

ALARMSniffer

SEE THE ALARM AROUND

Enhance driver's safety through automating alarm detection

AlarmSniffer is designed to help drivers to detect and localize emergency alarm sounds (like police or ambulance alarms). Using a microphone array installed on the car roof, the system analyses the audio input and provide all necessary information : alarm presence, type, direction and distance.

Detection

Ability to detect emergency alarms among a wide range

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Identification

Identify the alarm type

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Localization

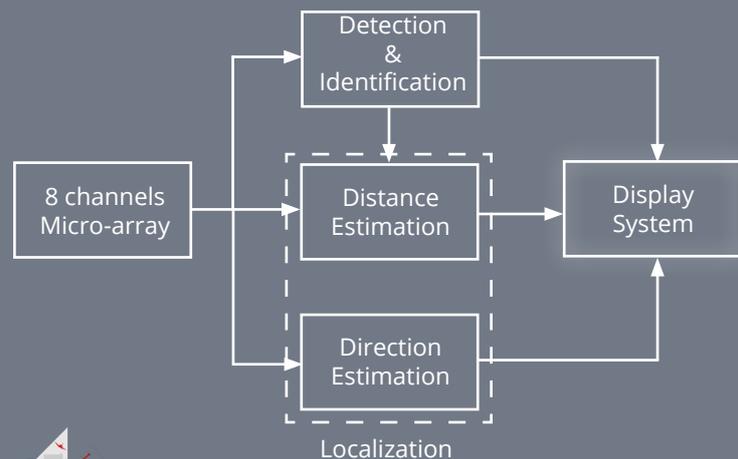
Indicate the right direction and how far is the emergency vehicle in order to shorten the driver's reaction time

TUM | ENEA

Specifications

- Input : audio flow from an 8 channels microphone array
- Detect the alarm presence in 200 meters radius
- Fast alarm identification system (less than 0.02s)
- Different alarm types can be detected and identified according to a normalized alarms' database
- Accurate direction of arrival feedback (Resolution = 5°)
- Three main safety range:
 - Critical zone: 0-50 meters
 - Alert zone: 50-100 meters
 - Safe zone: >100 meters

System overview



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