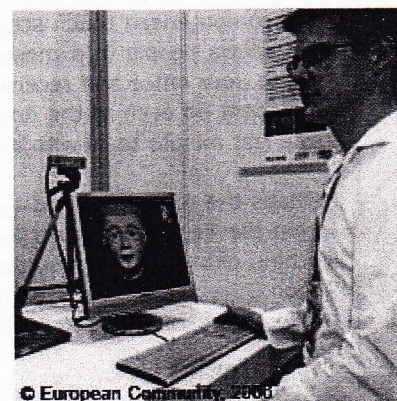


IST2006 Helsinki showcases state of the art technology

[Date: 2006-11-23]



Spread over 9,000 square metres, some 150 of Europe's most innovative and advanced technology projects had the opportunity to show off their wares during the IST2006 event in Helsinki, from 21 to 23 November.

CORDIS News toured a number of the stands to learn more about how information and communication technologies (ICT) are being put to use to solve some of the challenges that we face in our everyday lives.

One of the most visited displays was that of the Communication by Gaze Interaction (COGAIN) project, where delegates could test some of the latest eye control technology devices and software, like MyTobii, a portable communication device which enables people suffering with severe disabilities to gain access to computers with only a few blinks of an eye.

The device is composed of a computer screen with an integrated camera that can be attached easily to wheel chairs. With it, users simply fix their gaze on the digital keyboard and point out the letters they want with their eyes. Currently most text entry is done using a 'soft keyboard' - also a digital keyboard but one which obliges users to move the cursor along until they find the right letter.

Another device developed by partners in the project is the I4Control system, which consists of a tiny camera fixed to a pair of glasses, which can be used to control objects like a computer mouse or software keyboard.

While the technology behind each of the devices may vary, each of them are using standard control software which the COGAIN consortium partners have developed together. This is unprecedented in eye tracking systems, where software had to be written for every new device.

As Mick Donegan of the ACE Centre, one of the partners in the project, illustrated, standardising the software opens the way for more customised applications. He showed a video of a young girl, Helen, who suffers from a very rare disability, using writing activities that were adapted to her level of disability. Helen cannot use traditional aids like switches or special keyboards, because every time she tries to move her body jerks, Mr Donegan explained. 'We developed some specialist activities like a story and a music-playing screen for her. Afterwards we could see that she had become more relaxed about using the eye control software, and is now able to write using it.'

Mr Donegan is responsible in the consortium for getting feedback about the activities from users and relaying their needs back to the researchers. To ensure the widespread take-up of the eye control technology, the consortium is working with a large study group ranging from people with cerebral palsy to people who are 'locked-in', meaning those that can only move their eyes and only communicate with their gaze. 'About 2,000 people across Europe are using eye-control technology at the moment but we hope that these numbers will go into hundreds of thousands,' he told CORDIS News. To achieve this, the consortium is making some of the applications they developed freely available, and is working closely with specialist centres to raise awareness of the benefits of this technology.

Another display drawing the crowds in Helsinki was that of the Computers in the Human Interaction Loop (CHIL). 'The aim of our project is to turn the old human-machine paradigm on its head,' explained Margit Rodder of the University of Karlsruhe, one of the partners in project. 'Rather than humans attending to machines, we develop digital services that attend to humans.' These services include the Memory Jog, which prompts people in meetings with background information and memory assistance, and Targeted Audio, which uses ultrasound to effectively speak directly to someone in the meeting, unbeknown to the other attendees. This could be a useful tool, Ms

Rodder suggested, in cases where someone in the meeting has forgotten another attendee's name.

Also showcased was CHIL's Smart Workspace, aimed at enabling colleagues to work together more efficiently, 'There are many devices available to help people work on their own like palm pilots, blackberry devices and laptops, but public collaborative work is still pen and paper,' explained project partner, Fabio Pianesi of the Italian centre of research, ITC-IRST.

'Our system, which has normal PC requirements, can be projected overhead onto a regular table or installed on a large computerised touch screen table, around which members of a work group sit,' Mr Pianesi told CORDIS News. 'This allows people in a meeting to consult and work on documents together. And after the meeting, you can go back to your office and receive a summary of the meeting, via a webpage, which details the topics covered and the time spent on each of the documents.' The system has been fully developed and the consortium is now conducting some last minute tests with a number of potential customers.

Perhaps the most tried and tested device at the exhibition was the new SmartUs playground environment. Located within the Finnish Pavilion, the playground consists of large i-grid jump pad and a screen which serves for active learning games both indoors and outdoors. The concept behind the games played is very similar to that of 'What Simon Says': when a letter appears on a specific grid on the screen, players must mimic the computer by jumping to the corresponding grid on the mat. As the game progresses, players are expected to follow the instructions more quickly.

Katrina Lahtinen, Content Designer of SmartUs from the Finnish Group Lappest, which heads the project, explained the impetus of the playground. 'Our project set out to address several challenges facing children today. The first is to fight obesity and improve the health of children, which has declined because children do not play outside and move about as much.

'Kids are under too much pressure in school; we wanted to make learning fun because children do not think about learning when they play...We also wanted to help those children that have difficulty learning in the conventional way,' she told CORDIS News. The project partners also hope that adults and the elderly will also use the playground to exercise, and as a way to spend time and interact with the family.

In addition to word games, the playground can be used for other learning exercises in mathematics, geography and music. 'Teachers can create content with the help of special tools that can incorporate images, sounds and text into familiar games,' explained Ms Lahtinen.

Although it is only two years since the project started, the partners have already successfully commercialised the product and several sales have been made. Ms Lahtinen said that the playground has attracted a lot of interest from schools, amusement parks, and even shopping centres.

All three projects received funding under the Information Society Technologies (IST) programme of the Sixth Framework Programme (FP6).

For more information, please visit:
<http://www.cogain.org/>
<http://chil.server.de/servlet/is/101/>
www.smartus.fi

Category: Projects

Data Source Provider: CORDIS News attendance at IST2006

Document Reference: Based on CORDIS News attendance at IST2006

Programme or Service Acronym: FP6-INTEGRATING, FP6-IST, FRAMEWORK 6C

Subject Index: Information Processing, Information Systems; Medicine, Health; Social Aspects

RCN: 26701