

Management Parameters for 10 Mb/s Operation and Associated Power Delivery over a Single Balanced P

Cl 45 SC 45.2.1.174d P 40 L 44 # 268
KIM, YONG NIO

Comment Type TR Comment Status A Mixing Segment

Multidrop mode is not clear. If the TX or RX characteristics change, then it may be clearer to provide control around TX or RX parameters. Multidrop mode seems to indicate MAC/RS type of layer function.

SuggestedRemedy

Please use more direct parameter name as appropriate.

Response Response Status U

ACCEPT IN PRINCIPLE.

Add "(see Clause 147)" after "multidrop mode over a mixing segment network" in paragraph 45.2.1.174d.5 at P41 L51.

Cl 45 SC 45.2.1.174e P 42 L 21 # 271
KIM, YONG NIO

Comment Type TR Comment Status A Registers

Multidrop mode is not clear. If the TX or RX characteristics change, then it may be clearer to provide control around TX or RX parameters. Multidrop mode seems to indicate MAC/RS type of layer function.

SuggestedRemedy

Please use more direct parameter name as appropriate.

Response Response Status W

ACCEPT IN PRINCIPLE.

Add "(see Clause 147)" after "multidrop mode over a mixing segment network" in paragraph 45.2.1.174e.4 at P42 L52.

Cl 45 SC 45.2.3.58c P 47 L 25 # 273
KIM, YONG NIO

Comment Type TR Comment Status A PLCA

Does the network segment work fine when nodes initialize with all defaults (in this case nodeID=255)? If so, then please explain how it works in CL147. If not, please explain why the default value matter.

SuggestedRemedy

Please reference appropriate part of CL147 that describes NodeID=255 default operation, or delete, or add other clarifications needed.

Response Response Status W

ACCEPT IN PRINCIPLE.

Replace "The default value of bits 3.2289.7:0 is 255." with, "The configurarion of local_nodeID is beyond the scope of this standard. When PLCA operation is disabled these values have no effect."

Cl 45 SC 45.2.3.58c P 47 L 19 # 274
KIM, YONG NIO

Comment Type TR Comment Status R PLCA

If PLCA network does not work with repeaters, and a single multiple access segment cannot go beyond <nn> of nodes, why is the field much greater than necessary? It would be appropriate to set the value range to be the same as the actual segment max, and set the rest of the bits as reserved.

SuggestedRemedy

Please do so.

Response Response Status W

REJECT.

PLCA does not have a maximum size specified in Clause 148.

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Cl 45 SC 45.2.3.58d.1 P 47 L 44 # 275
KIM, YONG NIO

Comment Type TR Comment Status R PLCA

Default value of 20 bit times seems excessive for system that initialize with the value, when E2E delay for 25 m is 1.25 BT. Adding RX latency (148.4.5.1) delta, which is not spec'ed but the worst case (one could be at 0 us and another could be at 4 us in 147.11) the value could be 41.25 us for 25 m segment. None of these equate to 20 bit times default.

SuggestedRemedy

Please spec appropriate default for system operation when systems initialize from default.

Response Response Status W

REJECT.

Commenter does not provide sufficient remedy. The default value for PLCA TO_TIMER was considered by the Task Force.

Cl 45 SC 45.2.3.58e.3 P 48 L 45 # 276
KIM, YONG NIO

Comment Type TR Comment Status A Big Ticket Item PLCA_EN

PLCA is not a part of PCS. Need to move this bit to appropriate layer (RS) register

SuggestedRemedy

Please do so.

Response Response Status W

ACCEPT IN PRINCIPLE.

Move *all* PLCA related bits to a dedicated subclause / address range in Clause 45. This includes registers to be added after accepting #556.

Implement changes marked with #276 in http://www.ieee802.org/3/cg/public/Sept2018/beruto_02_Cl_45_d2p0_proposed.pdf

Cl 45 SC 45.2.3.58e.4 P 48 L 50 # 277
KIM, YONG NIO

Comment Type TR Comment Status A Big Ticket Item PLCA_EN

PLCA is not a part of PCS. Need to move this bit to appropriate layer (RS) register

SuggestedRemedy

Please do so.

Response Response Status W

ACCEPT IN PRINCIPLE.

Move *all* PLCA related bits to a dedicated subclause / address range in Clause 45. This includes registers to be added after accepting #556.

Implement changes marked with #277 in http://www.ieee802.org/3/cg/public/Sept2018/beruto_02_Cl_45_d2p0_proposed.pdf

Cl 45 SC 45.2.3.58f.1 P 49 L 27 # 278
KIM, YONG NIO

Comment Type TR Comment Status A Big Ticket Item PLCA_EN

PLCA is not a part of PCS. Need to move this bit to appropriate layer (RS) register

SuggestedRemedy

Please do so.

