TEAM INFORMATION

Team Name/Project Title: REBs-Remote Emergency Biometric system

Department: Electrical Engineering

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PROJECT INFORMATION

Description:

REBs is a mobile biomonitoring system that collects and transfer vital-signs data wirelessly, enables remote monitoring for a large number of patients in emergency scenarios.

Abstract:

Remote Emergency Biomonitoring System (REBS) is a wireless vital-sign monitoring device combined with a scalable software interface that is designed to meet and exceed the current challenges of remote vital sampling and collection methods. Using a non-intrusive lightweight vest, wristband and the ubiquity of a portable wireless network, REBS can provide a cost effective way to monitor a large number of patients in emergency scenarios. In such scenarios, REBS is a viable option for an emergency triage system, where a large number of victims with different levels of medical needs can be monitored and addressed in a timely manner. The REBS system can also be used to solve issues in current outpatient, however, most current health monitoring equipment is often expensive to rent or too large to be comfortable to the individual wearing it. Overall, the REBS design goals are to leverage today's microprocessor System-on-Chip (SoC) systems to demonstrate how a monitoring device can be low-cost, portable, and scalable to a number of sensors. As such the REBS design will integrate a pulse-rate unit, accelerometer, and a full heart monitor (including a blood pressure monitor and an ECG unit), for less than the cost of available ECG systems.