INTERNATIONAL ELECTROTECHNICAL COMMISSION

TC65:   **Industrial-process measurement, control and automation**

SC65C: **Industrial communication networks**

Meeting: 65C/MT9/PT 60802 (TSN) Project Team for: IEC/IEEE 60802 Time-sensitive networking profile for industrial automation and IEEE 802.1 Time-Sensitive Networking (TSN) Task Group
Further called in this document: "**IEC/IEEE JWG TSN** or **JWG TSN**"

Minutes: Meeting based on documents listed in Annex B and the meeting announcement, see IEC collaboration tool
Date: 2018-03-06 — 2018-03-08;

Location: Rosemont (Chicago), IL, USA

Convenor: Ludwig Winkel

Daily Minutes by: Jordon Woods

Compiled Minutes by: Ludwig Winkel and Jessy Rouyer

Published: Collaboration tool http://collaboration.iec.ch/, and IEEE 802.1 web site http://www.ieee802.org/1/files/public/docs2018/

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1   General topics

1.1   Welcomes and organizational issues: Internet access, lunch, etc. to the IEC/IEEE TSN JWG

Call to order: 06 March 2018, 10:30 AM.

János Farkas, IEEE 802.1 TSN Task Group Chair, and Ludwig Winkel, IEC MT9 Convenor, welcomed the IEC/IEEE TSN JWG organized in

- IEC SC65C/MT9/PT60802 (TSN) Project Team led by Ludwig Winkel; and
- IEEE 802.1 TSN TG, led by János Farkas

The IEC MT9 Convenor explained the intended future organization of the TSN JWG. If the IEEE 802 Executive and New Standards Committees approve this project, the Joint Working Group (JWG) will be established. The IEC/IEEE TSN JWG would be organized in IEEE 802 as a project under the IEEE 802.1 TSN Task Group and in IEC SC65C as a project team of IEC 65C/MT9.

The IEC MT9 Convenor also provided information about the attendance log, lunch and general logistics. Lunch is at the responsibility of participants who have to reserve enough time for lunch to be back in time.

Disposition: Administrative

1.2　Review minutes, draft agenda and timetable

The draft agenda was reviewed and accepted with modifications. The TSN JWG reviewed the agenda again at the beginning of each meeting day and agreed with the proposed changes. The minutes were reviewed at the end of the meeting.

The final agenda was agreed and used during the meeting, see Annex C.

The IEC MT9 Convenor asked for comments on the minutes of the January 2018 meeting held in Geneva, Switzerland; these minutes were approved without comment.

Disposition: Administrative.

NOTE: Access to IEC CollTool is restricted to IEC 65C/MT9 members and their Liaison partners. All cited documents in CollTool are in parallel accessible through the IEEE 802.1 docs2018 public file server.

1.3　Membership and attendees; Roster; Administrative

The JWG decided that all participants shall register in the IMAT system. This lowers the handling efforts for the chairs to log the attendance. János Farkas reviewed access to IEEE documents, IMAT, and the TSN TG agenda.

The list below shows the IEC nominated experts and their attendance per day.

NOTE:　NC means: Members nominated by an IEC National Committee (NC).
　　　　JWG means: Affiliation in IMAT if participant registered for JWG.
　　　　TSN means: Affiliation in IMAT if participant registered for TSN.

　　　　Mar 06, 07 and 08 means: Presence in the JWG meeting if a "1" is in this cell. Note that due to an overlap with other IEEE 802.1 TSN TG sessions in IMAT, some IEEE 802.1 TSN TG participants may or may not have attended the JWG meeting.

The list below shows IEEE 802.1 TSN TG participants having logged their attendance to JWG sessions run independently, or with the rest of the IEEE 802.1 TSN TG.