Response Response Status W

ACCEPT IN PRINCIPLE.

Move *all* PLCA related bits to a dedicated subclause / address range in Clause 45. This includes registers to be added after accepting #556.

Implement changes marked with #278 in http://www.ieee802.org/3/cg/public/Sept2018/beruto_02_Cl_45_d2p0_proposed.pdf

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Cl 147 SC 147.1.1 P 145 L 30 # 282
KIM, YONG NIO

Comment Type TR Comment Status A General

AN is not defined for 10BASE-T1S PHY in HD in multidrop mode. How does PHY know it's in that mode? What happens one PHY is not in multidrop mode, connected to the multidrop segment, or connected with null segment? Management is optional. Duplexness is associated with MAC

SuggestedRemedy

Please clarify.

Response Response Status W

ACCEPT IN PRINCIPLE.
Replace,
"Auto-Negotiation for 10BASE-T1S is defined in Clause 98. MII is defined in Clause 22. Auto negotiation is not defined for 10BASE-T1S PHY operating in half-duplex multidrop mode."

with,
"Auto-Negotiation for 10BASE-T1S is defined in Clause 98 and available only while not in multidrop mode. Selection between multidrop and point-to-point mode is made via the appropriate configuration bit. Optional MDIO is defined in Clause 45. Management is not optional. MII is defined in Clause 22."

Cl 147 SC 147.3.2.2 P 149 L 44 # 283
KIM, YONG NIO

Comment Type TR Comment Status A Big Ticket Item PLCA

PLCA is not a part of PCS. It is a part of RS (CL 148). Why are plca_en and other signals are defined and used in CL147 PHY specification, i.e. Fig 147-4 PCS TX state diagram line 11? As per "When PLCA capability is supported and enabled, the RS shall use the combination of TX_EN deasserted, TX_ER asserted, and TXD<3:0> equal to 0010 or 0011 as shown in Table 22-1 to send respectively a BEACON or a COMMIT request as explained in Clause 148." the TX state diagram could just be tx_sym <=tx_cmd in SILENT state.

SuggestedRemedy

Eliminate plca related signal use here and everywhere else in this clause (CL147). Let RS layer do its thing, and let PCS and PMA in the PHY do their thing.

Response Response Status W

ACCEPT IN PRINCIPLE.

Implement changes in Clause 147_r2p0_resolution.pdf tagged with comment #283.

Changes include revising the state machine and deleting plcs_en.

Cl 148 SC 148.1 P 173 L 15 # 284
KIM, YONG NIO

Comment Type TR Comment Status A ig Ticket Item PLCA_SCOPE

"PLCA is designed to work on top of CSMA/CD and can be dynamically enabled or disabled via management interface. When disabled, the system operates as specified in Clause 22." makes no sense. Second sentence - CL22 has been modified to add PLCA support. First sentence -- it does NOT work on top of CSMA/CD. PLCA uses Carrier sense and collision detect in completely different manner to perform alternative media access method.

SuggestedRemedy

Delete paragraph (both sentences), or make it technical correct.

Response Response Status W

ACCEPT IN PRINCIPLE.

Proposed resolution in Clause_148_r2p0_resolution.pdf. Changes are marked with #284 in the right boxes.

Notes:

WRT "When disabled, the system operates as specified in Clause 22" - CL22 has been modified to add PLCA support: Modifications to Clause 22 are not in effect when PLCA is not supported or not enabled. This is clearly stated in references text.

WRT to "PLCA is designed to work on top of CSMA/CD", this is resolved by #657

WRT to "PLCA uses Carrier sense and collision detect in completely different manner to perform alternative media access method":
Carrier Sense has been used in other 802.3 standards to prevent MAC from transmitting, even when the medium is not busy. See also #287.

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Cl 148 SC 148.2 P 173 L 25 # 286
KIM, YONG NIO

Comment Type TR Comment Status R PLCA

"..round-robin fashion every time the PHY with node ID = 0 signals a BEACON on the medium, indicating the start of a new cycle" -- this specification does not describe how a node ID=0 is selected (or elected), and how the system handles duplicate node id=0 or absense of node id=0. Also not specified are node id conflict (duplicate node id s)

SuggestedRemedy

The draft is not complete without these specifications. Specify these to complete the spec. Ethernet std has management optional, config rules are known, and required protocol to config are specified (e.g. channel trainig)

Response Response Status W

REJECT.
No consensus to change
Commenter is referred to comment 598 with respect to node ID assignment and management operation.

