# Next Generation Enterprise/Campus/Data Center Ethernet
# Industry Connections Activity Initiation Document (ICAID)
# Version: 1.0, 02-Oct-2015

**Instructions**

- Instructions on how to fill out this form are shown in red. It is recommended to leave the instructions in the final document and simply add the requested information where indicated.
- Shaded Text indicates a placeholder that should be replaced with information specific to this ICAID, and the shading removed.
- Completed forms, in Word format, or any questions should be sent to the IEEE Standards Association (IEEE-SA) Industry Connections Committee (ICCom) Administrator at the following address: industryconnections@ieee.org.
- The version number above, along with the date, may be used by the submitter to distinguish successive updates of this document. A separate, unique Industry Connections (IC) Activity Number will be assigned when the document is submitted to the ICCom Administrator.

## 1. Contact

Provide the name and contact information of the primary contact person for this IC activity. Affiliation is any entity that provides the person financial or other substantive support, for which the person may feel an obligation. If necessary, a second/alternate contact person's information may also be provided.

**Name:** John D'Ambrosia
**Email Address:** jdambrosia@ieee.org
**Phone:** +17175034512
**Employer:** Independent
**Affiliation:** Independent

## 2. Participation and Voting Model

Specify whether this activity will be entity-based (participants are entities, which may have multiple representatives, one-entity-one-vote), or individual-based (participants represent themselves, one-person-one-vote).

Individual-Based

## 3. Purpose

### 3.1. Motivation and Goal

Briefly explain the context and motivation for starting this IC activity, and the overall purpose or goal to be accomplished.

The growing diversity of applications within enterprise, campus, and data center networks requires new Ethernet standards to be developed at a rapid pace. This is evident by recent standardization activities related to 2.5Gb/s, 5Gb/s and 25 Gb/s Ethernet, as well as subsequent conversations related on introducing new Ethernet solutions at these rates. Furthermore, with recent decisions in the IEEE P802.3bs 400GbE Task Force on 50Gb/s and 100Gb/s electrical and optical signaling, there is growing discussion of how to leverage these new signaling technologies for new Ethernet projects.

The goal of this activity is to assess emerging requirements for enterprise, campus, and data center networks, identify gaps not currently addressed by IEEE 802.3 standards, and facilitate building industry consensus towards proposals to initiate new standards development efforts.

### 3.2. Related Work

Provide a brief comparison of this activity to existing, related efforts or standards of which you are aware (industry associations, consortia, standardization activities, etc.).

There are no known open standards / IEEE 802.3 based activity for Ethernet projects to compare against this Industry Connections activity proposal.

The following current projects within IEEE 802.3 are examples of new efforts targeting Next Generation Enterprise/Campus/Data Center Ethernet applications, and illustrate the growing diversity of applications and rates of operation targeted by Ethernet.

- IEEE P802.3bq 40GBASE-T Task Force.
- IEEE P802.3bs 400 Gb/s Ethernet Task Force.
- IEEE P802.3bt DTE Power via MDI over 4-Pair Task Force.
- IEEE P802.3by 25 Gb/s Ethernet Task Force.
- IEEE P802.3bz 2.5/5GBASE-T Task Force.
- IEEE 802.3 25GBASE-T PHY Study Group.
- IEEE 802.3 2.5 Gb/s and 5 Gb/s Backplane and Short Reach Copper Study Group.

The IEEE P802.3bs 400GbE Task Force is currently developing new electrical and optical signaling technologies that operate at 50 Gb/s and 100 Gb/s. It is also anticipated that these new signaling technologies will be leveraged for future Ethernet projects targeting new rates of operation.

Relevant activities outside the IEEE 802.3 Working Group include –

- The Optical Internetworking Forum
- 25G Ethernet Consortium
- MGBASE-T Alliance
- NBASE-T Alliance

### 3.3. Previously Published Material

Provide a list of any known previously published material intended for inclusion in the proposed deliverables of this activity.

None

### 3.4. Potential Markets Served

Indicate the main beneficiaries of this work, and what the potential impact might be.

