

## multimedia @ VU

### contact

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**disclaimer** This document originally dates from around 2005, and although most of it is still true in spirit, some actual information may be outdated in fact. The multimedia-related curricula originated from research and education in software engineering<sup>1</sup>. And, as they say, you can take the man out of software engineering, but (apparently) not the software engineering out of the man.

### curricula

There are two curricula in which multimedia topics play an important role:

- information science/IMM: *multimedia and culture*
- computer science<sup>2</sup>: *multimedia & game development*

These curricula differ in their focus on respectively content and technology development.

### principles/elements

In summary, our curricula cover:

- exploratory design – *advanced information systems, human-computer interfaces*
- multimedia technology – *3D graphics, animation, games, virtual environments*
- scientific context – *user evaluation, media theory, mathematics, logic, convergence, standards, retrieval*

Dependent on the individual interest and capabilities of the student, these elements may have different weights.

### topics/projects

In the broad range of multimedia applications, we focus on:

- multimedia information systems – e.g. digital dossiers for cultural heritage<sup>3</sup>
- game development – using 3D technology and game engine SDK's
- interactive video – with ximpel.net

However, application domains such as video monitoring and digital storytelling have also been touched upon.

### courses – *multimedia*

The courses that I am responsible for are:

- project interactive multimedia – interactive video
- multimedia authoring – flex/as3
- (intelligent) multimedia technology – exploratory development
- visual design – style and game design
- multimedia project(s) – individual assignments

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<sup>1</sup>www.cs.vu.nl/~eliens/research/correspondences.html

<sup>2</sup>www.cs.vu.nl/~eliens/multimedia/guide.html

<sup>3</sup>www.few.vu.nl/~dossier05

## facilities/technology – *multimedia zaal*

In the beginning of 2005, a well-equipped multimedia practicum room has been realized, with high performance computers, with double screens and a powerful GPU, as well as a rich collection of software, including:

- VRML – Blaxxun Contact 3D, Parallel Graphics VmlPad
- virtools – [www.virtools.com](http://www.virtools.com)
- Alias Maya Complete (5.0 & 6.0) – 10 floating licenses
- 3D Studio Max 7 – 15 floating licenses
- Adobe Photoshop CS, Illustrator CS
- DirectX9c SDK – [www.microsoft.com/directx](http://www.microsoft.com/directx)
- WildTangent WebDriver & SDK – [www.wildtangent.com/developer](http://www.wildtangent.com/developer)
- CG Toolkit – [developer.nvidia.com/page/tools.html](http://developer.nvidia.com/page/tools.html)
- RenderMonkey & SDK – [www.ati.com/developer/rendermonkey](http://www.ati.com/developer/rendermonkey)
- Half Life 2 SDK – [www.valve-erc.com/srcsdk](http://www.valve-erc.com/srcsdk)

The *multimedia zaal* also has facilities for projection, and a 5-1 surround sound system.

## research context

activities 2004-2009<sup>4</sup>  
[www.cs.vu.nl/~eliens/research](http://www.cs.vu.nl/~eliens/research)

Our mission statement 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 primarily focus on the use of interactive video and game technology for immersive serious applications, in particular:

game technology

- 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 was primarily done in cooperation with students as part of the regular multimedia courses or individual projects. In the past we have investigated *intelligent multimedia*. Nowadays, our focus changed to high-performance multimedia, and game applications using flex/a3 and game SDKs.

## examples/demo(s)

A number of examples of student's work, as well as research related demos, from the past, are available online:

- student practical work<sup>5</sup> – infotainment, games, digital dossiers
- research-related<sup>6</sup> – intelligent multimedia applications

## motivation/rationale

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

The (original) *introduction multimedia* syllabus, entitled topical media & game development covers all the background material and contains also a rationale of the educational and research activities that fall under my supervision.

A. Eliëns, (1/6/05) adapted 10/1/10

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<sup>4</sup>[www.cs.vu.nl/~eliens/research/cv/overview-09.html](http://www.cs.vu.nl/~eliens/research/cv/overview-09.html)

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

<sup>6</sup>[www.cs.vu.nl/~eliens/papers/demo.html](http://www.cs.vu.nl/~eliens/papers/demo.html)