

Smart, safe and cost-efficient



By Foo Eu Jin

CYBERJAYA, the nucleus of MSC Malaysia, recently consolidated its position as a leading global technology centre with the launch of a unique transportation management system. Developed at a cost of RM20.1 million, the Cyberjaya Dedicated Transport System (DTS) leverages on global positioning system (GPS) and general packet radio service technologies to monitor passenger and bus movements, schedule timings and even manage emergency situations.

Launched last month, the Cyberjaya DTS was conceived out of a simple need to provide a service to all shared services and outsourcing (SSO) companies in Cyberjaya.

SSO companies do not have standard work shifts – their 24x7 schedule is tailored to accommodate requests to change schedules. In addition to the different work shift requirements, there is a need to provide a constant and safe transportation system as workers reside in various locations within the Klang Valley.

To address this challenge, the Cyberjaya Consultative Council Meeting in February 2005 convened to improve the transportation service for Cyberjaya. Following this, the 18th MSC Malaysia Implementation Council Meeting held in August 2005 determined that cost sharing be adopted between the Government and SSO companies to provide company transport.

With the assistance of Cyberview Sdn Bhd, Multimedia Development Corporation (MDeC) developed a project paper on a dedicated transport system for Cyberjaya, incorporating the unique GPS concept.

RapidKL provided the medium of transport. It also has been tasked to maintain and service the buses as well as provide the workforce to operate the service.

Cyberview's role is to work hand-in-hand with RapidKL to monitor and make sure that each bus and its passengers would arrive safely and on time.

MDeC has been promoting the Cyberjaya DTS internationally to attract SSO companies to establish their operations in Malaysia. Locally, the system is marketed through various forums and platforms such as the Consultative Council Meetings.

The Finance Ministry is subsidising 80 per cent of the Cyberjaya DTS project; the remaining amount will be covered by companies using the system.

The Cyberjaya DTS shuttles personnel from the Klang Valley, Seremban, Banting and Bangi to Cyberjaya based on schedules designed to suit the working hours of companies operating there.

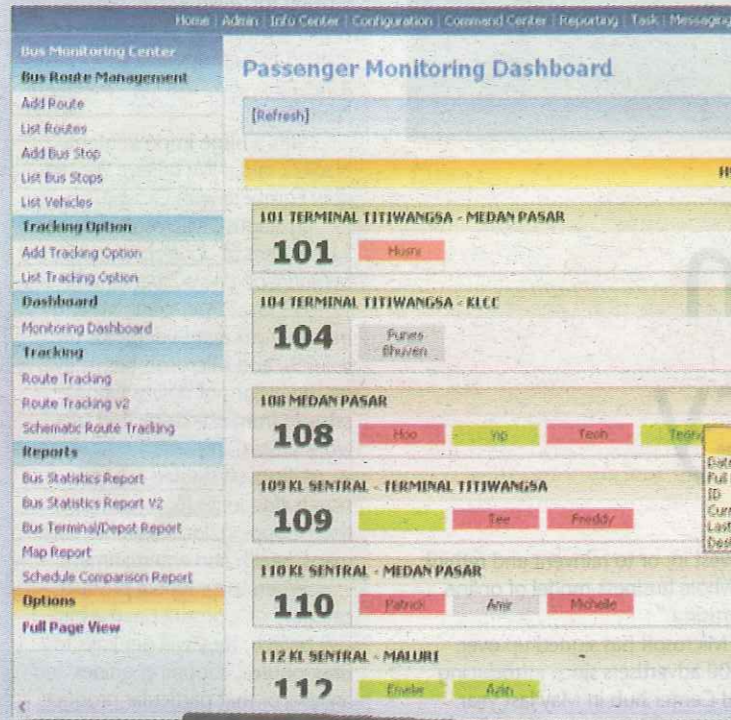
One distinct advantage of the Cyberjaya DTS is its flexibility to meet transport needs in a short notice. If a bus breaks down, the situation can be easily resolved as the number of passengers on the bus can be determined through GPS.

It is estimated that the transportation cost of each passenger is RM213 a month. Compare this figure with most of an individual's monthly petrol and toll bills, the service is rather cost-effective.

Cyberview's managing director Redza Rafiq said, "The successful launch of the DTS is in line with Cyberjaya's mission as the national ICT (information and communications technology) capital to attract, nurture and retain ICT industries. We hope this service will attract foreign investors."



A Mobile Tracking Unit reader



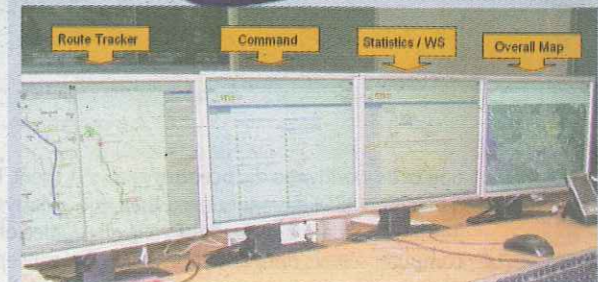
Web reporting services



A monitoring workstation



The MTU transponder is embedded with smart technology to help in the decision-making for accuracy, faster response and less dependency on the server.



How it works

THE Cyberjaya DTS allows live tracking of buses. Passenger management is done through the iButton that transmits data to the Mobile Tracking Unit (MTU) on each bus. It relays information through general packet radio service back to a live Web server.

The global positioning system is utilised to manage the fleet of buses. The MTU transmits the location and speed of the buses. Bus speed and engine temperature are registered every five seconds. So, it can immediately determine if there has been a breakdown, or if the buses have been driven at a permissible speed.

The system provides alerts when the vehicles depart from the approved routes and are architected with capabilities for voice communications between drivers and the remote centre, panic buttons and status monitoring of engines.

Standby buses at all seven routes are provided in case of breakdowns or accidents.

Access records (for example, iButton ID, bus stop, date and time stamps, route ID, and name of organisation) will be logged with the client to reconcile with other personal or organisational records for billing, scheduling, tracking and administration purposes. Future enhancements expected next year include online scheduling where seat bookings will be possible.

The system began trial runs in July last year to identify time-saving routes. Two months later, it was put to test with its first customer and 38 passengers. The fleet has since grown to 53 buses, with 31 customers and over 2,260 passengers.



The iButton