Introduction of PIF Standard Promotion Committee

Mission:
Support for international standardization activities on Photonic Network

- **Systematic visualization of standardization documents and trends in standardization organizations related to photonic network**

- **Latest information exchange through Workshops on standardization trends and road map**

- **Promotion of standard activities in academic societies**

- **Collaboration with international standardization organizations**

Systematic visualization of information in SDOs

Latest trends, documents of the related standardization organizations(SDOs) are systematically shown in "PIF standardization portal site".
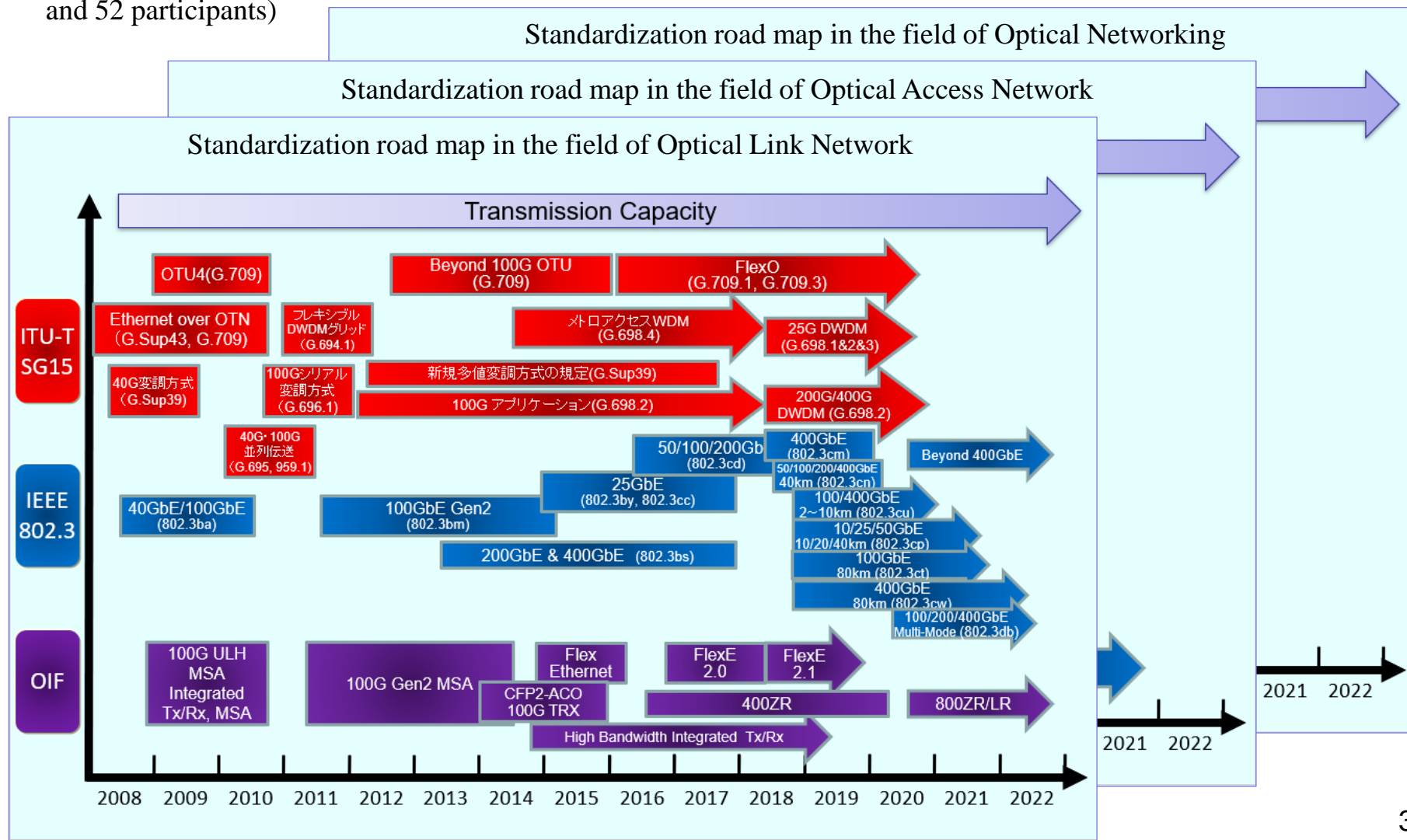
Field	Relevant keyword	Number of contents
Optical link	OTN, 400GbE, Beyond-400G and more…	36 contents
Optical access	NG-PON2, Front/Back-haul for 5G Radio Access, IFoF/RoF and more…	23 contents
Optical networking	Transport SDN, SDN/OpenFlow, NFV and more…	44 contents

