

**JULY 2014 IEEE 802 PLENARY SESSION  
EMERGING APPLICATIONS BIRD OF A FEATHER**

ALL PRESENTATIONS OCCUR WEDNESDAY JULY 16, 2014

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**PRESENTATION #1**

**TITLE:** I Feel the Need... for Low Speed

**NAME OF PRESENTER, AFFILIATIONS AND CONTACT INFO:**

<b>Presenter(s) Name:</b>	<b>Affiliation:</b>	<b>Email Address:</b>
Steve Carlson	High Speed Design	<a href="mailto:scarlson@ieee.org">scarlson@ieee.org</a>

**ABSTRACT: (a brief paragraph describing content of the presentation)**

Speed is a relative term that is dependent on the targeted application, regardless of whether wired or wireless. IEEE 802 should not lose sight that there are a number of high volume applications, where low data rates, ranging from kb/s to 1Gb/s, are sufficient and meets the desired cost targets. This talk will raise the discussion of market needs for “low speed” wired and wireless solutions as a significant opportunity for the IEEE 802 community, as reflected by the general interest in the Internet of Things, which could leverage efforts currently underway. There is a wealth of standardized technology within IEEE 802 that may be utilized or form the basis for new and exciting high volume applications, but the IEEE 802 community, at large, needs to be cognizant of application spaces outside of those currently being discussed inside IEEE 802 today.

**PRESENTATION #2**

**TITLE :** Emerging Applications of Enhanced User and Device Identities

**NAME OF PRESENTERS, THEIR AFFILIATIONS AND CONTACT INFO:**

<b>Presenter(s) Name:</b>	<b>Affiliation:</b>	<b>Email Address:</b>
Paul A. Lambert	Marvell	<a href="mailto:paul@marvell.com">paul@marvell.com</a>

**ABSTRACT: (a brief paragraph describing content of the presentation)**

New applications emerge when the security and privacy of user identities is enhanced. This short presentation provides four examples of emerging applications that build on IEEE 802 to define user and device identities that enable new services. Examples will include: IoT and simple setup, mobile peer-to-peer services, automotive C2X services

## PRESENTATION #3

**TITLE OF TUTORIAL:** IOT2.0: When the IOT and Micro Location Converge

**NAME OF PRESENTERS, THEIR AFFILIATIONS AND CONTACT INFO:**

Presenter(s) Name:	Affiliation:	Email Address:
Luc Darmon	Decawave	luc.darmon@decawave.com

**ABSTRACT: (a brief paragraph describing content of the presentation)**

After years of concept, the IOT revolution is becoming a reality that will drive the deployment of billions of connected objects in the coming years.

A few technical challenges remain for a smooth implementation but a bigger concern arises: how to locate those billions of nodes?

Indeed, without any information about to the exact position of the device, the reported data is losing most of its value except if you constantly keep a detailed map of all the devices that are in the field.

Sounds unrealistic when you think about 10's of billions of devices!

This need for accurate position information will soon drive a 2nd revolution that will converge with the IOT: the micro location revolution.

Here we talk about the capability for objects, even as small as a key ring or a pair of shoes on a shelf, to be accurately located by an infrastructure or by a user as well as the capability for objects to self-position themselves in their environment like home robots, automated carts, ...

The current RF technologies, while offering very good performances for data communication, are only capable of a few meters of accuracy with a maximum reliability below 80% when it comes to location reducing the field of possible applications.

Thankfully, new RF technologies arise, like the 802.15.4-2011 standard, which is capable of sub 10cm accuracy with close to 100% repeatability. Such performance is opening the door to breakthrough new applications.

This lecture will present a status of the current available micro location technologies as well as 3 use cases describing the game changing applications that will be enabled by the capabilities of the latest RF technologies.

This will include Indoor Micro Navigation, Intelligent House and security/payment.