BusinessGeoInfo

Esri • Summer 2011

GIS for Business Solutions

Eye on Catastrophe

Map Applications and Accessible Content Quickly Provide an Overview of the Crisis in Japan

After a magnitude 9.0 earthquake rocked Japan on March 11, 2011, and set off a tsunami, the catastrophe risk modeling firm EQECAT Inc., headquartered in Oakland, California, quickly went to work gathering information for clients.

Besides collecting economic and scientific data related to the disaster, EQECAT needed digital maps that showed the tsunami flood zones, where aftershocks occurred, damaged areas including roads, and the locations of population centers in the affected areas.

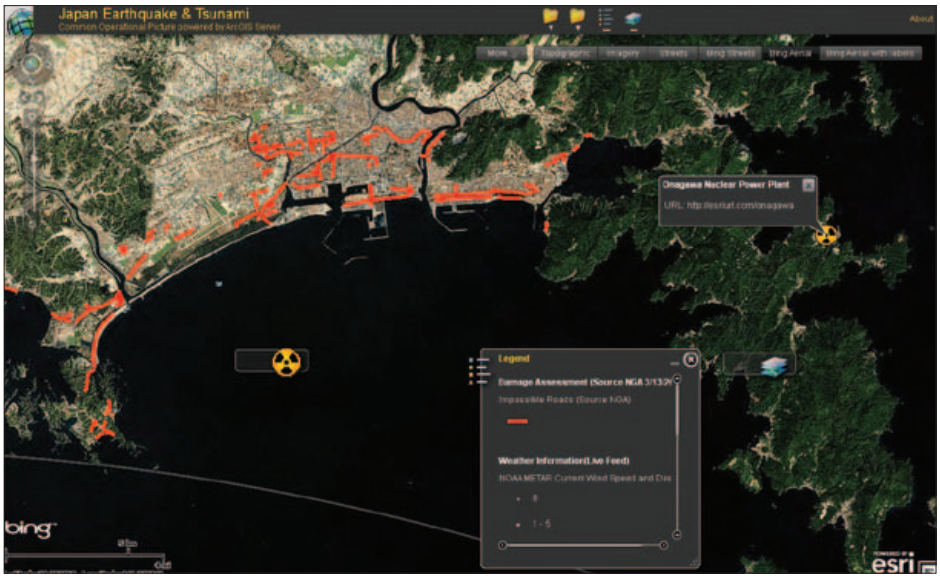
The maps were created using Esri's ArcGIS Online, a platform anyone can use to create and share geographic content and build GIS and mapping applications. Accessible via ArcGIS.com, ArcGIS Online hosts maps, applications, and tools published by the GIS user community and can be shared freely.

Quick Access to Maps and Data

EQECAT knows the power of seeing where natural disasters strike. The consulting firm helps clients in the insurance, financial, and commercial industries better understand the risk of earthquakes, typhoons, and tsunamis so they can manage their business operations.

So just seven days after the earthquake struck the Japan Trench megathrust fault off Honshu's east coast, EQECAT was in action.

continued on page 2



Satellite imagery gives a very quick and accurate visual assessment during a catastrophic event for better understanding of where damage, like impassable roads, is located, such as here in Japan after the earthquake and tsunami.

In This Issue

continued from page 1

Eye on Catastrophe

The company gathered staff and clients from around the world to present a report about what occurred, called a Catastrophe Watch, or CatWatch.

This report, broadcast via a webinar, details postevent effects including economic and insured losses. The CatWatch was attended by primary insurers, reinsurance agencies, brokers, corporations, hedge fund managers, and investment firms that have business dealings in Japan. EQECAT's clients were provided with a comprehensive overview of the event, in part due to the maps created using ArcGIS Online.

Simon Thompson, commercial business industry manager at Esri, and Mark McCoy, Esri's industry solutions manager for insurance, created the maps based on a telephone conversation with Paul Little, EQECAT's senior vice president of global client development, two days before the CatWatch. Working quickly, Thompson and McCoy produced maps displaying data on the tsunami flood zone, Japan's highways and major roads, topographic data, and even population information from the Japan Society of Family Sociology.

> "Providing maps that give a general overview of an area and providing the ability to drill down to get even more granular information is a huge part of what we feel our clients need."
>
> Paul Little, Senior Vice President of Global Client Development, EQECAT

"Timely delivery of information immediately after an event is one of the ways we create value for our clients," said Little. "Providing maps that give a general overview of an area and providing the ability to drill down to get even more granular information is a huge part of what we feel our clients need so they can begin assessing the financial impact and make decisions on how to deal with a crisis like this."

Knowing EQECAT needed information quickly, Thompson chose to pull together maps and data using ArcGIS Online.

"The power of ArcGIS Online is the fact that all the data and all the template code is available to anyone who needs it," said Thompson. "To create these particular maps, I took a map template shared on ArcGIS Online and edited it to display only what I wanted. I then shared the maps over the Internet with EQECAT staff, who in turn can share them through any browser on a computer or a phone. That's the power of ArcGIS Online and cloud computing."

By clicking the Share button, Thompson provided the maps he created for EQECAT to anyone who wants to view them both on ArcGIS Online and in map viewers such as Esri's free ArcGIS Explorer application.

Nuclear power plants with different distance radii overlaid with a live weather feed give an idea of what population centers may require evacuation.

"This is a prime example of operational GIS," said McCoy. "It's providing information in real time. This intelligent map supports effective collaboration by making a vast amount of aggregated knowledge easily understandable and available to the stakeholders who need the 30,000-foot level of detail, like CEOs."

Making It Even Easier to "See" an Event

ArcGIS Online hosts a repository of authoritative content from the worldwide GIS community. Esri also provides published disaster mapping applications so organizations can see the information, identify their exposure in the impacted area, and plan effective responses.

The Japan Trends Map is one example. Esri created this heat map from data collected on property damage, hazards, evacuations, power outages, and help and services available. Visualizing this data as hot spots or trends gives an idea of the density of reports coming from a single area. This can help allocate resources to those who need the help most or help validate whether incidents reported are corroborated by others, adding increased clarity to a situation. More than just dots on maps, hot spots organize lots of data and provide a better understanding of the data quickly. Reports can also be filtered by date to see daily trends.

Besides Twitter, YouTube, and Flickr postings, Esri's Japan Trends Map supports reports from Ushahidi, a nonprofit technology company that develops a social network that allows people to report incidents via short message service (SMS), e-mail, or the web. The information is categorized and analyzed using ArcGIS. By selecting Show reports, viewers can see individual Ushahidi reports. Public content from Ushahidi is added to the site by directly accessing the Ushahidi Earthquake Tohoku service. This feed aggregates information from the public for use in crisis response.

The Japan Trends Map has been used by many different organizations, including those in the media, to provide detailed information and analytic support to relief efforts. This spatial analysis makes crowdsourced data like Ushahidi reports actionable. "We're able to model the disaster. How many people are affected, and where are they?" Thompson said. "By combining population data with elevation maps, relief organizations can begin to calculate the number of people affected by flooding. The amount of supplies like food, water, and temporary shelter are just a few things that can be estimated to care for those in need."

Many organizations have caught on to these ready-made apps showing current events and are embedding these to provide information to their constituents. "I love this kind of content," said Eric Gakstatter, contributing editor for survey and construction for *GPSWorld* magazine. "I think this puts the event in an entirely new perspective."

Find out more at esri.com/insurance.

Business Sense

Simon Thompson
Director Commercial Industry, Esri

Creating a Location-Aware Network

I have seen volunteered geographic information (VGI), or locational crowdsourcing—where citizen volunteers contribute data that's georeferenced, then disseminated—become more prominent in daily activities. VGI is particularly useful in emergency applications, because the information's timeliness is especially valuable. This is very useful to business users, as they can quickly get a more accurate picture of what is really happening on the ground, thanks to georeferenced Twitter, YouTube, and Flickr posts.

Add to this the ability to get real-time or near real-time data feeds of authentic data, such as weather information from the National Oceanic and Atmospheric Administration (NOAA) and satellite imagery from any number of Esri partners such as DigitalGlobe and SpotImage, and a holistic view of an event can be created and shared to give those who need to make decisions all the information they need in a readily understandable format. These location-aware networks have a huge potential for providing faster, more orchestrated assistance to communities during a crisis.

While seeing where a problem is located (for example, a road closure due to flooding) is vastly helpful, the real power of GIS and mapping is in performing spatial analysis. This allows users to transform data into intelligence by uncovering trends and correlations that are not visible in the raw data. Being able to visualize reports as hot spots, or trends, on a map gives users the idea of density. Instead of looking at road closures individually, areas can be weighted by how many road closures there are, the size of the road, and other factors to help responders and citizens make decisions about how to travel and which roads to fix first.

This issue of *BusinessGeoInfo* is full of articles discussing how businesses use accurate, timely information and provides some tips on how GIS can easily be implemented at any organization. Continue your education of how to incorporate up-to-date information in an understandable format—a map—at the Esri Business Summit being held July 10–11, 2011, in San Diego, California.

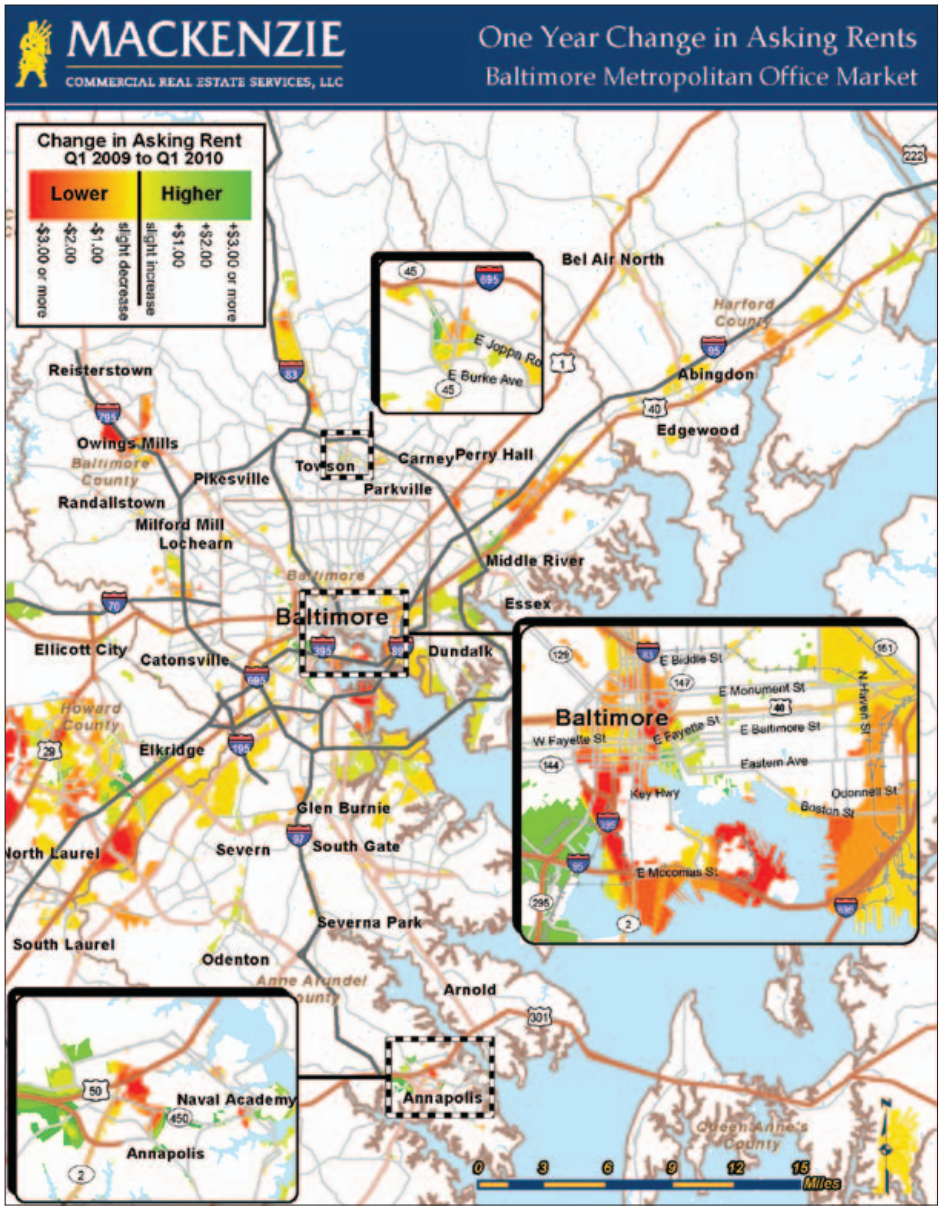
Opening the Door to New Real Estate Opportunities

MacKenzie Finds Opportunities, Lands Clients, and Sees its Business

"For the first time, I think members of my company really saw their real estate."

