VEHICLE SPEED MONITORING SYSTEM FOR SAFE RIDING AND MINIMISING ACCIDENT IN PRONE AREA

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Abstract*—We lost our valuable life by making known mistake while driving in hilly area, highways and speed limiting areas. Now a day's peoples are driving very fast so accident are occurring frequently. Currently the survey observes 1, 37,000 people dies in India every year and in that 1 dies every 4 minutes. The main reason for an accident by the national crime roads bureau, law commission of India says that only by over speeding in accident prone areas and violating the road rules. So in order to avoid such kind of accidents and to alert the driver about the speed limits in such kind of places the highway department has already placed the signboards. But sometimes it may not be possible to view the signboards and leads to disastrous road accidents. So here our project contribution is more useful. Here we are making the driver to alert while exceeding the speed limit in that particular area, if they are supposed to relegate the alert given by the alarm, the respective driver has to pay the penalty or else the case will be booked automatically. Our system also generates the penalty receipt and sent to the respective candidate and it can be done by using CDMA technology. The existing technology still does not reduce the number of accidents. Hence there is a need to implement intelligent speed adoption (ISA) in vehicles .we proposes automatic speed control based on RF signal for accident prone area, hospital, and school roads. Where the speed control within the limit is required. The methodology explains that, a various transmitter are placed in those above said zones and the receiver fitted in the vehicle will sense the speed and it can be successfully done.*

***Keywords*—Current survey of road accidents,CDMA technology, Intelligent Speed Adaptation.**

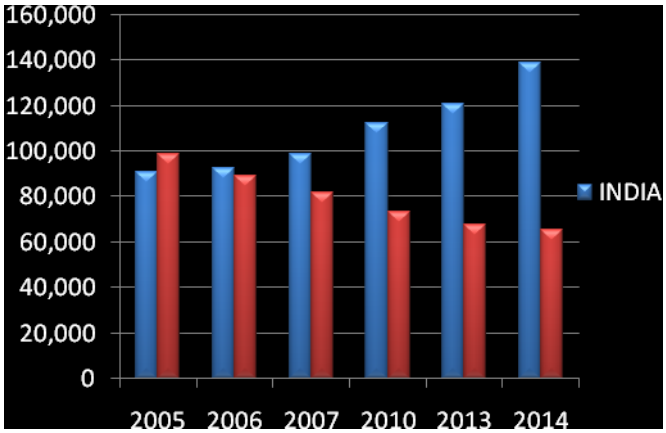
1. INTRODUCTION

In today's fast moving world, as the rate of accidents is increasing day by day, speed of the vehicles should be monitored properly as much as possible. Most of the accident reported in India are due to poor monitoring, over speeding, drowsy driving, drunk and driving and some other natural causes like rainfall etc. for this reason , different speed limit are implemented to reduce accident but unfortunately drivers usually ignore them. So the above stated issues will become worst in the future. Traffic congestion and tidal flow management were recognized as a major problem in some areas and will leads to road accident. Improving the efficiency of the current transportation through the advanced technologies may alleviate traffic congestion and decrease the vehicle crashes. Road accidents can be prevented by adopting measures such as traffic management, improving quality of road infrastructure and proper monitoring

2. SURVEY REPORT

The frequency of traffic collision in India is amongst the highest in the world. A National crime record bureau (NCRB) report that every year 140,000 traffic collision related deaths occurs in India. In New Delhi, the capital of India, the frequency of traffic collision is 40 times higher than the rate in London, the capital of United Kingdom. Traffic collision death increased from 13 per hour in 2009 to 16 per hour in 2014, more than 40 percent causalities are associated with motor cycles and trucks. The most accident occurring time in Indian road is during the peak hours at evening and most predicted month is at the fourth week of July. In 2015, one person dies every 4 minutes in road accident in India, said by NGO 'Indians for road safety'

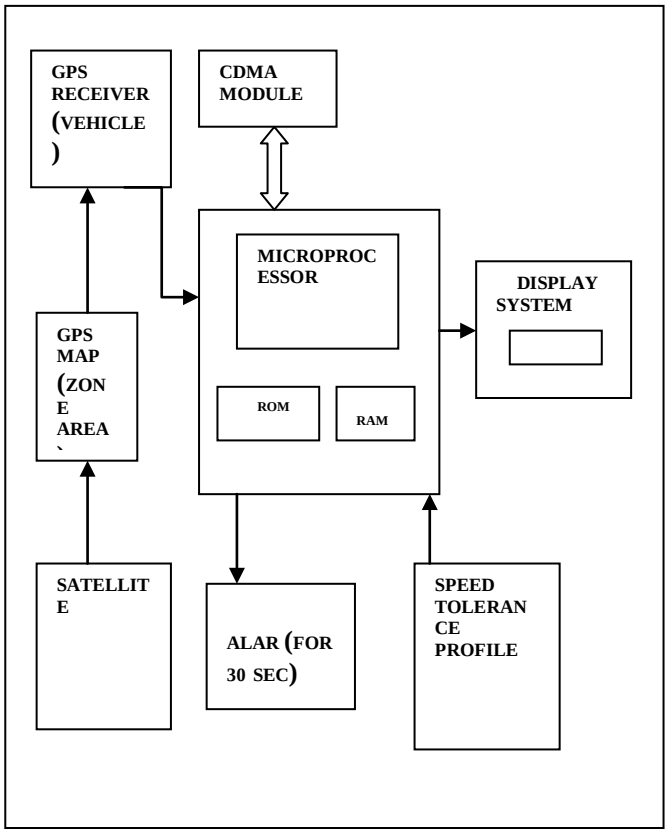
YEAR	ACCIDENTS	CASUALITIES
2002	9,012	19,939
2005	10,055	18,276
2010	14,241	20,658
2012	15,072	27,128
2013	16,548	35,658
2014	16,652	75,843
2015	17,005	140,563



