بسم الله الرحمن الرحيم

إن الذين ءامنوا و عملوا الصالحات إنا لا نضيع أجر من أحسن عملاً

صدق الله العظيم

سورة الكهف آية 30

DEDICATION

Once Again, To Wonderful Parents, Teachers & All,
With Love.

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I want to express my appreciation to Dr.Bala Aljak, who guide me, reviewed the manuscript & provided many valuable suggestions. A special note of appreciation goes to prof. Babu P.G. who offered constructive suggestions.

تجـــريـد

يعتبر هذا البحث مدخل لتقنية معالجة الإشارات الحيوية المرسلة من مسافة بعيدة عن طريق إشارة الراديو.حيث تربط هذه التقنية الكائن الحي (المريض - الحيوان-.....)

و وحدة معالجة الإشارة بوصلة لاسلكية. باستخدام جهاز إرسال راديو يكون قرب المريض حيث تنتشر الإشارة الحيوية ضمن مدى محدد,يستطيع بذلك الباحث أو الدكتور استقبالها ومتابعة مريضه أو إجراء بحوثه عن الحيوان و هو في وضعه الحركي الطبيعي.و تمنح هذه التقنية كذلك أفضل طريقة لعزل المريض عن الأجهزة الطبية و خطوط القدرة.

العديد من الأجهزة الحيوية الطبية تعمل بهذه التقنية.في هذا المشروع استخدم جهاز تخطيط القلب.

ABSTRACT

This project introduces a technique that is processed by radiotelemetry using biopotential and other signals. A technique which provides a wireless link between the biological subjects (patient-animals…. etc.) and the majority of the signal-processing components. A miniature

radio transmitter attached to the patient is used broadcast the information over a limited range. Clinicians or doctors can monitor a patient or conduct a research on animal while they have full mobility. This technique also provides the best method of isolating the patient from the recording equipment and power lines.

Many types of radiotelemetry systems are used in biomedical instrumentation. In this project we use the Electrocardiograph (ECG).

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LIST OF ABRIAVIATION

(**A_v**)	Gain
(**A_{COM}**)	Common -Mode Gain
(**ADC**)	Analog To Digital Converter
(**AV**)	Atrio-Ventriclar Node
(**Ca++**)	Calcium
(**CRO**)	Cathode Ray Oscilloscope
(**CMRR**)	Common - Mode Rejection Ratio
(**DAQ**)	Data Acquisition
(**ECG**)	Electrocardiograph.
(**EOC**)	End Of Conversion
(**FM**)	Frequency Modulation
(**FRC**)	Flexible Ribbon Cable
(**IF**)	Intermediate Frequency
(**K+**)	Potassium
(**LED**)	Light Emitted Diode
(**Na+**)	Sodium
(**Op Amp**)	Operational Amplifier
(**PLL**)	Phase Locked Loop
(**PM**)	Phase Modulation
(**PPI**)	Parallel Port Interface
(**RF**)	Radiofrequency
(**SA**)	Sino-Atrial Node
(**SC**)	Start-Conversion
(**VCO**)	Voltage- Controlled Oscillators