Pending (unresolved or not yet in draft) issues

ID	Balloter	Type	Page	Line	Clause	Comment / Remedy	Resolution
8	Gene Milligan	E	1	17-19	1.1	Lines 17 through 19 read like leftover stuff from the introduction. I think they should be moved back to the introduction or re-written to sound like scope material. Perhaps "This standard is relevant to any application that requires efficient, peer-to-peer transport of data between devices including printers."	
20	Peter Johansson	T	6	20 - 21	3.1.2.11	The definition of 'logical unit' seems to imply that devices compliant with P1394.3 may not implement more than one logical unit. I do not think that was the intent of the working group.	
21	Gene Milligan	T	6	20 - 21	3.1.2.11	Does the definition of logical unit is this standard rule out two logical units? Actually it does. I guess I should have asked why? Correct the definition of logical unit or state, perhaps in the scope, why this standard is limited to single logical unit devices.	
22	Lon Canaday	E	6 - 8	20 - 21 33 - 34 9 - 12	3.1.2.11 3.1.2.32 3.1.2.36	Note: Several of the definitions in Section 3 were copied from the SBP-2 standard and when combined with other definitions in the standard under review the result is the appearance of conflicting definitions. At the very least it is very hard to understand. A target is defined as a node (3.1.2.32) and also as a CSR architecture unit (3.1.2.32). However, a unit is defined as being part of a node (3.1.2.36) and a node can contain more then one unit (3.1.2.36). Section 3.1.2.11 also states that a PPDT target contains only one logical unit. It is unclear from reading these definitions whether a CSR Architecture unit is the same thing as a logical unit. And what is a unit in relation to the first two? It needs to be clarified how a node can have more then one unit but a target is a node and can only have one logical unit. Modify the language of definitions 3.1.2.32 and 3.1.2.36 to remove ambiguities.	
28	Gene Milligan	E	7	17	3.1.2.26	On line 17 the definition of service sounds more like a service request. Clarify.	
32	Gene Milligan	T	8	1 - 3	3.1.2.34	In the case of PPDT is the task set a separate entity from the queues? Should this point be included in the task set definition? Clarify.	
60	Gene Milligan	E	20	6 - 10	5.1	Regarding lines 6 through 10 why not make the special bit vendor specific since its meaning seems to vary between not defined and not specified? Additionally upon whom is the normative requirement" Otherwise the meaning and usage of the special bit are application-dependent and shall apply to all of the application data contained within the buffer described by the ORB." directed? Clarify or change to vendor specific.	

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ID	Balloter	Type	Page	Line	Clause	Comment / Remedy	Resolution
98	Akihiro Shimura	E	33	41	6.3.2.1	The following sentence is not necessary. "If completion status for the control ORB indicates that the RELEASE QUEUE control request was not delivered to the target, the initiator shall either signal the control ORB again or reset the target by a write to its RESET_START register. "(This sentence seemed to be accidentally left since the draft 0.6.) Remove above sentence.	
99	Gene Milligan	E	34	1 - 5	6.3.2.1	Line 5 contradicts lines 1 and 2. It obviously should be a conditional statement. If it were true there would be no purpose for RELEASE QUEUE. Clarify.	
102	Akihiro Shimura	E	34	40	6.3.2.2	The following sentence is not necessary. "If completion status for the control ORB indicates that the RELEASE QUEUE control request was not delivered to the target, the initiator shall either signal the control ORB again or reset the target by a write to its RESET_START register." (This sentence seemed to be accidentally left since the draft 0.6.) Remove above sentence.	
116	Gene Milligan	T*	41	14 - 16	7.4	Regarding lines 14 through 16 "The exact details of context information maintained by a target are implementation-dependent, but the context shall be sufficient to correctly resume execution of a previously active ORB if signaled by the initiator after a task set abort." seems like a difficult requirement to comply with in open systems since sufficient information is vendor unique. Sounds like more work or an additional reference is needed. I guess this is a technical issue rather than editorial. As a starter delete "Context information probably includes the original buffer size (derived from page table entries if a page table is associated with the ORB), the amount of data already transferred or remaining to be transferred and the offset of the current location within the data buffer." or change it to "Context information shall include the original buffer size (derived from page table entries if a page table is associated with the ORB), the amount of data already transferred and the offset of the current location within the data buffer." Make the requirement explicit enough to allow interoperability in open (vender wise - not referring to the model) systems. The change suggested in the comment may be enough.	

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ID	Balloter	Type	Page	Line	Clause	Comment / Remedy	Resolution
126	Akihiro Shimura	T	46	7	8	Some host controller that is already in the marketplace and widely deployed does not have capability to support block read of the configuration ROM even if it is compliant with IEEE Std 1394a-2000. The specification "The *max_ROM* field shall have a minimum value of one." is applied not only to the target device but also to the initiator device, and especially the initiator device that already has such a host controller installed cannot be compliant with this standard unless host controller hardware itself is updated. This specification is over-restricting because transport protocol on this standard itself does not require being capable of block read of the configuration ROM to inter-operate, and this specification will unreasoningly reduce the applicable host controller or increase non-compliant device. Change the sentence from "The *max_ROM* field shall have a minimum value of one." to "The *max_ROM* field should have a minimum value of one." This change will also affect the *max_rec* specification at line 6 in the same page. The sentence in page 62, line 2 needs to be revised too.(The *max_ROM* value in the Figure F-1 (page 61, line 13) has already been zero and does not need to be revised.)	
129	Akihiro Shimura	T	46	19	8.1	Though a Keyword_Leaf entry is mandated within the root directory, there will exist nodes those do not have any instance. For example, the initiator that only uses services on the target will not have functional instance at all. How a node represents its instance and keyword is dependent on the existence of services and is beyond the scope of transport protocol. The specification of instance and/or keyword should be left to appropriate device service profile. Keep silence on the existence of Keyword_Leaf entry in the root directory. (This is also applied to other parts of the standard.)	
130	Akihiro Shimura	T	47	1	8.1	Though an Instance_Directory entry is mandated within the root directory, there will exist nodes those do not have any instance. For example, the initiator that only uses services on the target will not have functional instance at all. How a node represents its instance and keyword is dependent on the existence of services and is beyond the scope of transport protocol. The specification of instance and/or keyword should be left to appropriate device service profile. Keep silence on the existence of Instance_Directory entry in the root directory. (This is also applied to other parts of the standard.)	
132	Chuck Rice	T	48	2 - 12	8.5	Does the presence of the initiator unit directory imply that the initiator supports reverse login or will it be necessary to write an initiator profile that specifies how an initiator will advertise support for reverse login. The specification needs to clearly state how an initiator is supposed to advertise support for reverse login.	