Last name	First Name	Affiliation	Tue 6 TSN + JWG (AM2)	Tue 6 JWG (PM)	Wed 7 TSN + JWG (AM1)	Wed 7 JWG (AM2)	Wed 7 JWG (PM2)	Thu 8 JWG (AM + PM1)	Thu 8 TSN + JWG (PM2)
Adachi	Yoshiaki	Hitachi, Ltd.	1	1	1	1	1	1	1
Bao	Shenghua	HUAWEI			1				1
Bechtel	Gordon	Bechtech	1		1				1
Belliardi	Rudy	Schneider Electric; IEC TC 65	1	1	1	1		1	1
Bierschenk	Jens	Robert Bosch GmbH	1	1	1				1
Boiger	Christian	b-plus GmbH	1	1	1			1	1
Chang	Xin	Huawei Technologies Co. Ltd	1	1			1	1	
Chen	David	Nokia	1		1	1		1	1
Chen	Feng	Siemens AG	1	1	1	1			1
Chen	Leo	Kyland Corporation					1	1	1
Cheng	Weiying	Coriant				1			
Cummings	Rodney	National Instruments Corporation		1	1				1

Last name	First Name	Affiliation	Tue 6 TSN + JWG (AM2)	Tue 6 JWG (PM)	Wed 7 TSN + JWG (AM1)	Wed 7 JWG (AM2)	Wed 7 JWG (PM2)	Thu 8 JWG (AM + PM1)	Thu 8 TSN + JWG (PM2)
Dorr	Josef	Siemens AG	1	1	1	1		1	
Elbakoury	Hesham	Huawei Technologies Co. Ltd	1	1	1	1		1	
Ellegaard	Lars	Microsemi Corporation	1	1	1	1	1	1	1
Enzinger	Thomas	B&R Industrial Automation	1	1	1	1		1	1
Fan	Xiaojing	Fujitsu Research & Development Center	1	1	1				
Fang	Yonggang	ZTE TX Inc			1	1	1		
Farkas	Janos	Ericsson	1		1				1
Finn	Norman	Huawei Technologies Co. Ltd	1		1				1
Fontaine	Mickael	TransPacket	1		1				
Garner	Geoffrey	Huawei Technologies Co. Ltd	1		1	1	1	1	1
Gravel	Mark	Hewlett Packard Enterprise	1	1	1				1
Gunther	Craig	HARMAN INTERNATIONAL INDUSTRIES, INCORPORATED	1		1				1
Gutierrez	Marina	TTTech Computertechnik AG	1		1				1
Haddock	Stephen	Stephen Haddock Consulting, LLC			1				1
Hantel	Mark	Rockwell Automation	1	1	1	1		1	1
Harima	Taro	Mitsubishi Electric Corporation	1		1	1	1	1	1
Hasegawa	Akio	Advanced Telecommunications Research Institute International (ATR)	1		1	1	1	1	
Holness	Marc	Ciena Corporation	1		1				
Hotta	Yoshifumi	Mitsubishi Electric Corporation	1	1	1	1		1	1
Hung	Soar	Realtek Semiconductor Corp.	1	1	1				1
Kabra	Lokesh	Synopsys, Inc.			1	1	1	1	
Karl	Michael	Marvell Semiconductor, Inc.	1	1	1	1	1	1	1
Kehrer	Stephan	Hirschmann Automation and Control, Inc.	1	1	1		1	1	1
KONDO	Kenji	Yaskawa Electric Corp			1	1	1	1	1
KOTO	Hajime	National Institute of Information and Communications Technology (NICT)	1	1	1	1		1	1
Lawlis	James	Ford Motor Company	1		1	1	1	1	1
Li	Dong	Shenyang Insititue of Automation, Chinese Academy of Sciences	1	1	1	1	1	1	
Lutz	Peter	Sercos International	1	1	1	1	1	1	1
Mangin	Christophe	Mitsubishi Electric Corporation	1	1	1	1		1	1
Mansfield	Scott	Telefon AB LM Ericsson	1		1				
Messenger	John	ADVA Optical Networking Ltd.			1		1		1
Mustala	Tero	Nokia Networks	1		1		1		1

