Cl **01** *SC* **1.4.389a** *P* **29** *L* **16** # 196

Kim, Yong NIO

Comment Type **TR** *Comment Status* **A** *Big Ticket Item - Definitions*

This could be a pile on comment. .avoid physical collision on the medium. There is a definition for collision and contention. What is "physical collision" on the medium conveyed in the definitions.

SuggestedRemedy

change "physical collision" to "collision". Or expand why the word "physical" is needed.

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

Replace, "A method for generating transmit opportunities for 10BASE-T1S multidrop PHYs operating on mixing segments in order to avoid physical collisions on the medium. (See IEEE Std 802.3, Clause 148.)"

with, "A method for generating transmit opportunities for 10BASE-T1S operating on mixing segments. (See IEEE Std 802.3, Clause 148.)"

Cl **22** *SC* **22.2.2.4** *P* **33** *L* **13** # 198

Kim, Yong NIO

Comment Type **TR** *Comment Status* **R** *Big Ticket Item - Definitions*

Also 22.2.2.5, 22.2.2.8 22.8.3.2 CL22 MII is an existing exposed interoperability test point. Any material changes to its function effect interoperability to installed base. EEE related modifications prior connects to EEE services client, not MAC. These proposed changes directly effect interoperability to existing installed base to MAC services.

SuggestedRemedy

Reverse all proposed modifications to CL22 that effect shall shatement that existed prior. A good test for this would be that there is no modifications to the PICS table with status "M". See Slides 4~6 in http://www.ieee802.org/3/cg/public/Nov2018/Kim_3cg_01a_1118.pdf for a complext context.

Response *Response Status* **U**

REJECT.

Commenter fails to identify a specific compatibility problem or specific PICS items. Compatibility is satisfied and has been demonstated. Refer to http://www.ieee802.org/3/cg/public/Jan2019/baggett_3cg_01_0119.pdf, http://www.ieee802.org/3/cg/public/July2018/PLCA%20overview.pdf (slides 16 through 21), and http://www.ieee802.org/3/cg/public/Jan2019/Tutorial_cg_0119_final.pdf (slides 29, 34, and 35) for examples.

Other than PICS item SF17, which has been modified to exclude the new PHYs in this draft, there are no changes to add new Mandatory PICS items other than those conditioned on new options (see 22.8.2.3).

Cl **30** *SC* **30.2.3** *P* **35** *L* **37** # 200

Kim, Yong NIO

Comment Type **TR** *Comment Status* **R** *Big Ticket Item - Management*

PHY is NOT the same as Physcal Layer in layer definition. PHY has xMII on one side and MDI on the other (1.4.391). RS in Physical Layer but not in PHY. So by definition, oPLCA CANNOT be in oPHYEntity. Note: look at other RS related entities in Fig 30-3 to see the consistency

SuggestedRemedy

Move oPLCA from below oPHY and locate it below oMAC

Response *Response Status* **U**

REJECT.

PLCA management was moved under the PHY entity in response to satisfied TR comment 301 on initial working group ballot.

Additional information: The Reconciliation Sublayer extensions specified in Clause 65 for point-to-point emulation extend the Reconciliation Sublayer to support multiple MACs above a single PHY, see Figure 65-1 'RS location in the OSI protocol stack'. These extensions effectively add a set of functions above the PLS service interface at the 'top' of the existing Reconciliation Sublayer specified in Clause 35 to provide support for multiple instances of the PLS service interface. These functions include replacing some of the preamble on transmit with information protected by a CRC8, and examining this information on receive to determine which of the multiple MACs a packet is forwarded to. These are in effect a set of functions operating between the existing Reconciliation Sublayer and the multiple MACs, and as a result, the oOMPEmulation object to support these additional functions has to be placed between the multiple oMACEntity objects and the single oPHYEntity object. Note the many-to-one mapping from the oMACEntity object to the oOMPEmulation object in Figure 30-3 DTE System entity relationship diagram.

This is not the case for Energy-Efficient Ethernet or Time Synchronisation which did not impact the interface presented to the MAC. As a result, the additional attributes were either placed in the oPHYEntity object, this was the case for Energy-Efficient Ethernet, or in an object contained within the oPHYEntity object, this the case for Time Synchronisation where the oTimeSync object was added. It is for the same reasons that the oPLCA object should be contained within the oPHYEntity object too.