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ID	Balloter	Type	Page	Line	Clause	Comment / Remedy	Resolution
133	Atsushi Nakamura	T	48	3	8.5	1394.3 initiators should contain a unit directory indicating 1394.3 support whenever possible. A target can make use of this information to confirm the initiator protocol version. The first sentence in section 8.5 should say: Configuration ROM for initiators compliant with this standard is strongly recommended to contain one unit directory....instead of Configuration ROM for initiators compliant with this standard may contain one unit directory....	
134	Atsushi Nakamura	T	48	3	8.5	An initiator device which config ROM contains an initiator unit directory shall also contain an instance directory with a "INITIATOR" keyword leaf. Add sentence ;An initiator device which config ROM contains an initiator unit directory shall also contain an instance directory with a "INITIATOR" keyword leaf.	
140	Gene Milligan	T	55	9	C	Regarding footnotes 9 and 10 most standards bodies would not allow normative requirements to be included in footnotes if they allowed footnotes at all. I do not know what the IEEE style is. But I think both of these should be notes in the unlabeled table - you know which table I mean - this here unlabeled table.	
148	Akihiro Shimura	E	67	22	F.7	There is no difference between initiator and target with respect to the relationship between instance directory, root directory and unit directory. Remove the entire description of NOTE.	
149	Chuck Rice	T	67	22 - 24	F.7	Specifying that the initiator unit directory be accessible from the root directory and not from an instance directory seems to contradict IEEE P1212. If an initiator supports more than one service does the initiator advertise those services in one unit directory or in multiple unit directories; if multiple unit directories are required does this not contradict IEEE P1212. The specification needs to clarify how an initiator unit directory should be laid out.	

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Resolved technical issues

ID	Balloter	Type	Page	Line	Clause	Comment / Remedy	Resolution
9	Gene Milligan	T	3	6	2.1	Regarding normative references, a normative citing is made of IEEE P1394.1 in the scope but it is not listed in the normative references.	Rejected; the citation of P1394.1 in the Scope does not constitute a normative reference. P1394.1 has been added to the bibliography.
10	Peter Johansson	T*	3	19	2.2	A note should be added to instruct the IEEE editor to update the reference to the CSR architecture to cite IEEE Std 1212-2001 if it has been approved by the time of publication for P1394.3.	Accepted
11	Gene Milligan	T	3	25	2.3	The footnote seems to be a carry over from when 1394a was in development. In addition I thought 1212 was a completed standard with some revision work underway and I think in ballot. Make it less temporal.	Accepted; the reference to draft standard P1394a has been deleted.
14	Gene Milligan	T	5	2 - 4	3	IEEE Std 100-1992 should be listed in the normative references.	Accepted; the reference has been updated to IEEE Std 100-2000.
39	Lon Canaday	T	12	15-16	4.2	"ANSI NCITS 325-1998 describes all the work to be performed by a particular logical unit as a task set, a collection of ORBs linked together as shown by Figure 6. "Note: Figure 6 shows multiplexed queues in a task set, but multiplexed queues are not supported in ANSI NCITS 325-1998. The queue names should be removed from Figure 6.	The labels in Figure 6 have been retained but additional text has been added to clarify that multiplexed queues are not a feature of SBP-2.
43	Colin Whitby-Strevens	T	13	14	4.3	It is not clear, during connection establishment, how a client knows whether to create a uni-directional or a bi-directional connection to a service, and whether a connection is a blocking or a non-blocking one. I understand from private communication that this is considered to be outside the scope of the specification. See both 4.3 and 6.3.1.1. Consider the inclusion of a negotiation mechanism for these parameters (a technical change) or clarify that how the client knows what parameters the service requires is outside the scope of the specification (an editorial change)	The suggested editorial change is accepted.
49	Gene Milligan	T	14	39	4.4	On line 39 change "cannot" to "should not".	Rejected. The use of “cannot” is correct here because, by definition by the standard, stream mode transfers to the target are unable to fail because of buffer size.
51	Gene Milligan	T	15	13	4.5	On line 13 change "may not" to "should not". Perhaps may should be searched globally, or at least may not, as it appears the standard is not following the compliance definitions if I am correctly guessing what is meant to be stated.	Accepted in principle; “may not” changed to “cannot”.