Last name	First Name	Affiliation	Tue 6 TSN + JWG (AM2)	Tue 6 JWG (PM)	Wed 7 TSN + JWG (AM1)	Wed 7 JWG (AM2)	Wed 7 JWG (PM2)	Thu 8 JWG (AM + PM1)	Thu 8 TSN + JWG (PM2)
Nomizu	Takuma	Hitachi, Ltd.	1	1	1	1	1	1	1
Ohori	Fumiko	National Institute of Information and Communications Technology (NICT)	1	1	1	1	1	1	1
Ohsawa	Tomoki	NICT	1			1	1	1	1
Osagawa	Daisuke	Mitsubishi Electric Corporation	1	1	1	1	1	1	1
Pannell	Donald	NXP Semiconductors	1	1	1	1	1		1
Parsons	Glenn	Ericsson AB		1	1				
Potts	Michael	General Motors Company	1	1	1		1	1	1
QIU	WEI	Huawei Technologies Co., Ltd	1	1	1			1	
Rouyer	Jessy	Nokia	1		1				1
Sato	Atsushi	Yokogawa Electric Corporation	1	1	1	1	1	1	1
Seewald	Maik	Cisco Systems, Inc.	1	1	1	1		1	1
Shen	Li	Huawei Technologies Co., Ltd						1	
Specht	Johannes	University of Duisburg-Essen and General Motors Company			1				1
Steindl	Guenter	Siemens AG	1	1	1	1	1	1	1
Sun	Liyang	HUAWEI	1						
Sun	Wenhao	Huawei Technologies Co., Ltd		1				1	
Tarui	Isao	Mitsubishi Electric Corporation	1	1	1		1	1	1
Wamsser	Reiner	IEC SC65C MT9-Member	1	1	1	1	1	1	
wang	haifei	Huawei Technologies Co. Ltd						1	1
Wang	Hao	Fujitsu Research & Development Center				1			1
Wang	Xinyuan	Huawei Technologies Co. Ltd	1	1					
Winkel	Ludwig	Siemens AG	1	1	1	1	1	1	1
Wood	Graeme	British Standards Institution (BSi), Rockwell Corp	1	1	1	1	1	1	
Woods	Jordon	Analog Devices, Inc.	1	1	1	1	1	1	1
Yamaura	Takahiro	Toshiba	1	1	1	1	1	1	1
Yin	Yue	Huawei Technologies Co., Ltd		1					
YU	XIANG	Huawei Technologies Co., Ltd		1				1	
Zein	Nader	NEC Corporation	1		1	1			1
Zhang	Jianfeng	kyland	1		1	1	1	1	1
ZHANG	YUN	Huawei Technologies Co. Ltd						1	

Disposition: Administrative.

1.4 Copyrights and IPR

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) and 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 IEC participants that similar rules apply in IEC. Specifically, the IEC MT9 Convenor reminded all MT9.PT experts that patents required for use of the TSN-IA profile must be announced to IEC and made available using the IEC licensing form. Presentations shall not have copyright marks or confidentiality information.

Disposition: Administrative.

1.5   Abbreviated terms and acronyms

AVNU	Consortium to establish and certify the interoperability of open Audio Video Bridging (AVB)[1] and Time-Sensitive Networking (TSN) standards.
CD	Committee Draft
CDV	Committee Draft for Vote
CollTool	IEC Collaboration Tool, see <http://collaboration.iec.ch>
CP	Communication Profile according to IEC 61784-1 and IEC 61784-2
FDIS	Final draft International Standard
IA	Industrial automation
IEC	International electrotechnical commission
IEC-CO	Central office of International Electrotechnical Committee
IEEE	Institute of Electrical and Electronics Engineers
IEV	International electrotechnical vocabulary
IO	Input output
IPR	Intellectual Property Rights
ISO	International Organization for Standardization
ITU	International Telegraph Union
JTC1	Joint Technical Committee 1 of ISO and IEC
JWG	Joint WG
MAC	Medium access Control
MAU	Medium access unit
MM	Meeting minutes
MT	Maintenance Team
MT9	Maintenance Team 9 of IEC SC65C
NC	National Committee
NP	New work item proposal
OPC	Open platform communications
OPC UA	Open platform communications unified architecture
PAR	Project authorization request
Phy	Physical Layer
PLC	Programmable logic controller
PoE	Power over Ethernet
preCDV	Draft CDV
preFDIS	Final Draft International Standard in preparation; "approved for Committee Draft with Vote"-status plus changes according to RVC and MT9 decision
PT	Project team
Q	Questionnaire
Rev	Revision
RQ	Report on questionnaire
RR	Review report
RVN	Report on voting of an NP

