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ArcGIS® Server 9.2 Web Mapping Application Compared to ArcIMS® 9.2 Viewers

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At ArcGIS® 9.2, hundreds of enhancements, including better quality, productivity, and documentation, were implemented to make it quicker and easier to get effective results across all areas of ArcGIS. A new Web-based Manager in ArcGIS Server 9.2 makes it much easier to set up and administer your server; create Web applications; and publish geographic information system (GIS) services such as high-performance cached map services, 3D globe services, geoprocessing services, and KML. ArcIMS® 9.2 enhancements include better performance, better data security, and new platform support.

ESRI® software provides a variety of tools that allow you to create effective Web sites for your mapping and GIS needs, and at 9.2, these tools consist of viewers and the Web Mapping Application. The ArcGIS Server system utilizes the Web Mapping Application through Manager. Manager is a Web application that lets you administer your GIS server, services, and applications within one application with little or no Web development experience. Viewers provide the foundation for the graphic and functional components of ArcIMS software-powered Web sites. ArcIMS Viewers are any one of the three Web site designs that come as standard options in ArcIMS Designer: HTML, Java™ Standard, and Java Custom.

Figure 1
Web Mapping Application

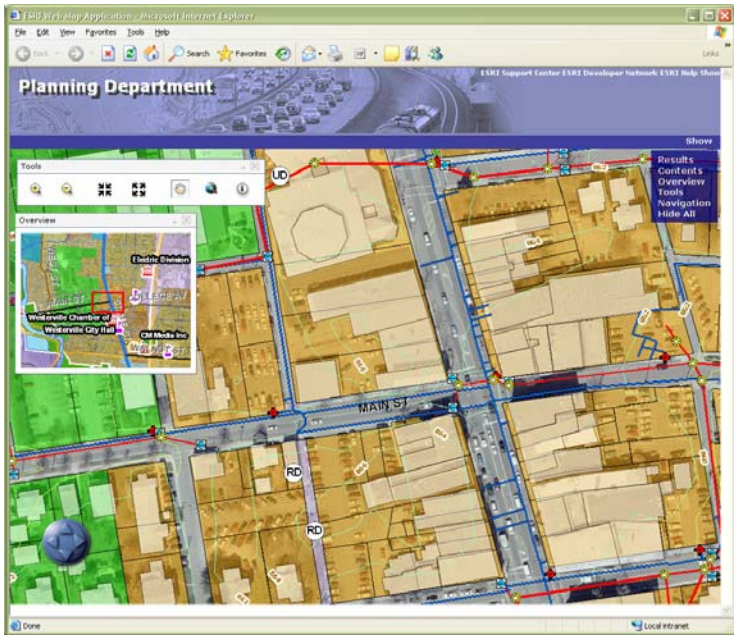

Table 1 compares the tool or task in the Web Mapping Application and the equivalent tools available in the HTML Viewer, Java Standard Viewer, and Java Custom Viewer toolbar.

Table 1
Tools and Tasks Comparison

ArcGIS Server Web Mapping Application	ArcIMS Java Viewer and HTML Viewer
Table of contents (TOC) includes layers and swatches together and is displayed in a collapsible, dockable panel.	Toggle between legend and layerlist
Included in collapsible, dockable panel.	Toggle overview map
Included on toolbar. Users can also use the scroll wheel or keyboard strokes.	Zoom in, zoom out, pan
Included on toolbar.	Zoom to full extent
N/A	Zoom to active layer
Included on toolbar for Java only. Can be added manually for .NET.	Back to last extent
Navigation tool allows users to pan the map.	Pan north, south, east, west
Included on toolbar.	Identify
Included as Query task.	Query
Included as Search task.	Find
Use a Query or Search task.	Stored query
Included on toolbar.	Measure
Included as part of Measure dialog box.	Set units
Buffer and Select Features are not included on the toolbar. Users can create a Geoprocessing task to support these operations. ArcIMS users can customize the Web Mapping Application to add these operations.	Buffer
Buffer and Select Features are not included on the toolbar. Users can create a Geoprocessing task to support these operations.	Select by rectangle, line, or polygon
Included as Find Address task.	Find address
Features are highlighted by turning on each selected feature individually. They are cleared by turning off each feature.	Clear features
Print functionality is not available as part of Manager. Has a Layout control that supports printing.	Print
Magnify tool on toolbar.	N/A
Find Place task.	N/A