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ID	Balloter	Type	Page	Line	Clause	Comment / Remedy	Resolution
55	Peter Johansson	T	16	32	4.7	Provide clear instructions to the IEEE editor that all references to "draft standard IEEE P1212" are to be replaced with "IEEE Std 1212-2001 if the latter has been approved in time.	Accepted
56	Gene Milligan	T	17	2	4.7	Change line 2 "wishes the initiator to logout" to "needs the initiator to logout."	Rejected; see rationale for comment 40.
59	Chuck Rice	T	20	1 - 5	5.1	Can the final bit be set by the either the target or the initiator. The paragraph needs to specify if either the target or the initiator or both can set the final bit.	The target can't change anything in an ORB; this is a basic SBP concept. No changes made.
61	Gene Milligan	T	20	19 - 20 25	5.1	Lines 19 and 20 read as if they are a requirement for the editor or the committee, what is the requirement for the implementer? The same comment applies to line 25. This requirement construction issue occurs elsewhere and should be treated as a global comment. Clarify globally.	Rejected. The normative relationship between queue zero (the control queue) and the *end_of_message* and *final* bits is clear.
68	Gene Milligan	T	22	30 - 32	5.3	On line 30 change "If the initiator has provided more control information than the target can accept or if the buffer is too small to receive all the target's control information, " to " If the initiator has provided more control information than the target is able to accept or if the buffer is too small to receive all the target's control information, "	Rejected—and deemed editorial. "Can" is synonymous with "is able" and avoids the passive voice.
76	Gene Milligan	T	23	8	5.3	On line 8 change "unimportant" to "not specified". After all we are free to specify unimportant items.	Accepted
83	Chuck Rice	T	27	8 - 10	5.5	It is unclear what a directory ID is. The specification needs to clarify the meaning of *directory_ID*	A reference to IEEE P1212 has been added.
88	Gene Milligan	T	30	33	6.1	On line 33 I think "and" should be deleted.	Accepted
120	Gene Milligan	T	45	3	8	Regarding line 3 and elsewhere "draft standards IEEE P1394a" is not a draft standard. Global change.	Accepted
124	Akihiro Shimura	T	45	17	8	Because root directory has its own CRC, root directory does not need to be included in the *crc_length*. IEEE P1212 is strongly recommending *crc_length* be equal to *bus_info_length* to reduce number of read transactions to acquire EUI-64 value. Change the sentence from "The *crc_length* field shall have a value of four plus the size, in quadlets, of the root directory." to "The *crc_length* field should have a value of four." The *crc_length* value in the Figure F-1 (page 61, line 13) and following sentence(page 61, line 14-15) need to be corrected too.	Accepted

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ID	Balloter	Type	Page	Line	Clause	Comment / Remedy	Resolution
131	Akihiro Shimura	T	47	20	8.3	The key value for the Service_ID entry shall not be $B0_{16}$ because the value is used by not an organization but a bus standard for the CSR architecture directory (feature directory in this case) as specified by P1212. Replace the value "$B0_{16}$" with "$B8_{16}$". The value in the Figure F-2 on page 62 needs to be revised too.	Accepted
143	Gregory LeClair	T	63	1	F.3	In Figure F-3, the key field for Feature Directory should be DA, not 9A.	Accepted
146	Gregory LeClair	T	67	1	F.6	In Figure F-7, the key field for Unit directory should be D1.	Accepted

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Resolved editorial issues

ID	Balloter	Type	Page	Line	Clause	Comment / Remedy	Resolution
5	Jerry Thrasher	E				Throughout the document the term SBP-2 and ANSI NCITS 325-1998 are both used. This makes them appear to be separate standards. Since SBP-2 is defined in the Approved References section. use that shorthand throughout the spec and drop the ANSI.....	Generally accepted; in a few places the formalism of ANSI NCITS 325-1998 is more appropriate and is retained.
6	Gene Milligan	E	iv	10	Patent notice	On line 10 why is patent holder singular? I thought there were several patents from several companies for which licenses were required to conform with 1394 standards.	The language is obtained directly from the IEEE-SA and may not be changed by the working group.
7	Peter Johansson	E	v	38	Points of contact	Should a subsequent draft be published for a recirculation ballot, the reflector address ought to be corrected to the IEEE reflector actually in use.	Accepted
12	Peter Johansson	E	3	28+	2.3	The part of footnote 1 that refers to P1394a is out of date and should be deleted. The correct citation is already present in clause 2.1.	Accepted; the reference to draft standard P1394a has been deleted.
13	Peter Johansson	E	5 - 8		3	The numbers assigned to the definitions serve no useful purpose and should be deleted.	Referred to the IEEE Project Editor for consideration.
15	Peter Johansson	E	5	18 - 20	3.1.1.4	The definition of 'reserved' could be improved by changing the last two sentences to read "The recipient of a reserved object shall ignore its value. The recipient of an object defined by this standard as other than reserved shall inspect its value and reject reserved code values."	Accepted
16	Gene Milligan	E	5	18 - 20	3.1.1.4	"The recipient of an object defined by this standard as other than reserved shall check its value and reject reserved code values." is in conflict with line 18. Bits should be excluded from this statement. It should only apply to bytes, quadlets, octlets, and fields. What is a field if not one of the former?	Accepted
17	Akihiro Shimura	E	5	31	3.1.2.2	The word "post" is used only in this paragraph. All other part of the document describes the same behavior by the word "signal" uniformly. Change the word "post" to the word "signal".	Accepted
18	Gene Milligan	E	5	37	3.1.2.4	On line 37 should the definition of byte go beyond data? Perhaps " An eight bit field."	Rejected; data is used here in a generic sense.
19	Gene Milligan	E	6	8 - 10	3.1.2.7	Lines 8 through 10 imply some convention is used for italics. A forward reference should be added and/or the convention should be added.	Accepted; the convention is explained in a footnote in 3.2.2.
23	Gene Milligan	E	6	26	3.1.2.14	"Automatically" is not a conformance statement. Delete it.	Accepted

