

Meeting of the IEC/IEEE 60802 Joint Project

2019-02-16

INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC)

TC65: Industrial-process measurement, control and automation

SC65C: Industrial communication networks

Institute of Electrical and Electronics Engineers, Inc. (IEEE)

IEEE 802: LAN/MAN Standards Committee

IEEE 802.1: Higher Layer LAN Protocols Working Group

IEEE 802.1 TSN: Time-Sensitive Networking Task Group

Meeting: IEC/IEEE 60802 Joint Project

Meeting was based on the meeting announcement; see IEC collaboration tool <http://collaboration.iec.ch/> and <http://www.ieee802.org/1>

Date: 2019-01-15 — 2019-01-17

Location: Hiroshima, Japan

IEC MT9 Convenor and IEC/IEEE 60802 Joint Project chair: Ludwig Winkel

Daily minutes by: Josef Dorr

Minutes compiled by: Ludwig Winkel and Jessy Rouyer

Published minutes: Collaboration tool <http://collaboration.iec.ch/>, and IEEE 802.1 web site <http://www.ieee802.org/1/files/public/60802>

Ludwig Winkel, IEC MT9 Convenor and IEC/IEEE 60802 Joint Project Chair (60802 Chair), and János Farkas, IEEE 802.1 TSN Task Group Chair (TG Chair), presided. Josef Dorr wrote the minutes.

At the beginning of the meetings on each day:

- The IEEE-SA PatCom Patent Slides for Standards Development Meetings and the IEEE 802 Participation slide were presented (<http://standards.ieee.org/about/sasb/patcom/materials.html>).
- The Call for Potentially Essential Patents was made. There were no responses to the calls prior to the end of the week's session.
- The IEC MT9 Convenor reminded the IEC participants that patent rules similar to those of IEEE-SA apply in IEC, reminded all that patents required for use of the IEC/IEEE 60802 profile must be announced to IEC and IEEE and made available using the IEC licensing form, and reminded that presentations shall not have copyright marks or confidentiality information.
- The agenda and the expected results of the day were reviewed and approved.
- Final agenda: <http://ieee802.org/1/files/public/docs2019/admin-60802-agenda-0119-v07.pdf>

Draft minutes were reviewed at the end of the week's session.

Attendance:

Whole TSN TG: Thu 08:00 - 09:20						
IEC/IEEE 60802 Joint Project: Wed 13:30 - 18:00						
Whole TSN TG: Wed 08:00 - 12:30						
IEC/IEEE 60802 Joint Project: Tue 13:30 - 18:00						
Whole TSN TG: Tue 09:00 - 12:30						
Last name	First name	Affiliation				
ADEMAJ	Astrit	TTTech Computertechnik AG	•	•	•	•
amagai	akihiro	Sanritz Automation	•	•	•	
Andersdotter	Amelia	Article19			•	
Belliardi	Rudy	Schneider Electric; IEC TC 65	•	•	•	•
Bierschenk	Jens	Robert Bosch GmbH	•	•	•	•
Boiger	Christian	b-plus GmbH	•	•	•	•
Canchi	Radhakrishna	Kyocera International Inc.	•	•	•	•
Chang	Xin	Huawei Technologies Co. Ltd	•	•	•	•
Chen	David	Nokia	•		•	
Chen	Feng	Siemens AG	•	•	•	•
Chen	Leo	Kyland Corporation	•	•	•	•
Chen	Lihao	Huawei Technologies Co. Ltd	•	•	•	•
Congdon	Paul	Tallac Networks; Huawei	•		•	•
Dorr	Josef	Siemens AG	•	•	•	•
Elbakoury	Hesham	Huawei Technologies Co. Ltd	•	•	•	•
Ellegaard	Lars	Microchip Technology, Inc.	•		•	•
Farkas	Janos	Ericsson	•		•	•
Finn	Norman	Huawei Technologies Co. Ltd	•		•	•
Fontaine	Mickael	TransPacket	•	•	•	•
Garner	Geoffrey	Huawei Technologies Co. Ltd	•	•	•	•

