IDENTIFICATAION OF AN APPROPRIATE URBAN DATA BASE FOR EFFECTIVE URBAN PLANNING

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A Dissertation Presented to the
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PREFACE

At a time when great enthusiasm is being demonstrated to harness the advantages of the modern technological age for the betterment of man-kind in every sphere, it is only natural that an attempt should be made to use modern and sophisticated electronic devices for the formulation and maintenance of data bases. This study is a modest attempt to identify and describe a suitable data base to serve the needs of urban planning. This study was undertaken as a part of the research related to the M.Sc cource in Town & Country Planning of the University of Moratuwa for year 1984. For the purpose of this study, 33 Govt. institutions which are sources of urban planning data were investigated by means of a questionnaire.

Urban planning cannot be cosidered a sphere isolated from the rest of society. Planning is a multi-disciplinary subject which embraces many fields and sectors. In this context more and more sophisticated techniques and mathematical models are used for analysis, formulation of new strategies, and to represent the complex urban entity. Considering this challenge and the increasing use of new technology in the world to simplify complex processes, this study attempts to identify an appropriate data base for urban planning. It should be noted that to date most urban planners have used data which was out date or data collected by different individuals in ad-hoc manner. Such a process is difficult and time-consuming because such collection methods were not sophisticated or advanced. Thus it is clear that proper urban planning needs an appropriate data base in order to make planning more effective and beneficial to the community. The data base proposed in this study is flexible, accessible as well as capable of being updated without much difficulty.

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By means of this analytical study of theory, techniques and surveys, it was possible to identify subject areas of data and their manipulation, completion and storage in appropriate ways. The evaluation of the present information system in Sri Lanka led to the discovery of certain shortcomings and disadvantages. Form this emerged a suitable data base for urban planning in Sri Lanka which will do away with these shortcomings and disadvatages and at the same time help effective and successful urban planning. This study, therefore, was, in effect, a theoretical, practical and also an academic exercise in planning.

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SYNOPSIS

This study is an attempt to identify an appropriate urban data base system for effective urban planning in Sri Lanka. It consists of an analytical study and a case study of the present flow of urban planning information in Sri Lanka. This analytical study and the case study have been used to formulate certain broad strategies for the establishment of an appropriate data base system for use in urban planning in Sri Lanka and One of them has been selected for detailed treatment in this study.

This dissertation consists of six Chapters. The First Chapter reviews the functions, purposes, and the role of urban planning and examines different types of urban plans in order to identify the sub-systems of an urban area for the purpose of demarcating specific subject areas of data which are crucial for urban planning. It also examines the fundemental concept of data base and the need for an appropriate data base for effective urban planning in Sri Lanka.

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The Second Chapter evaluates the present flow of urban planing information in Sri Lanka. The first part of this Chpter attempts to identify the present flow of information, examines the spatial units on which the collection of information takes place at present, and discusses the method of processing and storage used at present. This section is based on an institutional survey which was carried out as a part of this project. The second part of this Chapter is devoted to an evaluation of the flow of information identified in the earlier section. The survey of users of urban planning information which was also carried out as a part of this project was the basis for this evaluation.

Chapter Three highlights some specific proposals for the formulation of an urban planning data base system which will be suitable for use in Sri Lanka. The first part of this Chapter discusses certain selected basic approaches and proposals through a technical evaluation. It identifies a specific model of an urban data base as being appropriate to the Sri Lankan context. The final part of this Chapter submits proposals for the re-organization of the present flow of urban planning information so as to make it support the proposed data base system.

Chapter Four spells out detailed technical specifications of data collection formats and methods of processing, storage and distribution of urban planning data. It also gives a description of two selected applications of the proposed data base system. This is done by way of a sample demonstration of the practicability of the proposed system.

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Chapter Five of this study evaluates the proposed data base system in relation to different types of urban plans, Urban planning techniques and mathematical models.

Chapter Six, which is the final Chapter of this study, summarizes the conclusions and the general recomendations. It also includes some recommendations for the integration of national and regional planning data with urban planning data.