A IOT Access Architecture For Vehicle Monitoring

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Abstract- *The dangerous part in long distance travel is that anyone can get into accident. The main factor for the accident is that it could go wrong in long distance travel is engine failure and not following the rules are the major reasons. To avoid the danger and to ensure the safety for the travellers a smart IOT based system is developed. Different types of sensors are used to sense the different errors in the vehicle. These sensors sense each part and send the data to the corresponding users and according to the measured data the response will be changed. Every data that are measured by the sensors will be uploaded in the IOT. This system also uses an additional feature of detecting the side track to indicate free lane for another vehicle. In case the vehicle is at accident the system will detect by using gyro sensors.*

I. INTRODUCTION

One of the major sources of revenue for many countries is transportation. Human transportation, logistics, private traffic forms part of transportation. The developing and developed countries are striving to improve the standard and efficiency of transportation system. Because of the traffic jams, and lack of proper traffic management system, time and money of the public is being wasted. Goods transportation, machinery and human transportation are the key factors which influence the development of industries. The development of traffic monitoring and controlling system is a very important requirement in all the countries. As there is a rapid growth in the traffic these days, the authorities have to find different ways to avoid these problem.

An embedded system is a computer system with a dedicated function within a larger mechanical or electrical system, often with real-time computing constraints.It is embedded as part of a complete device often including hardware and mechanical parts. Embedded systems control many devices in common use today.

Ninety-eight percent of all microprocessors are manufactured as components of embedded systems. Examples of properties of typically embedded computers when compared with general-purpose counterparts are low power consumption, small size, rugged operating ranges, and low per-unit cost. This comes at the price of limited processing resources, which make them significantly more difficult to program and to interact with. However, by building intelligence mechanisms on top of the hardware, taking advantage of possible existing sensors and the existence of a network of embedded units, one can both optimally manage available resources at the unit and network levels as well as provide augmented functions, well beyond those available. For example, intelligent techniques can be designed to manage power consumption of embedded systems. Modern embedded systems are often based on microcontrollers (i.e. CPU's with integrated memory or peripheral interfaces),but ordinary microprocessors (using external chips for memory and peripheral interface circuits) are also common, especially in more-complex systems. In either case, the processor(s) used may be types ranging from general purpose to those specialised in certain class of computations, or even custom designed for the application at hand.

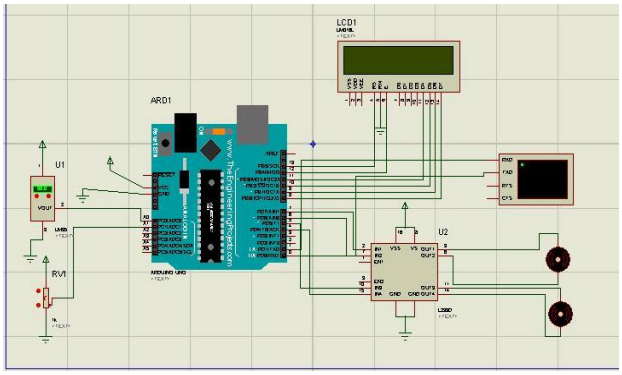
A common standard class of dedicated processors is the digital signal processor (DSP). Since the embedded system is dedicated to specific tasks, design engineers can optimize it to reduce the size and cost of the product and increase the reliability and performance. Some embedded systems are mass-produced, benefiting from economies of scale. Embedded systems range from portable devices such as digital watches and MP3 players, to large stationary installations like traffic lights, factory controllers, and largely complex systems like hybrid vehicles, MRI, and avionics. Complexity varies from low, with a single microcontroller chip, to very high with multiple units, peripherals and networks mounted inside a large chassis or enclosure.

II. LITERATURE SURVEY

IoT-Driven Automated Object Detection Algorithm for Urban Surveillance Systems in Smart Cities illustrates that we propose a novel unified method of automated object detection for urban surveillance systems. We use this novel method to determine and pick out the highest energy frequency areas of the images from the digital camera imaging sensors, that is, either to pick the vehicle license plates or the vehicles out from the imagesAutonomous-Vehicle Public Transportation System:Scheduling and Admission Control said that we propose a new public transportation system based on AVs. It manages a fleet of AVs to accommodate transportation requests, offering point-to-point services with

ride sharing. We focus on the two major problems of the system: scheduling and admission control.

III. ARCHITECTURE DIAGRAM



IV. CONCLUSION

This paper focuses on the urban traffic, and presents an adaptable roadside vehicle detection and speed estimation system with triaxial anisotropic magneto resistive sensors. A novel dynamic threshold multi-state machine algorithm is proposed, which takes the actual changeable traffic condition into account. The speed estimation is based on the maximum values of the two sensor signals of passing vehicles and the cross-correlation between them. The experimental results show that the proposed algorithms have significant improvement in accuracy and adaptability, which verifies that this sensor system is promising for application in urban traffic

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