Getting families and friends together again, virtually

March 26 2010

(PhysOrg.com) -- A fireside chat, sharing photos with granddad, a family get-together to play Monopoly on a Sunday afternoon? Digital media designed for the individual has hastened the demise of collective social events, but it could also enable their revival.

By marrying state-of-the-art video and audio communications technology with digital media, interactive devices and ambient intelligence, a team of European researchers hope to give people of all ages the opportunity to get together, play games, share experiences and generally communicate, interact and have fun even if they are thousands of kilometres apart. Their goal is to bring down the barriers between people - technological and social.

“E-mail, the internet, cellphones, internet video calls… they are all

designed for one person using one machine. They are not designed to support families or groups of people communicating," suggests Nikolaus Färber, a researcher at the Fraunhofer Institute for Integrated Circuits IIS in Germany. "People have become isolated by technology," he adds.

Coupled with people moving and travelling more frequently for work and study, it is a situation that has led to families and friends spending less time together. Even in the same home many people now tend to entertain and educate themselves alone, whether it is the teenager playing computer games in her room, the father listening to music on his MP3 player in the lounge or the mother studying on her laptop in the kitchen. Technology has encouraged this isolation, but advances in that same technology could now reverse it.

Telepresence and more

Working in the EU-funded TA2 (Together anywhere, together anytime) project, Färber and a team of researchers from seven European countries are aiming to turn the tables on technology by simply and affordably bringing telepresence into normal households. Their vision is of groups of friends and family members seeing each other on their TVs, hearing each other through their stereo systems, sharing photos and videos and playing games almost as naturally as if they were in the same room.

"My brother lives in Switzerland and we have kids about the same age but they only get to see each other twice a year. With the system we are developing they would be able to play together whenever they wanted to without having to leave their homes," Färber notes.

To make that possible, the TA2 researchers are developing the components necessary to build an affordable and easy to install in-home telepresence system. The components can then be used to build complete telepresence systems without the need for special rooms or big screens to

bring people together virtually. A television set, sound system, cameras and microphones placed in a living room suffice to create a sufficiently interactive and immersive experience, while state-of-the-art software which is transparent to the end user manages the communications backbone.

“Audio and video quality is of essence… it needs to be sharp and responsive,” Färber says. “At the same time, TA2 is aware that high audiovisual quality is not the only thing that matters. Applications like games, photo sharing, or virtual pin boards are necessary to frame and trigger the communication.”

Fraunhofer IIS has developed an Audio Communication Engine to provide low-delay, hi-fi quality sound that vastly improves upon current shaky and echo-prone internet calls. Other project partners, among them Philips, BT and Alcatel-Lucent, are working on enhancing video communications, linking together interactive devices and implementing ambient intelligence.

Two or more families playing a board game, for example, would be able to see and hear each other over their TV sets, with artificial intelligence used to focus in-home cameras on the person speaking or whose turn it is. A touch screen embedded in a table might serve as a board game interface, while ambient intelligence from in-home sensors will let the system and other players know where participants are and what they are doing.

“Ambient intelligence could also improve communications by letting friends and family know when someone is available for a call or if they are busy, depending of course on how much information the person wants to disclose,” Färber says.

Children and the elderly, who often find themselves more isolated than

other social groups in the modern world, stand to benefit particularly from the technology. One scenario, due to be used as a demonstrator to highlight the project results, envisages a grandparent and grandchild playing a picture-matching game called pairs in which old photos could be used to trigger conversations and pass stories down through the generations.

“At IFA in Berlin (the world’s largest consumer electronics fair) we set up a demonstrator consisting of two rooms, two TV screens and two tables with integrated touch screens on which people could play games. People were playing with each other as if they were really together in the same room… Many people were interested in the system, particularly those with families and friends in different parts of the world,” notes Matthias Rose, the head of marketing communications for audio and multimedia at Fraunhofer IIS.

Fraunhofer is already working on integrating its audio technology into commercial products, and commercial applications are also likely to stem from other areas of research in the TA2 project, which is being funded by the EU’s Seventh Framework Programme.

“Obviously, once the project ends, it would be interesting to find investors and partners to create a commercial product out of the whole system that would allow everyone to incorporate telepresence into their homes and bring families and friends closer together,” Färber says.

More information: TA2 project - www.ta2-project.eu/

Provided by ICT Results

Citation: Getting families and friends together again, virtually (2010, March 26) retrieved 24

April 2024 from https://phys.org/news/2010-03-families-friends-virtually.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.