SC	Sub-Committee of a TC
SR	Stream Reservation
TC	Technical Committee
TIA	Telecommunications industry association
TSN-IA	Time sensitive networking – industrial automation
TSN	Time sensitive networking
UNI	User Network Interface
WG	Working Group

1.6   Organizational issues (IEC.ch, CollTool; IEEE IMAT, document repository)

When the JWG between IEC and IEEE is established, all documents will be copied to the IEEE server as well as to the IEC server (CollTool). Until then, the IEEE 802 Chair, IEEE 802.1 TSN TG Chair and the IEC MT9 Convenor will try to make available all shown documents on both servers. For example, the IEC SC65C secretary sends the IEC/IEEE 60802 draft to the IEEE 802.1 Chair as a Liaison document for review.

Disposition: Administrative.

2   Technical issues

2.1   Industrial Use Cases

6 March 2018 AM2 session.

Jordon Woods gave a verbal summary of *Industrial Networking Requirements* http://www.ieee802.org/3/ad_hoc/ngrates/public/18_03/woods_nea_01_0318.pdf as presented to the IEEE 802 New Ethernet Applications Ad Hoc committee on 5 March 2018.

Guenter Steindl presented *Use Cases IEC/IEEE 60802 V0.4*: http://ieee802.org/1/files/public/docs2018/new-industrial-use-cases-0318-v04.pdf.

Disposition: Discussion continued in afternoon sessions. It was agreed to copy these uses cases with the modifications done during the meeting in the draft IEC/IEEE 60802 for further review and considerations.

2.2   Industrial Use Cases

6 March 2018 PM1 and PM2 sessions.

Guenter Steindl continued his 6 March 2018 AM2 presentation of use cases.

Josef Dorr agreed to provide a note to consider adding QoS considerations to 2.2 "Minimum Required Quantities".

Thomas Enzinger agreed to provide additional use cases for cycle times, which do not share a common multiple, on the same network. Thomas Enzinger presented on this on 8 March 2018 (see below).

Josef Dorr agreed to work with the contributors on the use case document to add network diagnostics and security use cases to the document. These additional use cases will be presented as a contribution at a future JWG meeting.

Maik Seewald provided a verbal overview of Working Group 10 in IEC TC57:
- Working Group 10 in TC57 IEC 61850 works on a Technical Report: IEC 61850-90-13 "Deterministic Networking".
- The scope is on electrical substations and WAN communication.
- The WG is in an early phase; requirements and use cases are in preparation.
- The objective is to present status (especially use cases) to find out about synergies/matching use cases in the next meeting.

Disposition: Related to new project; more discussion needed.

2.3   Review of the minutes of the day

6 March 2018 PM2 session.

Jordon Woods reviewed the minutes of the day.

Disposition: Administrative.

2.4   P60802 PAR & CSD

7 March 2018 AM1 session.

Ludwig Winkel and János Farkas used *P60802 Time-Sensitive Networking Profile for Industrial Automation Resolution of Comments on Project Authorization Request (PAR) and Criteria for Standards. Development (CSD)* http://www.ieee802.org/1/files/public/docs2018/60802-PAR-CSD-comments-0318-v01.pdf to support the resolution of comments received on the draft PAR and CSD for proposed P60802 *Time-Sensitive Networking Profile for Industrial Automation*.
Disposition: The JWG agreed on the following updated PAR/CSD and asked Glenn Parsons to bring these to the attention of the IEEE 802.1 Working Group for approval during its midweek plenary on Wednesday 07 March 2018.