Cl 148 SC 148 P 173 L # 287
KIM, YONG NIO

Comment Type TR Comment Status A PLCA

CL 4.3.3 variable definition of carrierSense is in conflict with how CL173 PLCA is using carrier sense. "The overall event of activity on the physical medium is signaled to the MAC sublayer by the variable carrierSense". And "var carrierSense: Boolean; In half duplex mode, the MAC sublayer shall monitor the value of carrierSense to defer its own transmissions when the medium is busy. The Physical Layer sets carrierSense to true immediately upon detection of activity on the physical medium. After the activity on the physical medium ceases, carrierSense is set to false. Note that the true/false transitions of carrierSense are not defined to be precisely synchronized with the beginning and the end of the frame, but may precede the beginning and lag the end, respectively. (See 4.2 for details.) In full duplex mode, carrierSense is undefined." CL173 use of carrier sense is in conflict w/ CL4. These conflicted use are pervasive, e.g. CL148.4.6.1 holds carrier_on active even when there is no activity on the physical medium.

SuggestedRemedy

Either include CL4 carrier sense related maintainance changes as a part of PLCA, or change PLCA to work with CL4 carrier sense as defined.

Response Response Status W

ACCEPT IN PRINCIPLE.

Accomodated by #649.

Cl 148 SC 148.4.1.1 P 175 L 6 # 288
KIM, YONG NIO

Comment Type TR Comment Status R PLCA

The Figure 148-2 does not belong in CL148. If it becomes desirable to have it, it should be added to CL22 and reiewed for generic model correctness. CL22.1.1 lists summary of major concepts, gRS should be consistent with that

SuggestedRemedy

Delete, or move it to CL22 with modifications to align it to CL22.1.1

Response Response Status W

REJECT.
The purpose of a RS is to specify mapping between MAC PLS primitives and MII signals, so the figure belongs to C148 which is an RS. See also Figure 90-2 (TSSI).

Cl 148 SC 148.4.2 P 176 L # 289
KIM, YONG NIO

Comment Type TR Comment Status R ig Ticket Item PLCA_SCOPE

RS is defined in CL1 "1.4.425 Reconciliation Sublayer (RS): A mapping function that reconciles the signals at the Media Independent Interface (MII) to the Media Access Control (MAC)-Physical Signaling Sublayer (PLS) service definitions. (See IEEE Std 802.3, Clause 22.)", and consistent with CL22.1.1. Even when MII signals are used to convey signals for EEE, it is still performing reconciliation. PLCA is using signals in RS (collision, carrier-sense, etc) while creating a completely different and new medium access control (MAC) method. PLCA function does not belong in RS.

SuggestedRemedy

Move PLCA outside of RS (which only translates MII signals to PLS signals, for the dataplane as well as control like EEE states, not a new media access control method. And if necessary, revise CSD and objectives as appropriate.

Response Response Status W

REJECT.

See comment #637 for rationale.

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CI 148 SC 148.4.2 P 176 L # 290
KIM, YONG NIO

Comment Type TR Comment Status R PLCA
PLCA is not a generic RS.

SuggestedRemedy

Please correct and clarify.

Response Response Status W
REJECT.

PLCA is contained within the generic RS as shown in Figure 148-3. Commenter did not provide sufficient explanation or remedy.

Straw poll reject comment with rationale above:

Y: 14
N: 0
A: 13

CI 22 SC 22.2.2.4 P 25 L 13 # 292
KIM, YONG NIO

Comment Type TR Comment Status R PLCA
The strike outs "Other. shall have no effect upon the PHY". This proposed change could potentially make existing systems non-compliant. So this potentially violates CRD (compatibility) and may cause other issues.

SuggestedRemedy

please fix it.

Response Response Status W
REJECT.

This text has not been deleted. An additional pair of TXD values have been inserted, which result in the text being moved to page 25, line 21 of draft 2.0.

CI 22 SC 22.2.2.4 P 25 L 22 # 294
KIM, YONG NIO

Comment Type TR Comment Status R PLCA
The sentence "Other.shall.. upon the PHY"

SuggestedRemedy

Unnecessary text. But if you feel it is necessary, define what "shall have no effect" means, so that it could be added to the PICS and tested.

Response Response Status W
REJECT.

This is not new text. It is present in clause 22.2.2.4 of 802.3-2018. Removing this sentence may cause backward compatibility issues.

An additional pair of TXD values have been inserted, which result in the text being moved to page 25, line 21 of draft 2.0.

