

Agenda

Back to Basics:

How the CIM Support Analytics, Integration and Operational Efficiencies

October 1-3

Carmel, Indiana

CIM University Agenda

October 1, 2019

| Time | Track 1 CIM Basics and Enterprise Integration | Track 2 CIM and Network Analysis | Track 3 CIM Tools |
|---------------|--|---|--|
| 9:00 – 9:15 | Introduction and Logistics <i>Margaret Goodrich (PCLtek)</i> | | |
| 9:15 – 9:30 | Introduction to the CIM Standards and Architecture <i>David Bogan (ONCOR)</i> This session CIM standards, how they are organized, and how they are used to exchange information between applications/systems. Topics will include: What is “the CIM?” - Role of the CIM in the Smart Grid architecture - Importance of CIM as a semantic model - Motivation for the coverage of CIM, what can be modeled, how does that save time and money in integration? - Three-layer architecture for organizing CIM standards - Work flow from semantic model to message/file assembly using CIM - Layer 1: CIM UML information model and contents - IEC 61970 and 61968 standards - Example: Substation model using CIM - Demo of UML modeling Tool – Sparx | Power System Modeling Basics <i>Pat Brown (Electric Power Research Institute); Jay Britton (Britton Consulting)</i> CIM and network models: - Anatomy of power flow data (through the eyes of the CIM) - Partitioning into profiles | CIM UML (30) <i>Margaret Goodrich (PCLtek)</i> Learn about the UML that is used to define the Common Information Model (CIM) and describe the utility domain information. |
| 9:30 - 9:45 | | Tour of Major CIM Network Model Implementations How the CIM approach to structuring network model data is being leveraged by utilities in the US and Europe <ul style="list-style-type: none"> • ERCOT’s NMMS <i>Margaret Goodrich</i> • ENTSO-E’s DACH and IGM/GCM <i>TBD</i> • AEP’s T-Nexus <i>Margaret Goodrich</i> | |
| 9:45 – 10:00 | | CIMTool – A CIM Profiling Tool (60) <i>Margaret Goodrich (PCLtek)</i> Learn about the open-source tool for managing CIM-derived models, profiles, and schemas. | |
| 10:00 – 10:15 | | | |
| 10:15 – 10:30 | | Network Model - EQ Profile (Foundation) | |

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| | | <p><i>Alan McMorran (Open Grid Systems)</i> The basics of the physical network model profile for steady state:</p> <ul style="list-style-type: none"> - Modeling a substation with CIM objects - Connectivity in bus-branch or nodebreaker - Containment - Energy input and output <p>This session continues after break.</p> | |
| 10:30 – 10:45 | BREAK | | |
| 10:45 – 11:00 | <p>Introduction to the CIM and Related Standards (Cont'd) <i>David Bogan (ONCOR)</i> The session continues the introduction started in the earlier session by exploring information exchange techniques and enterprise semantic modeling</p> <ul style="list-style-type: none"> - Layer 2, Profiles and profiling methodology for defining system interfaces – IEC 61970 and 61968 - Layer 3, Message assembly and RDF/XML serialization technologies - Value of an Enterprise Semantic Model (ESM) based on the CIM - Case studies - Where to get more CIM information | <p>Network Model - EQ Profile (Foundation, (Cont'd)) <i>Alan McMorran (Open Grid Systems)</i></p> | <p>Enterprise Architect – Lab #1a (15) <i>Henry Dotson (Mandla Solutions)</i> Learn how to navigate in Enterprise Architect</p> |
| 11:00 – 11:15 | | | |
| 11:15 – 11:30 | | <p>Network Model - EQ Profile <i>Svein Harald Olsen (Statnett)</i> More complex parts of the physical network model profile:</p> <ul style="list-style-type: none"> - Transformers - HVDC - Short circuit - Unbalanced | |
| 11:30 – 11:45 | | | |
| 11:45 – 12:00 | | <p>This session continues after lunch.</p> | |
| 12:00 - 13:00 | LUNCH | | |
| 13:00 – 13:30 | <p>T1 - Information Model & Reference Model <i>Margaret Goodrich (PCItek)</i> Learn about the CIM as an Information Model & as a Reference Model.</p> | <p>Network Model - EQ Profile (Special Topics)</p> | <p>Enterprise Architect – Lab #1B (15) <i>Henry Dotson (Mandla Solutions)</i> Learn how to create various diagrams in Enterprise Architect</p> |
| 13:30 – 13:45 | <p>Network Operations (IEC 61968-PART 3) Margaret Goodrich (PCItek) & Assets (IEC 61968-PART 4) Pat Brown (EPRI) Learn about Part 3 of IEC</p> | <p>Network Model – DY Profile (special topics) <i>Pat Brown (EPRI)</i> The CIM approach to standard dynamics model exchange.</p> | |
| 13:45 – 14:00 | <p>61968: Network Operations and Assets and Asset Health in Part 4</p> | <p>Network Model - DL Profile <i>Alan McMorran (Open Grid Systems)</i></p> | |

