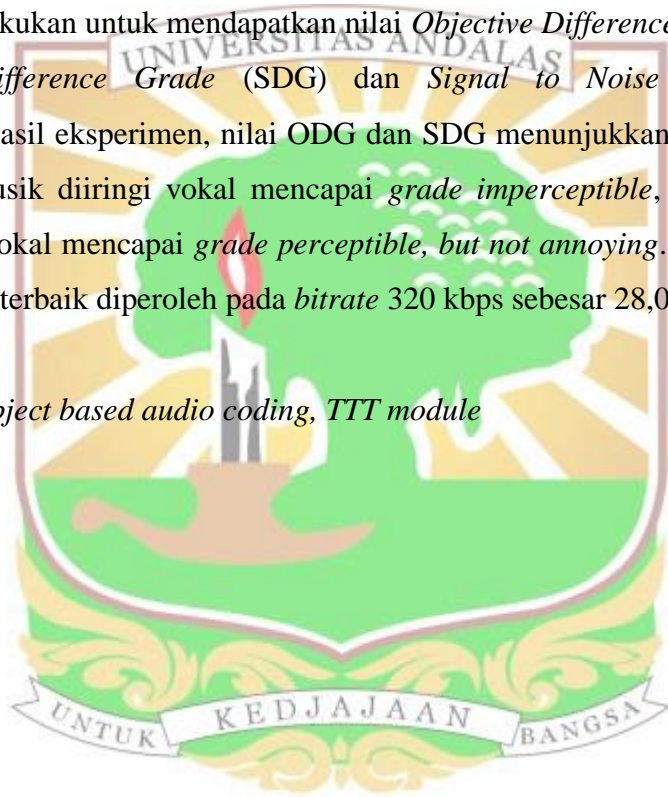


ABSTRAK

Object based audio coding merupakan teknik kompresi sinyal *audio* berbasis objek yang memberi kesempatan kepada pengguna untuk mengatur *listening experience*. Pada penelitian ini dilakukan perancangan *object based audio coding* menggunakan *TTT module* untuk aplikasi *audio* karaoke dengan musik dan vokal sebagai objek *audio*. Pada pengujian kualitas *audio*, *level* objek divariasikan sehingga menghasilkan *audio* seperti pada karaoke, diantaranya saat musik diiringi vokal, musik tanpa vokal dan saat *level* objek diturunkan. Pengujian dilakukan untuk mendapatkan nilai *Objective Difference Grade* (ODG), *Subjective Difference Grade* (SDG) dan *Signal to Noise Ratio* (SNR). Berdasarkan hasil eksperimen, nilai ODG dan SDG menunjukkan bahwa kualitas *audio* saat musik diiringi vokal mencapai *grade imperceptible*, sedangkan saat musik tanpa vokal mencapai *grade perceptible, but not annoying*. Selain itu, nilai SNR rata-rata terbaik diperoleh pada *bitrate* 320 kbps sebesar 28,07 dB.

Kata kunci: object based audio coding, TTT module



ABSTRACT

Object-based audio coding is an object-based audio compression technique that gives an opportunity to user to adjust the listening experience. In this research, the design of object-based audio coding using TTT module for karaoke applications with music and vocal as audio object. In testing of audio quality, object level is varied to produce audio such as karaoke, including when music with vocal, music without vocal and when the object level is lowered. Testing is done to get the value of Objective Difference Grade (ODG), the Subjective Difference Grade (SDG) and Signal to Noise Ratio (SNR). Based on the results of the experiment, the value of ODG and SDG indicate that the audio quality when music with vocal reached imperceptible grade, while when the music without vocal reached perceptible, but not annoying grade. In addition, the average value of SNR is obtained best at 320 kbps bitrate is 28.07 dB.

Keywords: object based audio coding, TTT module

