PSCCC Subcommittee S0 Meeting Minutes

Designation: S0	Name: PSCCC Cybersecurity Subcommittee Meeting				
Meeting Location: Virtual	Meeting Time: 10:20 AM CDT	Meeting Date: 2021/01/14	Minutes Revised: [YYYY/MM/DD]		Minutes Approved: 2021/05/06
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: Steve Kunsman - Chair			Recorded by: Scott Mix		Draft Number: 0.1

Attendance:

Name	Affiliation	Attending via Phone (P) / Web (W) or Local (L)	M/CM/G
Steve Kunsman	Hitachi ABB Power Grids	W	M
Scott Mix	PNNL	W	M
James Bougie	GPT	W	M
TW Cease	Independent	W	M
Ed Cenzon	Schweitzer Engineering Labs	W	M
Mike Dood	Schweitzer Engineering Labs	W	M
Herb Falk	OTB Consulting	W	M
James Formea	Eaton	W	M
Shane Haveron	AMETEK Power Instruments	W	M
Chris Huntley	Schweitzer Engineering Labs	W	M
Anthony Johnson	SCE	W	M
Marc Lacroix	Consultant	W	M
Theo Laughner	PowerGRID-RX Inc	W	M
Ralph Mackiewicz	SISCO, Inc.	W	M
Jeff Pack	POWER Engineers, Inc	W	M
Craig Preuss	Black & Veatch	W	M
Eric Thibodeau	Hydro Quebec	W	M
Nathan Wallace	Cybirical	W	M
Eugenio Carvalheira	OMICRON electronics	W	G
Peiman Dadkhah	Nugrid Power	W	G
Benjamin Kazimier	Bender Inc	W	G
David Williams	FirstEnergy	W	G
Samir Darbali	US Nuclear Regulatory Commission	W	G
Yuchen Lu	EPRI	W	G
Gayle Nelms	Schweitzer Engineering Labs	W	G
Jalal Gohari	WSP	W	G
Joe Xavier – ABB	ABB	W	G
Peiman Dadkhah	Nugrid Power	W	G
Karen Leggett Wyszczelski	Schweitzer Engineering Labs	W	G
David Dolezilek	Schweitzer Engineering Labs	W	G
Eric Udren	Quanta Technology, LLC	W	G

Seth Nelson	Basler Electric	W	G
John Grimm	Xcel Energy	W	G
Ron Farquharson	DNP Users Group and Mount Victoria Consulting	W	G
Erin Morales	IEEE	W	G
Rossella Mariotti-Jones	Bonneville Power Administration	W	G
Alex Apostolov	OMICRON electronics	W	G
Mario Jardim - Schneider Electric	Schneider Electric	W	G
Craig Hiemenz	Great River Energy	W	G
Harsh Vardhan	GE	W	G
Charles Adewole	ERLPhase Power Technologies	W	G
Allen Morinec	FirstEnergy	W	G
Kevin Donahoe	GE Grid Solutions	W	G
Shashi Sastry	Hitachi ABB Power Grids	W	G
Dan Nordell	Xcel Energy	W	G
Dan Reckerd	Duke Energy	W	G
Jason Allnutt	IEEE	W	G
René Lord	Gentec	W	G
Xiangyu Ding	S&C Electric Company	W	G
Tom Hofstetter	NERC	W	G
Jean-Sebastien Gagnon - Vizimax	Vizimax	W	G
Jay Anderson	ComEd - Exelon Corp	W	G
Jason Lombardo	S&C Electric Company	W	G
Marc Benou	Iniven LLC	W	G
Jim Michaelis	Commonwealth Associates, Inc.	W	G
Mahendra Patel	EPRI	W	G
Dennis Holstein	OPUS Consulting Group	W	G
Priyanka Nadkar	Schweitzer Engineering Labs	W	G
Deryk Yuill	iS5 Communnications	W	G
M:Member CM: Corresponding Member G: Guest			

Item no.	Notes	Action by
CALL TO ORDER	Called to order at 10:20 AM CST.	
INTRODUCTIONS AND QUORUM	Attendance with first and last names was noted on the WebEx Participants list. Attendance was 59 – with 18 members and 41 guests. Quorum Achieved: Yes! (18 of 21 members)	
CALL FOR PATENTS	N/A Not a standards meeting	
CHAIR'S REMARKS	Chair Kunsman welcomed the participants to SC meeting.	

