

## ABSTRACT

Reverberation is a phenomenon of the original voice signal mixing with the reflected signal. This phenomenon is caused by the room transfer function which can cause voice signal reflections delayed. Unlike the noise is additive, the signal due reverberation stubborn nature reverberation signal correlated with the original signal. Therefore, the removal method is not the same reverberation with regular noise elimination method. So this need a separate method to handle this problem is dereverberation.

Dereverberation is reverberation minimization signal method. Dereverberation that will be implemented in this final task is a method of envelope filtering based on cepstral modifications. The input that implemented in this final task is a reverberation single piano music signal without noise. The expected output is decreasing in the signal reverberation.

For getting reverberated signal we must do convolution between original signal with *room impulse response*. After that, that will be dereverberated. After dereverberation has been done in this final assignment, we can conclude that the envelope filtering method based on cepstral is good enough for single music piano signal dereverberation. We can conclude that thing because of the good value MSE (minimum MSE in small room that has value 0.001652), RT, and M.O.S of dereverberated signal.

Keywords: signal, reverberation, envelope filtering, cepstral

