

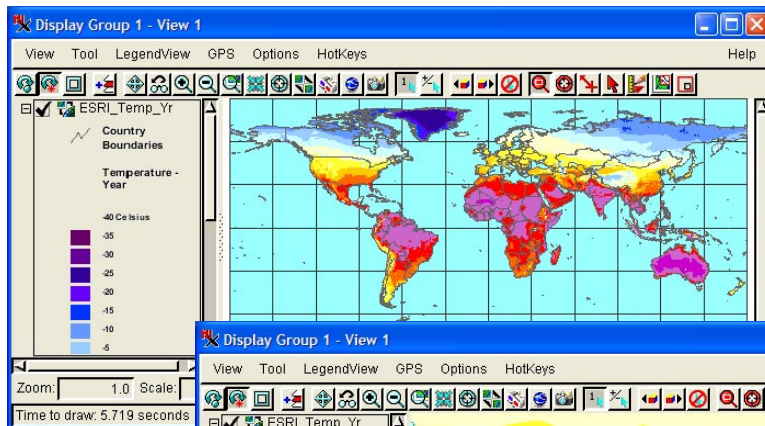
## Spatial Display

# Select ArcIMS Layers for Viewing



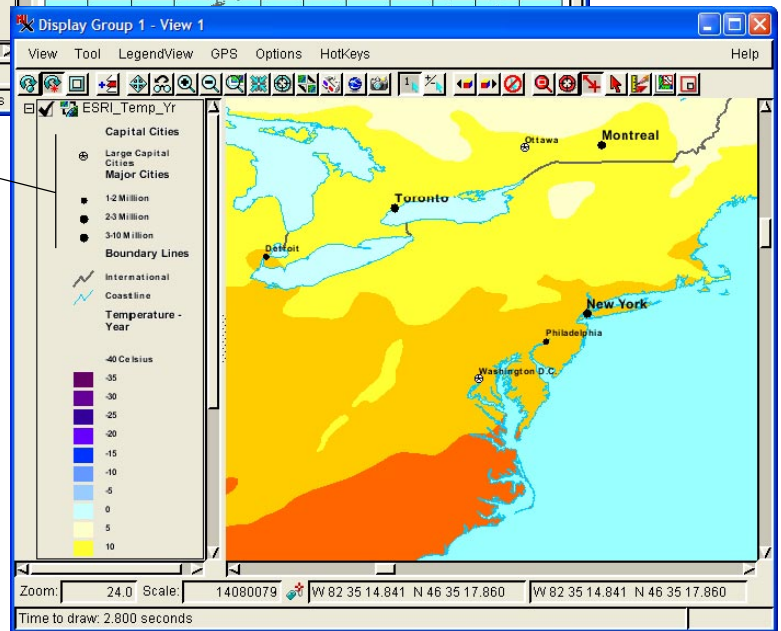
The TNT products provide the ability to select ArcIMS layers for viewing alone or in conjunction with Web Map Service (WMS) layers or layers found locally (on your computer or private network). All Display tools, such as sketching, measuring, and GPS tracking, are available for use with ArcIMS images whether alone or in combination with local or WMS layer types. These same tools are available for use with ArcIMS layers in the free TNTAtlas product. The ability to use ArcIMS layers provides you access to unlimited terabytes of reference images published on the Internet by many organizations.

To begin viewing ArcIMS layers, simply select Main/Display from the TNT menubar and click on the Add Web Layer icon (shown above left) and choose ArcIMS. You can select one or more layers from a single ArcIMS service to define each ArcIMS layer to view in the TNT products. You can create a display that uses layers from multiple ArcIMS services by choosing to add ArcIMS layers multiple times. When multiple layers are selected to create one ArcIMS layer, the service you are requesting the layers from will combine them and return a single, composited layer. If you want to turn ArcIMS layers from a single server on/off individually in the Display process, you need to add them to your view as separate ArcIMS layers. Clicking on the Add Web Layer icon and choosing ArcIMS as soon as you open the Display process will open a new 2D Display with the ArcIMS layer you select. You can also use the Add Web Layer icon to



These ArcIMS layers have map scale visibility control, so new layers appear as you zoom in. Note that only the currently visible layers are shown in LegendView for ArcIMS layers.

