P802.1ABcu

Submitter Email: janos.farkas@ericsson.com
Type of Project: Amendment to IEEE Standard 802.1AB-2016
PAR Request Date: 18-May-2017
PAR Approval Date:
PAR Expiration Date:
Status: Unapproved PAR, PAR for an Amendment to an existing IEEE Standard

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

2.1 Title: Standard for Local and metropolitan area networks - Station and Media Access Control Connectivity Discovery
Amendment: YANG Data Model

3.1 Working Group: Higher Layer LAN Protocols Working Group (C/LM/WG802.1)
Contact Information for Working Group Chair
  Name: Glenn Parsons
  Email Address: glenn.parsons@ericsson.com
  Phone: 613-963-8141
Contact Information for Working Group Vice-Chair
  Name: John Messenger
  Email Address: jmessenger@advaoptical.com
  Phone: +441904699309

3.2 Sponsoring Society and Committee: IEEE Computer Society/LAN/MAN Standards Committee (C/LM)
Contact Information for Sponsor Chair
  Name: Paul Nikolich
  Email Address: p.nikolich@ieee.org
  Phone: 8572050050
Contact Information for Standards Representative
  Name: James Gilb
  Email Address: gilb@ieee.org
  Phone: 858-229-4822

4.1 Type of Ballot: Individual
4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 07/2019
4.3 Projected Completion Date for Submittal to RevCom
Note: Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months.: 05/2020

5.1 Approximate number of people expected to be actively involved in the development of this project: 20
5.2.a. Scope of the complete standard: The scope of this standard is to define a protocol and management elements, suitable for advertising information to stations attached to the same IEEE 802 LAN, for the purpose of populating physical topology and device discovery management information databases. The protocol facilitates the identification of stations connected by IEEE 802 LANs/MANs, their points of interconnection, and access points for management protocols. This standard defines a protocol that a) Advertises connectivity and management information about the local station to adjacent stations on the same IEEE 802 LAN. b) Receives network management information from adjacent stations on the same IEEE 802 LAN. c) Operates with all IEEE 802 access protocols and network media. d) Establishes a network management information schema and object definitions that are suitable for storing connection information about adjacent stations. e) Provides compatibility with the IETF PTOPO MIB (IETF RFC 2922 [B9]).

5.2.b. Scope of the project: This amendment specifies a Unified Modeling Language (UML)-based information model and a YANG data model that allows configuration and status reporting for bridges and bridge components with regards to topology discovery (as specified by this standard) with the capabilities currently specified in clauses 10 (LLDP management) and 11 (LLDP MIB definitions). Additionally, this amendment will address errors or omissions to existing features.

5.3 Is the completion of this standard dependent upon the completion of another standard: No

5.4 Purpose: This standard specifies the necessary protocol and management elements to a) Facilitate multi-vendor inter-operability and the use of standard management tools to discover and make available physical topology information for network management. b) Make it possible for network management to discover certain configuration inconsistencies or malfunctions that can result in impaired communication at higher layers. c) Provide information to assist network management in making resource changes and/or re-configurations that correct configuration inconsistencies or malfunctions identified in b) above.

Changes in purpose: ~~An IETF MIB (IETF RFC 2922 [B9]) and a number of vendor specific MIBs have been created to describe a network's physical topology and associated systems within that topology.~~ This standard specifies the necessary protocol and management elements to a) Facilitate multi-vendor inter-operability and the use of standard management tools to discover and make available physical topology information for network management. b) Make it possible for network management to discover certain configuration inconsistencies or malfunctions that can result in impaired communication at higher layers. c) Provide information to assist network management in making resource changes and/or re-configurations that correct configuration inconsistencies or malfunctions identified in b) above.

5.5 Need for the Project: YANG (RFC 7950) is a formalized data modeling language that is widely accepted and can be used to simplify network configuration. The ability to manage the Link Layer Discovery Protocol (LLDP) via YANG model is needed for compatibility with modern network management systems.

5.6 Stakeholders for the Standard: Developers, providers, and users of networking services and equipment.

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?: Yes
If yes please explain: The YANG Data Model will be assigned a URN based on the RA URN tutorial and IEEE Std 802d.

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: #2.1 While 'YANG' (developed by the Internet EngineTF) appears to be an acronym its expansion 'Yet Another Next Generation' is not meaningful. It is vital that 'YANG' appear in the project title to inform potential participants and the target readership of the amendment.
#5.4 The first sentence of the original purpose has been deleted because it is obsolete.
#5.5 RFC 7950 The YANG 1.1 Data Modeling Language
#6.1b IEEE Std 802d IEEE Standard for Local and Metropolitan Area Networks: Overview and Architecture Amendment 1: Allocation of Uniform Resource Name (URN) Values in IEEE 802 Standards
RA URN tutorial: http://standards.ieee.org/develop/regauth/tut/ieeeurn.pdf
RA - Registration Authority
URN - Uniform Resource Name