

Designation: SO Meeting Location: Hybrid — La PAR Output: NA	s Vegas, NV	Subcommittee Meeting Time: 2:45 PM ET	Meeting Date:			
Hybrid – La	s Vegas, NV	Meeting Time:	Mosting Data			
PAR Output: PAR Out		2:45 PM FT	ivieeting bate.	Minutes Revised:	Minutes Approved	:
	:put:					
NA		PAR Approval Dat	e: PAR Expiration Date:	Target Sponsor Ballot Date:	ate: Target Completion Date:	
	NA	NA	NA	NA	NA	
Presiding Officer:			Recorded by:	Draft Nu	umber:	
Scott Mix (Chair), T	heo Laughner (V	rice-Chair)	Theo Laughner	1.0		
Attendance:						
					Attending via Phone (P) / We	
	Name		At	ffiliation	(W) or Local (I	
Scott Mix			PNNL		L	M
Theo Laughner			Lifescale Analytics		W	M
Jay Anderson			SEL		L	M
Ed Cenzon			SEL		L	М
Larry Collier			NERC		L	М
Mike Dood			SEL		L	М
Herb Falk			ОТВ		L	М
James Formea		Eaton		L	М	
Colon Gordon		SEL		L	М	
Dan Goodlett			NERC		L	М
Shane Haveron			Ametek		L	M
Chris Huntley			SEL		L	М
Anthony Johnso	on		SCE		L	М
Dean Ouellette			RTDS		L	М
Jeff Pack			Power Engineers			М
Craig Preuss			B&V		L	М
Eric Thibodeau			Hydro Quebec		L	М
Nathan Wallace	9		Ampirical		W	М
Tom Dahlin			SEL		L	G
Micahels		Commonwealth Associates		L	G	
Gayle Nelms		SEL		L	G	
Benton Vandiver			Hitachi		L .	G
David Dolezhilbic			SEL		L	G G
Tom Thompson Paul Harris			Pacificorp		L	G
Ken Fodero			SEL		l l	G
Craig Palmer			Powercomm		L	G
Emmanuael Davidson			Hubbell		L	G

M:Member CM: Corresponding Member		
G: Guest		

Item no.	Notes	Action by
CALL TO ORDER		Scott Mix
INTRODUCTIONS	18 members present, quorum established	Scott Mix/Theo
AND QUORUM		Laughner
CALL FOR PATENTS		
CHAIR'S REMARKS		Scott Mix
AGENDA APPROVAL	Herb Faulk – Motion, Eric Thibodeau – Second, Motion Carried	Scott Mix
APPROVAL OF PREVIOUS MINUTES	Jay Anderson – Motion, Tony Johnson – Second, Motion Carried	Scott Mix
S1 Report	WG S1: Revision of IEEE 1686 IED Cyber Security Capabilities	
	Inactive	
S2 Report	WG S2: P1711.1 Serial SCADA Protection Protocol (SSPP)	Ed Cenzon
	PAR Approval: 2017/03/23 PAR Expires: 2023/12/31 Target Completion: 2023/12/31 Draft: 9	
	Chair: Ed Cenzon Vice-chair: Andrew Wright* Secretary: Mike Dood	
	Scope: This standard defines the Serial SCADA Protection Protocol (SSPP), a cryptographic protocol to provide integrity, and optional confidentiality, for cyber security of substation serial links. It does not address specific applications or hardware implementations, and is independent of the underlying communications protocol.	
	Status:	
	 Met at 5pm on Monday 5/8/2023 6 members in attendance, with several guests. Quorum met. Chair sent request to IEEE Program manager to form ballot pool (approved) Chair to clean up draft (rev 9) and submit to S0 this week (Draft 9 attached here and uploaded to iMeetCentral) Request for S0: WG Requests approval to initiate balloting of P1711.1 Draft Rev 09 	
	Next Meeting Requirements: [Room Size=20] [Projector=Yes][Telecom=Yes][Conflicts=P2]	
S3/S4	Inactive	
55/51		

