

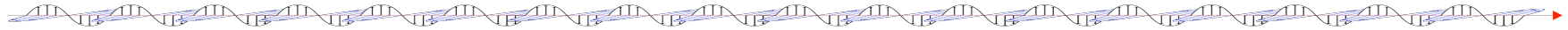


802.3 Closing Report

IEEE 802.3 Next Generation 40 Gb/s and 100 Gb/s Optical Ethernet Study Group

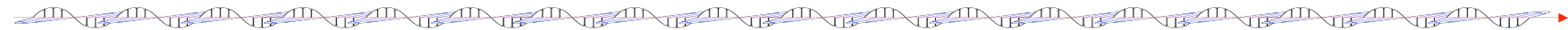
Dan Dove
Applied Micro
San Diego, CA – 19, July 2012

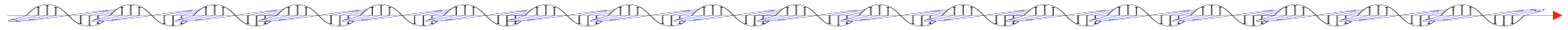




Overview (1)

- July Plenary Meeting highlights
 - 91 People signed the attendance sheet
 - 21 Presentations from various contributors
 - 2 days of meetings
- Comment Resolution
 - A single set of comments came in from our PAR and 5C pre-submission. These came from the EC and were related to the format and content of our documents.
 - Changed documents at;
 - http://www.ieee802.org/3/100GNGOPTX/public/jul12/dove_02_0712_optx.pdf
 - http://www.ieee802.org/3/100GNGOPTX/public/jul12/dove_03_0712_optx.pdf
 - http://www.ieee802.org/3/100GNGOPTX/P802_3bm_PAR_190712.pdf

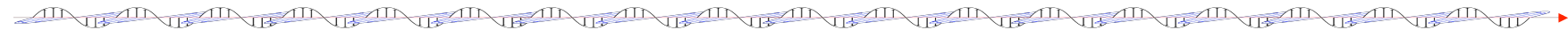




All Comments received on PAR / 5C

- From 802 EC
- **3. 802.3bm, amendment for 40 Gb/s and 100 Gb/s Operation Over Fiber Optic Cables, PAR and 5C**
- The 5C that was used is not the currently approved set of 5Cs that are required by 802 EC OM (see 11.5.2). Please update and respond accordingly.
- The title of the PAR and the 5C is different... The 5C document does not reference the PAR. Some note to tie the two together should be made.
- In response to page 11 of the 5C document:

You're Welcome!!



Responses to 5C Comments (1)

IEEE 802.3 Five Criteria

The IEEE 802 Criteria for Standards Development (Five Criteria) are defined in subclause 12.5 of the 'IEEE project 802 LAN/MAN Standards Committee (LMSC) operations manual'. These are supplemented by subclause 7.2 'Five Criteria' of the 'Operating Rules of IEEE Project 802 Working Group 802.3, CSMA/CD LANs'.

[The following are the Five Criteria Responses in relation to the IEEE P802.3bm PAR](#)

Broad Market Potential

A standards project authorized by IEEE 802 LMSC shall have a broad market potential.

Specifically, it shall have the potential for:

- a) Broad sets of applicability.
- b) Multiple vendors and numerous users.
- c) Balanced costs (LAN versus attached stations).

1. Optical Ethernet interfaces have been widely deployed. Examples include Data Centers, Enterprise and Telecom Network Equipment for edge, distribution and core connections.
2. Internet, cloud, and higher performance computing applications, along with advances in processors, server virtualization and converged networking, are driving the need for increasing numbers of high throughput LAN connections. As the market for 100 Gb/s LAN connections grows, lower cost, higher density, and lower power alternatives become necessary.
3. There has been wide attendance and participation (avg 108 persons, 71 companies) in the study group by equipment manufacturers, component suppliers and other stakeholders. It is anticipated that there will be sufficient participation to effectively complete the standardization process.
4. 100 Gb/s Ethernet optical PHY types utilizing a 4 x 25 Gb/s electrical interface, and optimized MMF interfaces will reduce cost, size and power for links in the growing Data Center market and provide a balance in cost between network equipment and attached stations.
5. 100 Gb/s Ethernet optical PHY types utilizing a 4 x 25 Gb/s electrical interface, and optimized SMF interfaces will reduce cost, size and power for links in the growing Data Center market and provide a balance in cost between network equipment and attached stations.
6. 40 Gb/s Ethernet has been deployed beyond its originally envisioned application space of server interconnect. Extending the reach of 40 Gb/s Ethernet will allow Ethernet to continue to address markets (such as telecom) as 10 Gb/s links are upgraded to 40 Gb/s.

