

P802c

Submitter Email: pthaler@broadcom.com

Type of Project: Amendment to IEEE Standard 802-2014

PAR Request Date: 11-Sep-2014

PAR Approval Date:

PAR Expiration Date:

Status: Unapproved PAR, PAR for an Amendment to an existing IEEE Standard

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: gparsons@ieee.org

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: 857.205.0050

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: 07/2016

4.3 Projected Completion Date for Submittal to RevCom: 02/2017

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 Identifier (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.

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

8.1 Additional Explanatory Notes (Item Number and Explanation):