CI 22 SC 22.2.2.5 P 25 L 46 # 295
KIM, YONG NIO

Comment Type TR Comment Status R PLCA
The proposed sentence "Assertion of the TX_ER signal shall not affect.".potentially make existing systems non-compliant. So this potentially violates CRD (compatibility) and may cause other issues.

SuggestedRemedy

please fix it.

Response Response Status W
REJECT.

No change is being made to the original clause 22 "shall not affect" text. The modification is the addition of "(with the exception of 10BASE-T1S and 10BASE-T1L)". The idea, which has been discussed in the group, is that we don't want to preclude using TX_ER with new 10BASE-T PHYs, so an exception has been added.

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Cl 22 SC 22.2.2.11 P 26 L 33 # 297
KIM, YONG NIO

Comment Type TR Comment Status A PLCA

The proposed new paragraph has optional behavior that may or may not occur. This text does not belong in CL22.

SuggestedRemedy

Please remove the proposed text, or if required, put appropriate missing text WRT its relevancy (actions, signals, etc).

Response Response Status W

ACCEPT IN PRINCIPLE.

This text has been deleted by changes marked #649 in Clause_22_r2p0_resolution.pdf.

Cl 22 SC 22.2.2.12 P 26 L 42 # 298
KIM, YONG NIO

Comment Type TR Comment Status R PLCA

Similar to my comment on 22.2.11. The proposed new paragraph has optional behavior that may or may not occur. This text does not belong in CL22.

SuggestedRemedy

Please remove the proposed text, or if required, put appropriate missing text WRT its relevancy (actions, signals, etc).

Response Response Status W

REJECT.

Actions and signals are described in clause 148.4.4.1.3, which is referenced by 22.2.2.11 as appropriate.

Cl 30 SC 30.2.1 P 30 L 25 # 301
KIM, YONG NIO

Comment Type TR Comment Status A Management

oPLCA 30.3.9 block is misplaced. It is mutually exclusive with oMACMergeEntity and oMPPEmulation and possibly others.

SuggestedRemedy

Please fix it so that they are not mutually exclusive with compatible entities.

Response Response Status W

ACCEPT IN PRINCIPLE.

Move oPLCA under oPHYentity in Figure 30-3

Jon Lewis to implement change.

Cl 30 SC 30.3.9.1.1 P 31 L 33 # 305
KIM, YONG NIO

Comment Type TR Comment Status A Management

States "...A disabled PLCA utilizes Clause 22 reconciliation sublayer without modification. An enabled PLCA modifies the behavior of the reconciliation sublayer per Clause 148" but Clause 22 is already proposed to be modified with PLCA states and signals. If the intention is to leave CL22 as-is, this draft should not make any modification to CL22 and make this statement. Or do what was intended. Current text does not work (not clear).

SuggestedRemedy

Please fix it.

Response Response Status W

ACCEPT IN PRINCIPLE.

Replace "A disabled PLCA utilizes Clause 22 reconciliation sublayer without modification. An enabled PLCA modifies the behavior of the reconciliation sublayer per Clause 148."

with
"When PLCA is enabled, the reconciliation sublayer is as defined by Clause 148, otherwise, Clause 148 behavior is not enabled."

(note this should not say "clause 22 behavior is performed" because it needs also to apply to non-clause 22 and non-clause 148 situations...)

Cl 30 SC 30.3.9.2.3 P 32 L 11 # 309
KIM, YONG NIO

Comment Type TR Comment Status A Big Ticket Item PLCA

aPLCAMaxID -- does not have a range, so am I to read this as Max ID = <integer max value>? Is this max # of nodes consistent w/ PLCA clause, and is it get-set or just get? And why would this object be needed for each DTE?

SuggestedRemedy

Please clarify (range) and justify (why needed for each DTE)

Response Response Status W

ACCEPT IN PRINCIPLE.

Change "INTEGER" at 32/16 to "INTEGER VALUE in the following range (inclusive): 0-255"

Change "INTEGER" at 32/27 to "Same as aPLCAMaxID"

Add the following value after "The value of aPLCALocalNodeID is assigned to define the ID of the local node on the PLCA network.",

"Value must be in the range of [0, aPLCAMaxID] (inclusive)."

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Cl 30 SC 30.3.9.2.4 P 32 L 22 # 311
KIM, YONG NIO

Comment Type TR Comment Status A Management

There is no description on how NodeID=0 is assigned (or elected). How each NodeID is assured to be unique. How duplicate NodeID (error condition) is handled.

SuggestedRemedy

Please add details or references to these behaviors.

Response Response Status W

ACCEPT IN PRINCIPLE.

