IEEE 802.1 Working Group January 18-22, 2021 Interim Session Electronic

Session Minutes

The Working Group (WG) Chair, Glenn Parsons, presided. The Recording Secretary, Jessy Rouyer, wrote and/or edited the minutes in part based on input from subgroup Chairs and their Secretaries.

Note that, throughout this document, minuted/recorded inputs from any attendee can not/shall not be assumed to represent a position of their employer or affiliated organization. Discussion points captured do not necessarily reflect the views of the presenter, discussion leader or minute taker, and do not imply consensus unless that is explicitly minuted. The content of draft standards is determined by the ballot process; other formal decisions are the subject of Working Group motions.

1 Attendance and affiliation

The table in this section reflects, for all meetings held in this session, the attendance and affiliation of participants who registered their attendance in IMAT.

		<u> </u>					-					Ν	/lair	iten	anc	e (F	rida	ıy, 2	2-J	an-2	202	21, 1	4:0	0 - 1	6:00	ET)
														TS	N (F	rida	iy, 2	22-J	an-	202	1, 1	11:3	0 - 1	13:30	0 ET)
												Se	curi)0 ET	_	
				1			7	TSN	- IE	EC/I	EEE	608	02 (Frid	ay,	22	an-	202	1, (9:0	0 -	11:0	00 E	T)		
										N	end	ica (Fric	lay,	22	an-	202	21, 0	9:0	0 - :	11:	00 E	T)			
								YA	NGs	ters	(Th	urso	lay,	21-	Jan	202	21, 1	L4:0	0 -	16:0)0 E	ET)				
				TSM	N - I	EC/	'IEE	E 60)802	2 (TI	nurs	day,	21	Jan	-202	21, :	11:3	:0 -	13:	30 E	T)					
				Ĩ.				TSM	1 (TI	hurs	sday	, 21	-Jar	1-20	21, :	11:3	80 -	13:	30 E	T)						
							TSI	ν (т	hun	sda	y, 21	L-Jai	1-2C)21,	11:3	30 -	13:	30 E	T)							
		TSN -	IEC	/IEE	E 6	080	2 (т	hur	sda	y, 2	1-Ja	n-2()21,	09:	00 -	11:	<u>00 e</u>	ET)								
					TSI	т) и	'huı	sda	y, 2	21-Ja	n-2	021,	09	:00 ·	11:	00	ET)									
				TSI	N (T	hu	rsd a	iy, 2	21-Ja	an-2	2021	, 09	:00	- 11	:00	ET)										
			SN	(We	dne	sda	iy, 2	20-J	an-2	202	1, 14	1:00	- 16	6:00	ET)											
		Security	(We	dne	esda	ıy, 2	20-J	an-	202	1, 1	3:30	- 15	5:30	ET)												
		TSN - IEC/IEEE 60802 (W	edn	esda	ay, :	20-J	lan-	202	1, 1	.1:3	0 - 1	3:30	ET)												
		TSN (Wedr	esd	ay, 2	20-J	an-	202	21, 1	1:3	0 - 1	13:3	DET)													
		TSN - IEC/IEEE 60802 (Wednesd										-)														
		TSN (Wednesday,								_	т)															
		Maintenance (Tuesday, 19			<i>,</i>				_	T)																
		TSN - IEC/IEEE 60802 (Tuesday, 19-Jar						_	T)																	
		TSN (Tuesday, 19-Jan-20						ET)																		
		TSN - P802.1DG (Tuesday, 19-Jan-2021,					ET)																			
		TSN (Monday, 18-Jan-2021, 14			-	ET)																				
		TSN - P802.1DP (Monday, 18-Jan-2021, 11:30			۱ í																					
		Security (Monday, 18-Jan-2021, 11:00 - 13		-																						
		/IEEE 60802 (Monday, 18-Jan-2021, 09:00 - 11:00	ET)																							
Last Name	First Name	Affiliation	_							_		_	_					_		_		⊢	_	_	_	_
Abdul	Amin	Molex Canada	•	-					_		•	_	_								_	⊢		•	_	_
ADEMAJ	Astrit	TTTech Computertechnik AG	•	<u> </u>	٠	٠			•		•		•					٠			•	\vdash		•	•	
Alden	Daroc	UNH InterOperability Laboratory	-				•	_		-			_		-	-	-	_	_	_	_		-	_	-	-
Assmann	Ralf	Marvell Semiconductor, Inc.	•	_	•	•	•	•	-	•	•	•			٠	٠	•	_	•	•		$ \rightarrow$		•	•	•
AYAZ Baba	SERKAN Takenori	Representing myself	-	<u> </u>			٠		•			-	-					-		_				_	_	_
		Mitsubishi Electric Corporation	•	<u> </u>	•		•		_	•		_	•	-				•		_	•	•	_	•	+-	-
Belliardi Bierschenk	Rudy Jens	Schneider Electric Robert Bosch GmbH	•	\vdash	•	•	•	•	•	•	-	-	•	_	•				•	•	•	•		•	•	-
			•	\vdash	-	•	•	•	-	•	_		•	-	•		_		_	•		•		•	•	-
Boiger Booth	Christian Brad	b-plus GmbH Dell	-	\vdash	\vdash	•	•	-	+	•		-	╞	+	-			-	•	-		Ĩ	+	-	╇	+
	Paul	Hewlett-Packard Development Company, L.P.	•	+	\vdash		_	_	_	-		_	_	+	<u> </u>					_	_	$ \rightarrow$	-+	-	+	+
Bottorff					•	•	٠	•		•	•					•	•		•	•				•		

												P	lain	tena	nce	(Eri	hav	22	lan	201	1 1	4.00	0 - 14	6:00	ET)
												N	an								- ·		13:30		-
												Se	curit		•								0 ET		
								TSN	I - I	EC/I	IEEE								· ·						
										N	lend	ica (Frid	ay, 2	2-Ja	ın-2	021,	09:	00 -	11:	00 E	T)			
											s (Th										T)				
				TSN	1 - 1	EC/				· ·	hurs					· · ·				1 1					
									-		sday														
		TCN	150	//==	F C						y, 2:														
		TSN -	IEC,				- ·				an-2							1							
											2021						'								
-		T	5N (-			-			1, 14					1									
		Security	We	dne	sda	ay, i	20-J	an-	202	1, 1	3:30) - 15	:30	ET)											
		TSN - IEC/IEEE 60802 (We	dn	esda	ıy, i	20	lan-	202	21, 1	L1:3	0 - 1	3:30	ET)												
		TSN (Wedne	esd	ay, 2	20-J	lan	202	21, 1	11:3	0 - 3	13:3	O ET)												
		TSN - IEC/IEEE 60802 (Wednesd										r)													
		TSN (Wednesday,								_	T)														
		Maintenance (Tuesday, 19-								:T)											~~				
		TSN - IEC/IEEE 60802 (Tuesday, 19-Jan TSN (Tuesday, 19-Jan-20		- ·					-1)																1
		TSN - P802.1DG (Tuesday, 19-Jan-2021,					1	,																	
		TSN (Monday, 18-Jan-2021, 14:																							1
		TSN - P802.1DP (Monday, 18-Jan-2021, 11:30 -				Ĺ																			1
		Security (Monday, 18-Jan-2021, 11:00 - 13	:00	ET)													T								1
		EEE 60802 (Monday, 18-Jan-2021, 09:00 - 11:00	ET)																						1
Last Name	First Name	Affiliation											-				+	-		⊢∣				+	1
Canchi	Radhakrishna	Kyocera International Inc	•	\square	•	•	•		•	•		•	•		•		•	-		•		-	•	•	•
Chahed	Hamza	Karlstad University	-	$\left \right $	-	-			_	+				H	+	• •	+	-	-	⊢┥	+	_	•	+	+
Chen Chou	Feng Vincent	Siemens AG Marvell Semiconductor, Inc.	•	\square	•	•	•		•	+	•		-	\vdash	•	•	-	•	•	⊢┨	•	+	•	•	•
Choudhury	Abhijit	Broadcom Corporation			1						+	+	+	⊢┤	+	+	+	+	\vdash	⊢┤	\neg	+	+	+	\vdash
Congdon	Paul	Congdon Consulting, LLC;Tallac Networks, Inc	•		•	•	•	•		•	•	•	\uparrow	•	+	• •	•	•	•	\square	•	•	-	•	•
Cummings	Rodney	National Instruments Corporation										Ť	\uparrow	Ħ	+	Ť	\uparrow	1		ГÌ	╡	+		+	•
Dai	William	Axonne Inc.					Â		•			•		•			•			•	_1		•	,	
Dorr	Josef	Siemens AG	•		•	•	•		٠			•	٠		•		•			•			•	•	
Dubrawski	Richard	ViaSat, Inc.		•			<i>y</i>			•				٠						Ц			•	<u>ب</u> ل	•
Ehlers	Kristian	Microchip Technology, Inc.					٠													Щ				┶	_
Elbakoury	Hesham	Huawei Technologies Co., Ltd	•		٠	٠	٠		•	•		• •	_		•		•	-		٠	•		•	•	_
Ellegaard	Lars	Microchip Technology, Inc.							•			•	_		_		_	_		\vdash			_	+-	_
Engelmann Enzinger	Anna Thomas	Volkswagen Ag B&R Industrial Automation GmbH	•		•	•	٠		•	•	•		•		•	+	•	-		•	•		•	•	┢
Farkas	Janos	Ericsson	•		•	•	•		•	•			•		•	•	_	•	•		•		•	•	•
Fedyk	Donald	LabN Consulting, L.L.C.	•	•	•	•	•	•	-	•		+	-	•	_	•	_	+	•		•		• •	-	
Finn	Norman	Huawei Technologies Co., Ltd	•	-	•	•	•	•		•	•	•		-	_	• •	_	•	•		•				•
Garner	Geoffrey	Huawei Technologies Co., Ltd	•		•	•	•		٠	٠		•	٠		•		•			•			•	•	٠
Gelish	Joseph	ANSI, SAE, NIST, DOE, ITS America			٠																				
Gilb	James	GA-ASI, USD, Gilb Consulting, Inc.								•															
Gravel	Mark	Hewlett Packard Enterprise	•		٠	٠	٠	٠			•	•	-		_	• •	_			Щ			•	•	-
Gunther	Craig	Craig Gunther Consulting, LLC	•		•	•	٠	•		•	•	•	\vdash	\vdash	•	• •	1	•	٠	⊢┤	\dashv	-	•	•	٠
		China Academy of Information and																							1
guo	liang	Communications Technology (China Academy of TeleCommunication Research, MIIT) CAICT																				•			1
		(CATR)																							1
Gutierrez	Marina	TTTech Computertechnik AG	•		•		•	•		•	•	•	\uparrow	H		• •	•	•	•	\square	•		•	•	\vdash
Haasz	ibol	IEEE Standards Association (IEEE-SA)	•		٠	٠	•		٠	•	•	•	_		•		T	Ĺ					•	•	Γ
Haddock	Stephen	Stephen Haddock Consulting, LLC	٠		٠	٠	٠	_		•	•	•			•	•	•	•	٠		•		•	•	٠
Han	Ruibo	China Mobile Communications Corporation					•	•			•					•						•			1
		(CMCC)		\square									_	\square		1		_	\vdash	⊢┤				+	⊢
Hantel	Mark	Rockwell Automation	•	\square	•	•	٠			-		•	٠	\vdash	•	+	•	-	\vdash	•	_	-	•	•	+
Hasegawa	Akio	Advanced Telecommunications Research Institute International (ATR)				•																			1
Hegarty	Michael	Data Device Corporation	\vdash	$\left \right $	•		\vdash			+	+	+	+	┝┼	+	+	+	+	\square	⊢┤	+	+		+	┢
Holness	Marc	Ciena Corporation	•	\square	•	•	•	•		•	•	•	\uparrow	⊢┤	•	• •		•	•	\square	•	•	-	•	\vdash
Hopf	Daniel	Continental Automotive GmbH					•	•		•	•	•	-		_	•	_	•	-	\square			•	•	•
hu	mark zhuomin	Aptiv	L					٠		_1			T				T							J	ſ
Huh	Woojung	Microchip Technology, Inc.			•	٠	•	٠	-	•								٠	•					٠	٠
Itaya	Satoko	National Institute of Information and	_	ΙĪ		•		T	T	Ţ	Γ			ΙŢ	T	Γ				ιT	Ţ	Γ			1
		Communications Technology (NICT)		\square								\perp		\square				_		⊢				+	\vdash
Ito	Yoshihiro	Nagoya Institute of Technology	•	$\left \right $	•	•	٠	_	•	•	•	•	\vdash	\vdash	•	• •	1	•	٠	⊢┤	-	-	•	•	٠
Jabbar	Abdul	General Electric Company (GE)	•	\vdash	•			_		-		+	+	\vdash	+	+	+	+		⊢┤		-+	_	+	┢
Janker	Georg	BMW Group, RUETZ System Solutions GmbH	I				٠									• •		1		⊢					1

