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Conference Abstract

Project RITA: Developing a digital advocate & care service with an empathetic heart and inquiring mind

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Abstract

RITA (Responsive InTeractive Advocate) is the vision for a computer software-based advocacy and companion service that brings together three elements: a 3D virtual avatar and conversational agent, an 'essence' repository for storage and organisation of various forms of information pertaining to the user, and an empathetic communication system that is capable of understanding and responding to the psychological, social and emotional needs of the individual user. Fundamentally, RITA represents substantial innovation in approach, functionality and quality in digital healthcare technology and future service provision as part of the long-term care revolution.

Recent census figures (ONS 2011) reveal that 9.2 million people across England and Wales are over the age of 65, almost a third of whom live alone, with more than half suffering long term health/mobility issues, many complex combinations of multiple conditions. In 2008, 22.9% of people died between the ages of 70-79 (NHS 2010). Surviving individuals within this demographic may consequently possess limited companionship opportunity as some of their peers have passed away or are similarly ill. Whilst they may be fortunate enough to have a family, personal and lifestyle pressures may restrict opportunities for support and care (see Merrill 1997; Silverstone & Hyman 2008). Professional carers may also be available, but only visit for relatively brief periods, meaning that the majority of the individual's time may be spent in isolation, causing them to experience disengagement, frustration and a lacking of fulfilment and purpose. Contemporary healthcare is fragmented and often reactive to worsening symptoms and new conditions. Individualised care, particularly with regards to providing effective emotional and personal support, is challenging because the system does not fully appreciate personality, desires, preferences or personal history.

Currently under development by professional and academic partners, RITA is envisioned as an integrated lifestyle package that will embody a humanised digital champion; an intelligent, informed and empathetic advocate who will be the friendly interface between users, their family, friends, professionals and services. Incorporating cutting edge environmental and physiological sensing

technology, alongside advanced artificial intelligence and machine learning algorithms, RITA will have the facility to securely store, interpret and retrieve the wealth of information that is shared with her throughout the years.

RITA operates primarily as a preventative carer who works more effectively as she learns more about the user over an extended period of interaction. This is made possible by the implementation of an evolutionary intelligence system, currently in development. In the initial stages of use, various forms of information can be shared with RITA, enabling her to carry out tasks almost immediately, before becoming increasingly more effective as more information is gathered and refined. This will create the opportunity for a reciprocal and collaborative relationship within which RITA can offer unprecedented support to the user.

Drawing on psychological research and service user feedback, this presentation will demonstrate, by way of interactive vignettes, how RITA will work and the types of support she can offer.

Keywords

digital advocate; semantic intelligence; service provision; empathetic; emotion recognition

PowerPoint presentation:

https://www.conftool.pro/digital-health-care-2014/index.php?page=adminPapersDetails&path=adminPapers&form_id=47
