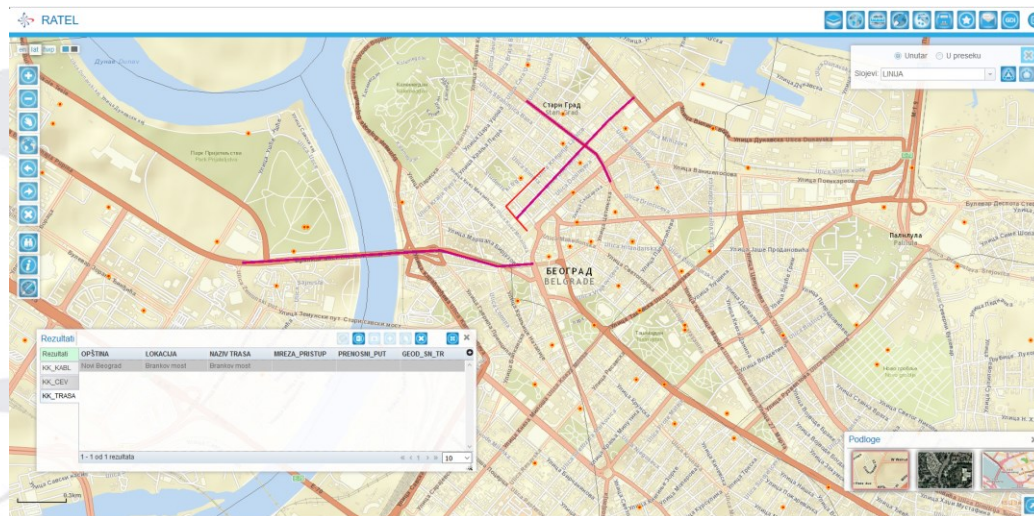




Mapping of Shared Infrastructure



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Budva, 2016

Infrastructure Mapping System

- Reasons for infrastructure mapping :
 - Optimization of infrastructure deployment
 - Avoiding costs of setting-up new networks
 - Better planning/cost sharing
 - Accelerating construction of Next Generation Networks

Mapping System Implementation Strategy

Rulebook on the method of collecting and publishing data on type, availability and geographical location of the capacity of electronic communication networks

- Adopted in July 2015
- Database implementation – deadline is July 2016
- Web – GIS application for end users (Network operators)

Responsibilities

- RATEL defines:
 - Data delivery method(s)
 - Database access procedures
 - Interfaces and protocols
- Republic Geodetic Authority provides base for cable infrastructure data

Types of data in the Database (1)

1) Cable infrastructure data:

- Network operator (owner)/location/cable route
- WGS84 coordinates of important nodes (beginning/end, junction)
- Cable route length/geo-footage
- Cable type
- Conduits information (tube type / number of ducts in the tube / cabinet type / number of cabinets on the cable route)
- Shared capacity / Unused capacity
- Cable ending installation

Types of data in the Database (2)

2) Antenna towers and equipment:

- Network operator (owner)
- Antenna tower location
- Tower construction type
- Tower base shape/dimensions (m)
- Tower height
- Building height in meters (if the tower is mounted on a building)
- Free tower space data (height of the free segment / available azimuth for mounting)
- Equipment (type/free capacity) - if it is the subject of sharing

Access the Database

- Administrative units (RATEL)
- Network operators
- Other entities possessing telecommunication infrastructure, with RATEL's permission

