

## curriculum vitae

A. Eliens

### background

In my student years I explored the intellectual and aesthetic arena, including the visual arts, electronic computer music, and what in retrospect may be regarded as the foundations of Artificial Intelligence, that is philosophy, logic, psychology and computer science. At a certain stage, I took up an interest in theoretical computer science, which resulted in a Ph.D. degree on the design, semantics and implementation of a distributed logic programming language, about which I published a book, Eliens (1992). During my employment at the VU, the focus shifted towards software engineering, and in particular object oriented programming, which resulted in a text book of which a second edition has appeared, Eliens (2000). Gradually, I developed an interest in hypermedia, multimedia user interfaces and the Web, which took shape in the DejaVU project<sup>1</sup>. The DejaVU project has resulted in the *hush*<sup>2</sup> library, HUSH, that has been used in the Software Engineering Practicum, and extensions of *hush* such as the simulation library *sim*, *SIM*, that has been used for BWI courses. The project also led to a series of publications concerning the Web, which appeared on a number of successive Int. WWW Conferences, Ossenbruggen & Eliens (1994), Eliens *et al.* (1997), as well as other conferences, Eliens *et al.* (1999), Eliens *et al.* (1996). In that time I also organized two consecutive workshops for the WWW5 and WWW6 conferences, entitled, respectively, *Programming the Web* and *Logic Programming and the Web*. The DejaVU project attracted many students of which a selection became research assistants, studying topics such as hypermedia, simulation and visualization, and task modeling and groupware. In 1998, I got involved in multimedia retrieval research, in an exchange with the CWI, which resulted in an experimental musical feature detector for MIDI as well as an NWO proposal for the RIF project to extend this approach to virtual worlds and VRML. My interests at that time may be summarized as, in brief, knowledge management, visualization and retrieval in 3D VRML-based virtual worlds.

Over the years my interest in logic-based approaches has never disappeared, as testified by the software architecture developed for multimedia feature detection, and a study group at the VU focussing on the application of logic-based programming in software engineering applications, which was active until august 2000 when my Ph. D. students finished their theses.

Around november 1999, the first Java-based implementation of DLP became available. At that time, I had a post-doc working at the WASP project for about

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

<sup>2</sup>[www.cs.vu.nl/~eliens/online/hush](http://www.cs.vu.nl/~eliens/online/hush)

half a year. The WASP project focussed on web agents, but since the actual work on the project started so late, we decided to merge the WASP and RIF projects, that is to work on agents in virtual environments. When the project at CWI stopped, due to changes in personell, we (almost immediately) extended DLP with VRML, using the Java External Authoring Interface for VRML. This change in directions resulted in a number of publications, among which Huang et al. (2002), which describes the application of the DLP+VRML platform to multi-user 3D communities and games. All in all, my interest in visualisation and 3D, has led to four consecutive publications at the international Web3D Symposium.

In retrospect, the research may be characterized as research in *intelligent multimedia*, in particular the combination of DLP and X3D/VRML may be regarded as an innovative step in this field. Our focus of attention now is to improve this platform and to include XML-based standards for the description of worlds, behaviours and also contents, to arrive (in the end) at an XML-based platform for rich media, driven by agent technology. Actually, my interest in XML is not surprising, since we developed probably the first SGML-based web browser (with *hush* applets) already in 1995.

At the end of the previous millenium, I made an effort to put all research work online<sup>3</sup>, including papers, talks, and software documentation. In addition, my educational material is becoming available in the form of online lectures. With the second edition, I have also developed an online version of my book Principles of Object-Oriented Software Development, that allows for immediate presentation. As a pet project, I extended this format to include 3D presentations, which I liked to have for my *multimedia* courses. A paper, entitled *what is the secret of the slides?* is in preparation. This presentation feature is, for example, also available in my *introduction multimedia*<sup>4</sup>, a book that I am writing for the introductory multimedia course.

