

IEEE P802.3da 10 Mb/s Single Pair Multidrop Segments Enhancement Task Force Closing Report

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Hybrid Plenary, Berlin, Germany

13 July 2023

IEEE P802.3da 10 Mb/s Single Pair Multidrop Segments Enhancement

Project information

Task Force Organization

Chad Jones, IEEE P802.3da Task Force Chair

Peter Jones, IEEE P802.3da Task Force Secretary

George Zimmerman, IEEE P802.3da Task Force Co-Editor

Valerie Maguire, IEEE P802.3da Task Force Co-Editor

Task Force web and reflector information

Reflector information: <http://www.ieee802.org/3/da/reflector.html>

Home page: <http://www.ieee802.org/3/da/index.html>

PAR: http://www.ieee802.org/3/da/P802d3da_PAR.pdf

Approved timeline: https://www.ieee802.org/3/da/P802d3_TL_V5.pdf

Private area: <https://www.ieee802.org/3/da/private/index.html>

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IEEE P802.3da 10 Mb/s Single Pair Multidrop Segments Enhancement Activities this week

Met Wednesday

Saw six presentations: Editor's report, Impulse noise in multidrop link, Verification of Consensus Model Simulation, LLDP Proposal and baseline, Clause 169 MPoE Features and baseline, 10BASE-T1S multidrop EEE proposal and baseline

Adopted one baseline proposal, deferred two until September

Reviewed a liaison letter

Proposed objective modifications

Liaison

Show letter

Motion DA1

Move that the IEEE 802.3 Working Group approve IEEE8023_to_OPEN_July2023_draft.pdf with editorial license granted to the Chair (or his appointed agent) as liaison communication from the IEEE 802.3 Working Group to The OPEN Alliance

M: Chad Jones

S:

IEEE P802.3da Objective Modifications

13 July 2023

Chad Jones

Chair, IEEE P802.3da

TF Motion

The TF supports the objective changes contained in 802d3da_objectives_proposed_modifications_0723a.pdf and instructs the TF Chair to present these changes to the WG for approval.

Mover: Tim Baggett Second: Bob Voss

Y: 20 N: 0 A: 2

IEEE P802.3da Objective 4

Was: Support interoperability with Clause 147 multidrop

Change to: Define a PHY which supports backward compatibility with Clause 147 PHYs on Clause 147 compliant mixing segments

Reason: Original suggests forward and backward compatibility, which is impossible. New objective clearly states the original intent of objective 4.

IEEE P802.3da Objective 6

Was: Select a single MDI connector

Change to: Specify required electrical and mechanical characteristics for connection methods necessary to achieve communications and powering objectives that allows multiple connector types.

Reason: A single connector won't cover all the desired use cases. For example, some industrial applications want screw terminals not a connector. We have proposed SPE as part of a multipair cable that will require a variety of connectors to enable.

IEEE P802.3da Objective 7

Was: Specify improvements for Energy Efficient Ethernet compared to current 10Mb/s multidrop single balanced pair networks

Change to: Support energy efficient operation for 10Mb/s single balanced pair multidrop networks

Reason: original was vague and EEE as we know it does not apply to SPE links. New one simply states to support energy efficient operation.

IEEE P802.3da Objective 10

Was: PSE shall only energize the mixing segment when at least one PD is connected

Change to: Define a method to detect at least one MPD before applying full operating power

Reason: a mixing segment must be minimally energized to detect, meaning the objective as originally approved cannot be met.

IEEE P802.3da Objective 11

Was: Support addition and removal of a node or set of nodes to a continuously operating powered mixing segment

Change to: Specify device characteristics necessary to enable addition and/or removal of a node or set of nodes to a powered mixing segment with a bounded interruption

Reason: Our work has demonstrated that it's not economically feasible to guarantee continuous power on a mixing segment for addition and removal. Also, removal of an MPD in the middle guarantees that all the MPDs after lose power. The new objective states that the TF will specify the power interruption magnitude and duration that MPDs that stay connected to the MPSE must tolerate.

Motion DA2

Move that the WG approve the objective modifications for the IEEE P802.3da TF found in 802d3da_objectives_proposed_modifications_0723a.pdf

M: Chad Jones

S:

IEEE P802.3da 10 Mb/s Single Pair Multidrop Segments Enhancement Timeline, V5

year	month	output	event
2021	jan	D0.2	
	may	D0.3	Quasi TF review
	jul	D0.51	Quasi TF review
	sep	D0.6	Quasi TF review
2022	jan-nov		
2023	jan	D0.7	
	mar-sep*		
	nov*	D1.0	TF review
2024	jan	D1.1	
	mar	D1.2/D2.0	WG Ballot
	may	D2.1	
	jul	D2.2	
	sep	D2.3	
	nov	D3.0	SA Ballot
2024	jan	D3.1	
	mar	D3.2	



*July is decision date for no new major features, Nov PAR split deadline

Approved 14 March 2023

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Next Steps

Use reflector to build consensus

Ad Hoc scheduled for 30 Aug 2023 for proposed baseline review

Meetings are on the IEEE 802.3 calendar:

<http://www.ieee802.org/3/calendar.html>

Questions?

Thank you!