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| | | The DL (schematic layout) profile. | |
| 14:00 – 14:15 | DER (IEC 61968-PART 5) <i>Stephan Amsbary (Electric Power Research Institute)</i> Learn about Part 5 of IEC 61968: Distributed Energy Resources. | Network Model - SSH Profile <i>Svein Harald Olsen (Statnett)</i> Power flow case inputs. - SSH – Steady State Hypothesis profile – Status | |
| 14:15 – 14:30 | Maintenance & Construction (IEC 61968-PART 6) <i>Margaret Goodrich (PCItek),</i> Customer Support Interfaces (IEC 61968-PART 8) | – Controls – Limits – Energy distribution | Enterprise Architect – Lab #1c (15) <i>Henry Dotson (Mandla Solutions)</i> Learn how to navigate in Enterprise Architect |
| 14:30 – 14:45 | <i>Stephan Amsbary (Electric Power Research Institute)</i> and Meter Reading & Control (IEC 61968- Part 9) <i>Margaret Goodrich (PCItek)</i> Learn about both Part 6 of IEC | Network Model - TP, SV Profiles <i>Alan McMorran (Open Grid Systems)</i> Power flow case outputs. TP – Topology profile SV – State Variables profile | Enterprise Architect – Lab #1d (15) <i>Henry Dotson (Mandla Solutions)</i> Learn how to create various diagrams in Enterprise Architect. |
| 14:45 – 15:15 | 61968: Maintenance & Construction and learn about Part 8: Customer Support Interfaces and Part 9 of IEC | Variations (Changes) <i>Pat Brown (Electric Power Research Institute)</i> Modeling of change over time. Prospective changes to the network model (projects). | Enterprise Architect – Lab #2 (45 Minutes) <i>Henry Dotson (Mandla Solutions)</i> Learn how to build a standard enterprise architecture model in Enterprise Architect and how to create CIM compliant schemas using Enterprise Architect’s Schema Composer tool. |
| 15:15 – 15:30 | 61968: Meter Reading and Control. | | |
| 15:30 – 15:45 | BREAK | | |
| 15:45 – 16:00 | Interface Specification Documentation <i>Margaret Goodrich (PCItek)</i> Interface Specification Documentation details. | Network Model Parts and Assembly <i>Jay Britton (Britton Consulting)</i> Approaches to model maintenance and case assembly activities. Modularization by instances: - Division into MAS with boundaries - Frameworks - Recursion Model Assemblies: - Datasets - Functions - Scripts - Audit Trails | Core CIM Integration Concepts & Lab 3 – Schema Modeling 2: (60 Minutes) <i>Henry Dotson (Mandla Solutions)</i> Lab 3 Learning Objectives <ul style="list-style-type: none"> • Learn best practices for creating a schema model • Introduction to Schema Composer • Create a message profile with Schema Composer |
| 16:00 – 16:45 | CIM-Based Integration – A Deep Dive <i>Margaret Goodrich (PCItek)</i> A deep dive into CIM-based integration. | | |
| 16:45 – 17:15 | Panel Session - CIM In Practice Come to a panel discussion about CIM in the real world | | |
| 17:30 – 19:30 | NETWORKING RECEPTION Drinks and Heavy Hors d’oeuvres Provided EDF Meeting Facilities - Hosted by UCA and EDF | | |

Agenda

CIM Users Group 2019 Fall North America Meeting

Back to Basics: How the CIM Support Analytics, Integration and Operational Efficiencies

