MultiMedia in Architectural Education
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MultiMedia
At nearly any occasion designers are encouraged to see, use or buy new persuasive electronic media. We are presented to a stack of electronic equipment, connected with a bunch of confusing wire. On the top of it all you will find a video camera and some huge loudspeakers.

TecnoPOP?
We are Architects and teachers. When the computer branch is trying to marketing itself to architects and designers, we are introduced to short video sequences covered with hard beat music and 3D marbled letters tumbling around the screen. Television Jingles dreamed by a Sports journalist, or the latest Television commercial for washing powder.

Children's toy?
I must confess that my boyish soul matches Quick Times sound channels. I am fascinated by vulgar video transitions, and still I can lose my mind to flying teapots rendered with mahogany-texture in an empty space. I often forget to ask myself what an architect can use that kind of visualisation for.

HyperMedia
When the computer business is trying to marketing itself to teachers, the same aperture is used to show interactive HyperMedia. Normally we see teaching material which simulates the format of a book on the screen. The illustrations are live and the students can choose a level at a higher degree than when using normal books. Unfortunately it lacks many of the advantages of the book. First of all the atmosphere of a book, and it is difficult to navigate. You get lost in HyperMedia. It is obvious that this media has not found its final functional and aesthetic format.

Intuitively I sense that these familiar media’s, Multi - and HyperMedia in some future can be useful for designers. The problem is that we don't know what to use them for. We don't have much experience and we still look forward to a couple of good examples in the architectural education.

A great part of the technology is still too poor. Especially digital video creates a lot of problems for our relatively small and slow hardware. The pictures are small like matchboxes if you want real-time and they are not sharp, and the volume in Megabytes on the desk is tremendous.

eCAADe 1992 - PDF-Proceedings (conversion 2000)
A sort of conclusion

The Problem is that we are not used to the media. We miss ideal examples. We transfer our expectations from known media to the new. In HyperMedia we use the book as an allegory, and in MultiMedias we use Television commercials as examples. And they are both subject to prejudices. This presentation does not claim to know what or how to do in the future.

Aarhus School of Architecture

At our school we have bought the necessary hardware to work with video in and out to the Macintosh-platform. We have worked with the media to follow the trend and combined video with CAD We are using a French software ZOOM for 3D-modelling. The program is rather simple to learn and have very complex modelling tools. It has good rendering options. If we want very advanced facilities like Raytracing, we use a cheap American CAD program, Strata Vision, for that job. To create animations we use ZOOM for simple fly throughs, and MacroMind 3D for advanced animation. In MacroMind 3D you can move or change through time almost every thing. Objects, colours, textures, cameras, surrounding, morphology, lights.

Presentation

To present projects, the students use MacroMind Director. This program is a graphical program, which can play animations and change or move graphics fast on the screen. The students plan and produce their presentations, including drawings, sections, descriptions, images, photos, animations and sounds. The program has a simple scripting tool, which can make the presentation interactive. The students are programming without knowing it. The presentation itself can take place on a large screen projector, or we use some of the MulitMedia equipment to tape the show onto video.

In addition we use different graphical software for 2D-drawing and Image processing and publishing. We use MiniCAD, PhotoShop and PageMaker.

Learning

Normally the students use a month to get familiar with these softwares: 3D-modelling, Animation, Image processing and Presentation. Each of these topics is easy to learn. What is important in this process is not the actual software. We only teach the students to use some of the upper parts of the programs. - It is impossible to learn many programs deep down, and probably we will find another interesting and much better software next month. The experience that will retain permanent is the awareness of using several computer tools in a complex order to join the single tools into an interactive media.
When students present their works the advantages and disadvantages are revealed. The students are until now taught to present their projects on paper. Paper has one clear advance, - the resolution. You can easily place a plan, a section and a elevation close to each other and percipitate the whole idea in one sight. You can't do that on a screen because of the resolution. You have to see the images one by one. Then you realise what an amazing ability architects have to combine projections at right angles to each other into a 3D objet inside our head.

In a screen-based media you do not have that possibility. But you have other advantages of course. When projects are created in CAD-surroundings, it is natural to present them in digital format. Most important is maybe that rendered colour pictures still look best on the screen. High quality paper printing is still a weak part of the process.

Presentations with large screen projectors show spatial pictures and video realistic animations, and they can give you can give you a feeling of instantness and interactivity. Presentations still need to be a carefully prepared show. Often discussions around the projects are dominated by the media. Whether the teaches find the media relevant for architects or not. Maybe our generation is taught to understand the formal structural representations of an architectural project. The coming generation will be used to media dominated by intuition and feelings in the perception of form, space, architecture. The media will give birth to other architectural languages and perceptions.

Some of our students are industrial designers, some are architects. In several ways it is easier for a designer to learn and get advantages of the media. Computer models of industrial products often have a rather limited geometry. It means that you need relatively few surfaces to describe nearly any detail of a product. In houses you often need more complex geometry to reach the same level of description. Another difference is that contrary to products houses are not dynamic objects. It means that it makes sense to use advanced animation software. When designing a house you can simply fly through the structure. When designing products objects often change their relationship to each other. The media looks like commercials.

Architects, on the other hand, are familiar with scenographic ways of presenting houses. The coming generation of architects will probably produce scenographic storys or maybe even plays, when they use MultiMedia.

By using the interactive media industrial designers have the opportunity to simulate the functionality and use of a product even before thinking of a prototype.
You can push the buttons, move the parts, and see what is happening.
Simply you can use it for testing. Not ergonomic testing of course, 
but visually and functionally you can get a good idea of the product.
You can create simulations so naturalistic that you can inform of or 
even market the product without having developed it.
When you have developed the product, simulations can be used 
when you sell the product or instruct new users in the use of the product.

Interface

Products with a growing use of electronic interfaces are difficult to plan without some simulation in an interactive multimedia. The functionality needs design, and certainly do the aesthetic.
Development of this part of the products must be done by designers, 
because it is a very integrated part of the experience of the design.

The interactive computermedia make it easy for designers who don't know any thing about programming and electronic engineering to express the structure of the functionality and to master the graphic layout of the interface. At our school we teach design students to use MacroMind Director, HyperCard or SuperCard for that purpose.

Software?

The step into software design is not far away.
I don't know any education which deals with design of interface and software in the way architects use the word 'design'. It is not only a graphic problem, although the expression is graphic.
The problems are very familiar to traditional design. The designer must create an aesthetic, structural and functional solution to a complex situation. You can say that a designer is modelling with complex data.
At our school we are thinking of establishing a group, who will be working with software design.
Examples

'LightHouse'
by Stud Studsen
A penthouse, moonlight, loneliness.
ZOOM, Persuasion

'ShowBoat'
by Susanne & Ragnhild
Flexible music scene by the harbour
ZOOM, MacroMind Director

'TubeChair'
by Anders Gammelgaard
Design analyses of a chair
ZOOM, MacroMind Director

'RoundMan'
by Ole Nystrøm
User instructions to a walkman
ZOOM, MacroMind Director

'Scooter'
by Kaare Bækgaard
Illustration of a mechanic principle
Swivel 3D, MacroMind

'The JukeBox'
by Helmer Håbløs
User instructions to a jukebox for CD’s
ZOOM, MacroMind Director

'Sepia'
by Niels Tvede
Interface for a remote control
Freehand, HyperCard
Order a complete set of eCAADe Proceedings (1983 - 2000) on CD-Rom!

Further information:
http://www.ecaade.org