



Nobel Systems, Inc.

Building Custom GIS Quickly and Easily

Problem

- Redevelop custom GIS viewing application quickly and easily.
- Provide access to spatial data without conversion to shapefiles.

Goals

- Easy to deploy affordably.
- Integrate seamlessly with the geodatabase without conversions.
- Meet clients' needs for customization.

Results

- Built stable custom application quickly and easily.
- Able to manage data in the geodatabase.
- Client list has grown as a direct result.

ESRI Software Used

- ArcGIS Engine Developer Kit
- ArcIMS
- ArcSDE

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Michael Samuel, President
Nobel Systems, Inc.

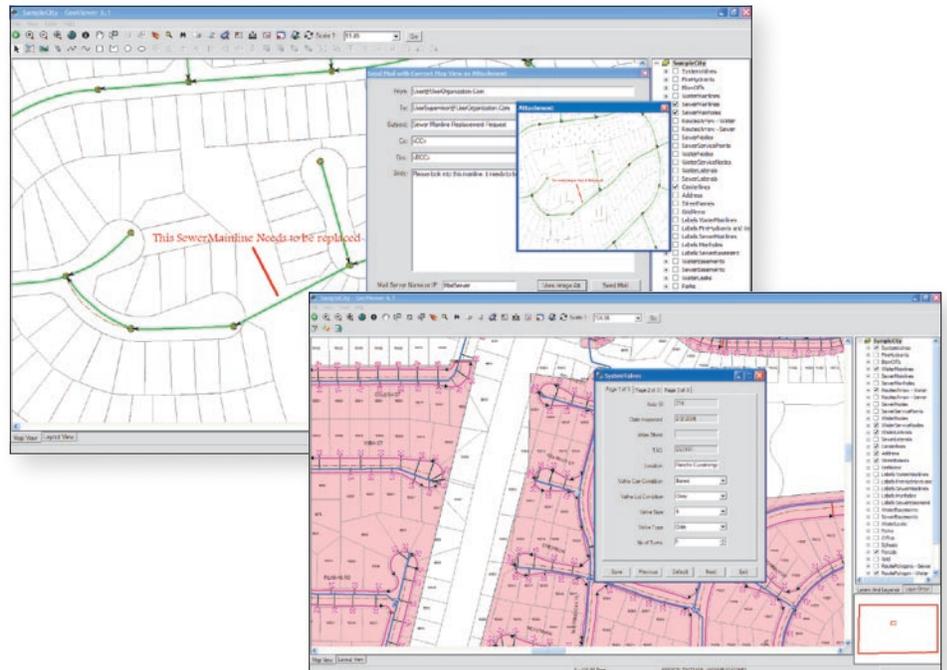


Nobel Systems, Inc., a privately held corporation, provides geographic information system (GIS) data conversion, GIS data viewing and hosting, and GIS consulting. Nobel Systems is headquartered in San Bernardino, California, with offices in San Marcos, California; Reno, Nevada; and Vineland, New Jersey. It has an affiliate in Prague, Czech Republic, as well as an additional production facility in Bangalore, India. Founded in 1992, the company has as its mission to be the premier supplier of geospatial and GIS services for water-related markets in the United States, with a special focus on public agencies.

The Challenge

Nobel Systems provides a full range of GIS services to its clients, from hosting and managing data to building customer-specific applications and converting paper maps to GIS data. The company developed a family of applications called GeoViewer that allows people to view and query data using GIS functionality but without requiring purchase of the GIS software. The original GeoViewer was built on ESRI® MapObjects® embeddable map and GIS components using Visual Basic.

The MapObjects software-based system presented some limitations. For instance, when data is converted, Nobel Systems stores the data in a geodatabase. With a geodatabase, spatial data such as features, rasters, addresses, and survey measurements is stored in an industry-standard RDBMS. ESRI's ArcSDE® is used to manage and access that data. To be read by the MapObjects version of GeoViewer, the data had to be converted to shapefiles, a vector data storage format for storing the location, shape, and attributes of geographic features. Converting spatial data to shapefiles presented difficulties with annotations and field names.

