

VicRoads  
International  
Projects

# INTELLIGENT TRANSPORT SYSTEMS



VicRoads is a leader in the application of Intelligent Transport Systems (ITS) to improve the operation of the road network.

It has extensive experience in the development, specification, implementation and operation of ITS both within Victoria and internationally. VicRoads operates a leading edge Motorway Management System to manage traffic on Melbourne's freeway and arterial road network which includes:

#### **Traffic Signal Linking and Monitoring (SCATS)**

VicRoads is a world leading practitioner of SCATS, a dynamic and adaptive traffic signal system. Of the 3,900 traffic signals throughout Victoria, 3,500 are integrated into the SCATS traffic signal linking and monitoring system.

VicRoads has developed programs to collect data and review traffic signal operation and these programs have been adopted by most jurisdictions throughout the world that use SCATS.

VicRoads has led the development of the implementation of public transport priority systems through SCATS which includes tram and bus priority and railway level crossing links. VicRoads also facilitates priority for emergency service vehicles through SCATS.

#### **Freeway Detection System**

Vehicle detection systems monitor the operation of the freeway network in Victoria and gather real time data for use in various applications. Vehicle detection devices installed in each lane provide continuous data on traffic flow along routes and can be used to detect interruptions to expected traffic flow.

### Traveller Information Systems

VicRoads has developed the Drive Time system for Melbourne's metropolitan freeway network to provide motorists with advice on real time traffic conditions via dynamic message signing. The advice includes predicted travel times and information on congestion or major incidents which may cause disruption to traffic flow.

### Variable Speed Limit Systems

VicRoads operates a dynamic variable speed limit system on major Melbourne freeways which changes speed limits at any time of the day to respond to traffic and weather conditions. The system is linked to a series of fixed digital speed cameras to automatically enforce the speed limit.

### Closed Circuit Television Cameras (CCTV) and Emergency Help Telephone Systems

Traffic is monitored at key locations on freeways and arterial roads through the use of an extensive network of CCTVs.

An emergency help telephone system is available on freeways to provide motorists with access to the Traffic Management Centre in the case of an emergency.

### Freeway Ramp Coordination System

Freeway ramp signals are traffic lights install on entry ramps to meter traffic entering the freeway.

VicRoads is leading the way in the use of the HERO suite algorithms that dynamically manage the coordination of ramp signals to control the entry of vehicles on to the managed motorway ensuring stable and reliable travel by preventing congestion.

### Traffic Management Centre

The Motorway Management System is monitored and controlled 24 hours per day from the VicRoads Traffic Management Centre. The Centre is at the leading edge of traffic management and utilises the latest ITS applications and technology. All the on-road systems discussed above, plus the freeway ramp metering system, driver warning systems and devices and dynamic fairway system for trams are integrated into a single desk top software platform which allows operators to monitor and change traffic control systems in real time.

VicRoads International has delivered ITS projects that allow clients to manage traffic flow better, reduce congestion and increase road safety. The projects have involved the selection, development and implementation of suitable traffic management systems, the design of appropriate specifications and the provision of advice and training on technical issues concerning system operations and maintenance. Projects have been undertaken in: *Australia, Hong Kong, Ireland, Malaysia, the Philippines, Singapore and the West Indies.*

