



Name : Miss Nunnapat Kosiriwalanon  
Thesis Title : Frequency Domain Analysis of Electrocardiogram  
Major Field : Medical Instrumentation  
King Mongkut's Institute of Technology North Bangkok  
Thesis Advisors : Assistant Professor Weerasak Ussawawongaraya  
Assistant Professor Surapun Yimman  
Associate Professor Achara Techaritpitak  
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### Abstract

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Electrocardiogram is a signal which indicates the condition of heart. A surface ECG recorder will interpret electrocardiogram in time domain.

The research presents frequency domain analysis of electrocardiogram by 256 points fast Fourier transform with a Matlab program. Patients with Right bundle branch block and Left ventricular hypertrophy were classified as the study group were studied and then they were compared with the control group (the normal electrocardiograms). Each group has 30 subjects which were selected by the quota sampling technique.

The result of this research at the confidence level of 95% (t-statistic) showed that the Right bundle branch block condition in lead II and  $V_2$  gave the difference in amplitude significantly between two groups at the positions of frequencies of the QRS complexes in chest lead. Patients with Left ventricular hypertrophy in Unipolar and Bipolar limb leads were not much different from the control group but they were very much different in the chest lead ( $V_1$ ,  $V_5$  and  $V_6$ ). The positions of frequencies of the T waves and QRS complexes exhibited the difference in amplitude in the chest lead.

(Total 243 pages)



Chairperson