PROTEGO: Proactive Technology for Elderly on the Go

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An aging population is a powerful and transforming demographic force. It is projected that the number of people above the age of 65 will increase from 524 million in 2010 to 1.5 billion by 2050 with a corresponding increase in the numbers of elderly people living independently. This project aimed to provide an innovative real-time movement tracking and monitoring solution to allow the elderly to lead safe, independent and active lives in their own homes. PROTEGO was developed as an easy-to-use solution that works by a self-adhesive radio frequency identification (RFID) patch applied to the elderly person. A network of antennae around the house identify the location of this patch in real-time using the principle of “triangulation”. This information is transferred to a base station in the house and then relayed to software on the cloud. The exact location and movements of the elderly person can then be viewed in real–time on any Internet connected device via a mobile application. In the event of a fall or an emergency at home a notification can be sent to the carer so that appropriate and prompt action can be taken. Active RFID tags were deemed the most appropriate and safe for the development of PROTEGO. They are powerful enough to transmit through a range of different material and have their own power source. Being a simple, cost effective solution that enables independence for the healthy aging population, PROTEGO could potentially reduce the burden on health care systems and aged care facilities.

Awards Won: