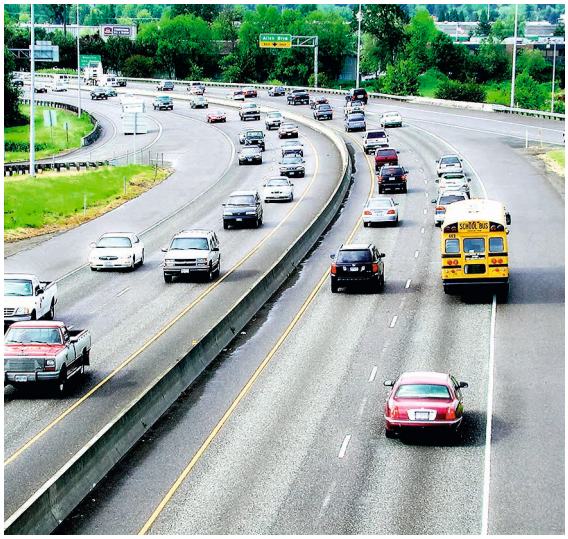
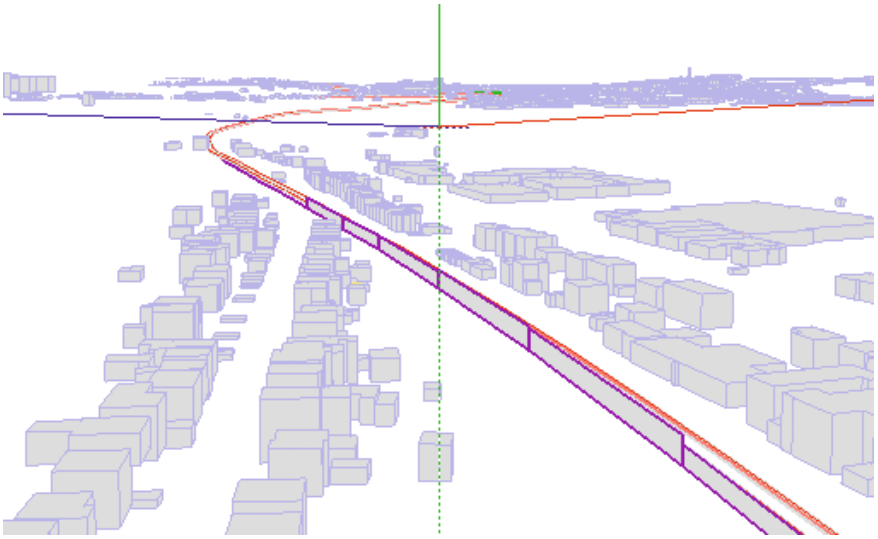
SoundPLAN® noise





Wall Design optimizing walls and berms

Design aids for sound protection walls and barriers
Calculation of wall/barrier height and length on the basis of given input for a planned construction. Can be used with specific receiver points or a facade noise map that consider all building facades in an affected area

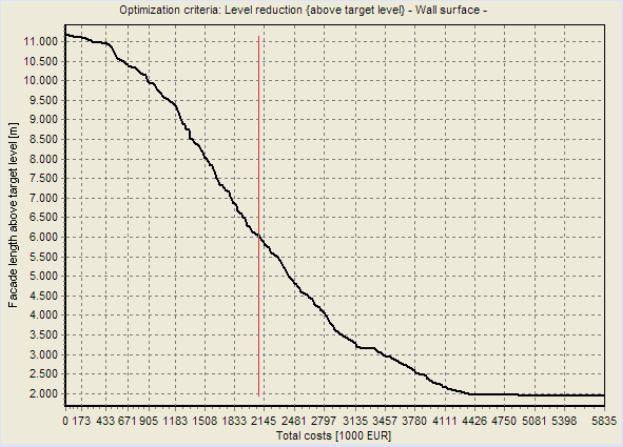
Different built-up strategies
Reduction of levels, minimization of wall costs, minimization of affected people or facade length above target values

Recording of the reduction per each wall element
for subsequent analysis of intermediate steps find the best solution on base of diagrams

