OSIsoft.
Users Group
Transmission & Distribution
Scottsdale, AZ September 14-16, 2016

Location:
Hilton Scottsdale Resort & Villas
6333 North Scottsdale Rd
Scottsdale, AZ, 85250
480-948-7750

Agenda

Wednesday, September 14th

8:30 -9:30	The Role of Advanced DMS/SCADA Software and Systems in Building a Resilient and Reliable Power Distribution Grid *Newton Evans - Charles Newton; President of Newton-Evans Research Company*
9:30-11:30	APS Control Center Tour
11:30-1:00	Registration and Lunch Reception
1:00 -1:15	Welcome and User group Community Update *Carlos Arocho - TEP (T&D Chair)* *Kevin P Walsh - OSIsoft*
1:15 -1:45	**Keynote** *APS*
1:45 -2:15	PI System Roadmap/**OSIsoft** *OSIsoft - Stephen Kwan, Product Management*
2:15 -2:45	**Break**
2:45 -3:15	Promotion of PI AF Systems for Weekly Database Loads *ERCOT - Aaron Rosenthal, Operations Engineer*
3:15 -3:45	EMS/DMS/SCADA conductor update *OSIsoft - Giro Iuliano, Global Account Manager*
3:45 -4:15	**Break**
4:15 -4:45	Unlocking Grid Analytics using PI AF, Maps and Rosetta Stones *Peak RC - Dayna Aronson, Enterprise Solution Architect; Scott Stapels, Utilicast Consultant*
4:45 -5:15	Partner Introduction/Partners
5:30 -9:00	OSIsoft/Partner Demo Exhibition/Hospitality

Thursday, September 15th

7:30 –8:30	Breakfast Session (OSIsoft Updates and Q&A) *OSIsoft – Ted Gorrie VP*
8:30 –8:45	**Break**
8:45 –9:15	Dominion's Journey with The PI System *Dominion - Tao Xia, PhD, PE Consulting Engineer*
9:15 –9:45	The SyGMA lab powered by OSIsoft *UCSD – Professor Raymond de Callafon* *OSIsoft - Dr Chuck Wells PhD*
9:45-10:15	**Break**
10:15-10:45	APS Solar Partner Program and PI *APS - Sanket Adhikari; Program Consultant - Technology Innovation and Integration and* *Kurt Pager; IT Sys Analyst/Integrator Senior - Ops Information & Strategy*
10:45–12:00	Expanding Your System past just a PI Historian – An Updated 2016 plus Q&A *Triencon - Bruce McCamant*
12:00–1:30	**Lunch**
1:30 –2:00	PI Development @ PJM *PJM – Matthew Brady, Engineer and Kireet Dholareeya,* *Sr. OSIsoft PI Analyst/Developer*
2:00 –2:30	How TEP leverages PI to monitor its distribution system *TEP – Carlos Arocho and Douglas Hood*
2:30 –3:00	**Break**
3:00 –4:00	Condition Based Maintenance with PI AF working session plus Q&A *OSIsoft – Curt Hertler and Keith Pierce, PI Team*
4:00 –4:30	**Break**
4:30 –5:00	Closing and 2015 T&D Meeting *Carlos Arocho – TEP (T&D Chair)* *Kevin P Walsh – OSIsoft*
5:30 –9:30	OSIsoft Sponsored Offsite Dinner **Blanco, Tacos+Tequila**

Friday, September 16th

7:30 –8:30 Breakfast

8:30 –2:00 Training

1.Why do Integrators exist?

a. Solve a big problem with a particular data set

b. 21st Century IT integration

c. 21st Century reporting

2.What Integrators exist?

a.Overview of the current and plans for integrators

3.What does an Integrator actually do?

a.Walkthrough of the data flow and operations of an integrator

4.How are they implemented (architecture)?

a.May be combined with #3 into one topic

5.Integrator for BA demo

6.Integrator for ESRI demo (time and resources permitting)

List of Partners exhibiting -

activu - Activu delivers critical information to decision makers on video walls, desktops and mobile devices. Activu enterprise software gets the right information to the right people wherever they are, enabling universal information sharing and collaboration. Activu does this by providing integrated and automated viewing of information to form a common operational picture. Information is delivered to any networked location (video walls, conference room displays, user desktops and laptops) or mobile personnel to enable collaborative decision making at critical moments.

doble - Doble partners with electric power industry clients to minimize risk, improve operations and optimize system performance. Doble provides enterprise level solutions, engineering expertise, on-line and off-line diagnostic instruments, consulting and testing services, educational seminars and the world's premier library of electrical apparatus test data for the benefit of the global power industry. Doble prides itself on the knowledge we offer, including forums such as client conferences, seminars, and technical papers.

