PSCC Subcommittee Meeting Minutes

Designation: P0	Name: PROTOCOLS AND COMMUNICATION ARCHITECTURE SUBCOMMITTEE			
Meeting Location: Nashville, TN – In-person and virtual	Meeting Time: 1:15 pm CDT	Meeting Date: 2022/09/14	Minutes Revised: 2022/10/07	Minutes Approved: 2023/01/11
Presiding Officer(s): Benton Vandiver - Chair; Tom Dahlin - Vice Chair		Recorded by: Tom Dahlin		Draft Number: 1.1

Attendance:

Name	Affiliation	Phone (P) / Web (W) / Local (L)	M/CM/G
Anthony Johnson	SCE	L	M
Benton Vandiver – Chair	Hitachi Energy	L	M
Brittany Chapman	CAI Engineering	W	M
Chris Huntley	SEL	W	M
Craig Palmer	PowerComm Solutions	L	M
Craig Preuss	Black & Veatch	L	M
Dave McGuire	Hubbell-RFL	W	M
Didier Giarratano	Schneider Electric	W	M
Ed Cenzon	SEL	W	M
Eric Thibodeau	Hydro Quebec	L	M
Eric Udren	Quanta Technology	L	M
Eugenio Carvalheira	Omicron	L	M
Galina Antonova	Hitachi Energy	W	M
James Formea	EATON	L	M
Jim Michaelis	Commonwealth Associates inc	L	M
Jay Anderson	SEL	L	M
Ken Fodero	SEL	W	M
Marc Benou	Iniven	L	M
Mike Dood	SEL	W	M
Nathan Wallace	Cybrical	W	M
Nicholas Kraemer	NuGrid Power	W	M
Ron Farquharson	Mount Victoria Consulting Ltd	W	M
Ryan Newell	TRC	W	M
Scott Mix	PNNL	L	M
Shane Haveron	Ametek	W	M
TW Cease	Consultant	L	M
Tom Dahlin – Vice Chair	SEL	L	M
Vasudev Gharpure	Quanta Technology	W	M
Yi Hu	Quanta Technology	L	M
Aditya Ashok	PNNL	L	G
Alexander Machado	SCE	L	G
Byungtae Jang	KEPCO	W	G
Deryk Yuill	iS5 Communications	W	G
Farzael Khalilpour	SCE	L	G
Gayle Helms	SEL	W	G
Jason Lombardo	S&C Electric	W	G
Jason Reed	Phoenix Contact	W	G
Jay Herman	EPRI	W	G
Jeff Pack	Power Engineers	L	G
Justin Turner	GE	L	G
Priyanka Nadkar	SEL	W	G

Ratan Das	Ica Power	W	G
Theo Laughner	Liferate Analytics	L	G
Thomas Rudolph	Schneider Electric	W	G
Yuchen Lu	EPRI	W	G
M:Member CM: Corresponding Member			

Item no.	Notes	Action by
CALL TO ORDER		BV
INTRODUCTIONS AND QUORUM	Member roll call taken. A quorum was met. There were 29 of 40 members present.	BV
AGENDA APPROVAL	The motion was passed. Motion: Eric Thibodeau; Second: Eric Udren Approved -Yes (29).	BV
APPROVAL OF PREVIOUS MINUTES	The motion was passed. Motion: Marc Benou; Second: Tony Johnson Approved -Yes (29).	BV
CHAIR'S REMARKS	**Announcements** RevCom submission by 09/14/2022 NesCom submission by 09/14/2022 If you need a PAR extension, please git it in/approved RevCom meeting by 09/19/2022 NesCom meeting by 09/19/2022 Policy changes now require Officer training and Behavior slides covered at each WG meeting **Membership:** Welcome: Jim Michaelis accepted an invite to the P0 SC as a new member. WG minutes, PLEASE, get them in to Tom within 1 week after your meeting. If not, we cannot complete our SC report to the MC.	BV
REPORTS	Please include what you need for the next meeting (room size, sessions) and revision of the document (draft #); Requirements for Next Session (RNS).	