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Last name	First name	Affiliation			
Gunther	Craig	Craig Gunther Consulting, LLC	•	•	•
Gutierrez	Marina	TTTech Computertechnik AG		•	
Haddock	Stephen	Stephen Haddock Consulting, LLC	•	•	•
Hantel	Mark	Rockwell Automation	•	•	•
Horiata	Kenshi	Panasonic Corporation	•	•	
Hotta	Yoshifumi	Mitsubishi Electric Corporation	•	•	•
Huang	Yi	kyland		•	•
Igarashi	Shunsuke	Mitsubishi Electric Corporation	•	•	•
ishii	yasunori	ADI	•	•	•
Itaya	Satoko	National Institute of Information and Communications Technology (NICT)	•	•	•
Ito	Yoshihiro	Nagoya Institute of Technology	•	•	•
Karl	Michael	Marvell Semiconductor, Inc.	•	•	•
Kawabuchi	Ryohei	Mazda Motor Corporation		•	
Kehrer	Stephan	Hirschmann Automation and Control, Inc.	•	•	•
KONDO	Kenji	Yaskawa Electric Corp	•	•	
Kondo	Yoshihisa	Advanced Telecommunications Research Institute International (ATR)	•	•	
Li	Dong	Shenyang Insititue of Automation, Chinese Academy of Sciences	•	•	•
Liu	Dan	ITEI		•	•
Mangin	Christophe	Mitsubishi Electric Corporation	•	•	•
Maruhashi	Kenichi	NEC Corporation	•	•	•
Messenger	John	ADVA Optical Networking Ltd.	•	•	
Mustala	Tero	Nokia Networks	•	•	
NOMIZU	TAKUMA	Hitachi, Ltd.		•	•
Ohori	Fumiko	National Institute of Information and Communications Technology (NICT)	•		•
Ohsawa	Tomoki	NICT	•	•	•
ohue	hiroshi	panasonic	•	•	•
Osagawa	Daisuke	Mitsubishi Electric Corporation	•	•	•
Osuga	Toru	National Institute of Information and Communications Technology (NICT)	•	•	•
Pannell	Donald	NXP Semiconductors	•	•	•
Parsons	Glenn	Ericsson AB	•		•
Riegel	Maximilian	Nokia Networks		•	
Rouyer	Jessy	Nokia	•	•	•
Sato	Atsushi	Yokogawa Electric Corporation	•	•	•
Sato	Shinichi	FUJITSU	•	•	
Seaman	Michael	Individual		•	

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Last name	First name	Affiliation				
Seewald	Maik	Cisco Systems, Inc.	•		•	•
Soeda	Tatsuo	Yaskawa	•	•	•	•
Specht	Johannes	University of Duisburg-Essen and General Motors Company	•		•	
Stanica	Marius	ABB AB	•	•	•	•
Steindl	Guenter	Siemens AG		•	•	•
Tarui	Isao	Mitsubishi Electric Corporation	•	•	•	•
traore	karim	Microchip/Microsemi Corporation	•		•	
Wakimoto	Yoshinori	MegaChips Corporation			•	•
Wamsser	Reiner	IEC SC65C MT9-Member	•	•	•	•
Wang	Hao	Fujitsu Research & Development Center	•	•		•
Wang	Tongtong	Huawei Technologies Co. Ltd	•		•	•
Wang	Xuehuan	Huawei Technologies Co. Ltd			•	
Weber	Karl	Beckhoff	•	•		•
Winkel	Ludwig	Siemens AG	•	•	•	•
Woods	Jordon	Analog Devices Inc.	•	•	•	•
Yamaura	Takahiro	TOSHIBA Corporation	•	•	•	•
YANG	Yumeng	Huawei Technologies Co., Ltd	•	•		•
Yokoyama	Hitoshi	FUJITSU	•	•		
Yoneda	Mitsuhiro	Omron	•	•	•	•
YU	XIANG	Huawei Technologies Co., Ltd	•			
YU	Yi	Rockwell Automation	•		•	•
Zein	Nader	NEC Europe (NLE)		•		•
Zhang	Jiayi	Huawei Technologies Co. Ltd				•
Zhao	William	Siemens AG	•	•	•	•
Zweck	Harald	Infineon Technologies AG	•		•	

Tuesday 15 January 2019

9:30 AM (call to order by the 60802 Chair and the TG Chair) to 12:30 AM

The TSN Task Group and IEC/IEEE 60802 Joint Project had a joint meeting.

