



Center for Photonic Communication and Computing

The DARPA Quantum Network

Chip Elliott

Principal Engineer in BBN Technologies
Cambridge, MA

Abstract: BBN, Boston University, and Harvard are designing and building the DARPA Quantum Network, delivering end-to-end network security via high-speed Quantum Key Distribution, and testing that Network against sophisticated eavesdropping attacks. The first link in our network is now fully operational, thus providing a standard Internet "Virtual Private Network" (VPN) whose traffic is protected by weak-coherent quantum cryptography. We will give a brief tutorial on quantum cryptography, and then discuss our working system and plans for the next phases of the project.

Monday, May 5, 2003

11:00 AM – 12:00 PM

Technological Institute, Room L324

Biography: As Principal Engineer for BBN Technologies, *Mr. Elliott* has led the design and successful implementation of a number of secure, mission-critical networks based on novel Internet technology for the United States, Canada, and the U.K., and has acted as senior advisor on a number of national and commercial networks including three LEO satellite constellations and Boeing's Connexion system. Mr. Elliott has particular expertise in wireless Internet technology, mobile "ad hoc" networks, quality of service issues, and novel routing techniques. At present he is leading the design and build-out of a very highly secure network protected by quantum cryptography. He holds over 70 patents pending or issued on network technology, currently serves on the Naval Studies Board (National Academy of Sciences), and has participated in a variety of other national advisory panels including the Defense Science Board and Army Science Board.

For more information please go to our website <http://cpcc.northwestern.edu>