

## **ABSTRACT**

*The problems in teleconferencing systems and voice recording systems are often experienced and disturbing perception of the listener to the information conveyed. In each room, what we heard from a sound source not only consists of direct sound, but also there is the sound generated by the reverberation effect. Reverberation is a real human voice signal degradation with the resulting signal reflections in an enclosed space. Reverberation disturbance is very disturbing that we need a system that can reduce the reverberation effects.*

*Reverberation signal difficult to remove because the reverberation signal together with the original signal. Dereverberasi is a method that can be used to minimize the impact of reverberation that occurs in human voice signals. This is so that the quality of voice signal to be more easily understood. In this final task is to analyze the signal reverberation will use the spectral correlation method based on Wavelet Transform, the two signals are recorded through the microphones at different positions. Wavelet Transform has the ability to divide the signal into two parts, namely low-pass and high-pass. Signals are located in areas of low-pass basically contain more reverberation than the signal in areas of high-pass. Wavelet spectral correction will be implemented by giving the damping coefficient is proportional to the correlation of two wavelets to reduce the impact of reverberation through the gain obtained by using the coherence of the two incoming signals from two different microphones.*

*The input signal that used in this Final Project is the human voice signals. The system has been able to reduce the impact of reverberation so that the sound can be heard more clearly and to work optimally in a small room with a maximum value of MSE improvement in addressing women at 12.13%, and at using Daubechies db8 order with a value increase of the maximum MSE when the women sing amounted to 40.22% and when using a gain  $\text{gain} = \frac{MSC}{1+MSC}$  with a value of 40.22%.*

*Key words: wavelet transform, correlation, reverberation, dereverberasi, the human voice signal*