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The ArcIMS Java Custom and Java Standard Viewers have the same tools as listed for the HTML Viewer. They also have some additional tools as shown in table 2:

Table 2
Tools and Tasks Comparison

ArcGIS Server Web Mapping Application	ArcIMS Java Custom or Standard Viewer
No equivalent when using a Web Mapping Application. However, you can save, close, and open maps using ArcGIS Explorer.	Open Project, Save Project, Close Project
Not available as part of Manager, but a MapTips control is included with the Web ADF for the Microsoft® .NET Framework.	MapTips
Not available as part of Manager, but a Web Mapping Application can be customized to support this functionality.	Layer Properties
An Edit Task is available when using ArcGIS Server Advanced edition.	EditNotes
Not available as part of Manager, but a Web Mapping Application could be customized to support similar functionality.	MapNotes

ArcGIS Server Web Mapping Application

The ArcGIS Server Web Mapping Application template provides basic map display capabilities and a set of tools and tasks for interacting with the map. The Web Mapping Application supports display of one service or a combination of services. Service types include services hosted by ArcGIS Server and ArcIMS, Web Map Server (WMS) services, and ArcWeb℠ Services. The Web Mapping Application is created in Manager, which contains a wizard to help you through the process of configuring and deploying the application without using an integrated development environment (IDE).

Customizing the Web Mapping Application

A Web Mapping Application contains standard Web page design elements in addition to Web controls.

There are two general levels available to you for customizing a Web Mapping Application:

1. Modifying properties of Web controls and making basic HTML modifications. If you have customized an ArcIMS HTML Viewer, this is equivalent to modifying ArcIMSparam.js and making basic HTML modifications. This level of customization requires no programming.

2. Programming against different application programming interfaces (APIs).

After you have deployed your Web Mapping Application, you can continue to use Manager to make changes to your application. You can also open a Web Mapping Application in an IDE and make changes to the application beyond what is available in Manager. For more information on customizing a Web Mapping Application, see the Developer Help for .NET (http://edndoc.esri.com/arcobjects/9.2/NET_Server_Doc/developer/getting_started.htm) or for Java (http://edndoc.esri.com/arcobjects/9.2/Java/java/server/getting_started_oview.htm).

ArcIMS Viewers

HTML Viewer

The HTML Viewer consists of a map display area and tools for interacting with the map. It uses a single image or ArcGIS Desktop ArcMap™ image service and does not require a Java plug-in. The viewer consists of a set of HTML pages and JavaScript files that you can customize.

Customizing the HTML Viewer

To customize the HTML Viewer, you primarily work with its ArcIMSparam.js parameter file and a set of JavaScript functions. ArcIMSparam.js contains global variables defining both the look and behavior of the Web site. You can also modify JavaScript functions and add or modify ArcXML™ requests generated in many of the functions. For more information about customizing the HTML Viewer, see *Customizing the HTML Viewer* (http://webhelp.esri.com/arcims/9.2/general/arcims_help.htm#mergedProjects/Books/pdf_listing.htm).

Java Standard and Custom Viewers

The Java Standard and Custom viewers, like the HTML Viewer, have a map display and a standard set of tools for interacting with the map. The Java viewers can be used with one or more feature, image, or ArcMap image services. You can also add local data such as shapefiles, raster files, and ArcSDE® data. The viewers provide support for simple client-side drawing and editing.

The Java viewers require a one-time Web download of the Java Runtime Environment (JRE) and ArcIMS Java Viewer components. These components will automatically download the first time you access a Web site if they are not detected on your machine. The Java Custom Viewer works only in Internet Explorer. The Java Standard Viewer works in Internet Explorer®, Firefox®, and Netscape®.

