P802.1DG

Submitter Email: mike.potts@gm.com
Type of Project: New IEEE Standard
PAR Request Date: 14-Nov-2018
PAR Approval Date:
PAR Expiration Date:
Status: Unapproved PAR, PAR for a New IEEE Standard

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

2.1 Title: Time-Sensitive Networking Profile for Automotive In-Vehicle Ethernet Communications

3.1 Working Group: Higher Layer LAN Protocols Working Group (C/LM/WG802.1)
Contact Information for Working Group Chair
Name: Glenn Parsons
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3.2 Sponsoring Society and Committee: IEEE Computer Society/LAN/MAN Standards Committee (C/LM)
Contact Information for Sponsor Chair
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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: 01/2022
4.3 Projected Completion Date for Submittal to RevCom
Note: Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months.: 10/2022

5.1 Approximate number of people expected to be actively involved in the development of this project: 40
5.2 Scope: This standard specifies profiles for secure, highly reliable, deterministic latency, automotive in-vehicle bridged IEEE 802.3 Ethernet networks based on IEEE 802.1 Time-Sensitive Networking (TSN) standards and IEEE 802.1 Security standards.

5.3 Is the completion of this standard dependent upon the completion of another standard: Yes
If yes please explain: This project will utilize the following specifications:
* P802.1AS-Rev Draft Standard for Local and Metropolitan Area Networks - Timing and Synchronization for Time-Sensitive Applications
* P802.1Qcr Draft Standard for Local and Metropolitan Area Networks - Bridges and Bridged Networks Amendment: Asynchronous Traffic Shaping

5.4 Purpose: This standard provides profiles for designers and implementers of IEEE 802.3 Ethernet networks that support the entire range of in-vehicle applications including those requiring security, high availability and reliability, maintainability, and bounded latency.

5.5 Need for the Project: The automotive segment does not have a standards-based profile for IEEE 802.1 Time-Sensitive Networking (TSN) standards as usage can vary widely based on the networking scenarios. The lack of a profile makes the definition of the automotive manufacturer's requirements and the implementation of those requirements by suppliers more difficult and costly. Thus there is a need for standardization of the selection and use of IEEE 802 standards and features in order to be able to deploy secure highly reliable converged

networks.

5.6 Stakeholders for the Standard: Developers, providers, automotive manufacturers and suppliers, and users of networking services and components for automotive Ethernet networked equipment. These components may include bridges, end stations, network interface cards, and integrated circuits.

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: The profiles will not make any change to the standards used.
* 5.2 and 5.4: Support for 802.3 half-duplex media is dependent on the media being deterministic