Matt Felton, Director of Research for GIS and Mapping, MacKenzie Commercial Real Estate Services

As a company dealing with buildings and space management, MacKenzie Commercial Real Estate Services has relied on maps to view information for the past 20 years. It wasn't until the company incorporated Esri's Business Analyst software, however, that agents at the organization really saw their commercial holdings.



GIS combines place with time to illustrate trends in the commercial real estate market. Similar to a weather map that shows changes in temperature over time, this heat map conveys one-year changes in asking rents for the Baltimore market. Bright green areas, for example, experienced rising values, while areas in dark red experienced the deepest declines.

Business Analyst and Business Analyst Online (BAO) are now used at the company every day to understand and analyze vast amounts of data for everything from characterizing neighborhoods to collecting information about properties to help their clients make better decisions to creating slick presentations. The software has even opened the door to new opportunities with customers who are not even interested in real estate transactions.

Today, MacKenzie Commercial Real Estate Services uses Business Analyst for all stages of the commercial real estate life cycle at the company, including development, landlord representation, tenant advisory and site selection, market research, construction, and property management.

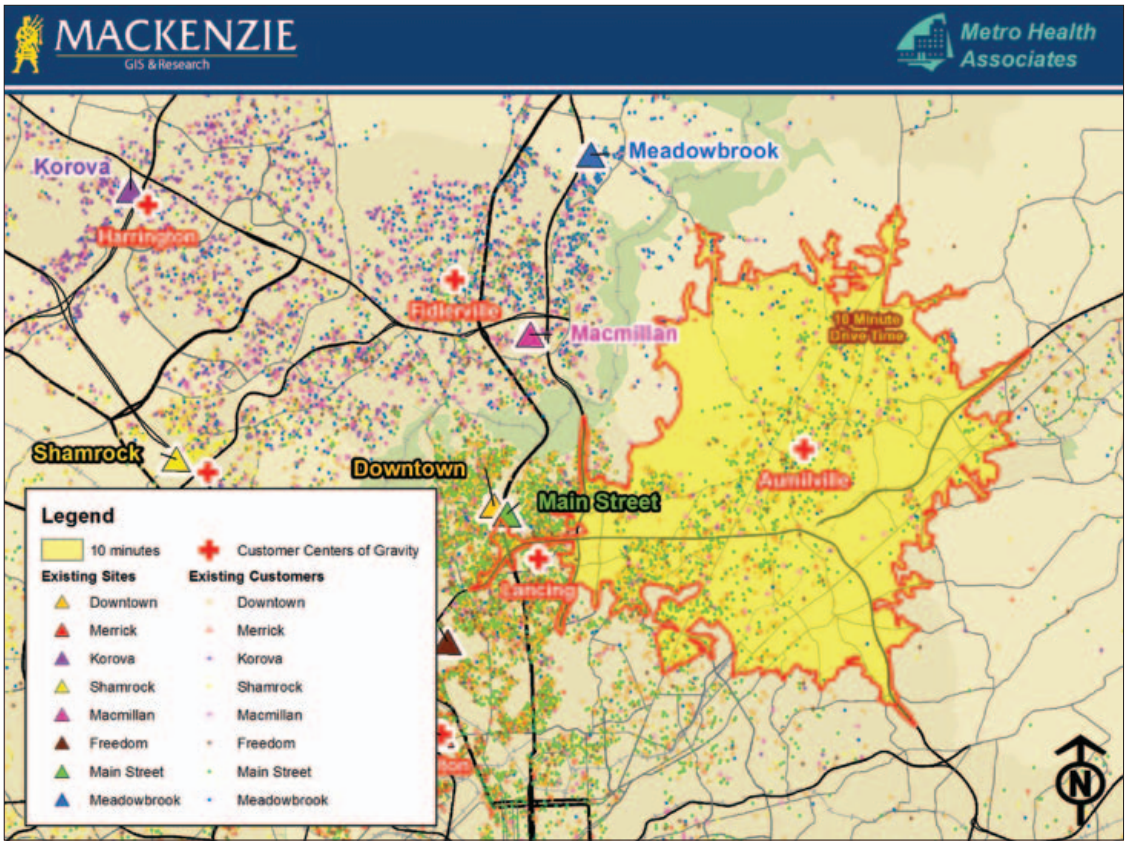
Discovering a Digital World

When the company first began using maps to view data, it was a long process. MacKenzie staff would pull aerial photographs off the web then use Adobe Illustrator to plot listings and hand draw road and highway labels.

When Matt Felton was hired as the director of research for GIS and mapping, he introduced the company to Business Analyst and the vast amount of data that is included with the software such as retail information, consumer expenditure data, and market potential indexes.

"For the first time, I think members of my company really saw their real estate," Felton said. "We had a lot of fun with the data, viewing and exploring information in a way they hadn't experienced before. The more they saw in the maps, the more questions they would ask."

No stranger to GIS, Felton had been serving as a director at Towson University's Center for GIS. The center's staff are GIS consultants to both government organizations and private businesses in the mid-Atlantic region. During the time he was there, Felton worked in many different disciplines including homeland



Mapping customer affiliation reveals patterns in customer behavior, like this center-of-gravity analysis performed to identify optimal locations for new health care facilities and to evaluate existing sites.

security, transportation, economic development, land-use planning, natural resources protection, public safety, and emergency management. The one area Felton hadn't experienced was commercial real estate. "I was drawn to the frontier of applying GIS as a common operating picture in a discipline that is inherently location," he said. He left his post and joined MacKenzie—right when the economy took a turn for the worse.

"Probably not the best-timed decision," Felton laughed. "But in hindsight, I couldn't have planned it any better. Just when things got really competitive, I had a tool that gave us an enormous advantage."

Seeing the Buildings through the Real Estate

Felton heads a team that actively supports about 40 brokers in the company with mapping and data discovery needs, which vary depending on the type of client being served. BAO is used to create quick reports, which is done often to investigate data downloaded from real estate information data providers like CoStar. For times when simply exploring a location is important, the brokers navigate ArcReader, a free, easy-to-use desktop mapping application from Esri, to view, discover, and print maps on their own.

For more heavy analysis, Felton's team uses Business Analyst and Esri's Tapestry Segmentation data to characterize neighborhoods for clients. "Maybe we are working with a company that sells suits," explained Felton. "We can show them where the people who buy suits are located based on the psychographic profile of their customers."

Whether the task is to simply plot a listing or provide a more in-depth analysis of the market, there are replicable steps that every broker follows. First, an area is targeted based on whether it is an available space, an area with high market potential, or another criterion that is important to the client. Once the area is selected, the broker identifies buildings or offices that might be suitable. Next, an analysis can be performed to understand if the site supports the selected criterion or reveals any hidden opportunities.

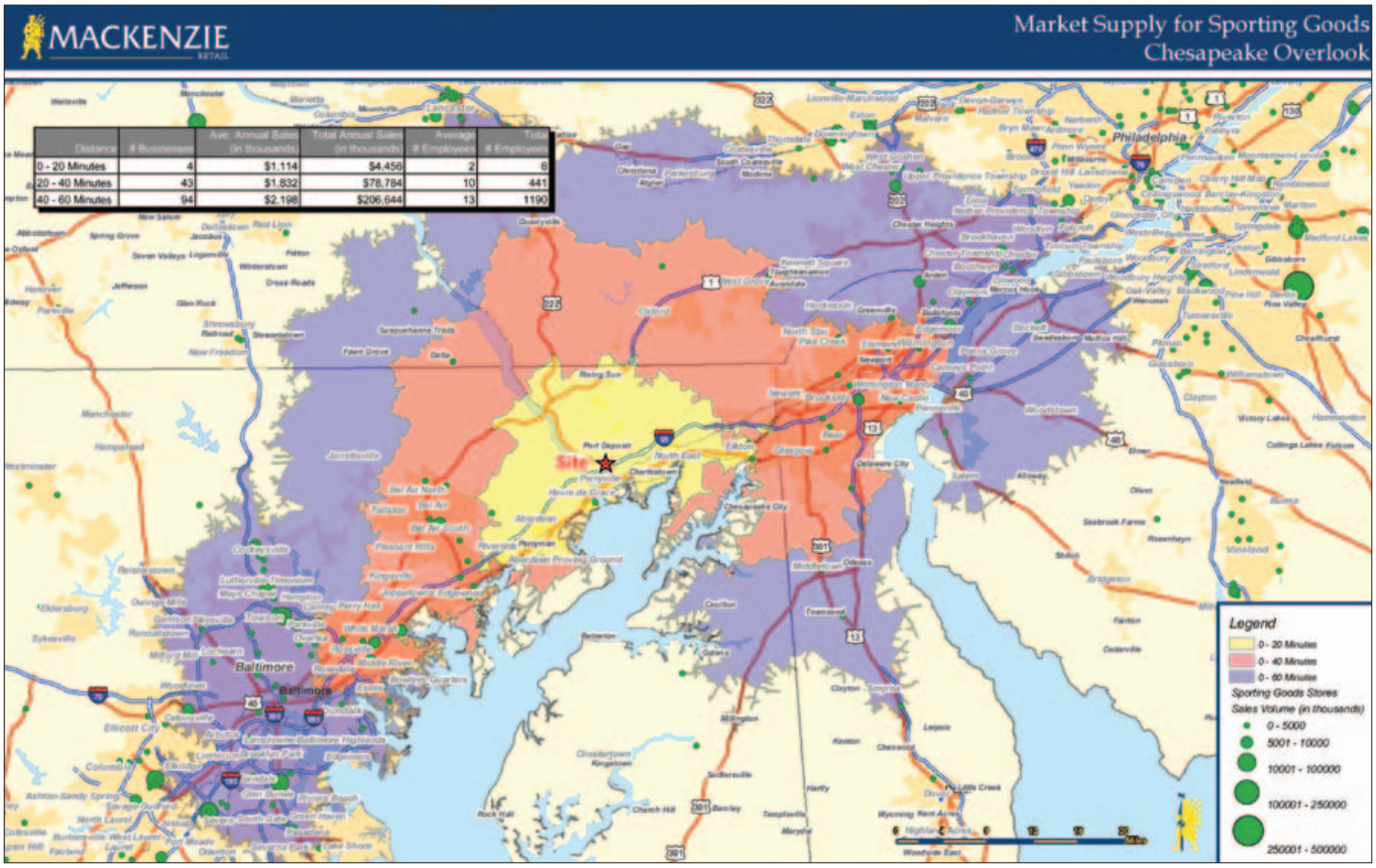
Timely Data Means Better Decisions

Local information, such as tax maps, is brought in to Business Analyst and overlaid on aerial and plat maps for a more accurate, timely view of the location. "Brokers used to spend hours at the courthouse trying to locate the proper tax map," said Felton. "Now, in 15 minutes, a broker can pull up exactly what

continued on page 6

continued from page 5

Opening the Door to New Real Estate Opportunities



To determine the viability of a large sporting goods store at a new site in Perryville, Maryland, market areas (20-, 40-, and 60-minute drive times) are overlaid with business volume data to reveal existing market supply for sporting goods and related products. In addition to providing the location and sales volume of competing businesses, the data was summarized into a table that showed the total existing revenue for each trade area. It was then evaluated vis-à-vis market demand data to present the overall potential for the new site.

is needed over the Internet and display it on the desktop."

The mapcentric view into the data allows the agent to click on a property that is of interest and automatically be taken to the state assessor's web page for the property. "This is often much easier than trying to search the online database," explained Felton. "Often, an undeveloped parcel has not been given an address, and our search allows the agent to zoom to the area of interest and click for information."

Once a site has been identified, the agent can explore that area by layering data from hundreds of other layers including zoning, tax incentives, floodplains, nearby businesses, and traffic counts. "GIS enables us to combine Esri's rich collection of data with authoritative data from state and local government organizations and with our own local market intelligence," Felton added.

