

Optical Networks 2020
Industry Connections Activity Initiation Document (ICAID)
Version: 0.3, 17 October 2017
IC17-015-01 Approved by the IEEE-SASB 6 December 2017

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.

Primary Contact:

Name: Peter Winzer

Email Address: peter.winzer@nokia-bell-labs.com

Phone: +1-732-939-5016

Employer: Nokia Bell Labs

Affiliation: Nokia Bell Labs

Alternative Contact:

Name: Xiang Liu

Email Address: xiang.liu@huawei.com

Phone: +1-732-618-5037

Employer: Huawei

Affiliation: Huawei

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.

Optical Networks 2020 (ON2020) is a global association that drives innovative optical network solutions to better meet the optical networking demands in the cloud era towards year 2020 and beyond. It aims to define new optical network requirements and specifications, develop general network technology roadmaps and evolution scenarios, and foster an open and sustainable ecosystem for end users, service providers, and equipment and component vendors to collectively address the optical networking demands in the cloud era. Freed from near-term thinking, competition, and looking beyond existing standardization efforts, the program will help to set longer-term goals and directions that the fiber-optic communications industry should be expected to work towards.

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 numerous standards and multi-source agreements (MSAs) covering optical components (particularly transceivers) as well as ROADMs (eg the Open ROADM MSA www.openroadm.org). Similarly, there are activities such as the Telecom Infra Project (www.telecominfraproject.com) which are addressing specific short-term needs of certain subsets of the optical communications space.

ON2020 has a broader, longer-term remit than most of the above, although the developments within these standardization and MSA activities will articulate to, and inform the thinking of, the ON2020 participants.

Developments in Software Defined Networking and Network Function Virtualization (eg the Open Networking Foundation www.opennetworking.org) are also complementary to the ON2020 activities.

3.3. Previously Published Material

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

The ON2020 has already published reports of its previous meetings, together with a series of presentations arising given at a workshop held in conjunction with the OFC 2017 conference in March 2017. More recently it has provided an initial readout based on responses to a survey of communications service providers in the US, EU and Asia. Copies of all these documents can be found on the ON2020 website at <http://on2020.org/download.html>.

3.4. Potential Markets Served

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

Optical networking equipment and component vendors; communications service providers

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: 12/2018

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.

Develop long-term industry visions beyond current product deployments and beyond concrete product roadmaps. (No near-term thinking, competition, standardization constraints.)

Develop commonly agreed-upon goals and directions that the fiber-optic communications industry should be expected to work towards.

Develop a plan for migration to an industry alliance, in accordance with the expectations of the IC activity.

The outcomes of these over the next 12 months would be one or more white papers summarizing the developed vision and overall industry directions. Current activities cover the areas of T-SDN, ROADM/OXC, 5G-oriented optical networks, and next-generation WDM and optical link technologies. In the medium term, these white paper(s) would be extended to encompass other aspects of optical networking.

To facilitate these developments, we will hold workshops and information sessions as part of the major optical communications in the US (OFC), Europe (ECOC) and Asia (ACP). These continue the existing series of workshops held at OFC and ECOC in 2016 and 2017. These workshops will continue to form part of the programming of these conferences and we are coordinating with the various conference organizers to facilitate this. As such, there will be no direct cost to the ON2020 activity for these workshops.

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 ICom.

No immediate funding is required. The activity envisions transitioning to a formal industry alliance, working with IEEE-ISTO, with fee-based membership. In the interim, most meetings will be via teleconference and any in-person activities will seek participating companies to act as meeting hosts. The basic support services provided to IC activities will be sufficient to meet the needs of this activity.

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?:

The Photonics Society has indicated that it wishes to support the activity. The nature of the support will be worked out between ON2020 and the Photonics Society.

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

Sponsoring Committee Name: IEEE Photonics Society

Chair's Name: Chennupati Jagadish

Chair's Email Address: Chennupati.jagadish@anu.edu.au

Chair's Phone: [+61-2-61250363](tel:+61-2-61250363)

Additional sponsoring committee information, if any.

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).

Activity officers will be elected at the start to manage the work of the program

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*, (b) Sponsor policies and procedures accepted by the IEEE-SA Standards Board, or (c) Working Group policies and procedures accepted by the Working Group's Sponsor. If option (a) is chosen, then ICom review and approval of the P&P is required. If option (b) or (c) is chosen, then ICom approval of the use of the P&P is required.

The Industry Connections baseline P&Ps for individual programs will be used.

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.

Optical networking system and component manufacturers, along with communications service providers will be key stakeholders encouraged to join the activity.

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.

10-25 participants

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 individual-based activity:

| Individual | Contact Information | Employer | Affiliation |
|-------------------|---|-----------------|--------------------|
| Peter Winzer | Peter-winzer@nokia-bell-labs.com +1-732-939-5016 | Nokia Bell Labs | Nokia Bell Labs |
| Xiang Liu | xiang.liu@huawei.com +1-732-618-5037 | Huawei | Huawei |
| Dogan Atlas | datlas@infinera.com +1 770-355-6471 | Infinera | Infinera |
| Brandon Collings | brandon.collings@lumentum.com +1-732-618-8780 | Lumentum | Lumentum |
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