													Ma	int-	nar	<u></u>	Erid	214	22	lar	-201	1 1	14.0	0.1	6.00	FT)
													ivia									- ·		0 - 10 13:30		- i
												s	ecu		-									13.30 00 ET	_	
								TSN	- F	FC/	IFFF				•								00 E		'	
																					11:			.,		
								YA	NGs				•	-							:00 E	_	,			
				TSN	N - I	EC/	IEE				hurs											,				
				-						-	sda										1 1					
									-		y, 2															
		TSN -	IEC,	/IEE	E 6			•												1						
			-				-				an-2							n 1		1						
				TSI	т) и	Thu	rsda	iy, 2	21-J	an-:	202	1, 0	9:00) - 1	1:00) ET)			1						
		T	5N ((We	dne	esda	ay, 2	20-J	an-	202	1, 1	4:0	0 - 1	L6:0	0 ET)										
		Security	We	edne	esda	ay, i	20-J	an-	202	21, 1	L3:3	0 - 1	15:3	0 E	г)											
		TSN - IEC/IEEE 60802 (We	dn	esda	ay, I	20-J	lan-	202	1, 1	L1:3	0 - 1	13:3	<u>80 E</u>	т)												
		TSN (Wedne	esd	ay, 2	20-J	lan-	202	21, 1	1:3	0 - :	13:3	<u>80 E</u>	т)													
		TSN - IEC/IEEE 60802 (Wednesd					· ·					T)						R								
		TSN (Wednesday,								_	T)															
-		Maintenance (Tuesday, 19-							_	T)																
		TSN - IEC/IEEE 60802 (Tuesday, 19-Jan	-20	21, 1	11:3	30 -	13:	30 E	T)																	
		TSN (Tuesday, 19-Jan-20						ET)														1				
		TSN - P802.1DG (Tuesday, 19-Jan-2021,					ET)																			
		TSN (Monday, 18-Jan-2021, 14:				ET)														1						
		TSN - P802.1DP (Monday, 18-Jan-2021, 11:30 -			ET)															1						
		Security (Monday, 18-Jan-2021, 11:00 - 13		- ·								-			98											
		IEEE 60802 (Monday, 18-Jan-2021, 09:00 - 11:00	ET) 1													₽		1	1	1		1				
Last Name	First Name	Affiliation													_	1	_					_	_		_	
Karl	Michael	Marvell Semiconductor, Inc.	•	$\left \right $	•	•	•	٠	-	•	•	-	•		•	_	•		•		⊢⊢	\rightarrow		•	•	٠
Kehrer	Stephan	Hirschmann Automation and Control, Inc.	•	$\left \right $	•	•	•	•	\dashv	•	-	•	-	•	•	4	+	٠	•	٠	⊢-	•	\rightarrow	•	•	•
Kelsey	Randy	Engineering Solutions, Inc	•	•		•	•	•		٠	\rightarrow	•	~		•	_	+	٠	<u> </u>	⊢'	•	•	\rightarrow	•	'	٠
Kim	Yongbum	NIO					•	•			٠	_		•	•						Щ	_	_	_	•	•
Klamser	Oliver	Pilz GmbH & Co. KG	•		•	•	•		•			•		•	•	<u> </u>	_	•			•	_		•	•	\vdash
Кода	Hidetsugu	Yaskawa Electric Corporation	•						•		-	•		_		_	_	•			•	_		•	_	\vdash
KONDO	Kenji	Yaskawa Electric Corporation	•				•	~~~		7		•	_	_			_	•			•	_	_	•	_	
Kumar	Ashok	AllGo Embedded Systems Pvt. Ltd.					•					_	_	_	_		_		-		\square	_	—	+	+-	\vdash
Lai	Gavin	Moxa Inc.	•		•	•	•	٠		•		•		•	•	•	•		•	٠		_		•	•	\vdash
Lasry	Ariel	TOSHIBA Corporation	•						٠			•		•			_	٠				_	_	•	•	\vdash
Lassini	Stefano	SAE International Automotive			٠							_		_		_	_				\square	_	_	_	_	\vdash
Lehment	Nicolas	NXP Semiconductors	•						•			•		•		_	_	٠			•	_	_	•	_	\vdash
Lin	Chun-Yu	Moxa Inc.	•		٠		٠					•		_		_	_				\square	_	_	_	_	\vdash
LLOYD	DOROTHY	SAE International			٠							_	_	_			_		-		\square	_	—	+	+-	\vdash
Lo	Bello Lucia	University of Catania					•		•					_		_						_		_	_	
Lopes	Joao	Qualcomm Incorporated	•			٠	٠		٠			•		•	_		_	•			\vdash	_	—	+	_	\vdash
Lv	Lily	Huawei Technologies Co., Ltd	•		٠	•	٠				٠	_	_		_	•	•		•	•	\square	_	•	+	•	\vdash
Lyubomirsky	Ilya	Inphi	•						_			_	_	_	_		_			\vdash		_	_	_	_	+
Madgar	Zahy	Valens Semiconductor										_	_	_			_	•	-		\square	_	—	+	+-	\vdash
Mangin	Christophe	Mitsubishi Electric Corporation	•		٠	٠		٠		•		•		•	•		_	٠			\square	•	—	•	•	
Mansfield	Scott	Telefon AB LM Ericsson			٠	٠		٠			•	_	•	_	•	•	•		•	٠	\square	٠	—	+	•	•
Marks	Roger	EthAirNet Associates								•		_	_	_	_	_	_			\vdash		—	•	_	_	+
Maruhashi	Kenichi	NEC Corporation	•	\vdash	H	•	•	_	-	_	_	+	+	+	+	+	+-	┢	.	\vdash	\vdash	\rightarrow		•	•	\vdash
Mater	Olaf	Marvell Semiconductor, Inc.	•	$\left \right $	٠	•	٠	٠	_	٠	•	_	•		•	•	•	┝	•	٠	⊢┤	\dashv	+	•	•	•
McCall	David	Intel							٠			•		_	_	_	_			\vdash	\vdash	—	—	—	_	+
McIntosh	James	Microchip Technology, Inc.		•						•	_	_			•	-				\vdash	\vdash	_	_	•	_	•
McMillan	Larry	Western Digital Corporation	•		٠	٠	٠	٠		•	•	_	•	_	•	•	•		•	٠	\vdash	•	•	+	•	٠
Messenger	John	ADVA Optical Networking Ltd.	\vdash	$\left \right $		\vdash	\square	_		•	+	+	+	+	+	+	+	┝	\vdash	\vdash	⊢┤	•	+	+	+	\vdash
		China Academy of Information and																1	1	1 '		1				
Miao	xinyu	Communications Technology (China Academy of	•														1	1	1	1						
		TeleCommunication Research, MIIT) CAICT														1	1	1	1	1						
Naks	Llizaki	(CATR)		$\left \right $				_	\dashv	-	-	_	+	-	+	+	+-	\vdash	-	\vdash	⊢┤	_	\rightarrow	+	+	\vdash
Nakano	Hiroki	CAHI Corporation;Kyoto University	•	$\left \right $	•	•	٠		-	٠	•	+	•		•	•	•	\vdash	1	\vdash	$\left - \right $	•	+	•	•	•
Nelson	Brent	Collins Aerospace	\vdash	$\left \right $	•	\vdash			-	-	\rightarrow	+	+	+	+	+	+	┢	\vdash	⊢	⊢┤	\dashv	+	+	+	\vdash
Neumann	Jens	Others	⊢	$\left \right $	٠	H		_	+	+	\rightarrow	+	+	+	+	+	+	\vdash	–	\vdash	⊢┤	\dashv	+	+	+	\vdash
Noseworthy	Bob	University of New Hampshire InterOperability	•		•	•	•					•		•			1	•	1	1					•	
·		Laboratory (UNH-IOL)	\vdash	$\left \right $						_	+	+	+	+	+	+	+	╟	\vdash	\vdash	\vdash	\dashv	+	+	+	\vdash
Ohnishi	Ayano	Advanced Telecommunications Research				•										1	1	1	1	1						
ohuc	hiroshi	Institute International (ATR)	-	$\left \right $		•			+	+	+	-	+	+	+	+	+	\vdash	1	\vdash	⊢┤	\dashv	+	+	+	\vdash
ohue	hiroshi Daisuke	panasonic Mitsubishi Electric Corporation	•	$\left \right $		-				-	+	+	-	+	+	+	+	\vdash	\vdash	\vdash	⊢	\dashv	+	•	+	+
Osagawa Ostertag	Martin	Mitsubishi Electric Corporation Zurich University of Applied Sciences	•	\vdash		\vdash			•	-	+	•	+	•	+	+	+	┢	\vdash	\vdash	•	\dashv		•	+	\vdash
Ostertag Pannell	Donald	NXP Semiconductors	ľ	$\left \right $	•	•	•	•	•	•	+	-	•	-	•		•	\vdash	•	•	⊢	\dashv	+	+	•	•
Parsons	Glenn	Ericsson AB	•	$\left \right $	•	•	•	•	+	_	•		•	+	•			\vdash	•		┝─┤	•	•		-	•
Petre	Razvan	Spirent Communications	•	+	•	_	•	•	+	-	•	_	•	+		_	_	\vdash	•	_	\vdash	-+		•		-
icuc	1.02.0011	spirene communications		1			•	-			-		- 1					1		<u> </u>	⊢			-		1

