



## PSCCC Subcommittee Meeting Minutes

Designation: PO	Name: PROTOCOLS AND COMMUNICATION ARCHITECTURE SUBCOMMITTEE			
Meeting Location: Myrtle Beach, SC – In-person & virtual	Meeting Time: 2:45 PM EDT	Meeting Date: 2023/09/20	Minutes Revised: YYYY/MM/DD	Minutes Approved: 2024/01/10
Presiding Officer(s): Tom Dahlin - Chair; Jim Michaelis - Vice Chair		Recorded by: Jim Michaelis	Draft Number: 1.0	
Attendance:				
Name		Affiliation		Phone (P) / Web (W) / Local (L) M/CM/G
Anthony Johnson	SCE	L	M	
Benton Vandiver	Hitachi Energy	L	M	
Brittany Chapman	CAI Engineering	L	M	
Chris Huntley	SEL	L	M	
Craig Palmer	PowerComm Solutions	L	M	
Craig Preuss	Black & Veatch	L	M	
Dan Nordell	Xcel Energy		M	
Dave McGuire	Hubbell-RFL	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		M	
James Formea	EATON	L	M	
Jason Lombardo	S&C Electric Company		M	
Jay Anderson	SEL	L	M	
Jim Bougie	Albireo Energy	L	M	
Jim Michaelis – Vice Chair	Commonwealth Associates, Inc.	L	M	
Ken Fodero	SEL		M	
Ken Martin	EPG	L	M	
Marc Benou	Iniven	L	M	
Mike Dood	SEL	L	M	
Nathan Wallace	Cybrical		M	
Nicholas Kraemer	NuGrid Power	L	M	
Ron Farquharson	Mount Victoria Consulting Ltd	L	M	
Ryan Newell	TRC		M	
Scott Mix	PNNL	L	M	
Shane Haveron	Ametek		M	
TW Cease	Consultant		M	
Tom Dahlin – Chair	SEL	L	M	
Vasudev Gharpure	Quanta Technology	W	M	
Yi Hu	Quanta Technology	L	M	

Aaron Martin	BPA	L	G
Adrian Zvarych	Qualus	L	
Alex Apostolov	Omicron	L	G
Andrew West	Consultant	W	G
Byungtae Jang	KEPCO		G
Charles Pestell	Powell Ind	L	G
Colin Gordon	SEL		G
Daniel Freeman	Schneider Electric		G
David Dolezilek	SEL		G
Emmanuel Duvelson	Hubbell-RFL		G
Gayle Nelms	SEL		G
Hugo Monterrubio	Hubbell / Beckwith		G
J. Richie Carroll	GPA		G
Jay Herman	EPRI		G
Jeff Pack	Power Engineers	W	G
Justin Turner	GE	L	G
Mario Jardim	Schneider Electric		G
Markus Epting	S&C Electric		G
Priya Raghuraman	Siemens	L	G
Priyanka Nadkar	SEL	L	G
Steven Kunsman	Hitachi Energy	L	G
Tom Thompson	IEEE SA	L	G
Tony Bell	Ametek	L	G
Xiangyu Ding	S&C Electric	L	G
M: Member G: Guest			