Item no.	Notes	Action by

P1WG	Standard Profile for Use of IEEE 1588 Precision Time Protocol in Power System Applications. Amendment 1: Adding a TLV to indicate the latest IERS-specified UTC Leap Second Event
	
	Presentation of responses to Subgroup's Poll (emailed out after the last meeting) for the following 3 questions:
	1) Question 1: Preference on clock compliance to C37.238a
	    a. Mandatory (either A or D): 6/9
	    b. Optional or with optional ability to disable: 3/9
	2) Question 2: Leap Event Validity bound (combining results where multiple acceptable answers were given, i.e., x or y). During the meeting one vote was changed since the voter said they had made a typo.
	For the Question 2, with no clear majority choice the subgroup said they would review the reasons and decide how to handle this; though currently informative, the subgroup suggested that having a normative requirement could be useful.
	3) Question 3: preference for decrementing leapEventValidity daily
	    a. A – 7 (Always (set to maximum when receiving the latest IERS Bulletin-C))
	    b. B – 0 (Only when disconnected from primary time reference)
	    c. C – 1 (Implementation specific)
	    d. C or A - 1
	For the Question 1, a discussion ensued about whether making the TLV mandatory for this Amendment would constrain future editions of the C37.238 standard to make the TLV mandatory in the base 238 standard. This was disputed by members and guests, the consensus being that present work may inform future revisions to a standard, but it does not constrain them; if there is interest in maintaining the contents of an amendment it would likely remain and be added to the base standard, but future WGs would be free to decide to drop it.
	
	RNS: 20 people, 1 session, HDMI projector, WiFi, teleconferencing
	Conflicts: P12, P14, H41 and H49
		Chris Huntley

P2WG	Electric Power Systems Communications – Distributed Network Protocol (DNP3) Chair: Ron Farquharson P2 is focused on 1815 (DNP3) – and collaborating with the DNP Technical Committee to develop the next release of 1815. The last release was 1815-2012. Met in a double session. • PAR extension has been approved to Dec. 31, 2025 • Great progress with the work of updating the 1815 standard involving years of work by the DNP-UG Tech Committee. Some sections are being completely re-written - especially Clause 7 (Cyber Security) and Clause 13 (Networking). • Discussion on the use of the term "Master". WG P2 is seeking input from P0. P0 to take to PSCC main committee. • Presentations by Ronald Landheer-Cieslak, CSTF Chair (Quebec City)- Overview of the IEEE 1815 (DNP and IEC) security work. • Presentation by Andrew West, Vice-Chair of the WG and Chair of the Tech Committee (TC) and the Test Procedure Committee (TPC) (Brisbane) RNS: 20 people, 2 session, HDMI projector, WiFi, teleconferencing	Ron Farquharson

P3SG	Exchanging Information Between Networks Implementing IEC 61850 and IEEE Std. 1815.1 (DNP3) Chair: Ron Farquharson DID NOT MEET. P2WG took up this time slot. Completed a Report focused on IEEE 1815.1 for mapping between IEEE 1815 (DNP) and IEC 61850.	Ron Farquharson

P5WG	Recommended Practice for Network Communications in Substations
	(Revision of IEEE P1615)
	Chair: James Bougie
	James Bougie was unable to attend. Mike Dood ran the meeting and reported that the 3 main items that needed to be addressed are:
	   1. Using Eric Udren's report from the PSRC and weave it into 1615
	   2. Update wireless component
	   3. Address the security part of it
	
