

438 Cl 69A SC 69A. P 63 L? Kim, Yong

As i understand it, an Annex is informative, the normative information is in the PMD clause. In any event, whether 69A is normative or informative all relevant information should be included. In my opinion, the information asked for is not relevant.

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225 Cl 69A SC 69A. P 63 L 41 Grow, Robert

517 Cl 69A SC 69A.2 P 64 L 19 Dawe, Piers

I suggest we include the following table:

acronym	meaning	defined in
NEXT	Near End Cross Talk	
FEXT	Far End Cross Talk	
SI	Self Interference	69A.1b
ISI	InterSymbol Interference	
IL(f)	Channel Insertion loss	69.3.3.3
Amax(f)	Worst case channel attenuation	69.3.3.2 eq 69-6
A(f)	Smoothed fit to IL(f)	69
f1	a lower frequency bound	69.3.3.1 table 69-2
f2	a upper frequency bound	69.3.3.1 table 69-2
ISIloss	IL(f2)-IL(f1)	69A.2 *
minISIloss	Spec limit to ISIloss	table 70-8, 71-8, 72-10 *
BER	Bit Error Ratio	
eBER	extrapolated BER	
mBER	measured BER	69A.5 Paragraph 4
E0	correction to measured IT	69A.5 Paragraph 7
EIT	Extrapolated Interference Tolerance	69A.5 Paragraph 8
EIT baseline	Spec limit for EIT vs frequency	69A.5 eq 69 ??
EIT base	Parameter used in eq 69 ??	table 70-8, 71-8, 72-10 *
DUT	Device Under Test	

131 Cl 69A SC 69A. 1 P 63 L John, D'Ambrosia

Recommend: accept new text reads:

b) Self Interference (SI), caused by reflection, due to impedance discontinuities, stubs, etc. This is really just a form of inter-symbol interference (ISI) beyond what a reasonable equalizer i can handle

(i have changed which into what)

627 Cl 69A SC 69A. 1 P 63 L Kundu, Aniruddha

Recommend: reject

Either I do not understand this or I disagree. I beleive that connection involves full duplex with two differential signal pairs one for data traveling in each direction. That is what try to show in figure 69A-1

615 Cl 69A SC 69A. 1 P 63 L 16 Beaudoin, Denis

I feel that this is not a test issue and should be handled elsewhere

15 Cl 69A SC 69A. 1 P 63 L 18 King, Iain
603 Cl 69A SC 69A. 1 P 63 L 18 Booth, Brad
412 Cl 69A SC 69A. 1 P 63 L 19 Barrass, Hugh
132 Cl 69A SC 69A. 1 P 63 L 21 John, D'Ambrosia

combined:

Recommend: accept new text reads:

Alien Interference, cross talk from unrelated sources such as clocks,
other kinds of data, power supply noise etc.

661 Cl 69A SC 69A. 1 P 63 L 35 David V James
660 Cl 69A SC 69A. 1 P 63 L 36 David V James

recommend whatever Shelto thinks.

256 Cl 69A SC 69A. 1 P 63 L 39 Healey, Adam
84 Cl 69A SC 69A.2 P 64 L 10 Weiner, Nick

recommend accept, especially if Adam will provide figure

262 Cl 69A SC 69A. 1 P 63 L 4 Brink, Robert

recommend reject.

If Robert means to do the test at 10.31353Gb/s and 10.31147Gb/s I do not see what value will be gained by doubling the test time. If he wants to swing back and forth between the two:

1. He needs to specify the rate.
2. Complexity get much greater
3. Utility is unclear

578 Cl 69A SC 69A. 1 P 63 L 40 Ghiasi, Ali

recommend reject

Part will be used in a compact environment where there is no reason to expect large swings in Tx phase, and Rx is likely to have exactly the same frequency reference as the Tx.

Also this would make a major increase in complexity and time for test.

581 Cl 69A SC 69A. 1 P 63 L 41 Ghiasi, Ali

recommend reject

changes to be made are insufficiently clear. At minimum i would like:

1. What > 10Gs/s FIR would be used
2. FIR tap weightings to be used

Also, current channel specs are in frequency domain, to connect Rx specs and channel specs it is usefull to use similar means of expression.