Accomodated by #598 which specifies locally unique NodeID within a collision domain.

Description or requirements of assignment of parameters in the management entity is beyond the scope of this standard.

Cl 30 SC 30.5.1.1.4 P 33 L 47 # 313
KIM, YONG NIO

Comment Type TR Comment Status R Big Ticket Item AUI

If 10BASE-T1S PHY supports CSMA/CD, then it should operate similiarly to 10BASE5, etc WRT to MAU not available/avialable as stated in second paragaph.

SuggestedRemedy

Please add appropriate references of media loopback. Current references are only to AUI

Response Response Status W

REJECT.

Consensus not to change. Refer to motion 9 from Unconfirmed_minutes_3cg_0918.pdf

Cl 148 SC 148.4.5.1 P 180 L 11 # 570
Laubach, Mark Broadcom

Comment Type TR Comment Status A PLCA

"PLCA control variables". Where are these? Suggest xref'ing to the appropriate subclause, e.g. 148.4.5.2. The more significant problem is that there is I can't find the term "default" and/or "default value" for any variable in 148.4.5.2. Please indicate in 148.4.5.2 what the default value is for each variable or consider providing a table somewhere appropriate with specific variables and their corresponding appropriate default value to make this statement correct.

SuggestedRemedy

Add the appropriate default value for each variable in 148.4.5.2 as referred to by the paragraph at line 11.

Response Response Status W

ACCEPT IN PRINCIPLE.

This text is not supposed to be normative, but rather a description of the normative state diagram in Fig 148-4 and 148-5.

Proposed resolution in Clause_148_r2p0_resolution.pdf. Changes are marked with #comment number in the right boxes.

Cl 148 SC 148.1 P 173 L 10 # 599
KIM, YONG NIO

Comment Type TR Comment Status A PLCA

says "MII. are compatible with the gRS. ". The statement may become true if all appropriate changes to CL22 are made to ensure this statement to be true. CL22 conveys PLS signals to MII. CL148 performs medium access control. So they are not compatible prior to changes.. Also not clear is what is being conveyed as "compatible".

SuggestedRemedy

Delete the sentence, and any other occurance of similar statement. If this statement is kept (against this comment), clarify what is meant to be "compatible"

Response Response Status W

ACCEPT IN PRINCIPLE.

Proposed resolution in Clause_148_r2p0_resolution.pdf. Changes are marked with #comment number in the right boxes.

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Cl 148 SC 148.4.4.1.2 P 178 L 51 # 602
 KIM, YONG NIO

Comment Type TR Comment Status A PLCA
 "thus request, the PHY shall asset the CRS..." has two problems. What PHY is "the PHY", and how does PHY assert CRS in accordance to CL148 state diagram

SuggestedRemedy
 Please fix it. If fixable.

Response Response Status W
 ACCEPT IN PRINCIPLE.
 Solved by #603 and #649

Cl 148 SC 148.4.4.1.2 P 178 L 51 # 603
 KIM, YONG NIO

Comment Type TR Comment Status A PLCA
 "A Commit request shall not.. PHY. RX_DV.." has two problems. What PHY is "the PHY", and how does the PHY know not to assert RX_DV signal in accordance to CL148 state diagram.

SuggestedRemedy
 Please fix it. If fixable.

Response Response Status W
 ACCEPT IN PRINCIPLE.

As stated in the same subclause "PHY specifications are free to map the COMMIT request to any suitable line coding as long as the requirement defined herein are met."

The purpose of this sentence is to ensure that whatever mapping is chosen in specific PHY clauses for the COMMIT request, this one is not interpreted as normal data (asserting RX_DV).

Suggested resolution should clarify this better.

Proposed resolution in Clause_148_r2p0_resolution.pdf. Changes are marked with #comment number in the right boxes.

NOTE: CRS assertion is not to be specified here (it's implicit in CRS definition). See resolution of #649

Cl 148 SC 148.4.5.1 P 181 L 50 # 604
 KIM, YONG NIO

Comment Type TR Comment Status R ig Ticket Item PLCA_SCOPE
 PLCA Control state diagram (Fig 148-5) and related text seems to describe Token bus-like medium access control function (without details on how the token (BEACON) is initialized, how dupilcate tokens are handled (duplicate nodeID=0), how lost token (null nodeID=0) is handled). This is NOT appropriate function for RS (CL22) layer that conveys (translates) signals between PLS and MII

SuggestedRemedy
 Move CL148 function so CL4 MAC Clause where it belongs. Make appropriate changes to CRD and objectives list, if deemed needed.

