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Fast, Accurate GIS Mapping Visually Enhances News Story

Newsweek Maps Out Hurricane Story With GIS and ESRI BIS Data

The 2004 hurricane season was devastating, with hurricanes Charley, Frances, Ivan, and Jeanne destroying property, displacing families from their homes, and resulting in numerous injuries and fatalities.

For news organizations, it was a particularly important story. The enormous impact of these natural disasters could be felt nationwide in a number of ways. News coverage featured stories involving impact on lives, households, and infrastructure; how hurricane destruction impacted the political landscape; and much more.

Newsweek, a leading weekly magazine with a circulation of more than three million, supplied extensive hurricane news coverage on many different but

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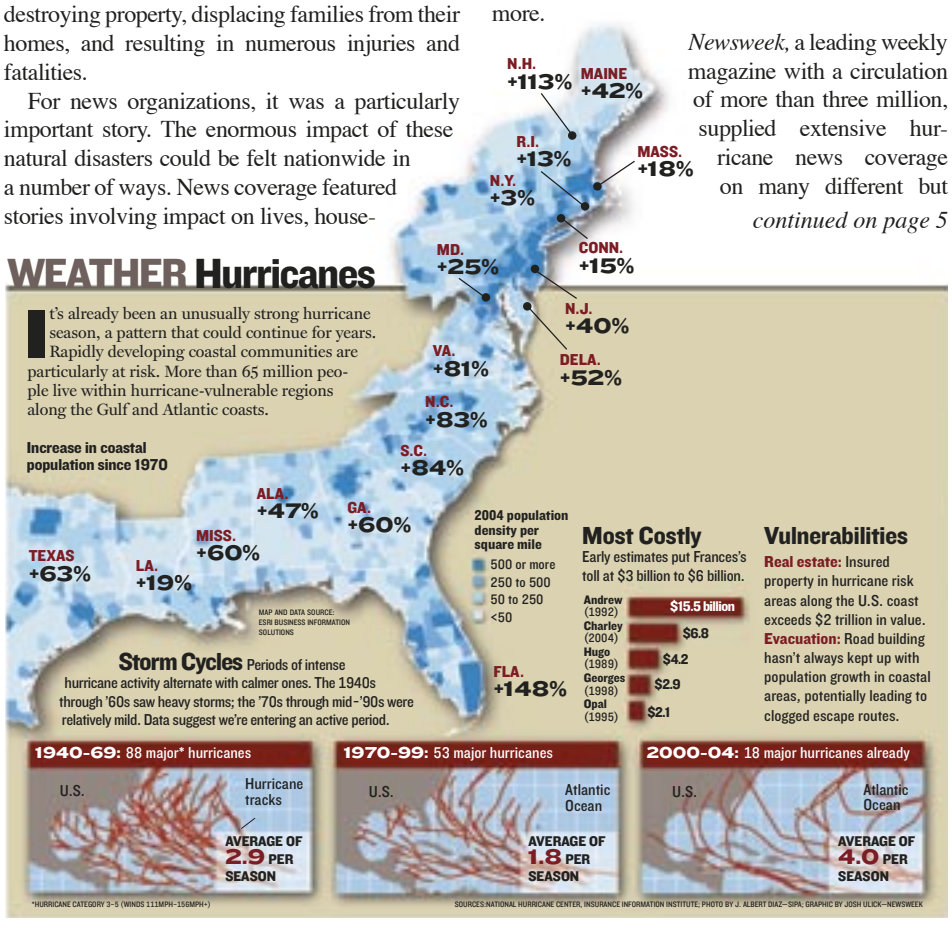

To produce this map, ESRI specialists used ArcGIS and ESRI BIS boundary data sets with current year demographic data. 2004 population data was extracted from the ESRI BIS database and joined with U.S. county boundaries. (Courtesy Newsweek. *Issue September 20, 2004. © 2004 Newsweek, Inc. All rights reserved.)*

2004 Presidential Election Coverage

CBS News Headlines GIS Mapping

The power of GIS to tell stories and put information in context was demonstrated on election night, November 2, 2004, in the United States. CBS News used ArcGIS software to create and quickly update results maps for its coverage. The data driven maps provided the American public with a detailed look at voting patterns by county, while other maps showed the demographics of those counties.

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Different mapping techniques gave CBS News a variety of ways to communicate complex information more quickly and easily to a wide audience. (Courtesy CBS News.)

Shell Signs Groundbreaking Enterprise Agreement

Building upon a successful Multinational Enterprise contract signed four years ago, Shell International Exploration and Production B.V. has signed an agreement with ESRI to implement a comprehensive, enterprisewide agreement under which Shell worldwide can use the ESRI suite of software products.