664 Cl 69A SC 69A. 1 P 63 L 42 David V James

663 Cl 69A SC 69A. 1 P 63 L 43 David V James

662 Cl 69A SC 69A. 1 P 63 L 43 David V James

665 Cl 69A SC 69A. 1 P 63 L 52 David V James

recommend whatever Shelto thinks.

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221 Cl 69A SC 69A. 1 P 63 L 6 Grow, Robert

recommend accept, new text reads:

A major problem in communicating across crowded backplanes is interference.
The interfering signal can come from a variety of sources including:

518 Cl 69A SC 69A. 1 P 64 L 3 Dawe, Piers

recommend ???

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299 Cl 69A SC 69A. 1 P 64 L 5 Abler, Joe

recommend accept in principle

Annex 69A assumes that the test is being done by someone who wants the Rx to pass. The intent is to limit how easy the test can be made and let the natural inclination of the tester drive the test to as near to the limit as possible. Perhaps this should be specifically stated in the introduction. Add text in 69A.1 P6 line 27:

"The test is prescribed with the assumption that the person doing the test wants the receiver to pass. Limits on the test and setup are prescribed to limit how easy the test can be made but the description is simplified by not prescribing how hard it can be made. The tester is expected to make the test as easy to pass as possible given the limits imposed by the test and his technical resources."

and add 69A.1 P64 end of line 6:

" or a piece of test equipment whose output meets the specification of the appropriate transmitter, except that if test equipment is used its output level must be in the lower half of the output level range allowed to the appropriate transmitter."

#259 69A SC 69A.1 P 64 L 5 Healey, Adam

recommend reject:

The intent of Interference Tolerance test is to have margin in EIT base large enough to cover the fact that not everything is worst case. The difficulty of specifying and building reliably a Tx with worst case equivalent jitter and equalizer resolution is likely to be excessive.

#71 Cl 69A SC 69A.2 P 64 L 10 Alping, Arne

recommend accept in principle:

Add to figure change recommended for comment 256 & comment 84,
delete first sentence of 69A.2 and replace it with:

"Compliance interconnect is a 1000hm differential system specified with respect to insertion loss. It consists of a frequency dependent attenuator, a interference injection block and interconnect necessary to conect them to each other and to TP1 and TP4.

#322 Cl 69A SC 69A.2 P 64 L 11 Baumer, Howard

recommend reject:

The intend to 69A in to provide the minimum number of specifications possible and assume that the tester will optimize the system to give good Rx performance. See reply to comment 299. It is expected that tester will minimize return loss.

#162 Cl 69A SC 69A.2 P 64 L 13 Spagna, Fulvio

recommend accept.

222 Cl 69A SC 69A.2 P 64i L 16 Grow, Robert

recommend reject:

This is not a typo: SI was intended. Table given in response to comment 225 will help make this clear.

163 Cl 69A SC 69A.2 P 64 L 17 Spagna, Fulvio

recomment accept.

133 Cl 69A SC 69A.2 P 64 L 17 John, D'Ambrosia

recommend accept in principle but see also
reply to comment 103

136 Cl 69A SC 69A.2 P 64 L 18 John, D'Ambrosia

recomment accept:

but if i change it in tables 70-7, 71-7 and 72-7 really I should
change it everywhere

103 Cl 69A SC 69A. 2 P 64 L 21 Moore, Charles

recommend look at accompanying presentation and accept that verbage.

311 Cl 69A SC 69A. 2 P 64 L 22 Seemann, Brian

recommend reject:

The test is intended to be run at near worst-case conditions. A clean channel, just worse than $A_{max}(f)$ is likely to be no worse than a channel with significant ripple in the attenuation and just above A_{max} .

164 Cl 69A SC 69A. 2 P 64 L 25 Spagna, Fulvio

I think that if we follow my recommendation on comment 103 that this will be taken care of.

516 Cl 69A SC 69A. 2 P 64 L 25 Dawe, Piers
116 Cl 69A SC 69A. 2 P 64 L 37 Andre, Szczepanek
323 Cl 69A SC 69A. 2 P 64 L 37 Baumer, Howard
87 Cl 69A SC 69A. 2 P 64 L 37 Weiner, Nick

recommend accept comment 516. This should fix 116, 323, and 87

This will require searching out all Amin and Amax references and fixing them

Cl 69A SC 69A. 2 P 64 L 25 Weiner, Nick

recommend ??

