

# INTEGRATED VISUALIZATION

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The Video and Multimedia studio at VTT, Technical Research Centre of Finland, started with endoscopy photography of scale models. Video recordings has been made since 1985 and computer graphic since 1989. New visualization methods and techniques has been taken into use as a part of research projects, but mainly we have been working with clients commissions only. Theoretical background for the visualizations is strong. Research professor Hilkka Lehtonen has published several papers concerning the theory of visualization in urban planning.

This studio is the only professional level video unit at Technical Research Centre, which is a large polytechnic research unit. We produce video tapes for many other research units. All kind of integrated methods of visualization are useful in these video productions, too.

## WHY INTEGRATED METHODS ?

Integration of different means does not mean only simultaneous use of these visual elements, but as well using one method after another. For us many sidedness is the main idea of visualization. It helps the viewer to have both intellectual (conceptual) and emotional (suggestive) point of view to the subject. Practical needs of the clients (architects, builders, inhabitants) is the reason to combine different visual materials.

It is possible to combine background live video (or still picture) with endoscopy video. Realistic background helps to make comparisons of the present and future situation of the milieu.

There are some other advantages to use integrated techniques. For example, when changes will be made in

*Figures 1, 2 and 3  
In these pictures the  
transformation is made  
using pieces of slides and  
video still frames. At  
videotape the transfor-  
mation runs animated.*



the existing built environment, it is not always possible to order a scale model. Scale models are often too small and undetailed to give a realistic impression.

Because architechtonic process always produces manual and (often) CAD-drawings, we consider important the ability to use all this material as elements of visualization.

Video or still image background can be combined to drawings, CAD prints (on paper), CAD still pictures (from computer to videotape) or to CAD-animation.

An easy method to demonstrate the situation before/after is to use computer animation software (like MacroMind Director). Animation effects can be useful for map visualizations, too. Digital manipulation of the still picture can also be used — for example when placing a new building to its surroundings or demonstrating the changes of facade.

If there will be changes in the vegetation or some other very detailed objects, using scale model can be difficult.

We try to make use of different technical possibilities and technical development, as interactive multimedia, videodisk, cd-rom etc. When visual information is in digital form it is possible to use it in interactive multimedia presentations.