	0 - 1						-		-				IVI																
	13:3			· ·						•																			
)	00 E1											-																	
	T)			00 -								-					-	SN	T										
		ET)		11:			· ·						•																
			ET)	:00	16:	00 -	14:0	21, :	202	an-	21-J	ıy, 2	rsda	hu	's (T	ster	NGs	YAI	Y										
				ET)	30	13:	30 -	11:3	21, :	202	an-	21-J	ay, 2	rsda	'nuı	2 (т	0802	60	EEE	:/IE	IEC	N -	TS						
					ET)	30 I	13:	30 -	11:3	21, 1	202	an-	21-J	ay, i	rsda	hui	Т) И	rsn	Т										
						ET)	30	13:	30 -	11:3	21, 1	202	lan-	21-J	iy, 2	sda	hur	(TI	SN	Т									
							ET)	:00	11:	0 -	09:0	21, (202	lan-	21-J	ıy, 2	sda	nur	(Th	02	608	EE 6	IEE/	c/I	IEC	TSN			
								ET)	00	11:	00 -) 9:0	21, (202	lan-	21-J	y, 2	sda	urs	Th	N (ΤS							
									ET)	00 E	11:0	0 -	09:0	21, (202	an-	21-J	y, 2	day	urse	Thu	N ('	TS	•					
								b .		ET)	00 E	16:	00 -	14:0	21, :	202	an-	0-Ja	, 20	lay	esd	dn	We	I (\	rsn				
							.				ET)	30 I	15:	30 -	13:3	1, 1	202	n-2)-Ja	20	ay,	esd	dn	/ec	(We	Security			
												_									-					TSN - IEC/IEEE 60802 (W	TSN - IEC/IEEE		
					6.							'														TSN (Wed			
													1 T.	_				· ·								TSN - IEC/IEEE 60802 (Wednes			
			1				6.							- ''												TSN (Wednesday			
						.																							
							1					- (:)										Maintenance (Tuesday, 19			
										δ.		a. 1	6				:T)									TSN - IEC/IEEE 60802 (Tuesday, 19-Ja			
																		т)								TSN (Tuesday, 19-Jan-2			
										- (p.								Г)	ET	:00	11	<u>)</u> 0 -):0	, 09:	TSN - P802.1DG (Tuesday, 19-Jan-2021	TSN - P802.1DG (Tuesday, 19-		
																			48)	ET)	:00	16	- :	:00	TSN (Monday, 18-Jan-2021, 14	TSN (Monday, 18-Jan		
												~~				_			98			ET)	30	3:3	- 13	TSN - P802.1DP (Monday, 18-Jan-2021, 11:30	TSN - P802.1DP (Monday, 18-Jan-20		
																.							ET)	DE	3:00	Security (Monday, 18-Jan-2021, 11:00 - 1	Security (Monday, 18-Jan-2021,		
																										TSN - IEC/IEEE 60802 (Monday, 18-Jan-2021, 09:00 - 11:0		TSN - IE	
																								1	` ٦	First Name Affiliation			ast Name
	•			•			•			•		•		•		•	•					•			•	Dieter Siemens AG			roell
+	•			Ť			-			-	/	-		-		-	-	_		-	-	-	•	-	•	WEI Huawei Technologies Co., Ltd			U
_		-		-		_	_	-			_	/				-	_				-		•	_			0,		
, 		•						٠	•		•				٠	٠		•	•	-	•		•	•	•	Karen INDEPENDENT;Tallac Networks, Inc			andall
_																						•		_		John GE Aviation			ang
																					•					Alon Keysight Technologies	Keysight Technologies	Alon	egev
												٠														Patricia IEEE SA staff	a IEEE SA staff	Patricia	oder
•	•			٠			٠			٠		٠		•		•	•	\otimes	•	•	•	•		•	•	Silvana Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd	Silvana	odrigues
•	•		٠		•	٠		٠	•	٠			٠		•	٠		•			•	•		•		Jessy Nokia	Nokia	Jessy	ouyer
Т																										Luca Airbus Group	Airbus Group	Luca	antinelli
	•						•			•		•		•			•									Atsushi Yokogawa Electric Corporation			ato
-	-						-			-		-		-			-		-			•				Greg Lockheed Martin Corporation			canlon
	•		•	•			•			•		•		•		•	•				•	•				Frank Phoenix Contact		-	chewe
_			-	-		_	•			•		•		•		•	•	_	-	-	-	•		4	-				
_											•							_	_	_	-		•	_		Michael Individual			eaman
•				٠			٠			٠		٠		٠		٠	٠		•	•	•	٠		-	•	Maik Cisco Systems, Inc.			eewald
_	•						٠							٠											•	Rafael ABB AB	ABB AB	Rafael	elent
•		٠	٠		•	٠		٠	٠	٠			٠		٠	٠		•	•	•	•					Ramesh Cisco Systems, Inc.	h Cisco Systems, Inc.	Ramesh	ivakolundu
	•			•			٠							٠			•								•	Tatsuo Yaskawa Electric Corporation	Yaskawa Electric Corporation	Tatsuo	oeda
	•		٠		٠	•		٠	•			•		٠		•		•	•	•		٠		•	•	Johannes Self;University of Duisburg-Essen	nes Self;University of Duisburg-Essen	Johannes	pecht
	•		•	•			٠	1				٠		•			•		•	-	1	•		,	•	Marius ABB AB			tanica
	•		•	•			•			•		•		•		•	•	+		-	-	•		,†	•	Guenter Siemens AG			teindl
\pm	-		•	۲,	•	•	-	•	•	•		-	•	-	•	-	-	•		_		Ē	•	-	-	Liyang HUAWEI			un
+	•	-	Ľ	•	•	-	-	Ľ	•	-	\vdash	_	-	•	•	_	•	-		+	⊢	-	Ľ	-	•				
+	•	\vdash	-	⊢		-	H		-	_	\vdash		\vdash	•	-		•	+	+	+	┢	-	_	4	-	Daisuke Mitsubishi Electric Corporation			akita
+	-+	$\left \right $	-	\vdash			٠	├					\vdash	•			_	-	+	+	┝	-	—	+	+	Isao Mitsubishi Electric Corporation	· · · · · · · · · · · · · · · · · · ·		arui
+			-	\square														•	_	-	╞	-		+	+-	Thies C&S group GmbH			eichmann
•				\square	٠	٠		I		٠			٠		•	•		•		-	-	٠	L		-	karim Microchip/Microsemi Corporation			aore
•	•			٠				٠	٠		٠		٠		٠	•			•	•	•		٠	-	•	Max Ethernovia		Max	urner
•	•				٠	•		٠	٠	٠		٠		٠		٠	•		•	•	•	•			٠	Balazs Ericsson AB	Ericsson AB	Balazs	arga
								L		_1		•	LĪ	•			•		•							Ganesh Intel Corporation	n Intel Corporation	Ganesh	enkatesan
			L					L		_1					•		_1	_T	•	•			L	•	•	haifei Huawei Technologies Co., Ltd	Huawei Technologies Co., Ltd	haifei	ang
•	•				٠	٠		٠	•			٠		٠		٠		•	•	•		٠		•	•	Tongtong Huawei Technologies Co., Ltd	ng Huawei Technologies Co., Ltd		/ang
					•			•	•	•			•		•	•		•			•	•		,	•	Xinyuan Huawei Technologies Co., Ltd			/ang
			•	•	-							•		•		•	•	+	•	-	-	•	F	-	•	Karl Beckhoff Automation			/eber
	•		F	•			•	-			\square	•		•		-	•	+	_	-	-	•	-	-	•	Ludwig PNO e.V.			/inkel
	•	\vdash	-	⊢			•	-	_	•		•	\vdash	•	_	_	•	+	•	_	-	•	-	-+	•			and the second sec	/oods
_		$\left - \right $		\vdash			•					٠	$\left \cdot \right $	•			•	-	-	_	+•		—	-+	_	Jordon Analog Devices Inc.			
•	•		٠	\square	٠	٠		٠	•	•			•		•			•	•	+	-	•	—	_	•	Chase Moxa Inc.			ang
╇	•			•			٠					٠		٠			٠			_	1	<u> </u>		•	•	Yi Rockwell Automation			U
+				\square																_	-	٠		4	_	Jamie The Boeing Company			aehring
		•						٠	•	•			•		•	•		•	•		•	•		•	•	Nader NEC Europe (NLE)	NEC Europe (NLE)	Nader	ein
•										Т	. T	-	i T	1 1	1 1	•	T	Ē		1	1	•		ſ		William Siemens AG	n Siemens AG	William	hao
•			٠		٠	•				٠			•			•				_		_	_						
_			•		٠	٠				•		_	•	_		•			•	•				T		Chuanhai Marvell Semiconductor, Inc.	hai Marvell Semiconductor, Inc.	Chuanhai	hou

2 802.1 Officers and Leadership

- Chair: Glenn Parsons
- Vice-Chair and Recording Secretary: Jessy Rouyer
- Executive Secretary: Stephan Kehrer
- Liaison Secretary: Karen Randall
- Maintenance TG Chair: Paul Congdon
- Security TG Chair: Mick Seaman
 - Security TG Vice-Chair: Karen Randall
- TSN TG Chair: János Farkas
 - TSN TG Vice-Chair: Craig Gunther
 - TSN TG Secretary: Marina Gutiérrez
 - IEC/IEEE 60802 Joint Project Chair: Ludwig Winkel
 - IEC/IEEE 60802 Joint Project Secretary: Josef Dorr
- Nendica Chair: Roger Marks
- YANGsters Chair: Scott Mansfield
 - YANGsters Vice-Chair and Secretary: Stephan Kehrer
- Maintenance of Email exploder: Hal Keen and Mark Hantel
- Maintenance of website: Paul Unbehagen

3 Maintenance Task Group

Between this session and the preceding session, the IEEE 802.1 Maintenance Task Group (TG) held electronic meetings whose minutes are incorporated to these session minutes by reference as follows:

- Minutes of the Maintenance TG meeting held 2020-12-02 12:02 PM 2:20 PM ET https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;c5d4b8dc.20
- Minutes of the Maintenance TG meeting held 2020-12-16 12:02 PM 1:06 PM ET https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;d047f3a6.20

The table in section 1 reflects, for all meetings held in this session, the attendance and affiliation of participants who registered their attendance in IMAT.

Call to order Jan 19, 2021 at 14:00 ET by Paul Congdon, IEEE 802.1 Maintenance TG Chair, who presided and wrote the minutes.

Agenda items and dispositions:

- 1. Meeting introduction. The TG Chair reminded participants that the following information was made available before the meeting:
 - The IEEE SA Copyright Policy slides,
 - The IEEE SA PatCom Patent Slides for Standards Development Meetings,
 - The IEEE SA slides regarding IEEE Codes of Ethics and Conduct, participation in the "individual process", and dominance,
 - The decorum information, and
 - The reminder for participants to register their attendance in IMAT contained in "MEETING INTRODUCTION"

<u>http://www.ieee802.org/1/files/public/templates/admin-WG+TG-intro-0720-v01.pdf</u> thereby providing the information on slides 2 and 5 of this presentation and made the Call for Potentially Essential Patents: there were no responses to this Call prior to the end of the session.

2. Approval of agenda. The TG chair presented the agenda in <u>https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;7d465650.21</u>.

Disposition: The agenda was reviewed, discussed, and updated as recorded by these minutes.

 P802.1Q-Rev Status. The TG Chair presented "QRev Status" in "Maintenance Task Group Conference Call" <u>https://www.ieee802.org/1/files/public/docs2021/maint-congdon-concall-0121-v01.pdf</u>

Disposition: Mick Seaman, new P802.1Q-Rev editor, will edit future drafts with input from John Messenger, former P802.1Q-Rev editor, and from Johannes Specht on YANG updates.

4. PFC and MACSec Interpretation Issue. Brad Booth led a discussion of an interpretation issue with PFC implementation in the field. Booth displayed Figure 36-1 of IEEE Std 802.1Q-2018 to lead the discussion.

Disposition: Agreed (informally, none dissenting) that the issue is more complex than simply the layering of PFC and MACSec. Further discussion and presentation are required at a future Maintenance TG electronic meeting.

- 5. Deprecated Terminology Discussion. The 802.1 WG Chair led a discussion on the replacement of deprecated terms in 802.1 standards in the context of the following activities:
 - The 802.1 WG Chair referenced the first December 2020 resolution in "IEEE SA STANDARDS BOARD RESOLUTIONS" <u>https://standards.ieee.org/about/sasb/resolutions.html</u> to discuss deprecated terminology.
 - The 802.1 WG Chair referenced the P1588g PAR <u>https://development.standards.ieee.org/myproject-</u> web/public/view.html#pardetail/8858 to discuss the scope of needed work in 802.1 standards.
 - The 802.1 WG Chair led the drafting of "Liaison response to LS SP-201142 on Use of Inclusive Language in 3GPP specifications" https://www.ieee802.org/1/files/public/docs2021/draft-liaison-response-3GPP-SP-201144-inclusive-language-0121-v03.pdf. This drafting was in response to reviewed "LS on Use of Inclusive Language in 3GPP specifications" https://www.ieee802.org/1/files/public/docs2021/draft-liaison-response-3GPP-SP-201144-inclusive-language-0121-v03.pdf. This drafting was in response to reviewed "LS on Use of Inclusive Language in 3GPP specifications" https://www.ieee802.org/1/files/public/docs2021/liaison-3GPP-S2-201144. Inclusive Language-0121.pdf.
 - The TG Chair had created a draft PAR for "IEEE Standard for Local and Metropolitan Area Networks—Timing and Synchronization for Time-Sensitive Applications Amendment: Master-slave optional alternative terminology" <u>https://www.ieee802.org/1/files/public/docs2021/dr-draft-PAR-0121-v01.pdf</u> that was reviewed during the meeting for consideration by the working group

Disposition:

- Agreed (informally, none dissenting) to initiate an ePoll authorizing the Maintenance TG to generate a PAR and CSD for pre-circulation to the EC for an amendment to IEEE Std 802.1AS-2020 to replace deprecated terminology with inclusive language. The resulting PAR/CSD would be submitted at the March 2021 plenary session.
- Agreed (informally, none dissenting) that the draft PAR and CSD are to be generated during the Feb 2, 2021 Maintenance TG electronic meeting.
- Agreed (informally, none dissenting) to determine, during PAR development, whether to replace the terms master/slave or to follow a process like what P1588g is proposing with optional alternative terminology.

