

# IEEE Synchrophasor Related Activities at Power System Relaying and Control Committee (PSRC) and Power System Communications and Cybersecurity Committee (PSCCC)

NASPI 2024 Spring Meeting

Salt lake City, Utah

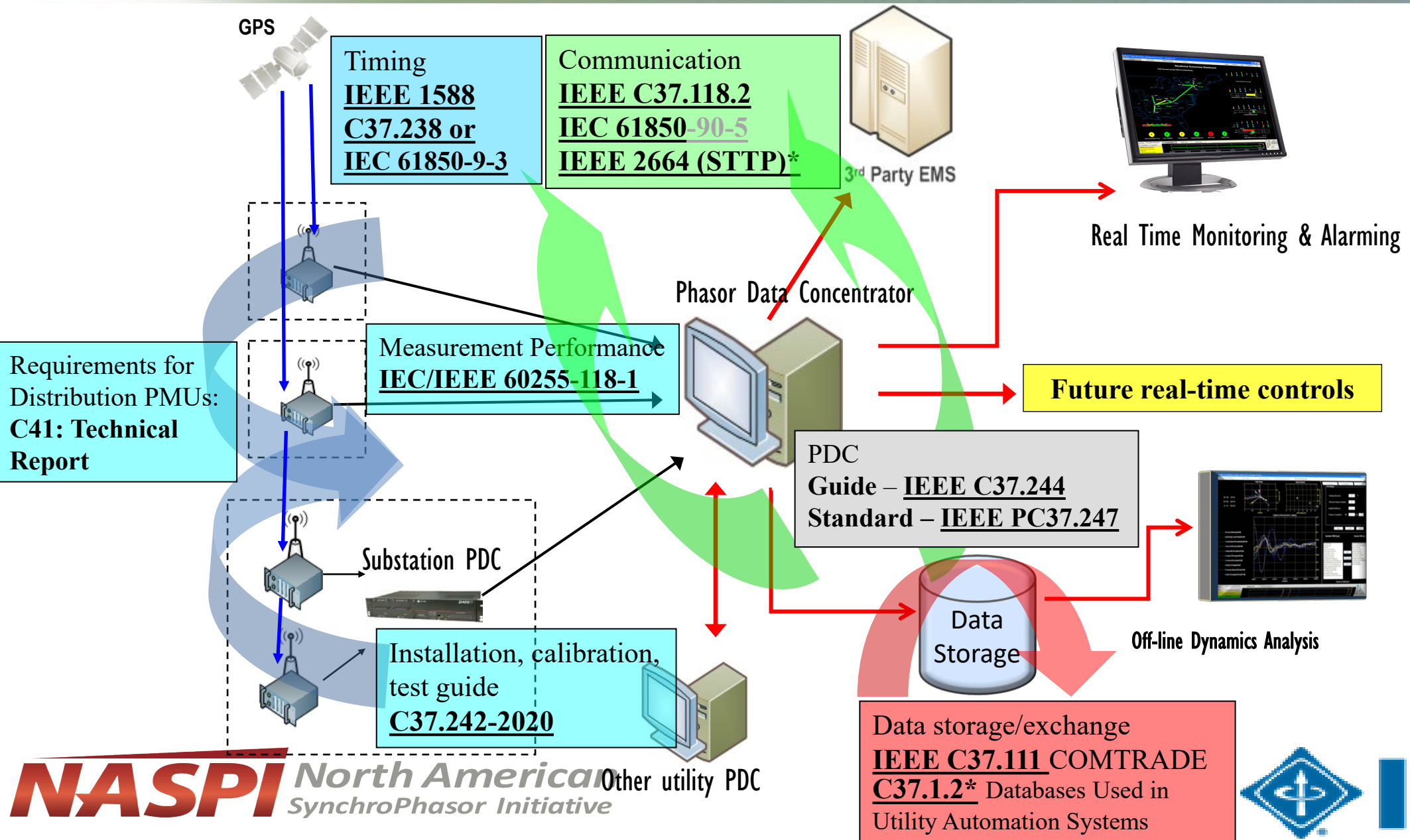
April 16-17, 2024

Presented by: Yi Hu

# IEEE PSRC/PSCCC January 2024 Meeting Report

- One in-person PSRC and PSCCC meeting were held since NASPI's September 2023 meeting
  - IEEE PES Joint Technical Committee Meeting (JTTCM, New Orleans, LA, January 7-11, 2024)
- At the PSRC WG C23 meeting
  - Jeff Dagle overviewed NASPI current activities as of September 2023 and informed attendees about the April 2024 NASPI meeting
  - A discussion whether IEEE should start any standardization activities related to synchronized measurement data
    - Consensus is that PSRC should start a task force to investigate this need
    - Will discuss and create an assignment statement for the task force at PSRC/PSCCC May 2024 meeting