Response Response Status W
 REJECT.

See comment #637 for rationale.

Cl 148 SC 148.4.6.1 P 187 L 54 # 605
 KIM, YONG NIO

Comment Type TR Comment Status R t Item HALF_DUPLEX_802.1
 PLCA Data state diagram (Fig 148-6) introduces a new behavior WRT media loopback when transmitting. Prior to CL148, CL4 half-duplex MAC reflects all TX packets back to RX (reflected by the half-duplex medium). CL4 full-duplex MAC does not reflect any TX back to RX. There is recognized inconsistency in 802.1 MAC Services defintion (e.g. thought experiment -- how does broadcast frame transmitted by a bridge to a half-duplex medium behave as per std, and how does a system actually behave)? This statemachine introduces a new behavior for the half-duplex MAC, where the TX is not reflected back to RX. An EXISTING system that is not aware of 802.3cg behavior would IGNORE (with half-duplex MAC) RX when it is also TX, when in fact RX is independant transmission that must be received (otherwise packet was transmitted to the network and lost silently by being ignored (reflected)).

SuggestedRemedy
 While the 802.1 MAC services issues has nothing to do with 802.3cg scope, the 802 and 802.3 compatibility is IN scope, because by introducing a different behavior. Existing systems (MACs and Bridges) would potentially not process any RX that is coincidental with its own TX. Please fix it, if fixable. 802.1 MAC Services maintenance change may be required be reviewed together with this issue.

Response Response Status W
 REJECT.

PLCA is compatible with the clause 4 MAC as specified in 802.3. Maintenance on clause 4 or other Standards is outside the scope of this project. The P802.3cg Task Force Chair will forward this comment to 802.3 Maintenance for consideration.

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Cl 00 SC 0 P 0 L 0 # 632
 Thompson, Geoff GraCaSI S.A.
 Comment Type TR Comment Status R Big Ticket Item AUI
 Draft does not conform to the model shown in Figure 22-1 in that there is no AUI specified.
 SuggestedRemedy
 Include the specification of an AUI to the specification in order to make this new PHY a fully-fledged and compatible member of the family of 10 Mb/s interfaces.
 Response Response Status U
 REJECT.
 Consensus not to change. Refer to motion 9 from Unconfirmed_minutes_3cg_0918.pdf

Cl 45 SC 45.2.1.174c P 40 L 3 # 635
 Thompson, Geoff GraCaSI S.A.
 Comment Type TR Comment Status A Registers
 THE TEXT: "The 3 default values for each bit should be chosen so that the initial state of the device upon power up or reset is a 4 normal operational state without management intervention." is an editorial note requiring further definition of the draft. It indicates that the draft was not complete and not qualified for WG ballot.
 SuggestedRemedy
 Complete definition of these default values as well as other incomplete items. This constitutes a lack of completeness of the draft, restart the initial WG Ballot.
 Response Response Status U
 ACCEPT IN PRINCIPLE.
 No change to draft required.
 Table 45-142c clearly shows that 0 0 0 for bits 1.2298.15:13 are Normal (non-test) operation. And 45.2.1.174c.1 clearly states, "The default value for bits 1.2298.15:13 is zero."

Cl 147 SC 147.1 P L 22 # 637
 Thompson, Geoff GraCaSI S.A.
 Comment Type TR Comment Status R ig Ticket Item PLCA_SCOPE
 The inclusion of PLCA in this project is (1) a layer violation and (2) out of scope for a Physical Layer project according to clause 1.1 of the standard. Inclusion of PLCA conflicts with paragraph 3 of the responses to the "Compatibility" criteria of the CSD.
 SuggestedRemedy
 Remove this paragraph from the draft and related text from this project. If PLCA is desired as an addition to the standards family it should be placed appropriately within the layer structure and have its own CFI.
 Response Response Status U
 REJECT.

PLCA maps existing MAC PLS primitives to MII, which is in-line with what an RS is supposed to do. PLCA is defined as a reconciliation sublayer, which has been considered part of a Physical Layer specification project. As long as this is the case, the text belongs in the subclause.
 Straw Poll: I support rejecting this comment with the rationale above.
 Y:25
 N: 1
 A: 5

Cl 147 SC 147.1.1 P L 26 # 638
 Thompson, Geoff GraCaSI S.A.
 Comment Type TR Comment Status R Big Ticket Item AUI
 The text and Fig 147-1 do not align to Fig 1-1 of the standard which is intended to comprehensively cover 802.3.
 SuggestedRemedy
 Remove Fig 147-1 and reference Fig 1-1 or duplicate the 10 Mb/s portion of 1.1 here. Alter the implementation of 10BASE-T1S to align to the 1.1 model.
 Response Response Status U
 REJECT.
 Consensus not to change. Refer to motion 9 from Unconfirmed_minutes_3cg_0918.pdf

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CI 147 SC 147.2 P L 34 # 642
 Thompson, Geoff GraCaSI S.A.

