New Ethernet Applications
Industry Connections Activity Initiation Document (ICAID)

Version: 6.0, 15 July 2024

<mark>IC15-005-06 Approved by the CAG 4 October 2024</mark>

Instructions

- Instructions on how to fill out this form are shown in red. Please leave the instructions in the final document and simply add the requested information where indicated.
- <mark>Spell out each acronym the first time it is used. For example, "United Nations (UN)."</mark>
- 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: ███████████████ .
- 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: Jon Lewis
Email Address: ████████████
Employer: Dell Technologies
Affiliation: Dell Technologies

IEEE collects personal data on this form, which is made publicly available, to allow communication by materially interested parties and with Activity Oversight Committee and Activity officers who are responsible for IEEE work items.

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 for Ethernet, including new application areas, is driving the development of a multitude of new standards to be developed. Recent examples of Ethernet standardization activities that originated in the current New Ethernet Applications Industry Connections ICAID Asymmetrical electrical automotive Ethernet supporting end-node cameras which progressed through the NEA and is now IEEE P802.3dm project, AI and HPC applications for Ethernet which is still in progress. It is anticipated that based on growing demand in the AI/HPC applications space that will spawn next generation high-speed Ethernet efforts in the NEA.

The goal of this activity is to assess requirements for new Ethernet-based applications, 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.

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.

Stakeholders for the Standard: Ethernet has been dominant in the datacom space such as campus, enterprise and data center applications. Stakeholders include component providers (e.g., electrical / optical transceivers, cabling and integrated circuit), system product providers (e.g., switch and NIC), network providers (e.g., installers, network support), bandwidth providers (e.g., carriers), software providers (e.g., network management), providers of network powered or powering devices, and the users of any of these products or services. Recent activities in IEEE 802.3 have helped expand stakeholders for Ethernet into automotive, industrial and access application spaces.

3.5 How will the activity benefit the IEEE, society, or humanity?
Describe how this activity will benefit the IEEE, society, or humanity.

Ethernet is employed in a number of market applications, which are exhibiting a growing diversity in terms of the Ethernet rates and features needed. Solutions spanning these different application spaces and rates will be best addressed by leveraging common technology investments. Ethernet provides ubiquitous low-cost, high-bandwidth communications. Recent global conditions highlighted the importance of being able to maintain communications globally. Ethernet in all its varieties is a critical component in communication infrastructure. This activity will support Ethernet's evolution by enabling 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: 09/2026

IC activities are chartered for two years at a time. Activities are eligible for extension upon request and review by ICCom and the responsible committee of the IEEE SA Board of Governors. 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.

5.1 Open Source Software Development
Indicate whether this IC Activity will develop or incorporate open source software in the deliverables. All contributions of open source software for use in Industry Connections activities shall be accompanied by an approved IEEE Contributor License Agreement (CLA) appropriate for the open source license under which the Work Product will be made available. CLAs, once accepted, are irrevocable. Industry Connections Activities shall comply with the IEEE SA open source policies and procedures and use the IEEE SA open source platform for development of open source software. Information on IEEE SA Open can be found at https://saopen.ieee.org/.

Will the activity develop or incorporate open source software (either normatively or informatively) in the deliverables? No

[DO NOT MODIFY OR DELETE: ICAID template approved by the IEEE SA CAG on 14 March 2022]

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 Activity Oversight Committee

Indicate whether an IEEE Standards Committee or Standards Development Working Group has agreed to oversee this activity and its procedures.

Has an IEEE Standards Committee or Standards Development Working Group agreed to oversee this activity? Yes.

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

IEEE Committee Name: IEEE 802 LAN/MAN Standards Committee
Chair's Name: James Gilb
Chair's Email Address: ▮▮▮▮▮▮▮▮▮▮▮▮▮

Working Group Chair: IEEE 802.3 Ethernet Working Group
Chair's Name: David Law
Chair's Email Address: ▮▮▮▮▮▮▮▮▮

Contact Information for Working Group Vice-Chair
Vice-Chair's Name: Adam Healey
Vice-Chair's Email Address: ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮

Additional IEEE committee information, if any. Please indicate if you are including a letter of support from the IEEE Committee that will oversee this activity.

IEEE collects personal data on this form, which is made publicly available, to allow communication by materially interested parties and with Activity Oversight Committee and Activity officers who are responsible for IEEE work items.

