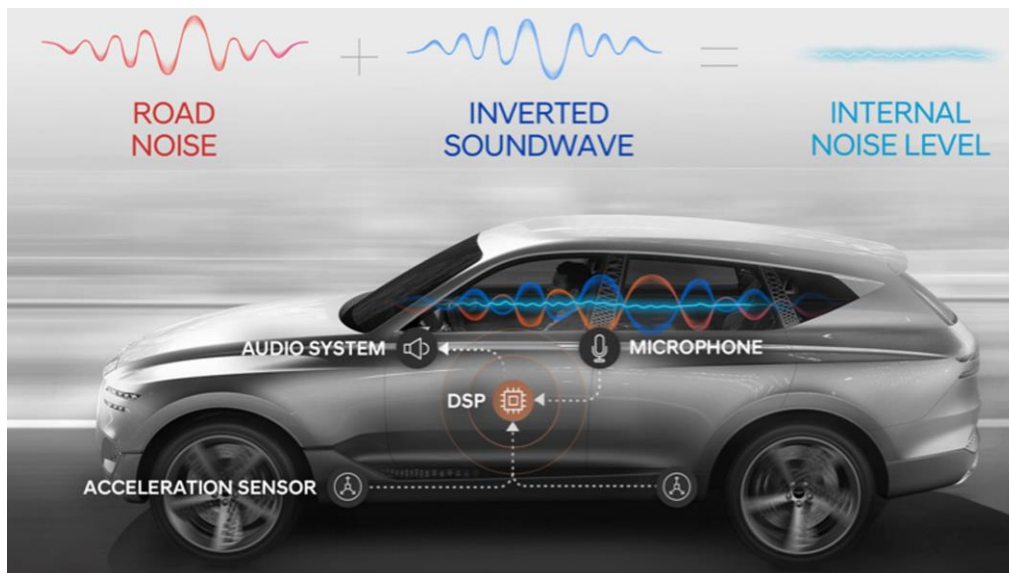


Road noise cancellation demo

In an electric driven vehicle, the road noise is considered to be especially disturbing for driver and passengers. The main source of noise is the wheel contact to road, and this can be measured with an accelerometer close to the source of the noise. Compared to traditional use of microphones the advantage is that the measurement is earlier in the signal chain and enables more processing and generation time for the cancelling signal.

Another typical feature is that the source of the experienced noise is in the wheel well of passenger area and the source of cancelling signal would be located in the A-pillar of the vehicle. That is, the distance to the human head (and direction) are different for the main signal and cancellation signal.

The purpose of the demo is to show the feasibility of using MEMS accelerometer instead of microphone (microphone can be used verify the feedback loop) and to show that the required latency times for the sensing, processing and generation of the cancelling signal can be reached. Ideally, “a quiet bubble” is created instead of a well-defined single location.



Picture: Hyundai Motor company

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