

ABSTRACT

Phase of respiration is the process of inspiration and expiration, in other words oxygen and out carbon dioxide from the body. During inspiration and expiration, sometimes a faint voice audible. Phase of respiration can be one indication of a person's health. Good respiration if it is at a certain rate, which for adults 12-20 respiration per minute.

This final phase of respiration is automatically detected in humans from the sound that comes out during the phase of respiration. Using an electronic stethoscope as a means of acquisition of respiration to be connected to PC soundcard and MATLAB software as a data processor. Placed on the detection of certain parts in the trachea.

Respiration sounds recorded first. There should be a pause between the inspiratory and expiratory sounds so easy to be detected later. Using the FFT method of respiration phase noise is then processed and divided or cut in segments to be identified segments is an inspiration or expiration.

From the segments, through the FFT again and put in the envelope detection (envelope detection), in order to smoother spectrum (differentiation) of the envelope detection. The next phase of inspiration or expiration will be detected by the system. Differentiation observed in the spectral range 3500-4500Hz was in the range of frequencies that became the distinguishing feature of inspiration to expiration.

Key word : Respiration, inspiration, ekspiration, segmen, window, FFT