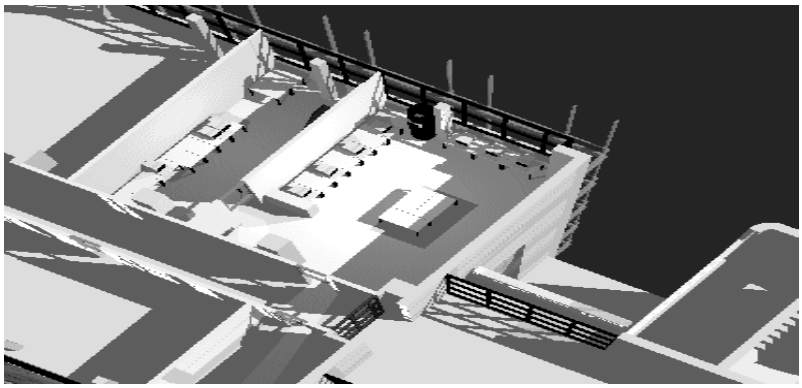
MESA, MODULAR EDUCATING SYSTEM FOR ARCHITECTURE



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Abstract
Similar structures in world-wide architectural education enable a huge global database of teaching elements, filled with copyright-free multimedia-data (digital photographs and videos, 3D-cad-details, . . .), used by teachers and students worldwide and at any time. This idea is not revolutionary, but the idea must be realised - so this congress will be a catalyst for distributing the idea and to encourage schools and teachers worldwide to feed the database, to use and to improve it!

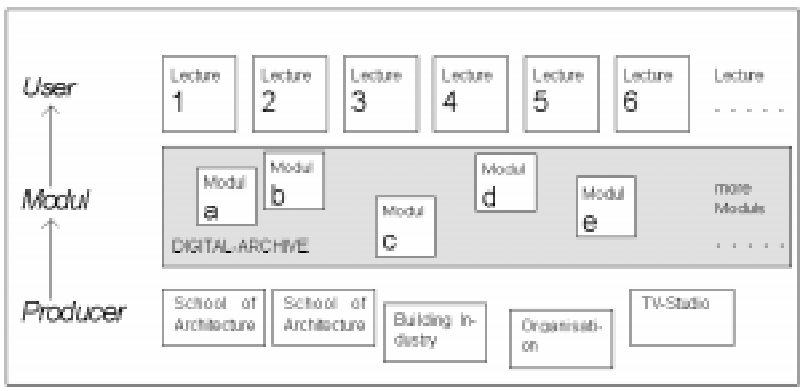


Fig 1: Modular Education System

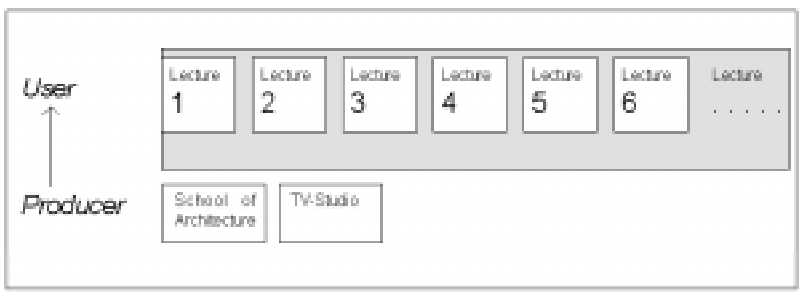


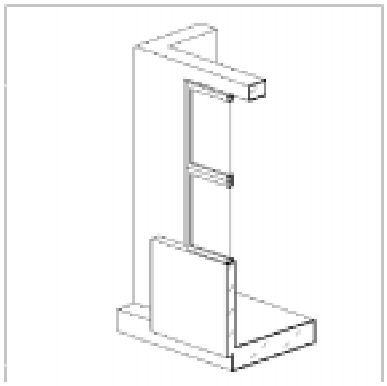
Fig 2: Lecture Series on Video does not work / fulfill all demands

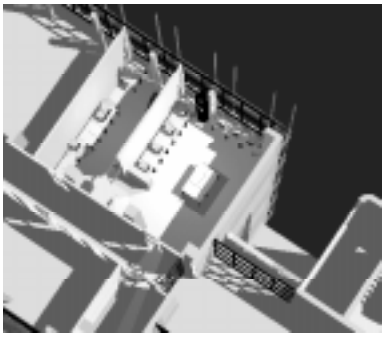
Szenario

Education in architecture as a global commonness is separated into two different groups of teachers and teaching methods:
one group (the “traditionalists”) still prefers traditional tools of working, teaching, drawing . . . without using computers and new media
the other group is open to new methods, tools and machines (esp. pc, cad, visualisation).
When looking at schools of architecture worldwide, the structure of the curricula is similar (even if each school has its own profile): teaching basic skills of design, of construction, architectural history etc.
Nevertheless every teacher is an individual and not many would accept to “copy” a series of lectures from a colleague . . .

3. "classical teaching"

4. Media-aided-teaching





5a/b 3d-aided teaching by using interactive 3D-models

Possible advantages

It could make sense to "freeze" a series of lectures by video-camera and show the movie to next years students or to students at different universities. This might be a brilliant way to select the best lectures nationwide or worldwide, to get a documentation of architectural teaching and a potential to reach more people than the "classic" group of students: possibly a wide range of people interested in architecture or architects, that have left the university for several years, looking for renewing their knowledge.

