


Spatial Display

Searching MicroImages' Catalog of ArcIMS Layers

 There are thousands of Internet sites using the ArcIMS protocol to publish more than 400,000 map and image layers of possible interest to you for viewing in combination with your local geodata. MicroImages searches the Internet daily to provide you an up-to-date catalog of these sites and the layers they offer for use in your TNT products. Your TNT product provides you with the search tools to explore this large and growing catalog of geographic materials for layers of local or general use. These search tools are discussed in detail here and are located on the Search tabbed panel in the ArcIMS Service Selection window. The related Recent, Favorites, and Catalogs tabbed panels in this window are discussed in the Technical Guide entitled *Spatial Display: Locating and Using ArcIMS Layers*. This same TechGuide also outlines the use of the related ArcIMS Service Layer Controls window to manage the addition of maps and images from this source to your TNT view after you have located and selected them.

Search Panel

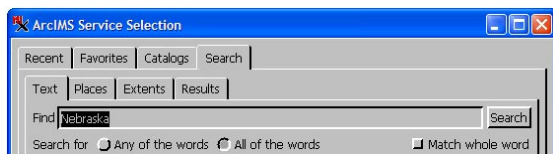
The Search panel lets you search for ArcIMSSs and layers of interest by specifying specific geographic areas or topics. MicroImages continuously searches the Internet and maintains an updated database of all geodata layers published by any ArcIMS service. Any search you make using the Search Text tabbed panel uses the current catalog on MicroImages' web site, so each time you search you are getting the latest results. The Search panel has four tabs: Text, Places, Extents, and Results.

Search Text panel. You can search for ArcIMSSs or ArcIMS layers of interest by entering text and/or by specifying geographic extents. When using text as your search criterion, both servers (ArcIMSSs) and their layers can be searched in a single pass. When searching servers, the URL and server name are searched for the entered text. When searching layers, the layer's name is searched. The text searching options include searching for any of the words entered, for all of the words entered, and matching whole words only (for example, micro would match MicroImages and microscope with this toggle off but not with it on). When you click on the Search button on this panel, you are automatically taken to the Results tabbed panel.

Search Places panel. In addition to searching servers and layers for text, you can use the Geonames or Google Maps database to find ArcIMS layers for your location of interest. The maximum number of results returned is 500. These searches return point locations but you indicate how large an area you want around this location. The default for the Geonames search is 100 kilometers, which is represented by a box that is 200 kilometers on a side (edges are 100 km from the point). The box is centered on the point location in the overview at the bottom of the ArcIMS Service Selection window. The default size of the box for the Google Maps search varies with the type of place found (for example, country, county, or city). The size of this box can be interactively adjusted in the overview or numerically adjusted by typing into the Extents Buffer Size field.

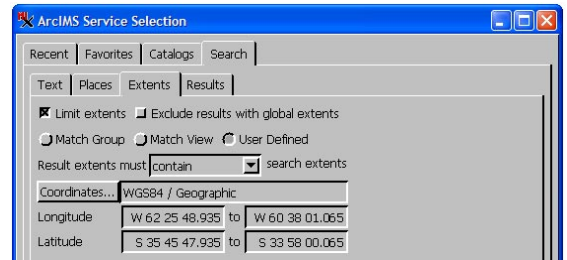
In order to use the Google Maps search, you must have a valid Google Maps Key. If you do not have one, you are prompted to obtain a key when you click on the Find Places button and a button is provided that takes you to a web page that lets you sign up for the Google Maps API (Application Programming Interface) key. You must have a Google account, such as Gmail, to sign up and your key is tied to this account. If you do not have a Google account, you can create one by following a link on the key sign-up page.