Well i am not going to spec phase: the chances that any realizable channel with the correct amplitude characteristics will have workable phase characteristics as well is much greater than the chance we can write a useful and usable spec. The question is should we include a note saying that specifying phase response is unnecessary. I am inclined to say no but others may over ride me.

165 Cl 69A SC 69A. 2 P 64 L 27 Spagna, Fulvio

519 Cl 69A SC 69A. 2 P 64 L 31 Dawe, Piers

recommend accept

134 Cl 69A SC 69A. 2 P 64 L 36 John, D'Ambrosia

recommend reject

This is the old sign change, loss vs gain thing. Above f_2 the gain or response should be less than the value at f_2 , but the loss should be greater.

257 Cl 69A SC 69A. 2 P 64 L 39 Healey, Adam

166 Cl 69A SC 69A. 2 P 65 L 1 Spagna, Fulvio

If my solution on comment 103 is accepted, minISILoss goes away and both comments are taken care of.

666 Cl 69A SC 69A. 2 P 65 L 13 David V James

recommend whatever Shelto thinks is right

521 Cl 69A SC 69A. 2 P 65 L 20 Dawe, Piers

recommend accept or accept in principle

Either we should add fbaud to the table of definitions or remove and replace it everywhere. I have started replacing it, at least in my presentations but defining it may be better. What do you think?

520 Cl 69A SC 69A. 2 P 65 L 22 Dawe, Piers

recommend accept

118 Cl 69A SC 69A. 2 P 69 L 22 Andre, Szczepanek

I want help here from someone who knows his way around the IEEE802 specifying system. If this comment is correct, we or i will have to do a lot of re-writing and if it is me i will need some advice.

167 Cl 69A SC 69A. 3 P 65 L 27 Spagna, Fulvio

recommend accept

with mixed feelings. Fulvio is correct but i think that the hint included
in the existing text is useful

324 Cl 69A SC 69A. 3 P 65 L 27 Baumer, Howard

recommend accept

169 Cl 69A SC 69A. 3 P 66 L 21 Spagna, Fulvio
106 Cl 69A SC 69A. 5 P 66 L 21 Moore, Charles
332 Cl 69A SC 69A. 5 P 66 L 21 Baumer, Howard
81 Cl 69A SC 69A. 5 P 66 L 21 Altmann, Michael
335 Cl 69A SC 69A. 5 P 66 L 23 Baumer, Howard
333 Cl 69A SC 69A. 5 P 66 L 23 Baumer, Howard

recommend accept in principle

use wording from comment 106 is one possibility, or see my separate
presentation on these comments

168 Cl 69A SC 69A. 3 P 66 L 6 Spagna, Fulvio

recommend accept

227 Cl 69A SC 69A. 3 P 67 L 21 Grow, Robert

recommend accept

Most likely we will need to change these figures anyway.

105 Cl 69A SC 69A. 3. 3. 5 P 59 L 11 Moore, Charles

move this into clause 69.3.3.5 and accept of course

100 Cl 69A SC 69A. 4 P 65 L 34 Gao, Xiao Ming

recommend reject

comment has great merit but it lacks sufficiently detailed method of resolution. When we have a specific test described with experimental results showing that it works i will revise my opinion.

302 Cl 69A SC 69A. 4 P 65 L 35 Abler, Joe

recommend accept in principle

Replace first sentence in paragraph beginning Page 66 Line 27 with

The frequency of the interference generator is then stepped from f1 to greater than {fbaud or SignalFrequency}. The step size shall be selected so that no samples fall at integer submultiples of {fbaud or SignalFrequency}

325 Cl 69A SC 69A. 4 P 65 L 36 Baumer, Howard#

recommend accept in principle :

change second sentence of 69A.4 to read:

The path of the interfering signal to the DUT should be calibrated so the amplitude of interference at the DUT will be known to an accuracy of 0.5dB or better.

326 Cl 69A SC 69A. 4 P 65 L 36 Baumer, Howard

recommend reject:

69A.3 covers the method of combining interference and data

628 Cl 69A SC 69A. 4 P 65 L 36 Kundu, Aniruddha

recommend reject:

phase is only meaningful with respect to another signal of the same frequency. There is no other signal at the same frequency as the interfering signal.

