

GROUP 60 PROJECT PROPOSAL

PROJECT TITLE	ASAP-Caller			
Group Members	Name	NSBM ID	PLY ID	Group Position
	R.M.R.M.L.Rathnayaka	19365	10747919	Programming Leader (GL)
	R.M.H.C. Rathnayake	19412	10747887	Technical leader
	R.M.L.P.Sandaruwan	19491	10747909	Testing and Maintenance Leader
	R.B.I.K.Subasingha	19270	10747883	Planning leader
	Y.M.S.K.Y.Bandara	19369	10749057	Quality Leader

PROJECT DESCRIPTION

When it comes to these days, we heard several Accidents in one day. From Those Accidents, 90% of Accidents are vehicle accidents. Present-day with improvements in technology there are so many options in a vehicle to avoid an accident before it happened. But we all know there is no change when it comes to the number of accidents. In this project, we focused not on avoiding accidents, we focused on what happened after someone faced an accident. When it comes to this kind of incident, the process begins few seconds after the accident according to the driver's and passengers' damages, that can be serious and may be unconscious. If that happened, they can't inform a hospital or any emergency services. This situation may end a life. When it comes to this project, we focused on a solution for this kind of accident.

PURPOSE / GOALS

The purpose of this project is to save the lives that lose due to vehicle accidents. This product works as a beacon, if some accident happens this device direct call to emergency line (ex: 119). We are going to develop a black box that direct calls or messages to emergency-line If driver or any passenger didn't confirm the trigger. Trigger activates after a huge shock or vehicle flip.

ASSUMPTIONS

As our assumption vehicle would make a huge shock after an accident or lean over 35⁰(degrees of angle) to any side. We assume that driver can reach his/her mobile phone if alarm is false

APPROACH

We are going to use Raspberry Pi microcomputer, XYZ Axis Accelerometer to sense the angle of the vehicle and Shock & Vibration Sensors to sense Shock

RISK FACTORS

All above sensors are hardware devices, if one sensor broke this system will not work for certain accidents. If vehicle loose power due to something and owner didn't notice that inbuilt battery could be dead in few hours (For this we are going to research to implement this system on a Arduino to minimize the power consumption and cost)

<u>TIMELINE / MILESTONES</u>
Develop a physical prototype according to our assumptions (Hardware)
Develop a code prototype according to our assumptions (Software)
Develop a solid software
Change hardware according to software optimally
Reinforce the hardware
Make a waterproof and rugged case for the Hardware
Researching about mount
Testing on a prototype model (can't do an actual testing due to cost)
Implement finished product to a real vehicle

<u>PROJECT COST AND RESOURCE ESTIMATE</u>	
OVERVIEW	Because of the hardware needs and some physical objects, we need invest to some resources.
NEEDS / INVESTMENT	COST
RaspberryPi	Rs.10000
Other Hardware	Rs.3000
Mount	Rs.500
Software	-
Case	Rs.2000
Total	Rs.15500

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