Ethernet is employed in a number of market applications, such as Enterprise, Campus, and Data Center, which are exhibiting a growing diversity in terms of the Ethernet rates needed. Solutions spanning these different application spaces and rates will be best addressed by leveraging common technology investments. This activity will enable industry consensus building on the market/application requirements and identify gaps not currently addressed by IEEE 802.3 standards of new solutions, which will help to foster industry interest in new Ethernet study groups.

## 4. Estimated Timeframe

Indicate approximately how long you expect this activity to operate to achieve its proposed results (e.g., time to completion of all deliverables).

**Expected Completion Date:** 11/2017

IC activities are chartered for two years at a time. Activities are eligible for extension upon request and review by ICCom and the IEEE-SA Standards Board. Should an extension be required, please notify the ICCom Administrator prior to the two-year mark.

## 5. Proposed Deliverables

Outline the anticipated deliverables and output from this IC activity, such as documents (e.g., white papers, reports), proposals for standards, conferences and workshops, databases, computer code, etc., and indicate the expected timeframe for each.

There will be multiple types of deliverables. The first type of deliverable will be the records of the meetings, including minutes and supporting presentations. The second type of output may be the creation of one or more consensus presentations that are used as the basis for one or more Call-for-Interests to study new areas. A third possible type of deliverable may be the creation, as appropriate, of white papers documenting the findings of the IC activity.

## 6. Funding Requirements

Outline any contracted services or other expenses that are currently anticipated, beyond the basic support services provided to all IC activities. Indicate how those funds are expected to be obtained (e.g., through participant fees, sponsorships, government or other grants, etc.). Activities needing substantial funding may require additional reviews and approvals beyond ICCom.

None.

## 7. Management and Procedures

### 7.1. IEEE Sponsoring Committee

Indicate whether an IEEE sponsoring committee of some form (e.g., an IEEE Standards Sponsor) has agreed to oversee this activity and its procedures.

**Has an IEEE sponsoring committee agreed to oversee this activity?:** Yes

If yes, indicate the sponsoring committee's name and its chair's contact information.

**Sponsoring Committee Name: IEEE 802 LAN/MAN Standards Committee**
**Chair's Name: Paul Nikolich**
**Chair's Email Address: p.nikolich@ieee.org**
**Chair's Phone: + 857 205 0050**

**Working Group Chair :** IEEE 802.3 Ethernet Working Group
**Chair's Name:** David Law
**Chair's Email Address:** dlaw@hpe.com
**Chair's Phone:** +44 1631 563729
Contact Information for Working Group Vice-Chair
Vice-Chair's Name: Adam Healey
Vice-Chair's Email Address: adam.healey@avagotech.com
Vice-Chair's Phone: + 610 712-3508

### 7.2. Activity Management

If no IEEE sponsoring committee has been identified in 7.1 above, indicate how this activity will manage itself on a day-to-day basis (e.g., executive committee, officers, etc).

N/A

### 7.3. Procedures

Indicate what documented procedures will be used to guide the operations of this activity; either a) modified baseline *Industry Connections Activity Policies and Procedures,* or b) Sponsor or Working Group policies and procedures accepted by the IEEE-SA Standards Board. The chosen policies and procedures must be reviewed by ICCom

IEEE 802 LMSC Operations Manual, IEEE 802 P&P, IEEE 802.3 Operations Manual

# 8. Participants

## 8.1. Stakeholder Communities

Indicate the stakeholder communities (the types of companies or other entities, or the different groups of individuals) that are expected to be interested in this IC activity, and will be invited to participate.

Stakeholders identified to date includes but are not limited to: users and producers of systems and components for servers, network storage, networking systems, data centers, high performance computing, and telecommunications carriers.

## 8.2. Expected Number of Participants

Indicate the approximate number of entities (if entity-based) or individuals (if individual-based) expected to be actively involved in this activity.

130 individuals

## 8.3. Initial Participants

Provide a list of the entities or individuals that will be participating from the outset. It is recommended there be at least three initial participants for an entity-based activity, or five initial participants (each with a different affiliation) for an individual-based activity.

Use the following table for an entity-based activity:

| Entity | Primary Contact | Additional Representatives |
|---|---|---|
| Entity Name | Contact Name<br>Email Address<br>Phone Number | Name, Email Address<br>Name, Email Address |
| | | |

Use the following table for an individual-based activity:

| Individual | Contact Information | Employer | Affiliation |
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