7.2 Activity Management

If no Activity Oversight 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* ([entity](), [individual]()), (b) *Abridged Industry Connections Activity Policies and Procedures* ([entity](), [individual]()), (c) Standards Committee policies and procedures accepted by the IEEE SA Standards Board, or (d) Working Group policies and procedures accepted by the Working Group's Standards Committee. If option (a) is chosen, then ICCom review and approval of the P&P is required. If option (c) or (d) is chosen, then ICCom approval of the use of the P&P is required.

IEEE 802 LMSC Operations Manual, IEEE 802 P&P, IEEE 802 Working Group Policies and Procedure, 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, telecommunications carriers, automotive, and industrial applications.

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.

120 Individuals

8.3 Initial Participants
Provide a few 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 individual-based activity:

Individual Name	Employer	Affiliation
Jon Lewis	Dell Technologies	Dell Technologies

Individual Name	Employer	Affiliation
Adam Healey	Broadcom	Broadcom
Ali Ghasi	Ghiasi Quantum LLC	Ghiasi Quantum LLC
Alireza Razavi	Marvell	Marvell
Anup Shah	Siemens Corporation	Siemens EDA
Beth Kochuparambil	Cisco	Cisco
Brett Mcclellan	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.
Chad Jones	Cisco Systems, Inc.	Cisco Systems, Inc.
Chan Chen	Self Employed	Independent/AOI
Chris Cole	Quintessent	Quintessent
Clark Carty	Cisco	Cisco
Claudio DeSanti	Dell	Dell
Dave Cassan	Alphawave	Alphawave
David Law	Hewlett Packard Enterprise	Hewlett Packard Enterprise
David Ofelt	Juniper Networks, Inc.	Juniper Networks, Inc.
David Piehler	Dell	Self
Earl Parsons	CommScope, Inc.	CommScope, Inc.
Ed Ulrichs	Intel	Intel
Eric Bernier	Huawei Technologies Canada Co., Ltd.	Huawei Technologies Canada Co., Ltd.
Eric Maniloff	Ciena Corporation	Ciena Corporation
Ernest Muhigana		Lumentum
Eugene Opsasnick	Broadcom Inc.	Broadcom Inc.
Felix Fellhauer	Robert Bosch GmbH	Robert Bosch GmbH
Flavio Marques	FURUKAWA ELECTRIC	FURUKAWA ELECTRIC
Frank J. Effenberger	Futurewei, US Subsidiary of Huawei	Futurewei, US Subsidiary of Huawei
Geoffrey Thompson	GraCaSI S.A.	INDEPENDENT
George Zimmerman	CME Consulting	CME Consulting, APL Group, Cisco, CommScope, Marvell, SenTekSe
Golam Choudhury	OFS	OFS
Guangcan Mi	Huawei	Huawei
Guangcan Mi	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Hans Lackner	QoSCom GmbH	QoSCom GmbH
Hideki Goto	Toyota Motor Corporation	Toyota Motor Corporation
James Theodoras	HG Genuine	HG Genuine
James Withey	Fluke Corporation	Fluke Corporation
Jason Potterf	Cisco Systems, Inc.	Cisco Systems, Inc.
Jeff Maki	Juniper Networks	Juniper Networks
John Calvin	Keysight Technologies	Keysight Technologies
John D'Ambrosia	Futurewei, US Subsidiary of Huawei	Futurewei, US Subsidiary of Huawei