Added "The following are the Five Criteria Responses in relation to the IEEE P802.3bm PAR" to title page

Added red-blocks to notate changes from old 5C questions to new format – Note, questions didn't substantially change except for Compatibility Slide



Responses to 5C Comments (2)

Compatibility

- IEEE 802 LMSC defines a family of standards. All standards should be in conformance : IEEE Std 802, IEEE 802.1D, and IEEE 802.1Q. If any variances in conformance emerge, they shall be thoroughly disclosed and reviewed with IEEE 802.1 Working Group. In order to demonstrate compatibility with this criterion, the Five Criteria statement must answer the following questions. Each standard in the IEEE 802 family of standards shall include a definition of managed objects that are compatible with systems management standards.
 - a) Does the PAR mandate that the standard shall comply with IEEE Std 802, IEEE Std 802.1D and IEEE Std 802.1Q?
 - b) If not, how will the Working Group ensure that the resulting draft standard is compliant, or if not, receives appropriate review from the IEEE 802.1 Working Group
- [Compatibility with IEEE Std 802.3](#)
- [Conformance with the IEEE Std 802.3 MAC](#)
- [Managed object definitions compatible with SNMP](#)

1. As an amendment to IEEE Std 802.3 (as amended by IEEE Std 802.3ba-2010) the proposed project will remain in conformance with the IEEE 802 Overview and Architecture, the bridging standards IEEE Std 802.1D and IEEE Std 802.1Q
2. The proposed amendment will conform to the full-duplex operating mode of the IEEE 802.3 MAC.
3. The proposed amendment will conform to the 40 Gb/s and 100 Gb/s Media Independent Interfaces (XLGMII and CGMII) specified by IEEE Std 802.3.
4. The proposed amendment will follow the existing format and structure of IEEE 802.3 management definitions by providing a protocol-independent specification of managed objects.
5. SNMP management capability to be provided in the future by an amendment to or revision of IEEE Std 802.3.1.
6. [The PAR mandates the resulting standard will comply with IEEE Std 802, IEEE Std 802.1D, and IEEE Std 802.1Q.](#)

IEEE 802.3 Next Generation 40 Gb/s and 100 Gb/s Optical Ethernet 17-19 July 2012 Plenary Meeting Page 6

New 5C for Compatibility included questions related to 802.1D and 802.1Q

Added answer: “The PAR mandates the resulting standard will comply with IEEE Std 802, IEEE Std 802.1D, and IEEE Std 802.1Q.”



Responses to 5C Comments (3)

IEEE 802.3 PAR

The IEEE 802 Procedure for PARs (Project Authorization Request) is defined in clause 12 of the 'IEEE project 802 LAN/MAN Standards Committee (LMSC) operations manual'.

The sponsor submits an online form containing a combination of pre-filled information, and added content that describes the proposed project.

Submitted information (proposed) is shown in blue below.

Changes to submitter, date and section 8.1 in green.

IEEE 802.3 Next Generation 40 Gb/s and 100 Gb/s Optical Ethernet 17-19 July 2012 Plenary Meeting Page 2

Changes to PAR presentation & Document

- Modified Submitter from Dan Dove to David Law to reconcile presentation to PAR
- Modified submission date on presentation to reconcile presentation to PAR
- Added response to section 8.1 (described on next slide)



Responses to 5C Comments (4)

Proposed Text (sec 6-8)

Intellectual Property

6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: No

6.1.b. Is the Sponsor aware of possible registration activity related to this project?: No

7.1 Are there other standards or projects with a similar scope?: No

7.2 Joint Development

Is it the intent to develop this document jointly with another organization?: No

8.1 Additional Explanatory Notes (Item Number and Explanation): Item # 5.2: The resulting standard will comply with IEEE Std 802, IEEE Std 802.1D, and IEEE Std 802.1Q.

Changes to PAR presentation & Document

- Added the following response to 8.1
- **8.1 Additional Explanatory Notes (Item Number and Explanation):** Item # 5.2: The resulting standard will comply with IEEE Std 802, IEEE Std 802.1D, and IEEE Std 802.1Q.