	RNS: 20 people, 1 session, HDMI projector, WiFi
	Conflicts:
		James Bougie

P9WG	Revision of C37.118.2 Chair: Vasudev Gharpure Working on joint revision of C37.118.2 standard, (with C40 – C37.247) P0 approved the P9 WG motion to form the ballot pool for (C37.118.2) and the motion to submit the draft after MEC editor approval and then proceed to ballot. Ken Martin raised a point that the configuration commands defined in the standard should be included in the commands section rather than the configuration section. On the same topic, Allen and Ken suggested that table 4.4 should be simplified, with repeated tables for rename and configure stream commands. These suggestions were accepted. These are editorial changes, and do not constitute a technical change. Vasudev urged attendees to provide their comments during the ballot process. RNS: 20 people, 1 session, HDMI Projector Conflicts: C40, C23, C28, C41, P10	Vasudev Gharpure
P10WG	IEEE Standard for Streaming Telemetry Transport Protocol Chair: Ken Martin Draft 2.89 The remaining editing needed since the last meeting was all completed, so the draft is mostly complete. The WG went through the document accepting edits that were previously reviewed. This included the Introduction, table of contents, new definitions, mandatory standards, clauses 7 and 8 covering cyber security and several typo and format corrections throughout the draft. The WG reviewed definitions and elected to compare them with those listed in the revised standard, C37.118.2. Ken will complete the edits from this meeting. He will also request a copy of C37.237 and add Mark to the WG Imeet site. RNS: 20 people, 1 session, HDMI projector Conflicts: P9, C23, C46, C41, H50, PSRC-SC-C, PSCC SC-P	Ken Martin

P12TF	Analog Leased Line End of Life and Migration Report Chair: Marc Benou The entire document was reviewed, and some minor changes were made. Keywords were added. It was determined that the references made throughout the document need to be added to the reference section. The group voted to submit the report to the SC for review after editing. Marc and Craig Palmer will do the final editing and then submit the report to the P0 SC for review RNS: 20 people, 1 session, HDMI Projector Conflicts: H32, P14, HTF49	Marc Benou
P13TF	Beginners guide to IEC61850 Chair: Eugenio Carvalheira Reviewed outline, existing assignments, and statuses of assignments. New volunteers recruited to open sections. New section added to cover testing features. Reviewed contributions received so far. iMeet space is now online. Invitation for members and non-voting members to comment/review contributions in iMeet. RNS: 30+ people, 1 session, HDMI projector, WiFi Conflicts: H45, H27, H31, H30, H6, H44, TFH47,	Eugenio Carvalheira
P14WG	Review of C37.236, IEEE Guide for Power System Protective Relay Applications Over Digital Communication Channels Chair: Tom Dahlin Reviewed the WG assignments. Two (2) drawings submitted by Ken Fodero were reviewed and approved. Also reviewed and approved the updated fiber optic section for C37.94 to include single mode optics. Galina provided a new outline for section 6 which the WG liked. Dave McGuire and I to revise that section for the next meeting. RNS: 30 people, 1 session, HDMI projector Conflicts: P12, H42, H41, H49	Tom Dahlin
P15WG	Standard Profile for Communications with Distributed Energy Resources (DERs) using IEEE Std 1815 [Distributed Network Protocol (DNP3)] Chair: Eric Thibodeau Work continues on our draft. About 50% of the draft have been covered by the review so far. It was raised during the meeting that MESA DER have started their own review of the DNP3 App Note to align it with 61850-7-420 and to address new needs. It was highlighted during meeting that the goal is for the IEEE Standard DER Profile to be the reference. We will try our best in the next few weeks to gather the MESA DER people into our review meetings, so they contribute to our draft instead of generating a separate document. RNS: 25 people, 1 session, HDMI projector, WiFi Conflicts: S1, P2, P3, K25	Eric Thibodeau

P16WG	P1854 Review by PSCC for Communications and Cybersecurity Requirements Chair: Jason Lombardo Joint work w/T&D and PSRC H53. Xiangyu Ding leads the joint work. Reviewed latest comments to P1854 and had some additional comments. Will be circling back with the smart distribution working group regarding comments and edits discussed in the meeting. RNS: 20 people, 1 session, HDMI projector, WiFi, Conflicts: I31, H46	Jason Lombardo
P18SG	Guide for Smart Grid Interoperability of Energy Technology and Information Technology Operation with the Electric Power System (EPS), End-Use Applications, and Loads Chair: Anthony Johnson Reviewed the status of the effort and issued a call for more volunteers. Discussed the potential effort to create digital collateral to support the standard. RNS: 25 people, 1 session, HDMI projector, WiFi Conflicts: S1	Anthony Johnson
P19WG	Working Group on Universal Utility Data Exchange (UUDEX) Chair: Scott Mix The chair reviewed the current state of the draft UUDEX standard. - All the text has been brought into the IEEE format as a single document - The most recent part incorporated was the API documentation converted from Web based into Word - The document is currently sitting at 540 pages - Did not migrate a draft test plan that could become a separate document - The GitHub repository with sample code is in place by PNNL The chair extended a call for participation. Target date for submitting to ballot is December 2023. RNS: 20 people, 1 session, HDMI projector, WiFi Conflicts: P20	Scott Mix