The power of combining all this data provides MacKenzie's brokers with a nimble environment from which they can help their clients make more informed and timely decisions. Another advantage? The broker is seen as an expert. "At the same time our brokers are on the phone with a client, they can be finding the property and all the information about it—who owns it, how it is zoned, and how much traffic passes by. They can then create a map layout quickly and e-mail it instantly to the client while still on the phone," said Felton. "GIS enables our agents to be real smooth."

Smooth Operators

Speaking of smooth, Felton has put GIS to use during board meetings and client presentations. Using ArcGIS Explorer, another no-cost viewer from Esri, MacKenzie agents are able to give tours of potential sites—virtually. This gives them the means to instantly narrow down what might be an extensive list of prospects to those that will really pan out.

When a national board of directors was looking to relocate its headquarters to a new city, MacKenzie's staff treated the group to a digital fly-through of each site including 360-degree, bird's-eye, and street views of each location. The cost, amenities, and terms for each building were also available and could be queried in ArcGIS Explorer. The directors were able to narrow down their options from 30 to 3 before doing the prerequisite site visit. "Instead of spending an entire day with a

bunch of sweaty people in suits in a van, we were able to narrow down our search sitting comfortably in a conference room and only spend a few hours touring the sites that were really of interest," said Felton. "Time and resources are limited. GIS enables us to do the most with everything we have available to us."

Opening New Opportunities

GIS has also helped MacKenzie branch out and offer new services to clients, even if there is no real estate transaction involved. The company has been assisting a regional hospital with its strategic plan for a new outpatient facility by performing an analysis of the market demand for existing health care, current facilities, number of patients, and more. Using Business Analyst, MacKenzie's staff are able to ask what-if questions and model different scenarios such as consolidating or relocating existing outpatient facilities and opening new facilities. The service is called a GeoStudy and is available to any organization.

Another innovative approach to landlord representation is MacKenzie's GeoProspector, a solution the company has created based on Esri's ArcReader and ArcExplorer that helps brokers more effectively search for tenants. GeoProspector combines multiple layers of information, such as streets and office buildings, onto an interactive map that is organized by a status grid. Based on the color of the building, brokers can methodically search the grids for potential tenants or buyers, ensuring they exhaust all possibilities before moving on to another region. "Instead of going down a long list of prospects, our brokers can work each map area, ensuring that they are effectively canvassing the entire market," said Felton. "GIS has definitely made our company more efficient and has been an invaluable tool for making smarter and faster decisions. We use it on the front end of the process to cull a lot of data and help our clients make the best choices possible, and then we use GIS on the back end to communicate those choices to stakeholders in a very compelling format."

> "Time and resources are limited. GIS enables us to do the most with everything we have available to us."
>
> Matt Felton

For more information on how GIS is used in real estate, visit esri.com/re.

Mapping the Market to Create Healthy Banks

SNL Financial Gives Its Customers a Better View of Financial Practices

"SNL is the trusted information partner for all the top 50 depositories in the [US] as well as hundreds of regional and community banks. One hundred percent of investment banks with any substantive financial institution industry practice are SNL subscribers."

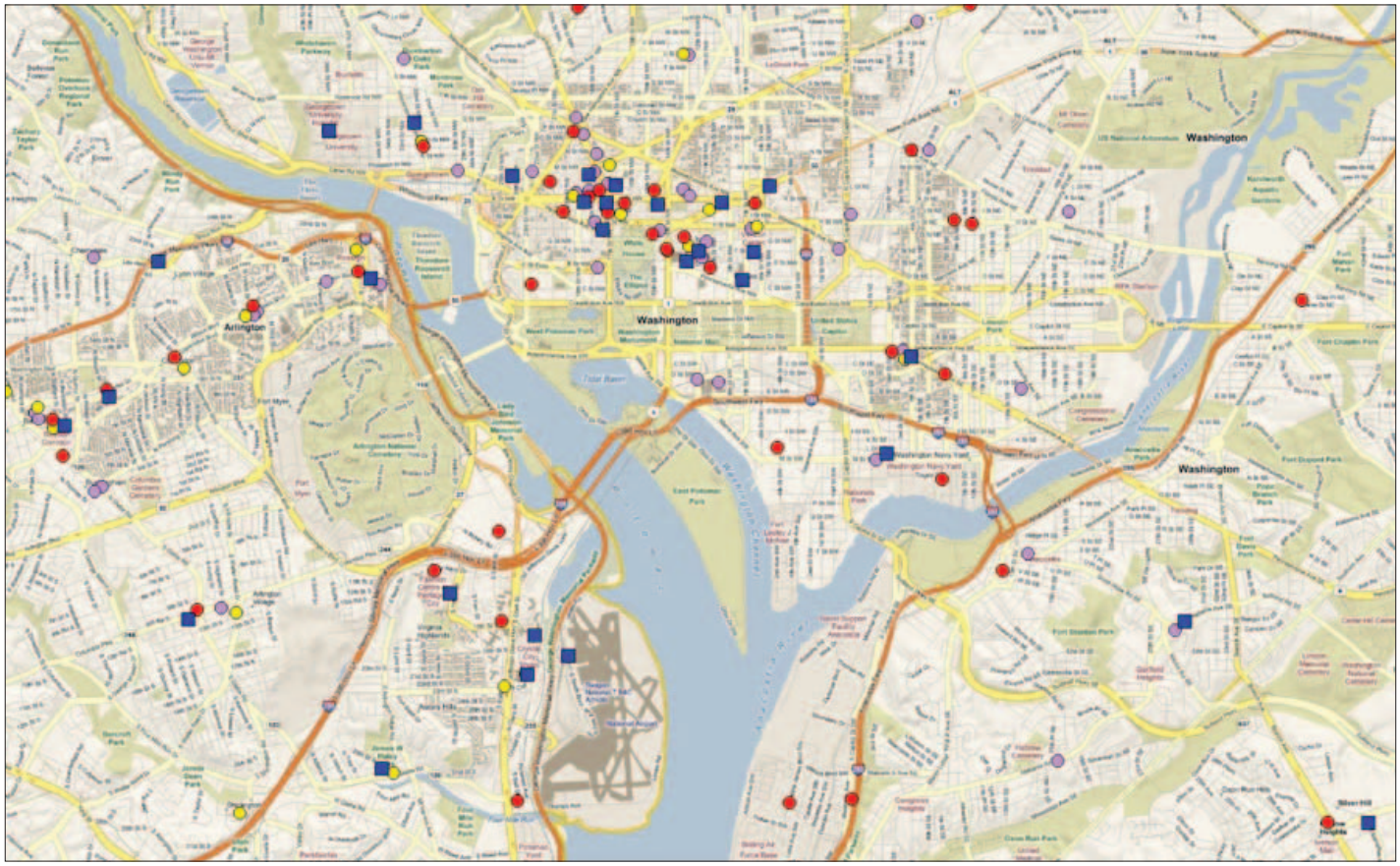
Elizabeth Rouse, Product Manager, Branch and Geographic Intelligence, SNL Financial

For the past two decades, SNL Financial has built a strong reputation for providing accurate and up-to-date financial data, news, and insight. Clients of the Charlottesville, Virginia-based company include leading investment banks, asset managers, banks and thrifts, and regulatory agencies. The company is frequently quoted by major media publications such as the *Wall Street Journal*, the *New York Times*, and *USA TODAY*.

SNL collects, standardizes, and disseminates specialized business information for the banking, financial services, insurance, real estate, and energy industries through its SNL Interactive (SNLi) web portal. The portal includes SNLi Mapping, a mapping application delivered to subscribers of the portal. SNLi Mapping uses Esri's ArcGIS software to view and analyze information on a map.

Mapping Business Worth

SNL started to incorporate ArcGIS software and Esri data in its product in order to offer customers detailed GIS and analytic functionality. The analytic tools SNL's customers wanted were readily available in ArcGIS. The functionality lets their clients view various types of data, including street information and aerial images, and gives them the ability to create new data, such as adding new market areas, and incorporate information on demographics and business data. SNLi Mapping incorporates these features, creating intuitive market analysis and visualization tools for subscribers. The website services allow subscribers to identify locations of assets, perform competition searches, and generate in-depth or ad hoc analyses as needed.

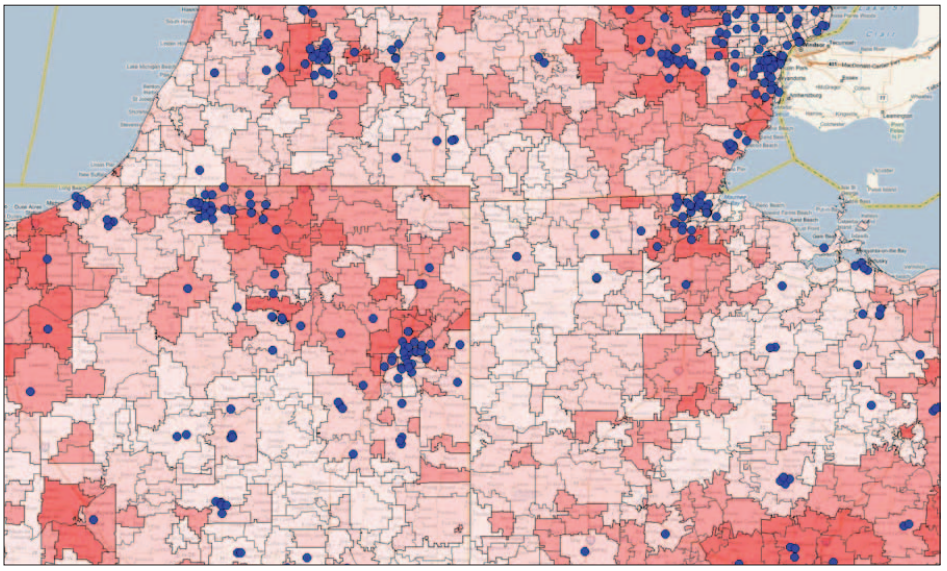


SNL Financial's clients can quickly visualize branch locations against the locations of competitors to see the possibility for growth through mergers and acquisitions.

SNLi Mapping proved popular with subscribers, and SNL was delighted with the success of the online mapping service. "Clients find visualizing information on a map to be very useful," says Dan Sheets, project manager, SNL Financial. "Using this tool, the information they need really pops out at them."

Using SNLi Mapping, subscribers have been able to better evaluate companies' mergers and acquisitions and make more informed decisions. They are performing their own market analyses and integrating demographic data with geographic information such as the location of major cities, interstate highways, and company buildings. Many subscribers also use SNLi Mapping for making presentations because of the high quality of the mapping capabilities.

"Having all this information integrated makes it easy for them to understand market valuation and why a particular location or company may be more attractive than another," says Sheets.



Users can quickly see their branches plotted with hundreds of demographic variables that Esri provides, helping them better understand their markets and opportunities for growth.

GIS Analytics Moves to Banking

Based on the success of SNLi Mapping, the company incorporated GIS visualization and analysis into Branch Analytics, a different web-based application that was created specifically to analyze bank markets. Branch Analytics allows customers to quickly perform in-depth market studies integrating bank branch deposit and demographic data. SNL expanded its use of Esri's ArcGIS software to create and deliver the geographic visualization and analysis.

Clients for the application range from newly chartered banks to superregional institutions that cover large areas of the United States. They use SNLi daily to make important strategic decisions such as where to locate new branches, how to increase market share, and what products to offer to customers. Using Branch Analytics, they can access SNL's database filled with detailed profiles on more than 20,000 United States financial companies, including all publicly traded banks and thrifts, privately held institutions, and credit unions. Subscribers can quickly search for 150,000 branch locations and plot them on maps using the latitude and longitude of the bank location, which is derived from the reported branch address and validated by SNL's Branch Data Management team using a variety of sources. Demographic and business summary data is provided annually by Esri.

> "Clients find visualizing information on a map very useful."
>
> Dan Sheets, Project Manager, SNL Financial

Powerful GIS Analytics on the Web

Subscribers can use Branch Analytics to delve deep into the marketplace and find the best solution for maintaining a healthy balance sheet. Changes in market deposit concentration can be viewed using the service, allowing them to model what-if scenarios such as what would happen if they opened new branches, offered different services, or closed underperforming sites. They can use the application to model such bank-specific activities as the acquisition of other bank branches and change attributes on the fly, including adjusting ownership for recently announced business transactions. Custom geographic markets can be created as well, to see the effects of all these activities in the real world.

