



PSCC Subcommittee [Working/Study Group, Task Force] Meeting Minutes

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| Designation: S15 | | Name: 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 | | | |
| Meeting Location: Teleconference | | Meeting Time: 1:10 PM | Meeting Date: 2021/05/04 | Minutes Revised: [2021/09/21] | Minutes Approved: [2021/09/21] |
| PAR Output: New | PAR Output: Guide | PAR Approval Date: 2021/02 | PAR Expiration Date: 2025/12 | Target Sponsor Ballot Date: 2023/11 | Target Completion Date: 2024/05 |
| Presiding Officer: Jay Anderson, Shane Haveron, Dean Ouellette | | | Recorded by: Dean Ouellette | Draft Number: 2.0 | |
| Attendance: | | | | | |
| Name | | Affiliation | | Attending via Phone (P) / Web (W) or Local (L) M/CM/G | |
| Jay Anderson | | Com Ed | | W | M |
| Shane Haveron | | Ametek | | W | M |
| Dean Ouellette | | RTDS | | W | M |
| Charles Adewole | | ERLPhase Power Technologies | | W | M |
| Alex Apostolov | | PacWorld | | W | M |
| James Bougie | | GPT | | W | M |
| Eugenio Carvalheira | | OMICRON | | W | M |
| Nestor Casilla | | Doble Engineering | | W | M |
| David Dolezilek | | SEL | | W | M |
| Michael Dood | | Schweitzer Engineering Labs | | W | M |
| Herb Falk | | Outside the Box Consulting Services, LLC | | W | M |
| Colin Gordon | | SEL | | W | M |
| Mital Kanabar | | GE | | W | M |
| Nicholas Kraemer | | NuGrid Power Corp | | W | M |
| Marc Lacroix | | Marc Lacroix | | W | M |
| Karen Leggett Wyszczelski | | SEL | | W | M |
| Scott Mix | | Pacific Northwest National Laboratory | | W | M |
| Priyanka Nadkar | | SEL | | W | M |
| Bharat Nalla | | SEL | | W | M |
| Madhab Paudel | | Eaton | | W | M |
| Craig Preuss | | Black & Veatch | | W | M |
| Craig Preuss | | Black & Veatch | | W | M |
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| Xiangyu Ding | | S&C Electric Company | | W | CM |
| Jean-Sebastien Gagnon | | Vizimax | | W | CM |
| Jalal Gohari | | Parsons Brinckerhoff | | W | CM |
| Yanfeng Gong | | SEL | | W | CM |
| Jason Lombardo | | S&C Electric Company | | W | CM |
| Yuchen Lu | | EPRI | | W | CM |
| Steel McCreery | | OMICRON | | W | CM |
| Jeff Pack | | POWER Engineers, Inc. | | W | CM |
| Farnoosh Rahmatian | | NuGrid Power Corp | | W | CM |
| Deryk Yuill | | iS5 Communications | | W | CM |

Minutes of meeting (continued)

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| Galina Antonova | ABB | W | G |
| Jim Campbell | Southern Company | W | G |
| Mario Capuozzo | Doble Engineering | W | G |
| Jack Chang | Hitachi ABB Power Grids | W | G |
| Jeff Dagle | PNNL | W | G |
| David Harrill | ComEd | W | G |
| Anthony Johnson | SCE | W | G |
| Farzad Khalilpour | Southern California Edison | W | G |
| Tim Mathias | Basler Electric | W | G |
| Jim Michaelis | Commonwealth Associates | W | G |
| Krish Narendra | Electric Power Group | W | G |
| Ryan Newell | TRC | W | G |
| Jason Pannell | University of Saskatchewan | W | G |
| Juan Placid | J J Power & Energy Inc. | W | G |
| Jesse Silva | Southern California Edison | W | G |
| Dustin Tessier | TESCO Automation | W | G |
| Nathan Wallace | Cybirical | W | G |
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| M: Member CM: Corresponding Member G: Guest | | | |

| Item no. | Notes | Action by |
|-------------------------------------|---|--------------------------|
| CALL TO ORDER | Jay Anderson presided over the meeting; Shane Haveron the vice-chair was present as well as Dean Ouellette the secretary. Jay asked if anyone objects to the meeting being recorded, no one objected. | Jay |
| INTRODUCTIONS AND QUORUM | Officers were introduced. Establishment of a quorum. Attendance: 22 Voting Members 10 Non-Voting Members 17 Guests Total: 49 Note: 24 persons have indicated that they wish to be voting members, including those that expressed a preference at or following the January meeting. | Jay |
| CALL FOR PATENTS | Patent slides were shown | Jay |
| CHAIR'S REMARKS | The approved project scope of was reviewed. | Jay |
| AGENDA APPROVAL | The agenda was approved | Scott motion Alex 2nd |
| APPROVAL OF PREVIOUS MINUTES | Motion to approve minutes from last meeting | Dean Motion Alex 2nd |
| [AGENDA ITEM 1] | | Jay |

Minutes of meeting (continued)

| Item no. | Notes | Action by |
|--|---|--|
| [AGENDA ITEM 2] | Reference material is available in iMeet Central for standards development for this group only. | Jay |
| [AGENDA ITEM 3] | Discussion about macros enabled or not. Herb Falk will not use macros. Marc Lacroix said to use a template without macros as he does in the MAC OS. Tony Johnson suggested letting members submit documents that do not have macros and have the editor(s) in the group merge the contributions into the SA-approved templates. WG officers will figure it out. | Jay |
| [AGENDA ITEM 4] | <p>Herb Falk contributed a document on the threat vectors of GOOSE and SV and how 62351 mitigates those threats.</p> <p>from Colin Gordon SEL to everyone: 1:48 PM</p> <p>In the list of threats do you have stale data attacks (frames held back past useful lifetime)? Herb did not include this.</p> <p>The subscribers have mechanisms to deal with this, using TATL and smprate/smpcnt</p> <p>from Colin Gordon SEL to everyone: 2:00 PM</p> <p>Sorry guys my VPN is terrible right now - "time boundary delay protection" is another way I've heard it referenced.</p> <p>Herb suggested that we add this to the document.</p> <p>Shane asked if threats are the same for layer 2 versus layer 3. Herb think they are the same.</p> | |
| [AGENDA ITEM 5] | A section to expand on how 62351-9 was designed for testing. i.e. the KDC allows a test system to be a member of the group that is allowed to participate in the secured network. | |
| [AGENDA ITEM 6] | How is the resiliency designed into a properly secured GOOSE/SV network (Physical security is not part of 62351-9) | |
| [AGENDA ITEM 7] | <p>1588 PTP is important but out of scope.</p> <p>from Colin Gordon SEL to everyone: 2:06 PM</p> <p>1588-2019 Draft mentions IPsec and MACsec for securing PTP</p> | |
| [AGENDA ITEM 8] | Alex mentioned functional security and will provide some more information. Herb suggested that we promote something that is useful (Herb and Alex will discuss) | |
| [AGENDA ITEM 9] | | |
| ITEMS REPORTED OUT OF EXECUTIVE SESSION | | |
| TIME OF FINAL ADJOURNMENT | Motion to adjourn at 2:20 pm | Dean motioned to adjourn, Nicholas 2nd |
| NEXT FACE TO FACE MEETINGS | virtual | |
| FUTURE MEETING ROOM REQUIREMENTS | Avoid H50, S15, H44, H47, C33, S2 | |

