Agenda

DSO of the Future:
Integrating the Total Energy Solution
October 3-5, 2022
Arnhem, Netherlands

CIM University Agenda
Monday, October 3, 2022

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** *Margaret Goodrich (PCItek)*		
9:15 – 9:30	**Introduction to the CIM Standards and Architecture** *David Bogen (ONCOR)* 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	**Introduction to the Network Model Portion of the CIM** *Pat Brown (EPRI Europe)* Introductions CIM and the two main types of grid model data - Grid Classes – whose objects describe some aspect of the grid - Meta Classes – whose objects enable management and exchange of grid objects Review of the agenda	**CIM UML** *Margaret Goodrich (PCItek)* Learn about the UML that is used to define the Common Information Model (CIM) and describe the utility domain information. Also Includes Mapping to the CIM and using UML to prepare for Profile generation **(9:15-10:15)**
9:30 - 9:45			
9:45 – 10:00		**Tour of Major CIM Network Model Implementations** The CIM approach to structuring network model data in practice at utilities in the US and Europe • ENTSO-E's DACF and IGM/GCM - *?? (ENTSO-E)* • TenneT's CMM – *Richard de Groot (TenneT)* • ERCOT's NMMS – *Margaret Goodrich (PCITek) (10:15-10:30)*	
10:00 – 10:15			
10:15 – 10:30			
10:30 – 10:45	**BREAK**		

<table>
<tr><td>10:45 – 11:00
11:00 – 11:15
11:15 – 11:30
11:30 – 11:45
11:45 – 12:00</td><td>Introduction to the CIM and Related Standards (Cont’d)
David Bogen (ONCOR)
The session continues the introduction started in the earlier session by exploring information exchange techniques and enterprise semantic modeling
- 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</td><td>Grid Classes – 61970-452 EQ Profile (aka the foundation)
Alan McMorran (Open Grid Systems)
The basics of the physical grid model profile for steady state
- What is information modelling?
- Modeling a substation in UML with CIM objects
- Basic equipment and connectivity
- Containment
- Equipment vs Asset

Grid Classes – 61970-452 EQ and SC Profiles (more complex parts)
Yang Feng (Siemens)
More complex parts of the physical network model profile
- Transformers
- HVDC
- Short circuit</td><td>CIMTool – A CIM Profiling Tool
Margaret Goodrich (PCItek)
Learn about the open-source tool for managing CIM-derived models, profiles, and schemas.
(10:45-12:00)</td></tr>
<tr><td>12:00 - 13:00</td><td colspan="3">LUNCH</td></tr>
<tr><td>13:00 – 13:15
13:15 – 13:30
13:30 – 13:45
13:45 – 14:00
14:00 – 14:15
14:15 – 14:30</td><td>T1 - Information Model & Reference Model
Margaret Goodrich (PCItek)
Learn about the CIM as an Information Model & as a Reference Model.

Reference Model Discussion for Each 61968 Part Standard Margaret Goodrich (PCItek)

Assets (IEC 61968-PART 4)
Michael Covarrubias, (Xtensible) & Margaret Goodrich (PCItek)
Learn about Assets and Asset Health in Part 4

Meter Reading & Control (IEC 61968- Part 9)
Margaret Goodrich (PCItek)
Learn about Part 9 of IEC 61968: Meter Reading and Control.

(14:00 – 14:30)</td><td>Grid Classes – 61968-13 Functional, Electrical and AssetCatalog Profiles
Pat Brown (EPRI Europe)
Modeling the distribution network
- Unbalanced
- Asset catalogs

Grid Classes – 61970-457 DY Profile
Pat Brown (EPRI Europe)
The CIM approach to standard dynamics model exchange
- Basics of dynamics modeling
- Update on Edition 2 of IEC 61970-457

Grid Classes – 61970-453 DL Profile
Alan McMorran (Open Grid Systems)
Layout of schematic diagrams (Diagram Layout)

Grid Classes – 61970-456 SSH Profile
Yang Feng (Siemens)
Power flow case inputs (Steady State Hypothesis)
– Status
– Controls
– Limits
– Energy distribution</td><td>Enterprise Architect
Margaret Goodrich (PCItek)
• Learn how to navigate in Enterprise Architect
• Learn how to create various diagrams in Enterprise Architect
(13:00-13:30)

CIM Contextor
Andre Maizener
Learn about the tool for managing CIM-derived models, profiles, and schemas. This tool is used by Europe for all Market Profile Messages as well as other messages developed by the EU Utilities

(13:30-14:30)</td></tr>
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<tr><td>14:30 – 14:45</td><td colspan="3">BREAK</td></tr>
<tr><td>14:45 – 15:00</td><td rowspan="3">Review of XSD Messages for all 61986 Part Standards
Margaret Goodrich (PCItek)
Show and Tell for some or all of the XSDs that are part of the 61968 Standards.
(14:45 – 15:45)</td><td>Grid Classes – 61970-456 TP, SV Profiles
Alan McMorran (Open Grid Systems)
Power flow case outputs (Topology and State Variables)</td><td rowspan="2">CIMontextor
Jean-Luc Sanson

(14:45-15:45)</td></tr>
<tr><td>15:00 – 15:15</td><td rowspan="3">Meta Classes
Pat Brown (EPRI Europe)
The model for managing and exchanging grid objects
- Models & ChangeModels
- Frames/Boundaries
- Assemblies</td></tr>
<tr><td>15:15 – 15:30</td><td rowspan="3">CIM2pp/pp2CIM Conversion Tools

