

## PSCC Subcommittee Study Group Meeting Minutes

Designation: P21		Name: System Architectures Supporting the Virtualization of Substation Protection and Control Applications			
Meeting Location: Teleconference		Meeting Time: 4:40 PM	Meeting Date: 2021/05/05	Minutes Revised:	Minutes Approved: 2021/08/23
PAR Output: N/A	PAR Output: N/A	PAR Approval Date: N/A	PAR Expiration Date: N/A	Target Sponsor Ballot Date: N/A	Target Completion Date: N/A
Presiding Officer: Craig Preuss, Chair			Recorded by: Craig Preuss	Draft Number: N/A	
Attendance:					
Name		Affiliation		Attending via Phone (P) / Web (W) or Local (L) M/CM/G	
Craig Preuss		Black & Veatch		W	M
Ramakrishna Gokaraju		University of Saskatchewan		W	M
Daniel Ridenour		Dominion Energy		W	M
Veselin Skendzic		SEL		W	M
James Formea		Eaton		W	M
Farzad Khalilpour		SCE		W	M
Mital Kanabar		GE Renewable Energy		W	M
Charles Adewole		ERL Phase Technologies		W	M
Chand Tailor		Eaton		W	M
Deryk Yuill		is5		W	M
Xavier Manel-la		Siemens		W	M
Jeff Pack		POWER Engineers		W	M
David Dolezilek		SEL		W	M
Fred Agyekum		SEL		W	M
Anthony Johnson		SCE		W	M
Thomas Rudolph		Schneider Electric		W	M
Shane Haveron		AMETEK		W	M
Madhab Paudel		Eaton		W	M
Prithpal Khajuria		Intel		W	M
Jay Anderson		ComEd		W	M
Mike Dood		SEL		W	M
Austin Wade		SEL		W	M
Jean Raymond		Hydro Québec		W	M
Deepak Maragal		NYPA		W	M
Gayle Nelms		SEL		W	M
Eugenio Carvalheira		OMICRON		W	M
Priyanka Nadkar		SEL		W	M
Prasad Shrawane		Greater Sudbury Hydro Inc.		W	M
Juan Placid		J J Power & Energy Inc.		W	M
Steve Klecker		MidAmerican		W	M
Jim Michaelis		Commonwealth Associates. Inc.		W	M
Steven Blair		Synaptec		W	M
Sai Chandra Reddy Thota		Megger Ltd		W	M
Anthony Sivesind		SRP		W	M

Miguel Rios	Southern Company	W	M
Arun Shrestha	IEEE	W	M
Chris Huntley	SEL	W	M
Jesse Silva	SCE	W	M
Michael Thompson	SEL	W	M
Eric Thibodeau	Hydro Québec	W	M
Ibrahim Abdulhadi	University of Strathclyde, Glasgow	W	M
James Bougie	GPT	W	M
Dean Samara-Rubio	Intel	W	M
Scott Mix	PNNL	W	M
M: Member CM: Corresponding Member G: Guest			

Item no.	Notes	Action by
<b>CALL TO ORDER</b>	Meeting was called to order by the chair at approximately 4:40 PM Central time.	
<b>INTRODUCTIONS AND QUORUM</b>	Introductions were not undertaken, the participants list used. Quorum does not apply to study group per IEEE-SA rules all attendees are considered voting members.	
<b>CALL FOR PATENTS</b>	Pre-PAR patent slides were shown.	
<b>IEEE-SA COPYRIGHT</b>	IEEE-SA copyright slides shown.	
<b>CHAIR'S REMARKS</b>	General welcome given.	
<b>AGENDA APPROVAL</b>	Scott Mix motion to approve agenda, Mike Dood second. No objections or abstentions.	
<b>APPROVAL OF PREVIOUS MINUTES</b>	No previous minutes to approve.	
<b>PSCCC study group rules</b>	The rules for the study group were reviewed by the chair. Refer to the embedded PowerPoint slide deck. The chair requested a volunteer for a vice-chair. Farzad Khalilpour volunteered, along with Dean Samara-Rubio.	
<b>Brief history</b>	PSRC H45 PC37.300 Centralized Protection and Control, draft 4, subclause 6.1.3.1.1 Internal hardware architecture within a Type 1 CPC system is beyond the scope of this guide and are expected to be addressed by the experts to meet the functional requirements described in this guide.	
	<a href="#">EPRI "Common Substation Platform" Project</a> SCE work both supporting EPRI and outside of EPRI Intel industry advocacy <a href="#">SEAPATH - LF Energy</a>	

Item no.	Notes	Action by
	<p>Where are the needs for specifying a virtualization platform to support CPC or even non-CPC architectures?</p> <ol style="list-style-type: none"> <li>1. Hardware specification</li> <li>2. Hypervisor specification</li> <li>3. Tool specification</li> <li>4. User interface specification (is work underway in PSRC H46 PC37.1.3 on HMI applicable or not?)</li> <li>5. What about cyber security (would update to IEEE 1686 work well enough?)</li> </ol>	
<b>New Work - Assignment</b>	<p>Determine if a working group should be formed to generate a standard document (guide, recommended practice, or standard) for addressing system architectures that support the virtualization of substation protection and control applications.</p> <p>Will this deal with connections to the field from the virtual environment? Need to define the applications and their requirements from PC37.300.</p>	
<b>P21 report deliverable</b>	<p>The chair provided a draft of the P21 report deliverable already started. Refer to the embedded file.</p> <p>Report is likely needed because the SG chair can not lead future work as WG or TF</p> <p>Also important to find volunteers as future officers of WG or TF</p>	
<b>Regular Web Meetings</b>	<p>How much background / reference / presentation is needed</p> <ul style="list-style-type: none"> <li>• PSRC H5 PC37.300</li> <li>• EPRI</li> <li>• SCE</li> <li>• Intel</li> <li>• LF Energy SEAPATH project</li> <li>• PSCCC S1 P1686</li> <li>• PSRC H46 PC37.1.3</li> <li>• CIGRE B5.60 work is related (Thomas involved along with SEAPATH)</li> </ul> <p>Work started in May so, completion of work in November not realistic, goal to finish with report to P0 subcommittee in Jan 2022</p> <p>Bi-weekly calls will be scheduled.</p> <p>Prithpal noted that Intel can combine SCE, SRP, and Intel to cover EPRI work.</p>	<p>Chair to send out doodle poll for bi-weekly calls.</p> <p>Chair to work with Prithpal to schedule presentation to cover EPRI project.</p> <p>Chair to coordinate with other groups for future presentations.</p>
<b>ITEMS REPORTED OUT OF EXECUTIVE SESSION</b>	<p>There was no executive session.</p>	
<b>TIME OF FINAL ADJOURNMENT</b>	<p>The meeting was adjourned at approximately 5:40 PM Central.</p>	
<b>NEXT FACE TO FACE MEETINGS</b>	<p>Unknown due to COVID-19 restrictions. Web conferences will be announced by the chair per PSCCC requirements.</p>	
<b>FUTURE MEETING ROOM REQUIREMENTS</b>	<p>N/A for room size, projector, conflicts.</p>	



P21SG  
agenda-2021-05-05.



P21 Report  
r0.1.docx