Comment Type TR Comment Status R Big Ticket Item Primitives

The claim is that this PHY uses the MII, the reference to 40.2 is to the GMII

SuggestedRemedy

Change the reference to an MII clause and use the same primitives as existing 10/100 PHYs without alteration.

Response Response Status U

REJECT.

The reference is identical to that in c96 100BASE-T1. This is a reference to "Service primitives and interfaces", not MII.

Straw poll to reject comment with the above rationale:

Y: 9
 N: 0
 A: 21

CI 147 SC 147.3.1 P L 3 # 643
 Thompson, Geoff GraCaSI S.A.

Comment Type TR Comment Status A EZ

It is not clear from the description whether "PCS Reset" produces a level or a pulse on its output. i.e. does it take a !PCS Reset to complete the reset and release the device for operation.

SuggestedRemedy

Clarify

Response Response Status U

ACCEPT IN PRINCIPLE.
 WORK WITH PIER ON THIS
 Change this:

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PCS reset initializes all PCS functions. The PCS Reset function shall be executed whenever one of the following conditions occur:

- a) Power on (see 36.2.5.1.3).
 - B) The receipt of a request for reset from the management entity.
- PCS Reset shall set pcs_reset = ON while any of the above reset conditions holds true. All state diagrams take the open-ended pcs_reset branch upon execution of PCS Reset. The reference diagrams do not explicitly show the PCS Reset function.

====

to this:

====

PCS reset initializes all PCS functions. The PCS Reset function shall be executed whenever any of the following conditions occur:

- a) Power on causes power_on = TRUE (see 36.2.5.1.3) while pcs_reset = OFF.
- B) The receipt of a request for reset from the management entity (see 3.2291.15 in 45.2.3.58e.1), independently from the current state of pcs_reset.

All state diagrams take the open-ended pcs_reset branch upon execution of PCS Reset. PCS Reset shall keep pcs_reset = ON until the complete execution of the PCS Reset function, after which it is set to pcs_reset = OFF. The reference diagrams do not explicitly show the PCS Reset function.

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Management Parameters for 10 Mb/s Operation and Associated Power Delivery over a Single Balanced P

CI 147 SC 147.3.2.2 P L 44 # 645
 Thompson, Geoff GraCaSI S.A.
 Comment Type **TR** Comment Status **R** *ig Ticket Item PLCA_SCOPE*
 PLCA is out of scope for this project and a layer violation for a PHY project.
 SuggestedRemedy
 Remove this variable and its descriptive paragraph.
 Response Response Status **U**
 REJECT.
 See comment #637 for rationale.

CI 147 SC 147.3.2.2 P L 50 # 646
 Thompson, Geoff GraCaSI S.A.
 Comment Type **TR** Comment Status **R** *ig Ticket Item PLCA_SCOPE*
 PLCA is out of scope for this project and a layer violation for a PHY project.
 SuggestedRemedy
 Remove the remainder of PCLA from this project draft.
 Response Response Status **U**
 REJECT.
 See comment #637 for rationale.

CI 147 SC 147.3.5 P L 10 # 648
 Thompson, Geoff GraCaSI S.A.
 Comment Type **TR** Comment Status **R** *Big Ticket Item Repeaters*
 Collision detect as described here purports to detect a collision between this station and one other station. It does not describe any way to detect a collision between any other two or more stations.
 SuggestedRemedy
 Add collision detection based on energy received. Lack of this aspect constitutes a lack of completeness in the basic function of the specified device and therefore the draft. Restart the initial WG Ballot.
 Response Response Status **U**

REJECT.
 PHYs detect activity on the bus, specific detection of collision is not required, nor is the method.
 Commenter indicates that his concern is reliable detection of activity with an arbitrary number of transmitters.
 Straw Poll:
 I support:
 REJECT - PHYs detect activity on the bus, specific detection of collision is not required, nor is the method.
 Y:7
 N:2
 A:11
 I support:
 ACCEPT. (commenter's proposed resolution is: Add collision detection based on energy received. Restart the initial WG Ballot.)
 Y:0
 N:9
 TFTD

Management Parameters for 10 Mb/s Operation and Associated Power Delivery over a Single Balanced P

Cl 147 SC 147.3.7 P L 1 # 650
Thompson, Geoff GraCaSI S.A.

