEntered	StatusDate
39	Normalize Snnn Terminology	Eric Hannah	4/22/1999	6/7/1999
Description				
Use of Speed Transmission numbers and designators are inconsistent.				
Status				
Y-DONE				
NextActions				
06/07/99 Draf 0.60 has removed the inconsistencies				

SCATNo	Title	Owner	DateEntered	StatusDate
41	Interpacket delay	Jerry Hauck	4/28/1999	9/17/1999
Description				
The link needs time to complete processing of a packet before it must deal with the next packet (isoch followed by isoc, for example); One issue to be dealt with here is how fast can a link deal with a series of packets (isoch, for example); how closely can the packets be spaced so that the link can perform its interpacket processing - how much time must they have? The proposal is a single quadlet.				
Status				
Y-DONE				
NextActions				
09/17/99: Sean has incorporated text in the draft which resolves this issue; 08/23/99: One Quadlet length of time (for the current packet speed); Now, should it be at the end of the current packet or the beginning of the next packet? Because of the way packets are assembled (always two packet beginning and two packet ending symbols) there are four symbols which just happens to be a quadlet. Colin will verify that the 'C-Code' makes certain this is the case. 07/17/99: Is there a need for a delay greater than three quadlets in length? An informal solution is two quadlets per PHY packet is quite sufficient and shall be the standard, and, furthermore, the proposal is to have a two quadlet delay between all packets; BUT, what about S100? Further discussion on the proposal will ensue at a later time; 06/09/99 The proposal (see description - above) was agreed upon by all available link designers (one quadlet interpacket spacing at the receiver). More to be added at the originator to allow for deletable symbols - implement this in the 'C-Code'.				

SCATNo	Title	Owner	DateEntered	StatusDate
42	Errant Reset of Error Counter	Alistair Coles	4/28/1999	8/23/1999
Description				
The error counter is reset when one re-syncs afer loosing synchronization. Loss of synchronization may be the result of an error. This doesn't sound v useful and probably should be fixed.				
Status				
Y-DONE				
NextActions				
8/23/99: Colin met with Alistair during the Bristol page turner on August 4th. Updated text will be added to the draft and the error counter registers will remain.; 7/21/99: Colin will socialize this with Alistair at the August 4, Bristol page turner; 06/23/99:The error counter is reset at the end of training be by design the training process introduces a bunch of errors. So if it is NOT reset at the end of training, it will need to read & cleared once before any use diagnostics can be obtained.; 06/17/99: Alistair to review the minues of the 06/09/99 SCAT meeting; 06/09/99: Place into the draft: Intended for use by single bus wide diagnotsic program. Cleared when read. The port code much be changed so the register is no longer cleared when loss of sync occurs: port_error_reg: change in rx_sync_actions(), change description in 10.6.2.7				

SCATNo	Title	Owner	DateEntered	StatusDate
45	Standby Response when B_Link==0	Colin Whitby-Strevens	4/30/1999	7/19/1999
Description				
A B-PHY shall always return OK == 0 when receiving a Standby command if B-Link == 0				
Status				
Y-DONE				
NextActions				
07/19/99: DONE; 06/09/99: To the query "Is this done" Colin replied "I don't think so". Perhaps it will be included in 0.7 draft revision. 04/30/99: Col submit appropriate wording in the next submittal to Eric for inclusion in the next revision of the draft.				

