

Minutes  
Multi-Gigabit Optical Automotive Ethernet (OMEGA)  
Task Force Ad Hoc  
31 August 2021

Attendance list as recorded in Webex participant list

Last Name	First Name	Employer	Affiliations	August31th
Abbott	John	Corning	Corning	X
Akin	Sami	Volkswagen AG	Volkswagen AG	
Amamiya	Yasushi	MegaChips	MegaChips	
Andrae	Stefan	SEI Antech-Europe GmbH	SEI Antech-Europe GmbH	
Aono	Michikazu	Yazaki	Yazaki	
Araki	Nobuyasu	Yazaki	Yazaki	X
Bergner	Bert	TE Connectivity	TE Connectivity	
Boyer	Rich	APTIV	APTIV	
Barbero	Fernando	KDPOF	KDPOF	
Bordogna	Mark	Intel	Intel	
Borda	Jamila	BMW	BMW	
Brooks	Paul	Viavi Solutions	Viavi Solutions	
Bruckman	Leon	Huawei	Huawei	
Castro	Jose	Panduit	Panduit	
Chang	Jae-yong	Keysight	Keysight	X
Choudhury	Mabud	OFS	OFS	X
Chuang	Keng Hua	HPE	HPE	
Cuesta	Emilio	TE Connectivity	TE Connectivity	X
Dittmann	Markus	KDPOF	KDPOF	X
Donthu	Suresh	Corning	Corning	X
Dube	Kae	UNH-IOL	UNH-IOL	
Eek	Magnus	Volvo Cars	Volvo Cars	
Felgenhauer	Alexander	Yazaki	Yazaki	
Fellhauer	Felix	Bosch	Bosch	
Ferretti	Vincent	Corning	Corning	X
Fortusini	David	Corning	Corning	
Fukuoka	Takashi	AutoNetworks Technologies Ltd.	AutoNetworks Technologies Ltd.; Sumitomo Electric Industries, Ltd.	X
Giovanne	Laura	Broadcom	Broadcom	
Glanzner	Martin	SEI Antech-Europe GmbH	SEI Antech-Europe GmbH	
Gomez	Chisato	Nitto Denko Corporation	Nitto Denko Corporation	X
Goto	Hideki	Toyota Motor Corporation	Toyota Motor Corporation	
Grow	Robert	Robert M. Grow Consulting	RMG Consulting, KDPOF	
Haasz	Jodi	IEEE-SA	IEEE-SA	X
Hajduczenia	Marek	Charter Communications	Charter Communications	
Harshbarger	Douglas	Corning Incorporated	Corning Incorporated	X
Hartmann	Stephan	Siliconally GmbH	Siliconally GmbH	
Hayashi	Takehiro	HAT Labs	HAT Labs	X
HIRASE	Hidenari	AGC	AGC	X
Hormmeyer	Bernd	Phoenix Contact	Phoenix Contact	
Huang	David	Broadcom	Broadcom	
Huang	Shaowu	Marvell	Marvell	
Hyakudai	Toshihisa	Sony	Sony	
Hyakutake	Yasuhiro	Adamant Namiki Precision Jewel	Adamant Namiki Precision Jewel	X
Isono	Hideki	FOC	FOC	X
Jiménez	Andy	WESCO	WESCO	
Kadry	Haysam	Ford Motor Company	Ford Motor Company	
KAGAMI	Manabu	NI Tech	NI Tech	X

