

NJIT's SmartCampus project to create closer connections

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The entire campus of New Jersey Institute of Technology will soon be a laboratory for investigating innovative ways in which students can better connect with each other by using cell phones and other compact wireless communications devices.

The research project, called SmartCampus, will allow NJIT students to instantly locate their friends at the school, identify other students who share their interests and obtain information about the number of people using the library, the cafeteria, the computer labs and other places on campus.

"We'll use mobile tracers to detect the places where students like to gather and use those places to identify students' interests and patterns," said Quentin Jones, PhD, an assistant professor of information systems at NJIT. "SmartCampus is a unique social computing research project that uses technology to unite an urban environment – in this case the NJIT campus – into a community. This has been a dream of social and computer scientists for decades, and it's incredibly exciting because we now have the technological ability to do it."

A project of this magnitude requires a skilled team of experts to achieve its goals. Constantine Manikopoulos, PhD, associate professor of electrical and computer engineering, along with Jones, has assembled a team of NJIT faculty and students drawn from electrical engineering, computer science, human-computer interaction, information systems and management. Their vision is to integrate resources from all of these

disciplines to build a greater sense of place and personal interaction on campus, an effort that could ultimately change and improve the way people in urban clusters interact with each other.

SmartCampus is a "cutting-edge investigation of location-aware technology and social dynamics that will make NJIT the best-connected campus in the nation," said Manikopoulos, one of the nation's leading experts in network security.

The promise of the SmartCampus project is underscored by the funding it has attracted: the National Science Foundation (NSF) is contributing \$1.7 million over the next three years. Part of the money will be used to provide participating volunteers with cell phones, laptop computers, and other wireless devices that have the software and communications capabilities needed for the project.

By this spring, the researchers expect that at least 100 volunteer users at NJIT's 45-acre urban campus will be able to locate and interact with each other as they go about their daily activities. Later, some 500 participants will be involved, and the ultimate aim of researchers is to allow the entire university - students, faculty and staff – to better communicate with each other, said Jones.

The SmartCampus initiative will feature the development of software that, among other uses, will permit the volunteers to access a database of interests and daily routines for all participants to facilitate social interaction. Constructing this database of participant profiles will involve collecting geotemporal data from mobile communications devices on a scale never before attempted. These profiles will be leveraged in real time to support a range of activities that will make campus life richer for all.

As the NJIT researchers acknowledge, gathering and storing such

information raises the key issue of protecting an individual's privacy, and even physical safety. "Preserving privacy while enabling valuable services is a very challenging problem that we intend to investigate," says Manikopoulos.

As a basic precaution, all those volunteering for the project will be required to specify which personal information they are willing to share with the SmartCampus electronic community. Participants will also have the option of restricting the availability of their location information to certain times and places.

As with the Internet, Jones admits that there is both "danger and wonder" in the technologies that are further transforming the way people communicate and interact. But these technologies are fast becoming a part of daily life, he said, and with the appropriate safeguards, their potential for enhancing personal interaction and building community makes them an exciting new social asset.

Source: New Jersey Institute of Technology

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