

**IEEE Power and Energy Society  
PSRC Annual Report 2017**

**January 8, 2018**

**Power System Relaying and Control Committee**

**Chair: Pratap Mysore**

**Vice-Chair: Russ Patterson**

**Secretary: Murty Yalla**

**I. Significant Accomplishments in 2017**

**A. Created a new PES Committee: Power System Communications and Cybersecurity Committee. Effective January 1, 2017 PSRC was renamed to Power System Relaying and Control Committee.**

**B. Standards, Guides & Reports Approved and Published in 2017**

- 1. C37.94 revision: Standard for N times 64 kbps Optical Fiber Interfaces between Teleprotection and Multiplexer Equipment.**
- 2. C37.238 revision: Standard Profile for Use of IEEE 1588 Precision Time Protocol in Power System Applications.**
- 3. C37.241 revision: Guide for Application of Optical Instrument Transformers for Protective Relaying.**
- 4. C37.246 revision: Guide for Protection Systems of Transmission to Generation Interconnections.**
- 5. C37.248 revision: Guide for Common format for Naming Intelligent Electronic Devices (COMDEV).**
- 6. C57.13.1 revision: Guide for Field Testing of Relaying Current Transformers.**
- 7. New Standards for Smart Grid Initiative:  
C37.118.1 and C37.118.2; C37.232; C37.236, C37.238; C37.239, C37.242, C37.243, C37.244 all Published.  
In process: C37.237 Recommended Practice For Time Tagging of Power System Protection Events**

**C. Presentations made at PES General Meeting; JTCM; Western, Georgia Tech, and Texas A & M Protective Relay Conferences:**

- “Summary paper for C37.243 IEEE Guide for Application of Digital line Current Differential Relays using Digital Communications”.**
- “What’s New in C37.113-2015 IEEE Guide for Protective Relay Application to Transmission Lines”.**

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- “Summary Paper of PSRC Report: Communications Technology for Protection Systems”.
- D. PSRC Publications completed & posted on web site:
  - Report on “Role of Protective Relaying in the Smart Grid”.
  - Report on “Commissioning Testing of Protection Systems.”
  - Report on “Avoiding Unwanted Reclosing on Rotating Apparatus (Auroral)”.
- E. Supported PES meetings:
  1. PES T & D Conference: 29 conference and 16 transaction papers presented.
- F. Mark Siira, Ratan Das and Bruce Mackie conducted three Webinar presentations, and Cathy Dalton generated one article for Pac World magazine.
- II. **Benefits to Industry and PES Members:**
  - A. These activities keep our industry up to date with technology, improve power system reliability, and help solve the most common protective relaying problems.
  - B. We are working on cybersecurity and synchrophasor standards with NERC, PES and IEC. We have one more standard to finish for more consistent Smart Grid performance and dependability. We are addressing grid stability with guides and standards in protection, control and communication.
  - C. Our meetings allow significant interaction between the PSRC, NERC, CIGRE, IEC and PES to share our interest, knowledge, and accomplishments.
- III. **Benefits to Volunteer Participants:**

72 Working Groups and Task Forces provide fertile ground for participants to increase their personal knowledge. Their companies enjoy more personal productivity from their employees, and contribute to the standards and practices of our industry.
- IV. **Outstanding Performance Recognition:**
  - A. IEEE Herman Halperin Electric Transmission and Distribution Award to George Dorwart Rockefeller.
  - B. IEEE Fellows: William Dickerson, Xinzhou Dong, Veselin Skendzic.
  - C. PSRC Working Group Recognition Award—Technical Report to Andre Uribe, Chair and Co-Chair Malcolm Swanson, for “Quality Assurance for Protection and Control Design”.

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- D. PSRC Working Group Recognition Award for Outstanding Standard or Guide to Solveig Ward, Chair and Vice Chair Bruce Mackie, for C37.243, “Guide for the Application of Digital Line Current Differential Protective Relays Using Digital Communications”.
- E. PES and PSRC Prize Paper Award to Ratan Das, Chair and Vice Chair Mital Kanabar, for “Centralized Substation Protection and Control”.
- F. PSRC Recognition Award for Outgoing Subcommittee Chairs to Jim O’Brien and Gary Kobet.
- G. PSRC Certificates of Appreciation to Chairs of Completed Working Groups: Bruce Mackie, Joe Uchiyama, Mike Reichard, Ratan Das, Roger Whittaker, Jim Niemira and Marc Benou.
- H. PSRC Distinguished Service Awards to Mike McDonald and Ratan Das.
- I. PSRC Career Service Award to Malcolm Swanson.
- V. Coordination with Other entities:
  - A. IEEE Standards Association Board of Governors: Phil Winston serving.
  - B. IEC TC 95: Murty Yalla serving as chair.
  - C. IEC TC 95, IEC standard 60255-187-1 supported by PSRC WG K19, Gustavo Brunello, chair.
  - D. IEC TC 95, IEC standard 60255-187-3 supported by PSRC WG D34, Norman Fischer, chair.
  - E. IEC TC 95 Joint WG 1, developing IEC Standard 60255-188-1, Synchrophasor Standard, chaired by Ken Martin.
  - F. IEC TC 57: WG 10 continues to develop IEC 61850 Edition 2.1. Convenor is Christoph Brunner.
  - G. IEC TC 95: Eric Udren is Technical Advisor to USNC.
  - H. CIGRE B5.53 Work in progress. Chairman is Alex Apostolov.
  - I. PSRC regularly met during 2017 with several subcommittees of the Substation and Power Systems Communications committees.
  - J. PSRC participated in the PES JTCM for the tenth year.
  - K. PSRC is in consistent liaison with NERC, IEC, EPRI, CIGRE and IAS.
  - L. Through PES Officers, a Task Force on Inverter Based Generation Low Short-Circuit Impact has been created in conjunction with NERC. It is led by Kevin Jones and Gary Kobet from PSRC, and Pouyan Pourbeik from PSDP. The purpose is to create a guidance document concerning gaps in standards and reports.

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- VI. New Technologies of Interest:**
  - A. Cybersecurity.**
  - B. Wide range grid data collection with Synchrophasors.**
  - C. Smart Grid Initiatives.**
  - D. Grid stability under stressed conditions.**
- VII. Significant Plans for 2018:**
  - A. January 8-11: JTCM in Jacksonville, FL**
  - B. Other PSRC meetings: May in Pittsburgh, PA; September in Minneapolis, MN.**
  - C. Joint meetings with subcommittees of Substations and Communications Committees.**
  - D. PSRC will continue to support the new Power System Communications and Cybersecurity Committee, and meet with them jointly.**
  - E. PSRC will participate in paper sessions and session sponsorships at PES meetings in 2018.**
- VIII. Global Involvement:**
  - A. Total number of attendees from Regions 8, 9, 10: 7**
  - B. Total number of Main Committee members from Regions 8, 9, 10: 3**
  - C. Officers from Regions 8, 9, 10: 0**
  - D. Subcommittee Officers from Regions 8, 9, 10: 0**
  - E. Subcommittee Members from Regions 8, 9, 10: 3**
- IX. Problems and Concerns:**

**None**

Submitted by: Pratap Mysore

January 10, 2018