BASAWARAJ SIDDAMALLAPPA BILAMGE
Dept. of Computer Science Govt. First Grade Collge Afzalpur, Gulbarga
Email: bbilamge@yahoo.com. M: 9886129101

EMBADDED CONTROLER FOR WIRE LESS INFORMING ANIMAL HEALTH

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Abstract:

Today we know that now how much the technology is going fast it can be or cannot be measurable, but in the world human being is great. Now days the technology of medicine will in very high like any problems happens to him he will immediately receive the best treatment & he cure very short time but we can think about the animals there are so many in the world without giving treatment they have been loosing their life with more pain why we not take care of all the animals in the world they have also life na?

It used to maintain error of the animal & its staying, as well as temperature of the body, its sound , it is eating food or not and its condition its legs problem , stomach problem, foot & mouth diseases, and other harmful disises and also animal location. can be find using this module.. if it the animal have any problem , directly information goes to the doctor according to him   further treatment will be given & the animal is safe.

Introduction

It is possible to detect the onset of a animal treatment . A device intends to benefit those at some pain or at high risk and it is also possible for already receiving some form of treatment. By sensing the heart beat rate, The animal will only be required to carry a what a developed system with GPS technology. When the implant detects a any of its problem. it will alert the microcontroller which in turn will automatically send the help sms and provide the animal location.

Methodology:

To work with the wire less informing animal health condition ,I have to make train the embedded involving in the network. That is, one of the interesting characteristics of GPS technology is the ability to learn. The training shows so many parallel to the intellectual development of animal growth and development that it may seem that we have achieved a fundamental understanding of this process.

Objective of work:

The main purpose of this work is to save the life of a animal when it is under its health in difficult condition or field & to intimate the doctors automatically before the disease takes place to animals by the way of indications like body temperature (decreases) , some what weight loss, body will become slightly vibrating and respiration become suddenly low and high And body will become wet, creating new sound from its mouth, enable to move, bleeding of blood or any other animal can attacking it , some time it can be dipped in mud this can be sensed by sensors & signal goes to the micro controller & it executes then the sms goes to Doctors and also its location through network or when the animal under the problem the device will automatically call to nearest doctors (the Doctors mobile number is already stored in doctors sim) The current system is confined to minimum distance it can be eliminated . To provide the internet related services to find the location of animal & transfer of messages to doctors immediately. It improves the delays in receiving medical treatment.

It is to detect the diseases or pain of the animal, But it will not come to the right time or else the animal should be in the out of Hospital or not near to doctors. At the that time of no will measure the animal condition. So that to detect this is to use advanced technology to save the animal . Most of the animal will suffer from this without knowing their conditions by doctors. .so what I provide is called the detection as well as indication of animals health and its body condition. and it is wire less It is possible to save the life of animal.

The goal is to provide early detection of animal problem, so that the animal will be given

medical attention within the first few critical hours, thus greatly improving the   chances of survival.

Implementation:

A device intends to benefit those at high risk and already receiving some form of surgical treatment. By implanting a chip into the body, the animal need not worry about device operation. We can keep the device at the neck of the animal, will only be required to carry a cell phone equipped with Bluetooth and GPS technology. When the implant detects the animal's any harm ful conditions , it will alert the cell phone which in turn will automatically call for help and provide the animal location and what form of animal now it is. The goal is to provide early heart attack detection so that the patient will be given medical attention within the first few critical hours, thus greatly improving his or her chances of survival.

Product Features
- Continuous monitoring of animal electrical activity
- Rapid detection of its pain
- Automatic call for medical assistance
- Identifies the animal location to sms and call to doctors.

Product Benefits
- Provides early detection of diseases of animal
- Eliminates delays in receiving medical treatment
- Improves healthcare services to at risk time.
- Saves lives and improves quality of living

Descriptions of design

Biosensors – Disposable Ag-AgCl ECG round pad electrodes are to be placed on each wrist of the patient. The electrodes are imbedded in pre-soaked electrolyte foam with double-sided peel-off adhesive tape for attachment.   The foam provides good electrical contact with the skin and reduces motion artifacts. The electrodes "read" the heart's electrical activity and outputs to the circuitry.

