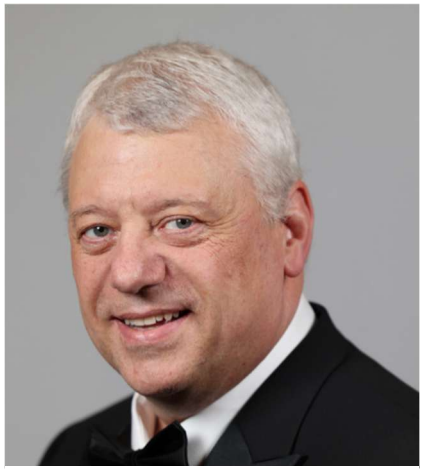
Metering Microgrids and Digital Twins
December 16, 2025, 7 am PST
Live Stream Seattle Washington

“You can’t improve what you don’t measure.”

Join us for a discussion on metering hardware, including instrument transformers and meter functionality that affects unit pricing. Typical parameters and sampling rates for both alarming and data collection. Onboard memory. Software dashboards and typical trending and reporting. Using meter data for a more accurate digital twin. Metering in a Microgrid, and Power Quality.



Matt Groom

BSEE, Maryland, 1991. MSEE, Drexel, 2018. MS Cybersecurity, Maryland, 2025. 6 years as a gas turbine startup engineer for GE. 3 years selling switchgear. 25 years with Schneider’s PowerLogic metering business in sales, application engineering, and as a federal metering and digital twin specialist. IEEE Senior Member; PE in DC, MD, VA; CEM certification by AEE/ANSI.

Register at:
https://www.microgridconsortium.com/event-details/metering-microgrids-and-digital-twins

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"Managing Operational Decisions using the Extended Digital Twins (XDT)"

In this presentation, we will walk through how Extended Digital Twins (XDT) can be used to manage and improve operational decision-making in complex environments. We will start by introducing a digital twin of a microgrid as our foundational model, then show how we enhance it with structured knowledge representation using Knowledge Graphs to create a Cognitive Digital Twin (CDT). From there, we will explain how semantic reasoning and orchestration extend the CDT into an XDT, enabling real-time interpretation of operational data and system behavior. Finally, we will discuss how this approach delivers continuous operational awareness at runtime, allowing leaders and operators to better anticipate conditions, evaluate options, and make informed, resilient decisions.

Mark Walker received his BSEE from Cal Poly University, Pomona (1990), and his MS CompEng from the University of Southern California, Los Angeles, CA (1994), where he specialized in machine intelligence. From 1976 thru 1983 he served in the U.S. Navy as a Reactor Operator onboard the U.S.S. Long Beach CGN9. His experience in Artificial Intelligence began in 1989 as a DOE Undergraduate Fellow at the Center for Engineering and Science Advanced Research Lab at Oak Ridge National Laboratory where he developed image processing and perception software for autonomous robots. www.eecomputing.com Mr. Walker's work with AI continued in the application of Health and Usage Monitoring Systems, (HUMS) and Prognostic Health Management (PHM). Mark pioneered work in this field beginning in 1996 with BFGoodrich Aerospace, Vergennes, VT, where he developed onboard health and state estimation algorithms for the Joint Strike Fighter and co-authored four patents in applied artificial intelligence. He also spent 6 years as Senior Consulting Engineer for expert system manufacturer Gensym Corporation, applying artificial intelligence and data analytics solutions to U.S. Government and commercial industrial mission critical situation awareness (SA) applications. A Leader Mark also served for 10 years as Lead Engineer, Intelligent Systems for General Atomics, where he led GA in the development of AI projects and reusable AI-powered Prognostics and Health Management systems applied to various industries, including U.S. Army UAV's and U.S. Navy's Aircraft Launch and Recovery Equipment. He founded D2K Technologies in 2014, a solution provider of intelligent model-based reasoning and data analytics solutions for mission critical systems. He also serves as a PHM and Autonomous.

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