Item no.	Notes	Action by
S 5	WG S5: Revision of IEEE C37.240 Cybersecurity Requirements for Power System Automation, Protection and Control Systems PAR Approval: yyyy/mm/dd PAR Expires: yyyy/mm/dd Target Completion: yyyy/mm/dd Draft: xxxx	Scott Mix
	Chair: TW Cease Vice-chair:vacant Secretary:	
	Met without chair or quorum	
	•IEEE form completed and submitted to share document with ISA	
	•Consensus of the group (confirming last three meetings) to go inactive.	
	•Entertain motion to move group to inactive status pending completion of ISA99	
	WG14 work	
S 6	Inactive	
S7	WG S7: P2808 Function Designations used in Electrical Power Systems for Cyber Services and Cybersecurity	Nathan Wallace
	PAR Approval: yyyy/mm/dd PAR Expires: yyyy/mm/dd Target Completion: yyyy/mm/dd Draft: xxxx	
	<u>Chair:</u> Nathan Wallace <u>Vice-chair:</u> Mike Dood <u>Secretary:</u> Deepak Maragal	
	<u>Scope:</u> This standard applies to the definition of function designations for cyber related services, and cybersecurity controls and measures used to detect, identify, protect from, respond to, and recover from, security threats to electric power systems. These designations apply to the design, procurement, and operation of electric power systems. This standard also provides examples of how to represent systems using these designations.	
	Status:	
	• Met 5/10	
	Achieved Quorum	
	• 12 attendees, 8 members, 4 guests	
	 Worked on draft and discussed best approach for future meetings. 	
	WG voted and approved motion to request a 4 year extension.	
	Next Meeting Requirements: [Room Size=20]	
	[Projector=Yes][Telecom=Yes][Conflicts=]	

Item no.	Notes	Action by
S8	WG S8: P2658 Guide for Cybersecurity Testing in Electric Power Systems	Nathan Wallace
6	PAR Approval: yyyy/mm/dd PAR Expires: yyyy/mm/dd Target Completion: yyyy/mm/dd Draft: xxxx	
	Chair: Nathan Wallace Vice-chair: Deepak Maragal Secretary:	
	<u>Scope:</u> This document provides test guidance for cybersecurity controls used in electric power systems. The guide encompasses testing and verification of cybersecurity services, applications, and controls, including end-to-end testing.	
	Status:	
	 Met 5/10 13 attendees, 8 members, 5 guests Had Quorum 	
	Worked on draft and discussed best approach for future meetings.	
	Next Meeting Requirements: [Room Size=20] [Projector=Yes][Telecom=Yes][Conflicts=]	
S9	TF S9: Task Force on Utility IT-OT Cybersecurity challenges in roles and terminology	Theo Laughner
	PAR Approval: N/A PAR Expires: N/A Target Completion: yyyy/mm/dd Draft: xxxx	
	Chair: Theo Laughner Vice-chair: Brian Smith Secretary:	
	Scope : Assess the IT-OT challenge in Utility Cybersecurity roles. Create a report to assist in building organizational understanding and collaboration	
	•Attendance taken and quorum achieved (4 members present of the 6 total members, with 26 attendees)	
	Previous Draft minutes approved Reviewed and resolved Utility IT and OT Cybersecurity and Terminology Draft comments from previous SO review	
	Next Steps 1.Schedule webinar in June/July to resolve comments 2.Re-submit draft report, Fall 2023 to S0 for review/approval Next Meeting Requirements: [Room Size=30] [Projector=Yes][Telecom=Yes][Conflicts= S7, S8, H40, PC37.111]	

Item no.	Notes	Action by
S10	TF S10: Utility & Municipality Challenges on Analyzing and Implementing Cybersecurity Standards and Best Practices	Jeff Pack
	PAR Approval: N/A PAR Expires: N/A Target Completion: yyyy/mm/dd Draft: xxxx	
	Chair: Jeff Pack Vice-chair: Justin Turner Secretary:	
	Scope : Assess the challenge in utilities & municipalities with limited resources on the applicability and relevance of the cybersecurity standards and create a report to assist summarizing the relevant cybersecurity standards.	
	Status:	
	 Meeting started on time at 2:23 P.M. PDT with approximately 16 attendees based on the room attendance list and the WebEx participant list. A full attendee list will be included in the minutes once the WebEx attendance report is provided. Six members were in attendance, so quorum was achieved. January 2023 minutes were reviewed and approved. Reviewed the assignment for S10. Reviewed status of the draft report and requested some reviews from the members so the draft could be submitted to S0 for approval. The chair will schedule at least one working session to facilitate the review. The chair will upload the draft to iMeet Central and make sure that all contributors have access to review and comment. Meeting was adjourned at 2:40 P.M. PDT. 	
	Actions: • Schedule working sessions to review and update draft.	
	Next Meeting Requirements: [Room Size=40] [Projector=Yes][Telecom=No] [Conflicts=HTF55]	

