

LOCAL VALUES
in a
NETWORKED
DESIGN WORLD

ADDED VALUE OF COMPUTER AIDED
ARCHITECTURAL DESIGN

DUP Science

scientific committee

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Think Globally – Act Locally

in Architectural Information Management

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Abstract

This paper tries to describe the conceptual connection between the larger-scale, somewhat idealistic global visions and trends in the architectural-ICT-education, and on the other hand the smaller-scale real-life activities that are carried out in the local educational institutions.

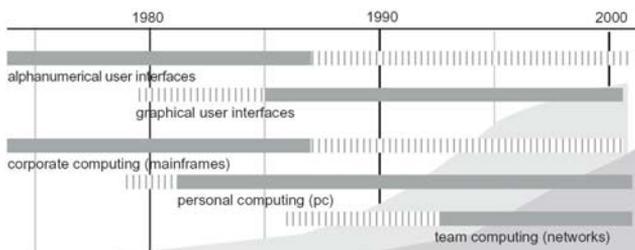
The local activities are demonstrated with a handful of case-study experiences from HUT/architecture.

A proposal for the future, is to establish a continuous web-forum for architectural schools

- To submit and maintain their organizational and educational data
- To benchmark their education content with other schools
- An early version is already available in: <<http://www.arkit.net>>

Guidelines in Global Scale

As well-noticed and seemingly widely accepted fact, the architectural ICT-education has been a constantly changing discipline during the last 20 years. From the early 1980's pioneer CAD-experiences, CAD has grown – through CAAD – into architectural information and communication technology (ICT), to become the tool of the masses of the early 2000's.



The general volume and "importance" of personal computing (light gray area on the back) has grow remarkable during the 1990's.

Longer-scale development trends and evolutionar changes of the topic, architectural-ICT and its education, can only be monitored, hence, also understood in the larger international and "multinational" scale.

Those trends are recognized, and actually often also defined in the international co-operative reserach and contact forums, such as:

- eCAADe and it's sister organizations
- ACADIA in USA and
- CAADRIA in Asia,
- topic-concentrated forums such as CAAD-futures, AVOCAAD, etc.

The experiences are cumulated into written research literature, and lately also collections of digital research material, such as CUMINCAD. <<http://cumincad.scix.net/>>

These visions and guidelines represent the general top-down aspect to the architectural-ICT, which is essential in seeing the trends, in targeting the local activities, and also in planning the local activities for the near future.

Activities and Realizations in Local Scale

Actual educational tasks are always carried out in local, regional level: in the architectural schools, in their departments and chairs and finally in the individual courses' weekly sessions.

This represents the bottom-up local view, realization of the idealistic plans and visions in practise.

On the other hand, the a fruitful evaluation of local activities needs also benchmarking and comparison of the own local actions with other schools. Hence, overall understanding of the whole spectrum of the educational activities of the topic area is needed, to succesfully carry out local every-day education.

Naturally there are also lots of other active fields of interest within the architectural discipline, but they seem to act also very "locally" within the interest fields.

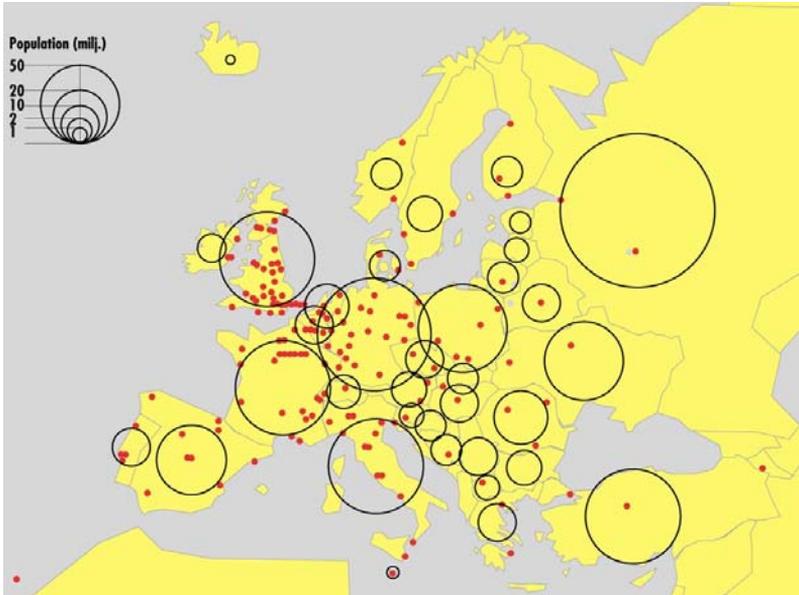
Critical hypothesis

Though the channels and digital media for easy and also cheap international communication are currently existing mainly via the web, and they are also technically working, they are not used too much in transferring the educational architectural content between the local actors.

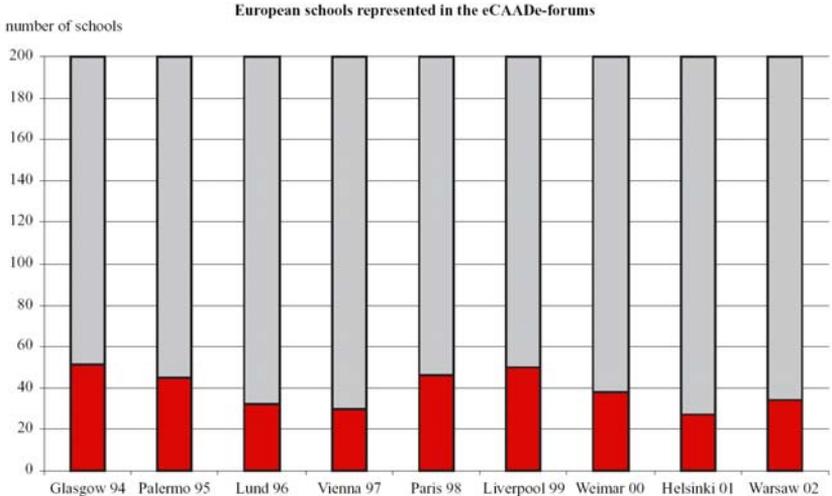
Practically there is rarely any strategy in using computing facilities within the architectural context. Neither do the new media tools have larger educational meaning in the architectural curriculumns of the European schools.