Cl **30** *SC* **30.3.9.2.7** *P* **39** *L* **47** # 205

Kim, Yong NIO

Comment Type **TR** *Comment Status* **R** *PLCA Burst*

aPLCABurstTimer has at least two isseus. 1) name seem to indicate timer burst, but the definition says wait timer before terminating burst. Should rename to reduce confustion. 2) With infinitely fast statemachines and atomic frame transfers, and RS being above the xMII counters in bit times makes little sense. Obviously exposed interfaces are exceptions. If the intention is to allow building a non-complaint PHY that includes PLCA in the PHY, then this timer may be relevant in implementations (not to the specification which is done in architectural frame work). I assum this is not the intent. If this is the intent, please go through appropriate process.

SuggestedRemedy

WRT to 1) please consider chaning the timer name to more descriptive name, if 2) is rejected. If 2) is accepted, then please ignore 1) comment.

Response *Response Status* **U**

REJECT.

This appears to be two comments in one.

1 (re:timer naming): Commenter provides insufficient information for remedy. aPLCABurstTimer is consistent with the timer named in clause 148.
2 (re: process): Commenter provides insufficient information for remedy. Commenter is incorrect; the timer is in the physical layer and not the MAC.

Cl **147** *SC* **147.1** *P* **167** *L* **17** # 206

Kim, Yong NIO

Comment Type **TR** *Comment Status* **A** *Big Ticket Item - Multidrop*

Only place the "multidrop mode" is defined is in 147.1 and says "a half duplex shared-medium mode, referred to as multidrop mode, capable of operating with multiple link partners connected to a mixing segment" I know this term has been in use for a long time in the .3cg draft development. But I don't see any benefit to introducing a new term. Traditionally we had mixing and link segments, and we have half-duplex point to multi-point (P2MP), and full duplex point to point (P2P) operations. I do not see any reason to introduce a new term that does not seem to have sufficent difference from traditional terms in function. Even in CL147 spec -- see 147.3.3.2, duplex_mode was sufficient.

SuggestedRemedy

Please consider careful search and replacement of "multidrop" "and multidrop over mixing segment" with point to multipoint (P2MP), or in many cases just "half-duplex", or "half-duplex over mixing segment". I don't see how it is reader-friendly to have so many terms to refer to the same thing. Painful now, but we have to live with the specified text [almost] forever.

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.
P167 L24: Delete "multidrop"
P167 L46: Delete "multidrop"
P213 L39: Change "multidrop network" to "mixing segment"
P218 L26: Change "multidrop network" to "mixing segment"
P224 L16: Change "multidrop network" to "mixing segment"
P49 L45 & L47: Change "multidrop operation over a mixing segment network" to "multidrop mode"
P49 L48: Change "multidrop operation" to "multidrop mode"

Add editor's note at top of 147.1:
Editor's note (to be removed following draft 2.3) - Commenters are encouraged to consider possible alternate names for "multidrop mode" using existing 802.3 terminology which are descriptive and compact.

Cl **147** *SC* **147.3.7** *P* **184** *L* **5** # 209

Kim, Yong NIO

Comment Type **TR** *Comment Status* **A** *Editorial*

Optional support for RS layer, separatated from the PHY via xMII and PCS does not seem to have any existing interface to convery message primitives referred to here. Please describe HOW it is conveyed from PHY to RS.

SuggestedRemedy

Please point out the message passing interface that conveys these additional and optional messages between PHY and RS -- in which case, this comment will be withdrawn. Or describe how these messages are converyed.

