P802.1DP

Submitter Email:
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: P802.1DP
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Project Title: Time-Sensitive Networking Profile for Aerospace Onboard Ethernet Communications

3.1 Working Group: Higher Layer LAN Protocols Working Group(C/LM/802.1 WG)
3.1.1 Contact Information for Working Group Chair:
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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:
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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: Jun 2022
4.3 Projected Completion Date for Submittal to RevCom: Apr 2023

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 profiles of IEEE 802.1 Time-Sensitive Networking (TSN) and IEEE 802.1 Security standards for aerospace onboard bridged IEEE 802.3 Ethernet networks. The profiles select features, options, configurations, defaults, protocols, and procedures of bridges, end stations, and Local Area Networks to build deterministic networks for aerospace onboard communications.

5.3 Is the completion of this standard contingent upon the completion of another standard? No
5.4 Purpose: This standard provides profiles for designers, implementers, integrators, and certification agencies of deterministic IEEE 802.3 Ethernet networks that support the entire range of aerospace onboard applications including those requiring security, high availability and reliability, maintainability, and bounded latency.
5.5 Need for the Project: The aerospace segment does not have profiles of IEEE 802.1 TSN standards. The lack of standardized TSN profiles makes the definition of the aerospace manufacturers' requirements and the implementation of those requirements by suppliers more difficult and costly. Thus, there is a need to standardize the selection and use of IEEE 802 standards and features in order to be able to deploy secure, highly-reliable converged networks, and enable certification as a basis for compliance and design assurance.
5.6 Stakeholders for the Standard: Developers, integrators, aerospace manufacturers and suppliers, test equipment vendors, certification agencies, and users of networking services and components of aerospace.

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? Yes

7.2.1 Organization: SAE

Technical Committee Name: Avionics Networks

Technical Committee Number: AS-1 A2

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 the 802.3 Medium Access Control (MAC) Service is dependent on it being deterministic.