

Intergraph Helps South Carolina Weather Hurricane Season



USING INTERGRAPH'S ENTERPRISEWIDE TRANSPORTATION WEB PORTALS SOLUTION, SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION IS ABLE TO MEET THE CHALLENGES OF HURRICANE SEASON HEAD ON

THE CHALLENGE:

When Hurricane Charley made landfall August 13, 2004, on the southwest coast of Florida, it delivered a seven-foot storm surge and wind estimated at 145 miles per hour. As the storm continued to track northeast across the state toward the Atlantic Ocean, threatening to bring its high winds and flash flooding to the East Coast, officials in the South Carolina Department of Transportation (SCDOT) paid attention. Charley was a powerful storm, and they understood its potential to regenerate its strength over the Atlantic. As the storm approached, South Carolina Governor, Mark Sanford, declared a state of emergency and ordered residents and vacationers in two coastal counties to evacuate.

South Carolina has often faced the possibility of destructive weather. With its miles of exposed coastline, the state needed a program that would put rapidly changing traffic and weather information at the fingertips of emergency evacuation managers. Realizing that preparedness is the best defense, officials developed the Hurricane Evacuation Decision Support Solution for the state several years ago.

Hurricane warnings and the forced evacuation of thousands of coastal residents could quickly lead to chaos if not managed efficiently. Roadways heading away from the coast have limited capacity. Decision makers need up-to-the-minute information to determine which route is best, and on top of all that, there's not a minute to lose. South Carolinians rely on the DOT to analyze conditions quickly and accurately and help them move to safety.

THE PROJECT OBJECTIVES:

- Implement an enterprisewide transportation Web portal that enables SCDOT to analyze weather conditions and quickly and accurately help to move citizens to safety
- Provide decision makers with up-to-the-minute evacuation information

PROFILE:

Name – South Carolina Department of Transportation, USA

Web site – www.dot.state.sc.us

The South Carolina Department of Transportation (SCDOT) prides itself of using innovative ways to serve citizens and promote safe and efficient transportation. From the roadside to the classroom, SCDOT strives to help people. The department partners with schools and colleges on various educational programs, and helps motorists with incident response programs.

KEY BENEFITS:

- Decision makers have up-to-the-minute evacuation information
- SCDOT employees can quickly and efficiently analyze weather conditions and recommend the best evacuation routes

PRODUCTS USED:

- GeoMedia® WebMap

THE SOLUTION:

The state selected Intergraph's enterprisewide transportation Web portals solution to develop the Hurricane Evacuation Decision Support Solution – a system for integrating multiple data sources and distributing geospatial information and other digital data via the Web. Beginning with Hurricane Floyd in 1999, the SCDOT staff could survey evacuation routes, vehicle counts, road closures, and weather conditions simultaneously.

In advance of predictions for an unusually destructive hurricane season in 2004, the evacuation system was enhanced with Intergraph's GeoMedia Web solutions that incorporate Scalable Vector Graphics (SVG). The new World Wide Web Consortium (W3C) standard for Web-based vector graphics, SVG was recently incorporated into GeoMedia WebMap. SVG is used in many applications, including Web graphics, user interfaces, graphics interchange, print and hardcopy output, animation, mobile applications, and high-quality design.

Based on Extensible Mark-up Language (XML), SVG provides dynamic segmentation capabilities that make an integrated environment of maps and charts more interactive. Combining rich graphics features and smooth handling of very large amounts of data, SVG saves time for users performing data analysis. SVG's powerful scripting and event-support capabilities complement the Open Geospatial Consortium's GML format, which can easily be converted for high-quality online display. SVG offers numerous benefits, including compatibility with open standards; superior rendering functionality; virtual desktop capabilities; compression to small file size; and graphs, tables, charts, and maps that can interact with the map that is being used for analysis.

With the enhancements to the SCDOT Hurricane Evacuation Decision Support Solution, decision makers can access near real-time information in the form of graphs, maps, and spreadsheets for analyzing road conditions. They can compare current traffic trends with normal loads, look for traffic blockages, and determine what action to take. Officials have rapid access to traffic volumes, speed data, evacuation route and detour maps, traffic cameras, current

weather data, and other pertinent traffic information to help them analyze conditions in real time and communicate with highway managers and the general public using the Web and the news media.

The readings from automatic traffic recorders (ATRs) can be compiled immediately, displaying near real-time data as it compares with an hour before, the last six hours, or the last 14 days. The ATR reports provide such critical information as speed of the traffic, number of vehicles per hour, and percent of capacity reached. If a road has reached its capacity and the traffic is starting to slow down, officials can use the reports to determine the next step. If necessary, they can close the road to coast-bound traffic and use all lanes for evacuation. Or they can reroute some of the traffic to alternate roads.

For more information, visit www.intergraph.com.

ABOUT INTERGRAPH

Intergraph Corporation (NASDAQ: INGR) is the leading global provider of spatial information management (SIM) software. Security organizations, businesses and governments in more than 60 countries rely on the company's spatial technology and services to make better and faster operational decisions. Intergraph's customers organize vast amounts of complex data into understandable visual representations, creating intelligent maps, managing assets, building

and operating better plants and ships, and protecting critical infrastructure and millions of people around the world.

