

ERFARINGER FRA WEB-STØTTET PE KURSUS OG PROJEKT ARBEJDE/ EXPERIENCES FROM WWW SUPPORTED PROJECT COURSE AND PROJECT COLLABORATION

- ITI Workshop om edb-systemer til fjernundervisning -
Langagervej 6, Aalborg Universitet

http://it.civil.auc.dk/it/presentations/f_ws_fjern_15_2_1999.html

Per Christiansson ¹

The presentation is very shortly summarized below.
Two courses were referenced

- 1) Basic WWW for secretaries and teachers
http://it.civil.auc.dk/it/education/secretary_teacher_1/
Illustration of Virtual Class room
- 2) It in the Building Process
http://it.civil.auc.dk/it/education/sem6_1998/

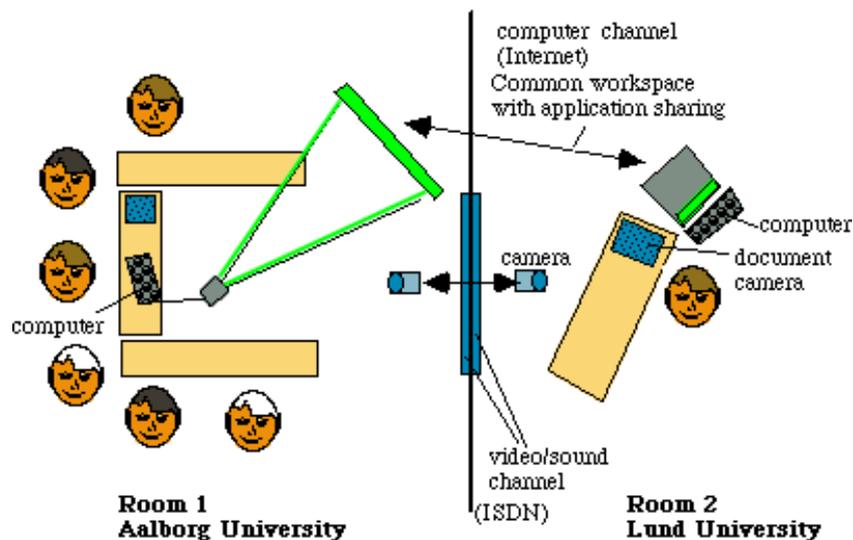
The Virtual Class room

Figure 1 shows a distant learning situation where a group at Aalborg University participates in a 2 hours lecture and exercise on image editing, see. Two physical rooms, one at Aalborg University in Denmark and one at Lund University in Sweden, were connected by two communication channels forming a virtual class room, see figure 2. A 3 line ISDN connection for video and an Internet TCP/IP connection to handle a shared work space were used. The Timbuktu software from Farallon Communication Inc, <http://www.farallon.com/> (<http://www.timbuktopro.com/>) was used to handle the application sharing.



Figure 1 Left screen displays the common workspace, in this case using Adobe Photoshop, controlled from Aalborg and Lund Universities at the same time. The teacher is on the middle screen and the audience, as he sees it, is on the right screen.

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Figure 2 Example on a physical set-up of a virtual classroom. See also figure 1 and http://it.civil.auc.dk/it/education/secretary_teacher_1/lecture_5.html.

Some experiences concerning collaborative work from this and earlier activities at KBS-Media Lab (<http://delphi.kstr.lth.se>) at Lund University are,

- video/sound connection over *Internet*, e.g. over a CuSeeMe reflector, is only adequate using very low image update,
- very good *social connection* may be achieved with the teacher/coach who though wished to have better eye and body language contact with the students (video cameras can be controlled remotely and should be preset at different positions),
- *shared applications* work very well both for collaborative production work and creative sketching.

IT in the building process

The aims of semester 6 1998 course 'IT in the Building Process' are to

- give an overview and understanding of how IT has been and are used in the building process,
- give an overview and understanding of how IT will change the building process,
- mediate knowledge on how IT can be used to support the student project work.

The course covers in particular - IT in the building process, IT history, building product/process models, relational database design, decision support systems, building maintenance with IT-support, multimedia, collaboration tools, intranets, and IT-strategies, see http://it.civil.auc.dk/it/education/sem6_1998/index.html.

The *course material* in the form of lecture notes, exercises and references are available on the Internet from a WWW browser, see figure 10. The notes are easily scanned using a combined graphic/textual palette on the left side of the screen. Each of the ten lectures can be reached either via the 'scheme' icon or by stepping forward or backward in time (red arrows in figure 10).

The *exercises* cover project web design and implementation, relational databases design, multimedia support and collaboration tools. Lectures and exercises only takes place during the first half of the semester together with project work and courses in building statics, management, materials, structural engineering, production and foundation.

The *projects* are chosen from ongoing or planned authentic construction work in the area (e.g. office/dwelling housing, bridges, and tunnels).