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ID	Balloter	Type	Page	Line	Clause	Comment / Remedy	Resolution
24	Gene Milligan	E	6	32	3.1.2.16	On line 32 change "it is not possible for an uncompleted ORB in one queue to block" to "an uncompleted ORB in one queue should not block"	Accepted
25	Gene Milligan	E	6	35 40	3.1.2.17 3.1.2.20	Are an octlet and a quadlet always data? See line 35 and 40. Clarify	Rejected; data is used here in a generic sense.
26	Akihiro Shimura	E	6	39	3.1.2.19	It will be helpful to the reader to clarify that peer unit on the initiator may not have corresponding unit directory. Add following sentence: "The peer unit on the initiator may or may not have corresponding unit directory."	Accepted in principle.
27	Gene Milligan	E	7	1 - 2	3.1.2.21	Why are queues ordered? Clarify.	Rejected; the definition's purpose is not to explain why PPDT queues are ordered, merely to state that this is so.
29	Gene Milligan	E	7	29 - 32	3.1.2.31	Clause 4.4 Data transfer between initiator and target uses the term buffer provided by the initiator to hold data. Should 3.1.2.31 system memory include the contrast to buffer? Clarify.	Usage of the term "buffer" has been reviewed and, when appropriate, qualified with the phrase "in system memory".
30	Peter Johansson	E	7	33 - 34	3.1.2.32	The definition of 'target' is not quite right. A suggested improvement is "A unit architecture (within a node) compliant with SBP-2 that fetches management requests, control and transport flow ORBs from an initiator's system memory."	Accepted
31	Akihiro Shimura	E	7	34	3.1.2.32	Following description is incorrect because the initiator may have unit directory. "A CSR Architecture unit is synonymous with a target." Delete above sentence.	Accepted
33	Peter Johansson	E	9	13	3.2.2	Add the phrase "as amended by IEEE Std 1394a-2000" to the first sentence.	Accepted; similar changes made throughout the draft.
34	Peter Johansson	E	9	22	3.2.2	It may just be an artifact in the production of the PDF that was circulated for ballot, but 'lsb' is missing from Figure 1.	Corrected
35	Peter Johansson	E	10	2	3.2.2	The sentence fragment at the start of the paragraph should be reconnected to read as follows: "When block transfers take place that are neither quadlet aligned nor an integral number of quadlets, no assumptions ..."	Accepted
36	Gene Milligan	E	10	2 - 5	3.2.2	Regarding line 3 << No assumptions can be made about the ordering (significance within a quadlet) of bytes at the unaligned>>. Of course assumptions can be made even if they are wrong. Change it to "No assumptions should be made about the ordering significance within a quadlet) of bytes at the unaligned" or alternatively to "No assumptions shall be made about the ordering (significance within a quadlet) of bytes at the unaligned"	Accepted

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ID	Balloter	Type	Page	Line	Clause	Comment / Remedy	Resolution
37	Gene Milligan	E	11	19	4.1	On line 19 change "(defined by this document)" to "(defined by this standard)". Actually the replacement of this document with this standard should be global as it occurs numerous times.	Accepted
38	Gene Milligan	E	12	3 - 13	4.1	Why are some of the definitions being repeated on lines 3 through 13? This may be convenient for the reader but is really bad practice for change control. If the bad practice remains again delete "automatically" and manually make any other changes that may occur in clause 3 to repeated portions in clause 4.	The redundant definitions are retained (for the convenience of the reader) but updated to match changes made in section 3.
40	Akihiro Shimura	E	13	1	4.2	All arrows in the Figure 7 should be dashed. Change all solid arrows to dashed ones.	Accepted
41	Gene Milligan	E	13	5 - 6	4.2	On line 6 change << If the initiator never places more ORBs in the task set than the target can accommodate in its working set, >> to "If the initiator never places more ORBs in the task set than the target accommodates in its working set,"	Accepted
42	Gene Milligan	E	13	8 - 11	4.2	Regarding lines 9 through 11 I would suggest a wording change to eliminate the "can" but I am puzzled by the meat of the statement. << Since the client application or service may initiate more data transfer requests than can be simultaneously active in the task set, the initiator marshals ORBs by queue number outside of the task set and enters them into the task set as task slots become available. >> I thought targets enter items in the task set so I presume the initiator is doing something somewhat different that causes the target to enter the items in the task set. In addition "marshals" is not a compliance term and I assume at best is rather weak in a technical specification even for an informative clause. Clarify.	The text has been revised to eliminate “marshals” and improve both accuracy and clarity.
44	Gene Milligan	E	13	22	4.3	On line 22 change "When a client wishes to establish" to "When a client needs to establish" Wishes for the machines should be a global search and replace but in at least one place it is appropriate as a warm blooded person is wishing. Correct globally with one exception noted.	Rejected. “Needs” is neither more nor less of an anthropomorphic attribution of will to a machine than is “wishes”.
45	Gene Milligan	E	14	1-9	4.3	Regarding lines through nine it is not clear upon what entity the compliance information is directed -perhaps god providing failure free hardware. Change "The queue used by the management service is an example of a bi-directional, blocking queue, but because both initiator and target restrict their usage such that only one request is outstanding until its corresponding response is transferred, the queue cannot block. " to "The queue used by the management service is an example of a bi-directional, blocking queue, but because both initiator and target restrict their usage such that only one request is outstanding until its corresponding response is transferred, the queue should not block."	Accepted
46	Peter Johansson	E	14	3	4.3	This would be clearer if it said "... with a different queue used for each of the directions."	Accepted

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47	Gene Milligan	E	14	6	4.3	Change on line 6 << Nonblocking behavior is not guaranteed by the transport but must be a property of the application itself. >> to "Nonblocking behavior is not guaranteed by the transport but may be a property of the application itself." or "Nonblocking behavior is not guaranteed by the transport but should be a property of the application itself. "Must" is not a compliance term.	Accepted
48	Gene Milligan	E	14	25	4.4	On line 25 "Because the target may not signal an ORB to the initiator, it indicates to the initiator that data is available. " Is "may not" correctly used? From a compliance standpoint it means "may". Clarify and correct globally.	The use of “may not” has been globally reviewed and revised appropriately.
50	Gene Milligan	E	15	6	4.5	On line 6 "neither may initiate a subsequent control request until a control response is returned for an outstanding request." appears to be an incorrect usage of may. Change it to "should".	Accepted
52	Gene Milligan	E	16	3 - 4	4.5	On line 3 change "Note that the initiator cannot signal an ORB for the response at the same time because the control response is not yet available." to "Note that the initiator should not signal an ORB for the response at the same time because the control response is not yet available." or "Note that the initiator is not able to signal an ORB for the response at the same time because the control response is not yet available."	Accepted
53	Gene Milligan	E	16	13	4.5	Regarding line 13 "the order in which they are processed is arbitrary so long as request execution is not concurrent." What is the order if the execution is concurrent? Clarify. This line also has need of the "may not" global work.	The vague concept of concurrency has been replaced with “…as one request is completed before the other is commenced.“
54	Gene Milligan	E	16	31 - 32	4.7	On line 31 and 32 "draft standard IEEE P1212" is a temporal method of referring to a reference that should become a standard. Perhaps before PPDT. The IEEE should have a less temporal way of referencing it. Correct globally.	Accepted; see editorial instructions in references section.
57	Gene Milligan	E	19	1	5	Unless I missed an earlier instruction (convention) people not trained as IEEE editors may have difficulty determining where the Informative clauses end and normative resumes. Clarify perhaps in the introduction.	Rejected; the BRC believes the inheritance of normative *vs*. informative attributes from a higher-level clause or subclause is sufficiently clear.