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.
(commenter appears confused by an editorial error which left optional support of PLCA RS separated from the text it applied to)
Accomodated by comment #190.
Resolution of comment #190 is:
ACCEPT IN PRINCIPLE.
Move all text at page 188/31-48 (effectively the headers and content of sub-clauses "147.3.8.3 Generation of BEACON indication" and "147.3.8.4 Generation of COMMIT indication") before sub-clause "147.3.8 Optional support for PCS status generation", turning those into "147.3.7.1 Generation of BEACON indication" and "147.3.7.2 Generation of COMMIT indication"

Cl **45** *SC* **45.2.3.68d.1** *P* **55** *L* **27** # 211

Kim, Yong NIO

Comment Type **TR** *Comment Status* **A** *PLCA*

PLCA Support (3.2292.15) means there is a 10BASE-T1S PHY and 10BASE-T1S PLCA PHY. So Is the PLCA RS function or RS, PCS, and possibly PMA function? Based on this setting, it seems to indicate that PLCA is not limited to RS. It would be good to clarify where all the layers PLCA optinoal feature/function/option reside

SuggestedRemedy

Either delete this, or clarify which layer PLCA resides.

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

Replace, "indicates the PCS does not support PLCA RS required functions"

with, "indicates the PCS does not support the encodings of BEACON and COMMIT".

Cl **45** *SC* **45.2.3.68f** *P* **56** *L* **18** # 214

Kim, Yong NIO

Comment Type **TR** *Comment Status* **R** *PLCA*

I see the benefits of # of collisions experienced for a given packet transmit attempts -- indicates some qualitative measure of congestion. I don't see the value nor relevance of counting collisions since beginning of time. I cannot locate (easily, anway) justification for adding this counter -- and even more so in PHY/PCS rather than in the MAC.

SuggestedRemedy

Please delete this counter, or reject this comment and point me to the rationale and utility of this counter.

Response *Response Status* **U**

REJECT.

When optional PLCA RS is enabled, the MAC will count the number of collisions reported by the RS via the PLS_SIGNAL.indication primitive. Having a register that counts the number of corrupted transmissions at the MDI detected at the PCS or PMA sublayer is, as commenter says, a useful indication for diagnosing misconfiguration problems and to evaluate the line quality.

Cl **45** *SC* **45.2.13.4** *P* **64** *L* **64** # 220

Kim, Yong NIO

Comment Type **TR** *Comment Status* **R** *PLCA Burst*

Related to my other comment on 30.2.9.2.7 (and should consider together), 1) name seem to indicate timer burst, but the definition says wait timer before terminating burst. Should rename to reduce confustion. 2) With infinitely fast statemachines and atomic frame transfers, and RS being above the xMII counters in bit times makes little sense. Obviously exposed interfaces are exceptions. If the intention is to allow building a non-complaint PHY that includes PLCA in the PHY, then this timer may be relevant in implementations (not to the specification which is done in architectural frame work). I assum this is not the intent. If this is the intent, please go through appropriate process.

SuggestedRemedy

WRT to 1) please consider chaning the timer name to more descriptive name, if 2) is rejected. If 2) is accepted, then please ignore 1) comment.

Response *Response Status* **U**

REJECT.

This appears to be two comments in one.

1 (re:timer naming): Commenter provides insufficient information for remedy.
aPLCABurstTimer is consistent with the timer named in clause 148.
2 (re: process): Commenter provides insufficient information for remedy. Commenter is incorrect; the timer is in the physical layer and not the MAC.

Cl **00** *SC* **0** *P* **0** *L* **0** # 223

Kim, Yong NIO

Comment Type **TR** *Comment Status* **A** *Big Ticket Item - Definitions*

Use of the word "collision" and use of term "logical collision" "local collision", and "physical collision. This is a pile on comment to unresolved D2.0 draft comment. Use of terms other than just "collisoin" in .3cg bothered me. This time, I went through some research. 1.1.2.1 Half duplex operation states "...if... message collides...to ensure propogation of collision through out the system." states collision is system wide. 1.4.202 collsion: A condition that results from concurrent transmission from multiple data terminal equipment (DTE) sources wihtin an single collision domain. And 1.4.203 collision domain: A single, half duplex mode CSMA/CD network. If two or more Media Access Control (MAC) sublayers are within the same collsion domain and both transmit at the same time, a collision will occur. MAC sublayers separated by a repater..." All of these prompt whether .3cg's use of "logical collsion" or "local collision" are proper use of the word collsion. "physical collision" should just be "collsion". In addition, the use of "logical collision" to describe an event that is not an observable event on the medium is confusing to 802.3 readers, who associates collision to an event on the shared medium.