IT Sem 6 MULTIMEDIA & COLLABORATION

QTVR, Quick Time Virtual Reality

Quick Time VR was developed by Apple Computer. You can make your own interactive QTVR movie either as an *object mode* (walk around an object) or as a *panoramic mode* (sit on a rotating chair). See also <http://www.apple.com/quicktime/developers> and <http://developer.apple.com/techpubs/multimedia/qtvdevdocs/VR/vrintro.htm>.

(Zoom in/out using the shift/ctrl keys)

This sequence from the KBS-Media Lab in Lund (<http://delphi.kstr.lth.se/>) was simply created using a video images which was fitted together on Adobe Photoshop using layer technique. A QTVR movie was then created from the PICT file with a shareware program. (see the links above).



Figure 3 Aalborg University course 'IT in the Building Process' lecture notes are accessible from Word Wide Web. See http://it.civil.auc.dk/it/education/sem6_1998/scheme.html.

The students can use optional tools covering communication support and information handling for their project work. The course is especially dedicated to be support for the semester project work. The projects are carried out in groups on 4-6 persons and in most cases reported on the web,

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B-SEKTOR, 6. SEMESTER 1998

GRUPPE C201 - KONSTRUKTION	PROJEKTIVEJLEDERE
Peter Dalsgaard Frederiksen Marlene Lindegaard Madsen	KONTORHUS AALBORG HAYNE FRONT F. Bolonius Olesen konstruktion

Figure 4 The student project works are accessed from the WWW. see for example See also http://it.civil.auc.dk/it/education/sem6_1998/participants.html.

Location: <http://130.225.55.49/FMRes/FMPro?-DB=c201b8%5f6%5f1998%20Copy.FP3&-Lay=Liste&-Token=25&-Format=TableVw.htm&-Error=E> What's Related

Table View | Form View | Search | ? | Home

Database: **c201b8_6_1998 copy.fp3**
Viewing record range 1-13 of 13

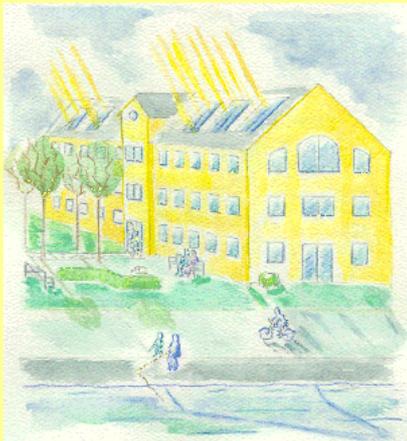
	Billede	Bygningsdel	Fagområde	Materiale	View
1		Sikringsrum	Anlæg	Beton, armering og interimkonstruktion	Normal
2		Byggegrube	Fundering	Armering, renselag	Fjern
3		Byggegrube	Konstruktion/Anlæg	Støbeplader	Fjern
4		Kældervæg	Konstruktion/Anlæg	Beton og interimkonstruktion	Nær

Record range: 1-13
Total records: 13
Unsorted
New record...
Find all

Figure 5 Part of student project web. Web access to an underlying database documenting the building project.

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**Gruppe C-218,
6 semester,
Indeklima og energiøkonomi,
AAU.**

Projekt: Administrationsbygning for Aalborg Kommune
Tema: Projektering, udførelse og drift af bygninger og deres installationer.
Projektperiode: 02.02.98 - 28.05.98.
Projektgruppe: Alice Andersen, Marianne Bjerne, Jan Per Jensen og Jesper Thorsgaard Larsen
Vejledere: [Mogens Steen-Thøde](#), [Finn Toft Hansen](#) og [Willy Olsen](#)

Sider opdateret: 03.06.98

Figure 6 Entrance to a student project web, semester 6 course 1998 'IT in the Building Process'.

Each student project team has a *group room* at its disposal where the students can connect their private computers to a hub with possibilities to establish an *intranet*. The project data can at any time be downloaded to a group area on a central http-server.

There is a common (for students and teachers) *discussion area*. We have implemented the Perl-script based shareware WWWBoard written by Matt Wright which can be found at <http://worldwidemart.com/scripts/wwwboard.shtml>. Students can at any time easily give course feedback.

We have also with good results tried a WWW-based evaluation system developed at Lund University (EVA 1998). Email is used extensively for communication as well as postings to all course participants.

The course is running now (spring 1999) for the second time. Some findings are reported below,

- students and teachers are not all *familiar* with the possibilities IT -supported collaboration provides (e.g. groups continuously documenting project progress, teachers using the student project web to follow progress),
- *guided exercises* are important for student learning by doing in small steps
- teachers must be highly *accessible* tutors and problem solvers especially during project kick-off and to make injections when group activities fade (search the problems). This poses special problem in a highly physically distributed environment,
- some groups want to have *intranets* only available for the group (they see a risk for improper result spread before the project is ready),
- the internet provides good opportunities for active search for knowledge *and background information* to generate ideas during the early project phases,
- *discussion forums* will not be used unless actively triggered by tutors.