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Radovan Cvetković,  
Chief Information Officer,  
Telekom Srbija

## The GIS Integration Vanguard

Telecommunications company connects every part of the enterprise with geospatial solutions

### Project Summary

Founded as an independent company by the Republic of Serbia less than ten years ago, Telekom Srbija rapidly transformed itself from a staid monopoly into a technologically advanced company with a reputation for exceptional customer service. Customers retrieve account information and make changes online, employees access customer accounts and location details directly, and decision-makers enjoy real-time visibility into location-based asset data. This is all thanks to Telekom Srbija’s telecom information system (TIS), which uses Oracle Spatial and Autodesk solutions to integrate geospatial and alphanumeric data. With Oracle and Autodesk solutions forming the backbone of TIS, Telekom Srbija has been able to:

- Reduce operational costs and staffing requirements
- Streamline the creation and management of CAD and spatial data
- Accelerate the typical work order completion process from weeks to days
- Enable more cost-effective asset analysis and management
- Improve customer satisfaction

### The Challenge

#### Integration Mission Impossible

With 11,000 employees, Telekom Srbija serves more than 2.5 million fixed telephone line subscribers and nearly 3 million mobile customers. The company is also helping to take Serbia into the Internet age: nearly 50 percent of its customers—are now online. Behind the scenes, Telekom Srbija receives more than 3,500 customer requests and generates 9,000 work orders per day. Many of those requests and work orders require a blend of geospatial and alphanumeric information. Prior to implementing TIS, it took weeks to bring together the data required to fulfill customer requests and complete work orders.

“We had about 15 different regional centers all running their own separate databases without geographic information systems,” says Mr. Radovan Cvetković, Chief Information Officer of Telekom Srbija. “We did not have an integrated information system that could support automated processes or produce the right information for managers. The system was slow, inefficient, and gave limited visibility into our entire telecommunications network.”



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## The Solution

### An Integrated Vision

Telekom Srbija’s IT department completed the alphanumeric portion of TIS in 2002. Then, in 2004, the company turned to OSA Computer, an Autodesk partner and provider of CAD and geospatial professional services, for help in extending the system to include geospatial information. Today, TIS supports all essential telecommunications business functions—including asset management, sales, maintenance, accounting, and customer care. The system integrates data within a unified Oracle Spatial database that connects “who” and “what” with “where”. To create and manage geospatial data within TIS, Telekom Srbija chose Autodesk Map 3D. And to share geospatial data on maps that dynamically integrate customer and asset information, the company turned to Autodesk MapGuide.

“To ensure the success of TIS, we used only technology designed to support seamless integration across systems,” explains Mr. Cvetković. “Geospatial software that stores data in proprietary formats confines spatial data to an island. Autodesk Map 3D is based on an open data model and includes native support for Oracle and Oracle Spatial. Autodesk geospatial software is completely consistent with our vision of a fully integrated system.”

Mr. Boris Damjanović, Development Director with OSA Computer, adds, “This one of the most impressive and complete integrations of geospatial data into other business systems in the region. Maps are now a seamless part of Telekom Srbija’s everyday processes. Because of the heavy customization needed and proprietary data formats, I don’t think that ESRI software could have supported this degree of integration. It certainly could not support the number of employees that Telekom Srbija must serve.”

### Supporting 7,000 Users, 2,000 Concurrently

Today, Telekom Srbija’s engineering and GIS department uses Autodesk Map 3D to design

new and maintain existing infrastructure. The changes they make to the system are stored in Oracle Spatial and made available throughout the organization in real time. Using Autodesk MapGuide and a web browser, customer service agents, maintenance personnel, and decision-makers can view alphanumeric and geospatial data on dynamically built maps. And they do. Each day, over 7,000 employees use TIS, and an average of 2,000 users access the information they need concurrently. The system also automatically populates work orders with all necessary spatial information.

“By spatially enabling our business processes, Autodesk geospatial solutions are adding value to all our data and helping us to serve customers faster,” says Mr. Cvetković. “Customers can call and get answers instant answers to questions. Customers with Internet access can even go online to request new services. We can also create accurate, real-time reports on our network and assets for top-level management, which allows us to make informed decisions faster.”

## The Result

### 38 Days Faster

According to Mr. Cvetković, the combination of Oracle Spatial and Autodesk solutions greatly improved TIS and radically transformed Telekom Srbija’s ability to respond to customers, complete projects, and control costs. He says, “As our company grows, we’re getting more done with fewer employees, and we’re doing things much faster. It used to take 40 days to complete work orders for new telecommunications lines. Now it takes two days or less. TIS, Autodesk solutions, and Oracle Spatial gave us what we needed to become a more dynamic and efficient company.”

## Learn More

Find out how Autodesk geospatial solutions and Oracle Spatial can help you improve the way you create, store, manage, and share asset data by visiting us on the web at [www.autodesk.com/infrastructure](http://www.autodesk.com/infrastructure).