P802.1DF

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Type of Project: New IEEE Standard
PAR Request Date: 18-Sep-2018
PAR Approval Date:
PAR Expiration Date:
Status: Unapproved PAR, PAR for a New IEEE Standard

1.1 Project Number: P802.1DF
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Title: Time-Sensitive Networking Profile for Service Provider Networks

3.1 Working Group: Higher Layer LAN Protocols Working Group (C/LM/WG802.1)
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3.2 Sponsoring Society and Committee: IEEE Computer Society/LAN/MAN Standards Committee (C/LM)
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4.1 Type of Ballot: Individual
4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 09/2021
4.3 Projected Completion Date for Submittal to RevCom
Note: Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months.: 05/2022

5.1 Approximate number of people expected to be actively involved in the development of this project: 25
5.2 Scope: This standard defines profiles of IEEE Std 802.1Q and IEEE Std 802.1CB that provide Time-Sensitive Networking (TSN) quality of service features for non-fronthaul shared service provider networks. The standard also provides use cases, and informative guidance for network operators on how to configure their networks for those use cases.

5.3 Is the completion of this standard dependent upon the completion of another standard: Yes
If yes please explain: This standard may make use of the specifications that are under development in: IEEE P802.1Qcr
Draft Standard for Local and Metropolitan Area Networks - Bridges and Bridged Networks - Amendment: Asynchronous
Traffic Shaping

5.4 Purpose: Service provider networks often support multiple users and applications, and can benefit from TSN Quality of Service (QoS) bridging features defined in IEEE Std 802.1Q. This standard provides guidance for configuration of QoS features to provide dependable bandwidth and bounded latency.

5.5 Need for the Project: Next generation transport networks that have more stringent QoS requirements would benefit from TSN QoS features. For example, next generation mobile networks will have an order of magnitude more cells than present networks, making it essential for multiple carriers (applications/users) to share network resources of a physical infrastructure.

The fronthaul use cases are already addressed by IEEE Std 802.1CM. QoS partitioning among applications or customers will enable high-value services that have stringent bandwidth and latency requirements to efficiently share the network with best effort services.

5.6 Stakeholders for the Standard: Developers, vendors, and users of service provider network services and equipment, such as bridge vendors, network operators, testers, and users.

Intellectual Property
6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: No
6.1.b. Is the Sponsor aware of possible registration activity related to this project?: No

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7.1 Are there other standards or projects with a similar scope?: No
7.2 Joint Development
   Is it the intent to develop this document jointly with another organization?: No

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8.1 Additional Explanatory Notes: 5.2:
IEEE Std 802.1Q - IEEE Standard for Local and Metropolitan Area Networks - Bridges and Bridged Networks;
IEEE Std 802.1CB - IEEE Standard for Local and metropolitan area networks - Frame Replication and Elimination for Reliability;
A profile of a standard selects features, options, configurations, defaults, protocols, and procedures of that standard;

5.5
IEEE Std 802.1CM - IEEE Standard for Local and metropolitan area networks - Time-Sensitive Networking for Fronthaul;
Fronthaul - The connectivity between the functional blocks (e.g., baseband processing and radio frequency blocks) of a cellular base station.