SuggestedRemedy

Please consider careful global search and replace of "physical coillsion" to just "collsion" and use some other term for "logical collision" and "local collision" if that remains in the draft. Cannot commup with a good suggestion for the alternate word, since the "local collision" function within .3cg in my mind is access control mechanism.

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

Note: the terms "logical collision" and "physical collision" are removed from the draft by these changes and other comments:

P224 L6: Delete "This is called a logical collision."

P225, L10: Replace, "and a logical collision is triggered" with, "and a collision is triggered"

P183, L17: Replace, "When operating in half-duplex mode, the 10BASE-T1S PHY shall detect physical collisions on the media during data transmission." with, "When operating in half-duplex mode, the 10BASE-T1S PHY shall detect when a transmission initiated locally results in a corrupted signal at the MDI as a collision."

P213, L44-45: Delete, "At any time, only the owner of the current transmit opportunity is allowed to send data over the medium, therefore avoiding physical collisions."

P218, L26: Delete, "PLCA Control state diagram is responsible for synchronizing transmit opportunities across the multidrop network to avoid physical collisions."

P224, L42: Delete, ", which would normally result in a physical collision"

P225, L1: Replace, "The variable delay line is a small buffer that is necessary in order to

avoid physical collisions by delaying transmission to the MII until the exclusive transmit opportunity for the node arrives." with, "The variable delay line is a small buffer that aligns transmission with the transmit opportunity."

Cl **146** *SC* **146.8.1** *P* **153** *L* **3** # 231

Kim, Yong NIO

Comment Type **TR** *Comment Status* **A** *MDI*

This says "this section defines the MDI for 10BASE-T1L", but it does NOT. MDI is a *mandatory* "shall"-stated Medium Dependant Interface for 10BASE-T1L. Tjhis section does NOT specify MDI. It provides (abeit useful) suggestions and diagrams but no specification. Please decide whether this project has an MDI (or set of MDIs). And if MDI is indeeed specified, please change the CL title to include MDI (currently just ....PMA)

SuggestedRemedy

Either specify "the MDI for 10BASE-T1L" or not, and make downstream consequential changes. If not specified, then perhaps use "MDI considerations" not "MDI specifications"

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.
Change from "This section defines the MDI for 10BASE-T1L."

to,

"This subclause describes connectors which may be used at the MDI. It also specifies electrical requirements, including fault tolerance, at the MDI.

Cl **147** *SC* **147.3.2.2** *P* **176** *L* **22** # 237

Kim, Yong NIO

Comment Type **TR** *Comment Status* **R** *PCS*

Based on my reading, tx_cmd encoding has been changed to be implemented regardless of PLCA RS layer option. Unnessary specifications.

SuggestedRemedy

Reverse the change and make any corrections WRT to T and I.

Response *Response Status* **U**

REJECT.
tx_cmd is implemented regardless of the PLCA RS layer option, and T & I are necessary to implement heartbeat (147.3.8)

Cl **147** *SC* **147.3.5** *P* **183** *L* **21** # 242

Kim, Yong NIO

Comment Type **TR** *Comment Status* **R** *PCS*

"The method for detecting a collision is implementation dependent but the following requirements have to be
fulfilled:" is grossly insufficient. Collision detection method must be specified and reliability of collision detection must be validated.

SuggestedRemedy

Without collision detection specification, this draft is grossly incomplete. I expect technically complete draft to include specifications on collision detect.

Response *Response Status* **U**

REJECT.
Commenter provides insufficient information for remedy. The standard specifies behavior, not implementation, and behavioral requirements for the collision detection are provided. Similarly, the standard does not specify how to equalize the received signal or how to cancel echoes, but states the transmitter electrical parameters, link segment transmission parameters, and receiver behavior (e.g., frame loss ratio and noise level tests) necessary for the implementation to meet.

Cl **147** *SC* **147.3.6** *P* **183** *L* **30** # 244

Kim, Yong NIO

Comment Type **TR** *Comment Status* **A** *PCS*

"When operating in half-duplex mode, the 10BASE-T1S PHY shall sense when the media is busy and convey
this information to the MAC asserting the signal CRS on the MII as specified in 22.2.2.11." is grossly insufficent for CSMA/CD to work. How, when, and condition, signal assert and deassert time, etc should all be specified.