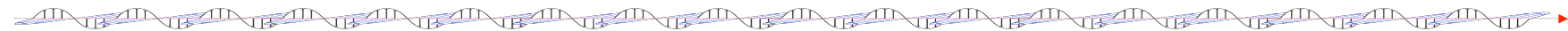
Motions (1)

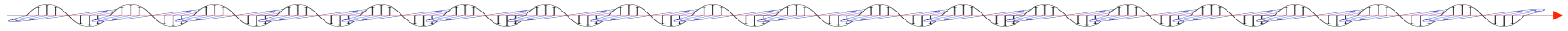
Motion 1

- Request 802.3 extend our Study Group for an additional period of 6 months
- Moved: Steve Trowbridge
- Second: Pete Anslow
- Y: 45
- N: 0
- A: 0 Passes

Motion 2

- Move that the Study Group adopt dove_02_0712_optx for our amended SG 5 Criteria submittal
- Moved: Robert Lingle
- Second: Pete Anslow
- Y: 43
- N: 0
- A: 1 Passes

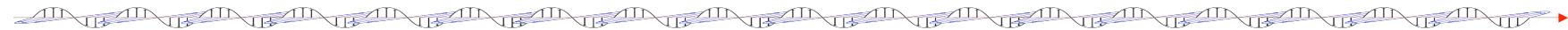


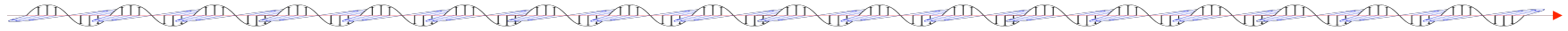


Motions (2)

Motion 3

- Move that the Study Group adopt dove_03_0712_optx for our amended SG PAR submittal
- Moved: Kapil Shrikhande
- Second: Steve Trowbridge
- Y: 45
- N: 0
- A: 0 Passes

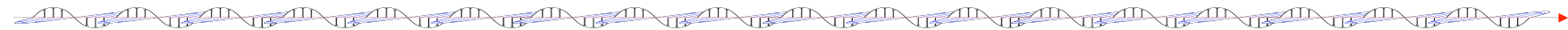


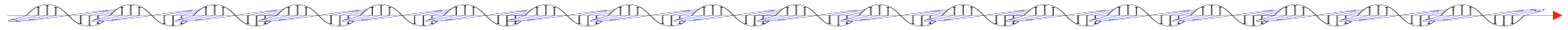


Motions (3)

Motion 4

- Move that the Study Group:
 - Submit the amended project documentation to the 802.3 Working Group for approval.
 - Request that the 802.3 Working Group chair submit the amended PAR and 5 criteria responses to the 802 Executive Committee for consideration at the July 2012 Plenary Session. Should the IEEE 802.3 Working Group not approve the submission at its July 2012 meeting, it will be removed from the IEEE 802 Executive Committee agenda.
- Moved: Pete Anslow
- Second: Peter Stassar
- Y: 48
- N: 0
- A: 0 Passes



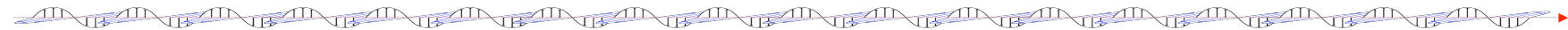


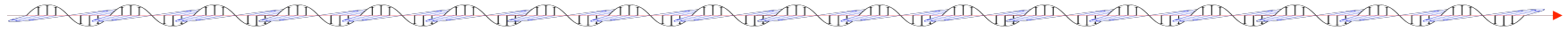
Strawpolls

- How many people
 - Are sure they will attend the ITU/802.3 Workshop? 12
 - May attend the ITU/802.3 Workshop? 7
 - Will not attend the ITU/802.3 Workshop? 18

 - Prefer meeting on Monday, Tuesday, Wednesday ? 30
 - Prefer meeting on Wednesday, Thursday, Friday ? 8

 - Are sure they will attend the September Interim? 33
 - May attend the September Interim? 15
 - Will not attend the September Interim? 4

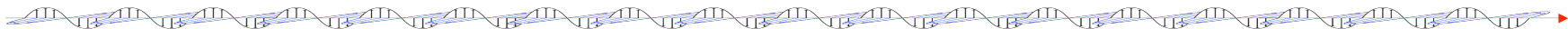




Objectives Review

The following Objectives have been approved by the Next Generation 40 Gb/s and 100 Gb/s Optical Ethernet Study Group:

