

Meeting of the IEC/IEEE 60802 Joint Project 2018-07-11
--

INTERNATIONAL ELECTROTECHNICAL COMMISSION

TC65: Industrial-process measurement, control and automation

SC65C: Industrial communication networks

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: 2018-05-23 — 2018-05-25

Location: Pittsburgh, PA, USA

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

Daily minutes by: Jordon Woods

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/docs2018/>

Ludwig Winkel, IEC MT9 Convenor, and János Farkas, IEEE 802.1 TSN Task Group Chair, presided. Jordon Woods 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. The final agenda: see Annex A.

Draft minutes were reviewed at the end of the meeting.

Attendance:

Last name	First name	Affiliation	Wed 23 TSN + JWG (AM1)	Wed 23 JWG (AM2)	Wed 23 JWG (PM)	Thu 24 JWG (AM)	Thu 24 JWG (PM)	Fri 25 TSN + JWG (AM)	Fri 25 TSN + JWG (PM)
Bechtel	Gordon	Bechtel	•						
Bierschenk	Jens	Robert Bosch GmbH	•			•		•	
Boiger	Christian	b-plus GmbH	•	•				•	•
Bottorff	Paul	Hewlett-Packard Development Company, L.P.			•	•	•		•
Canchi	Radhakrishna	Kyocera International Inc.		•	•	•	•	•	
Chen	Feng	Siemens AG	•					•	•
Congdon	Paul	Tallac Networks; Huawei	•						
Cummings	Rodney	National Instruments Corporation	•			•		•	•
Dorr	Josef	Siemens AG	•	•	•			•	•
Elbakoury	Hesham	Huawei Technologies Co. Ltd	•	•	•	•	•	•	•
Ellegaard	Lars	Microsemi Corporation	•	•	•	•	•	•	
Escudero-Sahuquillo	Jesus	University of Castilla-La Mancha						•	
Farkas	Janos	Ericsson	•					•	•
Finn	Norman	Huawei Technologies Co. Ltd	•					•	•
Fontaine	Mickael	TransPacket	•					•	
Garner	Geoffrey	Huawei Technologies Co. Ltd	•					•	•
Gunther	Craig	HARMAN INTERNATIONAL INDUSTRIES, INCORPORATED	•					•	•
Gutierrez	Marina	TTTech Computertechnik AG	•					•	•
Haddock	Stephen	Stephen Haddock Consulting, LLC	•					•	•
Hantel	Mark	Rockwell Automation		•	•	•	•	•	
Harima	Taro	Mitsubishi Electric Corporation	•	•	•		•	•	•
Hasegawa	Akio	Advanced Telecommunications Research Institute International (ATR)	•	•	•	•		•	
Hemmer	David	International Electrotechnical Commission (IEC)		•	•	•	•	•	
Henry	Jerome	Cisco Systems, Inc.						•	
Holness	Marc	Ciena Corporation	•	•					
Hotta	Yoshifumi	Mitsubishi Electric Corporation	•	•	•	•	•	•	•
Karl	Michael	Marvell Semiconductor, Inc.	•					•	•
Kehrer	Stephan	Hirschmann Automation and Control, Inc.	•	•	•	•	•	•	•
Kondo	Kenji	Yaskawa Electric Corp		•	•	•	•	•	•
Mangin	Christophe	Mitsubishi Electric Corporation	•	•		•		•	•

Mansfield	Scott	Telefon AB LM Ericsson	•					•	•
Messenger	John	ADVA Optical Networking Ltd.	•					•	•
Mustala	Tero	Nokia Networks	•						
Nomizu	Takuma	Hitachi, Ltd.	•		•	•	•	•	
Ohsawa	Tomoki	NICT	•	•	•	•		•	
Ohue	Hiroshi	panasonic	•	•	•	•		•	
Osagawa	Daisuke	Mitsubishi Electric Corporation	•	•		•		•	•
Pannell	Donald	NXP Semiconductors	•						
Potts	Michael	General Motors Company	•		•			•	•
Rouyer	Jessy	Nokia	•					•	
Sato	Atsushi	Yokogawa Electric Corporation	•	•		•	•	•	•
Seewald	Maik	Cisco Systems, Inc.	•	•	•	•	•	•	•
Specht	Johannes	University of Duisburg-Essen and General Motors Company	•					•	
Stanica	Marius-Petru	ABB AB	•	•	•	•	•	•	
Steindl	Guenter	Siemens AG	•	•		•	•	•	•
Sun	Wenhao	Huawei Technologies Co., Ltd	•					•	
Tarui	Isao	Mitsubishi Electric Corporation	•	•	•	•	•	•	•
Unbehagen	Paul	Avaya Inc.		•	•	•		•	
Wamsser	Reiner	IEC SC65C MT9-Member	•	•	•	•		•	
Wang	Hao	Fujitsu Research & Development Center		•		•		•	
Wang	Tongtong	Huawei Technologies Co. Ltd	•					•	•
Winkel	Ludwig	Siemens AG	•	•	•	•		•	•
Wood	Graeme	British Standards Institution (BSI), Rockwell Corp		•	•	•			
Woods	Jordon	Analog Devices Inc.	•	•	•	•	•	•	
Yi	Su	Fujitsu Research & Development Center	•					•	
Yu	Xiang	Huawei Technologies Co., Ltd	•					•	
Zein	Nader	NEC Europe (NLE)	•	•	•	•		•	
Zhou	Richard	Charter Communications				•			
Zuponcic	Steven	Rockwell Automation	•	•	•	•	•	•	