- The IEEE SA Program Manager to confirm with editorial staff if a global replace editorial instruction is sufficient to make the changes, or whether each instance of terminology change requires individual editorial instruction.
- Agreed (informally, none dissenting) to postpone to the March 2021 plenary session the development of individual liaison statements regarding deprecated terminology to IEEE 1588 and ITU-T Study Group 15.
- Agreed (informally, none dissenting) to initiate an ePoll approving <u>https://www.ieee802.org/1/files/public/docs2021/draft-liaison-response-3GPP-SP-201144-inclusive-language-0121-v03.pdf</u> as a communication to 3GPP SA WG2, granting the IEEE 802.1 WG chair (or his delegate) editorial license.
- ACct Comment Resolution. James Gilb, P802.1ACct editor, led the resolution of comments received on <u>https://www.ieee802.org/1/files/private/ct-drafts/d0/802-1ACct-d0-</u> 2.pdf.

Disposition: The following comments were resolved: 1,2,4,5,7,8,10,11,12. Partial disposition: <u>https://www.ieee802.org/1/files/private/ct-drafts/d0/802-1ACct-d0-2-pdis-v01.pdf</u>.

15:58 ET recess

Call to order Jan 22, 2021 at 14:00 ET by Paul Congdon, IEEE 802.1 Maintenance TG Chair who presided and wrote the minutes.

- 7. Meeting introduction. The TG Chair announced that the meeting is subject to the Copyright Policy, Patent Policy and Participants Policy as read and displayed at the opening Maintenance TG meeting, and made the Call for Potentially Essential Patents: there were no responses to this Call prior to the end of the session.
- Approval of agenda. The TG chair presented the agenda in <u>https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;7d465650.21</u>.
 Disposition: The agenda was reviewed, discussed, and updated as recorded by these minutes.
- SC6 Status. Karen Randall presented "ISO/IEC JTC1 SC6 STATUS January 2021" slides in "Maintenance Task Group Conference Call" <u>https://www.ieee802.org/1/files/public/docs2021/maint-congdon-concall-0121-v01.pdf</u>. Disposition: For information.
- 10. Liaisons:
 - The TG Chair led the discussion and review of a draft response to <u>https://www.ieee802.org/1/files/public/docs2020/liaison-SG15-LS268-</u> OTNT standardization workplan-920.zip.
 - Karen Randall led the discussion and review of a draft ISO/IEC SC6 ballot comment response to IEEE Std 802.1X-2020.

Disposition: Agreed (informally, none dissenting) to update the TSN diagram in the liaison response to <u>https://www.ieee802.org/1/files/public/docs2020/liaison-SG15-LS268-OTNT standardization workplan-920.zip</u> with a new version to be provided by the TSN TG Chair. Agreed (informally, none dissenting) to put both responses on the March 2021 plenary session agenda for 802.1 approval to send.

11. Maintenance item 0242: IEEE Std 802.1Qcp-2018: Collected issues on data consistency and others. Johannes Specht presented the table of YANG issues for maintenance item 0242 <u>https://www.802-1.org/items/357</u> and summarized the table of collected issues in <u>https://www.ieee802.org/1/files/public/docs2021/maint-specht-yang-comments-0121-</u> v02.pdf.

Disposition: Agreed (informally, none dissenting) to create an individual maintenance item for the FDB per bridge component issue in clause 12 of IEEE Std 802.1Q-2018. Agreed (informally, none dissenting) to categorize the individual items listed in

https://www.ieee802.org/1/files/public/docs2021/maint-specht-yang-comments-0121v02.pdf into specific maintenance items. Details for discussion on all items are logged in the IEEE 802.1 maintenance database at <u>https://www.802-1.org/home</u> where items progressed at the meeting can be reviewed by selecting 'Meetings'.

- Maintenance Item 0278 review for AS-2020/Cor1. Geoff Garner, P802.1AS-2020/Cor1 editor, presented "Maintenance Item #278 Input Needed" <u>https://www.ieee802.org/1/files/public/docs2021/as-garner-maintenance-item-278-input-needed-v00.pdf</u> to address maintenance item "0278: Inconsistent Clause 5 and PICS with respect to state machines" <u>https://www.802-1.org/items/393</u>
 Disposition: Agreed (informally, none dissenting) to not include maintenance item 0278 in the P802.1AS-2020/Cor1. Details for discussion on all items are logged in the IEEE 802.1 maintenance database at <u>https://www.802-1.org/home</u> where items progressed at the meeting can be reviewed by selecting 'Meetings'.
- 13. AS-2020/Cor1 Editor Update. Geoff Garner, P802.1AS-2020/Cor1 editor, presented <u>https://www.ieee802.org/1/files/private/as-2020-cor-1-drafts/802-1AS-Cor1-2021-d0-1.pdf</u> **Disposition:** Further draft to be prepared. Once the P802.1AS-2020/Cor1 PAR is approved by NesCom (anticipated on Jan 26, 2021) the initial WG ballot can be started on this further draft.
- 14. Any Other Business. No other business was discussed by the Maintenance TG in this session.
- 15. Future meetings. Agreed (informally, none dissenting) to hold a meeting on Feb 2, 2021 from 11:00 to 13:00 ET.

16:14 ET adjournment

4 Security Task Group

Between this session and the preceding session, the IEEE 802.1 Security Task Group (Security TG) held electronic meetings whose minutes are incorporated to these session minutes by reference as follows:

- Minutes of the Security TG meeting held 2020-11-24 <u>https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;ed391feb.20</u>
- Minutes of the Security TG meeting held 2020-12-15 13:00-15:00 ET https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;96bc9203.20
- Minutes of the Security TG meeting held 2021-01-12 13:00-13:53 ET https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;c1f9ecad.21

The table in section 1 reflects, for all meetings held in this session, the attendance and affiliation of participants who registered their attendance in IMAT.

The following list reflects additional attendance, in whole or part of a meeting, as noted on the Webex participants list. [IMAT does not allow participants who move between Task Group meetings running in parallel to register attendance in more than one meeting.]

Nakano, Hiroki	CAHI, Kyoto University	Mon AM
Seewald, Maik	Cisco Systems	Mon AM

Call to order Jan 18, 2021 at 11:00 ET by Mick Seaman, IEEE 802.1 Security TG Chair, who presided and wrote the minutes assisted by Karen Randall, Security TG Vice-Chair.

Agenda items and dispositions:

- 1. Meeting introduction. The Security TG Chair showed:
 - The IEEE SA Copyright Policy slides,
 - The IEEE SA PatCom Patent Slides for Standards Development Meetings, •
 - The IEEE SA slides regarding IEEE Codes of Ethics and Conduct, participation in the "individual process", and dominance,
 - The decorum information, and •
 - The reminder for participants to register their attendance in IMAT contained in "MEETING INTRODUCTION"

http://www.ieee802.org/1/files/public/templates/admin-WG+TG-intro-0720-v01.pdf thereby providing the information on slides 2 and 5 of this presentation, and made the Calls for Potentially Essential Patents at the beginning of this meeting and at the beginning of the Security TG meetings on Jan 20, 2021 and Jan 22, 2021 in this session: there were no responses to these Calls prior to the end of the session.

- 2. Approval of agenda. The Security TG Chair presented the agenda in https://1.ieee802.org/january-2021-interim-security-agenda/. **Disposition:** The agenda was reviewed, discussed and updated as recorded by these minutes.
- 3. Response to China NB comments on the pre-PDIS ballot of IEEE Std 802.1X-2020. Karen Randall, 802.1 Liaison Secretary, led a brief discussion of the proposed response to the Chinese (ISO) National Body comments on the pre-ballot of IEEE Std 802.1X-2020 [i.e. the ballot that approves sending the document for 90-day PDIS (Proposed Draft International Standard) under the PSDO (Partner Standards Developing Organization) agreement.

Disposition: For further discussion in the Maintenance Task Group and the IEEE 802 ISO SC (Standing Committee) prior to final approval in the March 2021 plenary session.

- 4. PFC and MACsec. The Security TG Chair led a brief discussion on the relationship between PFC and MACsec following up on a request for clarification. **Disposition:** For further discussion in the Maintenance Task Group.
- 5. P802.1AEdk MAC Privacy protection Draft development. Mick Seaman presented "Transmit selection and traffic shaping for Privacy Channels" https://www.ieee802.org/1/files/public/docs2021/dk-seaman-txselection-and-shaping-0121-v00.pdf.

Discussion:

- Need to understand how Privacy Channels work with existing 802.1Q transmission selection and shaping algorithms.
- Do not want yet another transmission selection algorithm for 802.1Q.
- Not clear how to specify yet; in the short term, focus on consequences.

Disposition: For further discussion.

13:01 ET recess

Call to order Jan 20, 2021 at 11:00 ET by Mick Seaman, IEEE 802.1 Security TG Chair, who presided and wrote the minutes.

6. Liaison from the Wireless Broadband Alliance (WBA) on the use of 802.1AR. The Security TG Chair led a brief discussion of "Liaison Statement to IEEE 802.1 – Secure Device Onboarding using WBA OpenRoaming" https://www.ieee802.org/1/files/public/docs2021/liaison-WBA-802.1AR-0121.pdf. Disposition: Check informally with 802.11 members who have participated in past 802.1

Security TG discussions. Decide how to proceed in the March 2021 plenary session.

7. P802.1AEdk MAC Privacy protection - Draft development (cont.). Don Fedyk, P802.1AEdk Editor, presented "MAC Privacy Maximum Latency"

https://www.ieee802.org/1/files/public/docs2021/dk-fedyk-dot1aedk-maximum-latency-0121-v00.pdf.

Mick Seaman continued the presentation of "Transmit selection and traffic shaping for Privacy Channels"

https://www.ieee802.org/1/files/public/docs2021/dk-seaman-txselection-and-shaping-0121v00.pdf.

Discussion:

- How do Privacy Channels work with existing transmission shaping and selection algorithms: strict priority, credit-based shaper, ETS, ATS and enhancements for scheduled traffic (transmission gates).
- An easy combination with strict/simple priority.
- Noted transmission gates are used in P802.1Qcz.
- Assume all traffic in a Privacy Channel is subject to the same transmission selection algorithm. Otherwise too complicated.
- ATS with higher priority in individual Privacy Frames is the simplest way of maintaining bounded per hop latency.
- For progressing Clause 20, look at/expand the functional blocks in Figure 20-1. **Disposition:** For further discussion.
- 8. MACsec performance requirements. Rich Dubrawski presented "802.1AE-2018 SecY Delay" <u>https://www.ieee802.org/1/files/public/docs2021/ae-dubrawski-secy-delay-0121-v00.pdf</u>.

Discussion:

- Original performance parameters were from 2004 work.
- Need to cover speeds to 400 Gb/s.
- Packet data should not be revealed externally until ICV has been checked. Can result in additional component delay as checked packet is moved from constrained checking scope (system architecture dependent) and move time can be important at very high speed.
- Some knowledge of component delay is a factor in overall system delay, some bounds needed.
- At 1G and 10G (some) implementation focus has been more on variability/jitter than absolute delay as minimizing jitter is TSN friendly (particularly when supporting 802.1AS PTP).
- Worth consulting IEEE 802.1BA (see page 15).

Disposition: Anticipate future work.

15:18 ET recess

Call to order Jan 20, 2021 at 13:30 ET by Mick Seaman, IEEE 802.1 Security TG Chair.

- P802.1AEdk MAC Privacy protection Draft development (cont.). The Security TG Chair led a discussion of the next steps in the development of the draft. Discussion:
 - Further development/drafting of text for Clause 20 PrY Operation, as a foundation for drafting Clause 5 Conformance, taking into account the discussion during this meeting.

Disposition: Anticipated review of updated Clause 20 text in the next Security TG electronic meeting and the March 2021 plenary session.