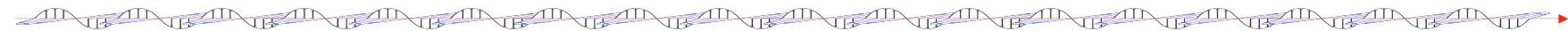
- Support full-duplex operation only
- Preserve the IEEE 802.3 / Ethernet frame format utilizing the IEEE 802.3 MAC
- Preserve minimum and maximum FrameSize of current IEEE 802.3 standard
- Support a BER better than or equal to 10^{-12} at the MAC/PLS service interface
- Provide appropriate support for OTN
- Define re-timed 4-lane 100G PMA to PMA electrical interfaces for chip to chip and chip to module applications
- Define a 40 Gb/s PHY for operation over at least 40 km of SMF
- Define a 100 Gb/s PHY for operation up to at least 500 m of SMF
- Define a 100 Gb/s PHY for operation up to at least 100 m of MMF
- Define a 100 Gb/s PHY for operation up to at least 20 m of MMF





5C Review

- The following slides compose our 5 Criteria Responses as amended after significant review & comment resolution:
 - Proposed 5C responses posted to reflector 2 weeks prior to Minneapolis meeting, comments requested
 - Comments absorbed, responded to
 - Modified 5C responses posted on website in advance of meeting
 - Modified 5C responses reviewed in Minneapolis, minor changes considered and incorporated
 - 5C responses voted on individually and passed unanimously
 - 5C responses pre-submitted to 802.3 and 802 EC
 - Minor Changes made this week in response to comments from EC after pre-submittal.





Proposed 5 Criteria Responses

IEEE 802.3
Next Generation
40 Gb/s and 100 Gb/s Optical Ethernet
Study Group

Dan Dove, Applied Micro
San Diego, CA: 17-19 July 2012

Contributors and Supporters

- Ghani Abbas - Ericson
- Jon Anderson - Opnext
- Steven Bates - PMC-Sierra
- Mike Bennett - LBNL
- Ralf-Peter Braun - Deutsche Telecom AG
- David Chalupsky – Intel
- Frank Chang - Vitesse
- Chris Cole - Finisar
- Piers Dawe - IPtronics
- Alan Flatman - LAN Technologies
- Ali Ghiasi - Broadcom
- Mark Gustlin - Xilinx
- Hiroshi Hamano - Fujitsu Labs. Ltd.
- Kiyo Hiramoto - Opnext
- Hideki Isono - Fujitsu Optical Components
- Walter Katz - SiSoft
- Scott Kipp - Brocade
- Taichi Kogure - Opnext
- Paul Kolesar - Commscope
- David Lewis - JDSU
- Robert Lingle Jr. - OFS
- Kent Lusted - Intel
- Valerie Maguire - Siemon
- Arlon Martin - Kotura
- Phil McClay - TE Connectivity
- Mark Nowell - Cisco
- David Ofelt - Juniper
- Mike Peng Li - Altera
- John Petrilla – Avago Technologies
- Rick Rabinovich - Alcatel-Lucent
- Ted Sprague - Infinera
- Peter Stassar - Huawei
- Steve Swanson - Corning
- Andre Szczepanek - Inphi
- Nathan Tracy – TE Connectivity
- Francois Tremblay - Semtech
- Alexandar Umnov - Huawei
- Tim Warland - APM
- David Warren - HP
- Chengbin Wu - ZTE
- Huangxi – Huawei
- Tom McDermott – Fujitsu
- Hiroshi Hamano – Fujitsu
- CK Wong - FCI

IEEE 802.3 Five Criteria

The IEEE 802 Criteria for Standards Development (Five Criteria) are defined in subclause 12.5 of the 'IEEE project 802 LAN/MAN Standards Committee (LMSC) operations manual'. These are supplemented by subclause 7.2 'Five Criteria' of the 'Operating Rules of IEEE Project 802 Working Group 802.3, CSMA/CD LANs'.