Item no.	Notes	Action by
S11	S11: Task Force on Roadmap Development for S0	Dan Goodlett
. I	PAR Approval: N/A PAR Expires: N/A Target Completion: yyyy/mm/dd Draft: xxxx	
	<u>Chair:</u> Dan Goodlett & Larry Collier <u>Vice-chair:</u> ?? <u>Secretary:</u>	
	Scope : Address recent publications and activities impacting the scope of SO as identified by the Task Force.	
	Status:	
	 Introductions Discussion of S11 mission (S0 Roadmap) and subsequent motion to restart the TF Participants asked to review the NERC & IEEE joint technical report - TR105 for the purposes of identifying future work items for the roadmap (link) S11 may utilize a survey for S0 roadmap work item determination similar to previous methodology of the S11 TF iMeet access is needed by the new TF chairs (Dan Goodlett / Larry Collier), chair training information is needed as well – Chairs will need assistance with these items Once iMeet access is obtained we will upload the meeting minutes (basically these bullet points) Member planet go live is scheduled for September timeframe and TF11 members will be signed up then 	
	Next Meeting Requirements: [Room Size=40] [Projector=Yes][Telecom=No] [Conflicts=]	
S12	Inactive	
S13	WG S13: Review 1547.3 Guide for Cybersecurity of DERs Interface with Electric Power Systems	Tony Johnson
	PAR Approval: yyyy/mm/dd PAR Expires: yyyy/mm/dd Target Completion: yyyy/mm/dd Draft: xxxx	
	<u>Chair:</u> Tony Johnson <u>Vice-chair:</u> R. Benjamin Kazimier <u>Secretary:</u>	
	Scope: To jointly develop 1547.3 with SCC21.	
	Status:	
	Balloting complete. Standard submitted to RevCom	
	Expect to go inactive once standard is published	

Item no.	Notes	Action by
S14	TF S14: Task Force on using TLS in Power System Applications	Colin Gordon
	PAR Approval: N/A PAR Expires: N/A Target Completion: yyyy/mm/dd Draft: xxxx	
	Chair: Colin Gordon Vice-chair: Shashi Sastry Secretary:	
	<u>Scope</u> : Develop a report on the implementation of TLS for usage in legacy (e.g., SCADA) and emerging (e.g., DER) power system applications	
	Status:	
	 Members – 4 out of 9 – no quorum Could not approve prior meeting minutes due to lack of quorum. Colin Gordon and Shashi Sastry resign their chair and co-chair positions (respectively) due to lack of time to assist with the effort. Colin lead a call for volunteers to chair the TF. No person volunteered. Colin will send an email to canvass for volunteers. Herb Falk brought up a potential ambiguity with the use of OCSP in energy systems. Herb mentioned that he would send some information about the issue after the meeting. Open discussion. Meeting adjourned 	
	Task Force will go inactive if a chair is not identified by mid-summer!	
	Next Meeting Requirements: [Room Size=30]	
	[Projector=Yes][Telecom=Yes][Conflicts=]	

Item no.	Notes	Action by
S15	WG S15: IEEE Guide for Securing Generic Object Oriented System Events (GOOSE) and Sampled Values (SV) Protocols of IEC 61850 using IEC 62351-6 and IEC 62351-9	Jay Anderso
	PAR Approval: yyyy/mm/dd PAR Expires: yyyy/mm/dd Target Completion: yyyy/mm/dd Draft: xxxx	
	<u>Chair:</u> Jay Anderson <u>Vice-chair:</u> Shane Haveron <u>Secretary:</u> Dean Ouellette	
	Scope : This guide provides information for suppliers and implementors on applying security from the most recently published versions of IEC 62351-6 and IEC 62351-9 to GOOSE (IEC 61850-8-1), R-GOOSE (IEC 61850-8-1), SV (IEC 61869-9), or R-SV (IEC 61850-9-2) protocols.	
	Status:	
	 The meeting was called to order at about 3:45pm PDT following some computer set-up time. 	
	 Patent slides, copyright slides, and behavior slides were displayed. 	
	 Since quorum was not achieved, the minutes from the 1/10/23 and 2/21/23 meetings (and this meeting) will be circulated for approval via email. 	
	 No writing assignments were received. Members were reminded about earlier voluntary commitments. 	
	 previously-discussed use cases were briefly reviewed (R-GOOSE, R-SV, DSM, Load Control, Inter-site communications, etc.). 	
	 A member discussed performance criteria and whether applications may require authentication or authentication and encryption. 	
	 In the context of -6 and -9 implications, a few considerations for VPN vs routed signals and the uses of secure routable and non-routable 	
	protocols were discussed for use cases.	
	 Acceptance of these security models: Availability of products 	
	o Penetration of this technology into real-world installations	
	 IT policies and attitude to "flattening" the network 	
	 The Chair noted that he requested copies of IEC 62351-1 and -2 for 	
	reference from the IEEE-SA. We learned that the process for obtaining	
	 IEC references is being revised and we will have to wait for a while. The Chair reviewed the Purpose clause from the S15 PAR and suggested 	
	that we use it to provide more targeted guidance for drafting the	
	Document. The PAR purpose section calls for providing guidance on how	
	to configure the optional (and mandatory) items in the 62351-6 and -9	
	PICS tables. o The 62351-6 PICS tables were displayed.	
	 This includes what types of applications require authentication, 	
	encryption, and/or state machines. The chair noted that state	
	machines could provide detection of issues beyond intentional	
	threats, including out-of-sequence errors due to network issues. The 62351-6 PICS also include mandatory and optional choices	
	for authentication hash and confidentiality algorithms; the user	
	may need to choose the most efficient and effective algorithms	
	depending on applications, key delivery mechanisms, etc.	
	o The 62351-9 PICS were not discussed at this meeting.	
	 Herb Falk mentioned that the AES-GMAC and AES-GCM algorithms may require fewer CPU resources than other algorithms; he will try to provide 	
	further information.	
	Herb also mentioned that there is a 62351 Tissue for the state machine	
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described in the 2020 edition of 62351-6 and that he has proposed a fix.