SuggestedRemedy

this specifciation is grossly incomplete. Please complete it. I expect technically complete draft to include specifications on carrier sense beahvior.

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.
On page 183, lines 30-32, replace,
"the 10BASE-T1S PHY shall sense when the media is busy and convey this information to the MAC asserting the signal CRS on the MII"

with,
"the 10BASE-T1S PHY senses when the media is busy and conveys this information to the MAC by asserting the signal CRS on the MII"

Cl **147** *SC* **147.3.8** *P* **184** *L* **7** # 245

Kim, Yong NIO

Comment Type **TR** *Comment Status* **A** *PCS*

Reading into "Heart-beat (HB)" -- the funciton REQUIRES support of BEACON, etc, in PLCA option in RS, to work properly. This means PLCA option is NOT an option if Augo-neg is implemented and enabled.

SuggestedRemedy

Please clarify whether PLCA RS layer is an option or mandatory. The current draft says optional in most places.

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

On page 184, lines 17-18, replace,
"The HB generation is disabled when the PHY is configured for operation over a mixing-segment network or a PLCA BEACON indication is detected on the line."

with,
"The HB generation is disabled when the PHY is configured for operation over a mixing segment or a BEACON is detected."

Cl **147** *SC* **147.3.8** *P* **184** *L* **7** # 246

Kim, Yong NIO

Comment Type **TR** *Comment Status* **R** *PCS*

Related to my other comment WRT half-duplex P2P mode WITHOUT repeater support makes little sense WRT broadmarket potential and suggest deleting that mode, and if that is considered positively, then consider replacing H-B with active idle for full-duplex P2P mode and have it align with 10BASE-T1L. H-B is being added in D2.2 in support of a mode that makes little market sense.

SuggestedRemedy

Please conditionally (delete P2P HD) consider this suggestion (replacement of HB)

Response *Response Status* **U**

REJECT.

Comment #210 was rejected. The resolution to comment #210 is:

Commenter is incorrect, a number of individuals with a broad spectrum of affiliations agreed on an objective for this. The Criteria for Standards Development (e.g., broad market potential) apply to the entire standard:
====
Each proposed IEEE 802 LMSC standard shall have broad market potential. At a minimum, address the following areas:
a) Broad sets of applicability.
B) Multiple vendors and numerous users.
====
As written (and commonly) they do not mention objective by objective, or else they would have to be modified every time an objective is changed. The objectives are chosen to fit within the broader CSDs, by the applicability and the multiple interest groups. The existing 802.3cg broad market potential speaks to 10 Mb/s single-pair Ethernet in industrial, automotive, and intra-system applications, and the number and breadth of individuals and companies which have expressed interest in the standard. These have voted to approve adding the objective for P2P.

Cl **147** *SC* **147.3.8.3** *P* **188** *L* **33** # 248

Kim, Yong NIO

Comment Type **TR** *Comment Status* **A** *EZ*

"In compliance to 148.4.4.2.1, when PLCA RS operations are supported and enabled, the PHY shall notify the RS of a received BEACON indication by the means of MII interface as specified in 22.2.2.8." This could be read that 10BASE-T1S PHY support of PLCA related signals are NOT optional. If this is the intent, PLEASE explicitly state it (probably somewhere near 147.1) If not, then adjust the text to reflect optional nature of PLCA RS support.

SuggestedRemedy

Please consider and do one of the two choices.

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.

Replace,
"when PLCA RS operations"

with,
"when optional PLCA RS operations"

Cl **147** *SC* **147.6.1** *P* **196** *L* **41** # 252

Kim, Yong NIO

Comment Type **TR** *Comment Status* **R** *AutoNeg*

"Auto-Negotiation may be performed as part of the initial set-up of the link and allows negotiation of the duplex mode of operation." and AN for half-duplex P2P related text should be deleted, IFF, sucn mode is deemed to not meet broad market potential (per my other comment)

SuggestedRemedy

Please conditionally (delete P2P HD) consider deleting the referenced sentence.

Response *Response Status* **U**

REJECT.

