IEEE Hamilton Section

Technical Meeting

Information/Communication/Security for Smart Grids

Topic: Theory & Practice of ICST Adoption within the Smart Grid Ecosystem
(ICST = Information, Communication, and Security Technologies)

Speaker: Mohammed Elneel, Graduate Student at McMaster

Date: Wednesday 2014-Sep-10

Time: 6:45 PM - 9:00 PM

Cost: None (Free event parking area)

Location: Meeting Room 1D, McMaster Innovation Park,
175 Longwood Road, Hamilton, ON L8P 0A1

Free coffee and cookies.
Register here (so we get enough refreshments) https://meetings.vtools.ieee.org/m/27069

ABSTRACT

The traditional electricity system is based on a single direction energy flow from generation through transmission and distribution to the end user. Today, this system is challenged by the dynamic society requirements, increasing population and industrial growth, variations in demand profiles, increasing distributed generation, mounting concerns about world energy security and environmental degradation, pressure to keep costs down, and an aging infrastructure requiring gradual renewal to cope with a fast-changing landscape.

Through the use of Information, Communication, and Security Technologies (ICST), Smart grids will enable cost-effective, reliable, and efficient power generation, distribution and consumption by building intelligence into the electricity grid. Using wide-scale situational awareness, a smart grid can facilitate large-scale renewable energy integration, multi-direction power sourcing and distribution, enhanced grid resiliency, and market-driven pricing.

ICST adoption within the smart grid industry ecosystem is faced with technical collaboration obstacles and a set of interrelated underlying policy development challenges that must be addressed to accelerate this key smart grid enabler. Using the information captured from the literature review and industry interviews, this research presents key policy formulation and implementation requirements, and provides an ICST technical guideline to assist more utilities on initiating and planning their smart grid transformation roadmap.

Speaker Biography

Mohammed Elneel is a Telecom Engineer with 12 years diverse experience in Engineering, Information Technology and Business Development, and currently concluding his Masters in Engineering & Public Policy from McMaster University (Sep' 2014) on ICT Adoption for Smart Grid Applications.

After completing his BEng Electrical Engineering from Dalhousie University - Canada, in 2001, Mr. Elneel worked internationally in several countries commencing with embedded systems programming, through Utility IT systems administration and software design, and later focused on carrier-grade wireless solutions development. Since 2005, Mr. Elneel helped design, audit, and manage metropolitan enterprise wireless networks, public wireless broadband networks, and p2p/p2mp wireless backhaul solutions using multi-vendor solution integration across leading market technologies. He is also a part-time college instructor.

Mr. Elneel is a Certified WiMAX RF Planning Engineer, Cisco Network Associate, Aruba Mobility Associate, IPv6 Forum Engineer, Cambridge VectaStar System Engineer, among other industry, business, and leadership training. Current consulting roles include:

- Developing business partnerships and market opportunities for clients.
- Provide professional consultancy for feasibility studies, carrier solution designs and project bids.
- End-to-end project management from initiation through deployment to commissioning, documentation and O&M setup.
- Develop deployment strategies, manage contractors, control financial & human resources and provide on-site & remote support.
- Assist with regulatory communication, represent stakeholders and coordinate external SME's.