10. Any Other Business. No other business was discussed by the Security TG in this session.

- 11. Future meetings. A Security TG electronic meeting will be scheduled for Feb 16, 2021 13:00 ET.
- 11:23 ET adjournment

5 Time-Sensitive Networking Task Group

Between this session and the preceding session, the IEEE 802.1 Time-Sensitive Networking (TSN) Task Group (TG) held electronic meetings whose minutes are incorporated to these session minutes by reference as follows:

- Minutes of the IEEE 802.1 TSN TG meeting held 2020-11-16 11:00 AM 1:05 PM ET https://listserv.ieee.org/cgi-bin/wa?A2=ind20&L=STDS-802-1-MINUTES&P=176430.
- Minutes of the IEEE P802.1DG, meeting held 2020-11-17 9:00 AM 10:38 AM ET https://listserv.ieee.org/cgi-bin/wa?A2=ind20&L=STDS-802-1-MINUTES&P=155456.
- Minutes of the IEEE 802.1 TSN TG meeting held 2020-11-23 11:00 AM 1:05 PM ET https://listserv.ieee.org/cgi-bin/wa?A2=ind20&L=STDS-802-1-MINUTES&P=187217.
- Minutes of the IEEE 802.1 TSN TG meeting held 2020-11-30 11:00 AM 1:25 PM ET https://listserv.ieee.org/cgi-bin/wa?A2=ind20&L=STDS-802-1-MINUTES&P=213967.
- Minutes of the IEEE P802.1DG, meeting held 2020-12-01 9:00 AM 10:44 AM ET https://listserv.ieee.org/cgi-bin/wa?A2=ind20&L=STDS-802-1-MINUTES&P=190524.
- Minutes of the IEEE 802.1 TSN TG meeting held 2020-12-07 11:00 AM 1:25 PM ET (revised) <u>https://listserv.ieee.org/cgi-bin/wa?A2=ind20&L=STDS-802-1-</u> <u>MINUTES&D=0&P=216635</u>.
- Minutes of the IEEE P802.1DG, meeting held 2020-12-08 9:00 AM 11:09 AM ET https://listserv.ieee.org/cgi-bin/wa?A2=ind20&L=STDS-802-1-MINUTES&P=199490.
- Minutes of the IEEE 802.1 TSN TG meeting held 2020-12-14 11:00 AM 1:00 PM ET https://listserv.ieee.org/cgi-bin/wa?A2=ind20&L=STDS-802-1-MINUTES&P=217980.
- Minutes of the IEEE P802.1DG, meeting held 2020-12-15 9:00 AM 11:08 AM ET https://listserv.ieee.org/cgi-bin/wa?A2=ind20&L=STDS-802-1-MINUTES&P=208003.
- Minutes of the IEEE 802.1 TSN TG meeting held 2020-12-21 11:00 AM 1:16 PM ET https://listserv.ieee.org/cgi-bin/wa?A2=ind20&L=STDS-802-1-MINUTES&P=219314.
- Minutes of the IEEE 802.1 TSN TG meeting held 2021-01-04 11:00 AM 12:02 PM ET https://listserv.ieee.org/cgi-bin/wa?A2=ind21&L=STDS-802-1-MINUTES&P=3338.

The table in section 1 reflects, for all meetings held in this session, the attendance and affiliation of participants who registered their attendance in IMAT.

The TSN TG and the IEC/IEEE 60802 Joint Project held joint meetings minuted in section 5.1.

Call to order Jan 18, 2021 at 11:30 ET by János Farkas, IEEE 802.1 TSN TG Chair, who presided. Marina Gutiérrez, IEEE 802.1 TSN TG Secretary, wrote the minutes.

Agenda items and dispositions:

- 1. Meeting introduction. The TSN TG Chair showed:
 - The IEEE SA Copyright Policy slides,
 - The IEEE SA PatCom Patent Slides for Standards Development Meetings,
 - The IEEE SA slides regarding IEEE Codes of Ethics and Conduct, participation in the "individual process", and dominance,
 - The decorum information, and
 - The reminder for participants to register their attendance in IMAT contained in "MEETING INTRODUCTION"

http://www.ieee802.org/1/files/public/templates/admin-WG+TG-intro-0720-v01.pdf thereby providing the information on slides 2 and 5 of this presentation, and made the Call for

Potentially Essential Patents: there were no responses to this Call prior to the end of the session.

- Approval of agenda. The TSN TG Chair presented the agenda in <u>https://1.ieee802.org/2021-01-interim-tsn-agenda/</u>.
 Disposition: The agenda was reviewed, discussed and agreed (informally, none dissenting) as presented.
- 3. Glenn Parsons, IEEE 802.1 Working Group Chair, and Stefano Lassini, SAE AS-1A Avionic Networks Committee Chair, welcomed participants to the new P802.1DP project. **Disposition:** For information only.
- Jodi Haasz presented "IEEE/SAE Joint Development Agreement" <u>https://www.ieee802.org/1/files/public/docs2021/admin-ieee-sae-joint-development-agreement-0121-v01.pdf</u>.

Disposition: Presentation discussed.

 The TSN TG Chair showed "Logistics Orientation" <u>https://www.ieee802.org/1/files/public/docs2020/admin-parsons-WG-logistics-orientation-1120.pdf</u>.

Disposition: For information only.

6. The TSN TG Chair and Abdul Jabbar led the discussion to choose the timeslot for future regular meetings.

Disposition: Regular meetings will be held biweekly on Wednesdays from 10:00 to 12:00 ET.

- The TSN TG Chair presented a draft "Call for participation" for P802.1DP. <u>https://www.ieee802.org/1/files/public/docs2021/dp-draft-cfp-0121-v02.pdf</u>. Disposition: Presentation discussed.
- Brent Nelson presented "Introduction to Aerospace Networks and Requirements/Constraints" <u>https://www.ieee802.org/1/files/public/docs2021/dp-Nelson-aerospace-overview-0121-v01.pdf</u>.
 Disposition: Presentation discussed.
- Greg Scanlon presented "SAE AS6675 Use Case Summary" <u>https://www.ieee802.org/1/files/public/docs2021/dp-Scanlon-aerospace-use-case-summary-0121-v01.pdf</u>.

Disposition: Presentation discussed.

 Jamie Zaehring presented "Aerospace Network Traffic Characterization" <u>https://www.ieee802.org/1/files/public/docs2021/dp-Zaehring-aerospace-network-traffic-characterization-0121-v01.pdf</u>.

 Disposition: Presentation discussed.

13:34 - 14:00 ET recess

- 11. The TSN TG Chair announced that the meeting is subject to the Copyright Policy, Patent Policy and Participants Policy as read and displayed as part of agenda item 1.
- 12. Jordon Woods gave an update on the May 2021 interim session. **Disposition:** For information only.
- The TSN TG Chair presented "LS on Use of Inclusive Language in 3GPP specifications" <u>https://www.ieee802.org/1/files/public/docs2021/liaison-3GPP-S2-</u> <u>201144 Inclusive Language-0121.pdf</u>.
 Disposition: Liaison discussed. Liaison response will be drafted during the Maintenance TG meeting on Jan 19, 2021.
- 14. János Farkas led the drafting of https://www.ieee802.org/1/files/public/docs2021/dq-cas-tspec-for-bursty-traffic-draft-CSD-0121-v01.pdf.

Disposition:

- Updated PAR: <u>https://www.ieee802.org/1/files/public/docs2021/dq-draft-PAR-0121-v01.pdf</u>
- Updated CSD: <u>https://www.ieee802.org/1/files/public/docs2021/dq-draft-CSD-0121-v01.pdf</u>

16:31 ET recess

Call to order Jan 19, 2021 at 09:00 ET by Craig Gunther, IEEE 802.1 TSN TG Vice-Chair, who presided. Marina Gutiérrez, IEEE 802.1 TSN TG Secretary, wrote the minutes.

- 15. The TSN TG Vice-Chair announced that the meeting is subject to the Copyright Policy, Patent Policy and Participants Policy as read and displayed as part of agenda item 1.
- 16. Max Turner presented "Text Proposal for a sub-Section of Section 12. and/or a new Annex on Redundancy in IEEE 802.1DG/D1.3" <u>https://www.ieee802.org/1/files/public/docs2021/dg-turner-redundancy-0121-v01.pdf</u>. Disposition: Presentation discussed.
- 17. Craig Gunther, P802.1DG editor, presented <u>https://www.ieee802.org/1/files/private/dg-drafts/d1/802-1DG-d1-3.pdf</u>.

Disposition: Presentation discussed.

11:00 - 11:30 ET recess

- 18. Stephan Kehrer, P802.1CBcv editor, presented "IEEE P802.1CBcv Editor's Report for Draft D1.0 Ballot Comment Resolution (v1)" <u>https://www.ieee802.org/1/files/public/docs2021/cv-kehrer-editors-report-d1-0-0121v01.pdf</u> and led the resolution of comments received on <u>https://www.ieee802.org/1/files/private/cv-drafts/d1/802-1CBcv-d1-0.pdf</u>.
 - Stephan Kehrer presented "IEEE P802.1CBcv Stream identification-type and FRER sequence-recovery-algorithm" <u>https://www.ieee802.org/1/files/public/docs2021/cv-kehrer-YANG-identification-type-0121-v01.pdf</u> in support of a ballot comment.
 - Don Fedyk presented "Comment on ieee802dot1CBcv.yang Structure and naming based on a Sample Operational Configuration" <u>https://www.ieee802.org/1/files/public/docs2021/cv-fedyk-dot1cb-yang-operational-comments-0121-v00.pdfin</u> in support of a ballot comment.

Disposition: Ballot comments 5, 6, 7, 8, 9, 25, 36, 37, 39, 40, 41, 45, 46, 104, 109, 108 were discussed and resolved as documented in <u>https://www.ieee802.org/1/files/private/cv-drafts/d1/802-1CBcv-d1-0-pdis-v02.pdf</u>.

13:40 ET recess

Call to order Jan 20, 2021 at 09:00 ET by Craig Gunther, IEEE 802.1 TSN TG Vice-Chair, who presided. Marina Gutiérrez, IEEE 802.1 TSN TG Secretary, wrote the minutes.

- 19. The TSN TG Vice-Chair announced that the meeting is subject to the Copyright Policy, Patent Policy and Participants Policy as read and displayed as part of agenda item 1.
- 20. Scott Mansfield, P802.1ABcu editor, presented "IEEE P802.1ABcu Editor's Report for Ballot Comment Resolution" <u>https://www.ieee802.org/1/files/public/docs2021/cumansfield-editors-report-d1-5-0121-v02.pdf</u> and led the resolution of comments received on <u>https://www.ieee802.org/1/files/private/abcu-drafts/d1/802-1ABcu-d1-5.pdf</u>. **Disposition:** Continued later.

11:01 - 11:30 ET recess

- 21. Stephen Haddock, P802.1ABdh editor, led the resolution of comments received on <u>https://www.ieee802.org/1/files/private/dh-drafts/d0/802-1ABdh-d0-2.pdf</u> **Disposition:** Ballot comments were discussed and resolved as documented in <u>https://www.ieee802.org/1/files/private/dh-drafts/d0/802-1ABdh-d0-2-dis-v1.pdf</u>. Anticipated next: WG recirculation ballot.
- 23. Scott Mansfield, P802.1ABcu editor, continued the resolution of comments received on https://www.ieee802.org/1/files/private/abcu-drafts/d1/802-1ABcu-d1-5.pdf.
 Disposition: Ballot comments were discussed and resolved as documented in https://www.ieee802.org/1/files/private/abcu-drafts/d1/802-1ABcu-d1-5.pdf.
 Disposition: Ballot comments were discussed and resolved as documented in https://www.ieee802.org/1/files/private/abcu-drafts/d1/802-1ABcu-d1-5-pdis-v02.pdf.
 Anticipated next: WG recirculation ballot.
- 13:33 14:01 ET recess
- 23. Feng Chen, P802.1Qdd editor, presented "IEEE P802.1Qdd Resource Allocation Protocol (RAP) Editor's Report for D0.4 Ballot Comment Resolution" <u>https://www.ieee802.org/1/files/public/docs2021/dd-chen-d0-4-editors-report-0121-v01.pdf</u> and led the resolution of comments received on <u>https://www.ieee802.org/1/files/private/dd-drafts/d0/802-1Qdd-d0-4.pdf</u>.
 Disposition: Ballot comments 16, 20, 22, 6, 7, 8, 12, 14, 30 were discussed and resolved as documented in <u>https://www.ieee802.org/1/files/private/dd-drafts/d0/802-1Qdd-d0-4-pdf</u>.