Item no.	Notes	Action by

AGENDA APPROVAL	Agenda:
	  1. Introduction
	  2. Roll Call/Quorum
	  3. Approval of Agenda
	  4. Approval of Previous Minutes
	  5. S0 Group Minutes and Roster Reminder
	  6. S0 SC Working Group/Study Group/Task Force Summary & Status
	  7. Old Business
	  8. New Business
	  9. Announcements
	  10. Adjournment
	
	Laughner moved to approve the agenda as prepared; Thibodeau seconded. The agenda was approved with no dissent.	

APPROVAL OF PREVIOUS MINUTES	September 2020 meeting minutes were briefly reviewed. Johnson moved to approve the minutes as prepared; Thibodeau seconded. The minutes were approved with no dissent.	
S0 Group Minutes and Roster Reminder	a) Summary minutes to be provided to SC officers immediately after this meeting. b) Detailed minutes to be provided to SC officers within 2 weeks after your group meeting. c) Meeting notice and WG/TF/SG agenda to be sent to S0 Chair 2 weeks prior.	
S0 SC Working Group/Study Group/Task Force Summary & Status	Note: room sizes and conflicts were not captured. Conflicts will be collected in December when the January JTCM schedule is being developed.	
WG S1	**Revision of IEEE 1686 IED Cyber Security Capabilities** **Chair:** Marc Lacroix **Vice-chair:** Éric Thibodeau **Secretary:** **Scope:** The standard defines the functions and features to be provided in intelligent electronic devices (IEDs) to accommodate cybersecurity programs. The standard addresses security regarding the access, operation, configuration, firmware revision and data retrieval from an IED. Confidentiality, integrity and availability of external interfaces of the IED is also addressed. **Status:** S1 met on Monday morning with 11 members (quorum met) and 11 guests. The WG finalized the comment review. Once the WG has had a chance to review the final version, the standard will be ready to go to ballot. See New Business for motions.	

Item no.	Notes	Action by
WG S2	**P1711.1 Serial SCADA Protection Protocol (SSPP)** **Chair:** Ed Cenzon **Vice-chair:** **Secretary:** **Scope:** This standard defines the Substation Serial 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:** Summary: • For Standard 1711: The PAR Extension has been granted until 12/2022. The draft document is in progress, expected to be ready for WG review by the end of Feb 2021 • For Standard 1711.1: The draft will be distributed to the WG for comments, end Jan 2021. Once comments are processed, the WG will discuss the move to ballot, March 2021. The Chair will complete housekeeping tasks (iMeet Central Workspaces and 123signup) for 1711 and 1711.1. WG members and CMs should review and discuss at regular (monthly) teleconferences to be scheduled by chair.	
WG S3	**P2030.102.1 Standard for Interoperability of IPSEC Utilized within Utility Control Systems** **Chair:** Jim Bougie **Vice-chair:** Marc Lacroix **Secretary:** James Formea **Scope:** This standard specifies requirements for interoperability of devices utilized within utility control systems which implement the Internet Protocol Security (IPsec) protocol suite within an IPv4 environment. **Status**: Standard complete – in final professional editing phase	