Comment #210 was rejected. The resolution to comment #210 is:

Commenter is incorrect, a number of individuals with a broad spectrum of affiliations agreed on an objective for this. The Criteria for Standards Development (e.g., broad market potential) apply to the entire standard:
====
Each proposed IEEE 802 LMSC standard shall have broad market potential. At a minimum, address the following areas:
a) Broad sets of applicability.
B) Multiple vendors and numerous users.
====
As written (and commonly) they do not mention objective by objective, or else they would have to be modified every time an objective is changed. The objectives are chosen to fit within the broader CSDs, by the applicability and the multiple interest groups. The existing 802.3cg broad market potential speaks to 10 Mb/s single-pair Ethernet in industrial, automotive, and intra-system applications, and the number and breadth of individuals and companies which have expressed interest in the standard. These have voted to approve adding the objective for P2P.

Cl **147** *SC* **147.9.1** *P* **198** *L* **48** # 257

Kim, Yong NIO

Comment Type **TR** *Comment Status* **A** *MDI*

This says "this section defines the MDI for 10BASE-T1S", but it does NOT. MDI is a *mandatory* "shall"-stated Medium Dependant Interface for 10BASE-TSL. Tjhis section does NOT specify MDI. It provides (abeit useful) suggestions and diagrams but no specification. Please decide whether this project has an MDI (or set of MDIs). And if MDI is indeeed specified, please change the CL title to include MDI (currently just ....PMA)

SuggestedRemedy

Either specify "the MDI for 10BASE-T1S" or not, and make downstream consequential changes. If not specified, then perhaps use "MDI considerations" not "MDI specifications"

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.
Text commenter refers to does not exist.

Insert new paragraph in 147.9 to align with 146.8 per comment 231:

"This subclause describes connectors which may be used at the MDI. It also specifies electrical requirements, including fault tolerance, at the MDI."

Cl **148** *SC* **148.2** *P* **213** *L* **45** # 261

Kim, Yong NIO

Comment Type **ER** *Comment Status* **A** *Editorial*

"avoiding physical collisions" should just be "avoiding collisions". Collisions on the medium. There is no other kind. The other collision "local collision" referred to in CL148 is more of access control and asserting COL signal in order to do access control. Readers of 802.3 understand collision, and introducing two new terms would be confusing without any derived benefit.

SuggestedRemedy

Consider and do so (accepting this comment means careful global search and repace of "physical collision")

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.
Resolve with #223.

Resolution of comment #223 is:
There are 3 parts to this comment, so all 3 will be addressed.
A. "local collision" - There is no such thing as a local collision in the draft. There is only the 'local collision domain', where local refers to the domain, not the collision. The term collision domain is used as defined in 1.4.203.
B. "logical collision" - In this case, the term collision will suffice. Delete use of "logical collision" in the only two places it occurs:
148.4.6.1, P224 L6: Delete "This is called a logical collision."
148.4.6.1, P225, L10: Change "and a logical collision is triggered" to "and a collision is triggered"

Cl **148** *SC* **148.4.4** *P* **217** *L* **24** # 268

Kim, Yong NIO

Comment Type **TR** *Comment Status* **R** *PLCA*

148.1 states "PLCA is defined for half-duplex mode of operation only. The PLCA RS is specified for operation with the PHY defined in Clause 147 (10BASE-T1S).". So perhaps 148.4.4. should reference relevant clauses in 147 -- it would be specific and reader friendly, and avoid making non-normative statements such as "PHYs are free to map the BEACON request to any suitable line coding as long as the requirements defined herein are met." in line 41. And similar comment to COMMIT, etc.

SuggestedRemedy

I do not see the [incomplete] generic PHY mapping, when PLCA is tightly coupled with 10BASE-T1S half-duplex PHY.

Response *Response Status* **U**

REJECT.
Commenter fails to provide sufficient information to implement a remedy.

The text commented on is out of scope for recirculation as text was unchanged.

Cl **148** *SC* **148.4.5.1** *P* **218** *L* **32** # 269

Kim, Yong NIO

Comment Type **TR** *Comment Status* **A** *PLCA*

"To achieve error free operation the PLCA node should be configured appropriately before transmit functions
are enabled." -- While this is good thought, it is not useful unless the spec completes the thought on how we achieve that. Please delete the unnessary text or add text to make this statement more useful

SuggestedRemedy

Please delete, or add text on how.