16:05 ET recess

Call to order Jan 21, 2021 at 09:01 ET by János Farkas, IEEE 802.1 TSN TG Chair, who presided. Marina Gutiérrez, IEEE 802.1 TSN TG Secretary, wrote the minutes.

- 24. The TSN TG Chair announced that the meeting is subject to the Copyright Policy, Patent Policy and Participants Policy as read and displayed as part of agenda item 1.
- 25. Tongtong Wang, P802.1DF editor, presented "P802.1DF TSN Profile for Service Provider Networks Editor's Report for D0.1 comment resolution" <u>https://www.ieee802.org/1/files/public/docs2021/df-wangtt-editors-report-0121-v01.pdf</u> and led the resolution of comments received on <u>https://www.ieee802.org/1/files/private/dfdrafts/d0/802-1DF-d0-1.pdf</u>.

Disposition: All ballot comments except 18, 20, 15, 16, 17, 27, 28, 30, 31, 34, 35, 36 were discussed and resolved as documented in https://www.ieee802.org/1/files/private/df-drafts/d0/802-1DF-d0-1-pdis-v02.pdf. The remaining comments will be accepted without discussion unless someone objects.

11:07 - 11:32 ET recess

26. Christophe Mangin, P802.1CBdb editor, presented "802.1CBdb/D1.1 Editor's report for the 2nd WG ballot comments resolution" <u>https://www.ieee802.org/1/files/public/docs2021/db-mangin-d1-1-editors-report-0121-v01.pdf</u> and led the resolution of comments received on <u>https://www.ieee802.org/1/files/private/db-drafts/d1/802-1CBdb-d1-1.pdf</u>. Disposition: Ballot comments 1-6, 9-50 were discussed and resolved as documented in <u>https://www.ieee802.org/1/files/private/db-drafts/d1/802-1CBdb-d1-1-pdis-v02.pdf</u>.

13:45 ET recess

Call to order Jan 22, 2021 at 11:30 ET by János Farkas, IEEE 802.1 TSN TG Chair, who presided. Marina Gutiérrez, IEEE 802.1 TSN TG Secretary, wrote the minutes.

- 27. The TSN TG Chair announced that the meeting is subject to the Copyright Policy, Patent Policy and Participants Policy as read and displayed as part of agenda item 1.
- 28. Johannes Specht presented "Update on Cut-Through Forwarding (CTF)" https://www.ieee802.org/1/files/public/docs2021/new-specht-cut-through-update-0121v01.pdf.

Disposition: Presentation was discussed.

- 29. Stephan Kehrer, P802.1CBcv editor, continued the resolution of comments received on https://www.ieee802.org/1/files/private/cv-drafts/d1/802-1CBcv-d1-0.pdf.
 Disposition: Ballot comments 2, 3, 14, 15, 16, 19, 20, 33, 42, 47, 48, 53, 54, 81, 82, 95, 96, 97, 98, 99, 105 were discussed and resolved as documented in https://www.ieee802.org/1/files/private/cv-drafts/d1/802-1CBcv-d1-0.pdf.
- 30. Any Other Business. No other business was discussed by the TSN TG in this session.

13:39 ET adjournment

5.1 IEC/IEEE 60802 Joint Project

Between this session and the preceding session, the IEC/IEEE 60802 Joint Project held electronic meetings whose minutes are incorporated to these session minutes by reference as follows:

- Minutes of the IEC/IEEE 60802 Joint Project meeting held 2020-11-16 9:00 AM 11:00 AM ET (revised) <u>https://listserv.ieee.org/cgi-bin/wa?A2=ind21&L=STDS-802-1-</u> <u>MINUTES&O=A&P=21401</u>
- Minutes of the IEC/IEEE 60802 Joint Project meeting held 2020-11-23 9:00 AM 11:00 AM ET <u>https://listserv.ieee.org/cgi-bin/wa?A2=ind20&L=STDS-802-1-</u> <u>MINUTES&O=A&P=184424</u>
- Minutes of the IEC/IEEE 60802 Joint Project meeting held 2020-11-30 9:00 AM 11:00 AM ET <u>https://listserv.ieee.org/cgi-bin/wa?A2=ind20&L=STDS-802-1-</u> <u>MINUTES&O=A&P=185362</u>
- Minutes of the IEC/IEEE 60802 Joint Project meeting held 2020-12-07 9:00 AM 11:00 AM ET <u>https://listserv.ieee.org/cgi-bin/wa?A2=ind20&L=STDS-802-1-</u> <u>MINUTES&O=A&P=204115</u>
- Minutes of the IEC/IEEE 60802 Joint Project meeting held 2020-12-14 9:00 AM 11:00 AM ET <u>https://listserv.ieee.org/cgi-bin/wa?A2=ind20&L=STDS-802-1-</u> <u>MINUTES&O=A&P=205055</u>
- Minutes of the IEC/IEEE 60802 Joint Project meeting held 2020-12-21 9:00 AM 11:05 AM ET <u>https://listserv.ieee.org/cgi-bin/wa?A2=ind21&L=STDS-802-1-</u> <u>MINUTES&O=A&P=23292</u>
- Minutes of the IEC/IEEE 60802 Joint Project meeting held 2021-01-11 9:00 AM 11:00 AM ET <u>https://listserv.ieee.org/cgi-bin/wa?A2=ind21&L=STDS-802-1-</u> <u>MINUTES&O=A&P=22351</u>
- Minutes of the IEC/IEEE 60802 Joint Project System Specification ad hoc meeting held 2020-11-11 11:00AM-12:00PM ET <u>https://listserv.ieee.org/cgibin/wa?A2=ind20&L=STDS-802-1-MINUTES&O=A&P=172230</u>
- Minutes of the IEC/IEEE 60802 Joint Project System Specification ad hoc meeting held 2020-11-18 11:00 AM – 12:00 PM ET <u>https://listserv.ieee.org/cgibin/wa?A2=ind20&L=STDS-802-1-MINUTES&O=A&P=173107</u>

- Minutes of the IEC/IEEE 60802 Joint Project System Specification ad hoc meeting held 2020-12-02 11:00 AM – 12:00 PM ET <u>https://listserv.ieee.org/cgibin/wa?A2=ind21&L=STDS-802-1-MINUTES&O=A&P=10986</u>
- Minutes of the IEC/IEEE 60802 Joint Project System Specification ad hoc meeting held 2020-12-09 11:00 AM – 12:10 PM ET <u>https://listserv.ieee.org/cgibin/wa?A2=ind21&L=STDS-802-1-MINUTES&O=A&P=12088</u>
- Minutes of the IEC/IEEE 60802 Joint Project System Specification ad hoc meeting to be held 2020-12-16 11:00AM-12:00PM ET https://listserv.ieee.org/cgi-bin/wa?A2=ind21&L=STDS-802-1-MINUTES&O=A&P=13190
- Minutes of the IEC/IEEE 60802 Joint Project System Specification ad hoc meeting held 2021-01-13 11:00 AM – 12:00 PM ET <u>https://listserv.ieee.org/cgibin/wa?A2=ind21&L=STDS-802-1-MINUTES&O=A&P=14071</u>

The table in section 1 reflects, for all meetings held in this session, the attendance and affiliation of participants who registered their attendance in IMAT.

Call to order Jan 18, 2021 at 9:00 ET by Ludwig Winkel, IEC 65C/WG18 Convenor and IEC/IEEE 60802 Joint Project Chair (60802 Chair), who presided with János Farkas, IEEE 802.1 TSN TG Chair (TG Chair). Josef Dorr, IEC/IEEE 60802 Joint Project Secretary (60802 Secretary), wrote the minutes.

Agenda items and dispositions:

- 1. Meeting introduction and other administrative items. The TG Chair showed:
 - The IEEE SA Copyright Policy slides,
 - The IEEE SA PatCom Patent Slides for Standards Development Meetings,
 - The IEEE SA slides regarding IEEE Codes of Ethics and Conduct, participation in the "individual process", and dominance,
 - The decorum information, and
 - The reminder for participants to register their attendance in IMAT contained in "MEETING INTRODUCTION"

<u>http://www.ieee802.org/1/files/public/templates/admin-WG+TG-intro-0720-v01.pdf</u> thereby providing the information on slides 2 and 5 of this presentation, and made the Call for Potentially Essential Patents: there were no responses to these Calls prior to the end of the session. The 60802 Chair explained that the IEC/IEEE 60802 Joint Project also follows the usual IEC patent <u>https://www.iec.ch/members_experts/tools/patents/patent_policy.htm</u> and copyright

https://www.iec.ch/standardsdev/resources/draftingpublications/overview/rules_requirement s/copyright.htm policies.

2. Approval of agenda. The 60802 Chair presented the agenda in <u>https://1.ieee802.org/2021-01-interim-tsn-agenda/#TSN 8211 IECIEEE 60802</u>.

Disposition: The agenda was reviewed, discussed, and agreed (informally, none dissenting) as presented.

 Update on the IEC 61802 conformity assessment project. The 60802 Chair gave a verbal update on the IEC 61802 conformity assessment project. Four consortia are involved to sponsor an author; another consortium is interested to become a sponsor by contributions. Two author candidates are considered.

Disposition: For information.

- 4. Incoming liaison P2971 & P2972. The TG Chair presented the incoming liaison in <u>https://www.ieee802.org/1/files/private/liaisons/liaison-IEEE P2971+P2972 introduction-0121.pdf</u>.
 - The 60802 Chair explained that IEEE P2971 and IEEE P2972 are proposed by the IEEE Computer Society Smart Manufacturing Standards Committee (IEEE C/SM SC: <u>https://sagroups.ieee.org/smsc/</u>), chaired by Sha Wei, with proposed titles as follows:
 - P2971 "Standard for Test Requirements and Methods for Time Sensitive Networking Gateway in the Field of Industrial Internet of Things".
 - P2972 "Standard for General Requirements of Gateway Supporting Time Sensitive Networking in Factory Environments".
 - The P2971 PAR is approved and the P2972 PAR is on the Jan 26, 2021 NesCom agenda.
 - Both projects are proposed to be organized under Working Groups following the entity process. Participation in these projects is thus on an entity rather than individual basis.
 - Only a few other projects are in this new SM Standards Committee: P2934 (Standard for Logistics Operation Process in a Smart Factory), P2959 (Standard for Technical Requirements of Standard-Oriented Knowledge Graphs), P2671 (Standard for General Requirements of Online Detection Based on Machine Vision in Intelligent Manufacturing), and P2806 (System Architecture of Digital Representation for Physical Objects in Factory Environments).

Disposition: The IEC/IEEE 60802 Joint Project identified a number of inaccurate statements related to the 60802 project. The industry (and with that, 60802) is focused on converged technology to avoid gateways.

If the P2972 project is approved during the NesCom meeting, then the 60802 Chair can work together with IEEE 802.1 management on "what coordination options" should be considered.

- 5. Editor's report. Jordon Woods, 60802 Editor, presented "Editor's Report 60802 Draft 1.2" <u>https://www.ieee802.org/1/files/public/docs2021/60802-woods-D1-2-update-0121-v03.pdf</u> **Disposition:** For information.
- Contributions to clauses 4.1 and 4.2: clean and redline. Jordon Woods, IEC/IEEE 60802 Editor, showed subclauses 4.1, 4.2 and 4.3 of <u>https://www.ieee802.org/1/files/private/60802-drafts/d1/60802-Steindl-Clause4-0121-v06-</u>

clean.pdf and walked through the updated subclauses.

Disposition: More discussion needed. The IEC/IEEE 60802 Editor would rework the document based on the discussion. The reworked document can be discussed in another IEC/IEEE 60802 Joint Project meeting in this interim session.

- IEC/IEEE 60802 D1.2 TG ballot comment resolution. Jordon Woods, IEC/IEEE 60802 Editor, continued the resolution of comments received on <u>http://www.ieee802.org/1/files/private/60802-drafts/d1/60802-d1-2.pdf</u>.
 Disposition: Ballot comments 412, 246, 154, 860 were resolved as documented in <u>https://www.ieee802.org/1/files/private/60802-drafts/d1/60802-d1-2-pdis-v23.pdf</u>.
- 8. Review of minutes. Draft minutes were reviewed under the lead of the 60802 Secretary.