- Just about 15 – 20 % of the European architectural schools out of the total of some 200, have actively attended in the eCAADe-conferences during the last 10 years.
- Almost 40% of the European architectural schools have never been represented in these ICT-concentared forums
- Plus some 25% of the schools who have participated just once.

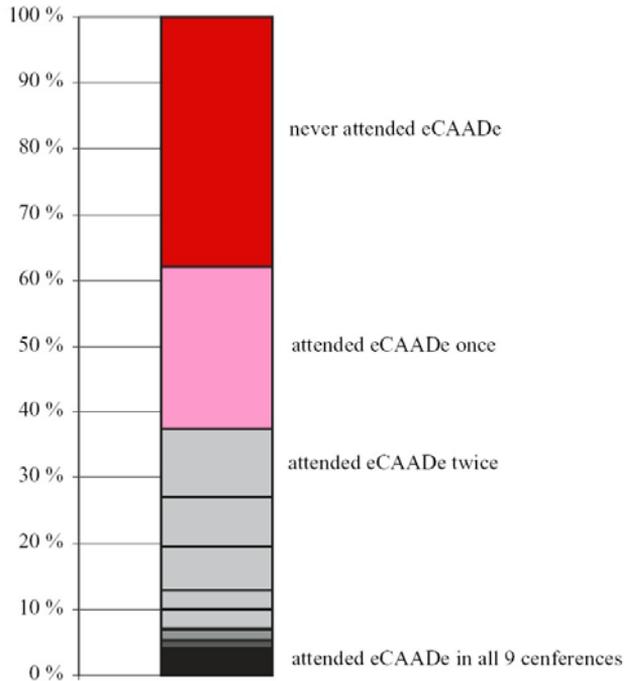
Though collected from ICT and CAD-oriented conferences, the results lead to rather pessimistic conclusions. Despite the available international connections of our “information society”, we are often still thinking much “too locally”.



*The architectural schools in Europe marked with dots.
The national population concentration is marked with larger circles.*



The activity of the European architectural school in the eCAADe-conferences during the 1990's (based on conference membership surveys by the eCAADe-organisation).



The majority (over 60%) of the European architectural schools have never attended in the eCAADe-conferences during the 1990's (based on conference membership surveys by the eCAADe-organisation).

Proposed communication forum

The various regional and local activities within the existing ≈ 200 European architectural schools could benefit much more from each others' experiences, if:

- A contact forum would be easily and quickly available
- The forum would offer so valuable information to the schools, that it would separate from the "web-nonsense", i.e. the forum would be well known
- The variety of available communication channels would also be more well known
- The educational content of the schools would be presented in understandable and comparable form.

The forum should contain also tools for the future planning, not only facts or educational state-of-the-art data.

- Good ideas and development hints
- Weak-signals of the possible rising future trends

Workshop of current activities

A handful of local case studies from Finland

A few very down-to-earth and simple educational ideas or realizations, that have proven to be successful in Helsinki University of Technology, the Department of Architecture in Otaniemi.

1. Teach the teachers

Since architect teachers are often quite low-skilled in utilising modern media in their education, ICT-education is made available also for them in:

- web-publishing and small site management
- "every-man" image manipulation [with Photoshop]
- team-communication [with email, webmail, web-logs]
- file transfer routines [system tools, web, FTP-tools]

2. Organize open workshop sessions

Since full-term-long ICT-courses are relatively heavy to organize, HUT-architects' CAD and ICT-courses will be structured into smaller workshop sessions:

- 1 to 4 hr workshops to be ordered by other courses
- to be carried out as educational "plug-ins" when needed
- timing of the sessions and early informing & scheduling are essential !

3. Offer virtual communication assistance

Since digital communication methods have very heavily developed during the last 5 years, a tested variety of the tools & assistance in using them, will be made available for "traditional" architectural courses.

4. Offer document management systems in school projects

Since the design & construction practise has gone into digital project management, these project & document management systems are tested and used also in student projects.

5. Build and use low-cost IT-tools

Since "several short steps" are easier to take than "one long", several simple ICT-tools have been created for architectural teachers & students during the last decade:

- urban facts, figures & relations calculator [with HyperCard]
- urban scale area management [with ArchiCAD's area tool]
- student administration and credit point management [with FileMaker-database]
- architects aid: various calculation templates [with Excel]
- interactive web-based catalogues, logs and forms [with FileMaker-database in the web]

Background

This work is part of Hannu Penttilä's on-going post-graduate work at HUT / architecture on the topic of: Architectural education and information technology, The educational meaning of digital media – A European overview <<http://www.arkit.net>>

One objective of the work is to make the connections and info-channels between the architectural schools easier.

Web-references

All European architectural schools	< http://www.mittaviiva.fi/hannu/index.html >
Questionnaire architecturalcurriculumns	
Helsinki-schools webpages	< http://www.arkit.net >
eCAADe-organization	< http://www.ecaade.org >