

## Transport Forecasting in Asia

### MVA Transport Forecasting Services

MVA has developed and applied transport forecasting models in most Asian countries. MVA's models range from multi-modal models of the region's major urban areas, to models used to assess viability of proposed toll road and rail projects, and traffic impacts of proposed commercial developments. Model outputs form the basis of engineering, financial and economic evaluation, or analyses of transport and land-use policy options.

MVA uses most leading transport software modelling packages such as CUBE VOYAGER / TRIPS, SATURN, EMME/2, TRANSYT, PEDROUTE, PARAMICS, as required to suit individual project and client needs.

### Recent Forecasting Models and Applications

#### Hong Kong

- ▶ Comprehensive multi-modal model for Hong Kong (MVCTS), fully compatible with Government's own models. The model is continually updated and is used on infrastructure, planning and investment projects.
- ▶ Several local traffic models (TRIPS, SATURN and PARAMICS).
- ▶ Airport access model, used to prepare forecasts for road, bus, airport express, and commuter rail.
- ▶ Strategic multi-modal forecasting for the Pearl River Delta region (Macau to Guangzhou to Hong Kong).

#### Thailand

- ▶ MVA led the Urban Transport Database and Model Development project to develop transport models, which are now used to analyse major transport infrastructure investment in Thailand.
- ▶ Bangkok Regional Models MVA's detailed highway and PT models, used to provide forecasts for present and future tollroad and mass transit projects.
- ▶ Chiang Mai transport model, used to test traffic management and physical junction improvements.

#### Malaysia

- ▶ Kuala Lumpur / Klang Valley - linked highway and public transport models used to forecast toll road traffic and revenue, bus ridership and LRT patronage.
- ▶ Johor Bahru public transport model, used to study bus route reorganisation and the role of light rail.

#### Singapore

- ▶ MVA undertook a major updating study for the Government's EMME/2 models, focussing on improving representation of ERP

and public transport transfers. The study involved a programme of 6,500 HIS and 2,500 SPS surveys.

- ▶ MVA also maintains a detailed and up-to-date CUBE model of Singapore's public transport systems. This model is used for PT integration and fare strategies.
- ▶ Highway and public transport models of the Buona Vista area, used for rail, bus and traffic forecasting.

#### Philippines

- ▶ Multi-modal model of the Metro Manila area. The model has been used to assess a proposed sub-urban commuter rail system; the EDSA Metrostar Express light railway; the proposed Pasig Expressway.

#### Indonesia

- ▶ Jabotabek model developed and refined specifically for evaluation of proposed BOT tollroad projects.
- ▶ Java highway model, used for the assessment and prioritisation of arterial and toll road planning in Java.
- ▶ Several local and regional models for public sector and private clients, to provide traffic and revenue forecasts for existing and planned toll road networks.

#### Vietnam

- ▶ A multi-modal model of Hanoi was built to assess options for railway and public transport development.
- ▶ A comprehensive model of Ho Chi Minh City, used to develop a transport masterplan for the city and feasibility studies for Metro Line 2.

#### China

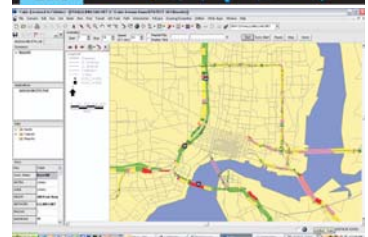
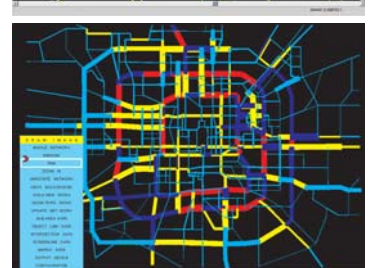
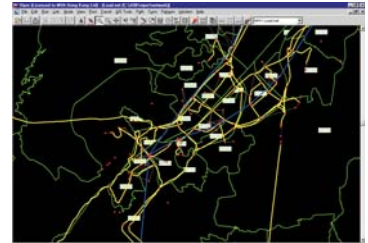
- ▶ Beijing 4-stage model, used to evaluate transport planning strategies and infrastructure programmes.
- ▶ Guangzhou 4-stage model, used to evaluate transport infrastructure programmes and highway projects.
- ▶ Several local and regional models, to provide traffic and revenue forecasts for various toll road projects.

#### Taiwan

- ▶ Taiwan 4-stage model, used to provide patronage and revenue forecasts for the High Speed Rail project.
- ▶ Kaohsiung multi-modal model, used to provide forecasts for the new MRT network.

#### India

- ▶ Strategic and detailed forecasting models for Mumbai, used for both highway and public transport / MRT forecasting and feasibility studies
- ▶ Purpose-built forecasting models for Delhi Airport Rail patronage & revenue studies



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