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

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Date: January 10, 2022.

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: Unassigned
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

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

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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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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
4.3 Projected Completion Date for Submittal to RevCom: Nov 2024

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 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 different or identical media access control (MAC) methods.
This project also specifies requirements and recommendations for the usage of CTF in bridged networks.
The project allows integration of a detailed model for internal interaction between CTF Bridges and IEEE 802 MAC Standards, 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 than achievable by Bridges and bridged networks solely supporting store and forward operations. The standard allows interoperable interconnection of information technology equipment 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, which is required for interconnecting different products conformant to the standard developed in this project, including (but not limited to) Bridges with support for CTF of different vendors.
5.6 Stakeholders for the Standard: Developers, providers, and users of networking services and equipment for industrial automation, professional audio-video, data centers and other systems requiring decreased latency over 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: