Enhanced learning with interactive courses for TV

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(PhysOrg.com) -- Providing educators with the tools to create interactive TV courses will expand their ability to reach audiences in their homes and help them learn new skills, according to European researchers.

The Enhanced Learning Unlimited (ELU) project was established to develop the methodologies and tools for interactive digital TV (iDTV) learning, known as 't-learning', as a complement to e-learning via a personal computer.

In the home and at school, conventional television remains a powerful tool for education. However, it has largely been used as a passive medium, with viewers receiving the information as observers rather than as participants.

ELU's task was to extend the advantages of interactive learning to a wider audience, especially to those living in the EU's newest Member States, where internet penetration is still relatively low and older adults are attempting to assimilate new ways of doing things. While 40-60% of European households have a broadband internet connection, television is available in almost all of them.

"Television was targeted as the means to transmit life-long knowledge to potential learners in a highly relaxed and comprehensible mode," says project coordinator Alex Shani. "Learning while watching TV and enjoying oneself is the main driver of ELU's work."

Compelling content, interactive results

Scripting interactivity into educational TV programmes creates a much more compelling and engaging experience for the learner. The EU-funded ELU project resulted in a number of application approaches, some ready-made formats and templates for programmes, and software for creating iDTV courses.

In particular, the researchers developed configuration parameters and content that helps to define interactive, multimedia presentations. They produced templates for multimedia pages and presentations, interactive quizzes, a virtual teacher, and support for ancillary devices. Users can adapt the template modules for particular programmes depending on appearance, content and level of difficulty.

They also created the ELU Script, which describes every course, and an Authoring Tool (AT), which helps educators to create complex interactive courses through a visual interface. The AT was designed as a plug-in on the top of Giunti Lab's eXact Packager e-learning production software. A multimedia player they developed is able to interpret the ELU Script and manage user interaction.

All of ELU's software was developed using the open interactive TV standard MHP (Multimedia Home Platform). This allows the ELU technology to be used with MHP-enabled TV set-top boxes and on Java-enabled devices capable of running MHP or its related middleware.

To test ELU's software and methods, the researchers developed six t-learning courses in different languages with a variety of themes, target users, and interactive features. The courses dealt with history, business, ICT, mathematics, statistics and road safety, and they were targeted at a variety of audiences and ages, including young pupils, MBA students and older adults.

For example, ELU's 'ICT Basics' course was designed for adults aged over 35 who had no or only very basic knowledge of information and communications technologies. The participating university prepared two interactive modules of the course. One guided the user through the process of finding and booking a holiday via the internet. The second dealt with the task of preparing and presenting digital photos to relatives.

Meanwhile ELU's iDTV business course was designed to encourage small business entrepreneurship in Latvia. The first module of the course introduces learners to basic business terms, provides a personal narrative about running a small business in Latvia and offers interactive content related to starting a business.

The second module uses a personal narrative about running a small business in Kenya to introduce learners to supply and demand functions, with built-in interactivity to help users understand the relationship between these market forces.

Testing and confirmation

The courses were tested on users in the Czech Republic, Hungary, Latvia, Slovenia and Lithuania. The testing confirmed the premise that t-learning complements e-learning and other methods of transmitting information, says Shani.

With the conclusion of the ELU project and the development of iDTV software that is close to market quality, it is now up to educational content developers to take the process further. For example, Czech TV plans to launch a dedicated channel devoted to t-learning, opening up the way for ELU's products to be tested in the market.

More information: www.elu-project.com/