Kazuhiko	Ishibe	Anritsu	Anritsu	
Kamino	John	OFS	OFS	
Kawahara	Keisuke	Furukawa Electric	Furukawa Electric	X
KIKUTA	Tomohiro	Adamant Namiki Precision Jewel	Adamant Namiki Precision Jewel	X
Kim	Joshua	Hirose USA	Hirose USA	
King	Roger	TRUMPF Photonic Components	TRUMPF Photonic Components	X
Kinningham	Alan	I-PEX	I-PEX	
Kobayashi	Shigeru	AIO Core	AIO Core	X
Koependoerfer	Erwin	Leoni	Leoni	X
Kondo	Taiji	MegaChips	MegaChips	X
Kurashima	Kazuyoshi	AGC	AGC	X
Law	David	HPE	HPE	
Lewis	David	Lumentum	Lumentum	
Liu	Karen	Lightwave	Lightwave	
Lee	Bernard	Senko	Senko	
Lee	Sylvanus	Leviton	Leviton	
Lingle	Robert	OFS	OFS	
Malicoat	David	Malicoat Networking Solutions	Senko Advanced Components	X
Martino	Kjersti	Inneos	Inneos	X
Marques	Flavio	Furukawa electric	Furukawa Electric	
Masuda	Takeo	OITDA/PETRA	OITDA/PETRA	X
Matheus	Kirsten	BMW	BMW	
McMillan	Larry	Western Digital	Western Digital	
Mueller	Harald	Endress + Hauser	Endress + Hauser	
Mueller	Thomas	Rosenberger	Rosenberger	
Murty	Ramana	Broadcom	Broadcom	X
Nakagawa	Hideki	AGC	AGC	X
New	Anthony	Prysmian Group	Prysmian Group	X
Nicholl	Gary	Cisco	Cisco	
Nikolich	Paul	802 Chairman	802 Chairman	
Niihara	Yoshihiro	Fujikura	Fujikura	X
Ogura	Ichiro	Petra	Petra	X
Omori	Kumi	NEC	NEC	
Ortiz	David	KDPOF	KDPOF	
Pandey	Sujan	Huawei	Huawei	
Pankert	Joseph	TRUMPF Photonic Components	TRUMPF Photonic Components	
Pardo	Carlos	KDPOF	KDPOF	X
Parsons	Earl	Commscope	Commscope	
Peng	Semmy	Huawei	Huawei	
Pérez-Aranda	Rubén	KDPOF	KDPOF	X
Peteranderl	Ralf	Rosenberger	Rosenberger	
Pham	Phong	EastPoint	EastPoint	
Piehler	David	Dell	Dell	
Pimpinella	Rick	Panduit	Panduit	
Pinzón	Plinio	KDPOF	KDPOF	
Pitwon	Richard	Resolute Photonics	Resolute Photonics	X
Preis	Roland	MD Elektronik	MD Elektronik	
Reinhard	Michael	SEI Antech-Europe GmbH	SEI Antech-Europe GmbH	
Retting	Thomas	Beckhoff Automation	Beckhoff Automation	
Sambasivan	Sam	AT&T	AT&T	
Savi	Olindo	Hubbell Incorporated	Hubbell Incorporated	
Sawano	Hiroshi	OITDA		
Sayre	Edward	Samtec	Samtec	
Shukla	Priyank	Synopsys	Synopsys	
Shigematsu	Masayuki	Sumitomo Electric	Sumitomo Electric	
Shiino	Masato	Furukawa Electric	Furukawa Electric	X
Shukla	Priyank	Synopsys	Synopsys	
Silvano de Sousa	Jonathan	GG-Group	GG-Group	

Su	Charles	Huawei	Huawei	
Sun	Wensheng	Marvell	Marvell	X
Sun	Yi	OFS	OFS	
Suzuki	Yasuo	KDPOF Japan	KDPOF	X
Swanson	Steve	Corning Inc.	Corning Inc.	X
Takahashi	Ryutaro	Senko	Senko	
Takahashi	Satoshi	POF Promotion	POF Promotion	X
Takahashi	Tadashi	Nitto Denko Corporation	Nitto Denko Corporation	X
Takayama	Kazuya	Nitto Denko Corporation	Nitto Denko Corporation	X
Tan	I-Hsing	Broadcom	Broadcom	
Theuerkom	Thomas	Corning	Corning	
Theodoras	James	HG Genuine	HG Genuine	
Torres	Luisma	KDPOF	KDPOF	X
Tsujita	Yuichi	Nitto Denko Corporation	Nitto Denko Corporation	X
Tsuzaki	Nozomi	Independent	Independent	X
Ueno	Yuto	Sumitomo	Sumitomo	X
Vanderlaan	Paul	UL LLC	UL LLC	
Walsh	Thomas	KDPOF	KDPOF	
WATANABE	Yuji	AGC	AGC	X
Wendt	Mattias	Signify	Signify	
Wienckowski	Natalie	General Motors	General Motors	
Wiesner	Michael	Trumpf	Trumpf	
Xu	Xing	Huawei	Huawei	X
Yamada	Osamu	Yazaki	Yazaki	
Yang	Yumeng	Huawei	Huawei	
Yasui	Hideshi	AGC	AGC	
Yonemura	Masatoshi	NITech	NITech	
Yonezawa	Kenji	AGC	AGC	X
Young	James	Commscope	Commscope	
Yurtin	John	APTIV	APTIV	X
Zhiwei	Yang	ZTE	ZTE	
Zhong	Qiwen	Huawei	Huawei	
Zhu	Liang	Marvell	Marvell	

## Tuesday, 31st August 2021, 12:00 (noon) UTC

The meeting was called to order at approximately 12:01 UTC Tuesday 31st August 2021  
Chaired by Luisma Torres, IEEE P802.3cz Task Force Secretary.

