DEVELOPMENT OF A COMPUTERIZED TRANSPORT AND LAND-USE DATABASE FOR THE CITY OF KANDY

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Kandy is one of the major commercial centers in Sri Lanka. In every working day, around 35,000 vehicles enter the Kandy municipality, along the seven major entry roads to the city. In a fast expanding city, it is very important to take into consideration the effect of land-use on transport and vice-versa in planning. In other works, it is important to adopt an integrated approach in planning land-use and transport. One very important pre-requisite for integrated planning is a comprehensive database of land-use and transport.

Different institutions dealing with different aspects of city life in Kandy maintain data related to transport, land-use and environmental situations of the city. However, the absence of a common single database that contain transport and land-use information is greatly felt in the integrated planing of land-use and transport.

Initially, this database is developed for the area within the Kandy municipal limits. The database is developed so that it can be accessed by a wide spectrum of users varying from planing experts to administrators. Therefore, a graphical user interface (GUI) is developed through a web-interface, which in very common at present, to access the database.

The database developed contains basic information on the municipal road network and the Central Business District (CBD). The spatial unit of analysis is a city block in the case of land-use data and a road link (or node) in the case of transport data. Road link data include such physical features as length, width, gradient, surfacing, shoulders, drainage etc. and operational characteristics such as on-street parking controls, link flows, link speeds, peak and off-peak journey times etc. land-use data include land-use category, population, employment, etc. However, at present these details are confined to the CBD only.

Some of the data are collected from the institutions that maintain such records. However, most of the information related to municipal road network are obtained through a series of traffic surveys. It is important to continue the development of this database with time so that the trends in the growth of the city also can be studied. The land-use component should be expanded to cover the suburbs of the city as well.