[The following are the Five Criteria Responses in relation to the IEEE P802.3bm PAR](#)

Broad Market Potential

A standards project authorized by IEEE 802 LMSC shall have a broad market potential. Specifically, it shall have the potential for:

- a) Broad sets of applicability.**
- b) Multiple vendors and numerous users.**
- c) Balanced costs (LAN versus attached stations).**

1. Optical Ethernet interfaces have been widely deployed. Examples include Data Centers, Enterprise and Telecom Network Equipment for edge, distribution and core connections.
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3. There has been wide attendance and participation (avg 108 persons, 71 companies) in the study group by equipment manufacturers, component suppliers and other stakeholders. It is anticipated that there will be sufficient participation to effectively complete the standardization process.
4. 100 Gb/s Ethernet optical PHY types utilizing a 4 x 25 Gb/s electrical interface, and optimized MMF interfaces will reduce cost, size and power for links in the growing Data Center market and provide a balance in cost between network equipment and attached stations.
5. 100 Gb/s Ethernet optical PHY types utilizing a 4 x 25 Gb/s electrical interface, and optimized SMF interfaces will reduce cost, size and power for links in the growing Data Center market and provide a balance in cost between network equipment and attached stations.
6. 40 Gb/s Ethernet has been deployed beyond its originally envisioned application space of server interconnect. Extending the reach of 40 Gb/s Ethernet will allow Ethernet to continue to address markets (such as telecom) as 10 Gb/s links are upgraded to 40 Gb/s.

Compatibility

- **IEEE 802 LMSC defines a family of standards. All standards should be in conformance : IEEE Std 802, IEEE 802.1D, and IEEE 802.1Q. If any variances in conformance emerge, they shall be thoroughly disclosed and reviewed with IEEE 802.1 Working Group. In order to demonstrate compatibility with this criterion, the Five Criteria statement must answer the following questions. Each standard in the IEEE 802 family of standards shall include a definition of managed objects that are compatible with systems management standards.**
 - a) **Does the PAR mandate that the standard shall comply with IEEE Std 802, IEEE Std 802.1D and IEEE Std 802.1Q?**
 - b) **If not, how will the Working Group ensure that the resulting draft standard is compliant, or if not, receives appropriate review from the IEEE 802.1 Working Group**
 - **Compatibility with IEEE Std 802.3**
 - **Conformance with the IEEE Std 802.3 MAC**
 - **Managed object definitions compatible with SNMP**
1. As an amendment to IEEE Std 802.3 (as amended by IEEE Std 802.3ba-2010) the proposed project will remain in conformance with the IEEE 802 Overview and Architecture, the bridging standards IEEE Std 802.1D and IEEE Std 802.1Q
 2. The proposed amendment will conform to the full-duplex operating mode of the IEEE 802.3 MAC.
 3. The proposed amendment will conform to the 40 Gb/s and 100 Gb/s Media Independent Interfaces (XLGMII and CGMII) specified by IEEE Std 802.3.
 4. The proposed amendment will follow the existing format and structure of IEEE 802.3 management definitions by providing a protocol-independent specification of managed objects.
 5. SNMP management capability to be provided in the future by an amendment to or revision of IEEE Std 802.3.1.
 6. [The PAR mandates the resulting standard will comply with IEEE Std 802, IEEE Std 802.1D, and IEEE Std 802.1Q.](#)

Distinct Identity (1 of 2)

Each IEEE 802 LMSC standard shall have a distinct identity. To achieve this, each authorized project shall be:

- a) Substantially different from other IEEE 802 standards.
- b) One unique solution per problem (not two solutions to a problem).
- c) Easy for the document reader to select the relevant specification.
- d) Substantially different from other IEEE 802.3 specifications/solutions.

1. While IEEE Std 802.3 does include specifications for 40 Gb/s and 100 Gb/s Ethernet on MMF and SMF cables there is a demand for reduced power, increased density and reduced cost with respect to these solutions.

2. The proposed 100 Gb/s SMF PHY(s) would use four 25 Gb/s electrical interconnect lanes in each direction **not currently defined in IEEE Std 802.3**.

3. The proposed 100 Gb/s MMF PHY(s) would use four lanes in each direction, allowing an 8 fiber link (rather than the 20 fiber link used by 100GBASE-SR10) and avoiding the need for a gearbox to/from the 25 Gb/s electrical interconnect.

4. The proposed 40 Gb/s SMF PHY would provide the only Ethernet solution at this rate for operation over distances above 10 km.

