

# TACTEX AND NORTEL COLLABORATE ON E-HEALTH RESEARCH AT CARLETON UNIVERSITY

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Tactex Controls Inc. ("Tactex") will collaborate with Nortel, Carleton University and the SCO Health Service on a research project to investigate "*Remote Patient Monitoring using Pressure-Sensitive Mats*" with funding from the Ontario Research Network for Electronic Commerce (ORNEC).

Tactex CEO David Lokhorst explains, "The objective of this project is to monitor the health and well being of older adults in their own homes remotely, using electronic processes and advanced communication approaches. Our bed sensor and other Kinotex® sensor devices can be used in a new generation of intelligent sensing to enable aging in place." Lokhorst went on to say that Tactex is delighted to be collaborating with the outstanding team of researchers at Carleton University and SCO Health Services and Nortel.

Nortel will provide technical expertise to help determine and demonstrate how sensors and integrated communications systems can improve operational efficiencies to healthcare facilities.

The Tactex bed sensor can be integrated into a 'smart home' system to detect abnormal situations range from sleeping disturbances, to variations in bed entry/exit routines, fever, breathing problems, or falls. "Smart" homes are equipped with many sensors connected by a communication network to data processing and decision making systems. The data from the various sensors reveals information about the health, well being, and behaviour of the home occupant. Once an abnormal situation is detected, the system initiates the appropriate response such as an audio cue, a call to the next of kin, a call to a designated health professional, a report to a health monitoring organization, or in case of emergencies a call to 911.

These "smart" homes monitor their occupants unobtrusively without the need of any intervention by the occupant. The 'smart home' and e-health concepts are cost effective approaches to delivering healthcare services and may also lead to improving the healthcare outcomes.

The proposed concepts of the research project will be assessed and verified in the prototype experimental "smart apartment" located at the Elisabeth-Bruyère Health Centre hosted by the SCO Health Service.

## ABOUT TACTEX

Tactex Controls has developed an unobtrusive bed sensing technology based on its patented fibre optic pressure system, Kinotex®, an innovative and durable tactile pressure sensing platform.

Tactex sensors are currently used in 'bed occupancy' applications. Kinotex® is a rugged, cost effective sensor capable of delivering rich data about resident motion and activity in bed that may correlate to clinical care and improving quality of life. Its bed sensors are of interest to clinicians for use in the burgeoning e-health field where patient monitoring is an important trend to address the aging demographic.

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## ABOUT CARLETON UNIVERSITY SYSTEM AND COMPUTER ENGINEERING

Dr. Rafik Goubran, P.Eng., is Principal Investigator on the project. Dr. Goubran is a Professor and Chair of the Department of Systems and Computer Engineering, Carleton University. Goubran is also Director for the Ottawa-Carleton Institute for Biomedical Engineering and a leading expert in signal processing. His work is widely published, he has filed 9 patents, and has participated in different committees including IEEE guest editor, IEEE conference chair, CEAB visits, CITO board, NCIT technical committee, and chair of the research sub-committee of the TAFETA project (Technology Assisted Friendly Environment for the Third Age). In 2004 he was awarded a Research Achievement Award by Carleton, and in 2003 he was selected as a "Champions of Innovation" by CITO. His role in this project is to provide expertise and supervision in the area of electronic processes, data processing, analysis, testing and communications.

The project co-investigator is Dr. Samy Mahmoud, P.Eng., a leading expert in communication systems. He is a Professor and Dean of the Faculty of Engineering and Design, Carleton University. He has published over 200 papers, co-authored a major book, filed 8 patents, and has been very active in three networks of excellence (TRIO, CITO, and CITR) both as Principal Investigator and research thrust leader. He led a major initiative to establish the NCIT that was launched with a total funding of \$25 million. He was a member of the founding executive board of CANARIE, the board of directors of CITO, and served as senior research advisor and chair of the research audit board of the European ACTS program. His research has received many recognition awards such as two best paper awards, National Stentor award, and Carleton Research Achievement Award. His role in this project is to provide expertise and supervision in the area of communication systems. Phone: (613) 520 5790

Brilliant Researchers. Brilliant Research.

Carleton University is a dynamic, interdisciplinary research institution located in Ottawa-Canada's capital. Carleton provides leadership to the conduct of research, scholarship, and creative activity. It has innovative programs in sciences, business, engineering, arts, and public administration and has realized partnerships with numerous public and private sector organizations. Its strengths have led to international recognition for its faculty, as well as an ability to attract outstanding students.

## ABOUT SCO HEALTH SERVICES

SCO Health Service is a recognized leader in the Care of the Elderly, and includes the Elisabeth-Bruyère Health Centre, Saint-Vincent Hospital, Résidence Saint-Louis, and Villa Marguerite facilities. Its teaching facility is affiliated with the University of Ottawa and the principal programs it offers are Complex Continuing Care (350 beds), Long-term care (270 beds), Rehabilitation (100 beds) and Palliative Care (40 beds). The SCO Health Service is a co-sponsor the Elisabeth-Bruyère Research Institute. Part of its Mission is to improve "the quality of life of adults affected by loss of autonomy". The SCO Health Service has invested in a state of the art "smart apartment" and staffing support to advance the science of geriatrics and home care. Dr. Frank Knoefel, MD, CCFP (CoE), MPA, the co-investigator, is a physician trained in Care of the Elderly with extensive experience in Geriatric Rehabilitation. He is currently Chief of Staff at the SCO Health Service and Vice-President of Medical Affairs. His research has focused on geriatric rehabilitation and medical complexity and the role of technology in "aging in place."

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\*Nortel is a trademark of Nortel Networks.

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*The TSX Venture Exchange has not reviewed and does not accept responsibility for the adequacy or accuracy of this release.*