

Maintenance of cadastre and regulation data for the city of Pazardjik

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Abstract

Indisputably are the importance and the key role of Geographic information system , well known under GIS, through the numerous applications in various spheres, for functioning and development of many fields. Its importance is tangible by reaching of different decisions, which are fundamental base to deliver diverse mix of services and solutions.

The functioning of GIS in Pazardjik municipality is connected with the necessity to support of real time operating cadastral and regulation data base – cadastral and town- planning maps and amendments and to put them in real system of coordinates.

Introducing GIS is useful move for every Bulgarian Municipality, which searches modern and efficient ways to improve the quality of the delivered services.

Crucial importance for developing of GIS has analysis, exhaustiveness and entirety of the information, the effectiveness of the final product and to be good enough provided with software.

In april 2001 Municipality of Pazardjik signs cooperation agreement with the American city West Bend in the frame of Town Twinning Program. The agreement accents on three basic issues about cooperation and one of them are development and implementation of GIS for the city of Pazardjik.

We had create a digital data base, which contain all the information of tracing paper, melinex, engineering line and the available archive. We also, rapidly improved the quality of the services, relate with activities of GIS.

But created digital model of the city of Pazardjik represent an open and dynamic system, which allow to be filled and improved with a lot of dates.

First steps

- Idea of the project – 1993/94r.
- Start up in 2000 on the twinning program in mutual cooperation between city of Pazardjik, Bulgaria and city of West Bend , WI, USA
- Realization – 2000 – with the establishment of division "GIS" to the Directorate "Territorial and Town Structure" and a choice of appropriate software for the GIS needs

Objectives of GIS

- Creation of Digital Model for Municipality of Pazardjik and four town halls
- Join to the project "E-Municipality"
- Fast and accurate service for the citizens
- Collaboration with different divisions and directorates in Pazardjik Municipality and the region
- Effective problem's solutions regarding the structure of the territory infrastructure and economic development

Opportunities of the chosen software for GIS objectives

- Interface, fully translated in Bulgarian, which contains main functions for creation of plans and maps and their revision
- Keeping up of files formats for input and output raster images
- Keeping up of files formats for ZEM, DXF, CAD, BMP, MapInfo
- Keeping up of inner system format BGR for data transfer between the separate files
- A link between graphical and text data

Advantages of the software

- Keeping up of graphical and text data and natural connection between them
- All the data is situated in relational data- base
- Opportunity for the network and possible connecting of more users to the created data-base
- Fast access to all vectors data
- Data protection of illegal access
- Data restoration after crash in the power supply, the computer or the system
- Regular and simplified internet update after development of a product new version

At GIS division

- We work with software of Bulgarian language provided by “Land Data Center” Company and it works under “Windows” system
- It is created four job positions
- It is working a team of specialists
- There is a direct Internet access for software update and opportunity for getting information about GIS development in others municipalities in Bulgaria and in the world
- It's achieved an unified file format for maintenance of Ministry of Agriculture and Forestry and Ministry of Regional development and Public Work in a connection with the changes in the regulations of the Law of territory structure and the Law of land survey and properly register
- There is a local network for inner access to and from separate divisions in Municipality of Pazardjik

Land register and urban-planning

- Keeping up of cadastral and regulation data- base
- Automated printing of plans and different maps of city of Pazardjik
- Making of Detailed Structural plan, planning changes, maintenance of archives of geodetic surveying of new buildings, objects and infrastructure
- Digital exchange of cadastral data-including underground equipment and machinery
- Making of different types of plans and schemes for maintenance and development of cadastral and urban-planning data
- Revision of digital data with information received by other source - accepted geodetic surveying for cadastral replenishment
- Replenishment and revision of the digital model with a new graphical information – parts of accepted urban and cadastral plan and changes in them

Prospects

- Enlargement the work of GIS through solving tasks in sphere of ecology ,environment, civil defense, and other directions related to GIS work
- Collaboration in projects in the sphere of town planning, cleanness and transport
- Keeping out and development of civil infrastructure's data-base
- Citizens access to the resources of the graphical system
- Data exchange with the Registration Agency for keeping out actual data
- Planning development and resources management
- Making of maps by specific investigations
- Giving up an internet information about cadastre of the town
- Receiving of digital documents through internet

Problems

- Outdated hardware
- Financial problems
- Eventual refusal for institutional collaboration

Results

- Monthly data update with cadastral and urban-planning information
- Effective collaboration with the different directorates, divisions and sectors in Municipality of Pazardjik
- Express, fast and normal making of plans
- It's already made :
- Informational map with alphabetical index and street directory and their location
- Informational map of Pazardjik Municipality showing all the settlements with their building's and land's borders, as well as the important characteristic sites - water, transport etc.
- Map of tax areas
- Map of the electoral areas
- Different types of thematic maps for the municipal administration need