Wednesday 23 May 2018

8:00 AM (call to order by Ludwig Winkel and János Farkas) to 10:00 AM

Ludwig Winkel and János Farkas:

- 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 János Farkas.
- Provided information about emergency exits, internet access, copyrights and IPR, lunch, attendance log to the IEC/IEEE 60802 Joint Project and whole TSN TG sessions.
- Noted that the term Joint Working Group (JWG) for the IEC/IEEE 60802 Joint Project was used at the beginning based on the usage in the IEC/IEEE guideline for the joint effort.
- Noted that the PAR for the 60802 project was approved and that Ludwig Winkel was appointed chair of the IEC/IEEE 60802 Joint Project in charge of developing IEC/IEEE 60802 *Time-Sensitive Networking Profile for Industrial Automation*.

Ludwig Winkel noted that the presented documents are also in the IEC document repository, called Collaboration Tool: see <http://collaboration.iec.ch/>. The IEC dashboard contains official IEC documents circulated to the national committees (NCs): see <http://www.IEC.ch>.

Ludwig Winkel presented *IEC/IEEE cooperation on TSN rev06*
<http://www.ieee802.org/1/files/public/docs2018/admin-IEC-IEEE-JWG-cooperation-process-0118.pdf>

Disposition: No draft document so far, just contributions and liaison documents.

János Farkas discussed the possibility of a joint IEEE-IETF meeting immediately preceding the November IEEE 802 plenary meeting in Bangkok, Thailand.

Disposition: A straw poll covering this subject was planned for Friday.

Norman Finn presented *Joint TSN/IEC/DetNet meeting in Bangkok*
<http://www.ieee802.org/1/files/public/docs2018/admin-joint-tsn-iec-detnet-bangkok-0518-v01.pdf>

Disposition: Further discussions during the topic “next meetings”.

Wednesday 23 May 2018

9:00 AM (call to order by Ludwig Winkel) to 6:00 PM, with a 1-hour lunch break

Josef Dorr presented *Use Cases Status Update 2018-05-14*
<http://www.ieee802.org/1/files/public/docs2018/60802-dorr-use-cases-status-update-0518-v01.pdf>

Disposition: Continued in a later session.

Jordon Woods presented *Accumulated switch latency in industrial applications Call for Interest DRAFT* <http://www.ieee802.org/1/files/public/docs2018/new-woods-nea-accumulated-latency-0518-v01.pdf>

Disposition: Interested parties were invited to participate to the NEA activity.

Günter Steindl presented *Industrial guidelines available at IEEE802.1 private provided by IEC liaison “PROFIBUS & PROFINET International (PI)”*

<http://www.ieee802.org/1/files/public/docs2018/60802-Steindl-Industrial-guidelines-0518-v01.pdf>

Disposition: Group agreed to put listed reference materials to the restricted area; they are available at: <http://www.ieee802.org/1/files/private/liaisons>.

Taro Harima presented *TSN-IA Use Case Proposal Hierarchical Domain based Network* <http://www.ieee802.org/1/files/public/docs2018/60802-harima-industrial-use-case-0518-v04.pdf>

Disposition: Further discussions needed.

Marius Stanica and Josef Dorr presented *Use Cases IEC/IEEE 60802*
<http://www.ieee802.org/1/files/public/docs2018/60802-stanica-enzinger-comments-industrial-use-cases-0518-v01.pdf>

Disposition: Further discussions needed.

Graeme Wood presented *GW v3 comments on TSN 60802 preCD rev6p0*
<http://www.ieee802.org/1/files/public/docs2018/60802-wood-comments-IEC-65c-preCD-rev6p0-0518-v03.pdf>

Disposition: Comments will be considered when an initial IEC/IEEE 60802 draft becomes available.

Thursday 24 May 2018

8:00 AM (call to order by Ludwig Winkel) to 6:00 PM, with a 1-hour lunch break

Mark Hantel and Steve Zuponcic presented *POLICY BASED CONFIGURATION*
<http://www.ieee802.org/1/files/public/docs2018/60802-Hantel-Zuponcic-Policy-Based-Configuration-0518-v01.pdf>

Disposition: Further discussions needed.

