Is Wireless Security an Oxymoron?

(cosponsored by Princeton IEEE Communications & Consumer Electronics Chapter)

Bruce McNair

Wireless communications has been growing at a rapid rate over the last 10-20 years and is likely to continue to do so. With any evolving technology, there are bound to be unexpected pitfalls and wireless communications is no exception. We have witnessed such diverse security-related issues as espionage against microwave relay systems, theft of satellite TV service, cloning and fraudulent use of cellular phones, and most recently, simple compromise of the “Wired Equivalent Privacy” of wireless local area networks.

As we look at the designs of tomorrow’s networks, we are likely to see a continuing evolution of and dependence on wireless networks, and we are also likely to see evolving security threats against these networks. While wireless communications techniques and security technology are both popular subjects for investigation, these closely related topics are generally treated independently. The unique security vulnerabilities created by the inherent broadcast nature of untethered, wireless communications and the increasing dependence on these networks demands that we examine these critical subject areas in a unified manner.

Bruce McNair is Distinguished Service Professor of Electrical and Computer Engineering at Stevens Institute of Technology, Hoboken, NJ. He is also Founder and Chief Technology Officer of Novidesic Communications, LLC, a technology consulting company. Prior to 2002, he spent 24 years at AT&T Bell Laboratories and AT&T Labs – Research. His research interests include wireless communications, system security, cryptography, signal processing, digital system design, and hardware/software prototyping platforms.

Date: Tuesday, December 16, 2003, 6:30 pm – NOTE TIME AND PLACE
Place: Rutgers University, Fiber Optic Auditorium, Busch Campus
Piscataway, NJ
Information: Sanyogita Shamsunder, sanyo@ieee.org
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Snacks and refreshments will be provided at the venue. The talk is free and open to public.

Rutgers’ Fiber Optic Auditorium is in the Fiber Optic Materials Building. The nearest street is Taylor Road, Piscataway Campus. (Check http://www.rutgers.edu/kiosk/maps/level2-busch.html for more details.)

Basic Directions: From NJTP North or South: Turn off at Exit 9. After toll booths bear to the right; follow signs for “Route 18 North – New Brunswick.” Continue along Route 18 North past the exits for “Route 27” and “Rutgers University” and proceed over the Raritan River on the John Lynch Memorial Bridge (approx. 3.7 miles). On the other side of river proceed straight at the traffic light onto Metlars Lane. At the first traffic light make a left on Davidson Road for the Busch Campus. Then make a left on Taylor Road.

Parking: Metered spots are available in Lot 54 near Taylor Road. Additional spots can be found in Lots 51, 58, and 59.

For more information on this IEEE Communications / Consumer Electronics meeting, see http://ewh.ieee.org/r1/princeton-centraljersey/Announcements/Wireless_Security.pdf.