

P802.1CQ

Submitter Email: pthaler@broadcom.com

Type of Project: New IEEE Standard

PAR Request Date: 10-Sep-2015

PAR Approval Date:

PAR Expiration Date:

Status: Unapproved PAR, PAR for a New IEEE Standard

1.1 Project Number: P802.1CQ

1.2 Type of Document: Standard

1.3 Life Cycle: Full Use

2.1 Title: Standard for Local and Metropolitan Area Networks: Multicast and Local Address~~es~~ Assignment

3.1 Working Group: Higher Layer LAN Protocols Working Group (C/LM/WG802.1)

Contact Information for Working Group Chair

Name: Glenn Parsons

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3.2 Sponsoring Society and Committee: IEEE Computer Society/LAN/MAN Standards Committee (C/LM)

Contact Information for Sponsor 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 Sponsor Ballot: 07/2017

4.3 Projected Completion Date for Submittal to RevCom: 02/2018

5.1 Approximate number of people expected to be actively involved in the development of this project: 15

5.2 Scope: This standard specifies protocols, procedures, and management objects for locally-unique assignment of 48-bit and 64-bit addresses ~~to ports~~ in IEEE 802 networks.

Peer-to-peer address claiming and address server capabilities are specified.

5.3 Is the completion of this standard dependent upon the completion of another standard: Yes

If yes please explain: IEEE P802c Standard for Local and Metropolitan Area Networks: Overview and Architecture Amendment: Local Media Access Control (MAC) Address~~ing~~ Usage

5.4 Purpose: This document will not include a purpose clause.

5.5 Need for the Project: Currently, global addresses are assigned to most IEEE 802 end station and bridge ports. Increasing use of virtual machines and Internet of Things (IoT) devices could exhaust the global address space. To provide a usable alternative to global addresses for such devices, this project will define a set of protocols that will allow ports to automatically obtain a locally-unique address in a range from a portion of the local address space. Multicast flows also need addresses to identify the flows. They will benefit from a set of protocols to distribute multicast addresses. Peer-to-peer address claiming and address server capabilities will be included to serve the needs of smaller (e.g. home) and larger (e.g. industrial plants and building control) networks.

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.

equipment

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 protocol may require coordination 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):