At the end of 2003, the *Intelligent Multimedia Group* has produced numerous papers in the field of intelligent agents and virtual reality (for example three publications in the Interactive Virtual Agents conference in Irsee, Germany), and the research has also resulted in a state of the art platform for *intelligent multimedia*, which is now relatively stable. In addition, our educational activities now only concern (technical) multimedia. Nevertheless, although OO is no longer in the focus of my interest, I was pleased to receive translations of my OO book both in russian and chinese.

In may 2006 uur mission statement still is:

*... to study aspects of the deployment and architecture of virtual environments as an interface to (intelligent) multimedia information systems*<sup>5</sup>

As a follow up on our *intelligent multimedia* research, in which we developed

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<sup>3</sup>[www.cs.vu.nl/~eliens/online](http://www.cs.vu.nl/~eliens/online)

<sup>4</sup>[www.cs.vu.nl/~eliens/media](http://www.cs.vu.nl/~eliens/media)

<sup>5</sup>[www.cs.vu.nl/~eliens/research](http://www.cs.vu.nl/~eliens/research)

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<sup>6</sup>
- game @ VU – developing serious games<sup>7</sup>
- reality augmented presentation technology<sup>8</sup>

This research is, at the moment of writing, the end of may 2006, still in its inceptive and explorative phase, and primarily done in cooperation with students as part of the regular multimedia courses or individual projects.

In 2006 and 2007 I was involved in a number of projects, cooperating with partners outside of the Faculty of Sciences. As I wrote in *report 2006*<sup>9</sup>

Time never stands still. After observing that times flies like an arrow in my report 2005<sup>10</sup>, there have been many developments. First of all, I am happy to observe that most of the planned publications have been realized, and that apart from the uncertainty about multimedia @ VU, which led to a number of discussions with the management, the future does not look so bad.

The overall direction of research as outlined in research plan 2006<sup>11</sup> which is oriented towards the application of *game technology*<sup>12</sup> in various application domains seems to be fruitful, not in the least due to interest of parties within the VU, albeit outside of FEW:

- climate game @ VU<sup>13</sup>
- VU @ Second Life<sup>14</sup>

The *climate game* project is done in cooperation with the *Climate Centre* to prepare a submission for the *Academische Jaarprijs*. The *Second Life* project is done in cooperation with among others Frans Feldberg from FEWEB, and has resulted in a provisional funding of 10.000 euro from the CvB to further explore this initiative in the context of the planned *Media Institute*. The 1st of march, the opening of *VU @ Second Life* was reported on the (national) RTL news television broadcast, and (locally) in Amsterdam covered by AT5 and CampusTV.. Several newspapers, among which Telegraaf and Parool, also reported on this.

Currently, we are developing a demo of *Clima Futura*<sup>15</sup>, to acquire sponsors needed to take the game in production. Finally, september 2007 I completed the manuscript of *topical media & game development*<sup>16</sup>, that started as a syllabus for the *introduction multimedia* course, but has grown into a personal statement

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<sup>6</sup>[www.cs.vu.nl/~eliens/research/research-dossiers.html](http://www.cs.vu.nl/~eliens/research/research-dossiers.html)

<sup>7</sup>[www.cs.vu.nl/~eliens/research/research-game.html](http://www.cs.vu.nl/~eliens/research/research-game.html)

<sup>8</sup>[www.cs.vu.nl/~eliens/media/4-3.html](http://www.cs.vu.nl/~eliens/media/4-3.html)

<sup>9</sup>[www.cs.vu.nl/~eliens/research/report-06.html](http://www.cs.vu.nl/~eliens/research/report-06.html)

<sup>10</sup>[www.cs.vu.nl/~eliens/research/report-05.html](http://www.cs.vu.nl/~eliens/research/report-05.html)

<sup>11</sup>[www.cs.vu.nl/~eliens/research/research-plan-06.html](http://www.cs.vu.nl/~eliens/research/research-plan-06.html)