Variable wall heights along a route
These are taken into account automatically

Wall Design

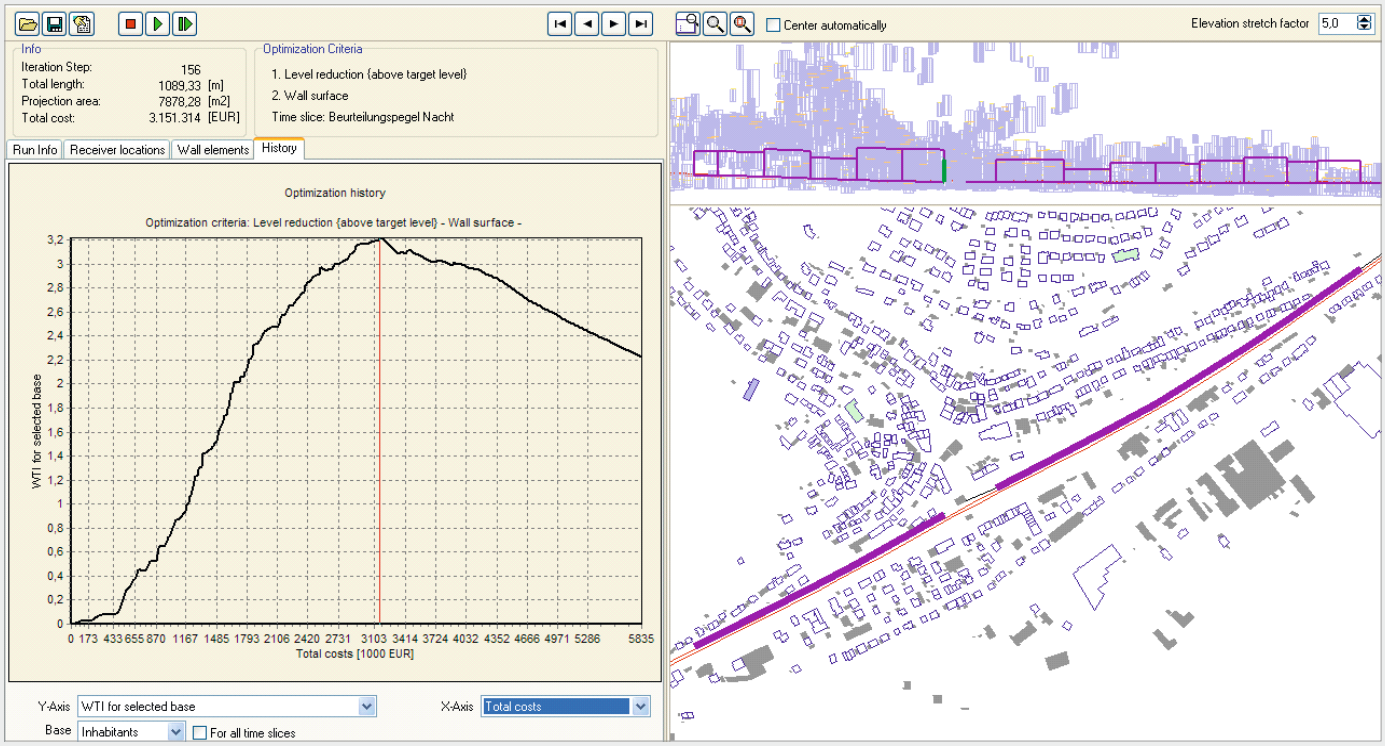
A study starts with a precalculation e.g. single point calculation or facade noise map. The input data contain the geometry of the wall or berm without the height. The wall has to be divided in several segments (there is an automatic tool in the Geo-Database for creating equal segment lengths). During the calculation a database will be established which contains the reduction of each wall element for each receiver point. The height of the wall will be incrementally raised by up to a user defined number of elements. Wall Design uses this database and builds the wall with the elements in order of their efficiency (which depends on the selected strategy). Following the Wall Design Calculation all results of all intermediate steps are shown in diagrams. Each intermediate step can be revoked later.



The abscissa shows the wall costs, the ordinate the facade length above target values. The facade length considers individual floors

SWISS WTI (OF BAFU) IN SOUNDPLAN:

In 2006 the Swiss Federal Bureau for Environment BAFU documented a well practiced method to create a diagram in order to show the effectiveness and efficiency of a measure. The efficiency means a good relationship between benefit and cost. A good effectiveness is given, when the goals such as fulfilling target values are reached. Both properties generate the WTI and are necessary for a successfully designed wall!



The left diagram shows the optimization history, with the WTI on the abscissa. To the right the wall for the selected optimization step (highest WTI marked with a vertical red line (is shown)

Software Designers and Consulting Engineers

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