SCATNo	Title	Owner	DateEntered	StatusDate
46	Table 12-11 Modifications	Sean Killeen	4/30/1999	9/17/1999
Description				
Table 12-11 shall be modified to include restore with and without notification of a previous bus reset. As part of this, any time the PHY sends the content of an internal register it identifies whether it is autonomous or not (e.g. table 12-11 value 1001 is the same as 1000 except the register being sent is being sent autonomously)				
Status				
Y-DONE				
NextActions				
09/17/99: The 'C-Code' has been updated; Sean must still add text to the draft specification; 7/19/99: The restore 'C-code' must be changed so it passes information to the link. Two new status indications have been added; A modification of 12-11 will be made so that the link of a leaf node may be notified (upon restore) that a bus reset occurred while it was in standby; 06/09/99 David Wooten will contact Sean and gather some latest status				

SCATNo	Title	Owner	DateEntered	StatusDate
47	Deprecation of Max_speed in PHY register MAP	Upstarts	4/30/1999	6/6/1999
Description				
Upstarting negotiates speed on per port basis. Max_speed is a node number. Why is Max_speed needed in a 1394B PHY?				
Status				
Y-DONE				
NextActions				
06/06/99: Colin has completed his action here (on 4/30/99) and as of 06/06/99 there has been no scream response, therefore, this issue item is DONE - Max_speed has been deprecated; 4/30/99: Deprecate Max_speed in the next revision of the draft. Socialize this effort on the reflector. Wait for "scream response - if none, leave deprecated. .				

SCATNo	Title	Owner	DateEntered	StatusDate
48	Eliminate Enab_multi & Enab_accel	Jerry Hauck	4/30/1999	9/17/1999
Description				
Is Enab_multi and Enab_accel required in a P1394b PHY register map?				
Status				
Y-DONE				
NextActions				
09/17/99: Jerry has crafted first pass text for inclusion in the draft which has been agreed to in principle by the group; Jerry has given this text to Col has been included in the draft; 07/19/99: These are required when interfacing to an "A" link device - they cannot be eliminated. Enab_multi is needed for PHY which attaches to a legacy style link - it is NOT needed for a PHY which attaches to a "B" link. A "B" PHY with a parallel PHY/Link interface is REQUIRED to communicate with an "A" Link. Enabl_accel may NOT be needed in beta only PHYs but is required in legacy nodes; 06/09/99 David V will contact Sean and gather some latest status				

SCATNo	Title	Owner	DateEntered	StatusDate
49	Per Port Speed Register Clean-up	David Wooten	6/8/1999	7/21/1999
Description				
There is an issue with all of the per port speed registers. Specifically: How are they set, who sets them, how are they preserved across PHY power cycle (power-up resets), etc.				
Status				
Y-DONE				
NextActions				
7/21/99: From the perspective of IEEE p1394b, this is DONE (software takes over); 07/19/99: Clean-up portion is done, however, they are not preserved across PHY power-up cycles (e.g. they clear on power-up reset) - not a 1394b problem (probably the software stack will have to take care of this).				

SCATNo	Title	Owner	DateEntered	StatusDate
50	Self-ID Speed Bits for Beta Compliant PHYs	Colin Whitby-Strevens	6/8/1999	7/19/1999
Description				
Socialize on the reflector to determine whether it should be a requirement that all Beta mode compliant PHY's report 2'b11 as their speed in their self-ID packet? As in: a simple Repeater connecting DS S-100 to Beta S-100 (CAT-5 use model).				
Status				
Y-DONE				
NextActions				
07/19/99: Lack of negative discussion on the reflector, all PHYs which may do beta mode shall report 2'b11 in their self-ID packet.				

SCATNo	Title	Owner	DateEntered	StatusDate
54	Scrambler Control	B-Port	6/9/1999	7/21/1999
Description				
Status				
Y-DONE				
NextActions				
07/21/99: After much effort, it will be said that there is a register in PHY register map and it will do whatever it does for whoever needs it for; 06/09/99 to be part of #9) Need to decide whether the arb state machine or the port takes responsibility for controlling the scrambler and generating the NOP co symbol in order to emit the SB-JTPAT (as controlled by the "disable scrambler" bit in the PHY register map).				

