P802c

Submitter Email: pat.thaler@broadcom.com
Type of Project: Modify Existing Approved PAR
PAR Request Date: 13-Sep-2016
PAR Approval Date:
PAR Expiration Date:
Status: Unapproved PAR, Modification to a Previously Approved PAR for an Amendment
Root PAR: P802c **Approved on:** 11-Jun-2015

1.1 Project Number: P802c
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Title: Standard for Local and Metropolitan Area Networks: Overview and Architecture
Amendment: Local Medium Access Control (MAC) Address Usage

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: 02/2017
4.3 Projected Completion Date for Submittal to RevCom
Note: Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months.: 08/2017

5.1 Approximate number of people expected to be actively involved in the development of this project: 30
5.2.a. Scope of the complete standard: This standard contains descriptions of the IEEE 802(R) standards published by the IEEE for frame-based data networks as well as a reference model (RM) for protocol standards. The IEEE 802 architecture is defined, and a specification for the identification of public, private, and standard protocols is included.

5.2.b. Scope of the project: The amendment will provide an optional local MAC address space structure to allow multiple administrations to coexist. This structure will designate a range of local MAC addresses for protocols using a Company ID (CID) assigned by the IEEE Registration Authority. Another range of local MAC addresses will be designated for assignment by local administrators. The amendment will recommend a range of local MAC addresses for use by IEEE 802 protocols.
This amendment will also correct minor errors, ambiguities, omissions and inconsistencies including clarifying the use of CID in protocol identifiers and context dependent identifiers.

Changes in scope of the project: The amendment will provide an optional local MAC address space structure to allow multiple administrations to coexist. This structure will designate a range of local MAC addresses for protocols using a Company ~~Identifier~~ID (CID) assigned by the IEEE Registration Authority. Another range of local MAC addresses will be designated for assignment by local administrators. The amendment will recommend a range of local MAC addresses for use by IEEE 802 protocols. This amendment will also correct minor errors, ambiguities, omissions and inconsistencies including clarifying the use of CID in protocol identifiers and context dependent identifiers.

5.3 Is the completion of this standard dependent upon the completion of another standard: No
5.4 Purpose: This standard serves as the foundation for the family of IEEE 802 standards published by IEEE for local area networks (LANs), metropolitan area networks (MANs), personal area networks (PANs), and regional area networks (RANs).

5.5 Need for the Project: Currently, globally unique MAC addresses are assigned to most IEEE 802 end stations and bridge ports. Increasing use of virtual machines and Internet of Things (IoT) devices could exhaust the global MAC address space if global MAC addresses are assigned. These applications could use local MAC address space, but in that case some applications require independent address administration (e.g. virtualization systems and protocol specific address mappings). This project will provide conventions and enable protocols that will allow multiple stations or servers to automatically configure and use local MAC addresses without conflict when multiple administrations share a local address space. Such protocols will allow virtual machines and IoT devices to obtain a local MAC address without centralized local MAC address administration.

5.6 Stakeholders for the Standard: Developers, providers, and users of networking services and equipment for IoT (including Industrial Automation, Transportation networking, Smart Grid) and of operating systems, hypervisors and orchestration systems for virtual machines. This includes software developers, networking IC developers, bridge and NIC vendors, 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?: Yes
If yes please explain: This will designate a portion of the MAC address structure for protocols using an IEEE Registration Authority assigned Company Identifier and one or more blocks of Company Identifier space to be agreed with the IEEE Registration Authority.

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 During the development of the project, some minor errors and omissions were found in IEEE Std 802-2014 including adding Company ID as a protocol identifier to harmonize with IEEE RAC policy.