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2004—ESRI's Year in Review

2004 was another successful year for ESRI, which continues to champion a wide range of activities in support of both its customers and the expanded use of GIS in the many disciplines that are dependent upon geospatial work flows.

ESRI remains very healthy, with continuing growth, significant product development, strong sales,

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More Accurate Elevation Data

D. David Moyer explains that accurate elevation data is increasingly important for a wide variety of geospatial applications. GPS and related technologies provide elevation data that is not only more accurate but can also be produced at reduced costs. See pages 30–31 for his report.

Using ArcWeb Services

National Geographic and NPS Increase Access to Park Data

The National Geographic Society has championed America's national parks for nearly a century through its magazines, maps, books, television programming, and Web site. Now, the National Park Service (NPS) and National Geographic have formalized the relationship between the two organizations and paved the way for more collaborative efforts.

National Geographic and NPS recently signed

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IBM Spatially Enables Enterprise With ESRI ArcGIS Server

Bringing geospatial tools and information to business processes throughout an enterprise has a number of challenges that are now being solved by a unique IBM and ESRI technology partnership. This partnership has led to the creation of the IBM Spatial Integration Adapter for WebSphere Studio. The Spatial Integration Adapter is a new multiplatform development tool that allows GIS to be integrated into work

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This Issue—featuring GIS and

Tsunami Recovery

ESRI and its international distributors are supporting relief organizations responding to the Indian Ocean earthquake and resulting tsunamis. We extend our sincere sympathies to those affected by this disaster. Please check the upcoming Spring 2005 issue of *ArcNews* for articles describing GIS in these recovery efforts.

IBM Spatially Enables Enterprise With ESRI ArcGIS Server

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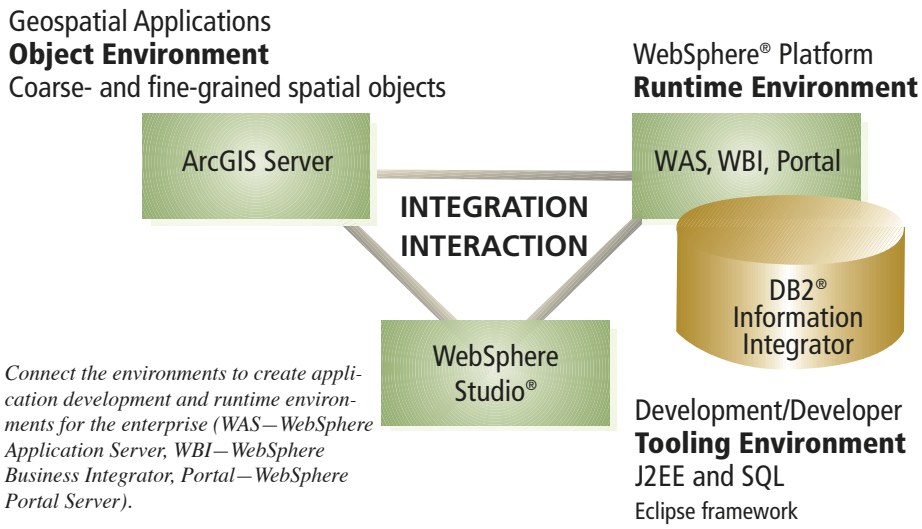
flow, process management, and security components of enterprise business solutions, such as customer relations management and supply chain management.

The Spatial Integration Adapter is a WebSphere Studio plug-in that enables developers to create geographic applications or applications that incorporate mapping, geographic analysis, and standardized Web services from within an intuitive tool set. The tool set supports integration of spatial objects (drag and drop), as well as the creation of new projects, samples, and so on. This tool set utilizes ArcGIS Server components, delivering to the WebSphere developer all the capabilities offered by ArcGIS geospatial objects in a Java standards environment.

The adapter provides an easy-to-use visual programming environment for the spatial objects and functions that comprise the IBM DB2 Spatial Extender. It allows development of extensive Web-based spatial applications and industry-standard Web services on top of the spatial types and features in DB2.

Once installed, the adapter allows programmers who create the presentation portion and business logic of a WebSphere-based application to apply visual programming techniques, such as drag and drop of spatial objects, to the creation of Web-based content.

