# three diminsional sound reproduction in Vehicles based on data mining techniques

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**Abstract.** The abstract should summarize the contents of the paper and should contain at least 70 and at most 150 words. It should be written using the *abstract* environment.

**Keywords:** Vehicles, sound, data mining, reproduction

## 1 Introduction

A sound reproduction system for a motor vehicle in which two channel signals are applied to two loudspeakers provided in the passenger compartment to reproduce the signals. The system includes a transfer function converting circuit for converting transfer functions between a listener and the first and second speakers into different transfer functions in different directions from those to the first and second speakers, a delay circuit for compensating for a distant difference between the listener and the first and second speakers, and a reverberation circuit for providing reverberation to two channel input signals, whereby a feeling of a widened sound region is obtained even in a small passenger compartment.[1]

The most there popular 3-D sound reproduction algorithms include Wave Field Synthesis(WFS), Ambisonics and Amplitude panning. WFS aims to reproduce the whole sound field and thus the real sound immersion was reproducted. However, WFS method is not practicle since there are too many loudspeakers requiered in WFS system. Ambisonics system

## 2 tree regression

## 3 three diminsional sound reproduction algorithm in Vehicles

## 4 experiment

## 5 conclusion

## References

1. A. Yamada, "Sound reproduction system for motor vehicle," *Journal of the Acoustical Society of America*, vol. 72, no. 3, pp. 1101–1101, 1982.