Mr. Torres presented *Agenda and General Information*

([https://iee802.org/3/cz/public/31\\_aug\\_2021/Agenda\\_3cz\\_01\\_310821.pdf](https://iee802.org/3/cz/public/31_aug_2021/Agenda_3cz_01_310821.pdf)).

Mr. Torres presented the agenda for the meeting. The agenda was approved by unanimous consent.

Mr. Torres asked the audience if there was anybody from the press. No one responded to the call.

Mr. Torres issued the call for essential patent claims. No one responded to the call. He also presented the slides on the IEEE Copyright Policy and participation guidelines.

Mr. Pérez-de-Aranda asked to present *Link budget proposal 25, 10, 5 and 2.5 Gb/s for GIPOF @850nm* ([https://iee802.org/3/cz/public/31\\_aug\\_2021/perezaranda\\_3cz\\_01a\\_310821\\_gipof\\_link\\_budget.pdf](https://iee802.org/3/cz/public/31_aug_2021/perezaranda_3cz_01a_310821_gipof_link_budget.pdf)). This presentation shows a link budget proposal for GIPOF and a VCSEL @ 850nm for 2.5, 5, 10 and 25 Gbps. Under several assumptions regarding VCSEL biasing, FFE, photodiode responsivity and GIPOF Effective Modal Bandwidth (EMB), a similar receiver sensitivity is obtained for OM3 @980nm 40m and GIPOF @850nm 15m. Many questions were asked, particularly about test methods to calculate the EMB (Differential Mode Distortion (DMD) test with Encircled Flux (EF) specification versus Over-Filled Launch (OFL)), and the extrapolation of EMB measured for 100 m to EMB estimated for shorter links. Mr. Pérez-de-Aranda provided answers.

Mr. Watanabe asked to present *Rationale for shorter reach links* ([https://iee802.org/3/cz/public/31\\_aug\\_2021/watanabe\\_3cz\\_01a\\_310821\\_rational\\_for\\_shorter\\_reach\\_link.pdf](https://iee802.org/3/cz/public/31_aug_2021/watanabe_3cz_01a_310821_rational_for_shorter_reach_link.pdf)) and *Proposed IEEE 802.3cz PMD, MDI and Media Baseline Text with OM3 and GI-POF* ([https://iee802.org/3/cz/public/31\\_aug\\_2021/watanabe\\_3cz\\_02a\\_310821\\_baseline\\_proposal\\_with\\_POF.pdf](https://iee802.org/3/cz/public/31_aug_2021/watanabe_3cz_02a_310821_baseline_proposal_with_POF.pdf)). These presentations show PMDs and MDI proposals for 2.5, 5, 10 and 25 Gb/s short reach (15m) maximum link length, maximum 4 in-line connectors for 2.5 and 5 Gb/s, 3 for 10 Gb/s and 2 for 25 Gb/s using 850nm VCSEL, named nGBASE-AUS. The GIPOF fiber optical parameters are taken from IEC60793-2-40 A4i type. It is admitted in the presentation that the proposed PMDs and MDIs do not cover all P802.3cz objectives, but considering nGBASE-AUS as an addition to the already proposed OM3 + 980nm VCSEL PMD, the TF objectives are then covered. It was also pointed out that the aramid yarn may not be required for POF cable. Many questions were asked, particularly regarding data supporting the need or not of aramid yarn for GIPOF, economic advantages of having different PMDs and wavelengths, risk of market segmentation versus OEM ability to choose among several standardized PMDs. Mr. Watanabe provided answers.

Mr. Torres asked to present the ToDo list. Mr. Torres asked Mr. Pitwon and Mr. Ogura about the scheduled presentations on Silicon Photonics + OM2/OM3 for September. Mr. Pitwon answered that the presentations will be on time.

Mr. Torres asked Mr. Takayama about the presentations that are expected regarding GIPOF-based PMDs, as no presentation date has been committed yet. Mr. Takayama said that he cannot commit on dates yet. Therefore, no update of the ToDo list was made.

Mr. Torres reminded the TF participants that the next TF Ad Hoc meeting is 7 September. Mr. Torres also comment on the need to revise the approved timeline, as the TF did not approve a baseline for PMD that allows the elaboration of a technically complete draft to be ready for WG ballot.

Having exhausted the agenda, the meeting was adjourned at approximately 13:59 UTC.

Recording secretary: Luisma Torres.