

ABSTRACT

Medical environment can influence the healthy condition of the people. The good medical instrument can make the quality of health service better. Along with development of information and communication technology, much of medical instrument are appears. One of medical instrument which is used to help in giving a health service is phonocardiograph (PCG). This tool is an instrument used for recording the sounds connected with the action of the heart in a human body.

This Final project reporting the result of realization of PCG system which is using a computer. This system consist of stethoscope, microphone, amplifier, filter, and a set of computer system. The parameter which is analyzed in this system is noise reduction which will be analyzed in qualitative and quantitative forms. The ratio of signal to noise is used to make an analysis quantitative. Furthermore, the method of MOS (Mean Opinion Score) is used to make an analysis qualitative. In MOS method, heart sound from the system heard by 30 respondents whose exist in medical environment.

The result of quantitative analysis shows that this PCG system with using active filter order 8 and frequency cut-off 2000 Hz have a value of S/N is 19.323 dB. Meanwhile, the qualitative analysis shows that this system is good with the mean value of MOS is 3,73. Refer to the result of analysis, this system is suitable for being an object of medical learning and engineering.

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