Individual Name	Employer	Affiliation
John Johnson	Broadcom Corporation	Broadcom Corporation
Joshua Kim	Hirose Electric USA	Hirose Electric USA
Kapil Shrikhande	Marvell	Marvell
Kenneth Jackson	Sumitomo Electric Industries, LTD	Sumitomo Electric Industries, LTD
Kent Lennartsson	Kvaser AB	Kvaser AB
Kent Lusted	Intel	Intel
Kent Lusted	Intel	Intel
Kihong/Joshua Kim	Hirose Electric (USA), Inc.	Hirose Electric (USA), Inc.
Kishore Kota	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.
Kumi Omori	NEC	NEC
Leon Bruckman	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Liav Ben-Artsi	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.
Marek Hajduczenia	Charter Communications	Charter Communications
Mark Nowell	Cisco	Cisco
Masato Shiino	FURUKAWA ELECTRIC	FURUKAWA ELECTRIC
Matt Brown	Huawei Technologies Canada	Huawei Technologies Canada
Mau-Lin Wu	MediaTek Inc.	MediaTek Inc.
Max Turner	Ethernovia	Ethernovia
Michael Dudek	Marvell	Marvell
Kapil Shrikhande	Marvell	Marvell
Kenneth Jackson	Sumitomo Electric Industries, LTD	Sumitomo Electric Industries, LTD
Kent Lennartsson	Kvaser AB	Kvaser AB
Kent Lusted	Intel	Intel
Kihong/Joshua Kim	Hirose Electric (USA), Inc.	Hirose Electric (USA), Inc.
Kishore Kota	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.
Kumi Omori	NEC	NEC
Leon Bruckman	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Liav Ben-Artsi	Marvell Semiconductor, Inc.	Marvell Semiconductor, Inc.
Marek Hajduczenia	Charter Communications	Charter Communications
Mark Nowell	Cisco	Cisco
Masato Shiino	FURUKAWA ELECTRIC	FURUKAWA ELECTRIC
Matt Brown	Huawei Technologies Canada	Huawei Technologies Canada
Mau-Lin Wu	MediaTek Inc.	MediaTek Inc.
Max Turner	Ethernovia	Ethernovia
Michael Dudek	Marvell	Marvell
Michael Paul	Analog Devices Inc.	Analog Devices
Mike Dudek	Marvell	Marvell
Natalie Wienckowski	General Motors	General Motors
Nathan Tracy	TE Connectivity	TE Connectivity
Nicholl, Shawn	Advanced Micro Devices (AMD)	Advanced Micro Devices (AMD)
Or Vidal	Alphawave Semi	Alphawave Semi
Paul Bottorff	Hewlett Packard Enterprise	Nortel Networks
Paul Nikolich	Self	Self

Individual Name	Employer	Affiliation
Peter Jones	Cisco Systems, Inc.	Cisco Systems, Inc.
Peter Stassar	Huawei	Huawei
Piers J G Dawe	NVIDIA	Nvidia
Pirooz Tooyserkani	Cisco Systems, Inc.	Cisco Systems, Inc.
Priyank Shukla	Synopsys, Inc.	Synopsys, Inc.
Ragnar Jonsson	Marvell Semiconductor, Inc.	Marvell
Ramana Murty	Broadcom Inc.	Broadcom Corporation
Rayond Nering	Cisco Systems, Inc.	Cisco Systems, Inc.
Rick Rabinovich	Keysight Technologies	Keysight Technologies
Robert Voss	Panduit Corp.	Panduit Corp.
Roberto Rodes	II-VI	II-VI
Sachin Goel	Aviva Links Inc	Aviva Links Inc
Sam Kocsis	Amphenol Corporation	Amphenol Corporation
Shawn Nicholl	AMD	AMD
Shimon Muller	Enfabrica Corp.	Enfabrica
Shoji Ogawa	Fujitsu Optical Components Limited	Fujitsu Optical Components Limited
Shuang Yin		Google
Steve Carlson	High Speed Design	High Speed Design
Taiji Kondo	MegaChips Corporation	Dexerials Corporation
Takahito Fukushima	Dexerials Corporation	Dexerials Corporation
Tetsuyuki Suzaki	NEC	NEC
Thomas Huber	Nokia	Nokia
Tingting Zhang	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Tom Huber	Nokia	Nokia
Tomoo Takahara	FUJITSU LABORATORIES LIMITED	FUJITSU LIMITED
Toshiaki Sakai	Socionext Inc.	socionext
Ulf Parkholm	Telefon AB LM Ericsson	Telefon AB LM Ericsson
Upen Kareti	Cisco Systems, Inc.	Cisco Systems, Inc.
Viet Tran	Keysight Technologies	Keysight Technologies
William Simms	NVIDIA Corporation	NVIDIA Corporation
Xiang He	Huawei	Huawei
Xinyuan Wang	Huawei	Huawei
Yan Zhuang	Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd
Yasuhiro Hyakutake	Orbray Co., Ltd.	Orbray Co., Ltd.
Yasuo Hidaka	Credo Semiconductor	Credo Semiconductor
Yongmao Chang	Inphi Corporation	Source Photonics
Yoshihiro Niihara	Fujikura Ltd.	Fujikura Ltd.
Yu Xu	Huawei	Huawei
Yuki Murakami	FUJITSU LIMITED	Fujitsu Limited

8.4 Activity Supporter/Partner

Indicate whether an IEEE committee (including IEEE Societies and Technical Councils), other than the Oversight Committee, has agreed to participate or support this activity. Support may include, but is not limited to, financial support, marketing support and other ways to help the Activity complete its deliverables.

Has an IEEE Committee, other than the Oversight Committee, agreed to support this activity? No.

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

IEEE Committee Name: Committee Name
Chair's Name: Full Name
Chair's Email Address: who@where

Please indicate if you are including a letter of support from the IEEE Committee.