

Draft PAR Proposal for an IEEE 802.1 standard on Cut-Through Forwarding (CTF)

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Reference: Slide 95 of <https://www.ieee802.org/1/files/public/minutes/2021-11-closing-plenary-slides.pdf>

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Type of Project: New IEEE Standard
Project Request Type: Initiation / New
PAR Request Date:
PAR Approval Date:
PAR Expiration Date:
PAR Status: Draft

1.1 Project Number: <<Project ID>>

1.2 Type of Document: Standard

1.3 Life Cycle:

2.1 Project Title: Cut-Through Forwarding in Bridges and Bridged Networks

3.1 Working Group: Higher Layer LAN Protocols Working Group (C/LM/802.1 WG)

3.1.1 Contact Information for Working Group Chair:

Name: Glenn Parsons

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3.1.2 Contact Information for Working Group Vice Chair:

Name: Jessy Rouyer

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

3.2.1 Contact Information for Standards Committee Chair:

Name: Paul Nikolich

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3.2.2 Contact Information for Standards Committee Vice Chair:

Name: James Gilb

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3.2.3 Contact Information for Standards Representative:

Name: James Gilb

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4.1 Type of Ballot: Individual

4.2 Expected Date of submission of draft to the IEEE SA for Initial Standards Committee Ballot:

Nov 2023/2025

4.3 Projected Completion Date for Submittal to RevCom: Nov-Dec 2026/4

5.1 Approximate number of people expected to be actively involved in the development of this project: 30

5.2 Scope of proposed standard: This project standard specifies protocols, procedures and managed objects of Bridges with support for Cut-Through Forwarding (CTF), termed CTF Bridges, that interconnect individual Local Area Networks (LANs) connected by via different or identical media Media Access Control (MAC) methods.

This project standard also specifies requirements and recommendations for the usage of CTF in bridged networks. The standard project allows integration of a detailed model for internal interaction between CTF Bridges and IEEE 802 MAC Standards methods, although completion of this project does not depend on such a model.

5.3 Is the completion of this standard contingent upon the completion of another standard?

No

5.4 Purpose: This standard specifies support for Cut-Through Forwarding (CTF) in Bridges and Bridged networks, which enables lower communication delays lower than achievable by Bridges and bridged networks solely supporting store-and-forward operations. The standard allows interoperable interconnection of information technology equipment, with and without support for CTF, attached to separate individual LANs.

5.5 Need for the Project: Support for CTF is found in existing products, but CTF is not standardized by an IEEE 802.1 standard. Such products are used in existing installations that require the lower communication delays enabled by CTF, but interoperability between different products is not ensured. Standardizing CTF is needed to enable such interoperability between different products, which is required for interconnecting different products conformant to the standard developed in this project, including (but not limited to) products Bridges with support for CTF of from different vendors.

5.6 Stakeholders for the Standard: Manufacturers, distributors, vendors, developers, providers, and users of networking services and bridging equipment for industrial automation, professional audio-video, data centers and other systems requiring communication decreased latency delays over lower than

Kommentiert [j1]: Intention of this sentence (needs to be enhanced):
a) Allow to integrate such a model/enable the permission via the scope.
b) Do not promise such a model to be part of the standards document on the front matter of the standard (i.e., the scope is written on the front matter).

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~~achievable by store-and-forward bridging operations, including networking integrated circuit developers, bridge and network interface card vendors, and users.~~

6.1 Intellectual Property

6.1.1 Is the Standards Committee aware of any copyright permissions needed for this project?

No

6.1.2 Is the Standards Committee 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 Is it the intent to develop this document jointly with another organization? No

8.1 Additional Explanatory Notes:

~~<Additional Explanatory Notes>~~

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