Analog Circuitry –
The circuitry will consist of two buffers, a differential amplifier, and a band-pass filter. Each electrode will connect to a buffer which is needed to match the high impedance of skin to the low impedance differential amplifier. The differential amplifier then takes the difference between the data collected by the electrodes and provides a gain before outputting to the band-pass filter. The band-

pass filter is needed to eliminate noise and provides additional gain. Finally, the ECG waveform is fed into the A/D Converter

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A/D Converter –
The analog to digital converter will convert the analog data from the biosensors to digitally sampled data points, while allowing enough resolution and sampling rate for our purpose of detecting a heart attack. The data points will be sent to the microcontroller and be sampled at regular intervals.

Microcontroller –
The microcontroller is a BASIC Stamp 2 which will run a real time program to constantly monitor the output of the A/D Converter, comparing current data samples against stored samples. It will include an algorithm to process both the amplitude and frequency of the heart beat, to cover as many possible cases of a heart attack as reliably as possible. Once a heart attack is detected and confirmed, relevant data such as the time of occurrence will be collected, and a signal is sent to the Bluetooth Module to initiate the emergency dial up sequence via the cell phone.

Bluetooth Module –
The Bluetooth module is an Embedded Blue Transceiver App Mod which conforms to v1.1 of the   Bluetooth   standard   and   provides

connectivity for the BASIC Stamp. Bluetooth is chosen as the method of choice for wireless connectivity between the sensor package and the cell phone, because the connection can be treated as a low power wireless serial link, and Bluetooth is an emerging standard for personal area networks.

Cell Phone –.

This phone meets the requirements for having both Bluetooth and GPS built in. A Java applet application will be written to establish the link between the sensor package and the phone and to pass GPS and subscriber information to emergency personnel.

GPS Unit –

GPS is becoming a standard feature of newer production model cell phones in order to become compliant with FCC regulations. Work may include enabling a GPS unit to feed data to the cell phone if time permits.

Research Performance

The system must be able to reliably detect heart attacks. The analog circuit requires a band-pass filter with a lower cutoff frequency of 0.5 Hz, an upper cutoff frequency of 150 Hz, and a mid-band frequency of 20 Hz. Emergency personnel receive enough calls as it is, and flooding the system with additional false alarms is undesirable.

Block Diagram:
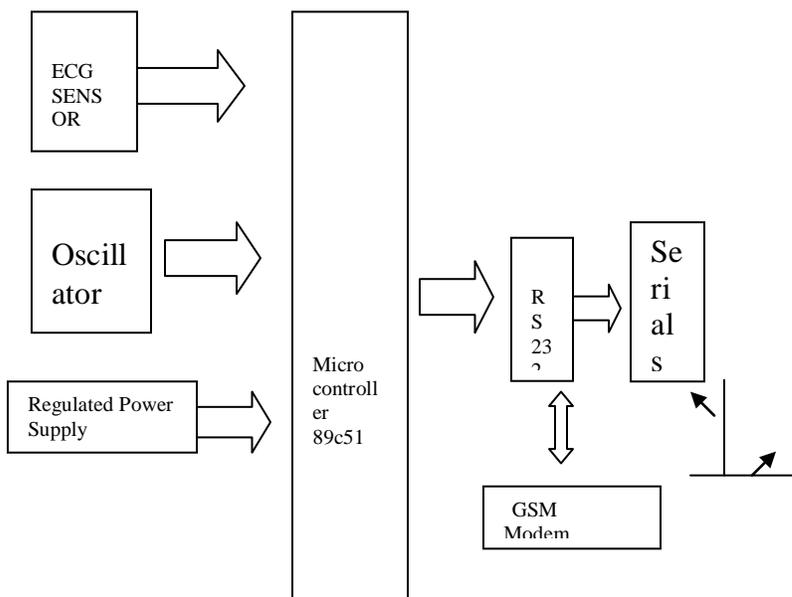
At the same time, the system cannot afford to miss detection of a heart attack. An error rate of less than 1% is desired. As to hardware, it must be portable, low-power, and durable. In addition, it must be able to sample at a rate of 400 Hz, the resolution required the pick up the QRS peak. Finally, communications between the sensor package and phone should be dependable. Assuming the phone is in range, it should be capable of accepting a signal from the sensor at all times