Item no.	Notes	Action by
S15 (Continued)	 Scott Mix suggested including an annex describing the performance implications of what choices were made during configuration. Scott will try to distil this into a statement. Practical trade-offs between security and performance The Chair requested that any suggestions, writing assignments, etc. be sent to the officers; or members can post them to the iMeet site. The meeting was adjourned by the Chair at 4:53pm PDT in overtime. 	
S16	TF S16: Task Force on Systems for Detecting and Preventing Network Intrusions in Electric Power Systems PAR Approval: N/A PAR Expires: N/A Target Completion: yyyy/mm/dd Draft: xxxx	Eric Thibodeau
	<u>Chair:</u> Eugenio Carvalheira <u>Vice-chair:</u> Eric Thibodeau <u>Secretary:</u>	
	Scope: This task force will be investigating the current state of the art for network Intrusion Detection Systems (IDS) and Intrusion Prevention Systems (IPS) used in Electric Power Systems (EPS). The report from the task force will have to document the different existing methods to perform detections. These include, but are not limited to, monitoring the associations between transmitters and receivers on the network, detailing the types of protocols used, recognizing signatures inside data packets, comparison to a baseline of existing traffic, etc. For prevention purposes, the task force should focus on active systems that can shut down a network intrusion under way. This excludes already well covered countermeasures like IED hardening, firewalls, network diodes, etc.	
	Status:	
	 Attendance taken and quorum achieved (4 members present of the 6 total members, with 26 attendees) Previous Draft minutes approved Reviewed and resolved Utility IT and OT Cybersecurity and Terminology Draft comments from previous SO review 	
	 Next Steps Schedule webinar in June/July to resolve comments Re-submit draft report, Fall 2023 to S0 for review/approval 	
	Next Meeting Requirements: [Room Size=20] [Projector=Yes][Telecom=Yes][Conflicts=]	

Item no.	Notes	Action by
S17	TF S17: Task Force on Use of SBOM in the Energy Sector	Eric Thibodeau
	PAR Approval: N/A PAR Expires: N/A Target Completion: yyyy/mm/dd Draft: xxxx	
	Chair: Éric Thibodeau Vice-chair: Marc Lacroix Secretary:	
	Scope : Investigate Use cases for SBOM; Survey of SBOM initiatives; Survey of tools; Applicability of these initiatives to the energy sector; Recommendations	
	Status:	
	S17 met on Tuesday at 1:00 PM EST.	
	6 members out of 7 attended, quorum was met. 147 officers introduced their working grown to review IEEE 627 224. It was	
	147 officers introduced their working group to revise IEEE C37.231. It was concluding that I47 could use our output at some point in the future, but probably not in this revision.	
	An outline for the draft was prepared during the meeting, with members volunteering to undertake writing assignments.	
	 Next Meeting Requirements: [Room Size=25]	
	[Projector=Yes][Telecom=Yes][Conflicts=I47]	
Unfinished Business	Request volunteer to serve as S0 representative for the PSCCC Awards Task Force (A1)	Scott Mix.
New Business	S2 requests to proceed to ballot with P1711.1 Serial SCADA Protection Protocol (SSPP) Draft 09	Motion – Ed Cenzon Second – Craig Preuss Motion Carried
	S7 requests a 4 year PAR extension for IEEE Std P2808 Cyber Services and	Motion – Nathan
	Cybersecurity Function Designations	Wallace Second – Tony
	Discussion – Needs to be presented to Main committee for approval.	Johnson Motion Carried
	Floor Motion to move S5 to inactive status pending output of ISA99 WG14 work	Motion – James Formea, Second
	Discussion – Existing standard will expire, Herb Faulk will provide liaison reports.	Eric Thibodeau Motion Carried
	Request from PSRC HTF55 for informational review of a survey:	Motion - Jeff
	Assignment - Investigate Distributed Cyber Physical Assessment for Grid Resilience and evaluate participation with other technical committees, societies,	Pack, Second Craig Preuss
	groups, and associations that may have interest.	Motion Carried
	Actions: Presentation to H subcommittee for approval (later today)	
	i. Presentation to H subcommittee for approval (later today)ii. Submit to PSCCC S0 for comments – comments returned by ??	
	iii. Review comments and incorporate changes	

