Intelligent Traffic Control System Ambulance Clearance Stolen Vehicle Detection

Abstract

In this project, we are Implementing Intelligent Traffic Control for Congestion, Ambulance clearance, and Stolen Vehicle Detection. This system was implemented based on present criteria that tracking three conditions in those one is heavy traffic control and another one is making a root of emergency vehicle like ambulance and VIP vehicle. In this paper we are going to implement a sensor network work which is used to detect the traffic density and also use RFID reader and tags. We use ARM7 system-on-chip to read the RFID tags attached to the vehicles. It counts number of vehicles that passes on a particular path during a specified duration. If the RFID tag read belongs to the stolen vehicles. GSM SIM300 used for message send to the police control room. In addition, when an ambulance approaching the junction, it will communicate the traffic controller in the junction to turn on the green light. This module uses Zigbee modules on CC2500.

Introduction:

The aim of this project is, INDIA is one of the most populous Country in the World and is a fast growing financial prudence. It is seen that terrible road congestion problems in cities. Infrastructure growth is slow as compared to the growth in number of vehicles, due to space and cost bounds .Also, Indian traffic is non-lane based. It needs a traffic control solutions, which are different from the other Countries? Smart management of traffic flows can reduce the negative effect of congestion. In recent years, wireless networks are widely used in the road transport as they provide more cost effective options. Technologies like XBee, GSM and RFID can be used in traffic control to provide cost better solutions. RFID system is a wireless technology that uses radio frequency electromagnetic energy to carry information between the RFID tag and RFID reader. Some RFID systems will only work within the range inches or centimeters, while others may work for 100 meters or more. A GSM modem is a special type of modem, which accepts a SIM card and operates over a subscription to a mobile operator, just like a mobile phone. The

XBee operates at low-power and can be used at all the levels of work configurations to perform predefined tasks. It operates in ISM bands (868 MHz in Europe, 915 MHz in USA and Australia, 2.4 GHz in rest of the world).