Henrique de Oliveira Henriques

"Programação Orientada a Objetos Aplicada à Estimação de Estado em Sistemas de Potências"

During the last three decades, many power system applications have been developed based on the subject functional description. The final products are composed of a variety of modules and each of them is capable of analysing only parts of the problem. Integration is usually achieved by developing interfaces among them and when some change is required this may propagate to all the modules and interfaces demanding a great amount of effort to modify the application. The power system representation model changes according to the purpose of the developing application, generating data with different formats. The object-oriented modeling and design approach has been suggested as an option to solve this problems. This methodology was applied to develop a software named Estima, which performs the basic tasks of a State Estimator in Energy Management Systems, identified by the filtering of frequent errors inherent to the mater and data validation. The performed study has demonstrated the utilization of this technology based on two test systems: a theoretic one of six buses and another formed by part of frequent erros inherent to the meter and data validation. The performed study has demontrated the utilization of this technology based on two test systems: a theoretic one of six buses and another formed by part of Light power system delivering energy for Rio de Janeiro city.