- Updated PAR: http://ieee802.org/1/files/public/docs2018/60802-draft-PAR-0318-v01.pdf
- Updated CSD: http://ieee802.org/1/files/public/docs2018/P60802-draft-CSD-0118-v01.pdf

The IEEE 802.1 WG voted during its midweek plenary on Wednesday 07 March 2018 on a first motion to forward the updated PAR and CSD to NesCom for approval; however, comments were subsequently received that were reviewed by the JWG (see below) with the intent to vote upon the updated PAR/CSD during the IEEE 802.1 closing plenary.

János Farkas reviewed a second motion for holding bi-weekly teleconferences Mondays from 6:00 AM (US-Pacific) to 8:00AM (US-Pacific).

Both the first and second motions can be found in the IEEE 802.1 midweek plenary slide deck: http://www.ieee802.org/1/files/public/minutes/2018-03-midweek-plenary-slides.pdf

Disposition: The JWG agreed to the second motion and asked Glenn Parsons to bring this to the attention of the IEEE 802.1 Working Group for approval during its midweek plenary on Wednesday 07 March 2018.

The IEEE 802.1 WG approved the second motion during its midweek plenary on Wednesday 07 March 2018.

2.5   TSN-IA Network Model and IEC/IEEE preCD 60802 Profile draft

7 March 2018 AM1 session.

Taro Harima led a discussion on *TSN-IA Network Model:* http://ieee802.org/1/files/public/docs2018/new-harima-TSN-IA-network-model-0318-v02.pdf

Straw Poll: Would you favour splitting the 60802 work into two projects, the first covering only bridge requirements and the second covering additional scope such as end stations?

A clear majority did not favour this proposal.

Straw Poll: Would you favour splitting the 60802 work into separate drafts, the first covering only bridge requirements and the second covering additional scope such as end stations?

A clear majority did not favour this proposal.

Disposition: Disposition: No further action required.

The JWG agreed that uses cases (both those presented during the 6 March 2018 JWG meeting and future use cases agreed upon by the JWG) be included in the profile as

informative text during the drafting process. There was general agreement on this proposal. It will be decided later whether to keep this in the publication, publish it separately or delete the material.

Josef Dorr led a discussion on the current IEC/IEEE preCD 60802 Profile draft *TIME-SENSITIVE NETWORKING PROFILE FOR INDUSTRIAL AUTOMATION*:

http://www.ieee802.org/1/files/private/liaisons/liaison-65c-60802-Ed1-IS-preCD-OE_20180201_rev5p0_Clean.pdf

Comments were received and noted in the document.

The IEC MT9 Convenor stated that the JWG Profile will follow the IEC template and style guide. Ludwig Winkel agreed to provide a link to the IEC style guide and other IEC information on how to draft an IEC International Standard.

IEC organization:
http://www.iec.ch/

Home of the IEC organization of JWG TSN: IEC 65C/MT9:
http://www.iec.ch/dyn/www/f?p=103:7:0::::FSP_ORG_ID,FSP_LANG_ID:1376,25

Assistance to experts drafting IEC documents:
http://www.iec.ch/standardsdev/resources/draftingpublications/

Reference material:
http://www.iec.ch/members_experts/refdocs/

There was a discussion regarding the use of the terms "end station" and "bridged end station". The group agreed that the IEEE 802.1 terminology of "end station" and "bridge" is adequate to describe use case requirements. It was further agreed that use cases in which an end station or bridge are resource-constrained should be considered.

Disposition: Related to new project; more discussion needed.

2.6   IEC/IEEE preCD 60802 Profile draft

7 March 2018 PM2 session.

Josef Dorr continued to lead the discussion on the current IEC/IEEE preCD 60802 Profile draft. Comments were received and noted in the document.

Disposition: Related to new project; more discussion needed.

2.7   IEC/IEEE preCD 60802 Profile draft

8 March 2018 AM1 session.

Josef Dorr continued to lead the discussion on the current IEC/IEEE preCD 60802 Profile draft. Comments were received and noted in the document.

The JWG expressed a desire for contributions on the subject of configuration approaches.

Disposition: Related to new project; more discussion needed.