SCATNo	Title	Owner	DateEntered	StatusDate
56	B-Link Identification	UPSTARTS	6/23/1999	9/17/1999
Description				
How and when do we know that a 1394a link is or might in the future be attached, given that this information is needed at self-ID time?				
Status				
Y-DONE				
NextActions				
09/17/99: Colin has inserted the appropriate 'C-Code'; Sean will add some text in the draft which correlates with the 'C-Code'; 07/21/99: There has been resolution. Sean shall insert resolution into the specification. If the value of the link flag (three values possible: 1) BETA_LINK, 2) LEGACY_LINK; 3) NO_LINK) changes then the PHY goes through its power reset sequence (I.e. all ports disconnected, upstarts, loop prevention, etc. etc.) NOTE: this flag is independent of LPS. Second Note: In implementation, support must be provided for notification to the PHY of a 1394a link or NO_LINK connected.				

SCATNo	Title	Owner	DateEntered	StatusDate
7	High Speed Copper Cables	Max Bassler	12/10/1998	4/8/1999
Description				
Copperheads have verified that an "Enhanced Plug/Socket" 1995 cable functions at S800 for both Data Strobe & Beta Mode. A question exists as to whether a standard plug/cable will function with an enhanced socket at S800 for Beta mode.				
Status				
Z-CLOSED				
NextActions				
4/8/99: Mike make this irrelevant if we approve new connector scheme with Beta-only and Bi-lingual plug. 3/24/99: No longer a need based upon events occurring in the 3/23/99 Plenary				

SCATNo	Title	Owner	DateEntered	StatusDate
14	A/B PHY-Link Interoperability	PHY-Link	12/10/1998	4/8/1999
Description				
A-Link to B-PHY operating model				
Status				
Z-CLOSED				
NextActions				
4/8/99 - If B-PHYs work with A-Links, they must be able to step down to 50 MHz. B-PHY & A-Link is an OPTIONAL implementation. If such an implementation is to be done, then it will be requisite on the implementor to use the A Spec to insure a successful implementation. The B-PHY would be limited to S400 maximum communication to the link. The PHY can only process legacy formatted packets when running in the "A" compatible mode.				

SCATNo	Title	Owner	DateEntered	StatusDate
23	DC BIAS	Steve Bard	12/10/1998	4/8/1999
Description				
Complete DC BIAS Specification				
Status				
Z-CLOSED				
NextActions				
4/8/99: No Action Taken; 3/24/99: Steve Bard has requested the contributor of this SCAT item to identify the issue. If no one speaks up, this item will be CLOSED.				

SCATNo	Title	Owner	DateEntered	StatusDate
24	IRM	David Wooten	12/10/1998	6/9/1999
Description				
Changes to IRM (band-width & channels allocation)				
Status				
Z-CLOSED				
NextActions				
06/09/99: Clause 9.2.8 in IEEE 1394a-1999 obsoletes this SCAT issue table entry. 3/24/99 Same 2/18/99 -It is possible that this has been obsoleted. Peter to write up the proposal from Unibrain. Action on this SCAT to be delayed until Peter's informative write-up can be reviewed. This shall be taken back to plenary for review and decision.				

SCATNo	Title	Owner	DateEntered	StatusDate
26	Error handling	PHY-Link	12/10/1998	4/30/1999
Description				
Delayed error detection & reporting (receiving a packet, data looks correct (good CRC), but the data end reveals that it is, in fact, incorrect - a method needed to report the event across the PHY-Link interface).				
Status				
Z-CLOSED				
NextActions				
4/30/99: Per e-mail from colin, no action will be taken on this issue item. There will be no such error reporting; 3/4/99: This will be resolved upon completion of SCAT #37				

SCATNo	Title	Owner	DateEntered	StatusDate
29	"B" Root	David Wooten	2/10/1999	6/9/1999
Description				
How does one go about making certain a "B" node is ROOT (if a "B" node exists on the bus). Does it make sense to have a "B" root if there is no "B"				
Status				
Z-CLOSED				
NextActions				
06/06/99: SCAT discussed the new border node functionality and came to the conclusion that root hold-off bit continues to be the only mechanism needed. 03/24/99: The root hold-off bit works fine in a managed bus environment. It is not expected that performance optimizations are needed in an unmanaged environment. The only concern is root hold-off bit "wars." Deferring further action to "Peter Johansson type activity" for any further resolution. 2/10/99: David will work with a proposal at the next meeting				

