OVERVIEW OF ITS DEVELOPMENT IN MALAYSIA

by

IR. MD. AMIR BIN KASIM
Director
Highway Planning Unit
Ministry of Works
Malaysia

Government of Malaysia

Benefits of ITS applications.

☞ Optimise the efficiency of use of highways, hence increasing road capacity

☞ Improve road safety

☞ Minimise travel cost and time

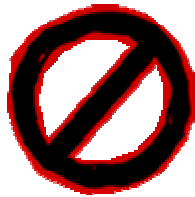☞ Enhance quality of environment through reduction in carbon dioxide emissions
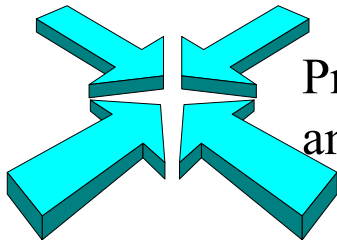
ITS applications in Malaysia.

Introduced in the mid 90's

Computer Controlled Traffic Signals in the Kuala Lumpur

Electronic Toll Collections for privatised roads

Systems installed in an adhoc manner with little co-ordination.

Problems in the areas of inter-operability and compatibility.

ITS applications in Malaysia.

Integrated Transport Information System (ITIS)

   i.   real-time information on traffic conditions around the city.
   ii.   detecting incidents and traffic congestion.
   iii.   analysing the traffic and calculating travel times.
   iv.   disseminate or update the information on the VMS.

The ITS Strategic Plan

1999

The Road Engineering Association of Malaysia or REAM formulated an "ITS Strategic Plan" for Malaysia.

2000
The Government of Malaysia endorsed the plan.
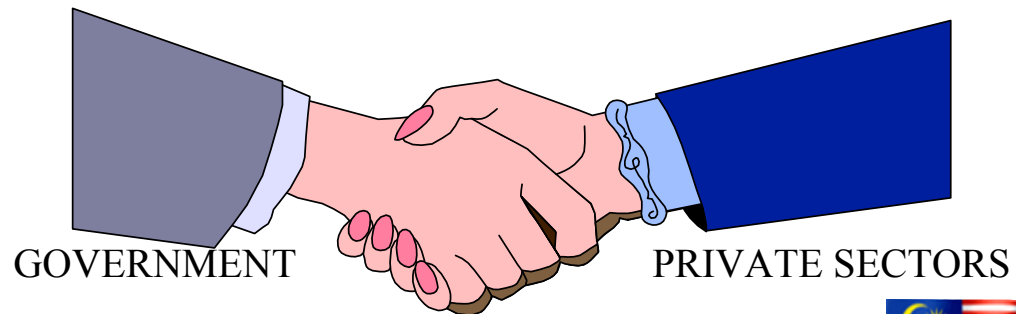
Government of Malaysia

Objectives of ITS Strategic Plan

☞ to provide direction for a systematic approach to ITS implementation.

☞ to propose ITS application sectors most relevant to Malaysia.

☞ to provide direction for ITS research and development.

☞ to provide a framework for system integration.

☞ to provide a means for stimulating economic development.

Recommendations of ITS Strategic Plan

Four ITS programme initiatives to be implemented by both the public and private sectors:
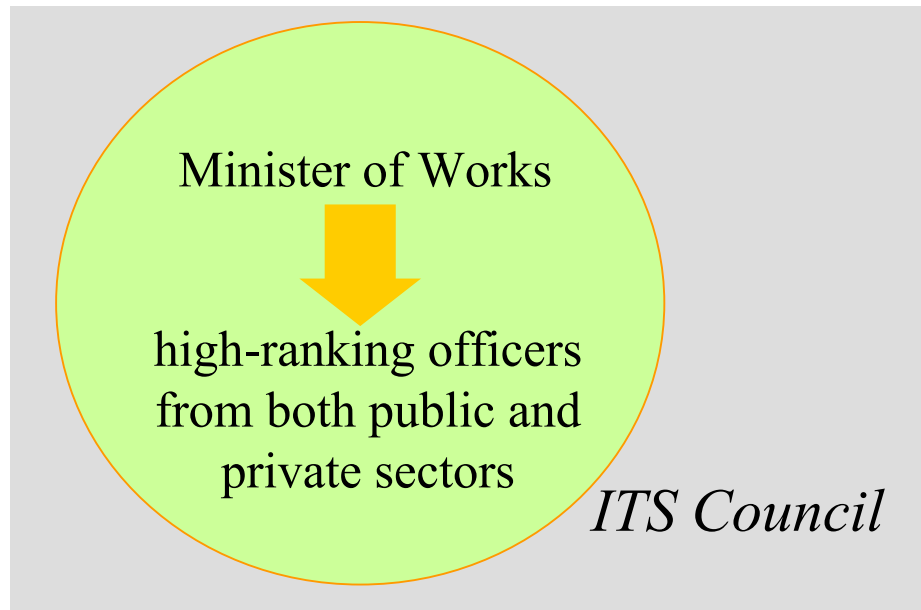
☞ selected ITS user-services projects.

☞ research and development programme.

☞ professional development and training.

☞ outreach programs.