2.8   Use Case for IEC/IEEE 60802 Multivendor Motion Control

8 March 2018 AM2 session.

Thomas Enzinger presented *Use Case for IEC/IEEE 60802 Multivendor Motion Control*:
http://www.ieee802.org/1/files/public/docs2018/new-industrial-enzinger-multivendor-motion-control-0318-v01.pdf

Disposition: Related to new project; more discussion needed.

2.9 Additional Use Case discussions

8 March 2018 PM1 session.

Guenter Steindl presented *Use Cases IEC/IEEE 60802 V0.5*:
http://ieee802.org/1/files/public/docs2018/new-industrial-use-cases-0318-v04.pdf.

Disposition: The presented document was updated based on comments received during discussion: http://ieee802.org/1/files/public/docs2018/new-industrial-use-cases-0318-v05.pdf. Related to new project; more discussion needed. The next version of the *IEC/IEEE preCD 60802 V0.5 will be uploaded according to the workplan, see Clause 4.*

3 PAR Review, gaps for TSN-IA profile, summary of the 3 days, work plan, next meetings

3.1 PAR Review

8 March 2018 PM1 session.

János Farkas used *P60802 Time-Sensitive Networking Profile for Industrial Automation Resolution of Comments on Project Authorization Request (PAR) and Criteria for Standards. Development (CSD)* http://www.ieee802.org/1/files/public/docs2018/60802-PAR-CSD-comments-0318-v01.pdf to support the resolution of further comments received on the draft PAR and CSD for proposed P60802 *Time-Sensitive Networking Profile for Industrial Automation*.

Disposition: The group agreed to the PAR changes made during resolution and asked Glenn Parsons to bring this and the unchanged CSD to the attention of the IEEE 802.1 Working Group for approval during its closing plenary on Friday 09 March 2018.

- Updated PAR: http://www.ieee802.org/1/files/public/docs2018/60802-PAR-0318-v02.pdf
- CSD: http://www.ieee802.org/1/files/public/docs2018/60802-CSD-0318-v01.pdf

The IEEE 802.1 WG approved the corresponding motion during its closing Plenary on Friday 09, March 2018.

3.2 Next meetings

3.2.1 Straw polls

Ludwig Winkel led a discussion on next meetings. The next JWG meeting will be held in Pittsburgh, PA, USA, 23-25 May 2018.

There was a straw poll for the following options:

- June 25-29 – Frankfurt: y: 10
- July 9-13 – San Diego (IEEE 802 Plenary): y: 24
- July 23-27 – Frankfurt: y: 9

Second straw poll:

If San Diego, ending Friday:

- 2 Days – y: 0
- 3 Days – y: 29
- 4 Days – y: 0
- 5 Days – y: 0

Third Straw Poll:

Who could not attend the IEEE 802 Plenary in San Diego?

- Could not attend: 4

Fourth Straw Poll – Support of 2 meetings:

- July 11-13 – San Diego?
  - Y: 30
  - Cannot come: 5
- July 24-26 – Europe, e.g., Frankfurt/London (3-day)
  - Y: 14
  - Cannot come: 21

It was suggested that the fall 2018 meeting be held during the IEEE 802.1 interim meeting in Oslo, Norway, September 11-13, 2018. There were no objections.

3.2.2   Next dates and locations of the IEC/IEEE JWG TSN meetings

Pittsburgh, PA, 23-25 May 2018; meeting hours 8:00 AM to 6:00 PM.

San Diego, CA, 11-13 July 2018; meeting hours 8:00 AM to 6:00 PM.

Frankfurt, Germany, 24-26 July 2018; meeting hours 8:00 AM to 6:00 PM.

Oslo, Norway, 11-13 September 2018; meeting hours 8:00 AM to 6:00 PM .

NOTE   The meetings in Pittsburgh, San Diego and Oslo need a registration through the IEEE 802.1 web site and require meeting fees. The meeting in Frankfurt does not require a meeting fee.

3.2.3   Remote meetings

Bi-weekly teleconferences Mondays from 6:00 AM (US-Pacific) to 8:00 AM (US-Pacific) starting 19 March 2018.