104 Cl 69A SC 69A. 5 P 64 L 21 Moore, Charles

301 Cl 69A SC 69A. 5 P 66 L 27 Abler, Joe

Recommend accept 301 with added text in 69A.4 after the text given
under comment 302:

A minimum of 20 samples shall be take from f1 to {fbaud or SignalFrequency}.

Less sure about104 but it will reduce the penalty for choosing a large number
of samples

327 Cl 69A SC 69A. 5 P 65 L 42 Baumer, Howard

recommend reject:

error rate is how many errors there are in an amount of time, BER
is Bit Error Ratio, the ratio of error rate to {fbaud or SignalFrequency}.
The existing text uses the terms correctly.

328 Cl 69A SC 69A. 5 P 66 L 1 Baumer, Howard

330 Cl 69A SC 69A. 5 P 66 L 4 Baumer, Howard

recommend accept

329 Cl 69A SC 69A. 5 P 66 L 4 Baumer, Howard

recommend accept

I guess "or" should sit on its own line

226 Cl 69A SC 69A. 5 P 66 L 16 Grow, Robert

recommend accept

228 Cl 69A SC 69A. 5 P 66 L 23 Grow, Robert

334 Cl 69A SC 69A. 5 P 66 L 23 Baumer, Howard

232 Cl 69A SC 69A. 5 P 66 L 23 Dudek, Mike

recommend accept

336 Cl 69A SC 69A. 5 P 66 L 28 Baumer, Howard

337 Cl 69A SC 69A. 5 P 66 L 28 Baumer, Howard

recommend accept

338 Cl 69A SC 69A. 5 P 66 L 29 Baumer, Howard

recommend accept

340 Cl 69A SC 69A. 5 P 66 L 34 Baumer, Howard

229 Cl 69A SC 69A. 5 P 66 L 34 Grow, Robert

recommend accept

I will not suggest equations numbers since previous changes may affect
the number

303 Cl 69A SC 69A. 5 P 66 L 34 Abler, Joe
339 Cl 69A SC 69A. 5 P 66 L 34 Baumer, Howard
108 Cl 69A SC 69A. 5 P 66 L 34 Liu, Cathy
231 Cl 69A SC 69A. 5 P 66 L 34 Dudek, Mike
88 Cl 69A SC 69A. 5 P 66 L 34 Weiner, Nick

recommend accept

except fbaud may change to SignalFrequency

230 Cl 69A SC 69A. 5 P 66 L 36 Grow, Robert

recommend accept

Most likely we should use EIT baseline

85 Cl 69A SC 69A. 5 P 66 L 40 Weiner, Nick

recommend accept in principle

The confusion comes from using BREIT which is hard to understand and not all that useful. Change:

"The difference between the EIT baseline and EIT for lowest EIT relative to the EIT baseline is the baseline relative EIT (BREIT). BREIT is reported as the result for the interference tolerance test."

to

"At each sample EIT shall be greater than EIT baseline."

also eliminate BREIT from table 70-8, 71-8, 72-10. Note it is not included in my list of definitions.

331 Cl 69A SC 69A. 5 P 66 L 8 Baumer, Howard

recommend accept in principle

the paragraph beginning at line 7 is not necessary to the test, it is just a sanity check before the test begins and most DUTs will perform their own sanity check. Delete this paragraph

668 Cl 69A SC 69A. 5 P 67 L 43 David V James

669 Cl 69A SC 69A. 5 P 67 L 51 David V James

667 Cl 69A SC 69A. 5 P 67 L 8 David V James

670 Cl 69A SC 69A. 5 P 69 L 2 David V James

recommend, ask Shelto.

223 Cl 69A SC Figure 69A- 2 P 65 L 15 Grow, Robert

if my recommendation for comment 103 is accepted, delete confusing figure, otherwise:

shade area above $A_{\max}(f) \dots A_{\max}(f_2)$ line and mark it as reject region or similar name

224 Cl 69A SC Figure 69A- 2 P 65 L 22 Grow, Robert

recommend accept unless figures are made unnecessary by other changes.