Frank Marten, Fraunhofer IEE

(15:45-16:45)</td></tr>
<tr><td>15:30 – 15:45</td><td rowspan="2">Interface Specification Documentation
Margaret Goodrich (PCItek)
Interface Specification Documentation details.
(15:45-16:15)</td></tr>
<tr><td>15:45 – 16:00</td><td rowspan="3">CIM-Based Integration – A Deep Dive
Margaret Goodrich (PCItek)
A deep dive into CIM-based integration and a look at the Success Factors that should be considered for any integration project.
(16:15 – 16:45)</td></tr>
<tr><td>16:00 – 16:15</td><td rowspan="2"></td></tr>
<tr><td>16:15 – 16:30</td><td rowspan="2"></td></tr>
<tr><td>16:30 – 16:45</td><td></td></tr>
<tr><td>16:45</td><td colspan="3">Adjourn and Go to Networking Reception – SEE YOU THERE!!</td></tr>
<tr><td>17:00 – 19:00</td><td colspan="3">NETWORKING RECEPTION
Drinks and Hors d’oeuvres Provided
Robbers & van den Hoogen Winery, Le Jardin Room</td></tr>
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Agenda

CIM Users Group 2022 Fall European Meeting

DSO of the Future: Integrating the Total Energy Solution

Arnhem, Netherlands

CIM Plenary Session

Tuesday, October 4, 2022

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**	*David Bogen, ONCOR & Michael Covarrubias, Xtensible*
9:30 – 10:00	**Keynote: DSO Grid Digitization and the Need for a Common Language**	*Rinke van de Rhee, Director of Business Digitalisation, Alliander*
10:00-10:15	**Sponsor Presentation: Building the Next Generation Grids Ops "Machine" Using CIM**	*Bas Kruimer, DNV*
10:15– 10:30	**BREAK**	
	Session 2, Network Modeling	
10:30 - 11:00	**Use of CIM for datalake management**	*Odilon FAIVRE, Enedis*
11:00 – 11:30	**Report on the EPRI/UCAIug Distribution CIM IOP Event**	*Pat Brown, EPRI*
11:30 – 12:00	**LTDS CIM Initiative: Distribution Grid Planning Models as Open Data**	*Jaye Nozarick, Ofgem (UK Regulator)*
12:00 – 13:00	**LUNCH**	
	Session 3	
13:00 – 13:30	**A National Database for DER**	*Arthur Keesen & Joep Van Genuchten, Alliander*
13:30 – 14:30	**Using CIM flexibility data model to embed local flexibilities for local grid congestion in Enedis industrial model**	*Juan PAREJA (Enedis)*
14:30 – 14:45	**BREAK**	
	Vendor Presentations	
14:45 – 17:15	**Vendor Presentations** *(Equal time allocated to vendor sponsors)* 1. **PCItek 14:45-15:00** 2. **Xtensible 15:00-15:15** 3. **Siemens PTI 15:15-15:30** 4. **DNV 15:30-15:45** 5. **GDB 15:45-16:00** 6. **EPRI 16:00-16:15** 7. **OpenGrid 16:15-16:30** 8. **Bentley 16:30-16:45** 9. **Oracle 16:45-17:00** 10. **Safe 17:00-17:15**	1. *Margaret Goodrich* 2. *Michael Covarrubias* 3. *Yang Feng* 4. *Lino Prka* 5. *Bostjan Rozic* 6. *Pat Brown* 7. *Alan McMorran* 8. *Theo Van de Ven* 9. *Anirban Acharya* 10. *Mark Stoakes*
17:30 – 19:00	**Evening Reception Hospitality & Vendor Demonstrations** *Robbers & van den Hoogen Winery, Le Jardin Room*	

CIM Plenary Session

Wednesday, October 5, 2022

DAY 2

Time	Topic	Presenter
8:30 – 9:00	**Registration and Coffee/Tea**	
	Session 4	
9:00 – 9:30	**Driving Forces to Become the DSO of the Future: Expanding out the Data Model**	*Jaime Sanchez, Celsia* *Michael Covarrubias, Xtensible*
9:30 – 10:00	**Using CIM to foster innovative services for households**	*Fabien Coutant, Enedis*
10:00 – 10:30	**Artificial Intelligence and IEC CIM: multi-energy real use cases for metropolitan cities**	*Enea Bionda, IoP_Big Data, Ricerca sul Sistema Energetico (RSE)*
10:30 – 10:45	**BREAK**	
	Session 5	
10:45 – 11:30	**Profiling for CIM and Beyond**	*Joep Van Genuchten, Alliander*
11:30 – 12:00	**Power Grid Model: a high-performance steady-state power system calculation library**	*Tony Xiang, Alliander*
12:00 – 13:00	**LUNCH**	
	Session 6	
13:00 – 13:30	**Developing DSO CIM Flexibility Profiles Supporting the Flexibility Market**	*Marellie Akoury, DNV*
13:30 – 14:00	**Challenges on utilizing the CIM in organizations – Panel Session**	*Moderator – Michael Covarrubias, Xtensible*
14:00 – 14:30	**UCA update – new website, newsletter (announcement of newsletter), re-org, ITCA, etc. (15 min)** **Business Update from Board (15 min)**	*Margaret Goodrich, UCA Staff* *David Bogen, ONCOR & UCA Board Member*
14:30 – 14:45	**BREAK**	
	Session 7 - Meeting Wrap-Up	
14:45 - 15:45	**What's New in the Latest CIM UML Model Release (Model Managers Report)**	*Model Manager, Yang Fang*
15:45 – 16:15	**Ask the Experts: Panel Session**	*Michael Covarrubias, Xtensible*
16:15 – 16:30	**Closing Comments & Two $100 Amazon Gift Card Drawing** *(must be present to win)*	*David Bogen, ONCOR&* *Michael Covarrubias, Xtensible*
16:30	**Adjourn**	*David Bogen, ONCOR&* *Michael Covarrubias, Xtensible*