Disadvantages

On the other hand it is (technically) not easy to get a lecture documentated by video. Normally it is not only the spoken word, it is a mixture of talking, showing slides, presenting a powerpoint-sequence, using overhead-projection oder chalk. And it is very expensive to get a professional video-documentation. Nevertheless this kind of video-lecture might be obsolet one or two or three years after production due to changes in actuality or technical development.

Complexity needs more media

And even if it would be possible to create a series of video-lectures - the teaching of architecture has quite more complexity: it is not only the one-way-direction in classical lectures, it has components like working in seminars, in design-studios etc.

Due to this complexity none of the Tele-Universities in the world has a course in architecture (information, given by the International Council for Open and Distance Education ICDE at its world conference in Duesseldorf, Germany in April 2001 - www.idce.org).

Architectural Education needs a wide range of information and knowledge from different media: books, photographs, plans, magazines . . .

Many of these information can be offered to teachers and students by "classical" libraries, slide-archives - but nowadays it is time to provide information by using multimedia or even interactive media. Unfortunately the production of teaching elements is far more complex and expensive than to make and publish a book.

So when looking at the market of multimedia-courses you will only find issues on very popular themes like art-history (louvre-museum), computer-aided-design (AutoCad), very few on architectural themes - e.g. a course in surveying (mostly developed at universities with special funding).

The modular alternative

We try to develelop an alternative: creating a modular system of teaching-elements and establishing a network of teaching-elements throughout the country and perhaps worldwide.

That means: instead of a two-hours-lecture only video sequences of a few minutes for a special theme, not only video, but also interactive 3D-models.

Methodology

So the best way is to establish a database of teaching-elements and to find an effective way of steering the process of development, documentation and usage for more than one university. Teachers at different schools should provide their materials free of license-fees as a public database used by other teachers (in seminars) or directly by students.

On the other hand we are trying to develop methods of archivying lectures by video and DVD (so that special lectures on certain universities can be viewed from students at other universities). It is a special task to make professional videos in the field of architecture because of the different teaching means: slides (often as parallel-projection), chalk, models, powerpoint presentations

The third field is the development of teleworking methods between students and between groups of students at different universities (synchronous and asynchronous).

Moduls

We have started to develop a set of moduls for different phases of architectural education, beginning with a database of house-models (ancient up to modern architecture) as vrml or qtvr-objects, as well as 3D-constructing-details (windows, walls, structures, . . .).

Beside that the whole range of already existing moduls and media has to be documentated. Even if we are living in the internet-era with lots of possibilities to get world-wide-information, a lot of information, which exists, is still not accesible by the internet - sometimes due to copyright reasons. So one of the most important factors is to establish a license-free database of teaching moduls.

Conclusion

The ideas of
- creating teaching moduls
- archivying lectures
- teleworking (cscw)

may not be new. So the most important factor is the development of methods to implantate these three parts into the teaching-practise and to convince a lot of people (esp. teachers) to cooperate. So SIGRADI could be the right forum to find partners and to get an international input. Even if several languages are used, the methods and moduls can be internationally the same as well as architectural schools worldwide are similar in structure and working methods.

Bibliography

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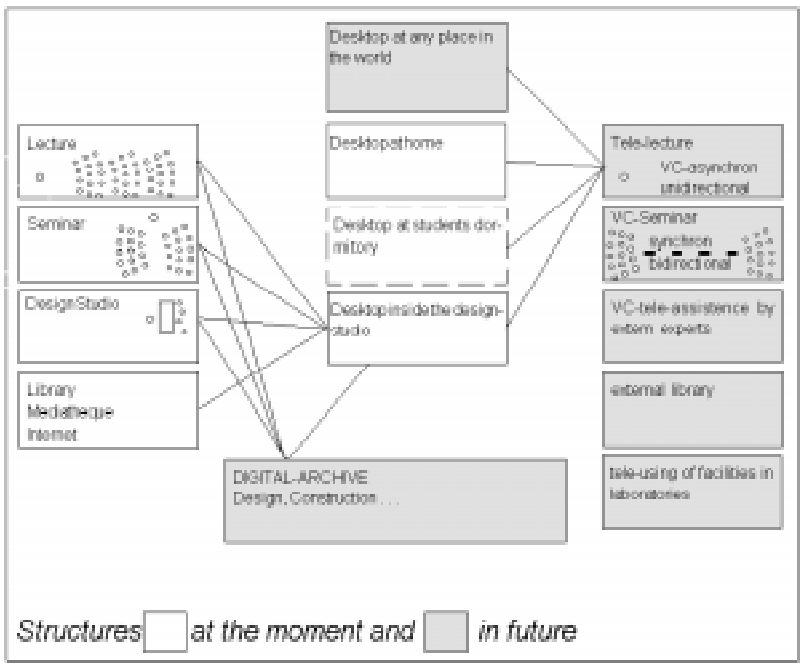

Fig 6: Teaching structures: at the moment / in future