Aalborg University Copenhagen

Department of Medialogy

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Title: Enhancing Headphone Music Sound Quality

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Abstract:

Stereo music played through headphones comprises a narrow acoustic field which can sound unnatural and even unpleasant at times. Various attempts to expand the acoustic field have contained flaws which lead to deterioration in some aspects of the sound, such as excessive coloration and other unwanted tonal changes.

In the present research a new way of achieving better sound quality for headphone music is presented. The proposed method diverts from the familiar techniques and aims to correct some of the current problems by using a balanced combination of assorted sound expansion methods. These include the use of amplitude panning, time panning, and particularly binaural synthesis.

Using the stereo format as a reference context, preference selection tests are conducted to measure the validity of the proposed methods. Conclusions from the tests showed that there are several factors contributing to our preference inclinations in regards to spatial sound quality perception.

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