11:00 ET recess

Call to order Jan 19, 2021 at 11:30 ET, by Janos Farkas, TG Chair, who presided with Ludwig Winkel, 60802 Chair. Josef Dorr, 60802 Secretary, wrote the minutes.

- 9. Meeting introduction and other administrative items. The TG Chair announced that the meeting is subject to the Copyright Policy, Patent Policy and Participants Policy as read and displayed as part of agenda item 1. The 60802 Chair explained that the IEC/IEEE 60802 Joint Project also follows the usual IEC patent and copyright policies.
 - Mark Hantel, IEC/IEEE 60802 Joint Project System Specification ad hoc Chair (System ad hoc Chair), proposed to move and extend the regular System ad hoc meetings from Wednesdays 11:00 – 12:00 ET to Fridays 9:00 – 11:00 ET starting from Jan 29, 2021: the IEC/IEEE 60802 Joint Project agreed (informally, none dissenting) to the proposal. During the meeting, the TG Chair updated the TSN calendar <u>https://1.ieee802.org/tsn/calendar/</u> accordingly.
- Approval of agenda. The 60802 Chair presented the agenda in <u>https://1.ieee802.org/2021-01-interim-tsn-agenda/#TSN 8211 IECIEEE 60802-2</u>.
 Disposition: The agenda was reviewed, discussed, and agreed (informally, none dissenting) as presented.
- 11. Contribution on Traffic Type Classes. Jordon Woods, IEC/IEEE 60802 Editor, presented "Traffic-Type-Class Introduction" <u>https://www.ieee802.org/1/files/public/docs2021/60802-</u> ademaj-contribution-traffic-type-classes-0121-v02.pdf.

Disposition: The presentation was discussed. Agreed (informally, none dissenting) that the two-step approach of the contribution (to first define industrial traffic-type-classes then relate industrial traffic types to these traffic-type-classes) is considered beneficial. During the discussion, comments were made and the IEC/IEEE 60802 Editor updated the 60802 draft accordingly.

- IEC/IEEE 60802 D1.2 TG ballot comment resolution. Jordon Woods, IEC/IEEE 60802 Editor, continued the resolution of comments received on <u>http://www.ieee802.org/1/files/private/60802-drafts/d1/60802-d1-2.pdf</u>.
 Disposition: Ballot comments 121, 750, 373, 1029 were resolved as documented in <u>https://www.ieee802.org/1/files/private/60802-drafts/d1/60802-d1-2-pdis-v23.pdf</u>.
- 13. Review of minutes. Draft minutes were reviewed under the lead of the 60802 Secretary.

13:30 ET recess

Call to order Jan 20, 2021 at 9:00 ET, by Ludwig Winkel, 60802 Chair, who presided with János Farkas, TG Chair. Josef Dorr, 60802 Secretary, wrote the minutes.

- 14. Meeting introduction. The TG Chair announced that the meeting is subject to the Copyright Policy, Patent Policy and Participants Policy as read and displayed as part of agenda item 1. The 60802 Chair explained that the IEC/IEEE 60802 Joint Project also follows the usual IEC patent and copyright policies.
- 15. Approval of agenda. The 60802 Chair presented the agenda in https://1.ieee802.org/2021-01-interim-tsn-agenda/#TSN 8211 IECIEEE 60802-3.
 Disposition: the agenda was reviewed, discussed, and agreed (informally, none dissenting) as presented.
- 16. IEC/IEEE 60802 D1.2 TG ballot comment resolution. Jordon Woods, IEC/IEEE 60802 Editor, continued the resolution of comments received on http://www.ieee802.org/1/files/private/60802-drafts/d1/60802-d1-2.pdf.

• Rogue comment #1052 was added by the IEC/IEEE 60802 Editor during the meeting.

Disposition: Ballot comments 1029, 600, 73, 74, 266, 265, 668, 866, 957, 560, 71, 699, 700, 970, 76, 1052 were resolved as documented in

https://www.ieee802.org/1/files/private/60802-drafts/d1/60802-d1-2-pdis-v23.pdf.

11:00 – 11:30 ET recess

- 17. IEC/IEEE 60802 D1.2 TG ballot comment resolution. Jordon Woods, IEC/IEEE 60802 Editor, continued the resolution of comments received on http://www.ieee802.org/1/files/private/60802-drafts/d1/60802-d1-2.pdf.
 - The IEC/IEEE 60802 Editor started drafting revised descriptions of industrial traffic types as preparation for the resolution of comments related to the traffic types subclauses.

Disposition: More discussion needed.

18. Review of minutes. This agenda item was skipped due to running out of time.

13:30 ET recess

Call to order Jan 21, 2021 at 09:00 ET by Ludwig Winkel, 60802 Chair, who presided. Josef Dorr, IEC/IEEE 60802 Joint Project Secretary, wrote the minutes.

- 19. Meeting introduction. The 60802 Chair announced that the meeting is subject to the Copyright Policy, Patent Policy and Participants Policy as read and displayed as part of agenda item 1. The 60802 Chair explained that the IEC/IEEE 60802 Joint Project also follows the usual IEC patent and copyright policies.
- 20. Approval of agenda. The 60802 Chair presented the agenda in https://1.ieee802.org/2021-01-interim-tsn-agenda/#TSN 8211 IECIEEE 60802-4.
 Disposition: the agenda was reviewed, discussed, and agreed (informally, none dissenting) as presented.
- 21. IEC/IEEE 60802 D1.2 TG ballot comment resolution. Jordon Woods, IEC/IEEE 60802 Editor, continued the resolution of comments received on <u>http://www.ieee802.org/1/files/private/60802-drafts/d1/60802-d1-2.pdf</u>. The IEC/IEEE 60802 Editor showed the updated revision of the "Traffic-Type-Class Introduction" presentation <u>https://www.ieee802.org/1/files/public/docs2021/60802-ademajcontribution-traffic-type-classes-0121-v03-clean.pdf</u> with the updates discussed during the Jan 19, 2021 meeting. The IEC/IEEE 60802 Editor continued drafting of revised descriptions of industrial traffic

types as preparation for the resolution of comments related to the traffic types subclauses.

Disposition: More discussion needed.

- 11:00 11:30 ET recess
- 22. IEC/IEEE 60802 D1.2 TG ballot comment resolution. Jordon Woods, IEC/IEEE 60802 Editor, continued the resolution of comments received on http://www.ieee802.org/1/files/private/60802-drafts/d1/60802-d1-2.pdf.

The IEC/IEEE 60802 Editor finished the drafting of revised descriptions of industrial traffic types, started resolving related comments and started drafting the introductory sub-clause

of the industrial traffic types descriptions in preparation for the resolution of related comments.

Disposition: Ballot comments 267, 958, 419, 968, 967, 940, 77, 604, 969, 78, 268, 605, 269, 606, 974, 670, 607, 274, 701, 273, 272, 271, 975, 976, 978, 977, 981, 980, 275, 608, 103, 8, 276, 277, 979, 163, 278, 79, 609, 279, 371, 1032, 1031, 610, 611, 164, 280, 702, 281, 561, 104, 941, 944, 943, 612, 945, 9, 1033, 282, 946, 947, 613, 914, 915, 704, 424, 918, 283, 919, 284, 614, 425, 426, 986, 705, 285, 917, 10, 12, 11, 14, 13, 15, 16, 17, 19, 18, 381, 392, 393 were resolved as documented in https://www.ieee802.org/1/files/private/60802-drafts/d1/60802-d1-2-pdis-v23.pdf.

23. Review of minutes. Draft minutes were reviewed at the end of the electronic meeting under the lead of the 60802 Secretary.

13:30 ET recess

Call to order Jan 22, 2021 at 09:00 ET by Ludwig Winkel, 60802 Chair, who presided with János Farkas, TG Chair. Josef Dorr, IEC/IEEE 60802 Joint Project Secretary, wrote the minutes.

- 24. Meeting introduction. The TG Chair announced that the meeting is subject to the Copyright Policy, Patent Policy and Participants Policy as read and displayed as part of agenda item 1. The 60802 Chair explained that the IEC/IEEE 60802 Joint Project also follows the usual IEC patent and copyright policies.
- 25. Approval of agenda. The 60802 Chair presented the agenda in <u>https://1.ieee802.org/2021-01-interim-tsn-agenda/#TSN 8211 IECIEEE 60802-5</u>, which is also available in <u>https://collaborate.iec.ch/#/pages/workspaces/677749/documents/138995/details/509906?</u> <u>onlyWithPreview=false&fileId=509906</u>.

Disposition: the agenda was reviewed, discussed, and agreed (informally, none dissenting) as presented.

- 26. CNC and CUC roles. Astrit Ademaj presented "On CNC/CUC" <u>https://www.ieee802.org/1/files/public/docs2021/dj-ademaj-cnc-cuc-roles-0121-v01.pdf</u>. **Disposition:** More discussion needed.
- 27. CNC-CUC UNI Talker Requirements. This agenda item was skipped by lack of time.
- 28. IEC/IEEE 60802 D1.2 TG ballot comment resolution. Jordon Woods, IEC/IEEE 60802 Editor, continued the resolution of comments received on <u>http://www.ieee802.org/1/files/private/60802-drafts/d1/60802-d1-2.pdf</u> and presented the revised traffic types subclauses which were drafted during the previous meetings: <u>https://www.ieee802.org/1/files/public/docs2021/60802-ademaj-contribution-traffic-typeclasses-0121-v04-clean.pdf</u> and <u>https://www.ieee802.org/1/files/public/docs2021/60802woods-Traffic-Type-Descriptions-0121-v01.pdf</u>. **Disposition:** For information.

Disposition: For information.

- 29. Review of minutes. Draft minutes were reviewed under the lead of the 60802 Chair.
- 30. Any Other Business. No other business was discussed by the IEC/IEEE 60802 Joint Project in this session.

11:00 ET adjournment

6 Nendica

Between this session and the preceding session, the IEEE 802 "Network Enhancements for the Next Decade" Industry Connections Activity (Nendica) held electronic meetings whose minutes are incorporated to these session minutes by reference as follows:

- Minutes of the Nendica meeting held 2020-11-19 09:00-10:00 AM ET https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;6716e5d2.20
- Minutes of the Nendica meeting held 2020-12-03 09:00-09:32 AM ET <u>https://listserv.ieee.org/cgi-bin/wa?A2=ind20&L=STDS-802-1-</u> MINUTES&O=A&P=193498
- Minutes of the Nendica meeting held 2020-12-17 09:00-10:15 ET <u>https://listserv.ieee.org/cgi-bin/wa?A2=ind20&L=STDS-802-1-</u> <u>MINUTES&O=A&P=211912</u>
- Minutes of the Nendica meeting held 2020-01-07 09:02-10:29 ET https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;45f363a.21
- Minutes of the Nendica meeting held 2020-01-14 09:00-10:16 ET https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;a71ad4a1.21

The table in section 1 reflects, for all meetings held in this session, the attendance and affiliation of participants who registered their attendance in IMAT.

Call to order Jan 22, 2021 at 09:00 ET by Roger Marks, Nendica Chair, who presided and wrote the minutes.

Agenda items and dispositions:

- 1. Meeting introduction and other administrative items. The Chair showed:
 - The IEEE SA Copyright Policy slides,
 - The Guidelines for IEEE SA Meetings slide,
 - The IEEE SA slides regarding IEEE Codes of Ethics and Conduct, participation in the "individual process", and dominance,
 - The decorum information, and
 - The reminder for participants to register their attendance in IMAT contained in "MEETING INTRODUCTION"

<u>http://www.ieee802.org/1/files/public/templates/admin-prePAR-intro-0720-v01.pdf</u> thereby providing the information on slide 2 of this presentation.

 Approval of agenda. The Chair presented the agenda in <u>https://mentor.ieee.org/802.1/dcn/21/1-21-0003-00-ICne-approved-agenda-of-the-nendica-meeting-of-2021-01-22.pdf</u>.
 Disposition: The agenda was reviewed, discussed and agreed (informally, none)

Disposition: The agenda was reviewed, discussed and agreed (informally, none dissenting) as presented.