# Overview of Standards for Synchrophasor Measurement Systems



# Current Related Activities at IEEE PSCCC

Lead By	Activity Description	Status
PSCCC WG P1	Amend IEEE C37.233 “Standard Profile for Use of IEEE 1588 Precision Time Protocol in Power System Applications” – Adding a TLV to indicate the latest IERS-specified UTC Leap Second Event.	In comment resolution process after the recirculation
PSCCC WG P9	Revise the IEEE C37.118.2 standard “Synchrophasor Data Transfer for Power Systems”	In comment resolution process after completed the first-round ballot
<b>PSCCC WG P10</b>	<b>Develop an IEEE standard 2664 for Streaming Telemetry Transport Protocol (STTP)</b>	<b>The ballot has been completed. It will be published soon</b>
PSCCC WG P20	Joint Revision of IEC 61850-9-3 for timing requirements	Review/discuss latest draft revision
PSCCC WG S5	Revise IEEE C37.240 standard “Cybersecurity Requirements for Power System Automation, Protection and Control Systems”	Considered a motion to go inactive at the May 2023 meeting
PSCCC WG S8	Develop an “IEEE Guide P2658 for Cybersecurity Testing in Electric Power Systems”	Draft development
PSCCC WG S15	Develop an “IEEE Guide for Securing GOOSE and SV Protocols of IEC 61850 using IEC 62351-6 and IEC 62351-9”	In the draft development process

# Current Related Activities at IEEE PSRC

Lead By	Activity Description	Status
PSRC WG C23	Coordinate synchrophasor related activities at NASPI and IEEE	On-going
PSRC WG C40	Develop a tutorial for C37.247 "IEEE Standard for Phasor Data Concentrators for Power Systems"	Ready to present, looking for a venue
PSRC WG C41	Develop a report summarizing measurement performance requirements for PMUs in distribution system applications	Draft development
PSRC WG C46	Prepare a summary transactions paper for C37.242 "IEEE Guide for Synchronization, Calibration, Testing, and Installation of Phasor Measurement Units (PMUs) for Power System Protection and Control"	Paper has been accepted for publication on "IEEE Transactions on Power Delivery"
PSRC WG H40	Develop an "IEEE Guide for Databases used in Utility Automation Systems" (C37.1.2) that has an annex on Synchrophasor Data Recording	Will form a ballot pool by January 2024
PSRC WG H50	Develop a report to document requirements for time sources (clocks) in protection & control systems	Draft development
PSRC WG H54	Revise IEEE C37.111-2013/IEC 60255-24:2013 Standard for Common Format for Transient Data Exchange (COMTRADE)	Draft revision document development

# Current Of-Interest Activities at IEEE PSRC

Lead By	Activity Description	Status
PSRC WG C43	Develop a report on “Practical Applications of Artificial Intelligence and Machine Learning in Power System Protection and Control”	1st version published 9/21/23, 2nd version development started
PSRC WG D45	Develop a report on “Protection Methods to Reduce Wildfire Risks due to Transmission and Distribution Lines”	Draft development
PSRC WG H44	Develop C2030.100.1 “IEEE Guide for Monitoring and Diagnostics of IEC 61850 GOOSE and Sampled Values Based Systems”	Draft development
PSRC WG H45	Develop C37.300 “IEEE Guide for Centralized Protection and Control (CPC) Systems within a Substation”	In comment resolution process after the first-round ballot
PSRC WG H51	Revise IEEE C37.239-2010 “Standard on a Common Format for Event Data Exchange (COMFEDE)”	Did not meet in September 2023.
PSRC WG H52	Revise IEEE C37.232 “Standard for Common Format for Naming Time Sequence Data Files (COMNAME)”	In the process of gathering inputs on areas to revise
PSRC WG I26	Recommend updating/expanding mathematical models of instrument transformers/transducers, including interface electronics such as merging units, for use in off-line and real time transient simulation.	In comment resolution after 1 subcommittee ballot

# Do You Have Any Recommended Activities for IEEE?

- IEEE PSRC and PSCCC are responsible for developing IEEE standards, IEEE guides, and IEEE recommended practices.
  - If you have identified any need for potential IEEE standard development work, please reach out to me – Will be happy to coordinate
- IEEE PSRC and PSCCC also develop many technical reports accessible at IEEE PES Resource Center (<https://resourcecenter.ieee-pes.org/>)

# Next PSRC/PSCCC Meetings

May 13 – 16, 2024

Buffalo, New York

September 9 – 12, 2024

Scottsdale, AZ 85250

<https://www.pes-psrc.org/meetings>



# Questions?

Yi Hu (IEEE PES PSRC WG C23 Chair)

[ychu@quanta-technology.com](mailto:ychu@quanta-technology.com)