

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

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DCN 1-22-0055-04-ICne

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: P802.1DU
1.2 Type of Document: Standard
1.3 Life Cycle:

2.1 Project Title: Standard for Cut-Through Forwarding 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:

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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 2026

4.3 Projected Completion Date for Submittal to RevCom: Jul 2027

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 standard specifies Cut-Through Forwarding (CTF) bridges based on the IEEE 802.1Q bridge architecture, including protocols, procedures, and managed objects. CTF bridges interconnect individual local area networks (LANs) using different or identical media access control (MAC) methods with and without support for CTF. This standard also details the usage of CTF bridges.

5.3 Is the completion of this standard contingent upon the completion of another standard?
No

5.4 Purpose: This standard enables lower latency communication than is achievable in bridged networks without CTF, while allowing interoperable interconnection of individual LANs with and without support for CTF.

5.5 Need for the Project: The low latency achievable in bridged networks with CTF enables the applicability of bridging in certain applications, including use cases in industrial automation, professional audio-video and data centers. This project addresses the unmet needs of these applications for interoperable equipment.

5.6 Stakeholders for the Standard: Manufacturers, distributors, vendors, developers, providers and users of bridging equipment for industrial automation, professional audio-video, data centers and other systems.

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?

Yes.

The YANG Data Model will be assigned a Uniform Resource Name (URN) based on the IEEE Registration Authority (RA) URN tutorial and IEEE Std 802d.

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:

#5.2:

1) IEEE 802.1Q refers to "IEEE Std 802.1Q: IEEE Standard for Local and Metropolitan Area Networks—Bridges and Bridged Networks"

#6.1.2:

2) While 'YANG' (developed by the Internet Engineering Task Force (IETF)) appears to be an acronym its expansion 'Yet Another Next Generation' is not meaningful.

3) IEEE Std 802d IEEE Standard for Local and Metropolitan Area Networks: Overview and Architecture Amendment 1: Allocation of Uniform Resource Name (URN) Values in IEEE 802 Standards

IEEE RA URN tutorial: <http://standards.ieee.org/develop/regauth/tut/ieeearn.pdf>