Banking professionals can create maps using SNL data and customize them for use in professional documents and presentations. This is easily accomplished by creating a report with Branch Analytics.

Maps can also be created after generating a report. Subscribers simply create a Branch Analytics report, for example, looking at company market share in an area, and the application automatically exports the analysis to a map. As information is updated, or the analysis is customized, the maps dynamically absorb the changes to reflect the adjusted report.

"This has been a powerful tool for our customers," says Elizabeth Rouse, product manager, SNL Financial. "Visualizing and modeling business practices helps our customers make the best strategic decisions and better understand the markets they operate in."

Find out more at esri.com/finance.

Eye in the Sky

State-of-the-Art Weather Warnings Are a Reality

Current weather observations, lightning strikes, and storm reports—tens of thousands of new data elements used in predicting weather patterns—can potentially become available each hour. AccuWeather, Inc., the leading global weather information provider, interprets this vast volume of data and issues weather bulletins to hundreds of millions of people each day via the Internet, mobile devices, and print and other media.

Businesses and consumers often require more precise weather warnings than government weather tracking systems provide. To meet that need, the more than 100 AccuWeather meteorologists use GIS to achieve the situational awareness needed to issue accurate, comprehensive severe weather alerts that help protect lives and property.

Meeting Client Demands

In 2002, AccuWeather began hosting custom websites for its clients using Esri's ArcIMS. Recently, the company adopted ArcGIS Server to enhance the weather content it served to customers.

"Clients saw our work and came to us with more challenging demands," said Ethan Knocke, GIS technical coordinator for AccuWeather, who is also a meteorologist. "We did a lot of cutting-edge configuration of our enterprise geodatabases and their associated connectors into Esri mapping and data services to meet these needs."

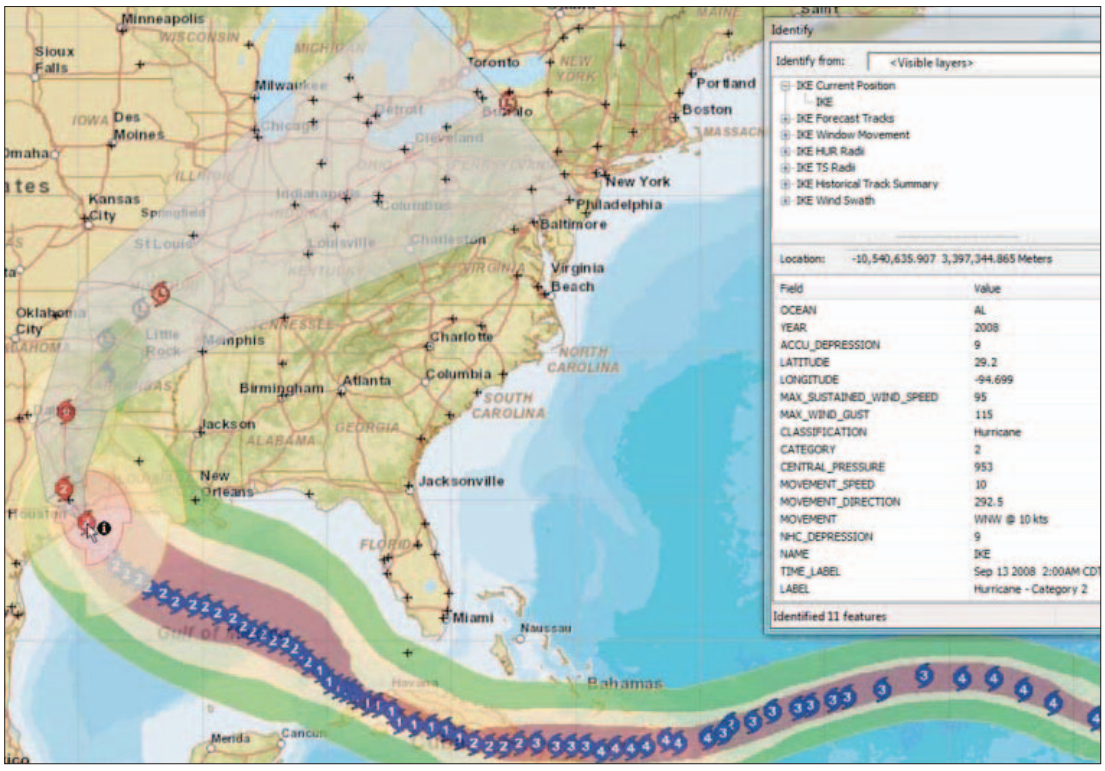
> "Shutting down business when there is no actual risk from a weather situation can cost just as much as ignoring a legitimate warning and incurring weather-related damage."
>
> Jonathan Porter, Manager of Meteorological Data, AccuWeather

Pinpointing Threats

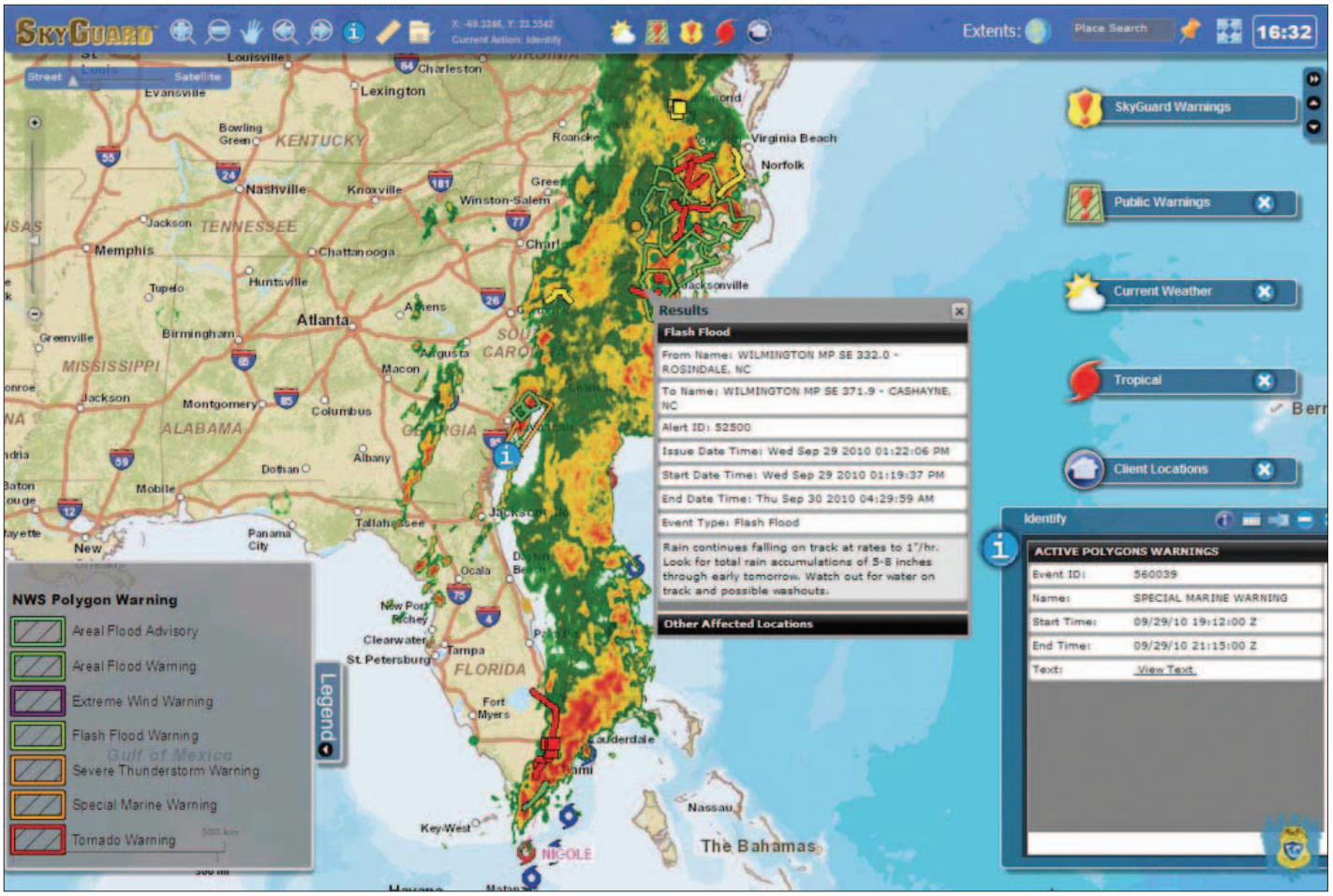
The US government issues severe weather warnings for hazardous weather conditions such as tornadoes, thunderstorms, and flash floods. Affected areas are identified by political boundaries and issued for fixed thresholds. Consequently, an organization's assets may fall within an area identified by a government warning but may not actually be in harm's way.

"Shutting down business when there is no actual risk from a weather situation can cost just as much as ignoring a legitimate warning and incurring weather-related damage," said Jonathan Porter, AccuWeather's manager of meteorological data. "That's why there's such demand for a pinpoint warning service like SkyGuard Warnings."

Warnings delivered through AccuWeather's SkyGuard Warnings service are based on specific criteria determined by the client and issued only when assets are in danger. SkyGuard warn-



Users can easily embed SkyGuard warnings, tropical impact forecasts, and other relevant current weather content into ArcGIS Desktop for visualization and analysis with their assets using SkyGuard data services. This map shows layers of the SkyGuard Tropical Impact Forecast product suite for Hurricane Ike loaded in ArcMap as a REST map service.



SkyGuard Online, a real-time situational awareness web application, leverages ArcGIS Server 10 and ArcGIS API for Flex to create a dynamic, interactive, and visually appealing weather portal. This image shows SkyGuard warnings in North Carolina and Florida related to Tropical Storm Nicole.

ings consist of point warnings applicable to locations such as schools, manufacturing plants, or corporate offices; segment warnings that relate to portions of railroads or trucking routes; or areal warnings that cover energy grids, amusement parks, or other similar facilities.

Online Weather Portal

To generate such specific warnings, SkyGuard meteorologists closely monitor the geospatial relationship between a client's assets and pending weather threats. Warnings must get to clients quickly as a comprehensive real-time view. ArcGIS Server enabled AccuWeather to create a web-based solution for its flagship SkyGuard product, called SkyGuard Online.

The online weather portal, created using ArcGIS API for Flex, displays SkyGuard warnings, tropical impact forecasts, and other relevant information on current conditions. AccuWeather's team of meteorologists enters the data into the geodatabase, which appears in an all-in-one map viewer. Subscribers receive a secure web portal customized to their location that supplies selected services. Customers may also upload their own data into their SkyGuard Online portal to create a centralized mashup of their assets and AccuWeather's live weather information.

"It's a real-time situational awareness tool," said Knocke.

Data Services: Open Data Models

ArcGIS Server also brought another level of efficiency to AccuWeather in the form of SOAP and REST services. "ArcGIS Server opened up the floodgates by providing much more flexibility with open data models," said Knocke. "Many of our clients already have deployed full GIS infrastructures and just need the missing piece—the weather content—exposed as data layers via REST and SOAP web services."

Today, the GIS team can provide live web services to its clients, who then integrate these services into their enterprise systems for visualization and modeling. "The geodatabase connectors in ArcGIS Server really opened the door for us," said Porter. "They enabled us to easily integrate a vast array of weather data stored in back-end relational databases into the Esri product suite."

The SkyGuard Online weather warning portal builds on the benefits unique to the ArcGIS Server platform. Plans are currently under way for AccuWeather to enter the mobile GIS space with smartphone versions of SkyGuard Online.

For more information on how real-time information can be used for business continuity, visit esri.com/business.