The band-pass filter will be isolated and frequency response determined. An input signal from a function generator will sweep over a range of frequencies while output magnitudes noted. To determine the common mode gain of the differential amplifier, both input signals are provided by the function generator and output voltage recorded. To find the common mode rejection, one input signal will be grounded while the other once again provided by the same function generator signal. The overall gain of the ECG amplifier will be found by grounding one input to a buffer and providing a sine wave of 0.1Vpp at 20Hz into the other buffer while taking note of the output magnitude. Finally, the ECG amplifier will be tested on real ECG waveforms by placing an electrode on each wrist of a subject and connecting to the buffer inputs.

The microcontroller should be able to run the algorithm using simulated data, the phone should be able to place a call. Put together, data simulating a heart attack will be fed into the system, and it should be able to detect the occurrence, and have the phone call for help.This unit consists of heart beat counter and a Mic connected to it. This unit will sense the heart beating of the human and the signal will be amplified and these signals are counted by a counter. These counted signals are sent to the micro controller where these counts are compared with the standard reference value if it has exceeded the standard value then the micro controller receive the particular location and sends an SMS to the desired number and then it also gives buzzer indication so that persons nearby the unit can attend the patient immediately.

Informing figures:
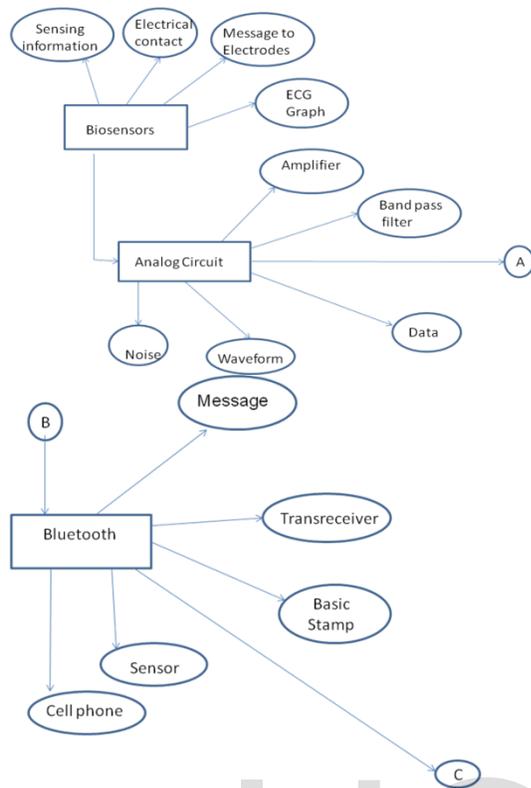
Conclusion: the embedded software development tools can not make assumption about the target platform. The user has to provide some details of the system to the tools through explicit statements or instructions once the data has given to the tools these tools generate expected outputs on the computer system itself.

The main purpose of this work is to save the life of a animal when it is under facing any difficulties in field & to intimate the doctors before the pain takes place to animals by the way of animal body temperature (decreases) , some what weight loss, body will become slightly vibrating. And body will become wet this can be sensed by sensors & signal goes to the micro controller & it executes then the sms goes to Doctors. or when the animal under the problem the device will automatically call to nearest doctors (the Doctors mobile number is already stored in sim) The current system is confined to minimum distance it can be eliminated . To provide the internet related services to find the location of animals & transfer of messages . It improves the delays in receiving medical treatment.

