P60802

Type of Project: New IEEE Standard
Project Request Type: Modify / New
PAR Request Date:
PAR Approval Date:
PAR Expiration Date:
PAR Status: Draft
Root PAR: P60802
Root PAR Approved on: 20 Sep 2022

1.1 Project Number: P60802
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Project Title: Time-Sensitive Networking Profile for Industrial Automation

3.1 Working Group: Higher Layer LAN Protocols Working Group(C/LAN/MAN/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/LAN/MAN)
    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:
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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:
May 2023
4.3 Projected Completion Date for Submittal to RevCom: May 2024

5.1 Approximate number of people expected to be actively involved in the development of this project: 40
5.2 Scope of proposed standard: This document defines time-sensitive networking profiles for industrial automation. The profiles select features, options, configurations, defaults, protocols, and procedures of bridges, end stations, and LANs to build industrial automation networks. This document specifies YANG modules defining read-only information available online and offline as a digital data sheet. This document also specifies YANG modules for remote procedure calls and actions to address requirements arising from industrial automation networks.
Change to scope of proposed standard: This document defines time-sensitive networking profiles for industrial automation. The profiles select features, options, configurations, defaults, protocols, and procedures of bridges, end stations, and LANs to build industrial automation networks. This document ~~also~~ specifies YANG modules defining read-only information available online and offline as a digital data sheet. This document also specifies YANG modules for remote procedure calls and actions to address requirements arising from industrial automation networks.

5.3 Is the completion of this standard contingent upon the completion of another standard? Yes
Explanation: IEEE P802.1ASdm: This standard will use hot standby time synchronization being specified by IEEE P802.1ASdm.
IEEE P802.1ASdn: This standard will use the YANG data model being specified by IEEE P802.1ASdn.
IEEE P802.1Qdj: This standard will use the configuration enhancements being specified by IEEE P802.1Qdj.
5.4 Purpose: This document will not include a purpose clause.

5.5 Need for the Project: IEEE 802 standards address a very wide range of networking scenarios. Users and vendors of interoperable bridged time-sensitive networks for industrial automation need guidelines for the selection and the use of IEEE 802 standards and features in order to be able to deploy converged networks to simultaneously support operations technology traffic and other traffic.

5.6 Stakeholders for the Standard: Developers, providers, vendors, and users of networking services and components for industrial automation equipment. These components may include bridges, end stations, network interface cards, and integrated circuits.

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: IEC
      Technical Committee Name: Industrial networks
      Technical Committee Number: SC65C
    7.2.2 Organization: IEC
      Technical Committee Name: Industrial networks
      Technical Committee Number: SC65C

8.1 Additional Explanatory Notes: #5.2 While 'YANG' (developed by the Internet Engineering Task Force) appears to be an acronym, its expansion 'Yet Another Next Generation' is not meaningful.
#5.2 The Remote Procedure Calls (RPCs) provided by the YANG modules of the base standards cited by IEC/IEEE 60802 are not satisfactory for industrial automation use cases. Therefore, the IEC/IEEE 60802 TSN Profile for Industrial Automation will specify RPCs for industrial automation.
#5.3 IEEE P802.1ASdm Draft Standard for Local and Metropolitan Area Networks - Timing and Synchronization for Time-Sensitive Applications - Amendment: Hot Standby;
IEEE P802.1ASdn Draft Standard for Local and Metropolitan Area Networks - Timing and Synchronization for Time-Sensitive Applications - Amendment: YANG Data Model; IEEE IEEE P802.1Qdj Draft Standard for Local and Metropolitan Area Networks--Bridges and Bridged Networks
Amendment: Configuration Enhancements for Time-Sensitive Networking
Change to Additional Explanatory Notes: #5.2 While 'YANG' (developed by the Internet Engineering Task Force) appears to be an acronym, its expansion 'Yet Another Next Generation' is not meaningful.#5. 2 The Remote Procedure Calls (RPCs) provided by the YANG modules of the base standards cited by IEC/IEEE 60802 are not satisfactory for industrial automation use cases. Therefore, the IEC/IEEE 60802 TSN Profile for Industrial Automation will specify RPCs for industrial automation. #5. 3 IEEE P802.1ASdm Draft Standard for Local and Metropolitan Area Networks - Timing and Synchronization for Time-Sensitive Applications - Amendment: Hot Standby;IEEE P802.1ASdn Draft Standard for Local and Metropolitan Area Networks - Timing and Synchronization for Time-Sensitive Applications - Amendment: YANG Data Model; IEEE IEEE P802.1Qdj Draft Standard for Local and Metropolitan Area Networks--Bridges and Bridged NetworksAmendment: Configuration Enhancements for Time-Sensitive Networking