

ABSTRACT

At this final assignment, the writer do research with the approach used two methods to detect the QRS complex Wavelet and the Pan-Tompkins, entitled "Method Combination Pan-Tompkins algorithm and Wavelet for QRS Detection in ECG Signal". Based on previous research, both methods produce good performance when run individually, but these methods have an error in certain circumstances^[3]. Therefore, authors do a combination of both methods to obtain a benefit from the advantages of each method algorithm. The data used in this final task is to record data. Pan-Tompkins algorithm realized within a few blocks, namely blocks Bandpass filters, blocks differentiation, squaring blocks Operation, block integration, the last block of Thresholding. While Wavelet realized using Daubechies2 (DB2), by Threshold determination using Hamming Window. Wavelet algorithm and the Pan-Tompkins run simultaneously to produce the end result of a block diagram of each system of Threshold method. This threshold indicate whether or not detected QRS complex. Testing system that has been created with input four different data record is: Atrial Fibrillation (AF), A117, Normal Sinus Rhythm (NSR), and Congestive Heart Failure (CHF). Accuracy of the output obtained for Wavelet method 79,50%, the Pan-Tompkins 44,71% and the combination of 100%. So from the analysis of the output QRS complex detection is best to use a combination of both methods the algorithm

Keyword: Pan-Tompkins, Wavelet, QRS kompleks, *Threshold*