



Background

Electrification in the Automotive Industry

The sound environment inside the cabin is changing

Good The cabin is becoming quieter

Bad Motor noises and other sounds contribute to discomfort



Purpose

Creation of Valuable EV Sounds

Design of

- Acceleration sounds that evoke a feeling of speed
- Arousal sounds considering driver fatigue

Enhancement of the spatial value of EV interior sound

Contents

Subjective Evaluations

Acceleration sounds and arousal sounds are evaluated subjectively under the following conditions:

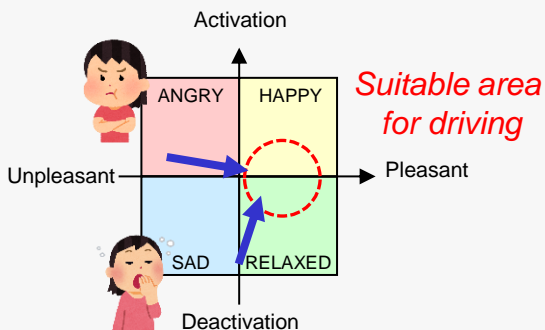
STEP 1: Auditory stimulus

STEP 2: Multisensory stimuli (auditory + visual + driving operation)



Objective Evaluations

Emotions are estimated based on biometric data from EEG



Driving Assistance

Sounds are provided according to the driving scene, controlling valence and arousal

Improvement in driving accuracy

