

afterthought(s)

The world of multimedia may be looked at in many ways. In fact, the phrase *multimedia* is too generic to be meaningful in any way. Nevertheless, multimedia has become a subject of interest for academia. This book has been written from an academic perspective. Let me clarify this perspective, to provide you with some context that might help you in understanding this book and use it more effectively in either education, research, or even your artistic endeavors.

As a starting point, let's look (again) at the *media equation*, quoted in the *research directions* of section 9.1:

media equation(s) 1/4

We regularly exploit the media equation for enjoyment by the willing suspension of our critical faculties. Theatre is the projection of a story through the window of a stage, and typically the audience gets immersed in the story as if it was real.

This suspension of our critical faculties seems opposed to what we are used to in academic practice. And, indeed, there is an often noted conflict between the arts and the sciences, a conflict that the introduction of multimedia in the academic curriculum cannot resolve.

If we try to delineate the 'meaning' of multimedia more precisely, we might come up with pseudo-equation such as the following.

multimedia equation(s) 2/4

$$\text{multimedia} = \text{presentation} + \text{context}$$

where *presentation* includes the sensory and aesthetic part and *context* everything else. Now, at the risk of getting too much involved in 'funny mathematics' we might define *context* by another series of pseudo-equations

multimedia equation(s) 3/4

- context = convergence + information + architecture

where

multimedia equation(s) 4/4

- convergence = data + platform + distribution
- information = storage and retrieval
- architecture = compression + components + connectivity

Clearly, and this is exactly what this exercise in funny mathematics intended to illustrate, this book is about the contextual aspects of multimedia. Contextual aspects that may be the subject of academic research.

Is there any hope to include the presentational or aesthetic aspects in the academic curriculum? Based on a thought experiment, that explored the possibility of algorithmic art and aesthetics, Eliens (1988), I would say no. And as a matter of fact, I strongly disagree with a recipe-based approach to developing multimedia presentations, as seems to be popular in a number of the academic multimedia courses.

There is another shade of meaning that may be attributed to the notion of *context*, namely context of application. Evidently, multimedia has become a natural ingredient of almost any application you can think of. In 1998, I organized a course on multimedia for Ph.D. students, entitled *Multimedia in Context*. This course dealt with some of the issues in distributed multimedia and multimedia information retrieval, as well as applications in the publishing industry, travel advertisement and medical diagnosis. To announce the course, I used an image from medieval alchemy, see part I, and a phrase characterizing 'perfect solutions'.

perfect solutions

Much more than the art of turning base metals into gold, alchemy is a system of cosmic symbolism. The alchemist learns how to create within a sealed vessel a Model of the Universe in which the opposing complementary forces of Male and Female, Earth and Air, Fire and Water attain the perfect synthesis of which gold is the emblem.

Risking obscurity at this point, I wish to equate multimedia with alchemy, to emphasize that the engineering of multimedia is an art that takes a lifetime to master. Repeating the quote from section 9.1:

multimedia engineering

"engineering is the art of moulding materials we do not wholly understand ... in such a way that the community at large has no reason to suspect the extent of our ignorance."

multimedia in context

Originally the book, that is chapters 1-7, were written for the *Multimedia and Culture* curriculum at the Vrije Universiteit, Amsterdam, that started in 2001. In particular, the book contains the course notes for the first year course *introduction multimedia*.

Then I constructed four follow-up courses:

multimedia courses¹

- multimedia authoring – Web3D/VRML
- intelligent multimedia technology – Virtual Environments

¹www.cs.vu.nl/~eliens/multimedia

- visual design – digital content creation
- multimedia casus – digital dossier(s)

The first of these courses deals with the technology for creating 3D scenes and worlds see appendix B, whereas the second is about providing intelligent services in virtual environments, as discussed in chapter 8 and appendix E. In addition, *Multimedia and Culture* students are required to take a course in *visual design* and to work on a *multimedia casus* to bring what they learned into practice. The structure and content of these courses are reflected in chapters 9 and 10.

Due to faculty politics, the *Multimedia and Culture* curriculum was reduced to a minor in Information Science, which made it less appealing, both for students and staff, including me. Over time, all the course mentioned above were repurposed for the newly created specialisation *multimedia* in Computer Science, which attracts more technically oriented students, with better skills for actual multimedia and game application development. Although not technical in nature, chapters 11 and 12 were written with these students in mind. And very likely, or hopefully, the specialisation *multimedia* will soon become *multimedia and game development*.

Faculty politics is not a nice topic, but unfortunately has an effect on daily life, even to the extent that I sometimes regret that I gave up the, within an academic environment, relatively safe and simple discipline of software engineering and object-oriented software development. The truth of the matter is that, whatever the reasons, multimedia and game development does not fit in well in the standard academic context of computer science. Although liked by students, it is certainly not well accepted, and for that matter understood, by the senior staff. But although anecdotes about the many conflicts about research directions and scientific merit would be interesting for those who like gossip, the sad fact is that the multidisciplinary background of multimedia and game development would require an intellectually and artistically more rich environment than a department of computer science can offer.

explorative development

From the perspective of research, the situation is not much better. It is my strong belief, right or wrong, that relevant research in the area of multimedia and game development requires *explorative development*, that is the design and implementation of prototype applications that embody the realization of an idea, as with our research on the *digital dossier(s)*, an idea that includes technical as well as cultural and presentational aspects. But how hard it is to perform such multi-disciplinary research in an environment that is by tradition pre-dominantly mono-disciplinary.

Back to the book, apart from providing an introduction to a number of issues and research areas in the world of multimedia, this book also defines, in an implicit way, a research program that concerns the development and use of

*virtual reality interfaces for multimedia information systems*²

²www.cs.vu.nl/~eliens/research

All aspect covered in this book contribute, one way or another, to that (implicit) research program that may be classified under the heading of *intelligent multimedia*, of which a tentative definition is given in appendix E. And, admittedly, there are many aspects that are not covered, in particular those that are related to more advanced multimedia, virtual reality technology, and artificial intelligence.

the skill(s) of relevance

At this stage you may still wonder why I chose to name the book *topical media*. Let me explain. The phrase *topical*, as an adjective, has the following meanings:

topical

1. designed for involving local application (as an anesthetic),
2. relating to, or arranged by, topics,
3. referring to the topics of the day or place.

Although certainly not meant as an anesthetic, and even though it is arranged by, or at least refers to, topics, the intended meaning is due to the motivation to write a book that is relevant for the topics of (interest of) today's world. And, although it may not teach you the actual skills necessary to survive in today's world of multimedia and game development, it is certainly meant to help you in acquiring the *skill of relevance*, see Bruner (1972), in this area, a skill that you will need to find your proper place and direction, anytime, anywhere.

Amsterdam, 9/8/2006

A. Eliëns