MANAGING THE KUALA LUMPUR ROAD NETWORK WITH THE INTEGRATED TRANSPORT INFORMATION SYSTEM

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- Description of the Kuala Lumpur Road Network
- Background of the Integrated Transport Information System
- Current Operations at the Transport Management Centre (TMC)
- Future Challenges
Challenges in Managing the Road Network System in Kuala Lumpur

- Increase in the vehicle population, especially single occupancy vehicles
- Limited capacity of junctions to cater for increase in traffic volumes
- Increase in overall aggressiveness of driver behaviour
- Resource constraints in managing, controlling and enforcing traffic flows in the city.
On a daily basis:

- 1.305 million vehicles cross the MRRI
- 2.125 million vehicles cross the MRRII
- 70% vehicle trips crossing MRRI (42,600 vehicles) and MRRII (86,500 vehicles) during AM peak hour are SOV.
- 65% crossing MRRI (39,100 vehicles) and MRRII (84,500 vehicles) during PM peak hour are SOV.

Total Volume Entering CPA = 1,260,000 pcu/day
Problems / Issues in Traffic Management

• Congestion Problems
  – During peak hours
  – Situations during flash floods, partial road closures, events
  – Blockages during road construction, illegal kerbside parking

• Abuse of Dedicated Bus Lanes
  – Bus drivers
  – Private vehicles

• Other related problems
  – motorcyclists
  – pedestrians
Kuala Lumpur’s Strategy for Sustainable Management of Road Transport System

• New concept based on “Integrated Transportation Demand Management”

• Strategy is focused on following key areas:
  – Increase usage of public transport system
  – Accelerate management and operations of existing transport infrastructures
  – Optimise usage of transport facilities and infrastructure in the most effective way possible
Integrated Transportation Demand Management Programme

- Prepare facilities to encourage greater use of public transport
- Carry out various traffic management schemes to smoother traffic flow and operations of bus and taxis in the city
- Apply ‘Intelligent Transport System’ (ITS) to better utilise the capacity of the overall road network system.
Background of the Integrated Transport Information System

- Design-Build project is funded by Federal Government under Rancangan Malaysia ke 8
- DBKL appointed as implementing agency
- Total cost of RM 365 million
- ITIS Project started in August 2002
- TMC Operations commenced March 2005
- Formal handing over commenced on 30 June 2005
OVERVIEW OF SYSTEM
Coverage

45 Surveillance corridors
Integrated Transport Information System

KEY OBJECTIVES

1. Monitor traffic situation
2. Detect incidents
3. Inform public
4. Provide assistance
Overview of the ITIS

Data Collection Stage
- Traffic Incidents
- Road Accidents
- Special Public Events

Situation detected and data sent via ITIS sensors

Dissemination Stage
- Useful traffic info in real time disseminated to the commuting public via:
  - Variable Message Signs
  - Call Center

ITIS: Powerful tools of software integrating the data collected into congestion maps, traffic flows, etc.
TRANSPORT MANAGEMENT CENTRE
Mon-Fri
7AM - 4PM
4PM – 11PM

Sat
8AM - 2PM
12PM - 6PM

Sun
10AM - 4PM
(1st Floor) Call Centre
(2nd Floor) Simulation / Joint Operations Centre
OPERATIONS

- Detect and Validate
- Monitor and Respond
- Inform and Advise
- Engineering for Enhanced Safety and Traffic Flows
Integrated Applications in ATMS Command Console
Types of Incidents

- **Stopped vehicles**
  - Road hazards
  - Accidents
  - Lane / road blockages
  - Unusual congestion
  - (Flash) Floods
  - Faulty traffic lights
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Road hazards
**Accidents**
Lane / road blockages
Unusual congestion
(Flash) Floods
**Faulty traffic lights**
Reporting Lines: Operations – Field response

TMC Operations Manager
- Shift Manager
- Supervisors
  - Senior Controllers
  - Controllers

Police / Directorate (Senior) Liaison Officer
- Police / Directorate Officer
Building a Real Time Map of the Traffic Situation
Vehicle Detector mounted on street light