Comment Type TR Comment Status R ig Ticket Item PLCA_SCOPE
PLCA is out of scope for this project and a layer violation for a PHY project.

SuggestedRemedy

Remove the entirety of cl. 147.3.7.

Response Response Status U
REJECT.

See comment #637 for rationale.

Cl 148 SC 148 P 173 L 1 # 656
Thompson, Geoff GraCaSI S.A.

Comment Type TR Comment Status R ig Ticket Item PLCA_SCOPE
The inclusion of PLCA in this project is (1) a layer violation and (2) out of scope for a Physical Layer project according to clause 1.1 of the standard. Inclusion of PLCA conflicts with paragraph 3 of the responses to the "Compatibility" criteria of the CSD.

SuggestedRemedy

Remove clause 148 and related text from the draft. If PLCA is desired as an addition to the standards family it should be placed appropriately within the layer structure and have its own CFI.

Response Response Status U
REJECT.

See comment #637 for rationale.

Cl 148 SC 148.1 P 173 L 14 # 657
Thompson, Geoff GraCaSI S.A.

Comment Type TR Comment Status A ig Ticket Item PLCA_SCOPE

According to this text, "PLCA is designed to work on top of CSMA/CD". Therefore it is mispositioned in the stack by being placed within the PHY which is below the CSMA/CD mechanism.

SuggestedRemedy

Remove clause 148 and related text from the draft. If PLCA is desired as an addition to the standards family it should be placed appropriately at MAC Control or higher within the layer structure and have its own CFI.

Response Response Status U
ACCEPT IN PRINCIPLE.

Proposed resolution in Clause_148_r2p0_resolution.pdf. Changes are marked with #657 in the right boxes.

NOTE: Intention was to specify that PLCA is not a replacement of CSMA/CD but instead it's a method that works in conjunction with CSMA/CD functions.

Cl 22 SC 22 P 25 L 1 # 658
Thompson, Geoff GraCaSI S.A.

Comment Type TR Comment Status R Big Ticket Item PLCA

The proposed changes in this clause are at odds with the statement in the approved criteria on compatibility that states "As a PHY amendment to IEEE Std 802.3, the proposed project will use (the existing) MII"

SuggestedRemedy

Remove clause 148 and related text from the draft. If PLCA is desired as an addition to the standards family it should be placed appropriately at MAC Control or higher within the layer structure and have its own CFI.

Response Response Status U
REJECT. Group to discuss.

Straw Poll: Reject comment #658 because 1) PLCA is compatible and operates with the CSMA CD MAC, not as a MAC function and 2) PLCA operates as a reconciliation sublayer and does not change the PLS service primitives.

Y: 27
N: 2
A: 7

Management Parameters for 10 Mb/s Operation and Associated Power Delivery over a Single Balanced P

Cl 147 SC 147 P 145 L 1 # 659
 Thompson, Geoff GraCaSI S.A.

Comment Type TR Comment Status R Big Ticket Item AUI

There is no AUI defined in the draft. The AUI is an essential element of all 802.3 10 Mb/s PHY specifications. This is particularly true in the case of half duplex applications where it is used as a timing test point for calculating the delay used in CSMA/CD round trip timing sums (Ref: Table 4-2). An AUI definition point is also needed (even if it never appears externally on a piece of equipment) in order to be able to include the cl. 9 repeater in networking configurations. Even though (almost) no one else remembers it or thinks it is relevant, the c. 9 repeater is a valuable tool in the network kit. It has a very, very low transistor count when compared to a bridge and much lower delay (~ 9 bit times) and jitter (not dependent on packet length) such that it is a superior element for time sensitive applications in terms of cost and performance.

SuggestedRemedy

Define and specify the AUI (no connector specification required) for the 10BASE-T1S PHY for use as a functional test point, a timing test point and a standardized element edge for IP implementations of the PHY.

Response Response Status U

REJECT.

Consensus not to change. Refer to motion 9 from Unconfirmed_minutes_3cg_0918.pdf

Cl 00 SC 13 P L 3 # 661
 Thompson, Geoff GraCaSI S.A.

Comment Type TR Comment Status R Big Ticket Item Repeaters

When we added this note we thought we were through with 10 Mb/s and half duplex forever. That appears not to be the case.

SuggestedRemedy

Remove the note and update clause 13 appropriately to add 10BASE-T1S as a full fledged member of the 10 Mb/s CSMA/CD family.

Response Response Status U

REJECT.

Consensus not to change. Refer to motion 9 from Unconfirmed_minutes_3cg_0918.pdf