

UNB AND ALIANT TEAM UP TO DEVELOP COMMUNICATIONS TECHNOLOGY

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A new research partnership between UNBF and Aliant will foster the next generation of wireless communications technology.

Aliant is investing \$500,000 through its Wireless Innovation Fund to support wireless research and development at UNBF. The fund is a collaborative effort with Bell University Labs (BUL), a national Bell Canada-sponsored university research and development investment initiative.

“The University of New Brunswick is delighted to enter into this research alliance with Aliant and Bell University Labs,” said Greg Kealey, UNB’s vice-president (research). “We look forward to significant research achievements which will benefit both parties, the province and the region.”

Aliant will contribute \$100,000 per year for three years in support of Next Generation Wireless Telecommunications Systems for Mobility research. This initiative is led by Bernd Kurz, a professor of computer science. Aliant will also contribute \$50,000 per year for four years to support Privacy, Security and Trust research as it relates to the wireless world, an initiative led by law professor David Townsend.

Dr. Kurz is developing a realistic high-speed test network for research that will enable seamless mobility across networks — networks which are currently isolated.

“It will enable service providers to deliver a wide variety of multimedia-rich applications and enable subscribers to access these services anywhere,” explains Dr. Kurz. “This project is an opportunity for the Atlantic region to become a leader in wireless network development.”

Aliant, UNB and others will be able to use the test network to develop and test new technology and services for industry, business, academia, and the public in a realistic environment before production.

“It will also allow us to train highly qualified personnel,” says Dr. Kurz.

Other components of Dr. Kurz’s project address the quality of service of multimedia-rich mobile applications optimally delivered to cell phones, personal digital assistants (PDAs) and laptops. He is also developing new tools and processes for mobile applications.

Under the same initiative, research partners in the electrical and computer engineering

departments at UNBF and Dalhousie University will investigate radio wave propagation and smart antennas, and pave the way for mitigation to future peer-to-peer networks.

The Privacy, Security and Trust (PST) research initiative may include several projects.

“We will be looking at challenges that will occur in the wireless world two to four years from now,” says Prof. Townsend. “For example, bringing the Internet to hand-held devices will also bring many of its problems -- spam, viruses and fraudulent activity -- which need to be addressed.”

Developing policy and technology to protect user privacy is another area where research is needed.

On the operational side of Aliant’s wireless network, Prof. Townsend says there is a need to develop new strategies for handling threats to the network by severe weather, power blackouts and malicious people.

“In addition, the federal government is going to impose new lawful access obligations on all wireless networks,” he explains. “Networks have to be able to capture not only a conversation but also someone’s location, their movements in real time and their online transactional activities.”

As many as 40 researchers from a variety of disciplines on campus have expressed an interest in being involved with privacy, security and trust research projects. “We also look forward to collaborating with the National Research Council Institute for Information Technology – e-Business, which has staff here in New Brunswick dedicated to PST research,” says Prof. Townsend.

The Aliant Wireless Innovation Fund, in collaboration with the Bell University Labs, encourages the growth of intellectual capital and contributes to leadership and innovation in the development of new communications technology in Atlantic Canada and across the country. Aliant is Atlantic Canada’s leading information and communications technology company.