

LOW POWER WIRELESS NETWORKS: DESIGN, PROTOCOLS, APPLICATIONS, AND RESEARCH OPPORTUNITIES

DR. FRED MARTIN
VICE PRESIDENT OF ENGINEERING
SUNRISE MICRO DEVICES
Friday, September 14th, 2012
LECTURE: 10:00 AM – 12:00 PM

ENGINEERING CENTER
ROOM EC 1107
10555 WEST FLAGLER STREET
MIAMI, FL 33174



Abstract: Low-power wireless networks based on standards such as ZigBee and Bluetooth Smart will become ubiquitous in the next few years. Important applications include health monitoring, automated building control, location, tracking and inventory control. These low power networks and the devices that support them differ in several ways from their more familiar cousins, such as WiFi and LTE. Key among these differences is the emphasis on cost and power rather than on throughput and quality of service. In this presentation, we will explore differences in emphasis that make low power wireless networks unique and useful. We will highlight ways in which this different emphasis impacts the design of hardware and protocols. We will look at future research opportunities for low-power wireless networks.

About the Author: Frederick Martin was awarded a BS in Applied Science and Master of Engineering in Electrical Engineering from the University of Louisville. He was awarded a Ph.D. with specialization in Electrical Engineering from the University of Florida. From 1980 to 2009, he was affiliated with Motorola, Inc., where he held technical and managerial positions in product development and research. In 2009, he co-founded, Sunrise Micro Devices, Inc., where he is currently the Vice President of Engineering.

Throughout his career, Dr. Martin has specialized in the design of integrated circuits for wireless applications. He has acted as the architect and team leader for several notable projects, including the first integrated fractional division synthesizer, the first integrated circuit to use fractional division as a modulation engine, and the first IC compliant with the IEEE 802.15.4/ZigBee Standard.

Dr. Martin is a Senior Member of the IEEE. He Holds 29 issued US patents.

Contact: 305-348-2807

Map: <http://campusmaps.fiu.edu/> (Other campuses/ - Engineering Center)