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ID	Balloter	Type	Page	Line	Clause	Comment / Remedy	Resolution
58	Gene Milligan	E	19	17 - 20	5.1	On lines 17 and 18 the statement "For most PPDT implementations the notify bit should always be one so that the SBP-2 initiator software may accurately determine completion status for each ORB; " seems odd as most will be determined by market dynamics and the notify bit state will be determined by firmware and/or automation hardware. I suggest changing it to "The notify bit should always be one so that the SBP-2 initiator software may accurately determine completion status for each ORB; ". But if this is the case why not a mandatory requirement?	The phrase “most” was intended to encompass PPDT implementations that are not closely coordinated with the SBP-2 initiator, for example in MacOS or Windows. Monolithic PPDT/SBP-2 implementations may be able to zero *notify*. The text has been clarified.
62	Gene Milligan	E	21	1	5.2	If seems odd, referring to Figure 11, to have the MSB and LSB straddle essentially unrelated fields some of which do not have or may not have (reserved) bit significance (in terms of MSB and LSB - otherwise referred to as bit significant - that is really confusing). Change the usage or if no change in the tables is made expand the definition in the conventions clause to deal with a mixture of fields that are not all relevant to MSB and LSB.	Rejected. The editorial conventions employed are considered sufficiently clear.
63	Peter Johansson	E	22	19	5.2	The first sentence of the paragraph would be clearer if it read "Otherwise, when residual is greater than or equal to zero, there is no mismatch between the size of the buffer and the data transfer length that precludes data transfer."	Accepted
64	Lon Canaday	E	22	28-30	5.3	"Only one control request or response shall be transferred by an ORB; when the direction bit is zero the end_of_message bit in the ORB shall be one, otherwise the end_of_message bit in the status block shall be one. "Note: This is unnecessarily hard to follow. At first reading it seems that the value of the direction bit has some influence on the value of the end_of_message bit. This is not the case. It might help to modify the second phrase to say "the end_of_message bit shall be one for all control requests and responses in queue 0."	The text has been revised in an effort to improve clarity.
65	Gene Milligan	E	22	4 - 5	5.2	The construction of lines 4 and 5 seems contradictory in trying to understand what "also" applies to since it does not fit other members, I suggest changing "When the queue field (in the ORB identified by ORB_offset_hi and ORB_offset_lo) is zero, the end_of_message bit in the associated status block shall also be one; " to "When the queue field (in the ORB identified by ORB_offset_hi and ORB_offset_lo) is zero, the end_of_message bit in the associated status block shall be one; "	Accepted

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ID	Balloter	Type	Page	Line	Clause	Comment / Remedy	Resolution
66	Akihiro Shimura	E	22	6	5.2	Note on the case that "*end_of_message*" is one and no data has transferred is missing below line 6, though note for a transport flow ORB exists on page 20, line 22. Add following note below line 6: "Note: When *end_of_message* is one and no data has transferred for pertaining ORB, a boundary exists at the end of application data or control information previously transferred to the initiator. The initiator flushes this data to the receiving application client and indicates the *end_of_message* condition."	Accepted
67	Gene Milligan	E	22	9 18 23	5.2	Regarding line 9 "When residual is negative,", how is negative indicated? I am not sure if line 18 helps since if positive values are encoded differently than negative values there may be overlap. Why have line 23 rather than a forward reference in this paragraph? Clarify.	Negative values are indicated by two's complement notation, as noted at the end of the paragraph. The text has been reordered to improve clarity.
69	Gene Milligan	E	22	32	5.3	On line 32 what does "(see 0 and 0)" mean?	Accepted; references corrected to 7.1 and 7.2
70	Jerry Thrasher	E	22	32	5.3	....shall indicate the appropriate transfer size (see 0 and 0)...What's (see 0 and 0)???	
71	Peter Johansson	E	22	32	5.2	The references to 7.1 and 7.2 show in the ballot draft as zeros.	
72	Akihiro Shimura	E	22	32	5.3	References are missing. "(see 0 and 0)" Change to "(see 7.1 and 7.2)".	
73	Gene Milligan	E	23	1	5.3	Concerning the untitled table after line 1 I suspect re-use will occur and "Initiate the release of a queue that no longer be used" should be changed to "Initiate the release of a queue that is no longer needed".	Rejected. There are no other references to the informal table and "needed" is a matter of opinion while "used" is an observable fact.
74	Gene Milligan	E	23	1	5.3	Well "possible" is normally a bad requirement to be replaced by practical but in the case of "The target no longer requires a login from the initiator; the initiator should logout as soon as possible." should be changed to "The target no longer requires a login from the initiator; the initiator should logout."	Accepted
75	Gene Milligan	E	23	2 - 3	5.3	Perhaps the distinction is too fine but I think "Unspecified error." should be "Other error" as it is specified as FF.	The editor agrees that the distinction is too fine.
77	Gene Milligan	E	23	9	5.3	Depending upon how much is important, on line 9 should it be "followed by a zero quadlet" or "followed by one or more zero quadlets"? Clarify.	Accepted
78	Gene Milligan	E	24	1	5.3	In table 1 (is it really Table 1 after the plethora of tables?) replace "desired mode" with "needed mode". But in either case is a more preemptive term needed or stated differently what is the ramification if the needed (desired mode) can not be accommodated? Clarify.	The adjective "desired" has been deleted, since the MODE parameter may occur in either a request or response.

