ESTABLISHMENT OF A GEOGRAPHICAL INFORMATION SYSTEM WITH AN INTERFACE FOR LAND USE PLANNING

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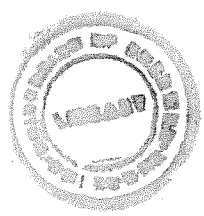

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ABSTRACT

This Project has been developed to create ARC tools for creation of a raster- and vector-based systems that provide Geographical Information Systems (GIS) inventory, display, analysis and modeling capabilities and a user interface system for calculation some socio-economic parameters.

A GIS is designed for the collection, storage and analysis of objects and phenomena where geographic location is an important characteristic or critical to the analysis.
Geographical Information Systems (GIS) have a wide variety of fields of application, since more and more users are now spatially referencing their geographical data.

Most GISs have their own language, the command language that directs it to perform any of its spatial data management and processing functions. The command language can become extensive if groups of commands can be grouped together and specified as macros. Therefore this dessertation was developed using the Simple Macro Language (SML) which available in the ARC/INFO GIS package (PC version).

Major emphasis was given to the developing of raster-based system which is a grid cell data bank that stores land related data by digitizing maps at grid cell basis. The main menu related to this module is mounted on the digitizer table and can be executed by digitizing the requred option on the menu.

The Vector-based module will used customized digitizer menus for coverage automation.

The User Interface System is designed to use the data in the main GIS system and calculate some parameters related to crops and population figures using PROLOG language.

Lots of further improvements can be done to create intelligent type user interfaces and customized digitizer menus for geospatial data automation. These are proposed in chapter 5.