<sup>12</sup>[www.cs.vu.nl/~eliens/research/game.html](http://www.cs.vu.nl/~eliens/research/game.html)

<sup>13</sup>[www.cs.vu.nl/~eliens/projects/project-climate.html](http://www.cs.vu.nl/~eliens/projects/project-climate.html)

<sup>14</sup>[www.cs.vu.nl/~eliens/projects/project-secondlife.html](http://www.cs.vu.nl/~eliens/projects/project-secondlife.html)

<sup>15</sup>[www.climafutura.nl](http://www.climafutura.nl)

<sup>16</sup>[www.cs.vu.nl/~eliens/media](http://www.cs.vu.nl/~eliens/media)

expressing my views on a wide variety topics related to multimedia and game development.

### **diplomas**

- 1979 – Doctoraal Philosophy (UvA)
- 1979 – Gerrit Rietveld Academy - painting
- 1985 – Doctoraal Psychology (UvA)
- 1986 – Doctoraal Informatica (UvA, cum laude)
- 1991 – Ph.D. Informatica, prof. dr. J. de Bakker, prof. dr. P. Klint

### **employment**

- 1979-82: project medewerker Institute of Sonology (Univ of Utrecht)
- 1981-82: assistant researcher, Dept of Philosophy, UvA
- 1996-90: assistant researcher, CWI
- 1990-...: universitair docent, FEW/Informatica/IM&SE, VU
- 1998-2000: senior researcher, CWI (part-time, in exchange with VU)
- dec 2008 - juli 2011 – (part-time) professor creative technology / new media (UTwente/EWI)

### **organisations**

- Professional member of ACM/SIGWEB
- Professional member of IEEE
- Professional member of Web3D Consortium
- member of ANMA – Amsterdam New Media Association

### **research**

#### **projects**

- 1994-...: DejaVU Project (Distributed Hypermedia)
- 1997-2001: SINS, VU/UFS Project, with prof dr vd Riet
- 1999-2001: WASP - Web Agent Support Program, with prof dr J. Treur (VU/AI) and prof dr P. de Bra (TUE/CWI)
- 1999-2003: NWO/GBE RIF - Retrieval of Information in Virtual Worlds using Feature Detectors, with prof dr M.L. Kersten (CWI/UvA) and prof dr P. de Bra (TUE/CWI)

#### **workshops (organized)**

- WWW5: Programming the Web<sup>17</sup>
- WWW6: Logic Programming and the Web<sup>18</sup>

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<sup>17</sup>[www.cs.vu.nl/~eliens/online/workshops/www5](http://www.cs.vu.nl/~eliens/online/workshops/www5)

<sup>18</sup>[www.cs.vu.nl/~eliens/online/workshops/www6](http://www.cs.vu.nl/~eliens/online/workshops/www6)

### program committees

- EDPD: International Conference on Electronic Publishing, Document Manipulation and Typography
- Webnet 99: World Conference of the WWW and Internet
- IOP – Multimodale Interfaces (prof dr. R. Collier)
- VIS2002 – IEEE Visualization 2002
- GAME-ON & GAME-ON-NA 2007 – track(s) art & game development
- IASTED Internet and Multimedia Systems 2008
- Intetain 2009 – [www.intetain.org](http://www.intetain.org)

Over the years, I have initiated new research that may, in retrospect, be characterized as research in *intelligent multimedia*. My group consisted of Ph.D. students, a post-doc and a scientific programmer, as well as (occasionally) students.

From 1994-2001, our research efforts have focussed on developing models and software architectures for multimedia and hypermedia applications. For describing the research we make a distinction between three (related) sub-projects, respectively *structured hypermedia*, *interactive visualisation*, and *intelligent multimedia*.