Item no.	Notes	Action by
WG S5	**Revision of IEEE C37.240 Cybersecurity Requirements for Power System Automation, Protection and Control Systems** **Chair:** Steve Kunsman **Vice-chair:** TW Cease **Secretary:** **Scope:** Revision of IEEE C37.240 to included new technical requirements for power system cyber security. Based on sound engineering practices, requirements can be applied to achieve high levels of cyber security of automation, protection and control systems independent of voltage level or criticality of cyber assets. **Status:** WG S5 met on Tuesday at 3:30 central with a quorum 14 of 27 members. During the September meeting, Craig Preuss recommended to convert the document structure according to the NIST Cyber Security Framework to align with other IEEE standards (e.g. 1547.3) and provide a consistency to the NIST documents. Craig graciously accepted the draft restructuring assignment and made a huge effort to develop the new requirements structure organized by the main security functions: Identify (ID), Protect (PR), Detect (DE), Respond (RS) and Recover (RC). The majority of the WG meeting focused on the restructuring intent and reviewing the new chapter for the Identify requirements and clauses. The last order of business discussed the C37.240 PAR expiration on 12/31/2021. The effort and time to restructure the document will require significant effort and thus a PAR extension will be required. A motion was put to the WG members to extend the PAR by 2 years. The WG voted and approved this motion and we therefore request a S0 Subcommittee motion to accept the PAR extension to 12/31/2023. WG S5 will meet monthly starting in February and will commence with a feedback session on the initial restructuring draft and then move to assign security function owners to drive the content development. S5 will requires a single session for May's meeting (virtual or in person).	
TF S6	**IoT for connected home - Communication and cybersecurity requirements** **Chair:** Marc Lacroix **Vice-chair:** James Formea **Secretary:** **Scope:** To produce a report that describes the different use cases that make use of the Connected Homes concept, presents a security risk analysis and propose requirements for telecommunication (Volume, frequency, speed) and cybersecurity. Guidelines for utilities experts will be listed. **Status:** *Did not meet. Will likely request group to be disbanded at May meeting.*	

Item no.	Notes	Action by
WG S7	**WG S7: P2808 Function Designations used in Electrical Power Systems for** Cyber Services and Cybersecurity ~~Function Designations~~ **Chair:** Nathan Wallace **Vice-chair:** Mike Dood **Secretary:** Deepak Maragal **Scope:** This ~~working group explores~~standard applies to the ~~need for and creation~~definition of ~~cyber device~~ function ~~numbers, acronyms, and~~ designations for cyber ~~devices and functions used in electrical power systems. This work focuses on identifying and providing a means for documenting enabled cyber~~-related services, and cybersecurity ~~functions~~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:** Attendance at the meeting was 18 Total, 11 Members, 7 Guests. It was determined that a UML structure is the best approach for creating an underlying data model for objects and the associated attributes. Tasks ahead for the working group is to confirm schema for the UML data model. Once confirmed then determine how objects that are stored using this UML scheme will be represented on engineering design drawings. There are different types of design drawing that have been discussed. Meetings before the May meeting are planned to be monthly virtual meetings, scheduled following a Doodle poll to determine an appropriate time.	
WG S8	**WG S8: P2658 Guide for Cybersecurity Testing in Electric Power Systems** **Chair:** Nathan Wallace **Vice-chair:** Deepak Maragal **Secretary:** **Scope:** This ~~task force explores the need~~document provides test guidance for ~~and creation of policies and procedures for the testing and commissioning of~~ cybersecurity controls ~~and measures~~ used in ~~electrical~~electric power systems. The guide encompasses testing and verification of cybersecurity services, applications, and controls, including end-to-end testing. **Status:** Attendance at the meeting was 29 Total, 10 Members, 19 Guests. A solid draft is underway in iMeet with multiple contributions from members. The document outline and the Types of Testing (categories) has been finalized. A framework for applying the tests is also underway that includes a matrix for considering the environment in which one is carrying out the tests. Next steps for the working group are to create a common structure to use in the document for each test, create language for the matrix, continue with content creation and review. Meetings before the May meeting are planned to be monthly virtual meetings, scheduled following a Doodle poll to determine an appropriate time.	