項目	キーワード	タイトル	開催日	発表者
光リンク	400G, Beyond-400G	高速光インターフェース動向（Toward Beyond-400G）New!	2021/2/15	曽根 由明（NEL-America）
	光トランシーバ	OIF/IEEE802.3の光トランシーバ審議状況	2020/2/21	磯野 秀樹（富士通オプティカルコンポーネンツ）
	100G超	超高速光伝送技術の国際標準化動向	2019/9/11	桑原 昭一郎（NTT）
	400GbE	短距離光通信の国際標準化動向	2019/2/8	高原 智夫（富士通研究所）
	digital coherent	デジタルコヒーレント光伝送システムの国際標準化動向	2019/2/8	山本 秀人（NTT）
光アクセス	IFoF/RoF	IFoF/RoF技術とITU-Tの標準化最新動向 New!	2021/2/15	田中 和樹（KDDI総合研究所）
	ITU-T 高速PON/PtP	光アクセスシステムの最新標準化動向	2020/2/21	金井 拓也（NTT）
	(e)CPRI	5G/New Radioに向けての(e)CPRI	2020/2/21	宮谷 徹彦（NEC）
	Beyond 5G	Beyond 5Gに向けた有線アクセスネットワークの進化シナリオ	2019/10/24	西村 公佐（KDDI総合研究所）
	RoF	光ファイバ無線技術の標準化動向	2017/9/13	久利 敏明（NICT）
	RoF	RoF技術と標準化最新動向	2017/3/9	Pham Tien Dat（NICT）
光ネットワーキング	衛星光通信	宇宙データシステム諮問委員会(CCSDS)における衛星光通信技術の標準化動向 New!	2021/2/15	コレフ ディミタル（NICT）
	Open化/Whitebox化	Telecom Infra ProjectにおけるWhitebox伝送装置の標準化動向 New!	2021/2/15	西沢 秀樹（NTT）
	量子暗号通信(QKDN)	ITU-Tにおける量子暗号ネットワークの国際標準化状況 New!	2021/2/15	釼吉 薫（NICT）
	P4	データプレーンプログラミング言語のP4に関する標準化動向	2020/2/21	桑田 斉（APRESIA Systems）
	車載光イーサネット	車載光イーサネットの標準化動向	2020/2/21	各務 学（名古屋工業大学）
	ポスト5G	ポスト5G時代のネットワークインフラへの期待	2019/10/24	佐藤 岳文（総務省）

Available on PIF website
https://www.scat.or.jp/photonic/
(Membership account is required for detailed information)

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Latest Information exchange through Workshops

Workshop is held to discuss the hot topics in ITU-T, IEEE, OIF, IETF and ONF, and continuously update a standardization road map. (Recent WS: on February 15, 2021, with 5 lectures and 52 participants)

