Abstract

Heart sound is a very weak acoustic signal, very susceptible to external acoustic signals and electrical disturbances, especially friction caused by the subject's breathing or body movements. The heart sound signal will be recorded in a phonocardiogram (PCG) and produce heart sounds, noise, and extra sounds. The purpose of this work is to denoise the signal from the heart sounds recorded on the PCG and determine valvular heart disease (VHD). Several methods have been proposed for denoising heart sound signals, both in the time domain and in the frequency domain. Most of these methods still have problems for denoising results. In this paper, the techniques used to denoise the heart sound signal are Discrete Wavelet Transform (DWT), Short Term Fourier Transform (STFT), and Low-Pass filter.