**Minutes of meeting (continued)**

Item no.	Notes	Action by
<b>CALL TO ORDER</b>	Meeting called to order at 2:45 PM EDT.	Tom Dahlin
<b>INTRODUCTIONS AND QUORUM</b>	Member roll call taken. A quorum was met with 24 of 40 members present. There were also 13 guests.	Tom Dahlin
<b>AGENDA APPROVAL</b>	The motion was passed. Motion: Mike Dood; Second: Marc Benou Approved - Yes (24).	Tom Dahlin
<b>APPROVAL OF PREVIOUS MINUTES</b>	The motion was passed. Motion: Marc Benou; Second: Ron Farquharson Approved - Yes (24).	Tom Dahlin
<b>CHAIR'S REMARKS</b>	<p><b>Announcements</b></p> <p>Please submit your MemberPlanet Profile so we will be able to use this new system going forward. Probably the last time for this announcement because the system will be live. All but six PO members have submitted profiles and Jim will be following up with those individually.</p> <p>If you need a PAR extension, please get it in / approved.</p> <p>RevCom submission by 10/16/2023, 12/19/2023, or 2/9/2024 NesCom submission by 10/16/2023, 12/19/2023, or 2/9/2024</p> <p>Following the last subcommittee meeting today there will be presentation on Ciber Informed Engineering presented by Idaho National Laboratory.</p>	Tom Dahlin
<b>OLD BUSINESS</b>	<p>Last meeting Ken Martin for P10 requested permission to go to ballot after MEC review and resolution of any mandatory comments. That has been done and it is now in ballot.</p> <p>P14 requested a PAR extension and that was approved by NesCom on June 29<sup>th</sup>, so the PAR has been extended through December 2025.</p> <p>Tony Johnson for P18 requested input on proposed changes to their PAR Scope and Purpose. Through discussion it was determined that a vote is not required, so were soliciting input from PO. The PAR revision is now in front of NesCom.</p> <p>Congratulations to P1! RevCom recommendation on June 28<sup>th</sup> was to approve Amendment 1 to the PC37.238a standard.</p>	Tom Dahlin
<b>OLD BUSINESS – COMMENTARY FROM MINUTES TAKER</b>	This was missed during the meeting, but there is a standing request from A1, Awards and Technical Paper Recognition Task Force, for an “at large” volunteer from the PO subcommittee. The subcommittee chair and vice chair are automatically part of this committee, so this increases the number of PO subcommittee people from two to three. The commitment is just three conference calls a year, usually a few weeks after each in-person meeting.	Jim Michaelis

**Minutes of meeting (continued)**

<p><b>NEW BUSINESS</b></p>	<p>P9WG with Vasudev Gharpure as chair would like to request a two-year PAR extension on developing the PC37.118.2 IEEE Draft Standard for Synchrophasor Data Transfer for Power Systems.          Motion: Vasudev Gharpure; Second: Tony Johnson          Approved - Yes (24).</p> <p>Reminder that the P10WG developed standard, IEEE P2664 'Standard for Streaming Telemetry Transport Protocol' went to ballot on September 6<sup>th</sup> and will close on October 5<sup>th</sup>. If you signed up to ballot, please make sure you get your ballots complete and submitted.</p> <p>P12TF is requesting permission to publish the Report on Analog Leased Line Withdrawal of Service and Transition Options for Power System Applications.          Motion: Marc Benou; Second: Eric Thibodeau          Approved - Yes (23), Abstain (1 – Craig Preuss).</p> <p>P12TF is requesting to go inactive following this meeting.          Motion: Marc Benou; Second: Craig Preuss          Approved - Yes (24).</p> <p>Discussion on PSCC Committee iMeet Central Depository for use as a storage location for group minutes and other non-PAR operational documentation. This doesn't include the standards draft documents. When draft minutes are approved the chair or vice chair needs to update the minutes with the approval status and post it to the Approved minutes folder. Then main committee officers know the minutes can be published on the website. Discussion on deleting old draft minutes, so there may need to be some follow-up on how to use the site. There appear to be some permissions issues that may also need to be cleaned up. Discussed the need to keep email accounts used to access IEEE SA up to date because these are used for communications regardless of what might be requested by working group chairs. Tom will send out the instruction slides that Scott Mix put together. This site is only for use by the group officers.</p> <p>Liaison Report PSRC WG D47: Revision of C37.243 IEEE Guide for Application of Digital Line Current Differential Relays Using Digital Communication          Tom Dahlin gave update in place of Galina Antonova.          Met this morning without a quorum. Continuing with discussion on section 6, with significant discussion on MPLS and the impact of quality of service.</p> <p>Liaison Report PSRC WG H41: Revision of IEEE P1646 Standard for Power System Communication Delivery Time Performance Requirements          Tom Dahlin gave update.          Met yesterday without a quorum. Discussed the latency model and draft descriptions of IED latency with potential variation due to IED processing times.</p> <p>Liaison Report P1547.10: Recommended Practice for Distributed Energy Resources (DER) Gateway Platforms          Benton Vandiver gave update.          Met August 4<sup>th</sup>. Discussed scope and gateway interface as conceived. Several items of contention on what defines gateway. Cyber security concerns were raised, deferred to a subgroup. Questions related to DER scope, commercial vs utility.</p>	<p>Tom Dahlin</p>
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**Minutes of meeting (continued)**