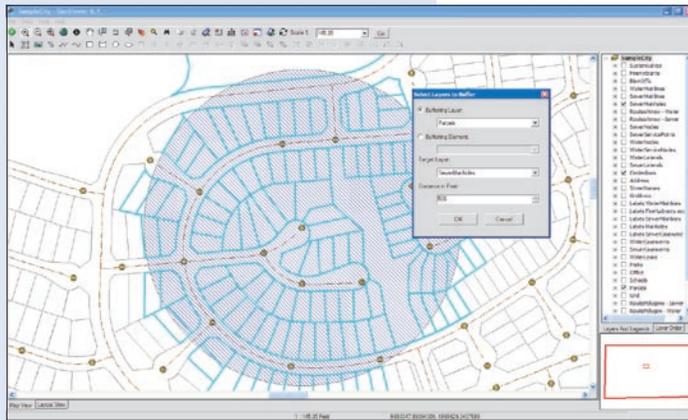


To learn more about ArcGIS Engine, visit www.esri.com/arcgisengine.

The Solution

When it was time to upgrade GeoViewer, Nobel Systems chose to do so using ArcGIS® Engine, a developer product for creating custom GIS desktop applications. With ArcGIS Engine, developers are able to add dynamic mapping and GIS capabilities to existing applications or build their own unique mapping programs. ArcGIS Engine provides a set of components a programmer can use to create a complete GIS application and supports several programming languages for application development. Nobel Systems chose Visual C# .NET as its programming language.

ArcGIS Engine gives the company a more flexible platform to build on and seamless integration with the geodatabase. It is also cost-effective because each client installation of GeoViewer requires only an ArcGIS Engine Runtime license. (ArcGIS Engine Runtime contains the core components to enable the execution of a custom ArcGIS application and must be installed with the custom application.) This permits an easy system of installation and deployment in both the office and the field. GeoViewer can be installed on customer laptops to allow field data collection and synchronization with a master database.



In addition, Nobel Systems developed GeoViewer Online to allow clients to access their data from the Internet. GeoViewer Online is built using ArcIMS®, which is a developer solution for delivering dynamic maps and GIS data and services via the Web. It was developed in ASP.NET and Visual C# .NET.

ArcGIS Engine, ArcIMS, and ArcSDE are all part of the ArcGIS family of products, which allowed Nobel Systems to develop different versions of GeoViewer with a common set of features. All versions of GeoViewer can directly access the geodatabase, making it much simpler for Nobel Systems to manage data while meeting client needs.

Results

"By migrating to the ArcGIS Engine platform, we are able to harness all the power and tools of ArcGIS while providing our clients with the custom interfaces that they demand," says Michael Samuel, president of Nobel Systems. "We also find that by using this ESRI-based technology, we can integrate with a wide variety of other software applications from other vendors such as computerized maintenance management system, vehicle tracking, and SCADA, among others."

Nobel Systems has seen its client list grow rapidly and attributes this growth to the versatility of GeoViewer and custom GIS applications built using ArcGIS Engine. It has also seen significant interest from utility clients in the Czech Republic as a result of its work.

"We are able to satisfy our clients by replacing the manual tasks that they perform daily with a high-end viewing and editing application. Managing shutdowns, valve exercising, hydrant flushing, and leaks is very simple with GeoViewer," says Anand Ganesh, IT manager at Nobel Systems. "The benefit of using ArcGIS Engine is that we are able to produce a stable GIS data-viewing application quickly and easily."

To learn more about the GeoViewer family of products, visit www.nobel-systems.com or call 866-NOBEL-SYS toll free.

For More Information



ESRI

380 New York Street
Redlands, CA 92373-8100
Phone: 800-447-9778
Web: www.esri.com