Green Wireless Networks
Gee (George) Rittenhouse, Alcatel-Lucent

Date: April 23, 2012 (Monday)
Time: 5:00 pm (refreshment starts at 4:30 pm)
Place: 202 ECEC, NJIT

About the Speaker

Gee (George) Rittenhouse is the Chief Operating Officer of Alcatel-Lucent's Software, Services, and Solutions Group (S3G). The S3G organization works with global operators to transform their business by creating new revenue generating opportunities in areas ranging from Cloud to applications such as mobile commerce and digital music as well as solutions that focus on customer experience. These solutions are backed by a team of services experts who deliver everything from concept planning through full-scale operations support to meet complex customer needs.

Before his current role in the S3G organization, Gee was Vice President of Bell Labs Research, overseeing all Alcatel-Lucent research in physics, computer science, mathematics, optics, access, networking, and applications. Prior to leading research he was Vice President of Bell Labs' Technology Integration Group, with the primary mission of taking Bell Labs research innovations and driving them into Alcatel-Lucent's products and services. Before that Gee was Vice President, Bell Labs Wireless Research.

He received his Bachelor of Science degree in physics from the University of California, Los Angeles in 1986. Then in 1993 he received his Ph.D. degree in Electrical Engineering and Computer Science from the Massachusetts Institute of Technology. In 2002 he received the Bell Labs Fellow Award. He is currently the Chairman of the Board of Green Touch, a non-profit pre-competitive research consortium focused on dramatic reductions in network energy requirements. He also has numerous publications and patents in the areas of communications and circuits.

About the Talk (registration: https://meetings.vtools.ieee.org/meeting_registration/register/11699)

With the expected explosion of the communication traffic driven by applications, devices and machines all being connected, the total Internet traffic in the next decade is expected to grow to a level that is 30 to 100 times that of 2010. The resulting power required by the communications infrastructure will increase exponentially and lead to unsustainable power consumption levels. Despite anticipated advances in hardware, software and architectures, the overall energy required will still increase manifold beyond the 2010 levels. Therefore a clear need for new energy-efficient technologies arises to enable and build a long-term sustainable communication infrastructure. In this presentation, we provide the motivation and a brief overview of the GreenTouchTM consortium, a global research consortium of industry, academia and research institutes dedicated to increasing network energy efficiency in 2020 by a factor 1000 relative to corresponding levels in 2010. We then review some of the challenges and opportunities for improved energy efficiency in future next-generation wireless networks and some of the promising research directions, including novel network architectures, antenna technologies and intelligent network and radio resource management. We conclude the presentation with a description of some specific research projects, ongoing activities and the initial results that have already been obtained.

Sponsors: IEEE Communications Society North Jersey Chapter
NJIT Department of Electrical and Computer Engineering

For more information contact Nirwan Ansari (973)596-3670. Check **http://web.njit.edu/~ieeenj/comm.html** for latest updates. Directions to NJIT can be found at: **http://www.njit.edu/about/visit/gettingtonjit.php**.