3. OPTIMISED METHOD

To ensure decline in accidents and to improve the road safety, speed monitoring and debugging technologies such as vehicle monitoring in school, colleges, prone and hilly areas should be implemented by using CDMA technology and GPS tracking.

The existing system does not able to reduce number of accidents so there is a need to implement Intelligent Speed Adaptation(ISA) in which violation of the vehicle are noted, alerted and reporting system are also employed.



4. IDEOLOGY

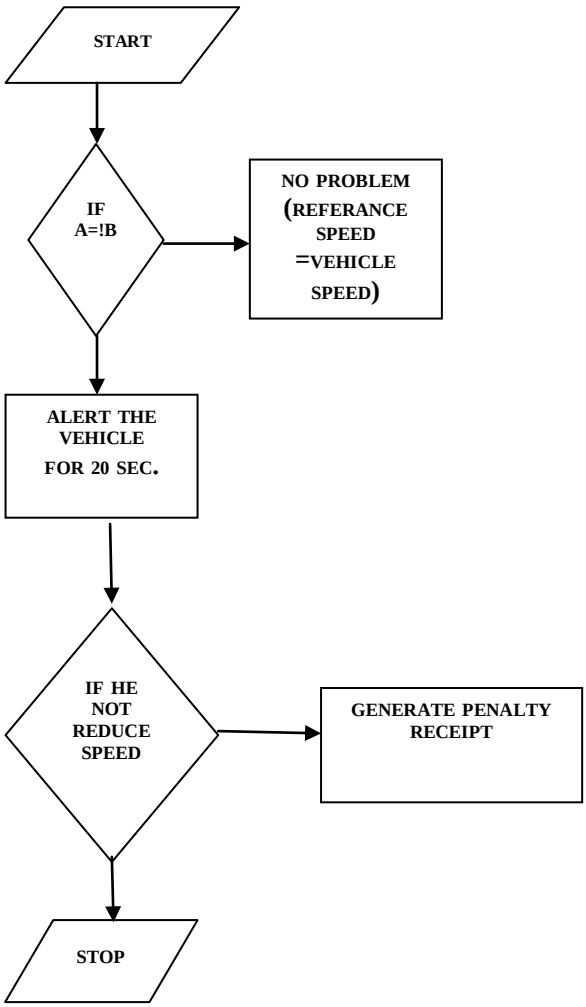
First we have to point out the accidental prone areas where we want to monitor the speed of the vehicle then make that area with GPS tracking network. From the above figure we can see that CDMA module is made available in each and every vehicle during registration. The registered vehicle owner's details are feeded in CDMA module.

When these vehicles come in to the zone areas then the speed of the vehicle will be automatically taken from the speedometer by this module. The CDMA module is programmed for the particular speed according to zone areas. When the vehicle violates these speed limits for a particular period then the module will automatically generate the violation message and it will be sent to control room and court.

The alert message about zone areas and speed of the vehicle at that area will be given to the driver through an alarm. If the person ignores the alert then he/she have to pay the penalty of that violation or else that vehicle will be ceased by the traffic controller.

5. ALGORITHM

Each vehicle crossing the sniffing region will be stored automatically in the local processing region. Then the vehicle speed stored will be checked with the reference speed of the zone i.e., selected zone has some speed limit that has to be taken and then if the vehicle crosses the limited speed then the alert is given to the driver if he violates the alarm for a particular period of time then they have to pay the penalty or else the vehicle will be ceased.



6. CONCLUSION

For growing countries like India, traffic congestion has to be maintained and accident has to be reduced because of no existing system for monitoring the speed very many accident took place to avoid this and save many valuable life a CDMA system is in need to be implemented soon also this gives income in the form of fine for over speeding because as said before most of the accidents occurs due to over speeding the vehicle which can be further used for good maintenance of the roads in the country also to reduce the scam and theft.

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