By using this module we can understand what type of pain they will facing we know that they have the higher capacity than human being but life is important for every body. Why should not be we given as better than best treatment as like humans.
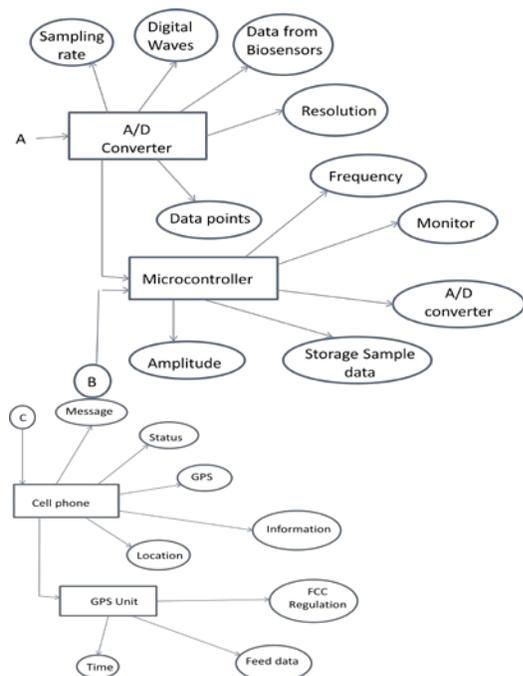
Block Diagram
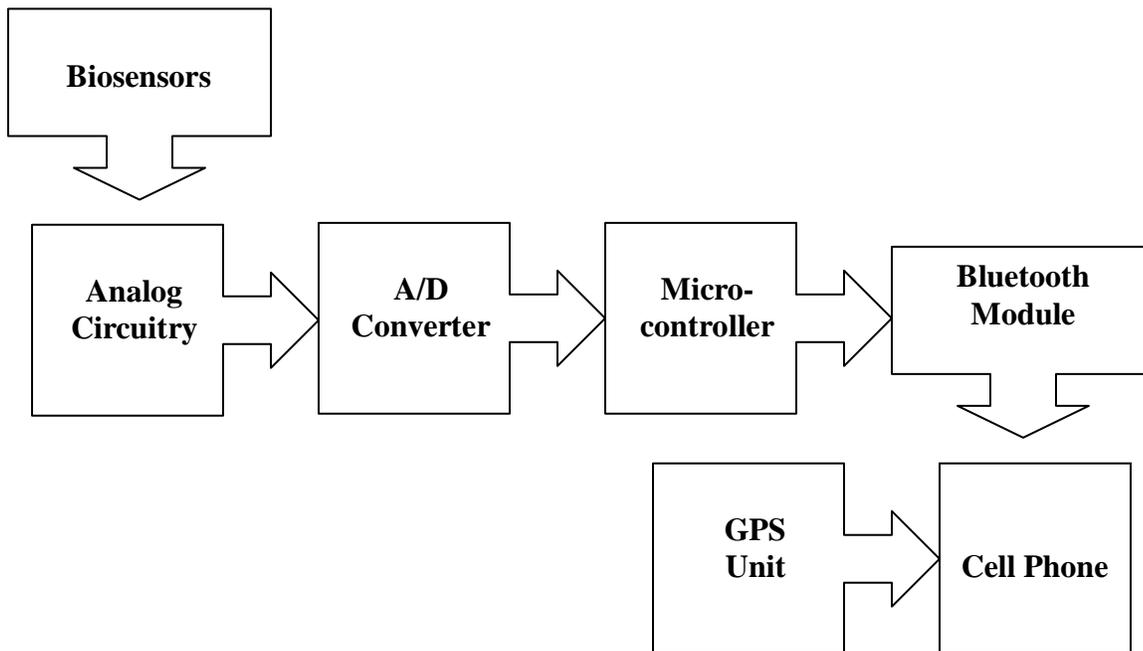
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