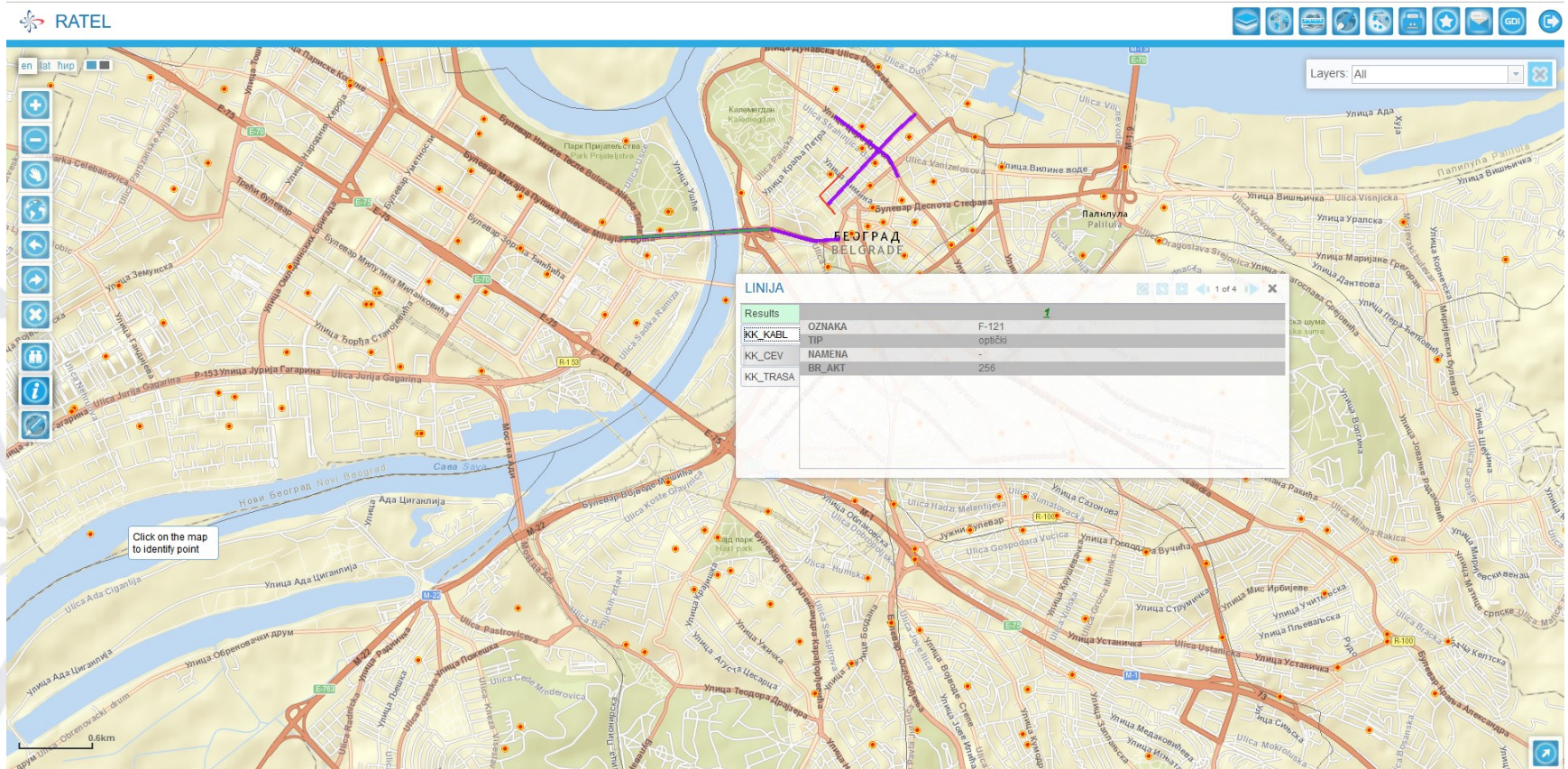
Web Application (1)

- Developed on Esri GIS mapping software solutions
- Esri SDE (Spatial Database Engine)
- Data can be imported:
 - Through a Web application
 - Via services for automated data exchange with Network operators
- Defined access right control

Web Application (2)

- Standard tools for working with maps:
 - Layer turning on/off
 - Zooming
 - Length/space measurements
 - Coordinate defining in multiple coordinate systems
 - Data selection using spatial queries / free hand
 - Variety of bases through free ArcGIS online service (satellite shots, topographic maps, street networks, etc.)

Infrastructure Presentation



The screenshot displays the RATEL web application interface. At the top left, the RATEL logo and language selector (en, lat, hup) are visible. The main area is a map of Belgrade, Serbia, with a purple line highlighting a specific cable infrastructure segment. A popup window titled 'LINIJA' is open over the map, displaying the following data:

Results		
KK_KABL	OZNAKA	F-121
	TIP	optički
KK_CEV	NAMENA	-
KK_TRASA	BR_AKT	256

Below the popup, a scale bar indicates 0.6km. A text box on the map reads 'Click on the map to identify point'. The interface includes various navigation and utility icons on the left and top right, and a 'Layers: All' dropdown menu in the top right corner.

Different Map Views

RATEL

en lat hup

Pretraga

Sloj za pretragu: ANTENSKI STUB

NAZIV LOKACIJE:

OPŠTINA: Novi Beograd

ADRESA:

KONSTRUKCIJA STUBA: Izaberite vrednost...

OBLIK STUBA: Izaberite vrednost...

OPERATOR:

NAZIV:


Pretraži Ukloni

Rezultati

Rezultati	NAZIV LOKACIJE	OPŠTINA	ADRESA	NADMORSKA VISINA	KONSTRUKCIJA STUBA	OBLIK STUBA	DIMENZIJE STUBA [m]	VISINA STUBA [m]
AS_OPREMA	NOVI BEOGRAD, OMLADIN BRIG 21	Novi Beograd						
OPERATOR	NOVI BEOGRAD, OMLADIN BRIG 21	Novi Beograd						
	BG0426D_N_BE Novi Beograd							

1 - 10 od 89 rezultata

Podloge



Conditions for Infrastructure Sharing

- Network operators interested in sharing the infrastructure must provide their data within 6 months from the date the Database was established
- In case of the new infrastructure construction, data must be provided within 15 days after its launch
- Network operators need to update changes in the infrastructure, at least once every 3 months

Thank you for your attention !

REGULATORY AGENCY FOR
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www.ratel.rs

