Management of an Urban Development Map: Design and Development of a GIS Interface to Solve Technical Problems

El Hassane SEMLALI, Lamiaa AIT LAKHRAZ, Rabia HAMEL, Abdelouahed EL IDRISSI, Morocco

Key words: Urban Development Map, GIS, database, CDM, user interface, note of information

SUMMARY

In order to prepare a good aesthetics of a city and ensure a better framework to inhabitants' life, it is necessary to make a good planning of the urban space. In Morocco, the management of this space is based on the Urban Development Map (UDM). This UDM is composed of different kind of data, so that its exploitation raises several technical management problems.

Knowing the data of a UDM, the present article tries to develop solutions to these technical problems using GIS technology. First, a Conceptual Data Model of the components of the UDM is designed using the Entity Relation model. Then, data are prepared and a prototype database is established. Finally, a GIS user interface is developed using VBA language within the ARCGIS 8.1 environment.

The developed user interface proposes solutions to the following functions:
- Acquisition of spatial and descriptive data as well
- Data updating, processing and analyzing
- Spatial and non spatial requests formulated on the UDM concerning: the position of a title, requests of opposition, disposition of a note of information, favorable and unfavorable opposition, and projects of allotments
- Classification of data based on specific criterion
- Searching spatial information concerning the UDM areas touched by flooding.
- Displaying and printing thematic maps, with layouts, related to road network, public equipment, and population.

The developed interface was tested using data from the Urban Agency of Settat and seems to meet most professional users' needs.

TS37 – Spatial Development Infrastructure Linkages with Urban Planning and Infrastructure Management 1/11
El Hassane Semlali, Lamiaa Ait Lakhraz, Rabia Hamel and Abdelouahed el Idrissi
TS37.5 Management of an Urban Development Map: Design & Development of a GIS User Interface to Solve Technical Problems

From Pharaohs to Geoinformatics
FIG Working Week 2005 and GSDI-8
Cairo, Egypt April 16-21, 2005