

Presence Research in Europe Economic and Social Prospects

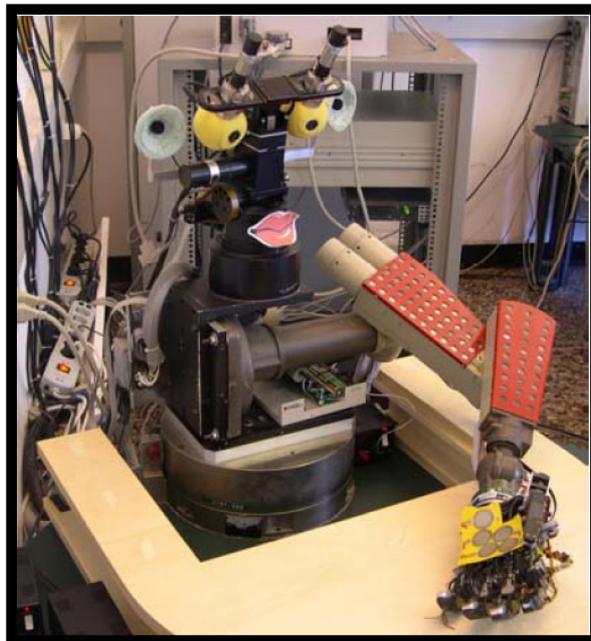
“Meet Europe’s leading Researchers in Virtual Reality”

March 10, 2005, 13:30 to 16:30.

CeBIT Hannover, GER: Hall 1, Conference Room “Rome”

The proliferation of multimodal computing and communications, and the desire to offer "virtual reality" (VR) and "augmented reality" (AR) as a user experience have become a key trend in the media and computer technology industries: Here scientists and researchers are called upon to contribute informed answers to important questions which are still unanswered and of high-risk, hi-potential impact. Modern VR and AR devices address different sensory modalities (e.g., optics, haptics, acoustics) and are highly immersive and interactive. They create the illusion of actually being within the location that they depict or of a virtual person coming alive. To make virtual stimuli elicit a real "sense of presence" requires 21st century technology and interdisciplinary knowledge.

Since 2002, the European Community has supported **research projects on Presence**. These efforts in research and development – funded within the IST program “Future and emerging technologies” of the European Commission – are driven by the confidence that Presence technologies will unfold substantial economic power in the near future. Product design, manufacturing, the delivery of goods and services, the ways of communicating in business, science, and administration, the means of teaching and learning, of creating and sharing new ideas will be revolutionized by Presence technologies and experiences.



The image shows the „BBot“, a multi-sensor robot that is capable to learn new behaviours autonomously. “BBot” has been developed by ADAPT, one of the research projects on “Presence” that are funded by the FET programme of the European Commission.

PREP 05 introduces the most recent and promising results of EU-funded research on Presence. European projects have made amazing progress in technology development, application, and the measurement of Presence in human users. Their prototypes and results are of immediate relevance to all industries devoted to VR/AR applications. **Meet Europe's leading researchers in Virtual Reality**, 3D technology, and Presence measurement. **Learn about new ways** of delivering rich media experiences and find innovative approaches to future challenges of communication, group work, design, training, therapy and many other fields of application.

Highlights of the Event

Stacey Spiegel, CEO of I-mmersion, Toronto, will introduce the economic, technological and creative perspectives of VR/AR and Presence research and applications. Mr. Spiegel is a pioneer in interactive cinema applications for education and entertainment. He will paint the big picture of VR/AR's future and explain why research and development in the domain of Presence is important for many industries and customers' daily life.

Jonathan Freeman, Senior Researcher at the Goldsmith College, London, and a key actor in the European Research initiative on Presence, will introduce the scope of 11 "Presence" projects that are working on various technologies, applications, and research questions. The OMNIPRES project which he represents functions as bridge between the single multidisciplinary projects all over Europe and is especially well capable to transfer European research findings to the industries.

An **open forum** will finally allow visitors and media representatives to get in touch individually with Europe's leading researchers to discuss the many uses and application perspectives of this cutting-edge research initiative. Discover the amazing results of various projects:

- "Touch-HAPSYS" has developed revolutionary applications that address the haptic senses. Literally feel virtual objects or touch things that are actually at remote locations – the tactile impression gets to you as if you were really putting your hand on it. Based on bio- and neurophysics, Touch-HAPSYS technologies open up a whole new dimension of haptic Presence and multi-sense human-computer-interaction.
- "PRESENCIA" is presenting new ways to control computer-generated environments – simply by thinking. Biofeedback methods allow to navigate a virtual room, for example, through brain activity that is measured by EEG. This highly innovative technology is based on latest neuroscientific research and promises to be useful for numerous applications.
- "BENOGO" has revolutionized visual and audio recording systems to capture real places for representation in virtual environments. Thanks to new cameras, the city center of a remote town comes alive in a virtual environment – in photorealistic quality! These new recording technologies allow to improve many existing VR and AR applications and increase their fidelity dramatically.

- “ADAPT” offers amazing results on learning robots. Equipped with multiple sensors, the project’s prototype is capable to perform various interactions with its environment and to acquire new behaviours autonomously. Watching this robot truly elicits a sense of “Social Presence”, which is highly relevant to many robotics applications.
- The “EMMA” project is utilizing VR technology for innovative applications in mental health. The goal is to help people to alternate their moods most effectively. VR and AR function as powerful “mood devices” that support various measures in psychotherapy and mental health.
- “MEC” has developed research tools for a human-centered approach to VR/AR environments. The project offers a variety of methods to assess users’ Presence experiences and their satisfaction with a given application. It also offers solid expertise on how to integrate the user perspective systematically into the design process of virtual environments.

The innovative results of these projects reflect Europe’s top position in VR/AR technology and research. All of them are immediately useful for existing and emerging applications of virtual environments, in business, education, administration, and science. Get a first-hand impression of Europe’s leading VR research and the people doing it!

The European “Presence Research” initiative is also represented at CeBIT with a **booth**. Come and see us in Hall 9, Stand A40. Get in touch with individual projects and discuss connections of their results to your business or technology demands.

Agenda

13:30 Welcome

“Presence: MEC” Project, Hannover, GER

13:45 Keynote: Presence Research for Virtual Reality Business

Stacey Spiegel, CEO, I-mmersion, Toronto, CDN

14:30 European Presence Research: Insights from 11 Projects

Jonathan Freeman, “OMNIPRES” Project, London, UK

15:15 Open Forum

Posters, Demos, Conversation with Europe’s leading Presence researchers

Coffee/Tea will be served.

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Contact and Registration

www.prep2005.info

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Web Resources

The FET Proactive Initiative “Presence Research Activities”
<http://www.cordis.lu/ist/fet/pr.htm>

Touch-Hapsys Project
<http://www.touch-hapsys.org/>

Presencia Project
<http://www.cs.ucl.ac.uk/research/vr/Projects/Presencia/>

Benogo Project
<http://www.benogo.dk>

Adapt Project
<http://www.lira.dist.unige.it/projects/adapt/>

EMMA Project
<http://www.tii.se/tools/projects/emma/>

MEC Project
<http://www.ijk.hmt-hannover.de/presence>

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