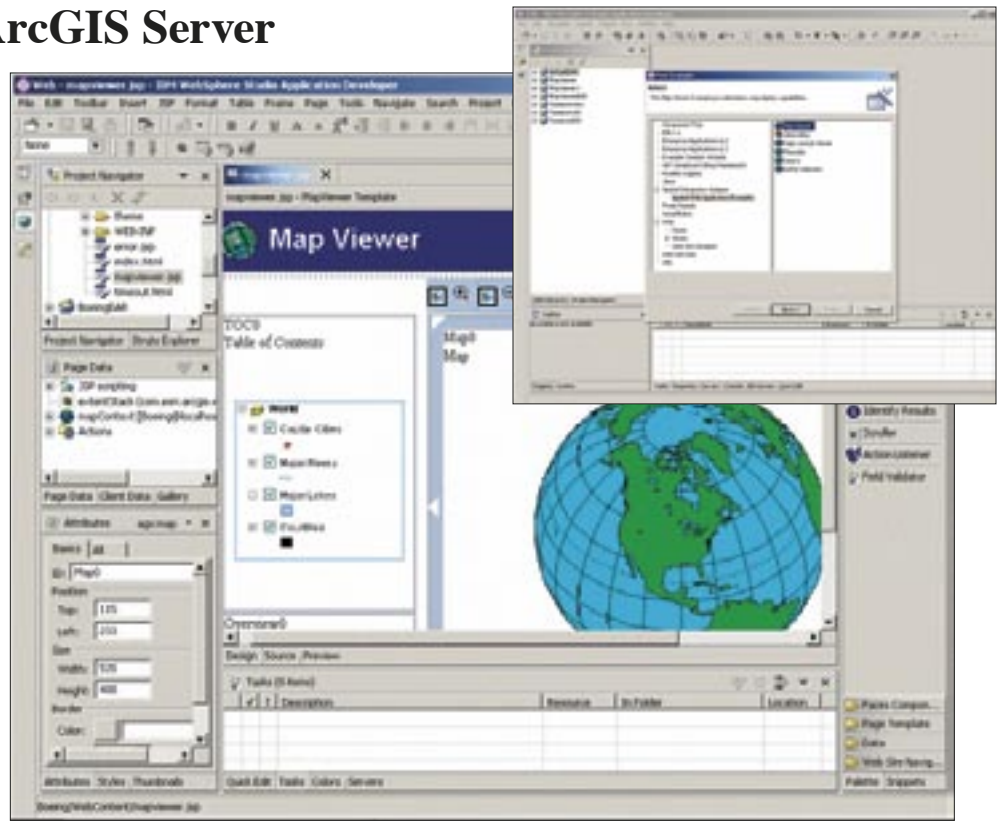
The adapter allows rapid assembly of spatially enabled Web applications, using a collection of visual components. Communication with ArcGIS Server is handled in a way that is transparent to the developer. WebSphere Studio Application Developer (WSAD) is currently the only tool that includes these visual components. The resulting applications run on multiple environments including Linux, UNIX, Windows, and even mainframe systems.



Connect the environments to create application development and runtime environments for the enterprise (WAS—WebSphere Application Server, WBI—WebSphere Business Integrator, Portal—WebSphere Portal Server).

From a runtime perspective, the position is similar. WebSphere Studio Application Server is a cross platform, highly scalable, transactional server that targets hosting business applications. It has excellent connectivity options into legacy environments, for example, mainframe applications or third party business applications, such as PeopleSoft or SAP. The Spatial Integration Adapter, together with the ESRI Java Application Development Framework (ADF), allows spatial applications to take advantage of these characteristics or business applications to include spatial function as if it were native to the platform. This includes the ability to access ArcGIS functions via a standards-based Web services layer from any client. Business processes can be built and run across these services, regardless of platform or language.

The Spatial Integration Adapter takes advantage of a number of standards. The visual components use JavaServer Faces (JSF) technology; the Web services component supports all the relevant Web services standards, including WS-Security. The plug-in is written on top of the open-source Eclipse platform (www.eclipse.org). Eclipse works across platforms, in widely available commercial product sets, such as the IBM WebSphere foundation and tools portfolio and the IBM DB2 Information Management portfolio.

