

multimedia @ VU

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The multimedia-related curricula originated from research and education in software engineering¹. However, they have now obtained a more independent status. For my qualifications in the area of multimedia, you may inspect my CV².

curricula

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

- information science: *multimedia and culture*
- computer science³: *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 heritage⁴

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

²www.cs.vu.nl/~eliens/cv/cv.html

³www.cs.vu.nl/~eliens/multimedia/guide.html

⁴www.few.vu.nl/~dossier05

- game development – using 3D technology and game engine SDK's

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

courses – *multimedia*⁵

The courses that I am responsible for are:

- introduction multimedia – convergence, standards, retrieval
- multimedia authoring – web3D/VRML
- intelligent multimedia technology – virtual environments
- visual design – house style and game design
- multimedia project(s) – individual assignments

Due to institutional re-organisations, however, changes may occur in the not so distant future.

facilities/technology – *multimedia zaal*

Recently, 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 VrmIpad
- virtools – 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
- 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.

⁵www.cs.vu.nl/~eliens/multimedia/courses.html

research context

research Our mission statement is:

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

www.cs.vu.nl/~eliens/research

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:

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 is, at the moment of writing, still in its inception and explorative phase, and primarily done in cooperation with students as part of the regular multimedia courses or individual projects. In the past we have investigated *intelligent multimedia*⁶. Nowadays, our focus changed to high-performance multimedia, and game applications using state-of-the-art game SDKs.

examples/demo(s)

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

- student practical work⁷ – infotainment, games, digital dossiers
- research-related⁸ – intelligent multimedia applications

The more recent explorations of game technology are not available online, but can be demonstrated on request.

motivation/rationale

www.cs.vu.nl/~eliens/media

The *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.

⁶www.intelligent-multimedia.net

⁷www.cs.vu.nl/~eliens/web3d/demo.html

⁸www.cs.vu.nl/~eliens/papers/demo.html