Talking to smart homes to improve quality of life

January 11 2005

Telling your house to turn on the lights or record a TV programme may be the ultimate high-tech luxury, but for elderly and disabled people voice-operated smart homes could dramatically improve quality of life. INSPIRE has successfully tested such a system.
Based on the results of the 30-month IST programme INSPIRE project, the partners are confident that they will be able to have a commercial version of their system on the market within two years. It will be geared initially toward people with disabilities and restricted movement but also any home-owner who wants to enjoy the advantages of operating appliances and devices with speech alone.

Within the property the interactive computer system picks up voice commands from wall-mounted microphone arrays, while remote access is provided via voicemail over mobile and fixed-line communications.

“One scenario could be that someone is on their way home and calls the house to turn on the heating for them, once there they can walk in the door and tell it to turn on the lights. If they wanted to watch TV they could use it to close the curtains and dim the lamps,” explains INSPIRE scientific coordinator Anastasios Tsopanoglou at KNOWLEDGE in Greece.

The system, which can be programmed to operate in any language, was tested in five pilot trials in Germany and Greece involving around 100 users.

“The greatest difficulty we faced was enhancing the speech recognition technology to an acceptable level, although we managed to ensure it would recognise voice commands successfully in more than 85 per cent of cases,” Tsopanoglou says. “Users’ reactions were generally very positive, on a scale of one to seven most rated it at 5.5.”

Even so, the coordinator admits that most average users said that though the system would be a nice feature to have in their homes they did not consider it essential.

“The market is not really mature enough for this technology yet for general consumers, however, there is vast potential to use it to help the elderly and disabled,” Tsopanoglou notes. “They could benefit enormously from being able to operate appliances with speech.”

The coordinator estimates that fitting a house with the system would cost approximately 10,000 euros, largely due to the need to run hundreds of cables.
“That could be overcome if new houses are built with cabling pre-installed, or by using wireless technologies such as Bluetooth to interconnect devices,” Tsopanoglou says.

Source: IST Results

Citation: Talking to smart homes to improve quality of life (2005, January 11) retrieved 26 April 2024 from https://phys.org/news/2005-01-smart-homes-quality-life.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.