# P802.3ch D3.0 Comments Preview

Natalie Wienckowski, General Motors

December 11, 2019

## MEC Review: LEGAL: "ABSOLUTE" VERBIAGE

Please review the text for any explicit or implicit guarantees made within the document, especially those that are safety related.

Avoid making guarantees if there is a possibility of unforeseen situations or circumstances altering an outcome.

For example, words such as "ensure," "guarantee," "maximize," minimize," etc., should be modified, if they are inaccurate. Substitutions might include "reduce" or "improve." For example, "to ensure safety" might be changed to "to improve safety" or "to prevent" might be changed to "to reduce."

Category	Page	Sub-clause	Line #	Comment	Proposed Change
Editorial	112	149.3.6.1	3	Consider replacing "maximize" per IEEE Mandatory Editorial Coordination comment. Note: This is part of the "common" wording used throughout 802.3. See 97.3.5.1, 113.3.5.1, 126.3.5.1, etc. The reasons for synchronizing refresh intervals is not required for the spec.	
Editorial	112	149.3.6.1	3	Consider replacing "ensure" per IEEE Mandatory Editorial Coordination comment.	Delete: To maximize power savings, maintain link integrity, and ensure interoperability,
Editorial	113	149.3.6.3	8	Consider replacing "maximize" per IEEE Mandatory Editorial Coordination comment. Note: This is part of the "common" wording used throughout 802.3. See 97.3.5.3, 113.3.5.3, 126.3.5.3, etc. The reasons for staggering refresh signals is not required for the spec.	Change: refresh signaling to maximize power savings. To: refresh signaling.
Editorial	130	149.3.9.2.7	19	Consider replacing "ensure" per IEEE Mandatory Editorial Coordination comment. Note: This is the same wording as 97.3.8.2.7.	Change: The toggle bit is used to ensure proper OAM message synchronization between the PHY and the link partner. To: The toggle bit lets the management entity determine which OAM message is being referred to.

Category	Page	Sub-clause	Line #	Comment	Proposed Change
Editorial	148	149.4.2.4.6	3	Consider replacing "guarantees" per IEEE Mandatory Editorial Coordination comment. Note: This wording is the same as 97.4.2.4.6	Change: This value of DataSwPFC24 guarantees that the switch from PAM2 to PAM4 occurs on a PHY frame boundary. To: When the value of DataSwPFC24 is a multiple of 16 the switch from PAM2 to PAM4 occurs on a PHY frame boundary.
Editorial	172	149.7.2	40	Consider replacing "ensure" per IEEE recommendation. Note: This wording is the same as 97.6.3, 113.7.3, 126.7.3, etc.	Change: To ensure the total alien NEXT loss and alien FEXT loss coupled between link segments is limited, power sum alien near-end crosstalk (PSANEXT) loss and power sum alien attenuation to crosstalk ratio far-end (PSAACR-F) is specified. To: Power sum alien near-end crosstalk (PSANEXT) loss and power sum alien attenuation to crosstalk ratio far-end (PSAACR-F) are specified to limit the total alien NEXT and alien FEXT coupled between link segments.
Editorial	172	149.7.2.1	48	Consider replacing "ensure" per IEEE Mandatory Editorial Coordination comment.	Change: In order to limit the alien crosstalk at the near end of a link segment, the differential pair-to-pair near-end crosstalk (NEXT) loss between the disturbed link segment and the disturbing link segment is specified to meet the bit error ratio objective. To: The differential pair-to-pair near-end crosstalk (NEXT) loss between the disturbed link segment and the disturbing link segment is specified to meet the bit error ratio objective by limiting the alien crosstalk at the near end of a link segment.

Category	Page	Sub-clause	Line #	Comment	Proposed Change
	470		40	Consider replacing "ensure" per IEEE	Change: To ensure the total alien FEXT coupled into a link segment, multiple disturber attenuation to crosstalk ratio far-end ACRF is specified as the power sum of the individual alien ACRF disturbers. To: Multiple disturber attenuation to crosstalk ratio far-end ACRF is specified as the power sum of the individual alien ACRF disturbers to limit the total alien
Editorial	173	149.7.2.2	42	recommendation.	FEXT coupled into a link segment.
Editorial	145	149.4.2.4	32	Consider replacing "ensure" per IEEE recommendation. It is not required to explain why this requirement exists.	Change: Infofield shall be transmitted at least 256 times with each change to octets 7-10 to ensure detection at link partner. To: Infofield shall be transmitted at least 256 times with each change to octets 7-10. Also, delete PICS PCF3 on P187 L26.
				Consider replacing "ensures" per IEEE Mandatory	Change: This also ensures that connectors and cable are matched in terms of balance and shielding, in order to reach sufficient accuracy to measure coupling and screening attenuation. To: In order to reach sufficient accuracy to measure coupling and screening attenuation, the connectors and cable
Editorial	196	149A.3	32	Editorial Coordination comment.	should be matched in terms of balance and shielding.

Category	Page	Sub-clause	Line #	Comment	Proposed Change
Editorial	112	149.3.6.1	12	Consider rewording to remove "ensures".	Change: This offset ensures that the MASTER and SLAVE ALERT windows are offset from each other and that the refresh periods are close to half cycle offset. To: The MASTER and SLAVE ALERT windows are offset from each other and the refresh periods are close to half cycle offset.
Editorial	110	149.3.6	30	Consider rewording to remove "ensure". Remove unnecessary explanatory language.	Delete: that is used to ensure refresh signals and alert start times are appropriately offset between the link partners

# **Environment Requirements**

There are a number of requirements in this section that are not testable, but have "shall" statements. The comments on the next slide are intended to remedy this.

# **Environmental Requirements**

Category	Page	Sub-clause	Line #	Comment	Proposed Change
					Delete: All equipment subject to this clause shall conform to IEC 62368–1 (or IEC 60950–1) (for IT and motor vehicle applications) and to ISO 26262 (for motor vehicle applications only, if required by the
Technical	176	149.9.1	5	There is an untestable shall.	given application). Also delete PICS ES1.
Technical	176	149.9.1	7	There is an untestable shall.	Change "All equipment subject to this clause shall conform to all applicable local, state, national, and application-specific standards." To "All equipment subject to this clause is expected to conform to all applicable local, state, national, and application- specific standards." Also delete PICS ES2.
Technical	176	149.9.2	18	There is an untestable shall which applies to the final instalation, not the PHY defined by this draft.	Delete: In automotive applications, all cabling shall be routed in such a way as to provide maximum protection by the motor vehicle sheet metal and structural components, following SAE J1292, ISO 14229, and ISO 15764. Also delete PICS ES3.

# Additional Comment Summary

The capitalization of "TRUE/true" and "FALSE/false" is not consistent in the document. I have created comments to make these consistent.

We updated the reference to the state diagram conventions in 149.1.6, but kept the incomplete reference in 149.3.1 and 149.3.9.4.1. These are no longer needed. We also need to add the reference to 145.2.5.2 in 149B.4.1.

I have also created a number "EZ" of comments to fix typos.

# THANK YOU