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INTELLEGENCE TRAFFIC SIGNS FOR BETTER TRANSPORT PROTECTION

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Abstract

The increasing need for improving mobility and road safety has led developing countries to make significant changes in their infrastructure, especially when it comes to the modernization of the transport infrastructure. The purpose of this paper is to present the experience and challenges of the implementation of intelligent transportation systems (ITS) in Qatar, a developing country in the Middle East. ITS has been developed in the country and currently in the implementation stage. A detailed review of existing and proposed ITS technologies is provided.

Many challenges were identified to achieve a fully functional, practical, and integratable ITS network. Some of these challenges include coordination with different stakeholders, a adopting different countries' ITS systems, keeping up with the technology, integration with existing systems, and budget constraints. The paper provides learned that can benefit other developing countries going through the same transition

Keywords : *Road Safety, Infrastructure, Transporation*

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INDTODUCTION

Intelligence has been defined in many ways: the capacity for abstraction, logic, understanding, self-awareness, learning, emotional knowledge, reasoning, planning, creativity,critical thinking, and problem-solving. More generally, it can be described as the ability to perceive or infer information, and to retain it as knowledge to be applied towards adaptive behaviors within an environment or context.

1. Intelligence is most often studied in humans but has also been observed in both non-humananimals and in plants despite controversy as to whether some of these forms of life exhibit intelligence. Intelligence in computers or other machines is called artificial intelligence.

2. A very general mental capability that, among other things, involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience. It is not merely book learning, a narrow academic skill, or test-taking smarts. Rather,it reflects a broader and deeper capability for comprehending our surroundings— "catching on," "making sense" of things, or "figuring out" what to do.

NEED OF THE STUDY

provide traffic managers with real-time and predictive insights about traffic flow speeds and traffic congestion/incidents. In practice, however, the success of such projects strongly dependson a city's ability to place a virtual management layer on top of physical traffic infrastructure.

Intelligent transportation system (ITS) is the application of sensing, analysis, control and communications technologies to ground transportation in order to improve safety, mobility and efficiency

This is simply because these lights allow the traffic to move in the correct direction. They also stop traffic congestion from arising and they help people to stay safe on the roads. In the absenceof physical traffic police officers at intersections, the traffic lights do the job

STATEMENT OF THE PROBLEM

Over several decades, traffic congestion has become a serious problem in the major cities. Congestion is particularly associated with motorization and the diffusion of the automobile, which has increased the demand for transportation infrastructure. However, the supply of the transportation infrastructure has often not been able to keep up with the growth of mobility. Traffic congestion problems consist of incremental delay, vehicle operating costs such as fuel consumption, pollution emissions and stress that result from interference among vehicles in the

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traffic stream, particularly as traffic volumes approach a road's capacity. Across cities more people are spending more time sitting in traffic jams than ever beforeTraffic congestion occurs when the demand is greater than the available road capacity. There are many reasons that cause congestion; most of them reduce the capacity of the road at a given point or over a certain length, for example people parking on the roads or increase in the number of vehicles. Traffic congestion also occurs due to traffic signal. At traffic signal when road traffic density is low signal still shows the same traffic time due to which other lane traffic increases which result in traffic congestion. Sometimes due this problem the ambulance, police vans, fire-fighting vehicle are not reaching at their destination on time.

Traffic congestion problems consist of incremental delay, vehicle operating costs such as fuel consumption, pollution emissions and stress that result from interference among vehicles in the traffic stream, particularly as traffic volumes approach a road's capacity.

OBJECTIVES OF THE STUDY

Traffic signs give information about the road conditions ahead, provide instructions to be followed at major crossroads or junctions, warn or guide drivers, and ensure the proper functioning of road traffic. Being unaware of road signs is akin to throwing caution to the wind.

It can lead to loss of life and property

achieve traffic efficiency by minimizing traffic problems. It aims to reduce time of commutersas well as enhances their safety and comfort. The application of ITS is widely accepted and usedin many countries today.

The objective of traffic flow prediction is to provide such traffic flow information. Traffic flow prediction has gained more and more attention with the rapid development and deployment of intelligent transportation systems (ITSs).

The main objective of a good transportation system is to provide safe economical, efficienttransportation for the facility of passengers and the transport of goods.

MATERIALS & METHODS

1. Arduino Uno
2. IR sensor
3. ESP8266

RESULT

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With proper planning and coordination, the ITS network will provide a new dimension of monitoringand control of the transportation network in Qatar. However, for a fully functional, practical, and integratable ITS network, the following issues need to be considered and addressed.

CONCLUSION

Finally we conclude of a fully operational ITS networkin the State of Qatar will help in a more efficient and controlled road network that will help the economy and population growth in the country. Currently, there are several major ITS projects being implemented to support the nation's economic growth. A few ITS subsystems are already deployed around Doha and are not working to their full capabilities since there is no real integration between the systems. When fully optimized, ITS willhave a significant and influential impact on the way transportation services are delivered in Qatar. It will help the growth and management of the transportation network in many ways; mainly helping road users to travel more safely,on less congested roads, and on better public transportation services with improved information services. The majority of the expressways are still under construction. Subsequently, this results in major gaps in the ITS network, and only standalone devices that are currently functional with no integration to the main control center. Until the ITS network is completely up and running, enough data can be collected to assessthe impact of the ITS network on Qatar's traffic and environment.

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