Standardization road map in the field of Optical Networking

Standardization road map in the field of Optical Access Network

Standardization road map in the field of Optical Link Network

Transmission Capacity

ITU-T SG15
- OTU4(G.709)
- Beyond 100G OTU (G.709)
- FlexO (G.709.1, G.709.3)
- Ethernet over OTN （G.Sup43, G.709)
- フレキシブル DWDMグリッド （G.694.1)
- メトロアクセスWDM (G.698.4)
- 25G DWDM (G.698.1&2&3)
- 40G変調方式 〈G.Sup39〉
- 100Gシリアル 変調方式 (G.696.1)
- 新規多値変調方式の規定(G.Sup39)
- 100G アプリケーション(G.698.2)
- 200G/400G DWDM (G.698.2)
- 40G・100G 並列伝送 〈G.695, 959.1〉

IEEE 802.3
- 40GbE/100GbE (802.3ba)
- 100GbE Gen2 (802.3bm)
- 25GbE (802.3by, 802.3cc)
- 50/100/200Gb (802.3cd)
- 400GbE (802.3cm)
- Beyond 400GbE
- 50/100/200/400GbE 40km (802.3cn)
- 200GbE & 400GbE (802.3bs)
- 100/400GbE 2~10km (802.3cu)
- 10/25/50GbE 10/20/40km (802.3cp)
- 100GbE 80km (802.3ct)
- 400GbE 80km (802.3cw)
- 100/200/400GbE Multi-Mode (802.3db)

OIF
- 100G ULH MSA Integrated Tx/Rx, MSA
- 100G Gen2 MSA
- CFP2-ACO 100G TRX
- Flex Ethernet
- FlexE 2.0
- FlexE 2.1
- 400ZR
- 800ZR/LR
- High Bandwidth Integrated Tx/Rx

2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

2021 2022

2021 2022

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Promotion of standard activities in academic societies

We invite an expert engaged in standardization activities in ITU-T, IEEE, OIF, IETF and ONF, and plan PIF lecture, cooperating or supporting various meetings and workshops in the IEICE(*).

(*)The Institute of Electronics, Information and Communication Engineers

◆ **IEICE Society Conference 2019 (September 11, 2019)**

・International standardization activities on ultra high-speed optical transmission technologies
　　　Shoichiro Kuwahara   (NTT)
・Next-generation datacenter routing data plane
　　　Shishio Tsuchiya   (Arista Networks Japan)

◆ **33rd OCS (Technical Committee on Optical Communication Systems) Symposium (December 18, 2019)**

・Activities for open optical network in the Telecom Infra Project
　　　Hideki Nishizawa   (NTT)

◆ **34th OCS (Technical Committee on Optical Communication Systems) Symposium (December 16, 2020)**

・Standardization of Ethernet and 200G/λ Short-Reach Optical Transmission
 Using Advanced Digital Signal Processing
　　　Shuto Yamamoto   (NTT)

Collaboration with international standardization organizations

We promote activities of international collaboration with international standardization organizations by co-organized international workshop, to globally activate the standardization activities of Japan.

◆ 13th International Conference on Network and Service Management (CNSM 2017)　　　 (November 26-30, 2017)

The Photonic Internet Forum (PIF) cosponsored the 2017 edition of CNSM, and at the 4th International Workshop on Management of SDN and NFV Systems (ManSDN/NFV 2017) held in conjunction with CNSM, the representative from the PIF presented on "Progress toward Network Softwarization" as an invited talk.

◆ 24th OECC／PSC 2019　(July 7-11, 2019) Cooperation in the Workshop and participation in the exhibition

The Photonic Internet Forum (PIF) cooperated in the workshop at OECC/PSC2019. "Multi-core fibers using current standard technology" was presented by the invited speaker recommended by the PIF. Furthermore, we participated in the exhibition and introduced our activities by using the poster, the leaflets and the PC slide show.

@ Fukuoka, Over 80 participants

◆ 16th International Conference on IP + Optical Network　(iPOP 2020) Virtual, Web conference　 (September 10-11, 2020)

The Photonic Internet Forum (PIF) supported the conference by the dispatch of the officer, the cooperation to management of TPC, the participation in interoperability demonstration, the operation of the online registration site. In addition, we showed our activities in the virtual exhibition.

CONTACT US

For more information, please contact the PIF Office:

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