### structured hypermedia

principal researcher: J. van Ossenbruggen

promotion: 10/4/2001

thesis: Structured hypermedia – a matter of style

supervision: dr. A. Eliëns, prof. dr. J.C. van Vliet

collaboration(s): dr. L. Hardman and dr L. Rutledge (CWI)

status: finished

**project description** The project started with the construction of a software framework for developing web-based hypermedia applications, the *hush* library. A number of prototype multimedia applications were built, exploring the extension of web-based hypertext with for example music and video. In cooperation with members of the CWI Multimedia Group, work was done on developing models for hypermedia applications. This cooperation resulted in the formalization of the Amsterdam Hypermedia Model, an extension of the Dexter Hypertext Reference Model.

### selected publications

**HUSH** A. Eliëns,, Hush – a C++ API for Tcl/Tk,, The X Resource, Issue 14, April 1995, pp. 111-155

**Time** J. van Ossenbruggen en A. Eliëns,, Music in Time-based Hypermedia,, Proc. European Conference on Hypermedia Technology 1994, pp. 224-227

**Music** J.R. van Ossenbruggen and A. Eliëns, Bringing music to the Web, Proc. of the Fourth International World Wide Web Conference – The Web Revolution, December 1995. World Wide Web Journal, O'Reilly and Associates, Inc., pp. 309-314

**Animate** Anton Eliëns, Jacco van Ossenbruggen, and Bastiaan Schönhage, Animating the Web — An SGML-based Approach, In: The Internet in 3D — Information, Images and Interaction Academic Press, 1997 pp. 75-96

**Jamming** Anton Eliëns, Martijn van Welie, Jacco van Ossenbruggen, and Bastiaan Schönhage, Jamming (on) the Web, Proceedings of the 6th International World Wide Web Conference — Everone, Everything Connected, O'Reilly and Associates, Inc., April 1997, pp. 419-426

**Style** Jacco van Ossenbruggen, Lynda Hardman, Lloyd Rutledge, and Anton Eliëns, Style Sheet Support for Hypermedia Documents, Hypertext'97 — The Eighth ACM Conference on Hypertext ACM Press, 1997, pp 2 16-217

**Markup** J. van Ossenbruggen, A. Eliëns, L. Rutledge and L. Hardman, Requirements for Multimedia Markup and Style Sheets on the World Wide Web, Proceedings of the Seventh International World Wide Web Conference (WWW7), in Computer Networks and ISDN Systems, volume 30, Elsevier Science B.V., April 1998, pp 694-696

### **interactive visualisation**

project funding: USF SINS

principal researcher: S.P.C. Schönhage

promotion: 8/5/2001

thesis: Diva: Architectural Perspectives on Information Visualization

supervision: dr. A. Eliëns, prof. dr. J.C. van Vliet

collaboration(s): ASZ Research and Development

status: finished

**project description** The theme of the subproject concerned the use of animations and visualisation to display business process simulation results in a hypermedia context. During the project the focus shifted towards visualisation, in particular business visualisation. Also, explorations were done to investigate interactive visualisation in 3D. In Schönhage's thesis several case studies can be found illustrating the use of visualisation to support business processes and in particular decision making processes.

### **selected publications**

**Simulate** A. Eliëns, F. Niessink, S.P.C. Schönhage, J.R. Vosse, P. Nash, Support for BPR – simulation, hypermedia and the Web, Proceedings Euromedia'96, Euromedia, London 1996

**DIVA** B. Schönhage, A. Eliëns, Multi-user visualization: a CORBA/Web-based approach, Int. Conf. on Digital Convergence: the future of the Internet and WWW, British Computer Society, Bradford, UK, 20-23 april 1998, 9 pgs

**Users** B. Schönhage, P.P. Bakker, A. Eliëns, So many users, so many perspectives, IFIP 12.2 Working Conference on Designing Effective and Usable Multimedia Systems, Fraunhofer Institute. Stuttgart Germany, Sept. 8-10, 1998, Kluwer Academic, pp. 159-172

**VRML** B. Schönhage and A. Eliëns, Dynamic and Mobile VRML Gadgets, In Proc. VRML99, 23 - 26 February 1999, Paderborn, Germany

