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Chattanooga acquires cutting-edge compute facility, joins smart city network

CHATTANOOGA, Tenn. (February 10, 2015) – [The University of Tennessee at Chattanooga](#) (UTC) announced today that it has added a cutting-edge computing resource to its campus network that will benefit both campus researchers and subscribers to the [EPB Fiber Optics](#) network.

In partnership with [The Enterprise Center](#) and [US Ignite](#), UTC has acquired and activated a GENI rack. The [GENI](#) rack (i.e., **G**lobal **E**nvironment for **N**etwork **I**nnovations) is linked with similar racks in 60 other leading universities in smart cities in the U.S. and internationally. The racks act collectively as a programmable nervous system for researching and deploying the next generation of the Internet and cloud computing.

The Chattanooga rack is unique in that it will be able to connect to Chattanooga homes and small businesses with gigabit Internet service from EPB Fiber Optics. This arrangement will enable Chattanoogans the opportunity to develop, test and provide feedback on advanced next-generation Internet applications in education, healthcare and public safety.

As a catalyst for the national movement to create and deploy such applications, US Ignite has been working with Chattanooga and EPB since US Ignite's formation, and the GENI rack and its connections will now enable Chattanoogans to be among the first to experience them. Chattanooga's 2015 [GIGTANK](#) accelerator will include an emphasis on leveraging this advanced infrastructure.

Some gigabit-enabled applications are currently being developed in Chattanooga through the [Mozilla Gigabit Community Fund](#). *Adagio*, created by local musician Jonathan Susman, is a cloud-based audio remixing tool that will reach national and international audiences thanks to the GENI rack and its connections to other leading universities and smart cities. *Viditor* is a collaborative video-editing tool created by two entrepreneurial students at UTC.

Other smart gigabit cities are developing applications in virtual reality (e.g., to immerse students in the Gettysburg battlefield or perhaps explore the biological structure of living cells). More than 200 faculty members worldwide are engaged in this work on the next-generation Internet and its applications. The GENI rack is the resource needed to add Chattanooga to this prestigious list.

"We expect this capability to accelerate our efforts to match UTC researchers with those at the best research universities in the country," says Steve Angle, chancellor of UTC.

One of the next-generation capabilities provided by the GENI racks is the ability to wall-off or isolate sensitive traffic. For example, the network could be configured to provide secure gigabit channels for telemedicine. Chattanooga was one of the first cities to demonstrate gigabit telemedicine by showing that gigabyte medical images could be examined by radiologists from their homes in the middle of the night in emergency cases.

Ken Hays, president and CEO of The Enterprise Center, confirms that, "We are receiving many inquiries from leading-edge researchers who seek a critical mass of gigabit users. With the GENI connection, we will be working with such researchers across the country focusing initially on smart grid, additive manufacturing and healthcare services."

Engage 3D and EPB used an early prototype of the GENI network to conduct the first city-to-city demonstration of student-controlled 3D television. Using the Ranger Rick program at the Tennessee Aquarium, a special camera captured not only video images, but also a representation of the 3D shapes of Ranger Rick, his animals and their surroundings. Because a digitized description of all of the objects in the scene was being sent, students watching the transmission in Chicago could control their vantage point, looking up, down and around the animal being shown. Each student could view the same or different vantage points simultaneously. Sending a complete description of the scene 30 times per second required nearly a gigabit of bandwidth to the aquarium, the Chattanooga Public Library and the local STEM high school.

Launched with support from the National Science Foundation, GENI supports next-generation architectures for sharing advanced applications that require symmetric gigabit speeds, advanced local cloud computing (*locavore* computing) and/or software-defined networking.

"We look forward to connecting other cities to Chattanooga and research universities via the GENI network so that new public-benefit applications can be developed collaboratively and shared for the benefit of many of the current set of US Ignite cities," says William Wallace, executive director of US Ignite.

About the University of Tennessee at Chattanooga

The University of Tennessee at Chattanooga is a national model for community engaged universities. In collaboration with many regional partners, it offers students an experiential learning environment graced with outstanding teaching scholars in bachelor's, master's, and doctoral programs.

About the Enterprise Center

The Enterprise Center is a non-profit organization whose mission is to establish Chattanooga as a hub of innovation, improving people's lives by leveraging the city's digital technology to create, demonstrate, test, and apply solutions for the 21st century.

About US Ignite

US Ignite is a non-profit, public-private partnership that fosters the creation of next-generation Internet applications that provide transformative public benefit in health care, clean energy, public safety, transportation, education, and advanced manufacturing. It was established in 2012 with initial inspiration from the National Science Foundation and the White House Office of Science and Technology Policy.