POWERRUNNER - PowerRunner provides energy companies with predictive and actionable analytics solutions that leverage operational data, localized weather data and market data to support enhanced operational decision management of critical business processes. PowerRunner's pointed business solutions are built upon a single source of business truth to support operational and commercial decision management across multiple business units within an energy company. PowerRunner's FORRunner predictive analytics solution is a micro forecasting engine supporting such functions as short and long-term analysis of DER integration. REVRunner analytics provides micro spatial and temporal revenue analysis including customer valuation and profit and loss analysis. RateRunner supports rate restructuring and decoupling scenario analysis from a single service point to whole company portfolios. These solutions, combined with PowerRunner's extensive use case library and roadmap of quantifiable value, bridges today's distribution paradigm to support future states of the transactive energy supply chain from grid operations through profit and loss analysis.

Seeq® - Seeq® enables organizations to get even more value out of their OSIsoft PI System data. Instead of hours of data wrangling, engineers using Seeq require just minutes to assemble, contextualize and organize their data, providing them with more time for analysis and reporting. The result is improved employee

productivity and insights that lead to better yields, margins, and product quality. Seeq is also well integrated into OSIsoft product offerings. In addition to easy connectivity with PI System servers, Seeq leverages your investment in Asset Framework, and at the conclusion of a report or investigation, Seeq worksheets may be exported to OSIsoft Coresight, Microsoft Excel, or PowerBI.

SISCO helps customers create value with open interoperable standards by delivering robust and secure solutions that foster interoperability in unique and innovative ways. We connect our customers to information using IEC 61850, CIM, COMTRADE, and ICCP-TASE.2 The SISCO CIM Adapter for PI AF uses an enterprise semantic model based on the IEC standardized Common Information Model (CIM) to organize PI data and manage tag naming for more flexible and agile applications and systems. The COMTRADE Utility automatically retrieves power system disturbance files from devices and associates them with Event Frames and PI AF assets enabling the OSIsoft PI System with a disturbance file event management system.

- Southwire Company, LLC is one of North America's leading utility solution providers with a reputation for leading innovation. Southwire provides a full range of products for utilities, including wire and cable, logistics services, engineering software and expertise. Their Intelligent Grid products incorporate OSIsoft products to offer end-to-end solutions: from hardware to monitor critical assets and legacy systems to software to analyze big data to optimize asset management, maintenance spending, generation dispatch, and power flow. Their systems empower utilities to make better decisions using real-time data.

- SUBNET Solutions Inc. is a software products company dedicated to serving the needs of the electric utility industry. SUBNET is making substations more intelligent through their unified grid intelligence solutions. SUBNET provides innovative interoperability solutions that combine the latest substation technologies with modern day networking and computing technologies enabling electrical utilities to build a smarter, more effective electricity grid. We create products that make your substations--and your overall power grid--more intelligent.

Presentation Abstracts

ERCOT - This presentation will showcase best practices in promoting AF (Asset Framework) models across multiple environments. A classic use case for this process occurs in enterprise environments utilizing a DTAP process (Development, Testing, Acceptance, Production) in their workflow. While AF is easily managed in a single-environment configuration, challenges arise when model or library changes in one environment must be promoted to another environment, particularly as the Asset Framework model and library configuration grow in size and complexity. ERCOT (the Electric Reliability Council of Texas) will present in-house solutions developed to solve these challenges, including: AF model building processes; detecting AF model changes; and applying CRUD operations (Create, Update, Delete) to promote AF model changes.

OSIsoft - Forum feedback on improving the data integration between your PI System and EMS/DMS/SCADA systems. An update on customer input and vendor response to driving the next generation of connectors for PI.

PeakRC - Using OSIsoft tools to manage the Power Grid. Peak RC has been a long-time OSIsoft customer. After vendor and custom solutions failed to meet their needs they found much of the answer was already in their toolbox. They took a huge step into the adoption of the Analytics and Visualization functionalities available to PI customers. By doing so, they are unlocking the value in their data and increasing the reliability of the Power Grid for the western half of the United States.

