

Dedication

To my Parent

Give me my ways in the life

To my Sisters

Whom support me

To my Friends

&

All Researchers

With infinitive love

Maha

Acknowledgement

All thanks to Allah for the blessings he gave us....

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List of Abbreviations

ECG	Electrocardiogram
RA	Right Atrium
RV	Right Ventricle
LA	Left Atrium
LV	Left Ventricle
SA	Sino-Atrial node
AV	Atrio-Ventricular node
LA	Left Arm
RA	Right Arm
LL	Left Leg
aVR	Augmented Vector Right
aVL	Augmented Vector Left
aVF	Augmented Vector Foot
WCT	Wilson's central terminal
Op-Amp	Operation Amplifier
NILabView	National Instruments Laboratory Virtual Instrumentation Engineering Workbench
DAQ	Data Acquisition Device
AI	Analog Inputs
AO	Analog Output
DIO	Digital Input/output
ADC	Analog-to-Digital Converter
PC	personal computer
EEG	Electroencephalogram
MRI	Magnetic Resonance Imaging

Abstract

This project aims to design ECG using LabView program in personal computer to get rid of the problems of ordinary device and its components.

The Electrocardiogram Device gets the heart signal, where gives very important information about the heart muscle condition and small different in the heart signal are the basic of diagnosis of heart diseases.

The Proposed System was using NI 6008 DAQ to bring the signal to a personal computer, and LabView software on the computer for signal processing and display.

The Results obtained according to the standard ECG signal were acceptable.

المستخلص

يهدف هذا المشروع الى تصميم جهاز تخطيط القلب بإستخدام برنامج LabView فى جهاز الحاسوب الشخصى للتخلص من مشكلات الجهاز العادى ومكوناته.

يعطى جهاز تخطيط القلب معلومات مهمة تبين نشاطات عضلة القلب، والاختلافات الصغيرة فى الاشارات الملتقطة من القلب، والتي على أساسها يتم تشخيص أمراض القلب المختلفة، هذا ما أدى الى التطور المستمر فى عمليات إلتقاط ومعالجة إشارة القلب.

تم تصميم هذا النظام باستخدام NI 6008 DAQ لجلب إشارة القلب الى جهاز الحاسوب الشخصى، ثم برنامج LabView على الحاسوب لمعالجة وعرض الإشارة عليه.

النتائج المتحصل عليه كانت مقبولة مقارنة بالاشارة المعيارية.