

# Making human-machine communication 'more human'

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Have you ever checked a phone directory listing or ordered a cab and wished that the automated telephone speech recognition system would respond to your frustration?

A new research network, led by the University of Western Sydney and Macquarie University, is set to revolutionise human-machine communication by linking the world's top scientific, engineering and information technology minds with psychologists, creative artists, musicians and linguists for a fresh and creative approach to the field.

The Human Communication Science Network (HCSNet), funded through an Australian Research Council grant of \$2 million over 5 years, will be officially launched today at MARCS Auditory Laboratories at the UWS Bankstown campus.

HCSNet Convenor, Professor Robert Dale, Director of Macquarie University's Centre for Language Technology, says the new body is designed to improve existing technologies and encourage new concepts and ideas that will make life easier.

"Our interactions with machine-based communication tools have become a daily fact of life," says Professor Dale.

"Many of us use mobile phones, SMS messaging, databases to store and retrieve information, and voice recognition systems, particularly on computers and telephones.

"Our research is not about creating an artificial human, as many other research approaches attempt to do, but rather, creating 'more human-like' communication with machines. We will be drawing on the subtleties and nuances of human-to-human communication to improve human-machine interactions," says Professor Dale.

"It's all about a new approach to an old problem," adds Chair of the Network's Steering Committee, Professor Denis Burnham, Director of the UWS MARCS Auditory Laboratories.

"This network will break the conventional interdisciplinary research links and forge new collaborations across fields as diverse as psychology, computing, linguistics and language development, music, engineering, acoustic science, speech science and technology, auditory perception, the creative arts, physics, psycholinguistics, and auditory neuroscience.

"We believe their combined expertise will be the perfect crucible for new ideas and creativity. It should provide some exciting results."

Chair of the Network's Training and Development Committee, Associate Professor Kate Stevens, Deputy Director of the MARCS Auditory Laboratories, says the network will also promote exchanges with partner institutions for research students and academic staff.

"This is a long-term, sustainable project. Not only will we provide the vehicle for unique collaborations, but we will also train and mentor younger, less experienced researchers so they can continue the quest for more effective communication tools in years to come," Associate Professor Stevens explains.

HCSNet involves 17 Australian universities, the CSIRO, the Australian Speech Science and Technology Association, the Australasian Language and Technology Association, the Australian Music and Psychology

Society, the Defence Science and Technology Organisation, the Bionic Ear Institute, as well as major universities and research institutes in Japan, the UK, the US, Canada, Asia and Europe.

Source: Macquarie University

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