Add Demographic Data and Reports with New ArcGIS Desktop Tool

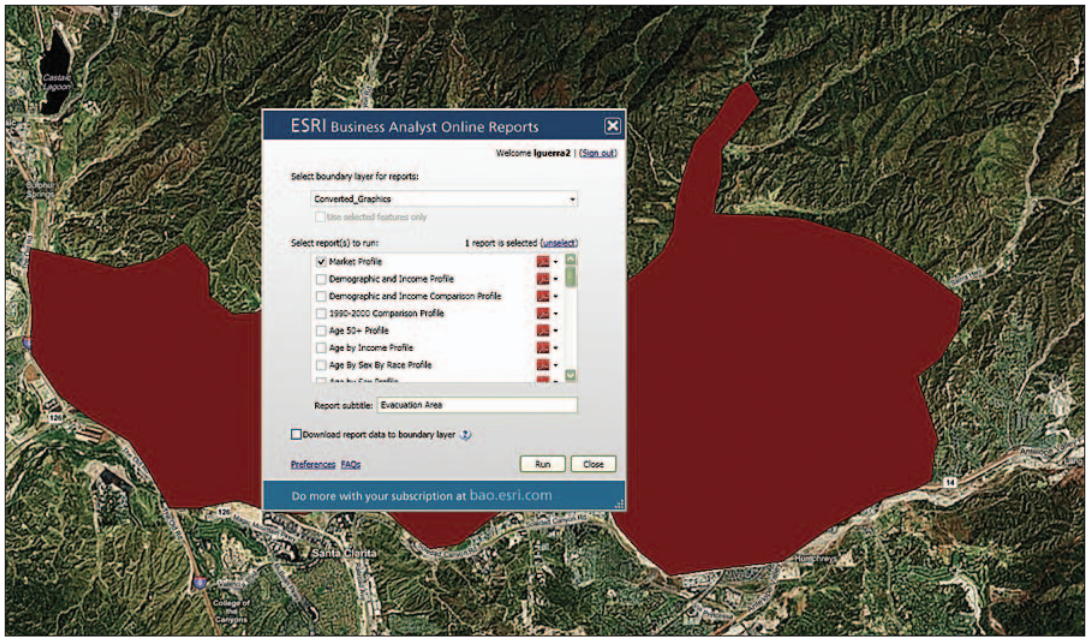
ArcGIS users can now quickly and easily add US demographic data and reports to their GIS projects with the Esri Business Analyst Online (BAO) Reports Add-in. This downloadable tool connects ArcGIS Desktop with the latest demographic, consumer spending, and business data and reports from BAO. A web-based solution, BAO combines GIS technology with extensive analytic data to allow users to generate boardroom-ready reports and maps on demand.

GIS professionals can now seamlessly leverage the data and tools in BAO in their ArcGIS applications to generate demographic reports for trade areas and sites they have defined on their desktop. They can obtain and consume the latest demographic and business data to create presentation-quality reports in PDF and Excel formats. Users can attach this data as attributes of map layers for use in their everyday ArcGIS mapping workflows.

Additionally, BAO Reports Add-in lets users access the BAO web application (bao.esri.com), where they can search for businesses, thematically map areas, create trade areas, compare sites, and create customized reports. Demographic and business data and analysis not only benefits those in retail, real estate, and traditional business industries but is also crucial for any organization that involves people, whether customers or constituents, and their lifestyles, behaviors, and characteristics. Almost any ArcGIS Desktop user can benefit from incorporating the BAO Reports Add-in into their analyses.

For example, a fire department needs to estimate how many people will be displaced if they need to evacuate due to a fire. Various groups of people must be kept current on the situation, including city and county officials, the news media, other fire departments, and the public. With the BAO Reports Add-in, the department can connect ArcView with the data it needs to generate reports identifying vulnerable populations. This information can be shared with all parties to coordinate evacuation and fire response efforts and develop an efficient response plan. The add-in also allows reports to be easily updated if the evacuation area changes.

Health care professionals who need to track a disease outbreak can also benefit from the BAO Reports Add-in. They can easily



Generate and share demographic reports and maps for an evacuation area.

track incidents using ArcView, and by adding demographic data from BAO, they can now determine if the outbreak is related to age, ethnicity, income, or other demographic factors. The GIS analyst simply downloads and appends data to features in ArcView to generate reports and thematic maps to better visualize the situation.

The add-in provides ArcGIS users with a straightforward and cost-efficient way to incorporate the latest demographic and business data into their applications. Esri's annual updates for demographic, consumer spending, and business data are available in BAO before being released in any other Esri solutions, giving ArcGIS Desktop users access to the most current data for their GIS projects.

ArcGIS Desktop users interested in the BAO Reports Add-in can get a free seven-day trial, after which they will need to purchase a subscription to continue accessing the reports and data.

For more information or to get started, visit esri.com/baoaddin.

Moving GIS from the Office to Mobile Devices

App and API for Windows Phone 7

Access sophisticated mapping capabilities on Microsoft Windows Phone 7 with the new ArcGIS for Windows Phone app. With this app, find, use, and share maps as well as deploy GIS data and functionality. The free app can be downloaded directly from Microsoft's Zune Marketplace. ArcGIS for Windows Phone is a mobile gateway to the ArcGIS system. In addition to finding places and addresses and querying map layers and data, the app can collect, edit, and update features and attribute information for field data collection and inspection projects. Download and install the app from the desktop using Zune or install it directly from the phone using the Windows Phone Marketplace.

Esri has also released ArcGIS API for Windows Phone. With this API, developers can build interactive applications that combine mapping resources, such as maps, locators, and geoprocessing models, with Windows Phone technologies and frameworks. Available at no cost from the ArcGIS Resource Center, this API is supported by a detailed blog, forum, and code samples.

Built on the Silverlight framework for the Windows Phone application platform, it uses familiar Microsoft tools and technologies such as Visual Studio and Expression Blend. Developers already familiar with Silverlight can create new applications for Windows Phone without experiencing a steep learning curve. ArcGIS API for Windows Phone and ArcGIS API for Microsoft Silverlight/Windows Presentation Foundation (WPF) have the same architecture, so application logic can be reused in ArcGIS applications built for Windows Phone, web, and desktop applications.

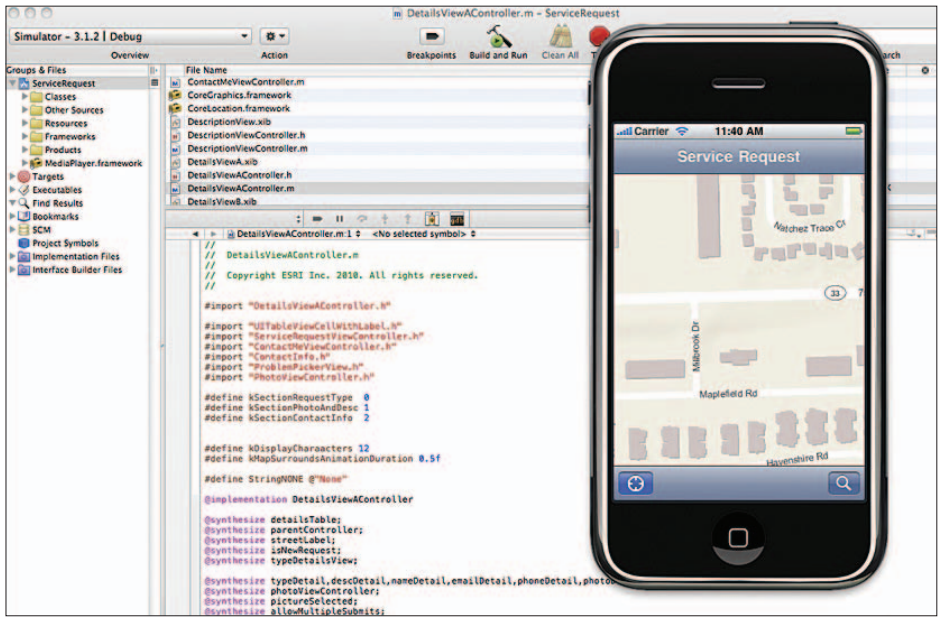
ArcGIS API for Windows Phone enables users to go beyond basic mapping. With this API, developers can build applications that use their own authoritative data, display data on an ArcGIS Online or Bing Maps basemap, add graphics and markups to a map interactively, search by GIS feature or attribute and display the results, and execute a GIS model using ArcGIS Server and display the results.

The API is designed to use web services available from ArcGIS Server and ArcGIS Online. Developers and Esri partners can build applications that work with their own published web services that can be deployed within an organization or to the public via the Marketplace.

To learn more about the ArcGIS for Windows Phone app, visit esri.com/windowsphone. To download and begin building custom applications using ArcGIS API for Windows Phone, visit the ArcGIS Resource Center at resources.arcgis.com.

ArcGIS API for iOS Now Available

Coming off a successful early adopter beta program, Esri recently released the ArcGIS API for the Apple iOS platform. ArcGIS API for iOS enables developers to build and deploy custom iPhone, iPod touch, and iPad applications. This API uses the powerful mapping, geocoding, geoprocessing, and editing capabilities that ArcGIS Server provides. It is designed to use web services available from ArcGIS Server and ArcGIS Online. Users can access dynamic, tiled, and image map services; overlay graphics; search for and identify features; locate addresses; collect and update data; and perform GIS analysis. Users also have the ability to embed ArcGIS maps and tasks into their line-of-business applications. The API can now be accessed from the ArcGIS Resource Center at no cost.



Code Built Using ArcGIS API for iOS

Students and faculty at the University of Oregon use ArcGIS API for iOS.

What Users Can Do with the API

With the API, users can

- Display and use maps that blend map services from ArcGIS Online and/or ArcGIS Server.
- Execute sophisticated geoprocessing tasks and display their results.
- Search for and identify features.
- Create useful reports of features they've found.
- Collect locations by sketching on the map or using the GPS embedded in their iOS devices.
- Match addresses to specific locations.

What the API Includes

The API provides the following resources for use in iOS applications:

- Maps and Layers—The API supports the display of both dynamic and cached (tiled) map services. With ArcGIS API for iOS, users can display maps in any projection.
- Graphics—The API can enhance applications by allowing users to draw graphics or by providing informational pop-up windows when a user taps on a graphic feature.
- Tasks—It provides common GIS tasks such as querying, searching for and identifying features, finding addresses and places, geoprocessing, and collection.

The API enables organizations to create mobile solutions that extend to a wider market via the Apple App Store. Developers and Esri partners can also use the API to create applications for both external and internal use. The API includes native Objective-C libraries, sample applications, templates, samples, and help guides that can be used within the Xcode integrated development environment. In addition, there are a variety of community resources, including forums, blogs, and code galleries, available to help users get up and running quickly.

To get started using ArcGIS API for iOS, visit resources.arcgis.com/content/arcgis-iphone/api.

ArcLogistics Provides Free Single-Vehicle Routing

Anyone in the United States in need of scheduling and routing multiple stops throughout the day for a single vehicle can now use ArcLogistics free of charge.

Esri's cloud-based vehicle routing and scheduling solution now includes a free single-vehicle subscription option that's perfect for sales professionals, lawn and pool services, or anyone who needs to find the best routes for a single vehicle.

ArcLogistics is used to create optimum routes and schedules based on specific business operations, including vehicle capacities, driver specialties, street network restrictions, and customer time windows. The solution is designed to help anyone who needs to move goods and services to the right place at the right time for minimum costs. Customers who use ArcLogistics to plan their routes typically save up to 30 percent on overall vehicle-related costs.

