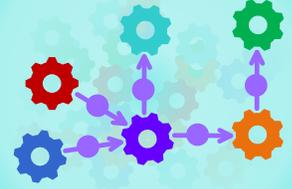


GMDM Vendor Forum

January, 2021 Update



EPRI's Grid Model Data Management (GMDM) Vendor Forum is underway!

Five technical webcasts have been held so far, with very active participation by the Forum's seven vendor members (Bentley, Esri, IPS, NetworkEdge, Oracle, Safe Software, and Survalent). With an eye toward achieving the project's first goal of identifying the data exchanges to be interoperability tested, Forum webcasts have:

- Built a shared understanding among Forum members of the drivers and potential value of an industry standard approach to the management of distribution grid model data,

The GMDM vision

- Today's solutions won't scale
- Utilities need enterprise-wide solutions implemented using industry-standard interfaces implemented by vendors on their products

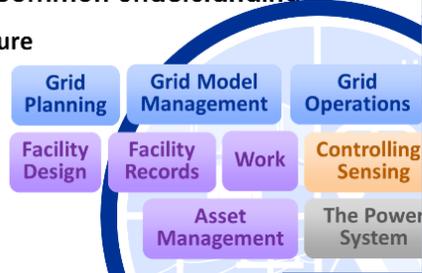
SUMMARY



How reasonable does this seem to you as a vendor? What would your customers say?

Business functions enable common understanding

- As basis for **industry architecture**
 - Common to all utilities
 - A framework for expressing industry requirements and design solutions independent of application choices
 - Supports industry standard data exchange 'building blocks'

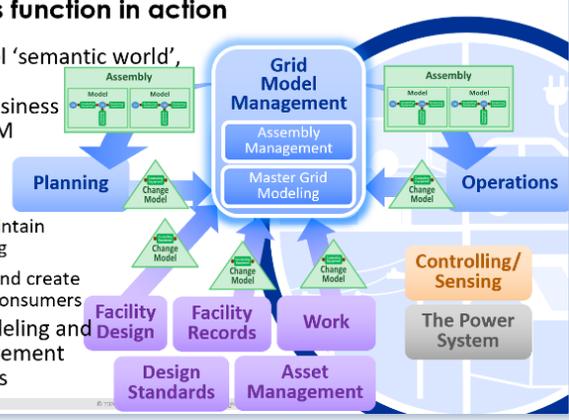


- Discussed the business function approach leveraged by GMDM in understanding requirements and designing an industry solution,

- Explored how Common Information Model (CIM) constructs support the two main model management business subfunctions: Master Grid Modeling and Assembly Management,

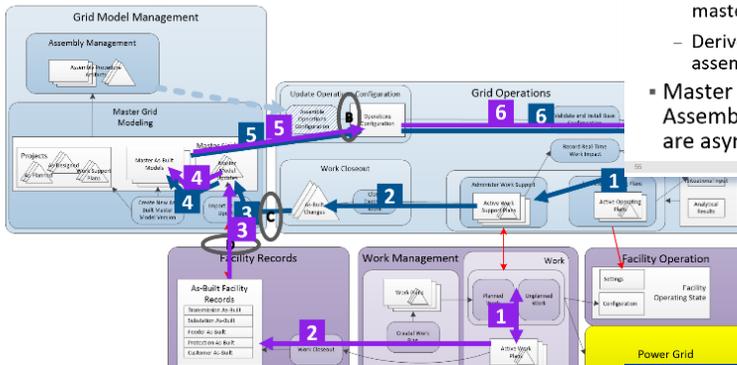
GMM business function in action

- In the grid model 'semantic world', the Grid Model Management business function uses CIM constructs to
 - Gather data updates from sources and maintain master modeling
 - Derive models and create assemblies for consumers
- Master Grid Modeling and Assembly Management are asynchronous

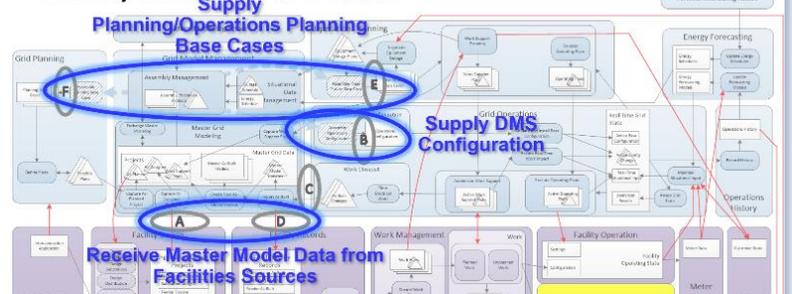


- Examined alternate information flow paths for facilitating the update of enterprise network modeling through the project lifecycle, identifying data management challenges,