Josef Dorr continued discussing *Use Cases Status Update 2018-05-14*
<http://www.ieee802.org/1/files/public/docs2018/60802-dorr-use-cases-status-update-0518-v01.pdf>

Disposition: Josef Dorr will incorporate the feedback received during this meeting and finalize his contribution in two weeks. The use cases in this contribution will be used for development of profile requirements. It was recognized that additional use case contributions may be provided and if accepted, will be the basis for a next edition. After a week review period, the topic will be discussed on the next scheduled teleconference.

Josef Dorr presented *Use cases and Requirements IEC/IEEE 60802*
<http://www.ieee802.org/1/files/public/docs2018/60802-dorr-TSN-IA-requirements-0518-v01.pdf> and led a discussion on improving use case requirements. Participants of the IEC/IEEE 60802 Joint Project were encouraged to give their input for their major market relevance according to clause 2.4.1.1 of the use case document.

Disposition: Josef Dorr will incorporate the feedback received during this meeting and finalize his contribution. Revised document will be available two weeks prior to the July 2018 IEEE 802.1 plenary meeting in San Diego, CA, USA.

Marius Stanica presented *TSN System requirements*
<http://www.ieee802.org/1/files/public/docs2018/60802-stanica-tsn-system-requirements-0518-v02.pdf>.

Disposition: Marius Stanica will work with Josef Dorr to integrate identified additional requirements into an update of the *Use cases and Requirements IEC/IEEE 60802* contribution by two weeks prior to the July 2018 IEEE 802.1 plenary meeting in San Diego, CA, USA. It was also agreed that this contribution will be used to guide the drafting of the profile. The use case and system requirements documents are not intended to be part of the profile.

Friday 25 May 2018

8:00 AM (call to order by Ludwig Winkel and János Farkas) to 12:00 PM

Ludwig Winkel presented *How to write and use standards*
<http://www.ieee802.org/1/files/public/docs2018/60802-Winkel-Principles-of-Standards-0518-v0.pdf>

Disposition: A definition was provided for the compatibility levels. IEC/IEEE 60802 could be implemented in one box or distributed in several boxes and can be combined with implementations of other standards.

Nader Zein presented *Flexible Factory IoT (FFIoT) - Enhancement to 802 technologies*
<http://www.ieee802.org/1/files/public/docs2018/new-FFIoT-Zein-FFIoT-Enhancement-to-802-technologies-0518-v00.pdf>

Disposition: Information provided for a next generation project. More discussions needed.

Günter Steindl presented *Model issues identified during Rosemount / Pittsburgh meetings*
<http://www.ieee802.org/1/files/public/docs2018/60802-Steindl-Observations-0518-v01.pdf>.

Disposition: The discussion focused on laying the ground for an initial IEC/IEEE 60802 draft.

Ludwig Winkel presented *IEC/IEEE 60802 Winkel - Schedule, Milestones – 05.18*
<http://www.ieee802.org/1/files/public/docs2018/60802-winkel-schedule-milestones-0518-v00.pdf>

Disposition: The work flow shows how the IEC/IEEE 60802 Joint Project intends to work. The first draft of the project schedule with milestones was accepted.

János Farkas presented an overview of the ongoing May 2018 meeting (<https://1.ieee802.org/iec-ieee-60802-tsn-profile-for-industrial-automation/>), Ludwig Winkel presented details of the upcoming Frankfurt, July 2018, meeting (<http://www.ieee802.org/1/files/public/docs2018/admin-60802-Winkel-Meeting-Logistics-Frankfurt-0518-v00.pdf>), and they had straw polls.


Disposition: The straw polls had the following results:

- Interested to participate joint TSN/IEC/DetNet: 25
- Have the IEC/IEEE 60802 Joint Project meeting in Bangkok: 22
- Don't have the IEC/IEEE 60802 Joint Project meeting in Bangkok: 0
- Interested to participate joint TSN/IEC/DetNet: 25
 - Who would come if we held a joint TSN/IEC/DetNet on:
 - Friday 9? 10
 - Saturday 10? 15
 - Sunday 11? 29
- IEC/IEEE 60802 Joint Project meeting in Bangkok
 - Who prefers:
 - Starting on Monday (2.5 days: Mon-Wed)? 18
 - Starting on Tuesday (2.25 days)? 11
 - Starting on Wednesday (2 days)? 2
 - From Monday to Thursday? 4
- The decisions will be taken during the next plenary by motions.

Adjournment of the IEC/IEEE 60802 Joint Project meeting: Based on additional time needed in the TSN TG, the common session and the IEC/IEEE 60802 Joint Project were adjourned at 12:00.

