noise3D
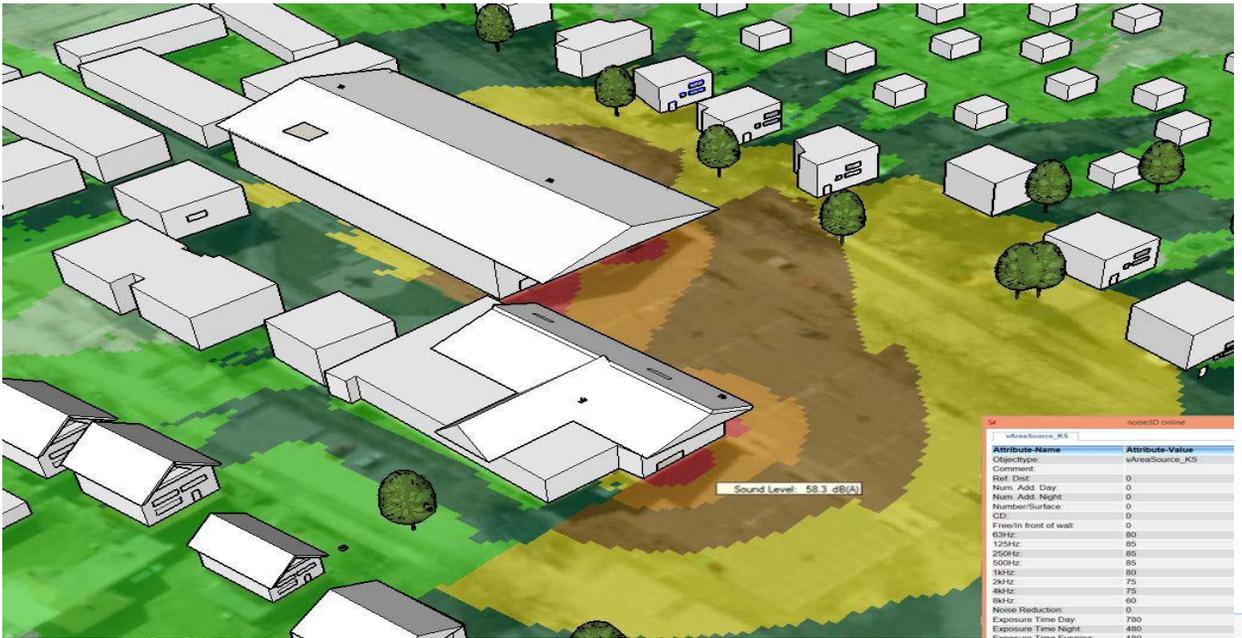
The innovative noise calculation service for architects, industrial planners and environmental consultants

Source Name	Ln	Lde	D0	Tde	+RT	Tn	Cmet-d	Cmet-e	Cmet-n	dp	DI	Abar	Adiv	Aatm	Agr
Fan	23.0	32.1	0.0	-3.0	0.0	9.0	0.0	0.0	0.0	61.1	0.0	18.1	46.7	0.1	-3.0
Truck	48.4	57.3	0.0	-3.0	0.0	9.0	0.2	0.2	0.0	45.0	0.0	2.7	44.1	0.6	-3.0
Truck	53.5	62.5	0.0	-3.0	0.0	9.0	0.1	0.1	0.0	43.2	0.0	0.0	43.7	0.6	-3.0
Truck	42.1	51.0	0.0	-3.0	0.0	9.0	0.1	0.1	0.0	43.5	0.0	7.3	43.8	0.4	-3.0
Truck	30.7	38.8	0.0	-3.0	0.0	9.0	0.9	0.9	0.0	72.0	0.0	15.5	48.1	0.2	-3.0
Shutter	13.5	21.8	3.0	-3.0	0.0	9.0	0.7	0.7	0.0	55.1	0.0	17.3	45.8	0.2	-3.0
Window	15.5	24.4	3.0	-3.0	0.0	9.0	0.2	0.2	0.0	38.5	0.0	10.1	42.7	0.1	-3.0
	54.9	63.9													

Kramer Schalltechnik

In Cooperation with

Sonja Christiansen Informatik GmbH

Modelling sound propagation outdoors is straight forward and easy to learn with noise3D™

Leveraging the 3D modelling application **SketchUp®** of Trimble Navigation you will create your acoustic model. It will be based on either a ground map in pixel format or a satellite map from **Google Earth™ (Google Inc.)**. The latter can be imported including terrain by just a few mouse clicks.