Distinct Identity (2 of 2)

Each IEEE 802 LMSC standard shall have a distinct identity. To achieve this, each authorized project shall be:

- a) Substantially different from other IEEE 802 standards.**
- b) One unique solution per problem (not two solutions to a problem).**
- c) Easy for the document reader to select the relevant specification.**
- d) Substantially different from other IEEE 802.3 specifications/solutions.**

- 5. The amendment will define one or two PMD types over MMF depending on whether one PMD type with short reach and a second with longer reach have sufficient cost, density, or power difference to justify two PMD types.
- 6. The amendment will enable new PHY types over SMF which consist of the existing 100GBASE-LR4 and 100GBASE-ER4 optical PMDs with four electrical interconnect lanes in each direction. The amendment will define a new 100 Gb/s SMF PMD in addition to these if it can be shown that a SMF PMD with a shorter reach than 100GBASE-LR4 has sufficient cost, density, or power difference to justify an additional SMF PMD type.
- 7. The proposed amendment to the existing IEEE 802.3 standard will be formatted as a collection of new clauses and amendments of existing clauses as appropriate, making it easy for the reader to select the relevant specification.

Technical Feasibility

For a project to be authorized, it shall be able to show its technical feasibility. At a minimum, the proposed project shall show:

- a) Demonstrated system feasibility.**
- b) Proven technology, reasonable testing.**
- c) Confidence in reliability.**

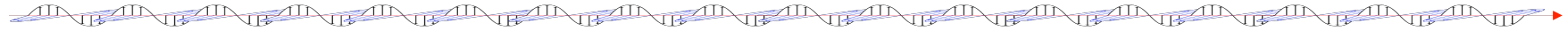
1. The operation of Ethernet at 40 Gb/s and 100 Gb/s has been established by deployment of devices compliant with IEEE Std 802.3 in operational networks.
2. The proposed project will build on the array of Ethernet fiber-optic component and sub-system design experience, and the broad knowledge base of Ethernet network operation.
3. Component vendors have provided presentations on the feasibility of the necessary components for this project, which either leverage existing technologies or employ new technologies.
4. The reliability of Ethernet components and systems can be projected in the target environments with a high degree of confidence based on existing 40 Gb/s and 100 Gb/s deployment experience.

Economic Feasibility

For a project to be authorized, it shall be able to show economic feasibility (so far as can reasonably be estimated) for its intended applications. At a minimum, the proposed project shall show:

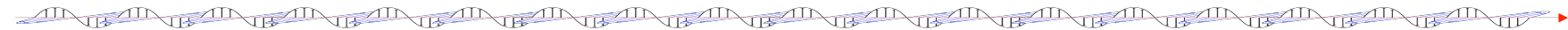
- a) Known cost factors, reliable data.**
- b) Reasonable cost for performance.**
- c) Consideration of installation costs.**

1. The cost factors for Ethernet components and systems are well known. The proposed project may introduce new cost factors which can be quantified.
2. Prior experience in the development of optical Physical Layer specifications for Ethernet indicates that the specifications developed by this project will entail a reasonable cost for the resulting performance.
3. The proposed 100 Gb/s optical PHYs will make it possible to achieve the desired density, power and cost targets for computer systems and network equipment.
4. The proposed 40 Gb/s optical PHY will enable upgrade of existing 10 Gb/s 40 km links to 40 Gb/s operation at significantly lower cost than current solutions.
5. In consideration of installation costs, the project is expected to use proven and familiar media, including multi-pair MMF, duplex SMF and possibly multi-pair SMF cabling technology.
6. Network design, installation and maintenance costs are minimized by preserving network architecture, management, and software.



PAR Review

- The following slides compose our PAR Responses as amended after significant review & comment resolution:
 - Proposed PAR responses posted to reflector 2 weeks prior to Minneapolis meeting, comments requested
 - No significant PAR comments received prior to Minneapolis
 - PAR responses voted on and passed unanimously
 - PAR pre-submitted to 802.3 and 802 EC
 - Minor Changes made this week in response to comments from pre-submittal.





Proposed Project Authorization Request

IEEE 802.3
Next Generation
40 Gb/s and 100 Gb/s Optical Ethernet
Study Group

Dan Dove, Applied Micro
San Diego, CA: 17-19 July 2012

IEEE 802.3 PAR

The IEEE 802 Procedure for PARs (Project Authorization Request) is defined in clause 12 of the 'IEEE project 802 LAN/MAN Standards Committee (LMSC) operations manual'.

The sponsor submits an online form containing a combination of pre-filled information, and added content that describes the proposed project.

