

multimedia @ VU

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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originally dates from around 2005, and although most of it is still true in spirit, some actual information may be outdated in fact.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 engineering¹. 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 science²: *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 heritage³
- 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

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

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

³www.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 Vrm1Pad
- virttools – www.virttools.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
- WildTangent WebDriver & SDK – www.wildtangent.com/developer
- CG Toolkit – developer.nvidia.com/page/tools.html
- RenderMonkey & SDK – www.ati.com/developer/rendermonkey
- Half Life 2 SDK – www.valve-erc.com/srcsdk

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

research context

activities 2004-2009⁴
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
- game @ VU – developing promotional games – www.cs.vu.nl/~eliens/game
- reality augmented presentation technology – 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 work⁵ – infotainment, games, digital dossiers
- research-related⁶ – intelligent multimedia applications

motivation/rationale

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

⁴www.cs.vu.nl/~eliens/research/cv/overview-09.html

⁵www.cs.vu.nl/~eliens/projects/demo.html

⁶www.cs.vu.nl/~eliens/papers/demo.html