GOVERNMENT   PRIVATE SECTORS

Government of Malaysia

Malaysia ITS Council

The Government of Malaysia has set up the ITS Council.

☞ to coordinate and monitor the implementation of the ITS in Malaysia

Minister of Works

high-ranking officers from both public and private sectors

ITS Council

Malaysia ITS Council

Malaysia ITS Council

Deliberate on ITS deployment policies

Set the direction for ITS research & development

Formulate implementation strategies

Launching grant of RM 8 million to initiate studies.
Five core areas identified:

- ITS system Architecture for Malaysia.

- Traffic Control System for Urban Centres in Malaysia.

- Electronic Toll Collection and Management Using ITS .

- Expressway Operation and Management Using ITS.

- Road Safety for Motorcyclist Using ITS .

ITS Master Plan Study

KAJIAN PELAN INDUK
SISTEM PENGANGKUTAN PINTAR (ITS)

FOR

HIGHWAY PLANNING UNIT
MINISTRY OF WORKS MALAYSIA
GOVERNMENT OF MALAYSIA

FINAL REPORT

January 2004

HMS Perunding Sdn Bhd (Co. No. 312808 T)

➢ Completed in January 2004

➢ To develop a comprehensive "roadmap" toward setting the direction and framework for the deployment of ITS applications in Malaysia over the next 10 years.

ITS Applications = **Integration of Technology** + **Environment**

ITS Master Plan Study: Findings

The ITS Master Plan Study highlighted the status of ITS deployment in Malaysia and its current weaknesses related to deployment, such as:

☞ institutional weaknesses

☞ absence of a set of established international ITS standards to be adopted

☞ urgent needs to develop an ITS System Architecture for Malaysia.

ITS Master Plan Study: Recommendations

1. Development of ITS System Architecture

- ➢ shall promote interoperability between system components, and the promotion of national and international compatibility of systems.

- ➢ Using ITS system architecture, all stakeholder will be given the definite directions to plan and develop their own ITS agenda.

2. Adoption of 5.8GHz DSRC

The government has reserved the 5.8GHz microwave as the dedicated short range communication (DSRC) for use the communication media between all roadside subsystems and vehicle subsystems.

5.8GHz DSRC

Establishment of

3. Malaysian ITS Bureau

☞ To coordinate all ITS activities in Malaysia

☞ Develop and implement the National ITS Policy.

4. National ITS Association

☞ To act as a bridge to the international ITS fraternity as a non-government organisation

☞ To play a vital role in the area of standards formulation.

☞ Pro tem committee established on 16 September 2005.

☞ Registration form to ROS on 25 October 2005.

5. Designation of National ITS Corridors

➢ to installed with appropriate and cost effective ITS technologies.

➢ to be use to integrate ITS infrastructure.

➢ Stage 1: Klang Valley, North-South Expressway, Federal Route 1, Penang, Ipoh and Johor Bahru.

➢ Stage 2: Federal Route 2 & 3, East-Coast Expressway, Johor Bahru to Kota Bharu, Kuching and Kota Kinabalu.

6. ITS Deployment Plan

Three strategic focuses in the ITS Deployment Programme:

☞ identification of proposed ITS projects

☞ identification of ITS strategic projects

☞ identification of priority areas for enhancement of ITS deployment

Government of Malaysia

6.1. Proposed ITS Projects

➢ Backbone structure in the development of ITS implementation programme.

➢ Serve as reference for future overall planning and development of ITS deployment.

➢ The projects are under each of these nine ITS sectors:

  i.   Advanced Traffic Management Systems
  ii.   Safety Systems
  iii. Advanced Public Transport Systems
  iv.   Advanced Traveller Information Systems
  v.   Electronic Payment Systems
  vi.   Commercial Vehicle Operation Systems.
  vii. Advanced Vehicle Control System.
  viii. Emergency Management System
  ix.   Information Warehousing Systems

6.2. ITS Strategic Projects

➢ As a demonstration project for future ITS deployment.

➢ Ten projects have been identified:

    i.   Integrated Transport Information System (ITIS).
    ii.   Electronic Payment Services Interoperability.
    iii. Intelligent Enforcement.
    iv. Commercial Vehicle Information System Networks.
    v.   Information Warehouse on Land Transportation.
    vi. Safety Enhancement to Vehicles.
    vii. Common Ticketing for Public Transport Services.
    viii. '511' Phone and Web Service.
    ix. Advanced Public Transport Management System.
    x.   Real Time Adaptive Traffic Control System for Selected Municipalities.

6.3. Priority Areas for Enhancement of ITS Deployment

➤ Four priority areas to ensure the sustainability of national ITS system architecture and the successful deployment of ITS:

i.   Research and development.
ii. ITS outreach programme.
iii. Professional development.
iv. Market support and opportunities.

ITS System Architecture for Malaysia

➢ Recommendation of the ITS Master Plan Study.

➢ The study to develop ITS system architecture for Malaysia has embarked in Jun 2006 as an addendum to the ITS Master Plan Study.

➢ Objective of the study is for seamless integration and to guide the coordinated deployment of ITS programmes within the public and private sectors across transportation modes throughout Malaysia.

