



Noise Measurements & Solutions

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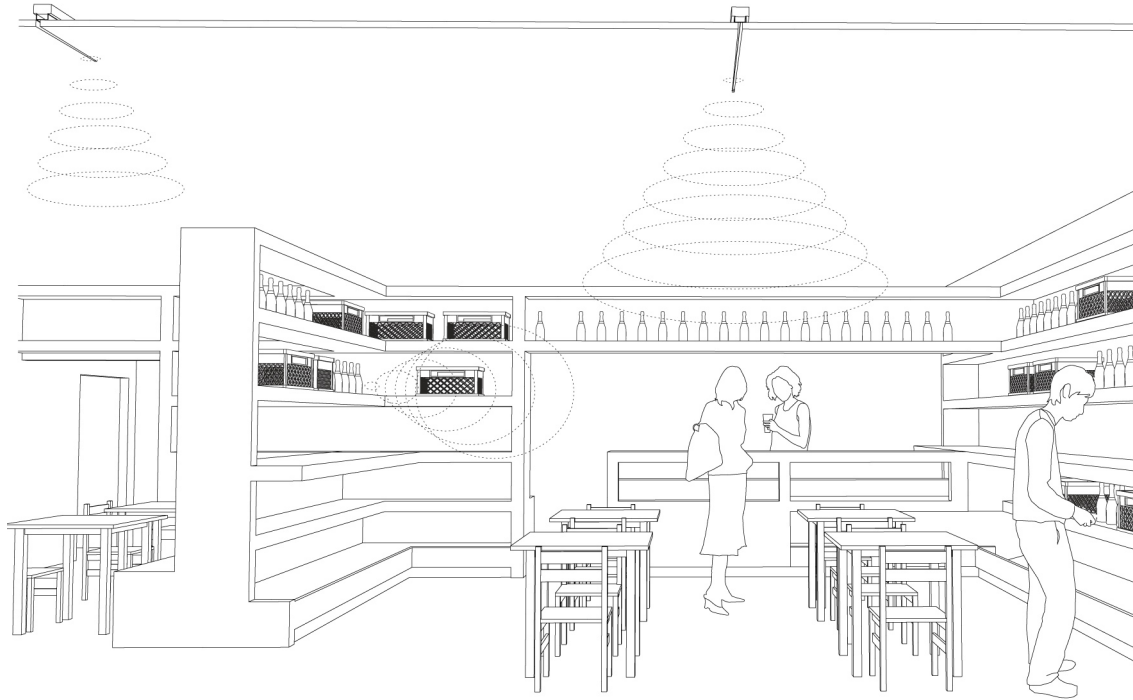
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Soundscape amelioration and noise masking: Theory and concept.

It is widely recognized that, high level of environmental noise such as traffic noise badly affect people health, an extensive report published by the WHO organization highlighting the incidence of cardiovascular diseases and decreased cognitive capacity in relation to high level of noise is having a major impact on the new development of urban spaces as the need to meet low noise criteria becomes a public health issue.

With “Soundscape amelioration” we intend to provide a meaningful solution to eliminate the annoyance caused by residual noises after the major sources of noise in our cities and in the living spaces have been reduced to ideal levels.

Our idea is based in the understanding that, it is not the noise level (dB level) alone to determine the negative effect of noise, it is also the alienating, repetitive characteristics of the noise, in particular the morphology and the frequency spectrum which in urban areas takes a unnatural shape substantially different from the one observed in many natural soundscapes.



Of primary importance is the psychological factor, when a particular noise is considered unwanted and intrusive in despite of its measured loudness it contributes to a subtle annoyance and psychological discomfort, detrimental to the quality of life, leading to an increase level of stress alienation and irritability in people and community subjected to it.

This discourse leads to the current debate about positive and negative soundscape that bring together the field of acoustic engineering, psychology and art.

What our proposal involves is a trade-off, a small increase in the noise level to allow for the playback of a composition of carefully crafted sounds diffused in the space by a specialised electro-acoustical system. This can be achieved at the expenses of a minimal almost undetectable rise in the environmental background noise, at the same time the additional acoustic energy introduced in the environment will target specific areas of the frequency

spectrum helping to re-gain the frequency balance as found in a natural soundscape counteracting the effect of urban and industrial noises such as machinery and traffic noises.

With an electro-acoustic installation it will be possible to mitigate the effect of monotony by proposing a program of variable and transient sounds diffused in the environment improving the quality of life of local residents, visitors of the open space or dwellers of indoor spaces.

A soundscape installation in a public outdoor space could be seen in the same way as a more traditional work of art such as a sculpture or a water feature, yet careful consideration in the choice of parameter should be the study of a sound artist as he would have the necessary sensitivity and tools to deal with the particular sound subject matter.

We have conducted extensive field research in cities and the natural environment and have noticed correlations between the pleasantness of the noise environment, its characteristic frequency spectrum, spatial diffusion and content, with this work we intend to create a stimulating atmosphere promoting relaxation and spiritual well being.

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