# **CASE STUDY: MINING**

How a national mining agency is now able to manage applications for mining permits through an online form that can be completed in 20 minutes

**Client:** General Directorate of Mining Affairs (Turkey)

**Challenge:** Making license application procedures easier, while monitoring mining operations nationwide

**Solution:** Başarsoft's scalable GIS data environment, synthesizing all data into an instantly updatable system providing easy monitoring, analyses and planning.



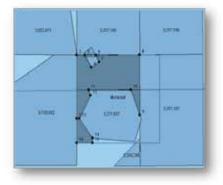
# **Executive Summary**

MIGEM is responsible for issuing licenses for mining research and operations, and was established by a specific law. The existing law does not permit the granting of the same type of mining license for the same area, but licenses for different types of mining can be issued. The first applicant will get the license, and others can get the remaining parts. The GIS system makes it easy to manage this huge and complex arrangement.

The existing licenses, expired licenses, and unlicensed areas for the whole country can all be seen on a single screen.

# **Business Challenge**

- Issuing mine licenses in an open and clear environment
- Managing mine licenses with maximum ease
- Following mining activities in licensed areas
- Controlling unlicensed areas
- · Maintaining historical and current license database
- Storing mine inventory database
- Making spatial analyses and reports based on mine types, license types, license dates
- Making license application procedures easier for companies and citizens





# GENERAL DIRECTORATE OF MINING AFFAIRS (MIGEM)

#### **Customer Profile**

As an agency of the Turkish government and a part of the Ministry of Energy and Natural Resources, MIGEM follows issues related to the licensing of mining operations, including analyzing and checking the applications for mining licenses.

MIGEM issued more than 84,000 licenses in 2013, compared to 10,000 in 2012



#### Solution

Since 2005, Başarsoft's web and desktop based GIS solutions have been developed and in use. Since 2012, a Kiosk Map application has been developed to make it easy for new applicants to apply for their first mining license. This application is used to apply for a mining permit and get the printout

- · by entering coordinates
- · by drawing and area

To evaluate the area of interest for logical and geographical problems

- Map sheet & coordinates are checked
- Orientation control (clockwise)
- Self intersection control
- Minimum/maximum applicable area control
- Area control for sea bed applications
- Free area control
- Steps are followed and reported

#### **Results and Benefits**

- · Service quality is increased
- Productivity is increased
- Dynamic, up-to date, improved and adaptable data analysis
- Visual Analyses can be presented
- Data sharing between departments, ministries, private companies and the public
- Error free applications from the internet for citizens and companies
- 800% increase in applications

# **CASE STUDY**



### **Technology Used**

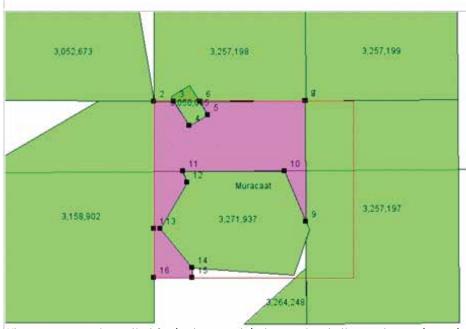
Oracle as Spatial Database.

MapInfo Professional is the leading Desktop GIS solution.

MapXtreme is the powerful web based GIS application software development kit (SDK).

MapXtreme is the leading software development kit (SDK) for integrating location intelligence with existing business systems. It allows developers to build custom mapping applications, provide tailored views of geographic data and automate and augment business processes.





When a new area is applied for (red rectangle), the previously licensed areas (green) and residual areas below a minimum width and area (white) are automatically removed. The remaining area (pink) is that which is available for licensing. The corner coordinates of this remaining polygon are enumerated and stored.



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