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79	Gene Milligan	E	24	2 - 5	5.3	I can not appropriately parse the sentence beginning on line 2 and ending on line 5. Clarify.	Split into three sentences; hope this helps.
80	Peter Johansson	E	24	11		In the last clause, correct the phrase to either "... the field shall contain ..." or "the parameter_value field shall contain ...".	Accepted
81	Gene Milligan	E	24	12	5.3	Regarding line 12 "The format of variable-length parameters (which are usually ASCII text strings) is shown below." How can ASCII strings have MSB and LSB? Clarification relates to earlier comment.	Rejected. The ordering of characters within ASCII strings is significant, even if it is not numerical significance.
82	Gene Milligan	E	27	7 - 8	5.5	In the untitled table between line 7 and line 8 change "The initiator cannot attempt a login at present; a subsequent REVERSE LOGIN request by the target may succeed." to "The initiator is not able to login at present; a subsequent REVERSE LOGIN request by the target may succeed."	Rejected. The phrases “cannot” and “is not able” are synonymous; the editor prefers to avoid the passive voice.
84	Gene Milligan	E	29	13	6.1	Noting line 13 I have belatedly noted that "wishes" to "needs" should be a global change. (Well I may have retroactively added it to an earlier comment.)	Rejected; see rationale for comment 40.
85	Gene Milligan	E	29	23 - 24	6.1	Regarding lines 23 and 24 is "At no time shall the task set contain more than two control ORBs." a requirement on the originator or the recipient. Be explicit. Clarify.	Accepted
86	Akihiro Shimura	E	29	37	6.1	The sentence "the initiator shall create such an ORB and place it in the task set" conflicts with the specification in page 21, line 10. Change "shall" to "should".	Accepted
87	Akihiro Shimura	E	30	14	6.1	The sentence "the initiator shall create such an ORB and place it in the task set" conflicts with the specification in page 21, line 10. Change "shall" to "should".	Accepted
89	Gene Milligan	E	30	39	6.2	Concerning line 39 "The preceding clause describes the use of" there are a couple inconsistencies. Earlier portions of the standard referred to sections rather than clauses. I assumed this was just because IEEE is out of step with international standards. But now I know this standard is not consistent. Also I suspect Clause 5 is not being referred to and that a previous subclause is referred to. Most helpful, if needed, would be to cite the specific cross reference.	In most places, except the case of “this clause”, the draft has been updated with specific references.
90	Gene Milligan	E	31	29	6.3.1	Regarding line 29, Does "With respect to task slots, the initiator shall guarantee" need to be backed by a bond of any particular value? Perhaps there is a more normative way to state the requirement. Clarify.	Accepted
91	Gene Milligan	E	31	31 - 32	6.3.1	Delete on line 31 "It is unimportant whether the CONNECT request was originated by the initiator or target." since this is not important or make a more important statement.	Accepted

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92	Gene Milligan	E	32	9 - 10	6.3.1.1	On line 9 why is "the target should return a TASK_SLOTS value less than or equal to that specified by the initiator." should and not shall? Change to shall or tell me why.	Text added to explain why.
93	Gene Milligan	E	32	20	6.3.1.2	On line 20 should "The initiator shall not use the queue number(s)" be reuse rather than use? Clarify.	Rejected. The verb “use” concerns the initial use of a queue, not the reuse of a previously active queue.
94	Gene Milligan	E	32 33	30	6.3.2	Regarding line 30 "producer" sounds like a Hollywood term I have not encountered in standards before, I think one of the terms defined earlier should be used. Perhaps "originator". This comment applies in an analogous way to "consumer" on the following page. Clarify.	Rejected. “Producer” and “consumer” are reasonably common terms applied to the sources and sinks of data.
95	Gene Milligan	E	33	14	6.3.2.1	My personal view of line 14 is that "ensures" should be used rather than "insures". I understand that this is not correct but never the less my impression is the "insures" implies a larger financial obligation.	Rejected. “Insures” is acceptable contemporary English usage.
96	Gene Milligan	E	33	21 - 24	6.3.2.1	Regarding line 22 and 23 and other similar places does "the target shall not defer completion of any ORB for the queue solely because the receiving client application or service has not provided sufficient buffer space " mean that it may defer completion partially for that reason and partially due to the phase of the moon? Clarify.	Accepted; the qualifier “solely” adds nothing to the normative requirements and has been deleted, here and elsewhere.
97	Gene Milligan	E	33	30 - 32	6.3.2.1	Regarding lines 30 through 32 "If the initiator signals any subsequent ORBs whose queue field identifies the provisionally shutdown queue, the target shall reject these with a status of one (invalid queue)." Is there an expiration on "subsequent" or are queue field values used only once in a lifetime? Clarify.	Accepted
100	Gene Milligan	E	34	7	6.3.2.2	Line 7 should be found in the global on desire.	Rejected; see rationale for comment 40.
101	Akihiro Shimura	E	34	32	6.3.2.2	The following sentence is incorrect to explain "disorderly". "After the target has completed the final ORB, it shall discard any data generated by a client application or service for the provisionally shutdown queue. Because a service or client application at the initiator is unaware of the discarded data, if any, the shutdown of a queue used for data transfer from the initiator to the target may be disorderly (abortive) when requested by the target." Change the sentence as follows. "After the initiator has signaled the final ORB, it shall discard any data generated by a client application or service for the queue. Because a service or client application at the target is unaware of the discarded data, if any, the shutdown of a queue used for data transfer from the initiator to the target may be disorderly (abortive) when requested by the target."	Accepted

