ABSTRACT

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Talempong is a percussion instruments made of brass metal originating from Minangkabau of West Sumatra. To play talempong and other musical instuments in a large room, need a microphone taht is connected to a sound system. However , the sound produced has a small gain and a lot of noise. So that the system needed to increase gain and reduce noise recorded by the microphone.

In this final project have been built in a software system that can reduce noise and increasing the gain at talempong musical instruments by using the method of wavelet noise reduction and method of gain adjustment with the equalizer. Furthermore, added a system capable of analyzing the quality of the SNR (Signal to Noise Ratio) at the talempong audio system. To test the quality of system, also perfomed the analysis using the method of MOS (Mean Opinion Score), where 30 respondents give an assesment of system perfomance.

In this system obtained a maximum SNR output at the filter haar, with a value of 20.2436 dB of input SNR of 10 dB. While the tambourine noise is the noise that is reduced well as it gets the maximum output SNR, the input SNR 0 dB, 6 dB, 8 dB and 10 dB. While MOS the best filter on voice noise is symlet, the best filter on stick noise is Coiflet, and the best filter on the tambourine noise are coiflet and daubechies. For the most noise is reduced by the MOS is the tambourine noise, at all tested wavelet filters.

Keywords: talempong, wavelet noise reduction, gain adjustment, SNR