- Update. The Nendica Chair reviewed the Nendica web site and the new documents available at the Nendica mentor server.
 Disposition: No discussion.
- 4. Minutes. The Nendica Chair reviewed the draft "Minutes of the Nendica meeting held 2020-01-14 09:00-10:16 ET" <u>https://listserv.ieee.org/cgi-bin/wa?A2=STDS-802-1-MINUTES;a71ad4a1.21</u>

Disposition: The document was reviewed and agreed (informally, none dissenting) as presented.

- 5. Stream and Flow Interworking [SFI] Work Item. Roger Marks, SFI Editor, noted that SFI has not been meeting due to lack of contributions and that meetings will resume when contributions arise.
- 6. Data Center Networks [DCN] Work Item. Paul Congdon, DCN Editor, reviewed the predraft version of "IEEE 802 Nendica Report: Intelligent Lossless Data Center Networks" <u>https://mentor.ieee.org/802.1/dcn/20/1-20-0030-14-ICne.pdf</u> and led discussion regarding the readiness of the document for a Call for Comments.

Disposition: Agreed (informally, none dissenting) that, before a Call for Comments, the pre-draft should be updated in the header to reflect its status, line numbers should be added, and the pages should be numbered in a single sequence.

Motion: To adopt 802.1-20-0030-14, <<u>https://mentor.ieee.org/802.1/dcn/20/1-20-0030-14-</u> <u>ICne.pdf</u>> subject to changes agreed, as a Draft Nendica Report and issue a 30-day Call for Comments.

Motion by Paul Congdon. Seconded by Ramesh Sivakolundu.

Approved, unanimous consent.

7. Study Items.

Disposition: No discussion.

8. Future Meetings. The Nendica Chair scheduled DCN meetings on alternate Thursdays 09:00 - 11:00 ET. However, the following meeting is Jan 28, 2021 which is too soon given that the Call for Comments will be underway.

Disposition: The Jan 28, 2021 Nendica meeting is cancelled. The remaining meetings remain on the biweekly schedule. The meeting of Feb 11, 2021 will remain scheduled in case it may be useful, noting that it may be cancelled since the DCN Call for Comments will be in progress and noting that holidays will be underway for some participants. DCN comment resolution will be planned for the following meeting of Feb 25, 2021.

9. Any Other Business. No other business was discussed by Nendica in this session.

10:16 ET adjournment

7 YANGsters

Between this session and the preceding session, YANGsters held electronic meetings whose minutes are incorporated to these session minutes by reference as follows:

- Minutes of the YANGsters meeting held 2020-11-17 10:06 AM 11:05 AM ET https://listserv.ieee.org/cgi-bin/wa?A2=ind20&L=STDS-802-1-MINUTES&P=178037
- Minutes of the YANGsters meeting held 2020-11-24 10:00 AM –11:08 AM ET https://listserv.ieee.org/cgi-bin/wa?A2=ind20&L=STDS-802-1-MINUTES&P=181220
- Minutes of the YANGsters meeting held 2020-12-01 10:00 AM –11:03 AM ET https://listserv.ieee.org/cgi-bin/wa?A2=ind20&L=STDS-802-1-MINUTES&P=192665
- Minutes of the YANGsters meeting held 2020-12-15 10:00 AM –10:46 AM ET https://listserv.ieee.org/cgi-bin/wa?A2=ind20&L=STDS-802-1-MINUTES&P=209450
- Subject: Minutes of the YANGsters meeting held 2020-12-22 10:00 11:00 ET https://listserv.ieee.org/cgi-bin/wa?A2=ind21&L=STDS-802-1-MINUTES&P=37093
- Minutes of the YANGsters meeting held 2021-01-12 10:00 AM –11:03 AM ET https://listserv.ieee.org/cgi-bin/wa?A2=ind21&L=STDS-802-1-MINUTES&P=7908

The table in section 1 reflects, for all meetings held in this session, the attendance and affiliation of participants who registered their attendance in IMAT.

Call to order Jan 21, 2021 at 14:00 ET by Scott Mansfield, the YANGsters Chair, who presided. Stephan Kehrer, the YANGsters Secretary, wrote the minutes.

Agenda items and dispositions:

- 1. Meeting introduction. The YANGsters Chair reminded participants that the following information was made available before the meeting
 - The IEEE SA Copyright Policy slides,
 - The Guidelines for IEEE SA Meetings slide,
 - The IEEE SA slides regarding IEEE Codes of Ethics and Conduct, participation in the "individual process", and dominance,
 - The decorum information, and
 - The reminder for participants to register their attendance in IMAT

contained in "MEETING INTRODUCTION"

http://www.ieee802.org/1/files/public/templates/admin-prePAR-intro-0720-v01.pdf thereby providing the information on slide 2 of this presentation.

- Approval of agenda. The YANGsters Chair presented the agenda in <u>https://1.ieee802.org/january-2021-interim-session-electronic-yangsters-agenda/</u>.
 Disposition: the agenda was reviewed, discussed and updated as recorded by these minutes.
- 3. Introduction to YANGsters. The YANGsters Chair presented:
 - <u>https://1.ieee802.org/yangsters/</u>,
 - https://1.ieee802.org/yangsters/yangsters-call-information/,
 - https://1.ieee802.org/category/yangsters-agenda/, and
 - https://1.ieee802.org/yangsters/yangsters-guidelines/yangsters-faq/.

Disposition: For information.

- 4. 802f Update. Marc Holness presented "P802f YANG Data Model for Ethertypes Updates" https://www.ieee802.org/1/files/public/docs2021/802f-mholness-Updatel-0121-v03.pdf.
 - The background on the topic was provided.
 - Regular meetings are held with the RAC to resolve outstanding issues.
 - The current proposal under discussion includes:
 - Introducing four new fields in the Ethertype Public Listing called "friendly name", "short description", "last updated", and "entity tag (SDO/SIG)".
 - Adding enhancements to the Ethertype Public Listing's search to provide a more flexible and robust search.
 - Clarifying how the new fields are managed.
 - Input on the topic can be sent to the YANGsters list and 802.1 Chair.

Disposition: For information.

5. YANG Instance Examples. The YANGsters Chair presented

https://1.ieee802.org/yangsters/yang-instance-examples/.

- The information at https://l.ieee802.org/yangsters/yang-instance-examples/ provides instance examples and guidance on how to use them in YANG related tools to verify YANG modules.
- A requ per est was made for those knowledgeable in the art to provide comments. **Disposition:** For information.
- 6. Meta-Data Review. The YANGsters Chair presented <u>https://1.ieee802.org/yangsters/yang-metadata/</u>.
 - As of Jan 21, 2021, 20 out of 39 files in the published tree of the YANG catalog GitHub repository are missing current metadata.
 - Four of the modules missing current metadata belong to IEEE 802.1.

Disposition: agreed (informally, none dissenting) that metadata needs to be added to the IEEE 802.1 YANG modules that are missing it.

- IEEE 802.1Q YANG discussion. Johannes Specht presented <u>https://www.ieee802.org/1/files/public/docs2021/maint-specht-yang-comments-0121-v02.pdf</u>.
 - The document provided is an update to a previous contribution on the topic.
 - It includes color coding to indicate how the issues can potentially be handled (i.e. as smaller standalone corrections or as part of a larger remodeling effort of the bridge YANG module).
 - To progress maintenance item 0242 (<u>https://www.802-1.org/items/357</u>) a decision is required on the approach that would be taken to handle the issues pointed out.
 - It was pointed out that doing smaller standalone corrections for easy but relevant issues can be done, even if a larger remodeling of the modules is chosen as the long-term solution approach.
 - The following provide information on how this can be done in a backward compatible way: <u>https://tools.ietf.org/html/draft-ietf-netmod-yang-solutions-01</u>, <u>https://tools.ietf.org/html/draft-ietf-netmod-yang-module-versioning-01</u>, and <u>https://tools.ietf.org/html/draft-ietf-netmod-yang-module-versioning-01</u>.

Disposition: agreed (informally, none dissenting) that more discussion on how to proceed with the aforementioned maintenance item is required.

- 8. IETF VLAN Comments. The YANGsters chair presented "Sub-interface VLAN YANG Data Models" <u>https://www.ietf.org/archive/id/draft-ietf-netmod-sub-intf-vlan-model-07.txt</u>.
 - A request was made in a previous YANGsters electronic meeting for those knowledgeable in the art to provide comments (as individuals) to help ensure the sub-interface information is accurate. This request was repeated.
 Disposition: For information.
- 9. YANG Doctors Question. The YANGsters Chair presented the maintenance item at https://www.802-1.org/items/420/requests/310/pre.
 - An email with questions on this maintenance item was sent to the YANG doctors.
 - The request on feedback from the YANG doctors will be sent again.

Disposition: For information

- 10. The YANGsters Chair led the discussion on "Guidelines for discussion".
 - Questions on guidelines and best practices to draft IEEE 802.1 YANG modules have been raised in the past and keep recurring, often in comment resolutions. The following items have been presented and discussed:
 - MIB to YANG mapping
 - RFC 6643 provides information on the mapping from MIB to YANG.
 - Use of Types file
 - It was discussed if types defined in YANG modules should be split out into separate types files and under what conditions.
 - If a type is expected to be used by another module putting the types file in a separate file is a good idea.
 - If a type is only used within its own module it should be kept in the module itself.
 - "Don't invent inheritance, discover it."
 - Moving types from one YANG file into a types file at a later point in time can potentially cause issues when importing that type and should be avoided.
 - If moving a type is required, the type should be kept in the original file and deprecated in addition to moving it.
 - Guidelines for prefixing
 - Prefixes should be short but not incomprehensible.
 - Guidelines should help to have a common approach on module names and prefixes but following them should not be a hard requirement.

- Changing the prefixes of existing modules can be done in a backward compatible way (as pointed out in section 11 of RFC 7950).
- A discussion of "Style" was deferred by lack of time.
- A discussion of "Names and Abbreviations" was deferred by lack of time. **Disposition:** Agreed (informally, none dissenting) that guidelines following the discussion
- on the YANGsters page would be helpful.
- 11. Update on Hot Issues was deferred by lack of time.
- 12. Next Calls was deferred by lack of time.
- 13. Any Other Business. No other business was discussed by YANGsters in this session.
- 14. Future meetings. Although not discussed, YANGsters meet next during the electronic meeting on Jan 26, 2021.

16:00 ET adjournment

8 ePolls

The ePolls in the following table were initiated during this interim session and all passed.

The results are also provided in "IEEE 802.1 WG January 2021 eMeetings"

https://www.ieee802.org/1/files/public/minutes/2021-01-WG-motions.pdf and in "802.1 Motions for LMSC agenda, including supporting material"

https://www.ieee802.org/1/files/public/minutes/2021-02-exec-regular-motions.pdf.

Start (ET)	ePoll Name	Торіс	Document	End (ET)	Votes [A/D/-]
20-Jan- 2021 00:00:0 0 ET	57 - P802 14Bdb	802.1 authorizes Stephen Haddock, the Editor of P802.1ABdh Station and Media Access Control Connectivity Discovery Amendment: Support for Multiframe Protocol Data Units to prepare drafts for and conduct Working Group balloting. Proposed: Janos Farkas Second: Paul Congdon		30-Jan- 2021 23:59:59 ET	54/0/0
19-Jan- 2021 00:00:0 0 ET	54 - 802.1DP CFP		<u>dp-draft-</u> <u>cfp-0121-</u> <u>v02.pdf</u>	29-Jan- 2021 23:59:59 ET	59/0/0
19-Jan- 2021 00:00:0 0 ET	55 - 3GPP SA2 liaison	Approve https://www.ieee802.org/1/files/public/do cs2021/draft-liaison-response-3GPP-SP- 201144-inclusive-language-0121-v03.pdf as a communication to 3GPP SA WG2, granting the IEEE 802.1 WG chair (or his delegate) editorial license. Proposed: Paul Congdon Second: Don Pannell		29-Jan- 2021 23:59:59 ET	57/0/3

19-Jan- 2021 00:00:0 0 ET 56 - P802.1AS0 PAR	802.1 authorizes the Maintenance TG to generate PAR and CSD for pre- circulation to the EC for an amendment to IEEE Std 802.1AS to replace deprecated terminology with inclusive language. Moved: Paul Congdon Seconded: Don Pannell		29-Jan- 2021 23:59:59 ET	57/2/1
--	---	--	-----------------------------------	--------

9 Next Session

Mar 8-16, 2021 electronic plenary session.