



# Welcome to the CIM Users Group

***“Back to Basics: How CIM Supports Analytics, Integration and Operational Efficiencies”***

Carmel, Indiana

1-3 October 2019

Hosted by MISO





- Introductions

- Schedule

- Logistics

- Agendas – provided at registration or available on the meeting site
- Facilities
  - Lunch – ???
  - Vendor reception – ???
- Internet
  - Network: ???
  - Username: ???
  - Password: ???
- Presentation materials – will be loaded onto the meeting after the conference.



# Ask the Experts Panel Session Thursday

- If, during the meeting, you think of a good question for our “Ask the Experts” panel session, please send your question to:
  - email
  - Text:



# Objectives & Scope of the CIMug

- Central point for access to all things related to the CIM
- Forum for CIM users - utilities, vendors, consultants, universities, others
- Education
  - CIM University and SharePoint site
  - Webinars
  - DistribuTech Utility University course
- Networking of CIM Users and sharing of CIM user experiences
  - Annual meetings – North America and Europe
  - Oceania/Australian chapter, potential for Brazil/South America chapter
- Collaboration
  - SharePoint subsites – Groups, Projects, Focus Communities
- Promote use of the CIM standards as interoperability solutions
- Liaison with IEC TC57 working groups for timely updates
  - Draft standards and Focus communities
- Clearinghouse for CIM questions



# CIM Usage and Acceptance

In use at hundreds of utilities throughout world

- Used at TSOs, RTO/ISOs, IOUs, and Distribution Utilities

## Network Model Management and Power System Model Exchange

- Most major EMS/DMS/Planning vendors support power system model exchange using CIM/RDF/XML, some with CIM-based databases behind the scenes
  - IOPs conducted since 2000
- CIM has been extended into the power market, planning, dynamic model exchange, diagram layout, network model management, and many other domains in order to meet high priority utility requirements to ensure reliable grid operation
  - AEP is good example of recent NMM application of CIM
- In Europe, ENTSO-E and TOs are migrating power model exchanges and day-ahead forecasts for planning/operational applications to CIM-based standard Common Grid Model Exchange Standard (CGMES)
  - Fifth IOP conducted in July 2015  
(first was UCTE IOP in March 2009)