SCATNo	Title	Owner	DateEntered	StatusDate
33	Beta Only Copper Speed	Colin Whitby-Strevens	2/10/1999	3/24/1999
Description				
Speed ranges for new Beta copper connector				
Status				
Z-CLOSED				
NextActions				
03/24/99: CLOSED because this subject has been covered rather adequately in other SCAT entries. 2/10/99: Colin will socialize this topic on the reflector with influence toward "faster is better"				

SCATNo	Title	Owner	DateEntered	StatusDate
37	Packet truncation	B-Port (Alistair)	3/24/1999	6/17/1999
Description				
How do we truncate a packet and when? (e.g. code violation - disparity). What happens if one receives a "busted" data_end (like the packet got longer)				
Status				
Z-CLOSED				
NextActions				
06/17/99: Now an arb state machine problem - This ISSUE is superceded by SCAT # 55 (Identify & Deal with all the problems concerning loss of synch 06/09/99: Contine review of error cases. Alistair will have a report available for discussion at the next SCAT meeting; 03/24/99: Continue discussion of				

SCATNo	Title	Owner	DateEntered	StatusDate
51	Cycle Start Token Timing	Jerry Hauck	6/9/1999	9/17/1999
Description				
Now that the draft standard has cycle start tokens, how does one go about using them. We need to make certain that a beta node can generate a cycle s token and an isochronous request in time after seeing the cycle start packet. When the cycle start packet is coming from a border node into a "B" doma not have a cycle start token.				
Status				
Z-CLOSED				
NextActions				
09/17/99: Not a problem; 07/19/99: Not done, but not forgotten; 06/09/99: Jerry will fix this and submit the fix for inclusion in the next draft. If succe look for it in 0.7 just prior to the next plenary.				

SCATNo	Title	Owner	DateEntered	StatusDate
52	Gap Timing Parameters (PIL/FOP)	Jerry Hauck	6/9/1999	9/17/1999
Description				
There is a link/PHY delay in a PIL/FOP implementation where one considers the PIL as a "link" and the FOP as the "PHY" (traditionally speaking). This needs to be examined for corner case issues with regard to ping and ping response.				
Status				
Z-CLOSED				
NextActions				
09/17/99: It is recognized that gap timing will not ping the PIL, however, this is not a problem (even in the corner case). It is less than a 100 nanosecond problem; 07/19/99 Not done, but not forgotten; 06/09/99: Jerry will analyze the possible timing issues and report at the next SCAT meeting the result of the analysis				

SCATNo	Title	Owner	DateEntered	StatusDate
60	FOP_INT timing	Sean Killeen	8/12/1999	9/17/1999
Description				
Is there a timing issue with ARB_RESET_GAP and SUBACTION_GAP serial interrupt notification? PIL is receiving PHY_SOLICITED register content when a subaction or arb gap occurs, which cannot be reported immediately because FOP_INT is BUSY. There seems to be a timing issue here that must be resolved - OR an opportunity to explain why everything is okay!				
Status				
Z-CLOSED				
NextActions				
09/17/99: After much Flip-Flopping on USB & other such items of interest, it has been decided that this is not an issue; 08/24/99: This is not just a FOP issue, it is a general issue with how the PHY/Link interface was documented previously. Examination of the data that currently comes over the PInt line will show that as this information is given to the Link over the Data Lines. This resolves the timing issues. Words need to be crafted for insertion into the draft. Once the words have been written, the status of this issue will be changed to AIP. 08/12/99: Sean to report at SCAT on August 23.				