➢ Provide the directions in which ITS applications could be deployed uniformly.

ITS System Architecture for Malaysia

Scope of the Study:

| Task	Description
1	Formulation of Design Framework
2	Development of Logical Architecture Framework
3	Development of Physical Architecture Framework
4	Development of Deployment Packages Framework
5	Establishment of Critical ITS Standards
6	Formulation of Maintenance Strategy for the ITS Architecture of Malaysia

ITS System Architecture for Malaysia
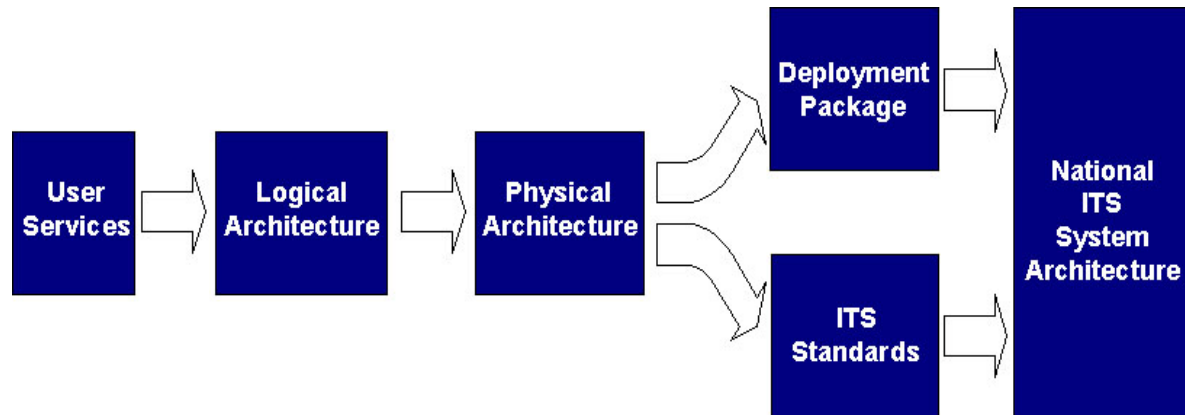
Establishing ITS System Architecture for Malaysia

ITS System Architecture for Malaysia
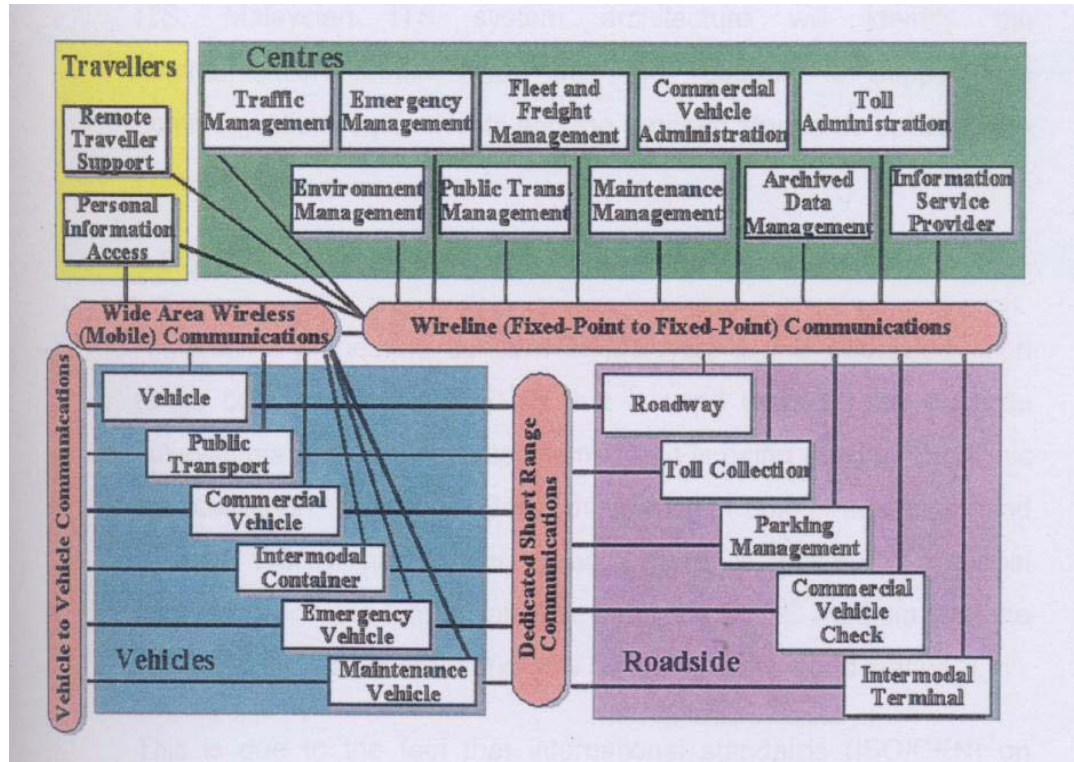
Typical ITS System Architecture

Outlook

In the near future, conventional traffic management system will be slowly phasing itself out for a new era of ITS technology.

Thank You

Government of Malaysia