Blue and Purple Dominants Path for Model Update



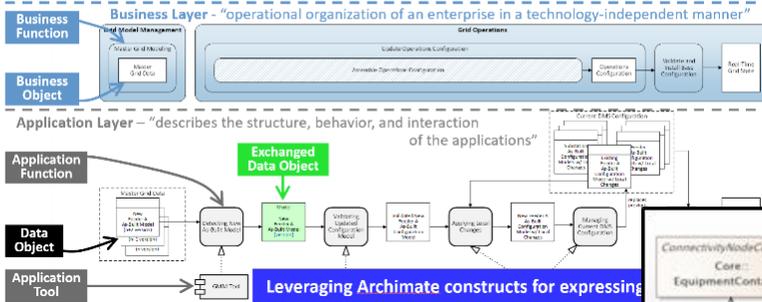
Primary Interfaces of Interest



- Identified the major data exchange interfaces of interest for interoperability testing,

GMM Tool Supplies Network Modeling for Project to DMS Variant 1

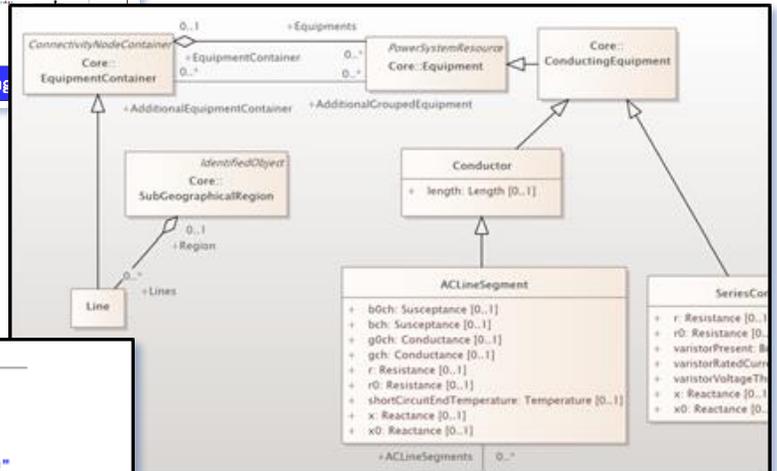
- As-built feeder configuration model sent to DMS after project on feeder go in service



- And started the exploration of multiple data exchange variants (from legacy to visionary) for each interface, using ArchiMate-expressed use cases illustrating exchanged data objects and how they are (or should be) supported by CIM.

Still ahead on the 'training docket' are:

- A tour of CIM power system modeling including exploration of CIM UML classes/properties and instance model examples and



- Investigation of the serialization techniques called for in draft IEC 61970-552 and their support for data exchanges leveraging the new CIM 'metamodel' classes designed to enable effective network model data management.

With the shared understanding developed by these activities, GMDM Vendor Forum members will move on to select the data exchanges to be interoperability tested. Then collaborative work, coordinated with IEC TC57 Working Group 13, will begin on refining the CIM information model and profiles to support the data exchanges. CIM Working Group members involved in the GMDM project have already raised awareness of the majority of anticipated areas of refinement and those areas appear on Working Group 13's 2021 work roadmap.

As CIM refinement activities wrap-up in late 2021, preparations for the interoperability test will start, with the culminating event - the interoperability test itself - planned for mid-2022.

EPRI is pleased to be partnering with UCAIug in facilitating the activities of the GMDM Vendor Forum. EPRI is taking the lead in the early project activities (vendor validation of the architectural approach, data exchange selection, CIM refinement) and UCAIug will guide the subsequent interoperability test-related activities (test model and profile creation, test procedure writing, event support). EPRI and UCAIug are working jointly on publicity and test participant and witness recruitment.

Participation in the GMDM Vendor Forum is open to both tool vendors and integration consultants, with pricing on a sliding scale basis. More information on the GMDM Vendor Forum project is available at the [EPRI GMDM Project](#) website or by contacting: Pat Brown (pbrown@epri.com) or Randy Rhodes (rrhodes@epri.com) at EPRI or Margaret Goodrich (margaret@j-mgoodrich.com) at UCAIug.