Dominion - Dominion Resources Services, Inc. - Electric Transmission & Distribution business (aka Dominion Virginia Power) have adopted the OSIsoft PI System Enterprise Licensing Agreement for its core data infrastructure technology that will transform its business operations and best practices. This informative presentation will discuss the steps and methodologies Dominion has taken to identify, evaluate, design, build, deploy, educate, adopt and enhance business processes and applications utilizing the OSIsoft PI System. Dr. Tao Xia will present and share the experiences and lessons learned with focus on the industry business drivers and main goals of the project, the implementation roadmap as well as data integrations. Dr. Xia will also discuss and share the AF build processes, existing and future applications, analytics, best practices, new approaches and the valuable experiences gained throughout this progression.

UCSD - Renewable generation and electric vehicle charging systems are being deployed in distribution systems at a rapidly increasing pace. These intermittent resources cause power flow problems that are difficult to control at the distribution management centers. Microgrids provide the means to mitigate power disturbances and control the power demand while connected to the main grid. They also increase energy surety to critical loads inside the microgrid by being able to run disconnected from the main grid. Microgrid have lower system inertia that requires controllers to run at higher rates than conventional Energy Management Systems. The Sempra/OSIsoft AMC runs at 60 Hz using time synchronized phasor data for feedback control. This approach provides closed loop response times of about 100 mS. The controller decouples the interaction between real and reactive power by using multivariable control technology. Examples of the closed loop response to both setpoint changes and disturbances while connected to a realistic hardware in the loop simulator are shown in the presentation.

APS - The topic of this presentation is Arizona Public Service's (APS) innovative research project, Solar Partner Program (SPP) and the use of PI system in this project for data storage and visualization. Increasing levels of rooftop PV penetration on distribution feeders in APS's service territory have introduced various challenges in the Distribution System. Through Solar Partner Program, APS is getting deeper understanding of these challenges and is researching the use of the technologies like residential advanced inverters and feeder level energy storage to address these challenges. Data collection, analysis, visualization and reporting are critical aspects of this project and PI is playing a very important role in these areas. In this presentation, the various components of this program, their integration, challenges and the role that PI is playing will be shared.

Tricon Services Inc. - Moving to the use of PI AF and visualization such as PI CoreSight means you have to bring SQL Server into your PI system and depend more on Windows Authentication methods. This presentation will take a deeper look at the 2016 Products and provide some thoughts and tips as it relates to the setup of SQL and Windows Authentication. It will also include an extended time for the group to ask questions and share experiences.

PJM - At PJM, there is a great deal of custom development revolved around PI. The PJM PI Team would like to showcase some of the recent development initiatives, and the associated business benefits. Topics to be covered include:

- One-Line Display Converter - configurable conversion application to convert Siemens EMS one-line diagrams into various file formats, such as PI ProcessBooks. Substation diagrams are now viewable with historical data, more manageable and more easily integrated with other applications.

- AF Database Automation – several targeted AF models have been created that automatically find tags and meta-data (across different upstream systems) and map them back to a specific asset. Assets are organized based on structures provided by the upstream systems, and are more accessible to the end-users. Modeling the data in AF also assists with cross-system PI integration with applications such as GIS.
- Dispatch Interactive Map Application (DIMA) - custom GIS application that leverages the PI Integrator for ESRI ArcGIS and the GeoEvent Processor to update a map with real-time data. DIMA is designed to improve situational awareness for dispatch, and give a spatial perspective on equipment locations.

TEP - The topic of this presentation is Tucson Electric Power's use of PI to help visualize how field devices can be used and monitored in PI. With aging infrastructure, utility companies are having to think outside the box on how to improve reliability. Tucson Electric Power has leveraged PI CoreSight and PI ProcessBook to display our wireless fault indicator to System Operators and Engineers along with data collection from hundreds of wireless fault indicators. In this presentation, you will see how we have integrated wireless fault indicators into our system while leveraging OSIsoft's PI platform for data collection and data analysis.

OSIsoft - Condition Based Maintenance (CBM) is a maintenance strategy that monitors the actual condition of your assets to determine when and what maintenance is required to maintain uptime. In this session you will learn how to create asset analytics within PI AF to track when certain indicators show signs of decreasing performance or upcoming failure. See how predictive models can be developed, tested and deployed at scale using the PI System Infrastructure. Stay informed of it all with PI Notifications.