The TG Chair, János Farkas, and the 60802 Chair, Ludwig Winkel:

- Welcomed the participants of the IEC/IEEE 60802 Joint Project, a joint effort of the:
 - IEC 65C/MT9/PT 60802 (TSN) Project Team, led by Ludwig Winkel; and
 - IEEE 802.1 Time-Sensitive Networking Task Group, led by the TG Chair.
- Provided information about internet access, lunch, attendance log to the IEC/IEEE 60802 Joint Project.

The 60802 Chair, repeated his new email address Ludwig.Winkel@online.de and notified of the organizational change in IEC from IEC 65C/MT9/PT 60802 to IEC 65C/PT 60802, i.e. PT 60802 is now in parallel to MT9.

Josef Dorr gave an oral status report on *Use Cases IEC/IEEE 60802*

<http://www.ieee802.org/1/files/public/docs2018/60802-industrial-use-cases-0918-v13.pdf> and *Requirements IEC/IEEE 60802*

<http://www.ieee802.org/1/files/public/docs2018/60802-industrial-requirements-1218-v12.pdf>.

The TG Chair showed the planned next sessions of the IEC/IEEE 60802 Joint Project at <https://1.ieee802.org/tsn/iec-ieee-60802-tsn-profile-for-industrial-automation/>.

Jordon Woods, IEC/IEEE 60802 editor, presented *Editor's Report 60802 Draft 0.5*

<http://www.ieee802.org/1/files/public/docs2019/60802-woods-D05update-0119-v00.pdf>. Drafting for a first Task Group ballot has started. The TG Chair presented

IEC/IEEE cooperation on TSN <http://www.ieee802.org/1/files/public/docs2018/admin-IEC-IEEE-JWG-cooperation-process-0118.pdf>, which also includes a description of

the common balloting process. Jordon Woods, IEC/IEEE 60802 editor, encouraged IEC nominated experts to provide comments using the IEEE commenting process to receive comments as early as possible. The TG Chair showed an example ballot

invitation email <http://www.ieee802.org/1/private/email2/msg27956.html> with information about the IEEE balloting process. Further information can be found in *Introduction to IEEE 802.1 Focus on the Time-Sensitive Networking Task Group* <http://www.ieee802.org/1/files/public/docs2017/tsn-farkas-intro-0517-v01.pdf>.

The TG Chair showed *Major Automation Industry Players join OPC UA including TSN initiative* <https://opcfoundation.org/news/press-releases/major-automation-industry-players-join-opc-ua-including-tsn-initiative/> with the statement “The TSN Profile for Industrial Automation standardized by the IEC/IEEE 60802 committee will be used and all working groups will closely align with this for TSN related specification sections.”

Günter Steindl presented *IEC/IEEE 60802 – TSN-IA Profile Scope and Status*

<http://www.ieee802.org/1/files/public/docs2019/60802-Steindl-ScopeAndStatus-0119-v02.pdf>

Disposition: No further action required.

Post-meeting, the TG Chair pointed out that the “No online participation allowed!” statement of slide 15 is misleading because the TG holds bi-weekly online teleconferences together with IEC 65C/MT9 to progress IEC/IEEE P60802 that anyone is welcome to attend. The TG Chair's interpretation of the intention behind the statement was that there is generally no remote participation to IEEE 802.1 face-to-face meetings (as opposed to some other organizations, e.g., the IETF). The

presentation was updated as <http://www.ieee802.org/1/files/public/docs2019/60802-Steindl-ScopeAndStatus-0119-v03.pdf>.

Ludwig Winkel and Mark Hantel presented *Update on Collaborative Conformance Assessment of IEC/IEEE 60802*

<http://www.ieee802.org/1/files/public/docs2019/60802-Winkel-CAupdate-0119-v01.pdf>.

Disposition: Further discussion needed

The TSN TG and IEC/IEEE 60802 Joint Project met separately after this joint meeting.

1:30 PM to 6:00 PM (call to order by the 60802 Chair)

Jordon Woods, IEC/IEEE 60802 editor, presented

<http://www.ieee802.org/1/files/private/60802-drafts/d0/60802-d0-5.pdf>.

Disposition: Task Group balloting will be started for further drafting of the IEC/IEEE 60802 profile; further discussion needed.