Response *Response Status* **U**

ACCEPT IN PRINCIPLE.
Insert the following after the referenced sentence,
"Appropriate configuration includes:
a) each local_nodeID is unique to the local collision domain,
b) there is one and only one node with local_nodeID = 0 on the local collision domain,
c) the transmit opportunity timer (to_timer) is set equal across all the nodes on the local collision domain,
d) plca_node_count is set on the node with local_nodeID = 0 to the number of nodes on the local collision domain"

Cl **148** *SC* **148** *P* **213** *L* **1** # 322

Thompson, Geoff GraCaSI S.A.

Comment Type **TR** *Comment Status* **R** *PLCA*

10 Mb/s half duplex Ethernet offers the lowest level of performance in the market success Ethernet family (ignoring 1BASE5 which was not a market success). 802.3 and the networking market have developed successful improved performance variations of Ethernet over the years. Each of these improvements was judged before the project was authorized to meet the CSD or its predecessor, the Five Criteria. There has never been a project approved in 802.3 for the performance space between 10M CSMA/CD and either 10M Full Duplex or 100M CSMA/CD. The addition of a new access method to "improve" our worst performer was done for this project with no mention of this major addition to the scope and features of this project with no mention of it whatsoever in the project paperwork (PAR, CSD original Project Objectives). Further, the addition of PLCA to the draft clearly constitutes a new medium access control (MAC) protocol which overrides the shared media access method and the basic peer nature of Ethernet thus, the mechanism for it belongs in the Media Access Control (MAC) sublayer according to 802 tradition and to IEEE 802 Overview and Architecture. Further, the non-peer nature of PLCA is specifically contrary to the 802 Overview and Architecture (Ref: Std 802 4.1 para. 6) and thus violates the Compatibility criteria of the CSD. It is clear that when the project was started there either was no anticipated requirement for a new access method or the addition of a new access method was sandbagged, presumably because it could then be added to the project without being subjected to the rigors of the CSD examination. Standardized 10 Mb/s CSMA/CD has proved itself adequate for hundreds of millions of installations. Where it is not adequate the legitimate 802 process and the market have chosen full duplex and/or higher speed is the appropriate path within the standard for higher performance.

SuggestedRemedy

Bring the project back into the bounds of the PAR scope and into compliance with 802 and the layer model by removing clause 148 and all other changes in the draft supporting PLCA elsewhere in the draft. I believe that this includes removing all reconciliation sub-layer functionality from the draft as no reconciliation should be required between a 10 Mb/s PHY and the legacy CSMA/CD MAC.

Response *Response Status* **U**

REJECT.

Commenter incorrectly posits that the Clause 148 PLCA RS is a new MAC. It does not meet the requirements for a MAC, and, leaves the MAC functionality with Clause 4, which, in fact, it could not work without. Commenter incompletely quotes IEEE Std 802-2014 4.1, paragraph 6 leading to incorrect conclusions regarding peer-to-peer networking. Additionally, commenter's suggested remedy appears to assert that the Clause 148 reconciliation sublayer is required. It is not; use of the Clause 148 PLCA RS is optional.

See www.ieee802.org/3/cg/public/Jan2019/Tutorial_cg_0119_final.pdf.

Strawpoll #4: I support rejecting this comment with the rationale: "Commenter incorrectly posits that the Clause 148 PLCA RS is a new MAC. It does not meet the requirements for a MAC, and, leaves the MAC functionality with Clause 4, which, in fact, it could not work

without. Commenter incompletely quotes IEEE Std 802-2014 4.1, paragraph 6 leading to incorrect conclusions regarding peer-to-peer networking. Additionally, commenter's suggested remedy appears to assert that the Clause 148 reconciliation sublayer is required. It is not; use of the Clause 148 PLCA RS is optional.

See www.ieee802.org/3/cg/public/Jan2019/Tutorial_cg_0119_final.pdf."

Task Force: Y:30 N:2 A:6
802.3 Voters: Y:18 N:2 A:1