Annex A

Agenda of the IEC/IEEE 60802 Joint Project meeting held in Pittsburgh, PA, USA May 23-25, 2018

Rev	rev4	Ludwig Winkel (Convenor IEC SC65C/MT9 and chair of IEC/IEEE 60802 Joint Project); János Farkas (chair of IEEE 802.1 TSN TG)
Key:		means Joint meeting of the IEC/IEEE 60802 Joint Project and the IEEE 802.1 TSN TG

Mi	23.05.2018	[h:min]	[min]	Topics	Responsible
Common session	08:00 - 08:10		10	Welcome and organizational issues: Emergency exits, Internet access, Copyrights and IPR, lunch, etc. to the IEC/IEEE 60802 Joint Project + TSN TG (whole TSN TG)	Ludwig, János
Room	08:10 - 08:20		10	Membership, attendees registration (IEEE imat), roster; administrivia	János, Ludwig
Monongahela 17th Floor	08:20 - 08:25		5	IETF joint meeting in Bangkok	János
	08:25 - 08:45		20	Agenda	Ludwig, János

	08:45 - 08:55	10	Organizational issues (IEC.ch, CollTool: document repository)	Ludwig, János
	08:55 - 09:00	5	Joint WG (JWG) TSN with IEEE 802.1	Ludwig, János
	09:00 - 09:15	15	IEC/IEEE JWG cooperation process	Ludwig
	09:15 - 09:15			
	09:15 - 09:25	10	Status of "use cases"	Josef
	09:25 - 09:30	5	Update on the NEA on accumulated latency	Jordon
	09:30 - 09:40	10	PI Guidelines see http://www.ieee802.org/1/files/private/liaisons	Günter
	09:40 - 09:45	5	IETF joint meeting in Bangkok	Norm
	09:45 - 10:40	55	Continue discussion of Taro's contribution	Taro
	10:40 - 11:10	30	Break	
Trk A: JWG	11:10 - 12:30	80	Comments on uses case document	Marius, Josef
Room	12:30 - 13:50	80	Lunch	
Frick	13:50 - 15:00	70	Comments on uses case document	Marius, Josef
Conference	15:00 - 15:30	30	Break	
Level	15:30 - 17:30	120	Comments on uses case document	Marius, Josef
	17:30 - 18:00	30	Comments on IEC65c-preCD-rev6p0	Greame
	18:00 - 18:00		-	
	18:00 - 18:00			
	18:00 - 18:00	0	Review of minutes of the day	Minute maker
	18:00		Recess of IEC/IEEE 60802 meeting	

Do	24.05.2018		Topics	Responsible
	[h:min]	[min]		
Trk A: JWG	08:00 - 08:10	10	Review Agenda; expected results of the day	Ludwig, János
Room	08:10 - 09:10	60	Policy Based Configuration	Mark
Frick	09:10 - 09:30	20	Finalize use case document Ed1	Josef
Conference	09:30 - 10:30	60	Mapping of the use cases to the existing requirements	Josef
Level	10:30 - 10:30			
	10:30 - 11:00	30	Break	
	11:00 - 11:00		-	
	11:00 - 12:30	90	Improving the requirement list based on use cases	Josef
	12:30 - 14:00	90	Lunch	
	14:00 - 15:05	65	Improving the requirement list based on use cases	Josef
	15:05 - 15:35	30	Break	

15:35 - 15:50	15	Improving the requirement list based on use cases	Josef
15:50 - 17:50	120	Requirements based on other organizations	Marius
17:50 - 17:55	5	Finalize requirement list Ed1	Josef
17:55 - 17:55			
17:55 - 18:10	15	Review of meeting minutes	Minute maker
18:10		Recess of IEC/IEEE 60802 meeting	

Fr	25.05.2018	[h:min]	[min]	Topics	Responsible
Common session Room Monongahela 17th Floor	08:00 - 08:10		10	Review Agenda; expected results of the day	Ludwig, János
	08:10 - 08:20		10	Recap past 2 days	Ludwig, János
	08:20 - 09:20		60	Next meetings	Ludwig, János
	09:20 - 10:00		40	General considerations about standards	Ludwig
	10:00 - 10:40		40	Flexible Factory IoT (FFIoT) approach to TSN	Nader
	10:40 - 11:05		25	Break	
	11:05 - 11:40		35	Technical discussions to prepare the draft	Günter
	11:40 - 11:45		5	Identify and discuss IEEE 802 gaps for TSN-IA profile	Ludwig, János
	11:45 - 11:55		10	Workplan	Ludwig
	11:55 - 12:00		5	Summary of the 3 days	Ludwig, János
	12:00 - 12:00		0	Adjournment of IEC/IEEE 60802 meeting	

