

Note on
Transport Information System and
Journey Time Indication System

Introduction

This note provides the following information on the Transport Information System (TIS) and the Journey Time Indication System (JTIS) -

- (a) the calculation of economic benefits adopted in the cost and benefit analysis; and
- (b) the estimated cost of in-vehicle navigation units.

Background

2. At the meeting of the Finance Committee held on 1 June 2001, Members approved a new commitment of \$63.6 million for the implementation of a Transport Information System and a new commitment of \$20 million for the provision of a Journey Time Indication System. During the discussion of the item, Members requested the Administration to provide information as stated in paragraph 1 above for their reference.

Calculation of Economic Benefits

3. There are about 1.34 million private vehicle trips made every weekday, where 410,000 trips are regular trips (for normal work and school journeys) and 930,000 trips are non-regular trips. Based on a conservative estimate of some 5% of the non-regular trip driver using the route guidance function under the TIS to find the shortest of fastest routes for their trips, it is expected that the average trip time saving would be about 5 minutes per trip for these 46,500 non-regular trips per day.

4. Based on the values of time adopted in the Third Comprehensive Transport Study which was completed in 1999, the weighted average value of time of motorists is \$1.7 per minute. Using 250 working days a year, the annual benefits accrued from motorists arising from savings in travelling time are about \$100 million.

5. Separately, there are about 9.89 million public transport passenger trips (excluding taxi trips) made every weekday, among which 4.33 million are non-regular trips. Again using a conservative estimate that some 5% of such public transport passengers would use the public transport inquiry service available under the system, it is expected that an average of 3 minutes per trip would be saved for 216,500 public transport passenger trips per day. The weighted average value of time of public transport passengers is \$1.13 per minute, and the annual benefits accrued from public transport passengers are about \$180 million.

6. The value of time was derived from data for different types of trip purposes and different types of household income groups collected in the 1992 Travel Characteristics Survey and the 1996 By-Census. Based on the money spent on travelling, such as fuel costs, toll, parking cost and public transport fare, different values of time were calculated for different types of road users. Taking into account the projected number of types of trips made by different income groups, we further calculate the weighted average values of time for all motorists and all public transport passengers, and these values are adopted in the cost and benefit analysis.

Estimated Cost of In-vehicle Navigation Unit

7. At present, in-vehicle navigation units are not readily available in Hong Kong. With the establishment of TIS, it is expected that such units would either be provided by vehicle manufacturers as a standard item for their vehicles or by information service providers for installation in the vehicle as an add-on item.

8. According to our research, the current market prices of the in-vehicle navigation unit range from \$9,000 to \$13,000, depending on the accuracy, function and quantity of built-in information. It is expected that in-vehicle navigation units would be sold at similar prices in Hong Kong in future.

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