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## Using Hypermedia as a Teaching Tool in CAD Education

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### **Introduction**

CAD-programs belong to the most complex kinds of software - complex and difficult in using and especially in learning for architects and for students. Some years ago we already tried to find ways for making the first steps easier for students and more comfortable for teachers:

Our first attempt was to reduce the number of commands from 150 to only 20 in the first lesson by cutting off many of the pull-down-menus (it was even the time before the cad-program, we use, was running under windows). We supported the reduced menus on the screen by handing out a template with all the needed commands for the first lesson. We had two positive results: the first was a reduction of beginners frustrations about too many new things, the second was a homogenisation among the students' know how: the very eager ones were no longer able to test too many new things! In the second lesson the students got another twenty new commands and so on (they could start the program with a batch rib-1, rib-2 etc.). Our second attempt was the development of new dialogues due to our experience in teaching and in looking at the same points of difficulties every year.

### **Actual Development**

In the meantime our cad-software ("ribcon", a 3D-modelling-software, developed in stuttgart, germany especially for architects ) is running under windows. First we had the feeling, that most of the new and younger students, who are more acquainted to the pc and to windows than some years ago, could have less problems with the complexity of the program. But it did not change much: frustration on the one hand, eagerness and joy of experimentation on the other. So we kept our variable menus and decided to support our lessons and the times of recapitulation and autodidactic learning by a specially made tutorial - designed with a dtp-software and made as a book, conventionally printed on paper.

Last year we started to make an on-line-tutorial under windows. You will know the help-function under windows. It is based on hypertext and only shows verbal help. We found it useful to develop a help-program, which is merely based on graphical support and supported by audio-sequences and even animations and videos: a real multimedia- or better, hypermedia-tutorial. The tool we used for developing, is Multimedia-Toolbook, one of the most popular hypermedia-development-kits for pc/windows.

We have three ways of using our help-programm: by "cool-switch" (Alt + Tab) as a background- programm under windows, on a twin-monitor-configuration (as it was made popular by Intergraph) or with a horizontally or vertically divided screen.

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