**Gadgets** S.P.C. Schönhage, A. van Ballegooij, A. Eliëns, 3D Gadgets for Business Process Visualization: a case study, VRML/Web 3D - 2000, Monterey CA, Febr 2000

**BizViz** Bastiaan Schönhage and Anton Eliëns, Management through Vision: a case study towards requirements of BizViz, International Conference on Information Visualization 2000 (IV 2000) London, England 19-21 July, 2000

### intelligent multimedia

principal researchers: dr. A. Eliëns, dr. Z. Huang

programmer: drs. C. Visser

funding: NWO WASP (612-60-003), NWO RIF (612-61-607)

cooperation(s): drs. A. van Ballegooij (CWI), dr. L. Rutledge (CWI), prof. dr. P. de Bra (TUE/CWI), dr. Z. Ruttkay (CWI)

status: ongoing

**project description** We are developing a high-level platform for 3D virtual environments based on agent-technology, using the languages DLP, Java, and VRML. This work is done in the context of the NWO WASP and RIF projects. Our goal is to study aspects of the deployment and architecture of virtual environments as an interface to multimedia information systems. As demonstrators we have developed a distributed soccer-game prototype with intelligent autonomous avatar-embodied agents as players.

**research directions** The *intelligent multimedia* research theme may be regarded as continuing the subprojects described before. In addition it combines research wrt. *intelligent agents* and *virtual worlds*, as defined for respectively the WASP and RIF projects. Currently, our efforts are directed towards realizing the technology needed for developing *intelligent multimedia* applications. This technology is intended to be used, among others, for student projects. In particular, we aim for developing demonstrators in the area of *persuasive technology*, and thus explore design methods and patterns for the realization of emotionally charged virtual worlds. This work is being done in cooperation with dr. C. Dormann and dr. Z. Ruttkay from CWI.

### selected publications

**DLPart** A. Eliëns, Distributed Logic Programming for Artificial Intelligence, AI Communications Vol. 4 No. 1, 1991, pp. 11-21

**Taxonomy** Zhisheng Huang, Anton Eliëns, Alex van Ballegooij, Paul De Bra, A Taxonomy of Web Agents, IEEE Proceedings of the First International Workshop on Web Agent Systems and Applications (WASA '2000), 2000.

**VirtualContext** Lloyd Rutledge, Alex van Ballegooij and Anton Eliëns, Virtual Context - relating paintings to their subject, Culture Track of WWW9 in Amsterdam, The Netherlands, Tuesday, May 16th, 2000

**Language** Cees Visser, Anton Eliëns, A High-Level Symbolic Language for Distributed Web Programming, Internet Computing 2000, June 26-29, Las Vegas

**NBQ** A. van Ballegooij and A. Eliëns, Navigation by Query in Virtual Worlds, Web3D 2001 Conference, Paderborn, Germany, 19-22 Feb 2001

**Architecture** Zhisheng Huang, Anton Eliëns, and Paul De Bra, An Architecture for Web Agents, Proceedings of the Conference EUROMEDIA 2001, 2001.

**Avatars** Zhisheng Huang, Anton Eliëns, and Cees Visser, Programmability of Intelligent Agent Avatars, Proceedings of the Agent'01 Workshop on Embodied Agents, June 2001, Montreal, Canada

**Community** Zhisheng Huang, Anton Eliëns, and Cees Visser, 3D Agent-based Virtual Communities, Proc. Web3D 2002 Conference, Tempe Arizona

### Additional 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 Casus<sup>19</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

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<sup>19</sup>[www.cs.vu.nl/~eliens/casus](http://www.cs.vu.nl/~eliens/casus)



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, Empathic 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: Zsofia 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*, 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

## education

I have spent a great deal of work to set up a curriculum *multimedia* for the *Informatiekunde* specialisation *Multimedia and Culture*. Since most students of that specialisation will have a more applied interest, it seemed worthwhile to develop a masters *multimedia*<sup>20</sup> for computer science as well. Currently, end of may 2006, it is investigated what efforts are needed to develop the master specialisation Multimedia into a master CS curriculum *Multimedia and Game Development*.

