

Using semantic web resources to translate existing files between CIM and IEC 61850

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Abstract-

The CIM (IEC 61968/IEC 61970) and the IEC 61850 are the two main families of standards that promote the interoperability in the electric system domain. The IEC is working on the modifications to be performed in such standards to solve the existing mismatches between them. However, until these modifications have been standardized, interactions between systems using the current versions of the standards will still be required. Interactions between heterogeneous models are usually expensive and time-consuming processes. For that reason, a new methodology based on Semantic Web open-source resources is proposed in this paper to facilitate such interactions. The methodology is implemented through a data translator that imports its knowledge from files described in well-known languages, facilitating its adoption to other heterogeneous models. The tests performed have proved the ability of the data translator to make bi-directional translations between the standards and to recover the lost information during the translations.

Index Terms- Substation automation, energy management, IEC standards, semantic web

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