

# 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	<b>Introduction and Logistics</b> <i>Margaret Goodrich (PCLtek)</i>		
9:15 – 9:30	<b>Introduction to the CIM Standards and Architecture</b> <i>David Bogen (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 - <b>Layer 1:</b> CIM UML information model and contents - IEC 61970 and 61968 standards - Example: Substation model using CIM - Demo of UML modeling Tool – Sparx	<b>Power System Modeling Basics</b> <i>Pat Brown (Electric Power Research Institute);</i> CIM and network models: - Anatomy of power flow data (through the eyes of the CIM) - Partitioning into profiles	<b>CIM UML (30)</b> <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		<b>Tour of Major CIM Network Model Implementations</b> 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"> <li>• ERCOT’s NMMS</li> <li>• ENTSO-E’s DACF and IGM/GCM</li> <li>• AEP’s T-Nexus</li> </ul>	
9:45 – 10:00			
10:00 – 10:15			
10:15 – 10:30		<b>Network Model - EQ Profile (Foundation)</b>	

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

14:00 – 14:15	<b>Meter Reading &amp; Control (IEC 61968- Part 9)</b> <i>Margaret Goodrich (PCItek)</i>	<b>Network Model - SSH Profile</b> <i>Chuck DuBose (PCItek)</i>	
14:15 – 14:30	Learn about Part 9 of IEC 61968: Meter Reading and Control.	Power flow case inputs. - SSH – Steady State Hypothesis profile – Status – Controls – Limits – Energy distribution	<b>Enterprise Architect – Lab #1c (15)</b> <i>Henry Dotson (Mandla Solutions)</i> Learn how to navigate in Enterprise Architect
14:30 – 14:45	<b>BREAK</b>		
14:45 – 15:00	<b>Review of XSD Messages for all 61986 Part Standards</b> <i>Margaret Goodrich (PCItek)</i>	<b>Network Model - TP, SV Profiles</b> <i>Alan McMorran (Open Grid Systems)</i>	<b>Enterprise Architect – Lab #1d (15)</b> <i>Henry Dotson (Mandla Solutions)</i>
15:00 – 15:15	Show and Tell for some or all of the XSDs that are part of the 61968 Standards.	Power flow case outputs. TP – Topology profile SV – State Variables profile	Learn how to create various diagrams in Enterprise Architect.
15:15 – 15:30		<b>Variations (Changes)</b> <i>Pat Brown (Electric Power Research Institute)</i> Modeling of change over time. Prospective changes to the network model (projects).	<b>Enterprise Architect – Lab #2 (45 Minutes)</b> <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.
15:30 – 16:00	<b>Interface Specification Documentation</b> <i>Margaret Goodrich (PCItek)</i>	<b>Network Model Parts and Assembly</b> <i>Pat Brown (EPRI)</i>	<b>Core CIM Integration Concepts &amp; Lab 3 – Schema Modeling 2:</b> (60 Minutes) <i>Henry Dotson (Mandla Solutions)</i>
16:00 – 16:45	Interface Specification Documentation details.	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	Lab 3 Learning Objectives <ul style="list-style-type: none"> <li>• Learn best practices for creating a schema model</li> <li>• Introduction to Schema Composer</li> <li>• Create a message profile with Schema Composer</li> </ul>
16:45	<b>Adjourn and Go to Networking Reception – SEE YOU THERE!!</b>		
17:00 – 19:30	<b>NETWORKING RECEPTION</b> Drinks and Heavy Hors d’oeuvres Provided Wolfies Grill- Hosted by UCA 1162 Keystone Way Carmel, IN 46032		