Customizing the Java Viewers

The Java Custom Viewer offers some limited customization options. The components that make up the viewers reside in Java applets, and communication to these applets is handled through JavaScript™ that accesses methods in the Java Viewer Object Model. The look and feel of the Java Custom Viewer can also be customized using HTML and JavaScript. For more information about customizing the Java Custom Viewer, see *Customizing the Java Viewer* (http://webhelp.esri.com/arcims/9.2/general/arcims_help.htm#mergedProjects/Books/pdf_listing.htm).

Tools and Tasks

Many of the operations in the HTML Viewer, Java Standard Viewer, and Java Custom Viewer that are handled through the toolbar are also in the Web Mapping Application. However, in some cases, a new approach has been taken to handle some of the operations. One big difference is the use of tasks. The task framework offers a standard way to deliver GIS functionality in your Web Mapping Application. Besides making the out-of-the-box functionality easier to use, you can also use the model to build your own custom tasks. Each task is a unit of work where there is often a dialog box requiring user interaction. For example, in the HTML Viewer, when a user clicks the Find tool, a dialog box appears where the user can type in a search string. In the Web Mapping Application, there is no equivalent tool in the toolbar. Instead, a Search task can be configured that allows users to type in a search string. In addition to a Search task, other tasks available for ArcIMS users are Query, Find Address, and Find Place.

Tasks make it easy for the end user of the application to perform certain functions, and in many cases, they facilitate the developer's job because they can be added to a Web application without writing any code. You can configure the Web Mapping Application

to contain tasks that help the end user run geoprocessing models, edit data, query attributes, and find places and addresses. These tasks are available whether you're building your application in Manager or an IDE. The Web Application Development Framework (ADF) contains classes for developing custom tasks in addition to the ones mentioned above. See Developing with ArcGIS Server: An overview in the Web help for more information (http://webhelp.esri.com/arcgisserver/9.2/).

Note: In versions of ArcIMS prior to 9.2, ArcIMS included a Manager, which allowed you to author ArcIMS services, design Web sites, and manage services and servers. This Manager was removed from ArcIMS 9.2. For authoring services, use ArcIMS Author. Use ArcIMS Designer to design Web sites using the HTML Viewer, Java Custom Viewer, or Java Standard Viewer. Use ArcIMS Administrator or the ArcIMS Service Administrator to manage services and servers. The Web Manager that comes with the Web ADF is used for creating Web Mapping Applications.

With ArcIMS viewers, you can only add ArcIMS services. The HTML Viewer allows for only one service per viewer. Access to services is through HTTPS. Using Manager within ArcGIS Server, you can administer your GIS server, services, and applications all within one application.

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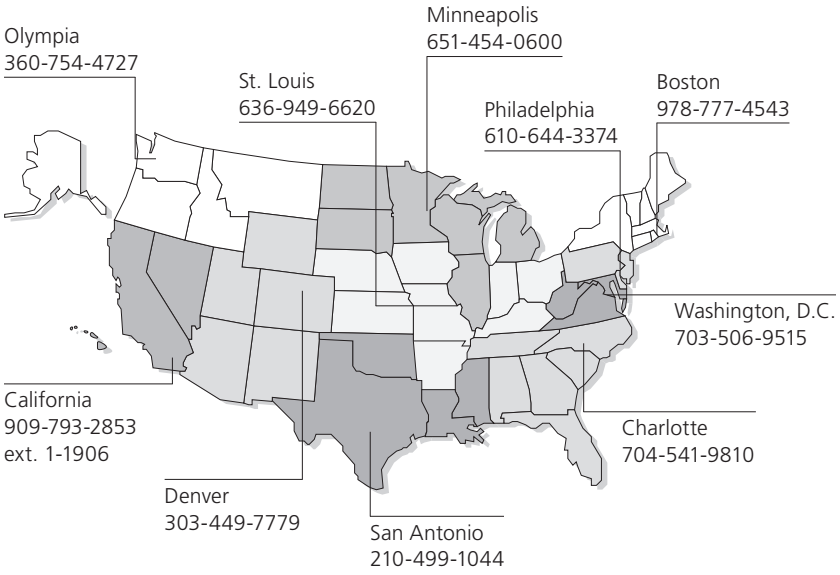

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