3.3   Gaps for TSN-IA profile

Ludwig Winkel asked the JWG to identify any gaps in the TSN-IA profile. There were no responses.

4   Workplan

Ludwig Winkel led a discussion on workflow and agreed to provide a tracked copy, with visible comments, and a clean, dated copy of the preCD 60802 Profile draft and the use case document on the IEEE server as well to the IEC server (CollTool). A copy of the minutes will also be provided.

The target date for the next preCD 60802 Profile draft incorporating the use cases is 30 April 2018.

Disposition: Administrative.

5   Review of the meeting minutes

8 March 2018 PM2 session.

Jordon Woods reviewed the draft meeting minutes for the full three-day session.

Disposition: Administrative. Ludwig Winkel and Jessy Rouyer will compile the final meeting minutes and upload them to the IEC and IEEE file servers.

6   Adjournment

The TSN JWG adjourned at 6:00 PM.

Annex A

SC65C/MT9.PT schedule

The updated work plan is in Table A.1.

Table A.1 – Work plan for TSN-IA profile document

Calender	Date	End	Actions TSN-IA profile IEEE 802.1
Dec-16			
Jan-17			
Feb-17			
Mar-17			
Apr-17			
May-17			
Jun-17			
Jul-17			Asking for a JWG TSN-IA profile
Aug-17			
Sep-17			
Oct-17			
Nov-17	09.11.2017		Drafting PAR
Dec-17			
Jan-18			
Jan-18		26.01.2018	PAR & CSD
Feb-18			
Mar-18		09.03.2018	
Apr-18			
May-18			
May-18	23.5.18	25.5.18	Pittsburgh
May-18			
Jun-18			
Jul-18	09.07.2018	13.07.2018	Meeting San Diego
Jul-18	24.07.18	26.07.18	Meeting Frankfurt
Aug-18			
Sep-18	10.09.2018	14.09.2018	Meeting Oslo
Oct-18			
Nov-18	12.11.2018	16.11.2018	Meeting Bangkok, JWG
Dec-18			
Jan-19			

　　　　　　　　　Ludwig.Winkel@Siemens.com

Annex B

IEC SC65C/MT9.PT documents

The following IEC SC65C MT9.PT documents are downloadable from the IEC server www.iec.ch and reflect the basis and results of MT9.PT (Membership required).

65C/875/NP   Industrial communication networks – Profiles – Part 6: Time sensitive networking profile for industrial use based on IEEE 802.1 and IEEE 802.3

65C/896/RVN   Result of voting on 65C/875/NP - PNW 65C-875: Industrial communication networks – Profiles – Part 6: Time sensitive networking profile for industrial use based on IEEE 802.1 and IEEE 802.3

65C/910/Q   QUESTION about conversion of the approved IEC 61784-6 project (Industrial communication networks – Profiles – Part 6: Time sensitive networking profile for industrial use based on IEEE 802.1 and IEEE 802.3) into a joint development project with IEEE 802.1

65C/917/RQ   Results of Questionnaire 65C/910/Q: Conversion of the approved IEC 61784-6 project (Industrial communication networks – Profiles – Part 6: Time sensitive networking profile for industrial use based on IEEE 802.1 and IEEE 802.3) into a joint development project with IEEE 802.1

01.02.2018   IEC CO changed the project number to IEC/IEEE 60802 substituting IEC 61784-6.

IEEE PAR/CSD P60802 positive voted at:

         IEEE 802.1:   09.March2018

         IEEE 802EC: 10.March2018

Annex C

Final Agenda at the end of the meeting

Green marked areas were joint sessions of IEEE 802.1 TG TSN and the **IEC SC65C MT9/**IEC/IEEE 60802 JWG TSN. The non-green marked areas were **IEC SC65C MT9/**IEC/IEEE 60802 JWG TSN sessions with overlap of other IEEE 802.1 TG TSN sessions.

