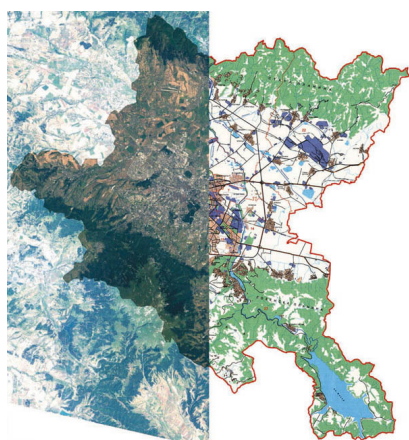


SICAD-UT-E AS AN ELECTRICITY NETWORK DOCUMENTATION SYSTEM FOR THE CITY OF SOFIA

The state owned utility company, "Electrical Distribution - Capital", started in January 2002 a Pilot Project introducing the geographical information system SICAD and the specialized application for electrical networks SICAD-UT-E. The main project task was to map part of the electrical network and to test the functionalities of the application with real data. Data analysis of the available information was carried out and methodology for data migration was elaborated. A possible integration with the software for network calculation SINCAL was shown.



The Customer

"Electrical Distribution - Capital" Plc is one of the biggest companies for utilities with more than 700 000 subscribers. The exchange of information for the network, which the company keeps is considerable and is expanding fast. Department "GIS

and perspective development" collects and classifies the information for the electrical distribution network and the equipment /transformers, trafostations/. Data must be always up-to-date and accessible all the time. For this reasons the most convenient are the graphical based information systems.

The Challenge

The company plans to use a Geographical Information System for documentation of the electrical network, which by this moment is stored in a graphical way/ in digital and analog format/ and the relevant attributive information. The main task is to map into appropriate GIS both the georeference network and its schematic representation (dispatcher scheme). The system must provide the possibility to maintain and store the data in RDBMS as Oracle and Informix. Different divisions of the company must have controlled access to the geodatabase and use an interface tailored in different manner for each specific user. The system architecture have to ensure flexibility and scalability and to organize data in appropriate structure for network calculations and future planning.

The Project

In the beginning of 2002 a pilot project was started on the base of the specialized application for electric networks SICAD UT-E from SICAD GEOMATICS and the network calculation software SINCAL from Siemens PTD. In the project were involved Department "GIS and perspective development" of "Electrical Distribution - Capital" Plc; Stalker - KM Ltd., the official partner of SICAD Geomatics in Bulgaria; experts from

L&Mark Terinformatika - partner of SICAD Geomatics in Hungary.

In the frame of the pilot project the following tasks were elaborated:

- Documentation of part of the medium voltage network on a test area of Sofia - residential complex Lulin
- Integration of SICAD UT-E with the software for network calculation SINCAL
- Elaboration of methodology for data migration, development of the necessary conversion tools

Current results

As a result of the work, the basic components of medium voltage network were documented in SICAD-UT-E. These components are:

- Cables
- Trafostations
- Equipment in trafostations (transformers, busbars)

Part of this information was exported to SINCAL, which allows different calculations to be made (loadflow, optimization, etc.).

After the import of the georeferenced network for the test area the SICAD-UT interface was parametrized in order to fit the customer requirements; adaptation of the data dictionary and the dialog masks was made.

One of the most important tasks, which have to be fulfilled in future, is the information link between the georeferenced network and the dispatcher scheme.