Then you will digitise the obstacles (buildings, screens, foliage, etc.). You will be provided with user friendly tables for the input of the related acoustical data.

In case you have an existing SketchUp model then you can add the acoustical data and use it for the calculation.

The entire process happens in 3D-Mode, you will always have a realistic presentation of your model in front of you. It will not be required to switch from a 2D- into a 3D-presentation and vice versa. As a consequence any geometric input errors will be spotten in process and can be corrected immediately. You will also have help screens, a detailed manual and the intuitive SketchUp Instructor capability.

Calculation of Sound Propagation:
The calculation of noise propagation is based on the international standards **DIN ISO 9613-2** and **ISO/TR 17534**.

The **Single Point Calculation** can be performed for an unlimted number of receiver points. It generates understandable tables which also show the attenuation parameters like screening, ground absorption, reflection, etc.

In addition **coloured noise maps** can be generated and presented in the 3D graphics.

In general the calculation should be performed **frequency depending** (in octaves). Should emission spectra not be available then single sound pressure values can be used in a major frequency of choice.
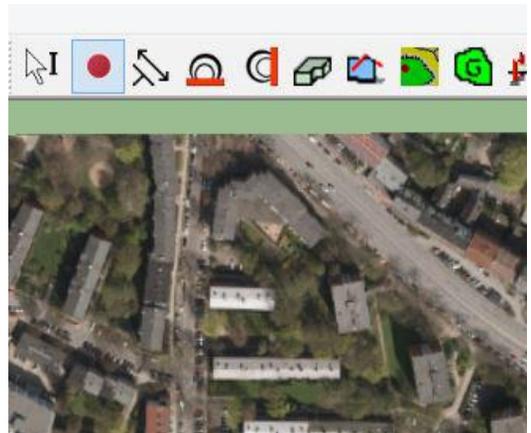
Modellelements

Free point source
Point source in front of building
Point source on top of roof
Line source (incl. moving sources, e.g. trucks)
Vertical area source
Horizontal area source
Building
Noise screen (also sloping)
Bridge
Foliage
Contour lines
Receiver point
Designated land use
Ground effects
Calculation area

Calculation

Reflection (to 3rd order)
Diffraction at barriers, lateral and above
Directivity
Automatic division of area sources and line sources, adaption to the terrain
Attenuation acc. to meteorology
Digital terrain
Consideration of exposure time
Treatment of noise reduction measures
Interpolation of grid noise maps

and many further functions.

Conformity

For noise3D we do have a **declaration of conformity** according to ISO/TR 17534 of Kramer Schalltechnik.
noise3D is a complete package for the calculation of industrial and urban noise outdoors. An extension to include traffic noise is in preparation.

Installation

- You have to aquire a SketchUp® License for 3D modelling.
- We will provide the noise3D plug-in for SketchUp and the calculation engine.
- Operating System: Windows®

Pricing

Noise3d is available for rent at low cost (monthly or annual PayPal payment) or you can buy an unlimited license. Please see our web site noise3D.com for details.

Demoversion

When you download noise3D from our homepage then it will fully function in a demo mode. But the results from the calculation engine will be slightly falsified..
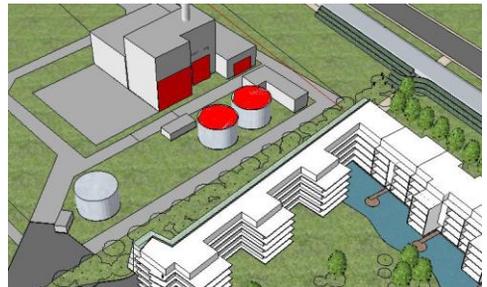
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3D calculation of sound propagation outdoors

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