

## **ABSTRACT**

Respiration is a very important in for living human. When the mechanism of respiration take place, between outside the rib cage muscles to contract, ribs upward and expand the chest cavity resulting in air pressure in a small chest so that air into the body. Every human has being the number of different respiration, influenced by factors of age, activity and body.

Average number of respiration per minute can be calculated through changes in the contraction of the rib measured using pressure sensors (piezoelectric). Sensor output voltage level around 700-900 mVolt so it needs to be strengthened 4 times. Voltage level that has been found to be linked to a PC via ports on the soundcard microfon. At the sound card changes the analog signal to digital. Furthermore, the computer will be presenting the respiration variability signal using Visual Basic 6.0.

This tool is very sensitive to the patient's body movements so that when using this tool the patient's condition without body movement. Measurements conducted by gluing the sensor in the right chest. As a comparison tool accuracy has been calculated manually respiration. So we get an average accuracy of tool 96,09%.

Key words: respiration rate, piezoelectric sensors, Soundcard and Visual Basic 6.0