

IEEE 802.3 motions

IEEE 802 EC

Friday 18 November 2022

7.087 ME: Establishment of IEEE 802.3 liaison with Open Alliance TC 7

Establishment of IEEE 802.3 liaison with Open Alliance TC 7

Motion

Approve <<https://mentor.ieee.org/802-ec/dcn/22/ec-22-0245-00-00EC-establishment-of-liaison-with-open-alliance-tc-7.pdf>> to establish an IEEE 802.3 Liaison with Open Alliance TC 7

Confirm the appointment of Luis Manuel Torres as an IEEE 802.3 liaison officer to serve as the IEEE 802.3 Liaison to Open Alliance TC 7

M: Law S: D'Ambrosia

Y: ??, N: ??, A: ??

Working Group vote

Y: 82, N: 0, A: 0

5.015 and 5.016 ME: IEEE P802.3df 200 Gb/s,
400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet
PAR split (division of existing work item)

IEEE P802.3df Target PMDs

Ethernet Rate	Assumed Signaling Rate per lane	BP	Cu Cable	MMF 50m	MMF 100m	SMF 500m	SMF 2km	SMF 10km	SMF 40km
200 Gb/s	200 Gb/s		1 pair			1 pair	1 pair		
400 Gb/s	100 Gb/s						4 pairs		
	200 Gb/s		2 pairs			2 pairs			
800 Gb/s	100 Gb/s	8 lanes	8 pairs	8 pairs	8 pairs	8 pairs	8 pairs		
	200 Gb/s		4 pairs			4 pairs	1) 4 pairs 2) 4 λ's		
	TBD							Over single SMF in each direction	Over single SMF in each direction
1.6 Tb/s	100 Gb/s								
	200 Gb/s		8 pairs			8 pairs	8 pairs		

Technology Reuse

Leverage existing or work-in-progress 100 Gb/s per lane (e.g. 3cu, 3ck, 3db) to higher lane counts

Develop 200 Gb/s per lane electrical signaling for 1/2/4/8 lane variants of electrical PMDs

Develop 200 Gb/s per optical fiber for 1/2/4/8 fiber based optical PMDs and per lambda for 4 lambda WDM optical PMD

Potential for either direct detect and / or coherent signaling technology

P802.3df

P802.3dj

IEEE P802.3df 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet PAR split (division of existing work item)

Rationale

It became apparent to the IEEE 802.3 Working Group that a portion of the project would leverage existing 100 Gb/s per lane signaling technologies developed for existing standards and projects, while the other portion of the project would leverage new 200 Gb/s or greater per lane signaling technologies. It was also recognized that the development of a standard based on existing technologies would occur on a faster timeline than a standard based on the development of new signaling technologies. As a result, the portion of the project that would leverage new 200 Gb/s or greater per lane signaling technologies has been removed from the IEEE P802.3df amendment PAR and placed in the new IEEE P802.3dj amendment PAR.

Title

IEEE P802.3df PAR modification request

Standard for Ethernet Amendment: Media Access Control Parameters for 800 Gb/s and Physical Layers and Management Parameters for 400 Gb/s and 800 Gb/s Operation

IEEE P802.3dj PAR

Standard for Ethernet Amendment: Media Access Control Parameters for 1.6 Tb/s and Physical Layers and Management Parameters for 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Operation

IEEE P802.3df 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet PAR split (division of existing work item)

Scope

IEEE P802.3df PAR modification request

Define Ethernet MAC parameters, physical layer specifications, and management parameters for the transfer of Ethernet format frames at 800 Gb/s over copper, multi-mode fiber, and single-mode fiber physical medium dependent (PMD) sublayers based on 100 Gb/s per lane signaling technology.

Using these new definitions for 800 Gb/s, define physical layer specifications and management parameters for the transfer of Ethernet format frames at 400 Gb/s.

IEEE P802.3dj PAR

Define Ethernet MAC parameters for 1.6 Tb/s. Define physical layer specifications, and management parameters for the transfer of Ethernet format frames at 800 Gb/s and 1.6 Tb/s over copper and single-mode fiber physical medium dependent (PMD) sublayers based on 200 Gb/s or greater per lane signaling technologies

Using these new definitions for 800 Gb/s and 1.6 Tb/s, define physical layer specifications and management parameters for the transfer of Ethernet format frames at 200 Gb/s and 400 Gb/s, when applicable

IEEE P802.3df 200 Gb/s, 400 Gb/s, 800 Gb/s, and 1.6 Tb/s Ethernet PAR split (division of existing work item)

Motion

Approve forwarding IEEE P802.3df PAR modification documentation in <<https://mentor.ieee.org/802-ec/dcn/22/ec-22-0196-03-00EC-draft-ieee-p802-3df-par-modification.pdf>> to NesCom

Approve IEEE P802.3df CSD modification documentation in <<https://mentor.ieee.org/802-ec/dcn/22/ec-22-0197-03-00EC-draft-ieee-p802-3df-csd-modification.pdf>>

Approve forwarding IEEE P802.3dj PAR documentation in <<https://mentor.ieee.org/802-ec/dcn/22/ec-22-0198-03-00EC-draft-ieee-p802-3dj-par.pdf>> to NesCom

Approve IEEE P802.3dj CSD documentation in <<https://mentor.ieee.org/802-ec/dcn/22/ec-22-0199-03-00EC-draft-ieee-p802-3dj-csd.pdf>>

M: Law S: D'Ambrosia

Y: ??, N: ??, A: ??

Working Group vote

Y: 82, N: 0, A: 3