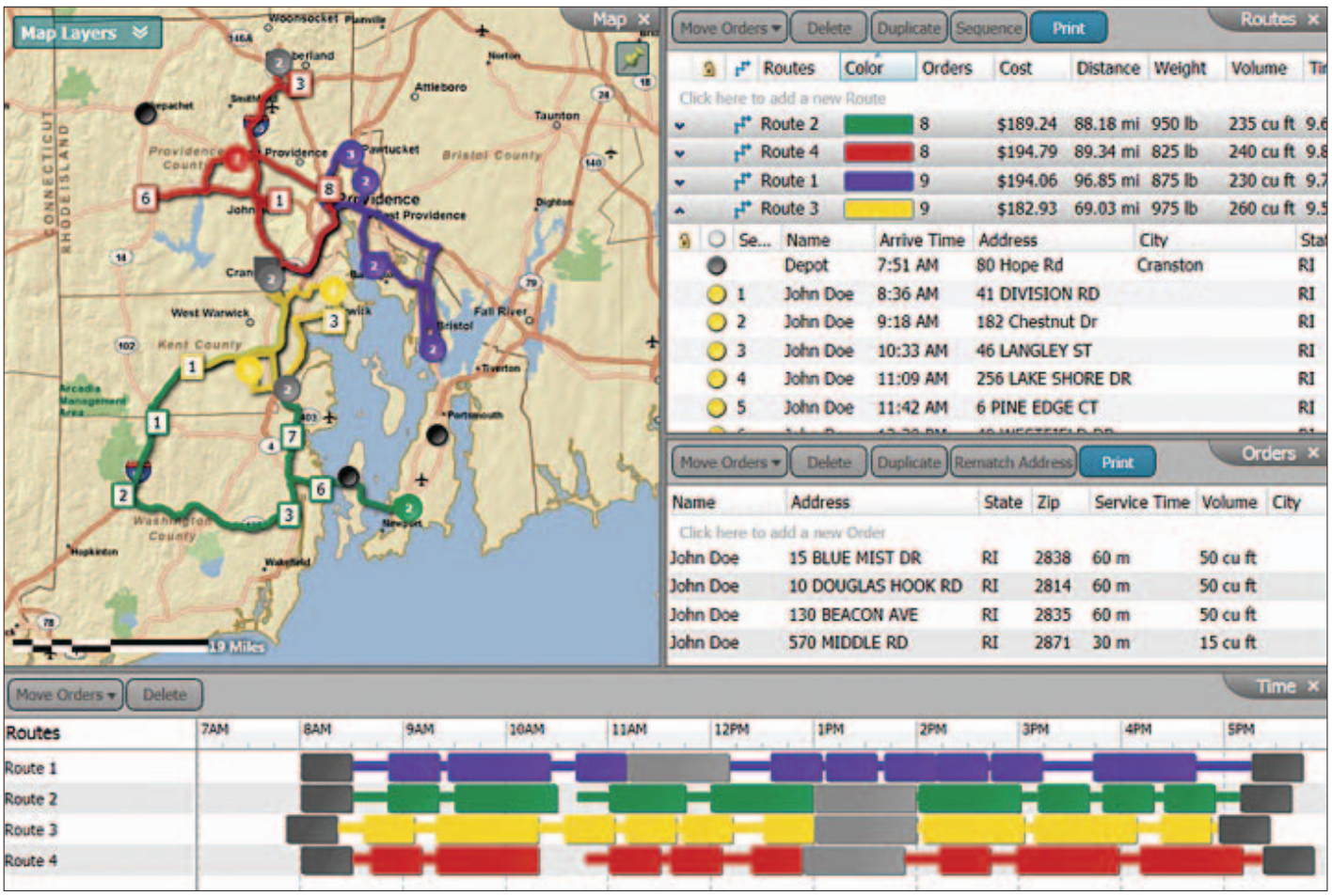
Now, single-vehicle operators can take advantage of the free ArcLogistics subscription and improve business operations by creating optimized routes that eliminate unnecessary driving and tighter schedules that improve delivery time windows.

Additionally, larger organizations with multiple vehicles can use their free one-vehicle subscription to determine whether ArcLogistics will help the rest of their fleet.

The latest version of ArcLogistics also includes the following key enhancements:

- **Setup wizard**—Each time a new routing project is started, the option of using a quick wizard is provided to set up the basic attributes of the fleet. This helps reduce the time it takes to import vehicles, drivers, and orders.
- **Improved address management for orders**—If an address is manually edited or moved, ArcLogistics will retain the edit and place it in the desired location next time it is imported or entered, reducing the time it takes to deal with problem addresses each time they are visited.
- **Secure services**—Esri-hosted mapping, routing, and geocoding services have been updated to use the secure HTTPS protocol.

To start a free one-vehicle subscription, visit esri.com/arclogistics and sign up for a 30-day trial, which allows the routing and scheduling of up to 50 vehicles. After 30 days, the trial converts to a one-vehicle-for-free yearly subscription.



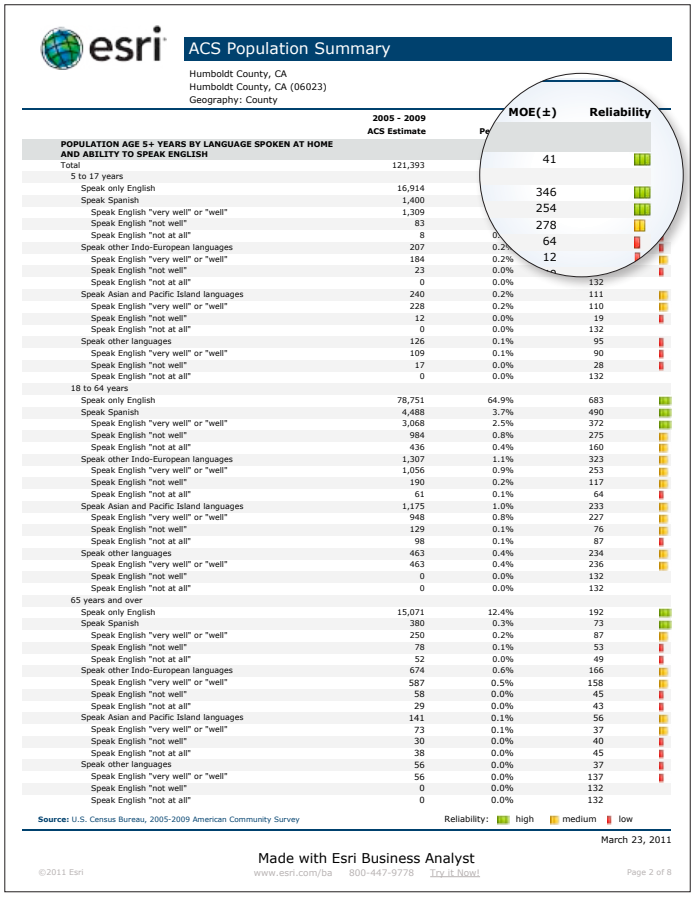
Routes and schedules created with ArcLogistics are easy to edit and can be changed as needed.

The ABCs of ACS

Changes in Census 2010 Data Could Impact Retailers

In 2010, the Census Bureau changed how it collects decennial census data. The bureau eliminated the traditional long form and opted to release only the data collected from the decennial census short form. Information previously obtained from the long form is now provided in the American Community Survey (ACS).

Because all survey-based estimates are subject to sampling error, the ACS margin of error (MOE) measures the variability of the estimate due to sampling error. MOEs enable data users to measure the range of uncertainty for each estimate with 90 percent confidence. The range of uncertainty, called the confidence interval, is calculated by taking the estimate number plus or minus (+/-) the MOE. For example, if the ACS reports an estimate of 100 with an MOE of +/- 20, there is a 90 percent certainty that the value for the whole population falls between 80 and 120. Ignoring the MOE can severely impact accurate trade area analyses. For example, selecting a prospective site without considering the population estimate and MOE could mean a loss of thousands of dollars and months of being stuck with a poorly performing store.



esri ACS Population Summary

Humboldt County, CA
Humboldt County, CA (06023)
Geography: County

	2005 - 2009 ACS Estimate	Pe	MOE(±)	Reliability
POPULATION AGE 5+ YEARS BY LANGUAGE SPOKEN AT HOME AND ABILITY TO SPEAK ENGLISH				
Total	121,393		41	
5 to 17 years				
Speak only English	16,914		346	
Speak Spanish	1,400		254	
Speak English "very well" or "well"	1,309		278	
Speak English "not well"	83		64	
Speak English "not at all"	8	0.	12	
Speak other Indo-European languages	207	0.2%		
Speak English "very well" or "well"	184	0.2%		
Speak English "not well"	23	0.0%		
Speak English "not at all"	0	0.0%	132	
Speak Asian and Pacific Island languages	240	0.2%	111	
Speak English "very well" or "well"	228	0.2%	110	
Speak English "not well"	12	0.0%	19	
Speak English "not at all"	0	0.0%	132	
Speak other languages	126	0.1%	95	
Speak English "very well" or "well"	109	0.1%	90	
Speak English "not well"	17	0.0%	28	
Speak English "not at all"	0	0.0%	132	
18 to 64 years				
Speak only English	78,751	64.9%	683	
Speak Spanish	4,488	3.7%	490	
Speak English "very well" or "well"	3,068	2.5%	372	
Speak English "not well"	984	0.8%	275	
Speak English "not at all"	436	0.4%	160	
Speak other Indo-European languages	1,307	1.1%	323	
Speak English "very well" or "well"	1,056	0.9%	253	
Speak English "not well"	190	0.2%	117	
Speak English "not at all"	61	0.1%	64	
Speak Asian and Pacific Island languages	1,175	1.0%	233	
Speak English "very well" or "well"	948	0.8%	227	
Speak English "not well"	129	0.1%	76	
Speak English "not at all"	98	0.1%	87	
Speak other languages	463	0.4%	234	
Speak English "very well" or "well"	463	0.4%	236	
Speak English "not well"	0	0.0%	132	
Speak English "not at all"	0	0.0%	132	
65 years and over				
Speak only English	15,071	12.4%	192	
Speak Spanish	380	0.3%	73	
Speak English "very well" or "well"	250	0.2%	87	
Speak English "not well"	78	0.1%	53	
Speak English "not at all"	52	0.0%	49	
Speak other Indo-European languages	674	0.6%	166	
Speak English "very well" or "well"	587	0.5%	158	
Speak English "not well"	58	0.0%	45	
Speak English "not at all"	29	0.0%	43	
Speak Asian and Pacific Island languages	141	0.1%	56	
Speak English "very well" or "well"	73	0.1%	37	
Speak English "not well"	30	0.0%	40	
Speak English "not at all"	38	0.0%	45	
Speak other languages	56	0.0%	37	
Speak English "very well" or "well"	56	0.0%	137	
Speak English "not well"	0	0.0%	132	
Speak English "not at all"	0	0.0%	132	

Source: U.S. Census Bureau, 2005-2009 American Community Survey

Reliability: high medium low

March 23, 2011

Made with Esri Business Analyst

©2011 Esri www.esri.com/ba 800-447-9778 Try it Now! Page 2 of 8

How can retailers successfully navigate these bewildering data changes? Because Esri understands the difficulty of using the ACS data successfully, Esri's data experts added value to the data by

- Offering the ACS data for nonstandard geographies such as ZIP Codes and user-defined polygons including drive times, rings, and custom trade areas
- Simplifying use of the ACS MOE

For more customized analysis, Esri is providing the ACS data for nonstandard geographies that are not supplied by the Census Bureau. "More than half of data users employ rings, drive times, and hand-drawn shapes in their analyses. Esri is the only vendor to provide ACS data for these nonstandard geographies," says Catherine Spisszak, Esri Data product manager.

To resolve this dilemma, Esri's data development team created an algorithm to calculate the ACS margin of error for these nonstandard areas. Because retailers frequently need to use nonstandard geographies when conducting trade area analyses, this innovation will ensure actionable results. For more traditional studies, Esri also provides the reports in standard census geographies such as states, counties, census tracts, and block groups.

To simplify exploration and use of the ACS data and solve the mystery of interpreting the ACS MOE, Esri's data development team devised a system of reliability symbols that indicate when users can depend on the ACS sample estimate or when the sampling error becomes too large. "When our clients asked us to simplify their use of the ACS data, Esri responded by adding easily understood, color-coded symbols to our reports that quickly identify which ACS estimates are reliable," says Spisszak. "This innovation eliminates the need for our clients to interpret the ACS margin of error themselves and provides them with more accurate data for better business decisions."

Esri recently launched the ACS data in two reports from Esri Business Analyst Online (BAO). These reports contain data from the 2005–2009 American Community Survey five-year-period estimates.

- ACS Population Summary —Demographic variables include marital status, language spoken at home, school enrollment, income, and more.
- ACS Housing Summary—Housing information includes home value, mortgage status, rent, vehicles available, and more.

Retailers can purchase the BAO reports as guests or subscribers. Business Analyst Desktop users can access the ACS data by choosing the Show Online Reports option from Preferences. Business Analyst Server users can also integrate the ACS data and reports immediately via the Business Analyst Online APIs.

For more information, visit esri.com/bao or call 1-800-447-9778.

Viewer and Updated Demographics Available from Windows Azure DataMarket

A free, online web application developed by Esri for mapping geographic datasets is hosted in the Windows Azure DataMarket. The ArcGIS Geospatial viewer, based on ArcGIS API for Silverlight, lets visitors access the site map and analyze geoenabled data in the DataMarket including Updated Demographics from Esri.

