DEVELOPMENT OF A COMPUTERIZED DATA BASE TO MANAGE AND INTERPRET ROAD TRAFFIC ACCIDENT DATA

H.J. EDIRISINGHE

Department of Civil Engineering, Faculty of Engineering, University of Peradeniya

The authority responsible for maintaining road traffic accident records in Sri Lanka is the Police Department. Due to lack of facilities, road traffic accident details are maintained manually by the Police Stations; only a summary of these records are sent to Traffic Head Quarters in Colombo in order to compile statistics annually. These summarized records do not carry many information required for a scientific study. The main objective of the present study is to identify accident black spots in Central Province Road Network using police records, by interviewing drivers and road maintenance authorities, and by field inspection. To carry out the study, accident records of last five years were collected from major police stations in the Central Province. The data from major police stations at Matale, Kandy, Gampola and Hatton were obtained so far. The data from sub police stations in the province are to be collected in the near future.

A computerized data base is prepared using Microsoft Access software to record all the information regarding an accident necessary for the current study. The information recorded included date, time, location, accident category, vehicles involved, casualties, details of vehicles, details of drivers, and post accident action. To identify the location of the accident, a computer program developed using Visual Basic based on GIS concepts was used. This Visual Basic program can be used to digitize maps, and for display and manipulation of the digitized output; preparation of collision diagrams is also possible using this program.

The data base contains details of road network in addition to traffic accident information. The details included are geometrical properties of roads, corridor information, locations of police stations, hospitals, schools, RDA officers, rail crossings, bridges etc. Therefore, this data base will be useful for maintaining data on highway information system for various decision making processes also.

According to the data summarized so far many accidents are happening on narrow bands in hill country road network. Once the data base is fully completed, accident black spots and reasons for frequent road accidents, vehicle involvement, and such other relationships may be easily identified.