P20SG	Joint Revision of IEC 61850-9-3 Chair: Benton Vandiver Review of 9-3 draft v3.4 from the last DLMT mtg. Topics in discussion • The group began with a review of Annex A – section A.1.2 where there was a remaining note to verify the port number handling. • Section A.1.3 was discussed and after several suggestions it was simply reworded to reference Note 2 of section 12.1.1 and that the timeTraceable flag should be generally ignored. • The topic of time domain came up from a question Jay asked about 9-3 support for fixed domain numbers. Table 2 Note "a" explains that any domain is permitted and is a network decision. • Section A.1.7 was reviewed and confirmed including the handling of the Authentication TLV by downstream clocks. • Section A.10 requires a heading descriptive of the contribution from Michael R and this was discussed but no decision made • Annex C being the newest content addition was reviewed and a discussion on the performance classes and requirements that relate to 9-3 were agreed to be satisfied with the existing T5 (1uS) class RNS: 30 people, 1 session, HDMI Projector, WiFi Conflicts: H50	Benton Vandiver
P21SG	System architectures supporting the virtualization of substation protection and control applications Chair: Craig Preuss P21SG motion to form a Task Force was approved. They will provide a technical report on the impact of CPC systems as described in PC37.300 (H45) and related standards. For this scope, they will seek to meet jointly with the suitable PSRC WG.	Craig Preuss

Item no.	Notes	Action by
OLD BUSINESS	P21 presented a motion to transition the P21 Study Group to a Task Force that will develop a PES technical report based upon the output of the P21 SG and the CIGRE B5.60 technical brochure that recommends a roadmap for developing new or updating existing IEEE standards (e.g., P1613, PC37.90 series, PC37.2, P1646, C37.115, P1686, PC37.240, PC37.231, and P2808) to address the impacts of CPC-based systems and CPC systems as described in PC37.300. With this scope, the P21 TF must be joint with the PSRC Committee (SC TBD). Motion: Craig Preuss; Second: Tony Johnson; Abstain: Galina Antonova P21SG motion to form a Task Force was approved. They will provide a technical report on the impact of CPC systems as described in PC37.300 (H45) and related standards. For this scope, they will seek to meet jointly with the suitable PSRC WG. P2 (1815 DNP3) PAR extension has been approved to Dec. 31, 2025	BV
NEW BUSINESS	P0 approved the P9 WG motion to form the ballot pool for (C37.118.2) and the motion to submit the draft after MEC editor approval and then proceed to ballot. Motion: Vasudev Gharpure; Second: Marc Benou Liaison Report PSRC WG D47: Revision of C37.243 IEEE Guide for Application of Digital Line Current Differential Relays Using Digital Communication Galina Antonova: The WG discussed the status of the assignments for Clause 6 Communication channel considerations that is being restructured. There is no material related to digital PLC, and a comment was made that this technology may not be suitable for use with current differential. Another questionable channel is a switched Ethernet-based channel based on the PRP and HSR protocols. A comment was made that these protocols are LAN based, not WAN based, and would not support a communication channel for current differential. Also, it may fall under the fiber optic or MPLC technology. WG will investigate further. Liaison Report PSRC WG H41: Revision of IEEE P1646 Standard for Power System Communication Delivery Time Performance Requirements Tom Dahlin: H41 did not meet.	BV
TIME OF FINAL ADJOURNMENT	2:35 pm CDT. Motion: Vasudev Gharpure; Second: Tony Johnson	TD
NEXT FACE TO FACE MEETINGS	January 2023 in Jacksonville, FL. In person / virtual meeting	BV
FUTURE MEETING ROOM REQUIREMENTS	For the next meeting we will need to meet for 1 session in a room for 50 people. We do not want to meet at the same time as the PSRC H SC or the PSCCC S SC.	