Windows Azure DataMarket is a cloud service that provides a global marketplace for delivering high-quality information in a consistent manner. Microsoft has selected ArcGIS as a foundation for viewing geospatial information in the DataMarket. Application developers and end users can select data, view it on a map, and analyze it with advanced geospatial tools from Esri to make better, more informed decisions.

Variables from Esri's Updated Demographics (2010/2015) data are available from the DataMarket. Developed with industry-leading, benchmarked methodologies, this demographic data identifies areas with characteristics such as high unemployment, rising vacancy rates, reduced consumer spending, changes in income, and increased population diversity. For more information, visit esri.com/azure. For more information about Esri's Updated Demographics, visit esri.com/demographicdata.

Esri on the Windows Azure DataMarket

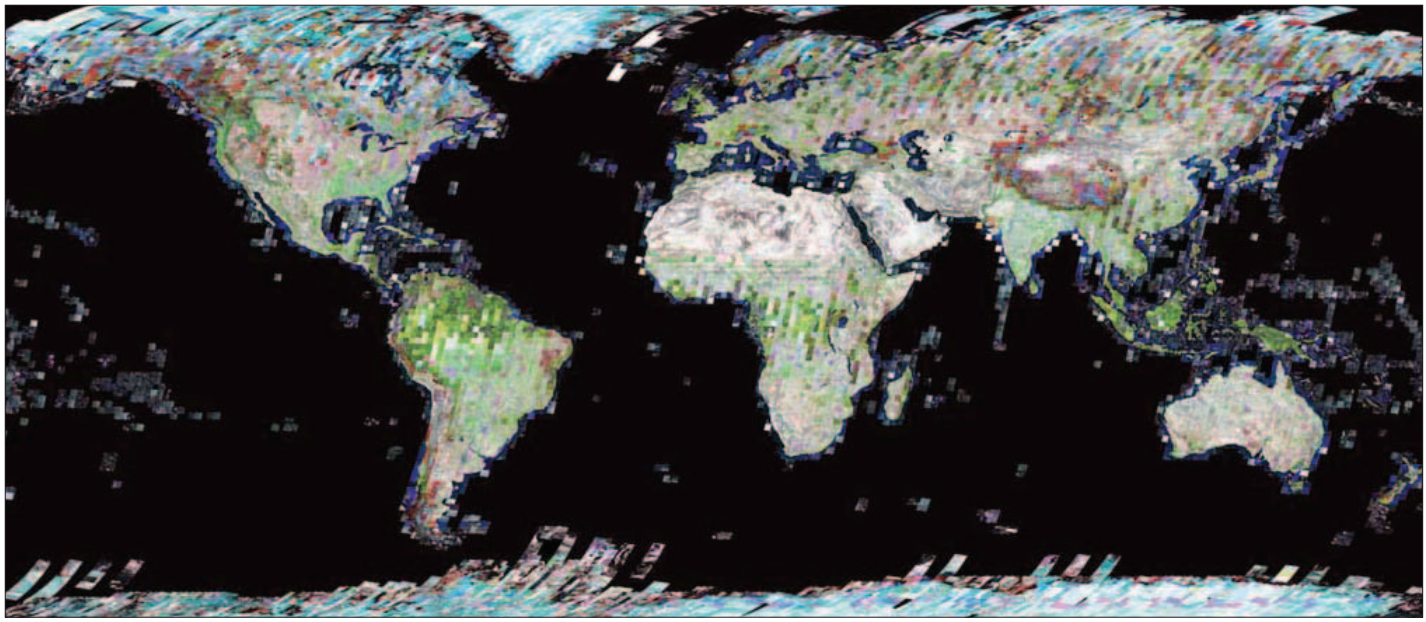
Esri has partnered with Microsoft to offer a set of features that contribute to and enhance the usability of the Windows Azure DataMarket. These features include online applications that query and map geographic data from the DataMarket, online analysis tools, and a collection of premium demographic datasets.

Among the data available in the DataMarket, Esri's Updated Demographics (2010/2015) data provides the industry's most accurate population, housing, and income variables.

Windows Azure DataMarket is a cloud service that provides a global marketplace for delivering high-quality information in a consistent manner.

For more information, visit esri.com/azure.

Landsat Imagery Archive Made Broadly Available



Landsat 7 World Mosaic 12/31/2000
Sensor: L7 ETM+
Landsat imagery courtesy of NASA Goddard Space Flight Center and US Geological Survey

The Landsat imagery archive contains the longest continuous global record of the earth's surface. It is an invaluable resource for dealing with the complex environmental challenges the world faces.

Now, an array of image services and a new viewer developed by Esri combine to make 30 years of Landsat imagery more accessible to specialists and nonspecialists alike. This fulfills the promise made by Department of the Interior (DOI) secretary Dirk Kempthorne in 2008 to make all Landsat scenes available for free.

In the intervening years, Esri and DOI have worked closely to make the eight terabytes of imagery data available as more than 20 dynamic, multispectral, multitemporal image services. The data available includes the Landsat Global Land Survey (GLS) datasets, which provide the best worldwide imagery data for measuring global change. With these services, users have dynamic access to all the spectral and temporal information in this massive imagery archive. With access to this data as online image services, users benefit from significantly reduced imagery storage and management requirements.

As Esri announced last year, this imagery is furnished as standard services available from ArcGIS Online. Users will be able to build web maps using this information and share their analyses for better understanding and collaboration. Esri also provides web maps on ArcGIS Online that show how these new services can be used and explains the measurement of change over time and space using the Landsat data. Because these services are also multitemporal, they can be used for performing change analysis that can span 30 years in ArcGIS Desktop or ArcGIS Online applications.

The dynamic image services result from on-the-fly processing of the original Landsat scenes by the ArcGIS Server Image extension so all data contained in this imagery is immediately available for use in maps and analyses. Processing for source images can be specified for an area of interest. The services are available in different standard band combinations that include

- False-color (bands 4,3,2), which is useful for vegetation studies and crop growth monitoring
- Natural color with atmospheric penetration (bands 7,4,2), which is best suited for analysis of urban study areas
- Vegetation analysis (bands 5,4,3), which provides the most information for agriculture and forest management applications

In addition, Esri created an easy-to-use web-based Landsat viewer for visualizing, analyzing, and detecting change using these image services. Built with ArcGIS API for Flex, the application interface gives on-click access to a variety of information products. Users can quickly zoom and pan to anywhere in the world. Information screens introduce the data furnished through the application.

The Landsat viewer contains fast, easy-to-use change detection tools that enable users to conduct multitemporal image analysis of change through image differencing. The Landsat viewer automatically calculates this information based on user selections and displays the resultant information on a change detection map where users can further interact with the data.

For more information, visit esri.com/landsat.

Esri Career Opportunities

Are you looking for a career where you can apply your industry expertise in a challenging new way? Join Esri's commercial team of sales, marketing, consulting, and project management experts and help companies worldwide make better decisions using geospatial technology.

Commercial Sales Team

Use your industry knowledge and strong communication skills to effectively describe the business value of GIS software solutions, training, and professional services. Support existing client relationships as well as cultivate new business. Opportunities are available in a number of our regional offices.

- Account Executive, Commercial
- Account Executive, Manufacturing
- Account Executive, Retail
- Account Manager, Commercial
- Sales Associate, Commercial

Business Development Manager, Commercial

Expand Esri's relationships with its business partners in the commercial sector by identifying and developing relationships with potential partners and advancing relationships with existing partners.

These positions are based in Redlands, California, unless noted otherwise. Learn more and apply online at esri.com/careers.

Esri Online

Listen to New Podcasts

Visit esri.com/podcasts to see the latest Speaker and Instructional Series podcasts. Here's a glimpse of what you'll find:

Geo Business Intelligence

Chris Ovens, general manager for SpotOn Systems, talks about the importance of integrating geospatial technology and data to give organizations a true view into their business data.

Become a Fan

Join thousands from around the world in an online community on Facebook, Twitter, and LinkedIn.

Check out these Facebook pages:

- Esri
- Esri UC
- Official Esri DevSummit
- GIS Day

Follow Esri and participate in conversations on Twitter with these hashtags:

#ESRI, #ESRIUC, #ESRIMOBILE, and #ARCGIS

- Follow the commercial business team at @ESRIBizTeam.
- Follow Simon Thompson, commercial business industry manager, at @SiAction.
- Follow *BusinessGeoInfo* newsletter editor Karen Richardson at @mudmo.
- Follow Esri on LinkedIn:

  Esri

  Esri UC

  Esri GIS

Spring Lineup on Esri TV

Tune in to the latest videos, such as those from Esri describing step-by-step instructions for using arcgis.com. Visit youtube.com/esritv.

Find Resources

Visit resources.arcgis.com to find the information you need including help documentation, tutorials, videos, ArcGIS templates, models, and scripts.

Attend a Free Online Training Seminar

Live training seminars bring the GIS instruction you need to your desktop. Technical experts lead these hour-long sessions, which are streamed live. Should you miss the interactive presentation, you can access the recording online. Visit training.esri.com for more information.

Smart Facilities Newsletter

Subscribe to the *Smart Facilities* print newsletter, published quarterly, and the e-newsletter, sent out every other month during the year, to keep up with the very latest news in the facilities management industry. To subscribe, visit esri.com/subscribe.

Consuming GeoRSS Feeds Using ArcGIS Desktop

By Joe Holubar, Esri Technical Marketing

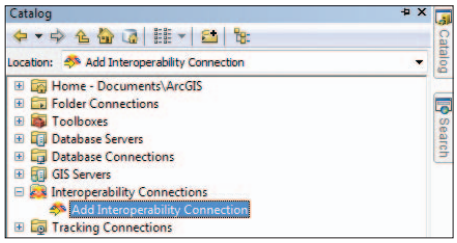
As access to real-time or near real-time data feeds becomes faster, easier, and less expensive, you will need ways to consume this data and view it in different applications. One example of a real-time data feed is GeoRSS. You've probably heard a lot about GeoRSS lately. Really Simple Syndication (RSS) is the most well-known web feed because it can be extended to publish any sort of itemized data to an application, but GeoRSS has gained popularity in the last few years because it has an added benefit: Location or geographic coordinates are encoded as part of the web feed. This allows web developers to add geographically referenced data feeds to web applications.

There are many web-based applications for consuming these types of feeds, including the ArcGIS APIs for Silverlight, Flex, and JavaScript. You also can use the Data Interoperability extension in the ArcGIS Desktop ArcMap application. This extension allows you to easily use and distribute data in many formats, including RSS or XML, without needing to convert it to a readable format first. With this option, you can not only visualize the data from a GeoRSS feed but also manage the data and analyze it for patterns and trends.

Here's how to do that using, as an example, a GeoRSS feed from the United States Geological Survey (USGS) on recent high-magnitude earthquakes.

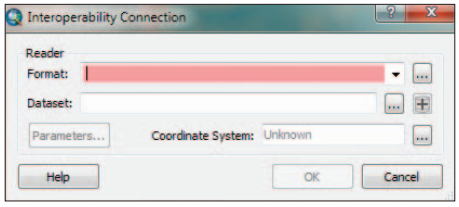
Step 1: Turn on the Data Interoperability extension in ArcMap by clicking Customize, pointing to Extensions, and clicking Data Interoperability.

Step 2: Add a new interoperability connection in the Catalog window in ArcMap by expanding the Catalog window and double-clicking Add Interoperability Connection.



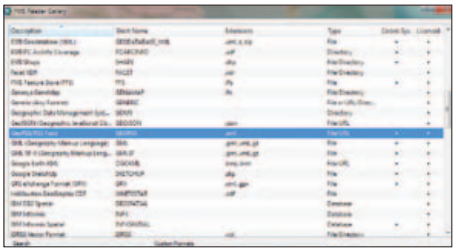
View of Catalog Window and Add Interoperability Connection Link

Step 3: Once the Interoperability Connection dialog box opens, click the ellipsis button next to the Format input box.