Item no.	Notes	Action by
TF S9	**TF S9: Task Force on Utility IT-OT Cybersecurity challenges in roles and terminology**	
	Chair: Theo Laughner **Vice-chair:** Brian Smith S**ecretary:**	
	Scope: Assess the IT-OT challenge in Utility Cybersecurity roles. Determine if a Task Force is required to create a report to assist in building organizational understanding and collaboration	
	Status: Virtual meeting held on 1/11/2021 @ 9:10 CST with 24 Members and Guests in attendance. Action items from last meeting were reviewed. Document chapter chairs who were present provided updates. It was noted that Mike Doak can no longer participate in PSCCC. A replacement is needed for his document section. Theo (Chair) requested meetings be held every two weeks on Tuesday 2PM EST to accelerate deliverables. Upcoming conferences were discussed for outreach for additional support.	
TF S10	**TF S10: Utility & Municipality Challenges on Analyzing and Implementing Cybersecurity Standards and Best Practices**	
	Chair: Jeff Pack **Vice-chair:** Steve Mark **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: The task force held its third meeting with Jeff Pack as chair. Steve Mark was unavailable to attend.	
	The group attendance was 29 - five members (4 from the first meeting and chair) and 24 guests. The meeting focused on completing the definition of the report elements and completing writing assignments. There was continued discussion on the structure of the applicability matrix and the overall layout of the report. These will be defined for review during our next meeting or via iMeetCentral. We will continue to strive to make the focus more international rather than U.S. as well as best practices rather than only compliance.	
TF S11	**Task Force on Roadmap Development**	
	Chair: Theo Laughner **Vice-chair:** Ralph Mackiewicz **Secretary:**	
	Scope: Develop a roadmap for activities that S Subcommittee should undertake related to communication security issues.	
	Status: *Did not meet.* Discussion in the Subcommittee meeting centred around clean-up activities for the TF, including finalizing the report and capturing data for future use. The concept of periodically revisiting the topic either specifically for S0, or for a broader PSCCC activity (for example, as part of A6 Long Range Task Force).	
	Once the clean-up activities are complete, the TF can be moved to *Inactive* status, likely at the May meeting.	

Item no.	Notes	Action by
WG S13	**Review 1547.3 Guide for Cybersecurity of DERs Interface with Electric Power Systems** **Chair:** Tony Johnson **Vice-chair:** R. Benjamin Kazimier **Secretary:** **Scope**: To jointly develop 1547.3 with SCC21. **Status:** Reviewed the progress of the document and the established sub teams. Next meeting with be the Week of Feb. 22. 33 people were in attendance.	
SG S14	**Study Group on HTTPS and TLS Exploration** **Chair:** Steve Kunsman **Vice-chair:** Shashi Sastry **Secretary:** **Scope:** *tbd* **Status:** SG S14 had its first meeting on Monday at 11:30 central with 30 attendees. The SG purpose was driven from the S0 Roadmap prioritization and the interest to investigate HTTP and TLS in power system applications. Shashi Sastry provide background on HTTPs and TLS and potential substation applications. The SG also reviewed the proposed assignment and agreed to run the SG for one more session to prepare a recommendation on moving to a TF to the S Subcommittee. The intent is to create a TF focused on preparing a report that would be useful today for the OT community outlining when and where to use HTTP/TLS and also importantly where not to utilize. Herb Falk discussed the NERC activity and the IEC proposal around encryption and end-to-end authentication and the need to consider this aspect. After TF report completion, the group would explore moving to a WG to develop a Guide or Recommended Practice. Not moving directly into a WG provides the industry a quicker output on this application and also allows time for the industry efforts (e.g. NERC) to solidify their position. SG S14 will require a single session for May's meeting (virtual or in person).	