October 1-3

Carmel, Indiana

CIM Plenary Session

Wednesday, October 2, 2019

DAY 1

| Time | Topic | Presenter |
|---------------|--|--|
| 8:30 – 9:00 | Registration and Coffee/Tea | |
| | Session 1, Introduction and Keynote Presentations | |
| 9:00 – 9:30 | Welcome & Intro | <i>David Bogen, ONCOR & Michael Covarrubias, Xtensible</i> |
| 9:30 – 10:00 | Keynote | |
| 10:00-10:15 | Sponsor Presentation | <i>Joseph Canterino, Siemens PTI</i> |
| 10:15– 10:30 | BREAK | |
| | Session 2, Network Modeling | |
| 10:30 - 11:00 | Back to Basics – CIM101 | <i>David Bogen, ONCOR</i> |
| 11:00 – 11:30 | NB Power – Analytics Analytics Presentation | <i>Confirmed –</i> |
| 11:30 – 12:00 | ERCOT Experiences: Implementing and Using Network Modeling Tools | <i>Bill Blevins, ERCOT</i> |
| 12:00 – 13:00 | LUNCH | |
| | Session 3, | |
| 13:00 – 13:30 | Enterprise Modeling Tool | <i>Bill Blevins, ERCOT</i> |
| 13:30 – 14:00 | SCE Presentation Title TBD - Power Models | <i>Confirmed –</i> |
| 14:00 – 14:30 | CIM Based Ratings & Impedance Calculations | <i>Chuck DuBose, PCITEK</i> |
| 14:30 – 14:45 | BREAK | |
| | Session 4, and Vendor Presentations | |
| 14:45 – 15:15 | Distribution modeling | <i>Pat Brown, EPRI</i> |
| 15:15 – 15:45 | Model Alignment (Operations and Planning) | <i>Chuck DuBose, PCITEK</i> |
| 15:45 – 16:45 | Vendor Presentations (<i>Equal time allocated to vendor sponsors</i>) <ol style="list-style-type: none"> 1. PCItek 2. Siemens PTI 3. SISCO | <ol style="list-style-type: none"> 1. Margaret Goodrich 2. Joseph Canterino 3. Ralph Mackiewicz |
| 17:00 – 19:00 | Evening Reception Hospitality & Vendor Demonstrations | |

CIM Plenary Session
Thursday, October 3, 2019

DAY 2

| Time | Topic | Presenter |
|---------------------------|---|--|
| 8:30 – 9:00 | Registration and Coffee/Tea | |
| | Session 5, | |
| 9:00 – 9:30 | OpenFMB Status | <i>Stuart Laval, Duke Energy</i> |
| 9:30 – 10:00 | ONCOR (NMM and Integration) | <i>David Bogen, ONCOR</i> |
| 10:00 – 10:30 | AEP - Integration | <i>Margaret Goodrich, PCITEK</i> |
| 10:30 – 10:45 | BREAK | |
| | Session 6, | |
| 10:45 – 11:15 | Architecture and using CIM | <i>PNNL</i> |
| 11:15 – 12:00 (45 min) | GRIDApps- D | <i>PNNL</i> |
| 12:00 – 13:00 | LUNCH | |
| | Session 7, | |
| 13:00 – 13:30 | Challenges on utilizing the CIM in organizations – Panel Session | <i>Moderator – Michael Covarrubias</i> |
| 13:30 – 14:00 | UCA update – new website, newsletter (announcement of newsletter), re-org, etc. Business Update from Board | <i>Sutton Sutherin, UCA</i> |
| 14:00 – 14:30 | UCA Test Report – 61850, OpenFMB, CIM Prelim Summary from IOP and ITCA Status | <i>Margaret Goodrich, PCITEK</i> |
| 14:30 – 14:45 | BREAK | |
| 14:45 - 15:45 | What's New in the Latest CIM UML Model Release (Model Managers Report) | <i>Margaret Goodrich, PCITEK</i> |
| 15:45 – 16:15 | Ask the Experts: Panel Session | <i>Ralph Mackiewicz, SISCO</i> |
| 16:15 – 16:30 | Closing Comments & Two \$100 Amazon Gift Card Drawing (must be present to win) | <i>David Bogen, ONCOR & Michael Covarrubias, Xtensible</i> |
| 16:30 | Adjourn | <i>David Bogen, ONCOR & Michael Covarrubias, Xtensible</i> |