RF Interference and Propagation Study in Single Family Homes

Date: Wednesday, September 14, 2016

Time:
6:30 PM – Pizza + Social Networking
7:00 PM – Presentation

Location:
Jacaranda Hall Room 4440
College of Engineering & Computer Science
California State University, Northridge
18111 Nordhoff Street
Northridge, CA 91330

No Fee: Free pizza and light refreshments from 6:30 PM

RSVP at amini.eventbrite.com by May 16, 2016 for food/drink count

Information: Mr. Ron Olch, Chapter Chair at ronald.h.olch@ieee.org

Abstract

This talk is an excerpt from a Home Area Network Study. The Southern California Edison Home Area Network (HAN) team was tasked with implementing a study that includes measurements of HAN coverage, interference, and multi-path channels in the home. The HAN Radio Frequency Study was performed at 11 different dwellings representing a variety of building structures and layouts. This study had benefits such as:

- Identifying the radio frequency coverage characteristics needed for a reliable communication between the Smart meter and HAN devices in single family homes (SFH) of different sizes and layouts.
- Ensuring compatibility between the Smart meter and HAN devices in environments with extreme interference.
- Informing the industry on the need for products to enhance RF coverage and mitigate RF interference and multipath issues.

Speaker Biography

As the Senior RF test Engineer at Southern California Edison, Afshin lead the smart meter Home area network, Advanced Metering Infrastructure (AMI) and smart grid communication testing. He was a subject matter expert for Radio Frequency testing of Smart Meter Home area network, and smart grid communication and related devices.

Prior to Southern California Edison, Afshin worked at Agilent Technologies developing emerging wireless standards Physical Layer software simulation and RF test instruments. At Hughes Corporation, Afshin was involved with modeling Satellite payloads, and Electric Vehicle motor control embedded software development.

Afshin has a Master’s Degree in Electrical Engineering from University of Minnesota, Minneapolis and a Bachelor’s degree in Electrical and Computer Engineering from University of Wisconsin Madison. He has also completed course work toward a PhD at USC.

He is currently the Product Manager for Konnected Universe which is developing a system that uses Near Field Communication (NFC) to detect when a handset device is being used by a driver of a moving vehicle and then disables texting.

Speaker: Afshin Amini

Product Manager for Konnected Universe

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