Submitted information (proposed) is shown in **blue** below.
Changes to submitter, date and section 8.1 in green.

Proposed Text (sec 1, 2)

Submitter Email: david_law@ieee.org

Type of Project: [Amendment to IEEE Standard 802.3-2008](#)

PAR Request Date: [17-May-2012](#)

PAR Approval Date:

PAR Expiration Date:

Status: **Unapproved PAR**, PAR for an Amendment to an existing IEEE Standard

1.1 Project Number: [P802.3bm](#)

1.2 Type of Document: [Standard](#)

1.3 Life Cycle: Full Use

2.1 Title: Standard for Information technology--Telecommunications and information exchange between systems--Local and metropolitan area networks--Specific requirements Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications [Amendment: Physical Layer Specifications and Management Parameters for 40 Gb/s and 100 Gb/s Operation Over Fiber Optic Cables](#)

Proposed Text (sec 3)

3.1 Working Group: Ethernet Working Group (C/LM/WG802.3)

Contact Information for Working Group Chair

Name: David Law

Email Address: david_law@ieee.org

Phone: +44 131 665 7264

Contact Information for Working Group Vice-Chair

Name: Wael Diab

Email Address: wael.diab@gmail.com

Phone: 4154468066

3.2 Sponsoring Society and Committee: IEEE Computer Society/LAN/MAN Standards Committee (C/LM)

Contact Information for Sponsor Chair

Name: Paul Nikolich

Email Address: p.nikolich@ieee.org

Phone: 857.205.0050

Contact Information for Standards Representative

None

Proposed Text (sec 4)

4.1 Type of Ballot: [Individual](#)

4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: [07/2014](#)

4.3 Projected Completion Date for Submittal to RevCom: [03/2015](#)

Proposed Text (sec 5.1, 5.2a)

5.1 Approximate number of people expected to be actively involved in the development of this project: 108

5.2.a. Scope of the complete standard: This standard defines Ethernet local area, access and metropolitan area networks. Ethernet is specified at selected speeds of operation; and uses a common media access control (MAC) specification and management information base (MIB). The Carrier Sense Multiple Access with Collision Detection (CSMA/CD) MAC protocol specifies shared medium (half duplex) operation, as well as full duplex operation. Speed specific Media Independent Interfaces (MIIs) provide an architectural and optional implementation interface to selected Physical Layer entities (PHY). The Physical Layer encodes frames for transmission and decodes received frames with the modulation specified for the speed of operation, transmission medium and supported link length. Other specified capabilities include: control and management protocols, and the provision of power over selected twisted pair PHY types.

Proposed Text (sec 5.2b, 5.3, 5.4)

5.2.b. Scope of the project: This project is to specify additions to and appropriate modifications of IEEE Std 802.3 to add 100 Gb/s Physical Layer (PHY) specifications and management parameters, using a four-lane electrical interface for operation on multimode and single-mode fiber optic cables. In addition, to add 40 Gb/s Physical Layer (PHY) specifications and management parameters for operation on extended reach (> 10 km) single-mode fiber optic cables.

5.3 Is the completion of this standard dependent upon the completion of another standard: No

5.4 Purpose: This document will not include a purpose clause.

Proposed Text (sec 5.5, 5.6)

5.5 Need for the Project: Rapid growth of server, network, and internet traffic is driving the need for higher data rates, higher density, lower cost fiber optic solutions, especially in the data center space. Advances in technology now allow the specification of new 100 Gb/s Physical Layer types with reduced lane count, addressing these needs. IEEE Std 802.3 does not currently define a 100 Gb/s four-lane electrical interface between host ICs and optical modules, nor does it define an extended reach solution for 40 Gb/s on single-mode fiber beyond 10 km.

5.6 Stakeholders for the Standard: Stakeholders that have been identified to date include, but are not limited to: users and producers of systems and components for servers, network storage, networking systems, data centers, high performance computing, and telecommunications carriers.

Proposed Text (sec 6-8)

Intellectual Property

6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: No

6.1.b. Is the Sponsor aware of possible registration activity related to this project?: No

7.1 Are there other standards or projects with a similar scope?: No

7.2 Joint Development

Is it the intent to develop this document jointly with another organization?:
No

8.1 Additional Explanatory Notes (Item Number and Explanation): Item # 5.2:
The resulting standard will comply with IEEE Std 802, IEEE Std 802.1D, and IEEE Std 802.1Q.



Thank You!

