PROJECT TITLE RESCUE SYSTEM WITH HELPER MONITORING IN PARTICULAR FOR DISABLED AND ELDERLY PERSONS BY THEIR HAND GESTURES

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BATCH: 2011-2015

WORK PLACE; VEL TECH MULTITECH DR RANGARAJAN DR SAKUNTHALA ENGINEERING COLLEGE

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Method and system for human action detections with acceleration sensors and surface myographic sensors (SEMG) signals for gesture recognition for the proposed rescue system for disabled and elderly persons who need help in evacuation from disaster areas is proposed. Not only vital signs, blood pressure, heart beat, pulse rate, body temperature, bless and consciousness but also, the location and attitude of the persons, mainly hand gestures have to be monitored for the proposed rescue system. The attitude can be measured with acceleration sensors. In particular, it is better to discriminate the attitudes, sitting, standing up and lying down. Also action speed has to be detected. Experimental results show that these attitude monitoring can be done with acceleration sensors. This prototype includes 19 different gestures.

PROJECT TITLE SASD (SLEEP ALERT SYSTEM DURING DRIVING).
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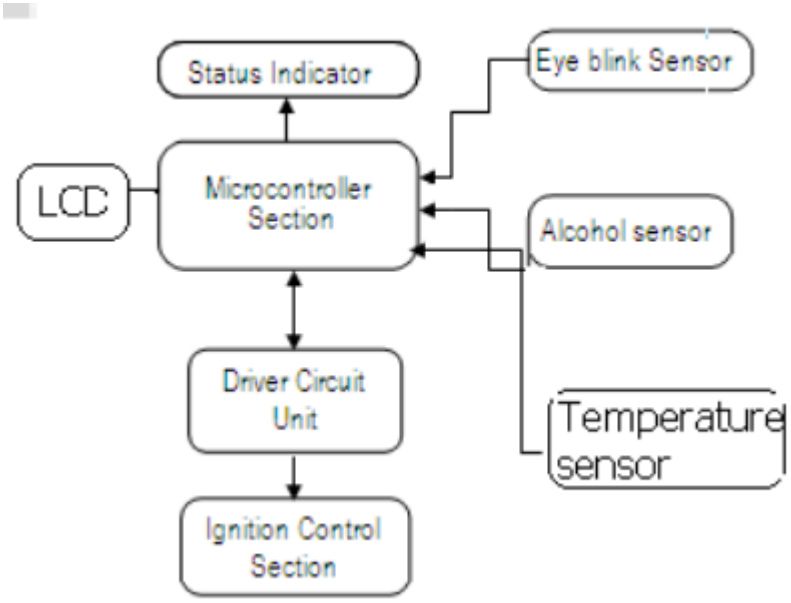
The primary purpose of the Drowsy Driver Detector is to develop a system that can reduce the number of accidents from sleep driving of vehicle. With our two monitoring steps, we can provide a more accurate detection. For the detecting stage, the eye blink sensor always monitor the eye blink moment. It continuously monitor eye blink. If the monitoring is over, the collected data will be transmitted to a microcontroller, and the microcontroller digitizes the analog data. If the warning feedback system is triggered, the microcontroller makes a decision which alert needs to be activated. The second application of this paper is to detect the alcohol content or any leakage of gas from the vehicle, once it deduct such sensation the LED light glows indicating emergency and this project also deals with temperature sensors, in case of any fire inside the vehicle the sensor senses and stops the engine. For the alert systems, we have a beeper device. The project code is developed in C language and then converted to hex code which is readable to the microcontroller.

Block Diagram



PROJECT TITLE RFID TECHNOLOGY FOR TRACKING AND POSITIONING OF PERSON'S HOSPITAL

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To create standards-based secure access to patient's personal data and medical records by using RFID tags and Web Service with the help of hardware kit. This system uses Web service interfaces to support standard Electronic Health Records for patient record interoperability. Customers can view and update their personal medical information via the web site, which seamlessly sync with one another. Because the system is built on Web services, it is easy to update, adapt and grow. Trying to identify an unconscious patient or patient who is unable to communicate can lead to delays in treatment. With this system emergency departments improve efficiency while enhancing the level of patient care. This project uses the hardware kit to get the patient id. The hardware kit will send the patient id to the serial port of the system. Hence tracking and monitoring of patients, their case sheets and medical equipments can be efficiently carried out. However, the reality of RFID adoption is far behind earlier expectation. This study reviews the literature on RFID applications in healthcare based on a formal research framework. We aim to identify current opportunities, potential benefits and adoption barriers. Our study shows that most care providers indicated that RFID to be functional and useful in asset tracking and patient identification. Major barriers to RFID adoption in healthcare include prohibitive costs, technological limitations, and privacy concerns. Although RFID offers healthcare practitioners advantages to enhance clinical practice, better designed RFID systems are needed to increase acceptance and proper use of RFID in healthcare.

PROJECT TITLE: THORACIC COMPRESSION BASED LOW COST AUTOMATED CPR FITTED IN PATIENT /AMBULANCE STRETCHER
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The use of rapid response systems for care of the deteriorating patient and prevention of in-hospital cardiac arrest is specifically addressed in Prevention of cardiac arrest and decisions about CPR. After in-hospital cardiac arrest the division between basic life support (BLS) and advanced life support (ALS) is arbitrary; in practice, the resuscitation process is a continuum. For all in-hospital cardiac arrests, ensure that:

- cardiorespiratory arrest is recognised immediately
- help is summoned using a standard telephone number
- CPR is started immediately and, if indicated, defibrillation is attempted as soon as possible (within 3 min).

All in-hospital cardiac arrests should be reviewed as part of an audit and quality improvement process. Details should be recorded after each event. The National Cardiac Arrest Audit (NCAA) enables hospitals to collect standardised data, and monitor changes in cardiac arrest activity.

The length of the pre-shock pause (i.e. the interval between stopping chest compressions and delivering a shock) is inversely related to the chance of successful defibrillation. Every five-second

increase in the duration of the pre-shock pause almost halves the chance of successful defibrillation, therefore it is critical to minimise the pause.[45-48] The traditional lengthy 'top-to-toe' safety check (e.g. "head, middle, bottom, self, oxygen away") performed after the defibrillator has charged and before shock delivery, will therefore diminish significantly the chances of successful defibrillation. The pre-shock pause can be substantially reduced by continuing compressions during charging of the defibrillator and by having an efficient team coordinated by a leader who communicates effectively. The safety check to avoid rescuer contact with the patient at the moment of defibrillation should be undertaken rapidly but efficiently. Rescuers must not compromise on safety. Roles should be agreed by the team members before attending a cardiac arrest. Always plan actions before stopping chest compressions. If there are delays caused by difficulties in rhythm analysis or if individuals are still in contact with the patient as the shock is about to be delivered, restart chest compressions whilst plans are made to decide what to do when compressions are next stopped. Rescuers should wear gloves during CPR attempts but do not delay starting CPR if gloves are not immediately available.

Although there are no data supporting a three-shock strategy, it is unlikely that chest compressions will improve the already very high chance of ROSC when defibrillation occurs immediately after onset of VF/pVT. In circumstances where rapid early defibrillation is feasible (e.g. cardiac catheter laboratory, in monitored cardiac surgery patients, patients who have a witnessed and monitored VF/VT and are already connected to a defibrillator) three rapid defibrillation attempts in quick succession, may achieve ROSC without the need for chest compressions.