

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
- game @ VU – developing promotional games – www.cs.vu.nl/~eliens/game
- reality augmented presentation technology – 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

digital dossier(s)

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)

status: ongoing

project description The *digital dossier(s)* resulted from the Multimedia Casus¹, 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

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

¹www.cs.vu.nl/~eliens/casus

ECA Anton Eliëns and Zhisheng Huang and Johan F. Hoorn and Cees T. Visser, *ECA Perspectives - Requirements, Applications, Technology*, In: Zsofia Rutkay 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*, In Proc. InSciT 2006, V.P. Guerrero-Bota ed. Open Institute of Knowledge, Merida, Spain, pp. 186-190

Present Wang Y., Eliëns A., van Riel C., Content-oriented presentation and personalized interface of cultural heritage in digital dossiers, In Proc. InSciT 2006, V.P. Guerrero-Bota ed. Open Institute of Knowledge, Merida, Spain, pp. 125-129

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, In Proc. InSciT 2006, V.P. Guerrero-Bota ed. Open Institute of Knowledge, Merida, Spain, pp. 143-147

ConceptMaps van Riel C., Wang Y. & Eliëns A., Concept map as visual interface in 3D Digital Dossiers: implementation and realization of the Music Dossier, In Proc. CMC2006, A.J. Canas and J.D. Novak eds., University of Costa Rica, pp. 104-111

WebDossier Eliëns A., Wang Y. van Riel C. and Scholte T. (2007), 3D Dossier – a new way of presenting cultural heritage on the Web, Web3D Symposium, 15-18 april, Perugia, Italy

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, *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)

status: ongoing

project description Many applications, such as virtual reality theatre, or games in an education 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 , In Proc. GAME’ON-NA 2006, P. McDowell ed., Eurosis-ETI, pp. 49-53, Sept 19-21, Monterey, USA

Odyssee Eliëns A. , Odyssee – explorations in mixed reality theatre, In Proc. GAME’ON-NA 2006, P. McDowell ed., Eurosis-ETI, pp. 62-64, Sept 19-21, Monterey, USA

Eliëns A. & Chang T., Let’s be serious – ICT is not a (simple) game, FUBUTEC 07, Eurosis, Delft, April 2007

SL Eliëns A. Feldberg F., Konijn E., Compter E., VU @ Second Life – creating a (virtual) community of learners, In Proc. EUROMEDIA 2007, L. Rothkrantz and Ch. van der Mast (eds), Eurosis, pp. 45-52 (best paper award nomination)

PanoramaWeb Yin S. & Eliëns A., PANORAMA: A Rich VRML Application Platform For Online Gaming , Workshop Web 3D Games, Web3D Symposium 07, Perugia Italy, April 15-18

Shaders Bouterse M.C. and Eliëns A., Simulating Infinite Curved Spaces using Vortex Shaders, accepted for GAME-ON 07, Nov 20-22, Bologna

Climate Eliëns A., van de Watering M., Huurdeman H., Bhikharie S.V., Lemmers H., Vellinga P. , Clima Futura @ VU – communicating (unconvenient) science, accepted for GAME-ON 07, Nov 20-22, Bologna

Mashups Eliëns A. Feldberg F., Konijn E., Compter E., Mashups in Second Life @ VU, accepted for GAME-ON 07, Nov 20-22, Bologna

Aesthetics Eliëns A. and Vyas D., Panorama – explorations in the aesthetics of social awareness, accepted for GAME-ON 07, Nov 20-22, Bologna