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The Study of Intelligent Transportation System

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ABSTRACT

Intelligent Transportation Systems (ITS), integrate information, control, and communication technologies to provide transport related services. Transport systems that apply modern information technologies to improve the operation of transport networks. The system acquire vast volume of data on various aspects of transport operation (such as traffic volume, speed, headway, load carried), process them and apply the result to guide traffic, improve operations enhance safety and transport cost. The framework works with a model editor to generate specifications complaint with that language, and a code generator to produce code from them using platform specifications. Transit users should be helped by hand-held guidance equipment and by taking signposts; road-crossing facilities can be improved to benefit everybody.

Keyword: intelligent transportation system, objective, application of(ITS), ITS in various country.

I.INTRODUCTION

Intelligent Transportation System (ITS) applies advanced technologies of electronics, communication, computer, control and sensing and detecting in all kinds of transport system. These technologies have been in use for some time, but the rate of application has increased. These systems are intended to improve the safety, efficiency and capacity of highway system.

Objectives

- To improve the traffic safety
- To improve the capacity of highway system
- To reduce air pollution
- To increase the energy efficiency
- To promote the development of related industries

Application of ITS

ITS can cover a wide variety of application such as:

1. Electronic collection of toll;
2. Monitoring traffic flow, provide information to derivers on the congestion on the road, road closures, alternative routes, weather condition and speeds to be observed. Advanced Traveler Information system (ATIS) gives information to highway users on traffic jams, road closures, alternative routes and weather condition.
3. Monitoring incidents on the road, such as vehicle break-down and collision ;
4. Traffic control on urban streets by using information on traffic flows and adjusting the signal operations to reduce congestion and delay.
5. Intelligent Vehicle-Highway System (IVHS), in which vehicle is guided longitudinally and laterally by the use of electronics devices. The advanced vehicle System (AVCS) dispense with human control of vehicles and rely on computer.
6. Electronic Road Pricing System to decongest the city centers.

IT'S in Various Countries

Many forms and variations of ITS are in use extensively in the development countries.

1. Advance (USA), providing dynamic route guidance, launched in Chicago.
2. Carminat (France), a vehicle-based driver information system.
3. Highway 407 (Canada), which is one of the earliest all electronic toll highways.
4. Traffic master (U.K), giving real-time traffic information infra-red beacons, radio-wave beacons and FM radio broadcasts.
5. SCATS (Australia), which is a traffic responsive traffic control system.
6. Many developed countries have Electronic Toll Collection System.

China has introduced Electronic Toll Collection systems on some of the Toll Roads.

II.CONCLUSION

Public transport users will be helped by smart cards and better information while travelling. These will reduce the need for passengers to hurry or to stand while the bus is moving, which reduces the risk of accidental falls. Pedestrians can be helped by better road-crossing facilities, making use of existing people detectors.

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