Video image processing

Vehicle Detector (AID)
Traffic Warning Alert
Avoid Travelling in/out of KL

Wed 23 Aug 2005: 6.45PM
Real Time Traffic Data
Profile of Traffic Flow at a Specific Location

A 728

[Graph showing traffic flow data over time]
Detecting Disruptions in Network Flows

Plot of Speed Profile from AID

Free flow

Interrupted flow

24/08/05 10:17

Ready
Jin Kuching-kemalangan- 11-10-2005

Jenis insiden : kemalangan ( Lori Kayu terbak)   

Jenis kenderaan : Lori Kayu

Lokasi : Jin Kuching ( di bawah bulatan Segambut ) menghala ke KL

Kesan : lorong kiri ditutup menyebabkan kesesakan

Kehadiran direktorat/polis : ada

Masa mula : 0650

Masa tamat :

Catatan: kenderaan berada di lorong kiri

8 Jin Kuching- kenderaan rosak1-0655.jpg (37324 bytes) (Download Count: 31)
INFORMING THE PUBLIC

ITIS
Integrated Transport Information System
The Clear Way To Go
Jalan Kinabalu-banjir-1033

Jenis insiden: banjir
Kenderaan terlibat: tiada
Lokasi: jalan Kinabalu menuju ke jain parlaman (bank rakyat jin tangai)
Kesan: trafik lancar sebab kenderaan tidak banyak
Kehadiran direktorat/polis: tiada
Masa mula: 1033
Masa tamat: 
Catatan: mesej dihantar ke VMS SB

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Jalan Kuching banjir-1033.jpg (29217 bytes) (Download Count: 15)
Travel Time Messages on VMS
Traffic Information on Website

www.itis.com.my

Integrated Transport Information System (ITIS)

Legend:
- Smooth Traffic
- Slow Moving
- Heavy Traffic

Info:
Now, you can avoid traffic jams and have a smooth journey around Klang Valley with real-time information on road congestion.
All you need to do is click on a particular road listed below to see its traffic condition.

Events
Incidents
Road Congestion
Road Works
Travel Plan

Zone Selection:
Please select a zone below to view

KL CENTRAL
KEPONG-SELAYANG
CHERAS.SG BESI
PJ-SHAH ALAM

Overview Map
Improvements / Traffic Engineering / Planning

ITIS
Integrated Transport Information System
The Clear Way To Go
Identifying Traffic Congestion Hot-Spots
Identifying Traffic Congestion Hot-Spots

HOT-SPOTS - EVENING
Installation of Flexi-poles to eliminate Q-jumping
Identifying Accident Prone Locations
EVENT MANAGEMENT
ASEAN Summit

Jalan Yew - kenderaan rosak - 1534 - 121205

Jenis insiden: Kenderaan rosak

Lokasi: Jalan Yew menghala ke Tun Razak

Kehadiran polis: tiada

Kesan: Trafik perlahan

Masa mula dikesan: 1534

Masa tamat:

Catatan: Kenderaan berhenti di lorong kiri jalan

[Image 84x79 to 556x706]
Taxis parked day before as well
SELAMAT HARI KEMERDEKAAN KE-48 "KERANAMU MALAYSIA"

LALUAN MASUK KE KLCC DITUTUP—IKUT ARAHAN POLIS TRAFIK

PENUTUPAN JALAN KE D/MERDEKA & KLCC BERMULA 7MLM 30/8/05

JLN S/ISMAIL DEPAN S/WANG PLAZA DITUTUP IKUT ARAHAN POLIS

JLN S/ISMAIL DEPAN S/WANG PLAZA DITUTUP ELAKKAN JLN IMBI

JLN S/ISMAIL DEPAN S/WANG PLAZA DITUTUP JLN HANG TUAH SESAK

LALUAN KE DATARAN MERDEKA DITUTUP—IKUT ARAHAN POLIS TRAFIK
KL Marathon
KL Marathon
ROAD MAP – THE WAY FORWARD
Road Map for the Long Term Development of the TMC

- Move to Command and Control of Road Traffic / Develop field presence
- Move to Multi-Modal Transport Operations
- Develop into Regional Transport Centre
- Develop into National Transport Centre

“National Aspiration …… World class Transport Management Centre”
Thank You