Günter Steindl started to present *An example selection of standards, standard attributes and standard extensions to cover a use cases and requirements selection*

<http://www.ieee802.org/1/files/public/docs2019/60802-Steindl-ExampleSelections-0119-v02.pdf>. The presentation was discussed. The presentation was continued on

Wednesday.

Disposition: Further discussion needed

Wednesday 16 January 2019

8:00 AM (call to order by the 60802 Chair and the TG Chair) to 12:30 AM

The TSN Task Group and IEC/IEEE 60802 Joint Project had a joint meeting.

Astrit Ademaj presented *Traffic Type Characteristics*

<http://www.ieee802.org/1/files/public/docs2019/60802-Ademaj-TrafficTypesCharacteristics-0119-v01.pdf>.

The presentation was discussed.

Disposition: Further discussion needed

Yoshi Hotta presented *Traffic Types & their Mapping to TSN Mechanism*

<http://www.ieee802.org/1/files/public/docs2019/60802-Hotta-Traffic-Types-Mapping-to-TSN-Mechanism-0119-v01.pdf>. The presentation was discussed.

Disposition: Further discussion needed

Mark Hantel presented *Data Sheet Model for TSN*

<http://www.ieee802.org/1/files/public/docs2019/60802-Hantel-Data-Sheet-Model-0119-v00.pdf>. The presentation was discussed.

Disposition: Further discussion needed

Astrit Ademaj presented *Datasheet Parameters*

<http://www.ieee802.org/1/files/public/docs2019/60802-ademaj-DatasheetParameters-0119-v01.pdf>. The presentation was discussed.

Disposition: Further discussion needed

Lihao Chen started to present *TSN Management*

<http://www.ieee802.org/1/files/public/docs2019/60802-chen-TSN-management-0119-v00.pdf>. The presentation was discussed. The presentation was continued in the

afternoon.

Disposition: Further discussion needed

The TSN TG and IEC/IEEE 60802 Joint Project met separately after this joint meeting.

1:30 PM to 3:30 PM (call to order by the 60802 Chair)

Lihao Chen continued to present *TSN Management*
<http://www.ieee802.org/1/files/public/docs2019/60802-chen-TSN-management-0119-v00.pdf>. The presentation was discussed.

Disposition: Further discussion needed

Günter Steindl continued to present *An example selection of standards, standard attributes and standard extensions to cover a use cases and requirements selection*
<http://www.ieee802.org/1/files/public/docs2019/60802-Steindl-ExampleSelections-0119-v02.pdf>. The presentation was discussed.

Disposition: Further discussion needed

Thursday 17 January 2019

8:00 AM (call to order by the 60802 Chair and the TG Chair) to 09:20 AM

The TSN Task Group and IEC/IEEE 60802 Joint Project had a joint meeting.

The TG Chair proposed adding a contribution describing P60802 required LLDP amendments, to the ongoing approach for an IEEE 802.1AB amendment. Three contributions have already been submitted:

- *Evaluating an LLDPv2 proposal against LSVR Topology Discovery Requirements* <http://www.ieee802.org/1/files/public/docs2019/new-congdon-lsvr-disco-requirements-for-LLDPv2-0119-v01.pdf>
- *Consideration of LLDPv2*
<http://www.ieee802.org/1/files/public/docs2019/new-congdon-lldpv2-consideration-0119-v01.pdf>
- *Industrial Considerations for LLDP v2*
<http://www.ieee802.org/1/files/public/docs2019/new-hantel-industrial-LLDP-considerations-0119-v00.pdf>

The 60802 Chair and the TG Chair gave a summary of the last two days.

Ravi Subramaniam presented *IEEE Conformity Assessment Program [ICAP] Introduction for TSN* http://www.ieee802.org/1/files/public/docs2019/60802-Subramaniam-IEEE_ICAP_Overview_TSN-0119.pdf.

The 60802 Chair reminded that there will be a doodle poll about the dates for the IEC/IEEE ad hoc Group preparation meetings.

The WG Chair indicated that IEEE staff has confirmed that IEEE 802.1 may share drafts relevant to P60802 with the following groups: OPC, Ethercat, ODVA, AVNU, IEC TC 57 WG10, IEC SC65C. LNI is still under review.

The 60802 Chair indicated that the OPC Foundation liaison request has been approved by IEC national committees vote.

The IEC/IEEE 60802 Joint Project was adjourned.