Item no.	Notes	Action by
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** **Chair:** Jay Anderson **Vice-chair:** Shane Haveron **Secretary:** 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 WG met on Tuesday 01/12/2021 at 01:10 with 46 total attendees, of which 19 volunteered to be Members and 3 corresponding members, with the rest either as guests or not expressing a participation preference. This was the first official meeting, so we had a Quorum by default. The copyright slides presentation started a conversation on obtaining permission to use the relevant IEC Standards; Ralph Mackiewicz provided a letter that he had prepared for a similar purpose for H44. Those attending focused on the following topics: 1. Dean Ouellette volunteered to be Secretary for the WG. 2. File and information sharing, including file format issues, was discussed. S15 has iMeet space. 3. Alex Apostolov suggested proposing a Profile in the Guide. 4. The target audience was discussed; comprehensive knowledge of the relevant standards might not be assumed. Herb Falk and Craig Preuss will begin a writing assignment to describe basic security profiles. 5. We discussed other potential reference documents we may need and will try to set up one or more WebEx's prior to the May meeting. For the next meeting: expect WebEx space for 45, single session. Try to avoid conflicts with P1, H50, and H44.	
SG S16	**SG S16:** **Study Group on Application of IDS and IPS to Electric Power Systems** **Chair:** Eugenio Carvalheira **Vice-chair:** Eric Thibodeau **Secretary:** **Scope**: *tbd* **Status:** *Did not meet*	
Old Business	1. The S6 Task Force *Report IoT for Connected Home – Communication and Cybersecurity Requirements* distributed via email on 9/24/2020, and re-transmitted earlier this week. It was noted that the report uses the words "shall" and "should" which may be inappropriate for use in technical reports. This was not noted as impeding approval, but future reports should be reviewed for requirements language to forestall any issues. **MOTION**: Approve the TF S6 report. Motion by Johnson, seconded by Mackiewicz. Motion passed with no dissent.	

Item no.	Notes	Action by

New Business	1. WG S5 requested an extension to their PAR. The present C37.240 PAR expires 12/31/2021. Migration of remaining document into new framework will require significant WG effort. The document restructuring into the NIST Cyber Security Framework (CSF) will provide:
	  • Consistency to other IEEE standards utilizing NIST CSF
	  • Document is restructured by separate clauses for each NIST function:
	    • Identify, protect, detect, respond, recover
	  • Similar look and feel to NIST CSF format allow for easier adoption
	
	Migration of standard into the new framework will require significant WG effort.
	
	MOTION: WG S5 motion to S0 Members to approve WG S5 2-year PAR Extension Request to complete work by December 31, 2023. Moved by Haveron, Seconded by Mackiewicz. Motion approved with no dissent.
	
	2. WG S1 is nearly complete with its work and is almost ready to start SA balloting. Two motions were made to start the process:
	
	MOTION: Move to form a Ballot Pool on condition of approval by WG of final version. Motion by Mackiewicz, seconded by Kunsman. Motion passed with no dissent.
	
	MOTION: Move to approve the WG to go to SA ballot, contingent upon the WG gaining final approval for the draft. Motion by Johnson, Second by Mackiewicz. Motion passed with no dissent.	

General Discussion		
Announcements:	1. 123Signup is being rolled out and will be used after this meeting. Additional information will be provided in the MC meeting. 2. Chairs must provide an updated roster with the meeting minutes within 2 weeks. 3. Chair Kunsman announced that his tenure as S0 chair will be over as of the end of the January meeting. Vice-Chair Mix will take over as chair, and the new Vice Chair will be Theo Laughner.	
ITEMS REPORTED OUT OF EXECUTIVE SESSION	N/A	
TIME OF FINAL ADJOURNMENT	Mackiewicz motioned to adjourn; seconded by Thibodeau, No dissent. Meeting adjourned at 11:37 PM CST.	
NEXT FACE TO FACE MEETINGS	May 2021, most likely Virtual	
FUTURE MEETING ROOM REQUIREMENTS	[Room Size=40] [Projector=YES] [Conflicts=H SC, P SC]	