

ABSTRACT

SYSTEM AND METHOD FOR DETECTING ABNORMAL AUDIO EVENTS

Method for detecting abnormal audio events in a given environment, characterized in that it comprises at least:

- an automated step for learning the modelling of the environment to be surveilled during which a database (9) is created by the extraction of acoustic parameters (2.1) associated with audio streams picked up over a fixed time period and an unsupervised automatic segmentation (2.2) of said streams, followed by a step of grouping the segments in classes (2.3) and a statistical modelling of the segment classes (2.4),
- a usage phase which comprises the analysis of an audio stream, with the extraction of the acoustic parameters (3.1), a step of automatic segmentation (3.2) of said analysed stream substantially identical to that used during the learning phase and a step during which the likelihood (3.3) of each statistical model contained in the database is determined on each of the segments of the analysed audio stream,
- said step of determining likelihoods resulting in a likelihood value λ which is compared to a threshold value in order to initiate or not a signal indicating the presence or absence of audio anomalies in the analysed audio stream.

Figure 2 to be published



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