Item no.	Notes	Action by
	Co-Sponsorship PAR request from PSRC I47 – Pending approval by PSRC I SC	Motion – Eric Thibodeau
	Discussion – Concerns about the need for a dedicated WG for transmitting signed	Second - Craig
	data were raised. This may also be addressed as part of 1688 which may	Preuss
	eliminate the need for this WG/TF. IEC also has a working group to address this.	
		Motion Carried.
	Motion to Call the Question by Craig Preuss, Second by Eric Thibodeau. Motion	8 Yea, 1 Nay, 7
	Passed.	abstain.
	TF19 will be created.	
	1815 request for SAv6 and AMP review – new TF	Motion - Natha
		Wallace, Second
	Discussion – Andrew West volunteered to chair the TF. Andrew suggested adding	– Herb Fault,
	the AMP section the scope of the review.	Motion Carried
Announcements	a. Roster Cleanup for non-participating members (notice must be provided	Scott Mix
	to non-participating members well ahead of removing them).	
	b. 123Signup Retirement and Replacement– hope to roll out sometime this	
	decade	
	c. Chairs must provide full meeting minutes within 2 weeks (by	
	05/26/2023).	
	d. Meeting Minutes (draft .doc and approved .pdf) must be uploaded by	
	WG/TF officers to the PSCC Committee iMeet site in addition to individual	
	SG/WG/TF sites.	
	i. Draft and approved minutes must also be uploaded to WG/TF/SG iMeet	
	site	
	ii. Minutes may also be emailed to guests	
	e. Meeting notice and WG/TF/SG agenda to be sent to sub-group members	
	and SO Chair two weeks prior to any meeting.	
	f. Newly formed WG and TF (i.e., those migrated from SG) should issue a	
	call for participation and establish a roster by the conclusion of their next	
	meeting.	
	g. All sub-groups are expected to have Vice Chairs. Secretaries are optional	
	(Vice Chair assumes role of Secretary if none).	
	h. Working Group chairs (standards activity) are now REQUIRED to take	
	IEEE SA training. Training must be completed by the end of the year.	
	i. Understanding IEEE SA's Antitrust, Competition, and Commercial Terms	
	Policies	
	ii. Data Privacy Awareness for IEEE SA Activities	
	iii. IEEE SA Standards Working Group Chair Fundamentals (multi-hour	
	course) – RECOMMENDED by IEEE SA, STRONGLY RECOMMENDED by PSCCC	
	and S0 leadership	
	i. New Participant Behavior slides to be shown at all WG meetings have	
	been released by IEEE SA. PowerPoint versions are available on the PSRCC	
	website - https://site.ieee.org/pes-pscc/files/2022/05/Participant-Behavior-	
	Individual-method.ppt	
	j. Reminder: Task Forces also need to manage membership and have	
	quorum to approve minutes, and at the completion of their task to approve	
	the reports out of the TF to go to the subcommittee.	
	k. If anyone has published a paper in an IEEE Transactions journal, let the	
	chair know so that it can be considered for an award.	
	I. New PES PowerPoint Template is available.	
	m. PES Technical Report template available on PSCCC website.	
	n. New Committee P&P and Working Group P&P Committee O&P under	
	development	1

Minutes of meeting (continued)

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Item no.	Notes	Action by
Roundtable		
Membership Activity	No report.	Scott Mix
TIME OF FINAL ADJOURNMENT	4:08 PM	
NEXT FACE TO FACE MEETINGS	Myrtle Beach, SC week of September 18, 2023	
FUTURE MEETING	30 People, Projector,	<u>.</u>
ROOM		
REQUIREMENTS		

PSCC Committee Minutes of Meeting