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## Special Guest Lectures

### GENI - The Global Environment for Networking Innovations Project

Chip Elliott, BBN Technologies and GENI PI/PD/Chief Engineer

Johnston Hall 338  
 May 20, 2008 - 09:30 am

#### Abstract:

GENI is an experimental facility called the Global Environment for Network Innovation. GENI is designed to allow experiments on a wide variety of problems in communications, networking, distributed systems, cyber-security, and networked services and applications. The emphasis is on enabling researchers to experiment with radical network designs in a way that is far more realistic than they can today. Researchers will be able to build their own new versions of the "net" or to study the "net" in ways that are not possible today. Compatibility, with the Internet is NOT required. The purpose of GENI is to give researchers the opportunity to experiment unfettered by assumptions or requirements and to support those experiments at a large scale with real user populations. GENI is being proposed to NSF as a Major Research and Equipment Facility Construction (MREFC) project. The MREFC program is NSF's mechanism for funding large infrastructure projects. NSF has funded MREFC projects in a variety of fields, such as the Laser Interferometer Gravitational Wave Observatory (LIGO), but GENI would be the first MREFC project initiated and designed by the computer science research community.

#### Speaker's Bio:

Chip Elliott is Project Director for GENI, a national-scale experimental facility being created by the National Science Foundation for "clean slate" research in global networking. He is Chief Engineer at BBN Technologies and an AAAS Fellow and IEEE Fellow with over 85 patents issued and pending. Mr. Elliott led DARPA's design and build-out of the world's first quantum cryptography network with 10 optical nodes across metro Boston providing highly secure key distribution non-stop through both telecom fibers and the atmosphere as well as the design and implementation of large-scale, mission-critical "ad hoc" radio networks now used in nearly a dozen nations including the United States, UK, and Canada. For his leadership in quantum cryptography he was given Frost & Sullivan's Award for Excellence in Technology (2005) and named a World Technology Award Finalist (2004) and Fellow. Mr. Elliott has served on many national panels and has held visiting faculty positions at Dartmouth College, Tunghai University in Taiwan, and the Indian Institute of Technology, Kanpur. Key GENI links: <http://geni.net/> <http://www.nsf.gov/cise/cns/geni/>