

## research statement 2006

Our mission statement still is:

*... to study aspects of the deployment and architecture of virtual environments as an interface to (intelligent) multimedia information systems (\*)*

As a follow up on our *intelligent multimedia* research, in which we developed a platform for intelligent agents in 3D virtual space, we now focus on the use of game technology for immersive serious applications, in particular:

- digital dossiers in cultural heritage – [www.cs.vu.nl/~eliens/casus](http://www.cs.vu.nl/~eliens/casus)
- game @ VU – developing promotional games – [www.cs.vu.nl/~eliens/game](http://www.cs.vu.nl/~eliens/game)
- reality augmented presentation technology – [www.cs.vu.nl/~eliens/vip](http://www.cs.vu.nl/~eliens/vip)

This research is, at the moment of writing, still in its inceptive and explorative phase, and primarily done in cooperation with students as part of the regular multimedia courses or individual projects.

(\*) [www.cs.vu.nl/~eliens/research](http://www.cs.vu.nl/~eliens/research)

## digital dossier(s)

I-GUARD

principal researcher(s): dr. A.Eliëns

students: Y. Wang, C. van Riel

additional research: dr. J.F. Hoorn, H. van Vugt

cooperation(s): T. Scholte, Y. Hummelen (ICN), G. Weijers (Montevideo)

external visibility: meetings and symposia

status: ongoing

## application(s)

- dossiers – [www.cs.vu.nl/~eliens/casus/dossiers.html](http://www.cs.vu.nl/~eliens/casus/dossiers.html)

**project description** The *digital dossier(s)* resulted from the Multimedia Casus<sup>1</sup>, in cooperation with the Instituut Collectie Nederland and the Institute for Time-based Arts. Digital dossier(s) are explored as a means to capture the information connected to (a collection of) artworks in an *immersive* way, as an alternative to topical (flat) websites or information systems, by means of a suitable metaphor, such as a virtual museum, an artist atelier, or a concept map in 3D space. In the project, we explored the use of agent technology as well as technology that is usually applied for the development of games or 3D infotainment.

## selected publications

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<sup>1</sup>[www.cs.vu.nl/~eliens/casus](http://www.cs.vu.nl/~eliens/casus)

**AWC** Hoorn J., Eliëns A., Huang Z., van Vugt H.C., Konijn E.A., Visser C.T., Agents with character: Evaluation of empathic agents in digital dossiers, Emphatic Agents, AAMAS 2004 New York 19 July - 23 July, 2004

**ECA** Anton Eliëns and Zhisheng Huang and Johan F. Hoorn and Cees T. Visser, *ECA Perspectives - Requirements, Applications, Technology*, In: Zsófia Ruttkay and Elisabeth André and W. Lewis Johnson and Catherine Pelachaud (eds), Evaluating Embodied Conversational Agents, Dagstuhl Seminar Proceedings (04121), 2006

**Navigate** Eliëns A., van Riel C., Wang Y., Navigating media-rich information spaces using concept graphs – the *abramovic dossier*, accepted for: International Conference on Multidisciplinary Information Sciences and Technologies (InSciT2006) October, 25-28th 2006, Mrida, Spain [www.instac.es/inscit2006](http://www.instac.es/inscit2006)

**Present** Wang Y., Eliëns A., van Riel C., Content-oriented presentation and personalized interface of cultural heritage in digital dossiers, accepted for: International Conference on Multidisciplinary Information Sciences and Technologies (InSciT2006) October, 25-28th 2006, Mrida, Spain [www.instac.es/inscit2006](http://www.instac.es/inscit2006)

**Guide** van Riel C., Eliëns A., Wang Y., Exploration and guidance in media-rich information spaces: the implementation and realization of guided tours in digital dossiers, accepted for: International Conference on Multidisciplinary Information Sciences and Technologies (InSciT2006) October, 25-28th 2006, Mrida, Spain [www.instac.es/inscit2006](http://www.instac.es/inscit2006)

**ConceptMaps** van Riel C., Wang Y. & Eliëns A., Concept map as visual interface in 3D Digital Dossiers: implementation and realization of the Music Dossier, accepted for: CMC2006, Costa Rica, Sept 5-8 2006

**IPEFIC** Van Vugt, H. C., Konijn, E. A., Hoorn, J. F., Keur, I., & Eliëns, A., Realism is not all! User Engagement with Task-Related Interface Characters, accepted for Interacting with Computers, 2006

## game technology for immersive (serious) applications

principal researcher(s): dr. A.Eliëns

students: S.V. Bhikharie

cooperation(s): Z. Obrenovic (CWI), D. Vyas (VU)

programmer: C. Visser

student(s): S.V. Bhikharie

status: ongoing

### application(s)

- game @ VU – [www.cs.vu.nl/~eliens/game](http://www.cs.vu.nl/~eliens/game)
- ViP – [www.virtualpoetry.tv](http://www.virtualpoetry.tv)

- MACE – [www.few.vu.nl/~mace](http://www.few.vu.nl/~mace)

**project description** Many applications, such as virtual reality theatre, or games in an educational context, require an approach that uses immersion as a way to involve the user in a more compelling way. To achieve such a high level of user involvement, we explore the use of state-of-the-art game technology for developing such applications. Related research issues encompass, the use of operating system level multimedia technology (such as DirectX), the architecture and extensibility of commercial game engines (such as the Half Life 2 Source SDK), and the use of communication facilities to allow multimodal interaction (such as the AMICO toolkit).

#### **selected publications**

**VULife** Eliëns A., S.V. Bhikharie, game @ VU – developing a masterclass for high-school students using the Half-life 2 SDK, accepted for: GAME’ON-NA’2006, September 19-21, 2006 - Naval Postgraduate School, Monterey, USA

**Odyssee** Eliëns A., Odyssee – explorations in mixed reality theatre, accepted for: GAME’ON-NA’2006, September 19-21, 2006 - Naval Postgraduate School, Monterey, USA