INTRODUCTION
.1 MANAGEMENT INFORMATION SYSTEMS

Management Information systems are stated to be strategic when they change the way the firm competes or changes the industry's structure. It has been argued that Strategic Information Systems (SIS) could contribute to firm's competitive advantage if they could assist in making sharp business decisions and formulates viable strategies.

Gordon B. Davis defines MIS as "Integrated man/machine systems for providing information to support the operations management and decision making functions of an organization. The system utilizes computer hardware and software, manual procedures, management and decision models and a database."

MIS is the "System intended to provide information for decision making, planning, organizing and controlling the operations of sub-systems of the firm and to provide a synergistic organization in the process" (Robert G. Murdic, Joel E. Ross, James R. Craggett).

1.1.1 Emergence of MIS:

The predominant business applications of MIS in 1950's were payroll, billing and various other types of routine clerical and accounting operations. These transaction processing applications were relatively easy to structure using the limited number of any typically hard to use computer language of 1950's. By the mid 1960's advances in disk technology made it possible to get faster and to access data in different ways.
The development of operating systems enabled computers to run with less manual intervention. Each of these developments and others contributed to the rise of so-called Management Information Systems. During 1960's and 1970's the term was limited in application. The primary purpose of these were generation of reports to help managers in decision making.

The transaction Processing Systems used to correctly calculate customer account balances and produce statements. However, this data could also be used to create reports and supply information to a variety of managers for decision-making. By late 1960's MIS professionals began pushing the concept of "Total Information System" i.e., an enterprise wide mega system that could meet all of the firms decision-making and transaction procession needs.

The MIS of 1960's has supplied a wide audience of decision makers with preplanned information in the form of periodically printed reports. In 1970's and 1980's Decision Support System (DSS) provided many of those same decision makers with easy-to-use computing and communication capabilities that could meet their individual information needs. For instance, DSS enables managers to sit at interactive display terminal and search through databases for useful information relating to the decisions they must take.

With DSS, customized queries and reports can be generated at a manager's workstation without the assistance of a computer professional.
1.1.2 PROCESSES OF MIS:

1.1.3 BENEFITS OF MANAGEMENT INFORMATION SYSTEM:

- Operation Efficiency
- Functional Efficiency
- Spotting and taking advantage of Opportunity
- Better Service
- Product creation and improvement
- Client lock in
- Competitors lock out

1.2 DECISION SUPPORT SYSTEMS:

"Good decision making" means that we are informed and that we have relevant and appropriate information on which to base our choices. In some cases, we support decisions using existing, historical data, while at other times, we collect the information especially for a particular choice process. This information comes in form of facts, numbers, impressions, graphics, pictures and sounds. It needs to be collected from various sources, joined together, and organized. The process of...
organizing the information about the various options is the process of modeling. Models are created to help decision makers understand that ramification of selecting an option. The models can range from quite informal representations to complex mathematical relationships (Vicki Sauter)

1.2.1 DEFINITIONS:

"A DSS is a computer – based system that supports choice by assisting the decision maker in organizing information and modeling outcomes."

"Interactive computer – based systems, which help decision makers utilize data and models to solve unstructured problems" (Gomy and Scott Morton, 1971).

"Decision support systems couple the intellectual resources of individuals with the capabilities of the computer based support system for management decisions makers who deal with semi structured problems (Keen and Scott Morton, 1978).

'A decision support system (DSS) is a computer based system that helps the decision maker utilize data and models to solve unstructured problems' (Sprague and Carlson, 1982).

The key characteristics of DSS are:

1. Incorporate both data and models.
2. Designed to assist managers in semi-structured or unstructured tasks.
4. The objective of a DSS is to improve the efficiency with which decisions are made.
In terms of the taxonomy, a DSS is aimed at senior managers with unstructured, strategic decisions. The organization may either be very mature and, for example, rely on extracting data from a number of operational systems, or it may be at the ad hoc stage where DSS are developed by end users without resource to the information systems strategy.

In so far as many GIS have been designed as DSS they often fail for two reasons, according to Densham (1989). Insufficient attention is given to the process and context in which decision are made, and secondly, many GIS do not support the analytical and statistical modeling required by many decision makers.

Many of the modeling approaches are complex and like statistical techniques, offer the user ample scope for misapplications. According to Densham (1991) the embodiment of knowledge about the selection of appropriate models in an area of application of expert systems to the GIS world.

1.2.2 DECISION MAKING:

Decision -making is a process of choosing among alternate courses of action for the purpose of attaining a goal or goals. (Efraim Turban and Jaye Aronson)

Planning involves a series of decisions:

1. What should be done?
2. When? How? Where? By whom?
Hence, planning implies decisions making. Decision-making is directly influenced by several major disciplines, some behavioral and some scientific in nature.

THE ACCEPTANCE OF DECISION SUPPORT SYSTEM:
The obvious question is WHY? One factor contributing to the acceptance of decision supporting system technology is that desktop computing has made technology easier to use and portable.

1.2.3 USES OF A DECISION SUPPORTING SYSTEM:
1. Look at more of a decision.
2. Generate better alternatives.
3. Respond to situations quickly.
4. Solve complex problems.
5. Consider more options for solving a problem.
Management Information Systems and Decision Support Systems are attaining increasing importance in the 21st century with increase in application of Computers in the field of Management Science and Technology. The addition of spatial information to MIS has lead to formulation of GIS, which has abundant scope for Business and Service Sector Planning and Management.

Over the past few years there has been a remarkable increase in interest in GIS in Universities, Government Departments and Environmental agencies. Activity in these traditional core areas is now being supplemented by vigorous growth in several emerging markets, the most important one being business and service sector planning. For many of these new users, the GIS focus to date has been basic mapping and asset management. Others, more advanced users are modeling data held in integrated databases. This modeling activity is frequently referred to as spatial analysis.

The present study is primarily concerned with the implementation of spatial analysis functionality in commercial GIS software systems and its implications for business and service sector planning. The study will address business and service sector for which Spatial Analysis tools will be applied.

Spatial Analysis is one of those terms that are so widely used in so many different contexts that it was difficult to define its succinctly. The last few years have witnessed huge improvements in the price performance ratio of computer hardware, such that it is now possible to
package very high-performance processors in the form of desktop personal computers. This has substantially removed the processing bottlenecks restricting spatial analysis that was evident even just few years ago.

Clearly, interest in spatial analysis as a research topic has been enormous in recent years, with it featuring high on the research agenda of all major national initiatives. Academics and researchers have been quick to extol the virtues of spatial analysis and deride the use of GIS for inventory applications. It is interesting, therefore to examine the impact of spatial analysis on the developers of GIS technology, and on the ultimate arbiters of the value of spatial analysis, the users of GIS. The latest phase sees the evolution of an information system from a transaction processing to a decision-support system capable of sophisticated analysis and modeling operations. During this phase there will be considerable emphasis on spatial analysis and modeling.

At the level of business operations, management tasks focus on how to manage the facilities and assets of the organization. This might involve, for example, a telecommunications company managing the network of nodes and lines around a particular city. A parcel delivery service company would need to optimize the routes for collection and delivery, manage parcel distribution centers, etc. In both these examples, geographical data is a vital input to the decision making process. Such applications involve little spatial analysis and great deal of automated mapping function.