Item no.	Notes	Action by
<b>REPORTS</b>	<p>Please include what you need for the next meeting (room size, sessions) and revision of the document (draft #); Requirements for Next Session (RNS).</p> <p>WG minutes, please get them in to Jim within 1 week after your meeting. If not, we cannot complete our SC report to the MC.</p>	
<b>P2WG</b>	<p>Electric Power Systems Communications – Distributed Network Protocol (DNP3) Chair: Ron Farquharson</p> <p>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.</p> <ul style="list-style-type: none"> <li>• Draft is near completion - still working on Clause 7 and Clause 13.</li> <li>• In process of using “Controlling Station” to replace “Master”.</li> <li>• Targeting going to ballot starting in February 2024.</li> </ul> <p>RNS: 25 people, 2 session, HDMI projector, WiFi, teleconferencing Conflicts: S5 – C37.240</p>	Ron Farquharson
<b>P5WG</b>	<p>Recommended Practice for Network Communications in Substations (Revision of IEEE P1615) Chair: James Bougie</p> <ul style="list-style-type: none"> <li>• Working on a revision to this guide.</li> <li>• Looking at incorporating input from a paper generated by P6.</li> <li>• Targeting having the draft revision done by the January meetings.</li> <li>• Anticipates asking for a PAR extension at the January meeting, hopefully for only one year.</li> </ul> <p>RNS: 20 people, 1 session, HDMI projector, WiFi, teleconferencing Conflicts:</p>	James Bougie
<b>P9WG</b>	<p>Revision of C37.118.2 Chair: Vasudev Gharpure</p> <p>Working on joint revision of C37.118.2 standard, (with C40 – C37.247)</p> <ul style="list-style-type: none"> <li>• Ballot comment resolutions are complete.</li> <li>• Ready for a recirculation ballot in a day or two.</li> <li>• Some field observations were raised at the meeting which probably should be reviewed prior to the next recirculation ballot.</li> <li>• Requesting a PAR extension to give them time to complete the ballot process.</li> </ul> <p>RNS: 20 people, 1 session, HDMI projector, WiFi, teleconferencing Conflicts:</p>	Vasudev Gharpure

**Minutes of meeting (continued)**

<p><b>P10WG</b></p>	<p>IEEE Standard for Streaming Telemetry Transport Protocol Chair: Ken Martin</p> <ul style="list-style-type: none"> <li>• Standard is currently balloting.</li> <li>• Met this week with discussion on the comment resolution process.</li> </ul> <p>RNS: 20 people, 1 session, HDMI projector, WiFi, teleconferencing Conflicts: P9, C23, C46, C41, H50, PSRC-SC-C, PSCC SC-P</p>	<p>Ken Martin</p>
<p><b>P13TF</b></p>	<p>Beginners guide to IEC61850 Chair: Eugenio Carvalheira Draft 0.3</p> <ul style="list-style-type: none"> <li>• Reviewed outline added and removed some sections.</li> <li>• Reviewed writing assignments.</li> <li>• Went through the cyber security section.</li> </ul> <p>RNS: 30 people, 1 session, HDMI projector, WiFi, teleconferencing Conflicts: H45, H27, H31, H30, H6, H44, TFH47</p>	<p>Eugenio Carvalheira</p>
<p><b>P14WG</b></p>	<p>Review of C37.236, IEEE Guide for Power System Protective Relay Applications Over Digital Communication Channels Chair: Tom Dahlin Draft 5.0</p> <ul style="list-style-type: none"> <li>• PAR extension granted through December 2025.</li> <li>• Reviewed Section 6 Digital Communications Transport Technology with a variety of layout and content revisions.</li> <li>• All working group members assigned to review Section 6 and provide comments by November 17<sup>th</sup>.</li> </ul> <p>RNS: 30 people, 1 session, HDMI projector, WiFi, teleconferencing Conflicts: P12, H41, H49, C1, C2, D47</p>	<p>Tom Dahlin</p>
<p><b>P15WG</b></p>	<p>Standard Profile for Communications with Distributed Energy Resources (DERs) using IEEE Std 1815 [Distributed Network Protocol (DNP3)] Chair: Eric Thibodeau</p> <ul style="list-style-type: none"> <li>• Received their PAR extension to December 2025 on June 29<sup>th</sup>.</li> <li>• Lengthy discussion on adding DNP3 conformance certification requirements, but lacking consensus tabled for the next meeting.</li> <li>• Roughly 50% done with a full working group review of the draft document, expected completion by the end of October.</li> <li>• Copyright agreements are still being discussed with resolution anticipated this fall.</li> <li>• Targeting going to ballot in January.</li> </ul> <p>RNS: 20 people, 1 session, HDMI projector, WiFi, teleconferencing Conflicts: S1, P2, P3, K25</p>	<p>Eric Thibodeau</p>

