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ReDAT

Monitoring of Noise Load

Case study - obtaining data on the development of noise levels, which can serve as a source for decision--making in building passive or active anti-noise measures.

The Controlling Analytic Centre (KAC) can be flexibly expanded to include a further feature - monitoring of noise load. This solution can be used wherever the monitoring of a noise situation is needed.

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The acquired noise level data can serve as a source for decision-making in building passive or active anti-noise measures, as well as for analysing specific noise events and identifying the noise source.

KEY BENEFITS

- Obtaining of a comprehensive centralized system for permanent noise load monitoring.
- The solution can be an extension of the KAC system with a built-in technological environment with an approved authorization system, and also with secure management and system operation support.
- Correlation and detection of connections based on other data monitored by the KAC system (CCTV systems, train passage monitoring system, etc.).
- Potential use of existing camera systems for the purposes of noise load monitoring.
- Tools for the detailed analysis of the noise data to determine the cause or source of noise.

NOISE

Noise is an unwanted sound that we need to be protected against; otherwise it could temporarily or permanently damage our health. For that reason, a whole range of laws, regulations, norms and many other measures have been created to regulate the permitted noise limits, especially in relation to the population.

PRINCIPLE OF THE SOLUTION

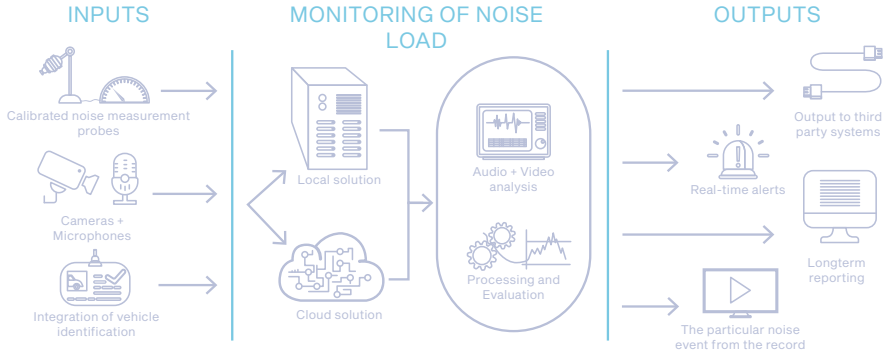
The solution is based on the installation of probes in locations designed to detect the noise level. The scanning probe consists of a microphone system and a coupled camera, the purpose of which is to capture a video recording of the situation for the detailed identification of the noise source, or of a alibrated sound sensor. Audio and possibly also the coupled video or data outputs of the probes are transferred to the centre of the KAC system via a data web where they are stored, processed and the outputs, respectively reports, are submitted to the authorized users. The KAC monitoring solution of the noise load thus uniquely enables the correlation and analysis of noise events in relation to specific events and situations.

SOLUTION ENABLES

- Permanent monitoring, obtaining of long-term noise data.
- Possibility of correlation of noise situations and an objective comparison with the data from other sources, stored in the KAC system (e.g. coupled video object identification - noise sources).
- Availability of current data in one central location.
- Analysis of the noise situation before and after the implementation of a specific measure (e.g. construction of noise barriers, change of the maximum permitted speed, etc.).

EVALUATION OF DATA FROM NOISE PROBES

- threshold of audio signal level [dB]
- audio and video quality
- probe placement in a geographic position on the map
- calibration constants



SELECTED MONITORING FUNCTIONS

- display of the probes positions on the map
- graphical presentation of records access
- synchronous audio and video reproduction of the noise events
- inserting of notes into the noise records
- incidents management for record keeping and investigation of the noise events
- automated reports

ReDAT Recording Systems, a business division of RETIA, a.s., which provides a sophisticated system for recording voice, screen and other relevant data. The system automatically analyzes the data to make it available to system users in a clear and structured way.

RETIA, a.s. is a Czech company based in Pardubice, founded in 1993. It develops, manufactures and modernizes radars, command and control systems, UWB localization and communication systems and ReDAT Recording Systems.

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