Meeting Agenda of IEC SC65C MT9/IEEE802.1 TSN = IEC/IEEE 6802 held in Rosemont IL (Chicago) at 2018-03-06 … -08

Ludwig Winkel (Convenor 65C.MT9 JWG TSN = IEC/IEEE 60802 TSN); János Farkas (TG chair of IEEE 802.1 TSN)

Rev	V0.4			
Tuesday	**06.03.2018** [h:min]	[min]	**Topics**	
	10:30 - 10:45	15	Welcome and organizational issues: Emergency exits, Internet access, lunch, etc. to the IEC - IEEE 802 JWG -- TSN TG joint session (whole TSN TG)	Ludwig, János
	10:45 - 11:05	20	Agenda	Ludwig, János
	11:05 - 11:15	10	Membership and attendees; Roster; Administrivia, membership	Ludwig, János, All
	11:15 - 11:20	5	Copyrights and IPR	Ludwig, János
	11:20 - 11:30	10	Organizational issues (IEC.ch, CollTool; IEEE imat, document repository)	Ludwig, János
	11:30 - 11:40	10	Status of Liaison and Joint WG with IEEE 802	Ludwig, János
	11:40 - 11:40	0		
	11:40 - 12:30	50	Result of IEC 65C/MT9/ahG "use cases"	Marius, Günter, or others
	12:30 - 13:30	60	Lunch break + IEEE Editor's meeting	
	13:30 - 13:30			
	13:30 - 15:30	120	Discuss the Draft CD use cases	Josef
	15:30 - 15:30			
	15:30 - 16:00	30	Break	
	16:00 - 17:50	110	Discuss the Draft CD use cases	Josef
	17:50 - 17:50			

		[h:min]	[min]		
	17:50	- 17:50			
	17:50	- 17:50			
	17:50	- 17:50			
	17:50	- 18:00	10	Review of minutes of the day	Minute maker
	18:00			Recess of JWG TSN meeting	

We	07.03.2018	[h:min]	[min]	**Topics**	
	08:00	- 08:55	55	DCB TG PAR	
	08:55	- 09:00	5	Review Agenda; expected results of the day	Ludwig, János
	09:00	- 09:45	45	P60802 PAR & CSD; Planning GoTo meetings	Ludwig, János
	09:45	- 10:15	30	Technical discussion; TSN-IA_netowork_model	Taro
	10:15	- 10:45	30	Break	
	10:45	- 11:30	45	Technical discussion; TSN-IA_netowork_model	Taro
	11:30	- 12:30	60	Technical discussion; drafting IEC 60802	Josef
	12:30	- 13:30	60	Lunch	
	13:30	- 15:30	120	IEEE 802.1 Midweek plenary	Glenn Parsons
	15:30	- 16:00	30	Break	
	16:00	- 17:40	100	Technical discussion; drafting IEC 60802	Josef
	17:40	- 18:00	20	Review of meeting minutes	Minute maker
	18:00	- 18:00		Recess of JWG TSN	
	18:00	- 18:00			
	18:00	- 18:30	30	Break	
	18:30	- 21:30	180	Social event	
	21:30				

Th	08.03.2018 [h:min]	[min]	**Topics**	
	08:00 - 08:05	5	Review Agenda; Patent etc.	Ludwig
	08:05 - 09:55	110	Technical discussion; drafting IEC 60802	Josef
	09:55 - 09:55			
	09:55 - 09:55			
	09:55 - 10:35	40	Break	
	10:35 - 11:50	75	Use case contribution	Thomas Enzinger
	11:50 - 13:30	100	Lunch	
	13:30 - 15:00	90	Preparing Use case contributions	Günter etc.
	15:00 - 15:00			
	15:00 - 15:30	30	Break	
	15:30 - 15:40	10	PAR comment resolution	Ludwig, János
	15:40 - 17:00	80	Next meetings	Ludwig, János
	17:00 - 17:05	5	Identify and discuss IEEE 802 gaps for TSN-IA profile	Ludwig, János
	17:05 - 17:35	30	Workplan	Ludwig
	17:35 - 17:40	5	Summary of the 3 days	Ludwig, János
	17:40 - 18:00	20	Review of meeting minutes	Minute maker
	18:00		Adjournment of JWG TSN meeting	