**Minutes of meeting (continued)**

<p><b>P16WG</b></p>	<p>P1854 Review by PSCC for Communications and Cybersecurity Requirements            Chair: Jason Lombardo            Joint work w/T&amp;D and PSRC H53. Xiangyu Ding leads the joint work.            Revision 20230111</p> <ul style="list-style-type: none"> <li>• Reviewed recent edits from bi-weekly meetings.</li> <li>• Discussed some architecture diagrams that were added.</li> <li>• New writing assignment on the impact of VVO with DER.</li> <li>• Wrapping up the edits and looking to go to ballot early next year.</li> </ul> <p>RNS: 20 people, 1 session, HDMI projector, WiFi, teleconferencing            Conflicts: I31, H46</p>	<p>Xiangyu Ding</p>
<p><b>P18SG</b></p>	<p>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</p> <ul style="list-style-type: none"> <li>• The PAR extension and Scope update was on yesterday's NesCom agenda yesterday and have not heard the results.</li> <li>• Reestablishing subgroups who will be working on additional sections of this document.</li> </ul> <p>RNS: 25 people, 1 session, HDMI projector, WiFi, teleconferencing            Conflicts: S1</p>	<p>Anthony Johnson</p>
<p><b>P19WG</b></p>	<p>Working Group on Universal Utility Data Exchange (UUDEX)            Chair: Scott Mix            Draft 0, Edit 10</p> <p>The chair reviewed the current state of the draft UUDEX standard.</p> <ul style="list-style-type: none"> <li>• Discussed the recommendations from an informal webinar that was held over the summer, specifically on US centric and overkill content.</li> <li>• Reiterated the request for all members to review the document.</li> <li>• Reviewed the status of some existing writing assignments.</li> </ul> <p>RNS: 20 people, 1 session, HDMI projector, WiFi, teleconferencing            Conflicts: P20, P21</p>	<p>Scott Mix</p>
<p><b>P20WG</b></p>	<p>Joint Revision of IEC 61850-9-3            Chair: Benton Vandiver            Draft 5.0b rev 3</p> <ul style="list-style-type: none"> <li>• Getting close to completing what is being considered the base line.</li> <li>• Still working on two more items that need to be resolved toward getting consensus.</li> </ul> <p>RNS: 30 people, 1 session, HDMI Projector, WiFi, teleconferencing            Conflicts: H50, P19, P21</p>	<p>Benton Vandiver</p>

**Minutes of meeting (continued)**

<p><b>P21SG</b></p>	<p>System architectures supporting the virtualization of substation protection and control applications Chairs: Craig Preuss</p> <ul style="list-style-type: none"> <li>• P21/I49 is meeting biweekly to review existing standards.</li> <li>• Herb Falk reported on an ongoing EPRI effort he is supporting investigating a curious time delay in 61850 sampled values.</li> <li>• Suggestions were taken for additional standards to review for inclusion in this technical report.</li> </ul> <p>RNS: 50 people, 1 session, HDMI projector, WiFi, teleconferencing Conflicts: P19, P20</p>	<p>Craig Preuss</p>
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Item no.	Notes	Action by
<p><b>TIME OF FINAL ADJOURNMENT</b></p>	<p>Adjourned at 4:10 PM EDT</p>	<p>Tom Dahlin</p>
<p><b>NEXT FACE TO FACE MEETINGS</b></p>	<p>JTCM January 7-11, 2024, scheduled in person and hybrid in New Orleans, LA.</p>	<p>Tom Dahlin</p>
<p><b>FUTURE MEETING ROOM REQUIREMENTS</b></p>	<p>For the next meeting we will need to meet for 1 session in a room for 40 people. We do not want to meet at the same time as the PSRC H SC or the PSCCC S SC.</p>	