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NORAH Acoustics database

All noise data from the NORAH sub-studies went into a database. For every study subject it contained around 30 "acoustic characteristics", including the so-called equivalent continuous sound level during the day (06–22 hrs) and night (22–06 hrs), average maximum levels and maximum level statistics at different times of the week (weekdays or at the weekend).

The researchers could use this data to calculate which sound levels from aviation, road and rail noise each individual study subject was exposed to in the years between 1996 and 2014. All of the data were, of course, anonymized in accordance with the data protection regulations.

Site-specific noise calculations

Just like the aviation noise data, the road and rail noise values for all study subjects also went into the NORAH database. Taken together, they could be used to draw up address-specific and time-specific noise exposure profiles for each individual. The database also contained information, for example, on the storey or the position of the bedroom of the study subjects.

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This was because even apparently small influences on the propagation of the sound could have a considerable effect on how much noise actually reached the ear of a study subject. For example, the doubling of road traffic at a location would only lead to an increase in the long-term energy equivalent noise level of around three decibels. The sound level, however, that can be measured in front of a house on a busy road is around 15 to 20 decibels higher than it is at the back of the house.

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