

ESRI Draft

Leading GIS and mapping software company offers a powerful framework for creating rich Internet application built around Adobe® Flex®

ESRI

www.esri.com/getting_started/developers/flex-development-tools.html



Industry

GIS Web Services

Challenges

- Building intuitive, task-based mapping applications
- Expanding the reach of GIS web services into new markets
- Delivering richer, more integrated mapping services

Solution

- Rich Internet applications
For ArcGIS Server, ESRI has created APIs that facilitate building rich Internet mapping applications. With Flex 3, ESRI is accelerating developing and deploying dynamic, high-impact mapping applications.

Results

- Accelerated by months the rollout of new services by customers
- Reduced development costs for ESRI and its customers
- Dramatically expanded market opportunities for GIS services
- Improved breadth of functionality for stronger integration to other systems and services

Systems At A Glance

- Adobe Flex 3
- Adobe AIR®

GIS goes mainstream

Demand for geographic information systems (GIS) web services has skyrocketed over the past few years. By combining geographic data with business and demographic information, organizations are finding new uses for GIS that are saving time and money. “GIS applications are more mainstream than ever,” says Mike Tait, director of Internet solutions at ESRI, one of the world’s leading GIS service providers. “Technologies that once mainly served geologists and government officials are now regularly used by organizations of all sizes.”

ESRI’s ArcGIS Server is at the forefront of expanding access to interactive GIS applications. ArcGIS Server connects people with GIS information via web applications and services and provides web mapping application programming interfaces (APIs) that enable developers to integrate mapping, GIS functionality, and content into rich Internet applications (RIAs). These applications handle a range of processes, including helping executives manage commercial fleets and identify trends; enabling disaster-response teams to better respond to events; and assisting companies with business continuity planning.

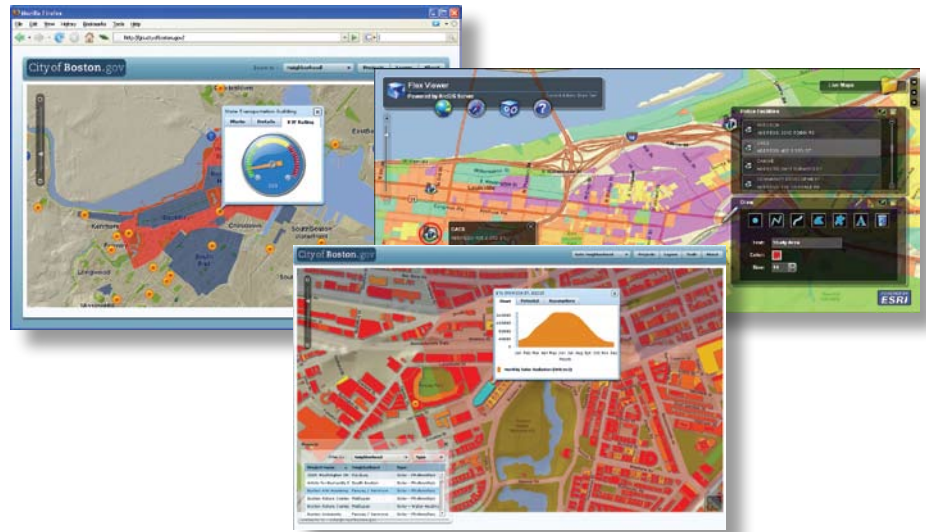
Simplifying complex processes

With the increased demand for GIS services, ESRI is transforming traditional approaches to how people and organizations find, analyze, and use geographic information. Applications that were once very complex now often require intuitive, web-based interfaces that can appeal to both technical and non-technical users. “Presenting mapping content in more compelling ways is a priority for us,” says Tait. “Today, the ability to solve problems with maps—rather than just display maps on screen—is creating new demands for services. Adobe Flex makes that possible by providing end users with richer, more dynamic interfaces.”

An important enhancement in GIS applications is the ability to create richer, more useful online experiences, especially for mapping applications that incorporate multiple sources of real-time data. For example, ESRI customers can use the ArcGIS Server services to create public safety applications that not only track emergency response vehicles but also include current traffic and weather conditions.

“The messaging infrastructure and data synchronization in Flex are excellent,” says Mansour Raad, senior software architect for the ArcGIS Server service at ESRI. “We can provide our partners with an API that enables them to quickly build web applications that pull data from multiple legacy and enterprise systems, and then deliver that data in seconds as rich media to end users.” Also important to enhancing the overall usability of the GIS services is the advanced visualization capabilities provided by the Flex framework.

The growing demand for GIS services that can be delivered online, on desktops, or on mobile devices has prompted solution providers like ESRI to develop ways of presenting compelling mapping content with intuitive, web-based interfaces. To do so, ESRI relies on Adobe Flex 3.



“With Adobe Flex 3, developers can achieve in a couple of days development tasks that would have taken months.”

Mansour Raad,
Senior software architect for the ArcGIS
Server service,
ESRI

One solution, multiple benefits

When ESRI began looking for a development environment to expand the reach of its ArcGIS Server services, three issues topped the list: adherence to standards, rapid development, and ease of use for customers. By developing with a proven, standards-based solution like Flex, ESRI is building a foundation for delivering powerful APIs that meet companies’ needs today and can evolve to meet tomorrow’s demands.

“Adobe Flex is an industry-leading development environment used worldwide,” says Tait. “With Flex APIs, we can support a large pool of talented developers who can quickly enhance their organizations’ services to meet changing business requirements.” According to Raad, the ease of finding skilled developers is only one of the many benefits of using Flex 3. “Flex 3 comes with powerful drag-and-drop components for creating trees, charts, tables, and other elements,” he says. “With Adobe Flex 3, developers can achieve in a couple of days development tasks that would have taken months.”

For ESRI partners looking to build GIS services that reach as wide an audience as possible, developing with the Flex API is ideal. The powerful web applications created with the ArcGIS API for Flex have interactive and intuitive client interfaces that run reliably in the ubiquitous Adobe Flash® Player, a popular runtime already deployed on more than 98% of Internet-connected desktops. For developers, this means they do not have to devote days or even weeks to creating and testing applications to run in the many popular web browsers in use worldwide. In addition, ArcGIS Server services are optimized for Adobe AIR, enabling customers to develop and deploy GIS applications that run on Internet and intranet environments.

More expressive, interactive content

For ESRI, the advantages of developing in Flex 3 are evident in the front-end interfaces and back-end integration. By delivering content viewable in the Flash Player, ESRI can enable customers to send interactive vector files rather than fixed raster images. “Our servers produce vector content that is rendered on client desktops,” says Raad. “This off-loads processing from our systems and makes the end-user experience much more responsive. At the same time, vector data is more expressive than raster data. Users can modify it and dynamically change views—all without going back to our servers.”



Adobe Systems Incorporated
345 Park Avenue
San Jose, CA 95110-2704
USA
www.adobe.com

Adobe, the Adobe logo, AIR, Flash, and Flex are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries. All other trademarks are the property of their respective owners.

© 2009 Adobe Systems Incorporated. All rights reserved. Printed in the USA.
95012035 02/09 A