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103	Peter Johansson	E	35	6	6.3.2.3	The concept of "no action" is vague and should be clarified to make sure that the reader comprehends that what is meant is no additional action beyond what has already been commenced.	Accepted
104	Gene Milligan	E	35	11	6.4	On line 11 delete "would be".	Accepted
105	Gene Milligan	E	35	29 - 30 34	6.5	On line 29 find "wishes" for global work and delete "Contrariwise,". On line 30 replace "more immediate" with "current". On line 34 replace "possible" with "practical".	Mostly accepted; see also comment 40.
106	Gene Milligan	E	37	9 - 10	7	On lines 9 and 10 change "which is always one when the datagram mode is used." to "which shall be one when the datagram mode is used."	Accepted
107	Peter Johansson	E	38	4	7	I think another sentence at the end of this paragraph would be helpful: "The difference between stream mode and stream mode with explicit SDU demarcation is that in the latter case although an SDU may span more than one data buffer it always begins at data buffer offset zero."	Accepted
108	Gene Milligan	E	38	18-20	7.1	Change lines 18 through 20 "For stream mode, this condition cannot arise; the target transfers data within the limits of local memory, delivers the data to the application client and continues to transfer data as local memory is released by the application client." to "For stream mode, this condition should not arise since the target transfers data within the limits of local memory, delivers the data to the application client, and continues to transfer data as local memory is released by the application client."	Rejected. Normative provisions of the standard, in fact, prevent the condition from occurring.
109	Gene Milligan	E	39	14 - 16	7.2	Change lines 14 through 16 from "The target transport may use write requests that address the data buffer in arbitrary order so long as successful completion status is not reported to the initiator until the quantity of data identified by residual has been transferred." to "The target transport may use write requests that address the data buffer in arbitrary order but successful completion status shall not be reported to the initiator until the quantity of data identified by residual has been transferred."	Accepted
110	Gene Milligan	E	39	19	7.2	A general comment restimulated by line 19, there are a lot of potentially separate sentences joined instead by a semicolon. I think the standard would be easier to read if actual separate sentences were used. In some cases this may have been done as a list. If a list was intended the list should be formatted as a list (e.g., indented separate lines (mini-paragraphs)).	Sentence split at the semicolon.

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111	Gene Milligan	E	39	26	7.2	To a SCSI person it sounds backwards for targets to have application clients. Is this usage in 1394 correct? Answer the question.	The “target” is PPDT itself, which may in turn have dependent applications, either clients or services (when seen from the perspective of their peer entities at a PPDT initiator).
112	Gene Milligan	E	39	26 - 29	7.2	On lines 26 through 29 change "For stream mode, this condition cannot arise; the target transfers data (supplied by its application client) within the limits of the data buffer provided by the initiator; if more data is available from the application client, the target_data_pending bit shall be one and the target awaits a subsequent ORB for the same queue whose direction bit is one." to "For stream mode, this condition should not arise since the target transfers data (supplied by its application client)within the limits of the data buffer provided by the initiator. If more data is available from the application client, the target_data_pending bit shall be one and the target shall wait for a subsequent ORB for the same queue whose direction bit is one."	Rejected. Normative provisions of the standard, in fact, prevent the condition from occurring.
113	Gene Milligan	E	40 - 41		7.3	The unlabeled table is split between two pages I am guessing. It might be two separate unlabeled tables. ANSI and ISO/IEC styles not only have tables labeled but also indicate "continued" before the split and "concluded" after the split. Does the IEEE have any requirements? Since the tables are not labeled and consequently can not be referenced it may be of no consequence as to whether it is one or two tables. Consider and do the right thing.	Alas, the editor is unaware of any facility in Word 2000 that permits a table caption to be continued when a table is split between pages. Perhaps the IEEE project editor knows of a method?
114	Gene Milligan	E	41	2 - 5	7.4	Lines 2 through 5 stimulate a comment that is more of a printer end user comment than a comment on PPDT. These lines imply, if they do not specify, that printing can not be reset. Difficulty in stopping garbage printing by more convenient means than pulling the power cord is a pet peeve. I assume that printing can be stopped and data dumped by a related command set or other standard means. But reading further there seems to be an implication that data continues even though the task set has been aborted. Clarify.	It is a PPDT design goal that data transfer need not be resumed from the beginning if the connection between initiator and target is temporarily severed. This may lead to the results described by the balloter, but the draft standard reflects the intent of the working group.
115	Gene Milligan	E	41	13	7.4	On line 13 I think "ack_complete are received by the target." should be "ack_complete is received by the target."	Accepted
117	Gene Milligan	E	42	6	7.5	Regarding line 6 change "target may retry" to "the target may retry". As just an observation other SCSI interfaces have long ago learned that targets will not be purchased if they time out initiators. Due to 1394 differences this experience may not be applicable.	Accepted

