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'Thinking' computers for your home

In these environments, the systems and services must be able to adapt and react without the need for people to intervene to configure them. Current research is concentrating on how information about people and the environment can be collected and interpreted automatically by 'intelligent' computer systems.

It is envisaged that 'knowledge networks' will be put to use in environments that are sensor-rich – where there are lots of various kinds of sensors, whether physical sensors, software sensors, or web social sensors. These sensors will generate extremely large amounts of independent pieces of information. The goal of the University's research is to provide a mechanism that enables knowledge networks to gather and self-manage all this information.

Maurice Mulvenna, from the CASCADAS team, says:

"CASCADAS is being viewed with interest by many other researchers in Europe. We presented our initial prototype to the project partners at Imperial College in London in May and it was well received. We plan to build more scientific evidence on the viability of our approach by the end of 2007, and the team are excited about the possibilities offered by the research.

"Knowledge networks could potentially enrich any computer-mediated environment, and in the TRAIL laboratory we have a particular interest in providing, for example, cheaper, more effective, monitoring in their own homes for the ageing and for people with disabilities.

"Currently homes can be fitted with sensors on fittings or doors to monitor the activities of residents, but the sensor responses have to be monitored constantly. A self-managing knowledge network could flag

up problems when they occur without constant monitoring. That would enable healthcare organisations to offer more focussed care, more cheaply and more effectively."

CASCADAS is funded by the prestigious Future and Emerging Technologies (FET) section of the European Commission's Information Society Technology (IST) priority, part of the EU Framework Programme for Research and Development.

FET is the IST Programme nursery for novel and emerging scientific ideas. Its mission is to promote research that is of a long-term nature or involves particularly high risks, compensated by the potential of a significant societal or industrial impact.

As well as Maurice Mulvenna, the CASCADAS team includes Dr Chris Nugent, School of Computing and Mathematics; Dr Kevin Curran, School of Computing and Intelligent



Maurice Mulvenna

Systems; Dr Matthias Baumgarten, Research Fellow and Dr Kieran Greer, Research Associate.

INSIDE LINKS:

For further information about the project you can log on to www.cascadas-project.org.

Collaboration for better research



The Rehabilitation and Therapy Research Society's (RTRS) 3rd Annual Conference took place recently at the Health and Rehabilitation Sciences Research Institute at the Jordanstown campus. The theme of the meeting was 'Collaborative Research.... Making It a Reality' and was attended by over 100 delegates. The RTRS was established in 2004 by the professions of physiotherapy, occupational therapy and speech and language therapy. Its mission is to 'develop and enhance rehabilitation and therapy research on the island of Ireland'.

Professor Suzanne McDonough, School of Health Sciences, said: "Four highly distinguished,

international key-note speakers gave valuable and inspiring insights on the importance of collaboration in today's research. Professor Domhnall McAuley from Jordanstown, an editor for the *British Medical Journal* (BMJ); Dr Elizabeth White, who is presently the convenor of the Research Forum for Allied Health Professions.

Professor Mary Dyson, Emeritus Reader in the biology of tissue repair at King's College London, and John Wilson, Professor of Communications, UU.

In the afternoon there were free paper and poster sessions. In all, almost 40 research studies were presented reflecting an increasing level of research. Abstracts will be published in the *Physical Therapy Reviews* journal.



From left: Professor Suzanne McDonough; Professor Domhnall McAuley; Dr Deidre Hurley-Osing, Chair of the RTRS; Dr Elizabeth White; Professor Mary Dyson; and Professor John Wilson.

INSIDE LINKS:

Next year's conference will take place on Friday 23 May 2008 at the Royal College of Surgeons in Ireland with the theme 'The Research Practice Cycle –Making it Work'. Details can be obtained from www.rtrs.org