Both Geonames and Google Maps searches return the place name, the country where that place is found, and the Lat/Lon coordinates of the point's location. As you select items in the list, the corresponding point is highlighted in the overview. If you are zoomed in on the global overview, it automatically pans to show the location of the currently highlighted entry in the list. If you go



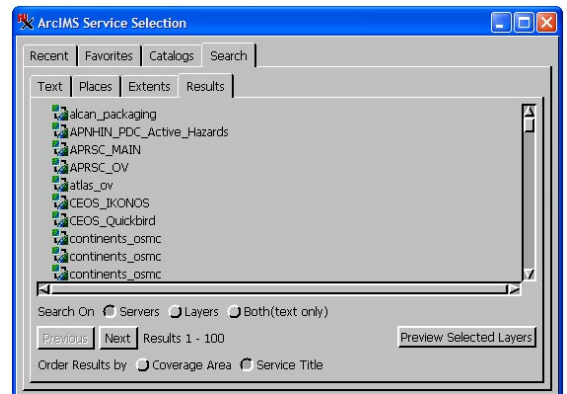
to the Extents panel, you will see that the extents represented by the buffer-size rectangle have been filled in, Limit Extents has been toggled on, and the User Defined option for limiting extents is also turned on.

Search Extents panel. When you turn on the Limit extents toggle, the fields for defining geographic extents become active. If you are adding ArcIMS layers to a group that already has other layers in it, you have the option of matching the extents of the group to which the ArcIMS layer is being added or matching the current view extents in addition to manually defining the geographic extents or using the Geonames or Google Maps search results to define them for you. You can also use the Select tool above the overview to select a country polygon to define the extents. Usually you will also choose to eliminate results with global or nearly global extents (which means N 89.5° to S 89.5° and E 179.5° to W 179.5° or greater) because all of these would likely contain your area of interest.



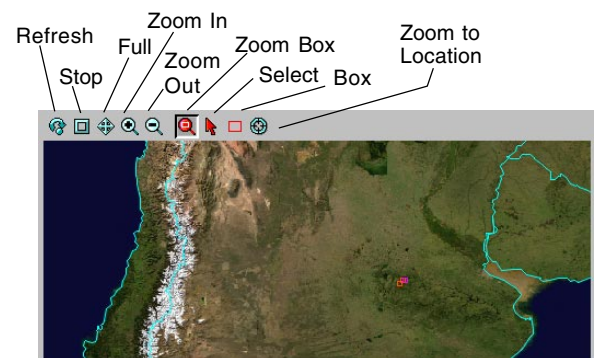
There are three choices to determine result extents: contain, be contained by, and overlap. *Contain* means that you desire the extents shown or entered to be larger than or equal to the extents advertised for the server/layers. *Be contained by* means that the server/layer extents must be smaller than or equal to the shown extents that you have defined. *Overlap* means that it will be used if any portion of the server/layer extents contains some portion of the extents shown that you have defined.

Search Results panel. The Search Results panel lets you sort the results by the name of the ArcIMS or by the ground area of the globe represented by the layers available from the ArcIMS. If sorting by the latter method, the smallest ground area is listed first. A smaller area means that the data covers a more local region and, thus, may be of more interest to you or of a higher resolution. If your search returned more than 100 results, the Next button will be active. Once the Next button has been used, the Previous button becomes active. The Preview Selected Layers button retrieves and displays only the selected layers in the overview panel.



Overview Panel

The overview panel by default automatically displays a global raster and country outlines vector that are automatically installed with your TNT product to provide a context for selecting the desired ArcIMS layers and other uses. It also lets you review the content of the layers provided by a service before adding them to your composite display. If a service is selected on any panel, the preview will show all layers available from that service. If you used the Search panel to find individual layers, only the selected layer is shown. To view selected layers, click on the Preview Selected Layers button on the Search Results panel.



In addition to the buttons for zooming in and out, the display hotkeys that zoom in and out around the cursor position (+ and -, respectively) are active as is the mouse scroll wheel for zooming in/out. Clicking in the view will also zoom in 2X around the location of the click. You can left-click and drag to reposition the view. The Zoom to Location function is also available so that you can zoom to a designated location at an optionally specified scale. The Select tool lets you either select a country polygon to define the search extents or select a point resulting from a search and have it highlighted in the list of results. The Box tool lets you interactively change the buffer size that is set numerically on the Search Places panel.