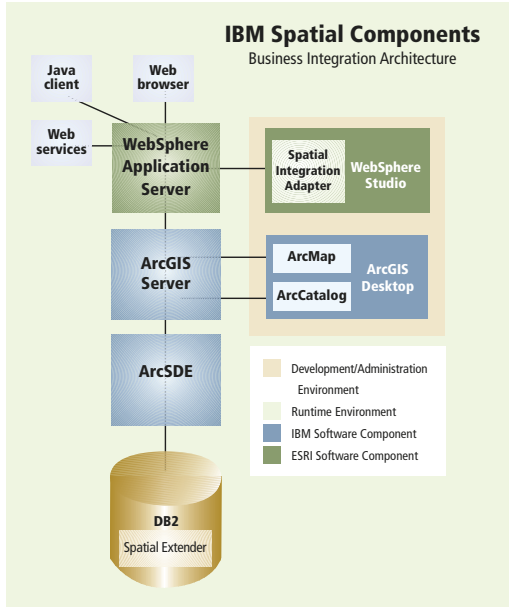


For simple implementation, no GIS or ArcGIS skills are required. Simply drag and drop GIS components into any Java/J2EE application. Inset: ArcGIS Server objects in drag/drop development environment: J2EE.

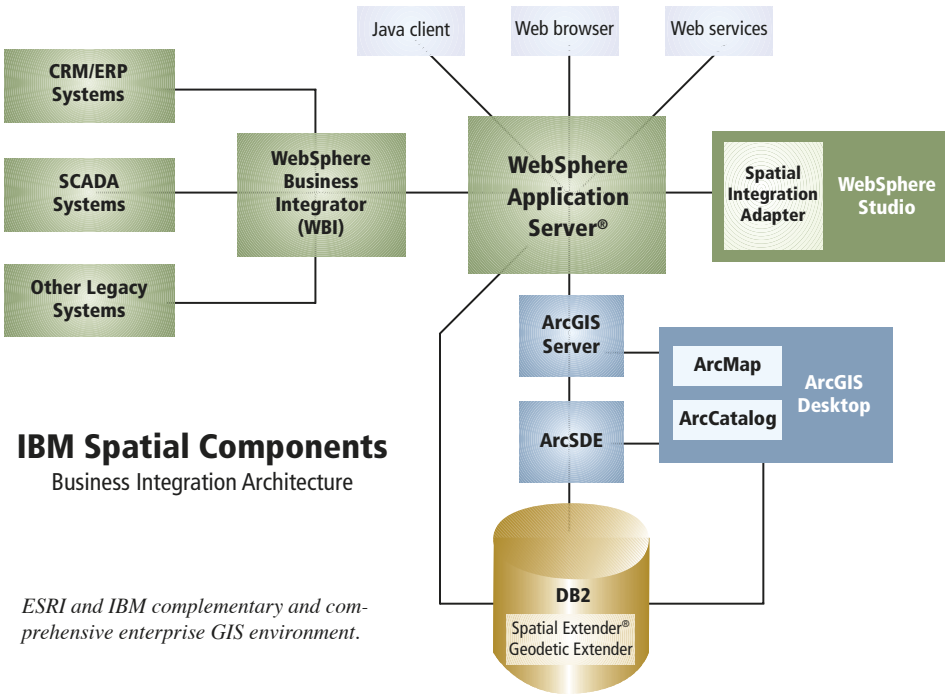
Building Permit Variance: WebSphere Application Developer and ArcGIS Server to construct a JavaServer Pages-based Web page, which computes and returns the owners of the adjacent parcels.

JavaServer Faces clearly separate the presentation from the data. The ArcGIS Server Application Development Framework JSF components are included in the standard WebSphere Studio Application Developer JSF palette, affording integration with a multitude of standard component libraries for rich application development. Developers can create new J2EE applications rapidly by using the visual page designer in WebSphere Studio. Since the full ArcObjects application program interface (API) is available in Java, it can either use the coarse-grained visual components or code against the fine-grained ArcObjects API. Applications are automatically packaged and deployable as J2EE applications, making them Web-based, robust, and highly scalable by running on WebSphere Application Server. Custom components can be built on top of the ones delivered with the plug-in.

The WebSphere Studio environment includes a WebSphere Application Server to afford real-time testing of the applications during development. The WebSphere Application Server also exposes ArcGIS functions as Web services. This supports the JAX-RPC and JSR109 Java Web services standards. There is a special wizard in WSAD to create a Web services module from an existing ArcGIS installation with Web services security. This affords interoperability with other platforms and neutral zone deployment via the Web Services Gateway. Rapid application development in a standard J2EE and JSP environment allows cross platform creation and deployment of spatial applications with access to the most extensive spatial functional library in the industry. From a development perspective, the Spatial Integration Adapter provides a bridge between J2EE developers of business applications and ESRI-skilled developers creating spatial applications.



The IBM and ESRI infrastructure stack.



ESRI and IBM complementary and comprehensive enterprise GIS environment.

For more information, visit www-306.ibm.com/software/data/spatial/integration_adapter.html and www-306.ibm.com/software/data/spatial on the Web. Article authored by David Beddoe, IBM Software Group. AN