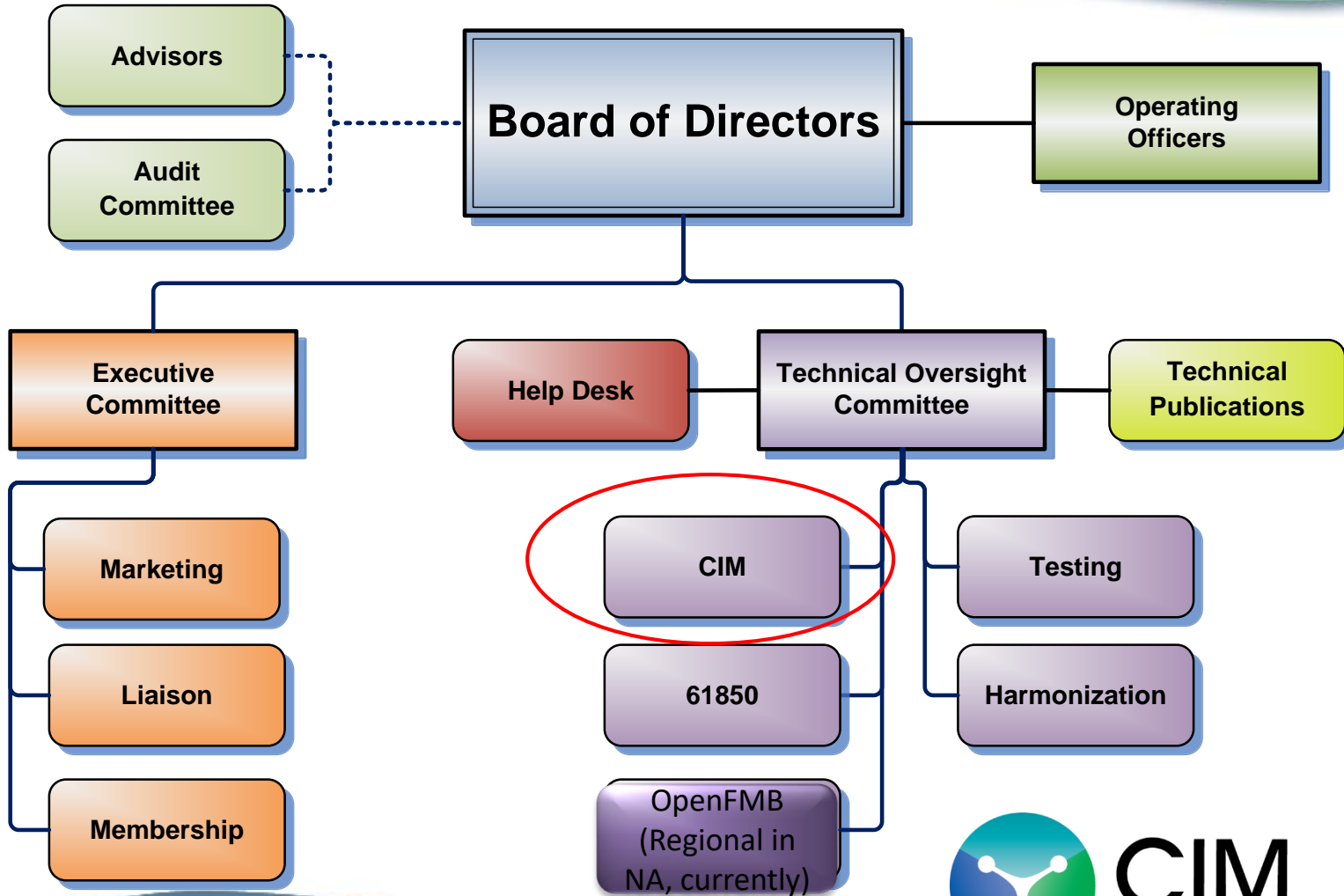
# CIM Usage and Acceptance

## Enterprise System Integration and Smart Grid Interoperability

- CIM provides a foundation for Service-Oriented Architecture (SOA) and Web service implementations
- Foundation for Model-Driven Integration (MDI) architecture based on an Enterprise Semantic Model (ESM) within an enterprise
- Foundation for information exchange between utilities and/or other external organizations
- Vendors have developed tools to build CIM-based information exchange messaging, ESB and OPC interfaces, and repository applications that can process CIM-aware data
- Endorsed and used by other standards organizations
  - Multispeak is converting to CIM-based UML models and XML
  - Zigbee, HAN, ENTSO-E, NASBE, OASIS, etc.
- Key building block in Smart Grid to achieve interoperability
- New developments include support for DER and IoT



# UCA International Users Group Organization



# Where to Get More Information About the CIM and Related Standards

- Visit CIM User Group (CIMug) Web Site
  - [cimug.ucaiug.org](http://cimug.ucaiug.org) or [www.cimug.org](http://www.cimug.org)
- Single site for gaining access to information about the CIM and related standards
  - Includes all draft standards being developed by IEC TC57 Working Groups 13, 14, 16, & 19
- Now provide access to:
  - Announcements of CIMug meetings, webinars, and CIM-related activities and events
  - Past meeting presentations
  - CIM UML model
  - Project and Group sites
  - Focus Communities – currently Asset Health
  - Results and data from CIM interoperability tests
  - CIM reference manuals
  - Tools used in validating data to be exchanged, designing CIM profiles, and generating design artifacts (XSD, RDFS, OWL, etc.)
  - How to become a member and benefits of membership
  - How to submit a CIM issue
  - CIM issues lists and status of resolution
  - Help desk
  - Links to other CIM-related sites





# CIM Reference Material

- Presentations posted on Saclay Meeting site
- CIM Primer, Edition 3, McMorran, Gray
  - Link on CIMug home page, or
  - [www.epri.com](http://www.epri.com), type “CIM Primer” in search bar
- CIM Primer on Using CIM for Network Analysis Data Management (NMM)
  - Link on CIMug home page
- The Common Information Model CIM: IEC 61968/61970 and 62325 - A practical introduction to the CIM, Uslar et.al.
  - [www.springer.com](http://www.springer.com), type “CIM” in search bar
  - Note – Please ignore another publication titled “The CIM Debacle”, which deals with the Computer Integrated Manufacturing CIM
- IEEE PES Power and Energy, CIM Special Edition Jan-Feb 2016
- Presentations from previous CIMug meetings



# What's New in 2018/2019?

- Conferences held in
  - Saclay , France (June 2019)
  - Dallas, Texas, USA (Oct. 2018)
  - Ljubljana, Solvenia (June 2018)
  - 3 days of training, presentations, panel sessions, demonstrations, etc.
- New Groups/Projects
  - Focus Communities: Asset Health, WG14 Part Teams, DER Harmonization
  - Projects: CIM-61850 Harmonization, CIM-Open ADR Harmonization, CIM for Weather, NMM Requirements, etc.
    - Also utility specific: AEP, SCE, BPA, TVA
- New SharePoint 2013/16 CIMug web site – rolled out last year
- New OpenFMB User Group – to be rolled out in Q3
- Reorganization of WG13/14
- Next Meeting: Looking for a Host





# Proposed Revision of WG13 (IEC 61970)

**Title:** Business Function Interfaces for Operation and Planning of the Electric Grid

**Mission:** Define standards for information exchange among systems supporting business functions directly involved with operation and planning of the overall interconnected electric grid. These functions rely on power system network models to analyse the behaviour of the grid. These business functions cover the entire interconnected grid at all voltage levels, and they often involve interactions between systems at various different participants in the grid (e.g. RTO, TSO, DSO, microgrid, generator, consumer).



# Proposed Revision of WG14 (IEC 61968)

**Title:** Enterprise Business Function Interfaces for Utility Operations

**Mission:** Define standards for information exchange among systems supporting business functions that support power system operations, maintenance and customer support. This includes major business functions such as asset management, work management, meter data management, customer information, geographic information systems and engineering design. Also included is interoperating with assets and business capabilities governed by interconnection agreements with customers.



# How to Get Involved

- Volunteer your time
  - Process WG
    - Strategic planning
    - Meeting planning
    - SharePoint facelift and new services (e.g., search engine, discussion forums, etc.)
- Give presentation
- Sponsor or host a meeting
- Create a new Focus Community, Project, or Group