# 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	<b>Registration and Coffee/Tea</b>	
	<b>Session 1, Introduction and Keynote Presentations</b>	
9:00 – 9:30	<b>Welcome &amp; Intro</b>	<i>David Bogen, ONCOR &amp; Michael Covarrubias, Xtensible</i>
9:30 – 10:00	<b>Keynote: CIM as a ‘Primary Key’ for a Corporate Digital Transformation</b>	<i>Brad Wasson, CDIO of NBP</i>
10:00-10:15	<b>Sponsor Presentation: Leveraging CIM standards as a foundation for future digitalization use cases within utilities</b>	<i>Sam Phillipson, Siemens PTI</i>
10:15– 10:30	<b>BREAK</b>	
	<b>Session 2, Network Modeling</b>	
10:30 - 11:00	<b>Back to Basics – CIM101</b>	<i>David Bogen, ONCOR</i>
11:00 – 11:30	<b>Grow your own information model: An iterative approach in creating a CIM based model using analytic use cases</b>	<i>Berend Middendorp, NBP</i>
11:30 – 12:00	<b>ERCOT Experiences: Implementing and Using Network Modeling Tools</b>	<i>Bill Blevins, ERCOT</i>
12:00 – 13:00	<b>LUNCH</b>	
	<b>Session 3,</b>	
13:00 – 13:30	<b>Enterprise Modeling Tool</b>	<i>Bill Blevins, ERCOT</i>
13:30 – 14:30	<b>How SCE is using the CIM to interconnect and optimize user of DER’s</b>	<i>Vidyod Mavilavalappil, SCE Greg Robinson, Xtensible</i>
14:30 – 14:45	<b>BREAK</b>	
	<b>Session 4, and Vendor Presentations</b>	
14:45 – 15:15	<b>CIM Based Ratings &amp; Impedance Calculations</b>	<i>Chuck DuBose, PCITEK</i>
15:15 – 15:45	<b>A CIM based Distribution Network Model Data Management Architecture</b>	<i>Pat Brown, EPRI</i>
15:45 – 16:15	<b>Model Alignment (Operations and Planning)</b>	<i>Chuck DuBose, PCITEK</i>
16:15 – 16:45	<b>Vendor Presentations (Equal time allocated to vendor sponsors)</b> <ol style="list-style-type: none"> <li>1. PCIttek</li> <li>2. Xtensible</li> <li>3. Siemens PTI</li> </ol>	<ol style="list-style-type: none"> <li>1. Matt Highfill</li> <li>2. Michael Covarrubias</li> <li>3. Sam Phillipson &amp; Jim Waight</li> </ol>
17:00 – 19:00	<b>Evening Reception Hospitality &amp; Vendor Demonstrations</b> <b>Renaissance Indianapolis North Hotel</b> <b>11925 N. Meridian St.</b> <b>Carmel, IN 46032</b>	

**CIM Plenary Session**  
**Thursday, October 3, 2019**

**DAY 2**

<b>Time</b>	<b>Topic</b>	<b>Presenter</b>
8:30 – 9:00	<b>Registration and Coffee/Tea</b>	
	<b>Session 5,</b>	
9:00 – 9:30	<b>OpenFMB Status</b>	<i>Stuart Laval, Duke Energy</i>
9:30 – 10:00	<b>ONCOR (NMM and Integration)</b>	<i>David Bogen, ONCOR</i>
10:00 – 10:30	<b>Benefits and Risks of transitioning to the CIM (the AEP T-Nexus Experience)</b>	<i>Frank Wilhoit, Broadheath Consulting</i>
10:30 – 10:45	<b>BREAK</b>	
	<b>Session 6,</b>	
10:45 – 11:15	<b>Grid Architecture</b>	<i>James Ogle, PNNL</i>
11:15 – 12:00 (45 min)	<b>GridAPPS- D</b>	<i>James Ogle, PNNL</i>
12:00 – 13:00	<b>LUNCH</b>	
	<b>Session 7,</b>	
13:00 – 13:30	<b>Challenges on utilizing the CIM in organizations – Panel Session</b>	<i>Moderator – Michael Covarrubias, Xtensible</i>
13:30 – 14:00	<b>UCA update – new website, newsletter (announcement of newsletter), re-org, etc. (15 min)</b> <b>Business Update from Board (15 min)</b>	<i>Sutton Sutherin, UCA Staff</i>  <i>David Bogen, ONCOR &amp; UCA Board Member</i>
14:00 – 14:30	<b>UCA Test Report – 61850, OpenFMB, CIM Prelim Summary from IOP and ITCA Status</b>	<i>Margaret Goodrich, UCA VP, Operations</i>
14:30 – 14:45	<b>BREAK</b>	
14:45 - 15:45	<b>What's New in the Latest CIM UML Model Release (Model Managers Report)</b>	<i>Margaret Goodrich, PCITEK</i>
15:45 – 16:15	<b>Ask the Experts: Panel Session</b>	<i>Michael Covarrubias, Xtensible</i>
16:15 – 16:30	<b>Closing Comments &amp; Two \$100 Amazon Gift Card Drawing (must be present to win)</b>	<i>David Bogen, ONCOR&amp;</i> <i>Michael Covarrubias, Xtensible</i>
16:30	<b>Adjourn</b>	<i>David Bogen, ONCOR&amp;</i> <i>Michael Covarrubias, Xtensible</i>