### academic courses

[www.cs.vu.nl/~eliens/onderwijs](http://www.cs.vu.nl/~eliens/onderwijs)

- 1991-99: Practicum Software Engineering
- 1992-2002: College/Practicum Object-Oriented Programming
- 1994-97: College Formal Methods
- 1995-98: Caput Hypermedia
- 1993-98: Prac Programmeertalen: Smalltalk
- 1999-...: Introduction Multimedia
- 2000-...: Multimedia Authoring I – Web3D/VRML
- 2001-2006: Multimedia Authoring II – Virtual Environments
- 2007-...: Intelligent Multimedia Technology – (mashups)
- 2003-2006: Multimedia Casus
- 2005-...: Visual Design

As a complement to the institutional quality assessment, I maintain a collection of student responses giving evaluation feedback<sup>21</sup> to my courses.

### student projects

[www.cs.vu.nl/~eliens/projects](http://www.cs.vu.nl/~eliens/projects)

- internal projects in DeJaVU Framework
- stages in OO development, CORBA
- stages in Web applications
- projects in (intelligent) multimedia
- game development projects

In total I supervised well over 80 students, including a number foreign students.

### promovendi

- 10/4/2001: J.R. van Ossenbruggen – Processing Structured Hypermedia – A Matter of Style
- 17/4/2001: M. van Welie – Task-based User Interface Design
- 8/5/2001: S.P.C. Schönhage – DIVA: Architectural Perspectives on Information Visualisation

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<sup>20</sup>[www.cs.vu.nl/~eliens/multimedia](http://www.cs.vu.nl/~eliens/multimedia)

<sup>21</sup>[www.cs.vu.nl/~eliens/onderwijs/eval.html](http://www.cs.vu.nl/~eliens/onderwijs/eval.html)

### extra-academic courses

- CMG/ASZ Course Web Applications (1998-99)
- CMG/ASZ Course Object-Oriented Software Engineering (1998-99)
- SIKS AIO Course: Multimedia<sup>22</sup>, May 1998
- masterclass game development<sup>23</sup>

### administration

Over the years I took an active part in administrative affairs, including the role of chairman of the faculty educational board, and the writing of the Zelfstudie Informatica 2001.

- 1991-92: accreditation report Artificial Intelligence
- 1992-95: Stuurgroep BWI
- 1996-97: Chair Facultaire Onderwijscommissie
- 1998: Advisor Facultaire Web Commissie
- 1998-99: Advisor Web en Onderwijs
- 1998-99: Administrator IM&SE Colloquium
- 1998-2000: Advisor TwinSite-2000
- 1996-2001: Apparatuurcie W&I
- 1998-2001: Opleidingscie Informatica
- 2001-2002: Zelfstudie informatica 2001, coordinatie bezoek VisitatieCie 18, 19 maart 2002
- 2002-2007: member OLC-IN
- 2007-....: chair OLC-IK/IMM

### collected presentations

- Comparative semantics of a backtrackable rendez-vous, INRIA, Paris France, 24 June 1991
- DLP A language for distributed logic programming, Benelog 91, Universiteit Namen, Belgie, 2 september 1991
- Comparative semantics of a backtrackable rendez-vous, CSN 91, Utrecht, 1991
- Responsibilities in OOP, Seminar COOP 92 – Computing and Object Oriented Programming, Universiteit van Amsterdam – Science Data Systems, Sun Microsystems Nederland, 15 jan. 1992
- Asynchronous rendez-vous in distributed logic programming (met E. de Vink) REX Summerschool - Semantics: Foundations and Applications, De Wippselberg (Apeldoorn), 1-4 juni 1992

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<sup>22</sup>[www.cs.vu.nl/~eliens/online/courses/siks98/contents.html](http://www.cs.vu.nl/~eliens/online/courses/siks98/contents.html)

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