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ID	Balloter	Type	Page	Line	Clause	Comment / Remedy	Resolution
118	Gene Milligan	E	42	25	7.5	On line 25 change "If the client application and service can reliably resume data transfer from the point it was interrupted, it may be unnecessary to cancel operations and flush buffers." to "If the client application and service is able to reliably resume data transfer from the point it was interrupted, it may be unnecessary to cancel operations and flush buffers."	Accepted
119	Gene Milligan	E	42	26 - 27	7.5	On line 26 change "In order for this method to work, the transport must be able to recognize resumption of an ORB active at the time the task set was aborted. " to "In order for this method to work, the transport shall be able to recognize resumption of an ORB active at the time the task set was aborted. "Must" is not a compliance term.	Accepted
121	Akihiro Shimura	E	45	3	8	1394a is not a draft standard (page 3 has already been corrected, but there are several places other than this place to denote it as a draft standard). Replace "draft standards IEEE P1394a" with "IEEE Std 1394a-2000".	Accepted
122	Gene Milligan	E	45	11	8	Regarding line 11 "(shown by a dashed line) is optional;" in the PDF it is not apparent that there is a dashed line. They are all solid although one of the slanted lines is stair stepped. Clarify	PDF output parameters have been tweaked to ameliorate the problem.
123	Akihiro Shimura	E	45	15	8	The *max_ROM* field in Figure 25 needs to be two bits wide to be compliant with IEEE Std 1394a-2000. Change field width from 4 bits to 2bits (bit 9 and 8), and make remaining two bits reserved.	Accepted
125	Peter Johansson	E	46	5	8	Here and throughout, all references to draft standard IEEE P1394a should be update to cite IEEE Std 1394a-2000.	Accepted
127	Akihiro Shimura	E	46	14	8.1	In the description column of Unit_Directory, It describes that "Unit_Directory entries are only applicable for targets.", but initiator may also have unit directories as described in 8.5. Delete "Unit_Directory entries are applicable only for targets"	Accepted
128	Jerry Thrasher	E	46 - 49	14 17 7 7	8.1 8.3 8.5 8.6	The "values" for the Type field in these tables aren't ever defined in this document. In P1212 they are defined before each and every table.	Accepted

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135	Akihiro Shimura	E	49	2	8.6	The following specification is ambiguous because it is not specifying the content or meaning of the unit directory while specifying one or more unit directories are required. "Configuration ROM for targets compliant with this standard shall contain one or more unit directories, each of which specifies a software interface (unit architecture) for a device instance. " Replace above sentence with the following sentence: "Configuration ROM for targets compliant with this standard shall contain one or more unit directories whose content and meaning are compliant with this clause."	Accepted in principle
136	Gene Milligan	E	50	10 - 12	8.6	In lines 10 through 12 change "Private unit directories cannot be discovered by a hierarchical parse of configuration ROM that starts with the root directory; they should not be enumerated by initiators nor should they be bound to device drivers. " to "Private unit directories should not be discovered by a hierarchical parse of configuration ROM that starts with the root directory since they should not be enumerated by initiators nor should they be bound to device drivers. " or to "Private unit directories should not be discovered by a hierarchical parse of configuration ROM that starts with the root directory since they shall not be enumerated by initiators and they shall not be bound to device drivers. "	Rejected. The text is correct as written: private unit directories cannot be discovered by a hierarchical parse since they are not linked into the hierarchy.
137	Gene Milligan	E	50	30 - 31	8.8	Regarding lines 30 and 31, although convenient, "specified by IEEE Std 1284-1994 clause 7.6," including the clause number is considered bad practice since an amendment and/or revision could change the clause number.	Accepted
138	Jerry Thrasher	E	50	30 38	8.8	Since P1284 has now passed ballot, the date should be changed to IEEE Std. 1284-2000.	Accepted
139	Gene Milligan	E	53		B	Should some of the requirements of Annex B be used to generate an addendum to SBP-2 or are they strictly candidates for SBP-3?	They have been incorporated into SBP-3.
141	Gene Milligan	E	59	19	E	"Wishes" on line 19 is by exception a valid use. No remedy needed.	
142	Akihiro Shimura	E	62	2	F.1	A *max_rec* value of six corresponds to maximum payload of 128 bytes (calculated by raising 2 to (*max_rec* +1)). Replace "a maximum payload of 64 bytes" with "a maximum payload of 128 bytes".	A maximum payload of 64 bytes was intended; the value of *max_rec* has been changed to five.
144	Akihiro Shimura	E	63	1	F.3	The key field for the Feature_Directory entry is DA, and the code 3A(":") is missing in the textual descriptor leaf. Replace the key field for the Feature _Directory entry with DA in the Figure F-3 and add 3A(":") in the textual descriptor leaf.	Accepted

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ID	Balloter	Type	Page	Line	Clause	Comment / Remedy	Resolution
145	Akihiro Shimura	E	63	1	F.3	Device type in the Logical_Unit_Number entry is "1F" for the unit compliant with this standard. Replace the value of Logical_Unit_Number entry with 1F0000. The description for the Logical_Unit_Number entry (page 64, line 8) needs to be revised too.	Accepted
147	Akihiro Shimura	E	67	1	F.6	The key field for the Unit_Directory entry is missing. Add D1 in key field for the Unit_Directory entry.	Accepted
150	Akihiro Shimura	E	68	1	F.7	The Service ID leaf offset in the Figure F-8 should not be in the unit directory but be referred via feature directory. Replace the "B0 Service ID leaf offset(1)" with "DA Feature directory offset" and Remove last two quadlets. The explanation on page 67, line 19 needs to be revised along with above change too.	Instead of deleting the service ID leaf, the figure has been corrected by the addition of a feature directory.

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Other issues

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1	Gene Milligan	T				There are too many fields to type into IEEE ballot responses. Tie the entries from the ballot to the comment form. Duplicate information should not have to be entered multiple times. Provide for uploading the entire set of comments as a file or as one large cut and paste. Oops I see that is now provided and was just off the screen.	These comments are not about the draft standard, *per se*, and have been referred to the IEEE Balloting Center.
2	Gene Milligan	E				I am having trouble remembering to control the Comment Type selection. As noted in the earlier general comments I view only one of the comments—noted (and stated in the comment)—as technical. I do not know how to retrieve a comment for correction. Please excuse the earlier comments with type technical that should have been editorial and any future errors of this nature.	
3	Gene Milligan	T				Sorry I was wrong this is another technical comment. Just not against the proposed standard - there is only one against the proposed standard. I must be nuts to be generating all these junk Emails to myself from the IEEE. Change the automation to only send one Email that confirms the entire ballot package (vote and comments).	
4	Gene Milligan	T				This is a comment concerning ballot box stuffing. I had just submitted my numbered comment (38) when a network interruption/failure occurred. To continue with my numbered comment (39) I had to fill out another ballot. I do not know if I will be voting once or often on this draft standard. Count my vote just once.	

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