Keynote Talk

Assuring the Trustworthiness of the Smarter Electric Grid

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Abstract—**The vision for a modernized "Smart Grid" involves the use of an advanced computing, communication and control cyber infrastructure for enhancing current grid operations by enabling timely interactions among a range of entities. The coupling between the power grid and its cyber infrastructure is inherent, and the extent to which the Smart Grid vision can be achieved depends upon the trustworthiness of its cyber infrastructure.**

This talk describes challenges in assuring the trustworthiness (performance, dependability, and security) of the emerging smart grid, using example of research underway at the DOE- and HHS-funded Trustworthy Cyber Infrastructure for the Power Grid (TCIPG) Center. The goal of TCIPG is to provide trustworthiness in the nation's electric grid cyber infrastructure such that it continues to deliver electricity and maintain critical operations even in the presence of cyber attacks. Achieving this goal will involve the extension, integration, design, and development of IT technologies imbibed with key properties of real-time availability and security. This research area provides many opportunities for dependability analysts and engineers to apply and extend their work.

Categories & Subject Descriptors—D.2.1 Requirements/Specifications, D.2.9 Management, I.6 Simulation and Modeling, J.7 Computers in Other Systems

General Terms—Management, Measurement, Performance, Design, Reliability, Security

Keywords—Smart Grid

Bio

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