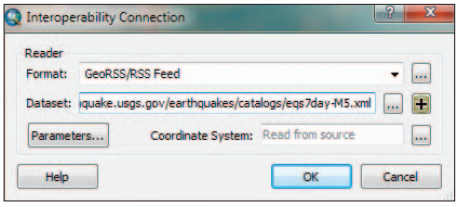
Choosing the Data Format within the Interoperability Connection Dialog Box

Step 4: Browse to GeoRSS/RSS Feed within the gallery. Select it and click OK.



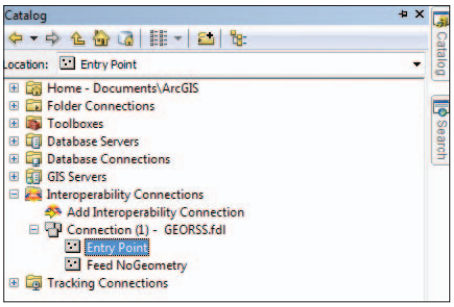
Gallery of Formats Read by the Data Interoperability Extension

Step 5: Copy and paste the GeoRSS URL for worldwide earthquakes greater than magnitude 5 from the USGS website (earthquake.usgs.gov/earthquakes/catalogs/eqs7day-M5.xml) into the Dataset input box, then click OK. You can change the parameters of how the feed is parsed out by clicking the Parameters button. You now have a new connection in the Catalog window.



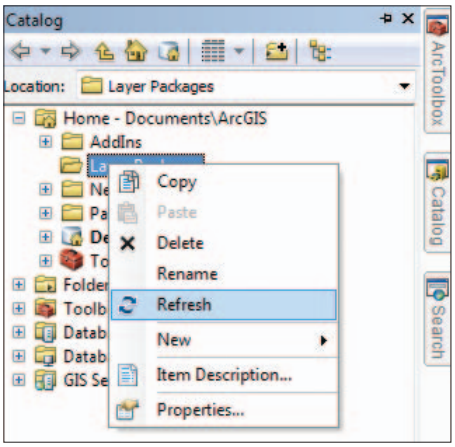
Inputting the URL within the Interoperability Connection Dialog Box

Step 6: Drag the Entry Point layer into your active ArcMap data frame to view the data. Once in ArcMap, you can symbolize the data as you see fit and begin to query and analyze this new dataset.



View of GeoRSS Feed in the Catalog Window

Step 7: Once the data is added to ArcMap, it's a static snapshot of the feed at the time it was added. To handle updates, the data frame or layer must be refreshed. Right-click the layer and choose Refresh from the menu to pull down the most up-to-date information.



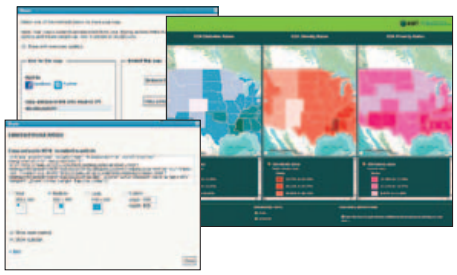
View of the Catalog Window and Layer Menu Options

To learn more about GeoRSS and ArcGIS Explorer, visit the ArcGIS Resource Center at resources.arcgis.com.

Sharing Your Maps Has Never Been Easier

Embed Your Maps and Create Custom Apps with No Programming

As access to maps has become more and more ubiquitous in the online world, most people now expect to see a map as part of a story or even have the map tell the entire story. ArcGIS users and other professionals now have an easy way to share their maps with a broad audience and leverage templates to quickly customize maps to fit their needs.



Maps can be embedded in web pages and web applications with just a few clicks. Users choose the size of the map and what controls to include.

Embedding Maps

Any map created with or that can be opened with the arcgis.com viewer, including basemaps that have been published by Esri—for example, the *World Topographic Map*—can now be embedded in a web page with just a few simple steps. One way to quickly share a map is to copy the long URL that appears in the web browser address bar of the arcgis.com viewer and paste it into an e-mail or web browser. Another way is to use the Share button in the arcgis.com viewer. Here, you can choose to share your map via your Facebook or Twitter account with the click of a button, or you can just copy a shorter URL and paste it into an e-mail, instant message window, or web browser. You can also choose to embed a map in a personal website or web application.

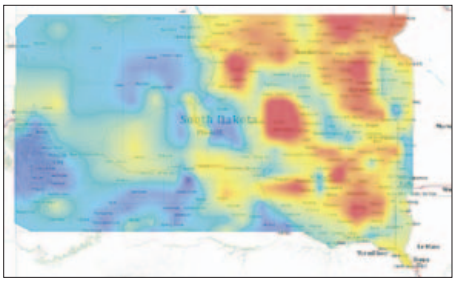
To get started with embedding a map, first choose the size of your map and decide whether you want to include a zoom control and scale bar. Then all that's left is to copy and paste the HTML code into a text editor like Notepad (any text editor will do) and save the file as an HTML extension. Double-clicking the saved file will bring up the HTML page with the map in it. Bloggers and others who want to add a map to their web page that has an existing layout can follow the same process, but instead of being copied into a text editor, the HTML code is copied to the View Source page and saved. Now, within seconds, anyone can add a map to a web page to support a story and tell it more effectively.

Using Custom Application Templates

To help you create apps more quickly, custom JavaScript applications have been created that can be used directly with ArcGIS Online maps. You can now access more than 20 application templates through the arcgis.com viewer and leverage them with any of your saved maps in My Content in arcgis.com. Or, you can simply select a basemap from the basemap gallery, such as *World Street Map* or *World Topographic Map*. Once the map has been opened in the arcgis.com viewer, click the Share button in the arcgis.com viewer and select Make a web application. You can review each application template before deciding which one to use. After downloading the template, you will be prompted to save a ZIP file containing everything you need to create the web application, including step-by-step instructions. Another way you can use the application templates is to copy and paste the URL that appears in the preview window of the application template.

Like web maps, each application has a unique and permanent identifier that can be used to share the application with others. Some of the templates available through arcgis.com are also available at the ArcGIS Resource Center for ArcGIS API for JavaScript under the arcgis.com samples. Just go to resources.arcgis.com and click Web, then web APIs, then JavaScript. Select the Samples tab and scroll down to arcgis.com on the left side. There, you can preview live samples of the templates, and you can see the unique identifier in the browser address bar, expressed as a URL parameter. You can also publish any map by simply copying and pasting the source code found in the sample documentation into an HTML file and saving it.

One particular example of a custom application is the new map comparison template. With this template, available only through the arcgis.com viewer, you can compare three ArcGIS Online maps side by side. For instance, you can look at individual maps about diabetes, obesity, and poverty rates and compare them in one view. All three maps are synchronized, so when you zoom and pan in one map, the other two maps will automatically adjust to the same scale and location. Information about the maps, such as description, content, and legend, is also synchronized to display on all three maps. When you use the Identify tool, information about features at the same location is displayed in all three maps. This provides you with a visually compelling and intuitive way to compare the different maps at the same time and gain a common understanding of several themes and the relationships between them. You also have the ability to modify the JavaScript source and adjust the look and feel of the template to meet your needs, add your own tools, and much more.



The South Dakota Game, Fish and Parks Agency has embedded this goose migration heat map on its website.

Embedding maps and using custom application templates are just two of the latest improvements in ArcGIS Online.

Visit arcgis.com today to start embedding your maps more quickly.

Starbucks, Edward Jones Keynote Esri Business Summit

Were you unable to attend the Esri Business Summit held July 10–11, 2011, in San Diego, California? You can read highlights in the next issue of *BusinessGeoInfo*.

The Business Summit provided attendees with a better understanding of how location-based analysis can improve an organization's overall performance, effectiveness, and efficiency.

Simon Thompson, Director Commercial Industry at Esri, addresses the crowd during the 2010 Esri Business GIS Summit.

"There's no other event quite like this," explained Simon Thompson, director of commercial solutions at Esri. "The summit draws a truly global audience that comes together to share knowledge about GIS, which allows us to really see and understand interconnections of business in this world economy."

Keynote speakers from Starbucks, Willis Re, MacKenzie Commercial Real Estate Services, Cisco, Edward Jones, and the University of Kentucky discussed how they use GIS to solve business problems or better serve their customers. The summit also offered a first look at technology, trends, and demonstrations of how GIS can be applied in retail, real estate, financial services, facility management, logistics, manufacturing, economic development, and health care.

The summit offered best practices and insights into how to create more effective business strategies using GIS. Through sessions, presentations, and networking events, case studies, return on investment (ROI)-focused strategies, and problem solving were discussed.

To find out more about the Business Summit and presenters, visit esri.com/bizsummit.

Belize Embraces Geospatial Technology

Belize, located in Central America, may be a small country, but it has big aspirations for adopting GIS technology. Bordered by Mexico to the north and Guatemala to the south and west, Belize, with a population of 333,200, is 180 miles long and 68 miles wide. This small area houses a diverse ecosystem ranging from scrubland to wetland that supports an agriculture- and tourism-based economy.

Loretta Garcia-Palacio, managing director of Total Business Solutions Ltd., welcomes attendees to the Belize GIS User Conference and Exhibition.

The need to carefully manage natural and man-made resources, combined with requests from local leaders, prompted Belize's Esri distributor, Total Business Solutions Ltd. (TBSL), to host the inaugural Belize GIS User Conference and Exhibition in January 2011.

Presenters from 12 Belizean organizations and five government departments shared their vision for and experience with GIS in a wide range of industries: oil and gas; law enforcement; park management; social mapping; public-sector management; and land use, planning, and development. Lynn Young, CEO of Belize Electricity Limited, talked about how his company understands the value of technology in business and how GIS is used to work on strategic objectives and ensure the highest level of customer service at his organization.

To continue sharing knowledge after the event, a Belizean community on ArcGIS Online was established. The ArcGIS Online community has become a springboard for conference participants and others interested in using GIS throughout Belize.

Many efforts are under way to continue adopting GIS, thanks to the collaboration of the conference goers. One project being spearheaded by the government's Land Information Centre will culminate in Belize's national spatial data infrastructure. This initiative has catapulted from the back burner to become the top priority for fiscal year 2011–2012. Discussions are also under way on how the Land Information Centre can provide data services using ArcGIS Server and ArcGIS Online.

Conference goers visit the Belize Natural Energy (BNE) booth to find out more about how BNE uses GIS.

Rene Villanueva, a radio host in Belize and master of ceremonies for the conference, congratulates Simon Thompson, Esri's commercial business industry manager, on his keynote address.

Simon Thompson, commercial business industry manager at Esri and the keynote speaker at the conference, was impressed with the work of GIS users in Belize. "The energy in this community is exciting," said Thompson. "There is so much interest in GIS, from a census count of citrus trees to business applications including risk analysis and lease management. The possibilities for this community are limitless."

Loretta Garcia-Palacio, TBSL managing director, agreed that there's a hunger to use GIS in Belize. "The conference was able to create a national awareness, and now there is an awakening—an excitement about the potential of GIS technology," she said. "About 30 percent of the conference participants had never been exposed to the technology, and now they want more. TBSL plans to use this momentum to garner private-sector support for the development of Belize's national spatial data infrastructure."

The conference was sponsored by the Belize Bank, the Belize Land Information Centre, Belize Natural Energy, Belize Telemedia Ltd., Brothers Habet, Esri, Idealab Studios, and Trimble Navigation Limited. More than 200 people from 75 organizations attended. The next Belize GIS User Conference and Exhibition will be held in January 2012. Visit www.gis.com.bz.

BusinessGeoInfo is a publication of the Business Solutions Group of Esri.

To contact the Esri Desktop Order Center, call
1-800-447-9778
within the United States
or
909-793-2853, ext. 1-1235,
outside the United States.

Visit the Esri website at **esri.com**.

View *BusinessGeoInfo* online at **esri.com/business** or scan the code below with your smartphone.

126317
INLD58.3M7/11tk

Advertise with Us
E-mail ads@esri.com.

Submit Content
To submit articles for publication in *BusinessGeoInfo*, contact Karen Richardson at krichardson@esri.com.

Manage Your Subscription
To update your mailing address or subscribe or unsubscribe to Esri publications, visit esri.com/manageyoursubscription.

International customers should contact an Esri distributor to manage their subscriptions. For a directory of distributors, visit esri.com/distributors.

Circulation Services
For back issues, missed issues, and other circulation services, e-mail requests@esri.com; call 909-793-2853, extension 2778; or fax 909-798-0560.

esri®
380 New York Street
Redlands, California 92373-8100 USA