Experiences from implementing CIM in a common solution for 15 Danish DSO's

Visue A/S is a small company created to implement and operate cross-organizational projects for 15 DSO's in Denmark (The owners of Visue).

First big project was implementing a centralized SCADA system, that was able to handle the 15 different DSO's needs regarding surveillance and control of the distribution power grid. As a part of this project an integration to the 15 local GIS systems has been made using CIM.

In the SCADA system the HV and MV network is enriched with detailed equipment data from GIS, but for the LV all equipment data and network topology is coming from the GIS systems. It is a two way integration. The SCADA system also sends back switch statuses and outage information. Also based on CIM.

Together with CIM Consultants (DAX ApS) and the SCADA system Vendor PSI AG, CIM Profiles for the various data exchange needs (network data, switch statuses etc.) was developed. From our point of view, it was important to have one standardized CIM interface, and then ask the different DSO's and their GIS Vendors to develop an Adapter that could deliver CIM files in the right format. The advantage by doing this is that the Vendor PSI only had to implement one Adapter as part of their delivery.

Currently a new version of the CIM Profile(s) is being implemented, that allows exchange of delta data using 61970-303 (generic dataset/changeset model). Also, a significant effort has lately been put into supporting DSO's needs regarding more detailed Nameplate and Asset information. To support this, the initial equipment profile has now been divided up in an Equipment Profile (based on 61970) plus an Asset Profile (based on 61968). By keeping the Equipment dataset static in nature, and loosely coupled to the more dynamic datasets such as Asset information, has helped us deal with increased data modelling and integration complexity.

Next project is a Metering Management Solution where we want to build a Common database with Metering data collected from the different Meter collecting systems. We want to keep the concept from the SCADA and GIS integration with a standardized CIM interface based on 61968-9.