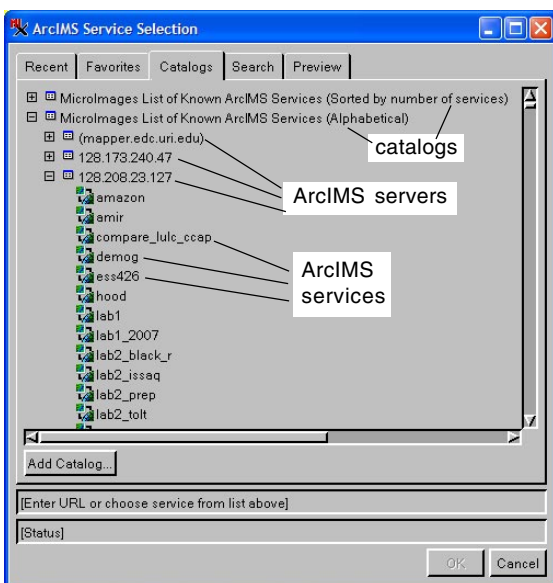
These layers do not appear in the legend at full view (above).



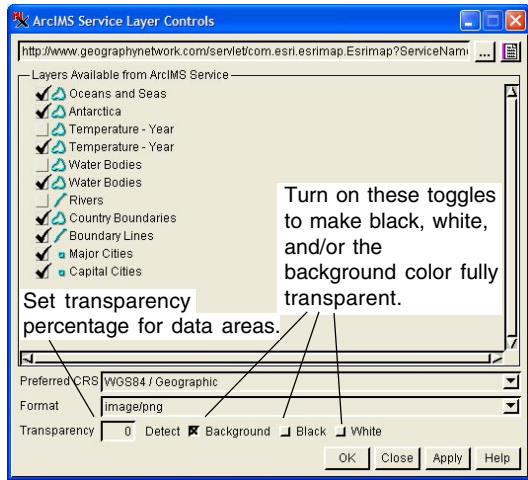
add layers to an existing group or layout that includes WMS, other ArcIMS layers, and/or locally available geodata in any format supported by TNT products.

The procedures for selecting ArcIMS layers are basically the same as that for selecting WMS layers except the concept of groups is not supported—each layer is selected individually. If you know the URL for an ArcIMS site you want to get layers from, enter the URL, and continue on. If you are not so familiar with ArcIMS services or are interested in reviewing and using the geodata published by the ArcIMS sites that MicroImages has located by scanning the Internet, click on the Catalogs tab.

Selecting ArcIMS layers requires communication with the service to discover its capabilities, such as what layers and map projections are available. The list on the Catalogs panel is stored on your machine and communication with the services specified by these catalogs is not necessary when you first view the panel. Expanding a catalog to reveal its ArcIMS services requires communication with the service to obtain its list. Communication to discover the capa-



bilities of an ArcIMS service is initiated when you click on one of the services in the list. Just as when using your web browser to search the Internet for information or when selecting WMS layers, it is possible that your Internet connection is not functioning properly or that there are problems with the site you are trying to reach or the server it is operating. There is never a guarantee that a specific web page can be displayed. The same is true when choosing an ArcIMS service. If an appropriate response is received, the OK button in the ArcIMS Service Selection window becomes active. Click on the OK button to see the layers available from the selected ArcIMS service and continue the selection process. If the OK button does not become active, the selected ArcIMS service is not responding, and you should look elsewhere for layers to display or try again later.



When you select an ArcIMS service from a catalog, its URL is shown in the field near the bottom of the window. Once a response is received from the service, the title of the WMS is provided in the field below the URL and the OK button becomes active.

Click the OK button to open the ArcIMS Service Layer Controls window, which provides a listing of all layers available from the selected ArcIMS service. This ArcIMS Service Layer Controls window is the window that opens when you click on the ArcIMS layer icon in the Display Manager. When opened from the Display Manager, the ArcIMS Service Layer Controls window also has an Apply button so you can modify your choices and check the results in the View before electing to close the window. When you open the ArcIMS Service Layer Controls for an ArcIMS layer already added to your view, you are changing the

content of that layer, not adding a new one. The file name and extents for each ArcIMS layer are identified by DataTip. The object type is also identified by the icon preceding the layer name as image, polygon, line, or point data.

Remember you are selecting one or more ArcIMS layers to comprise a single layer for display in the TNT products. You can select a single layer or multiple layers, which will be composited into a single layer. You can add ArcIMS layers to your own groups or layouts as shown at the right.

Your initial successful acquisition of the capabilities from an ArcIMS service does not insure your continued communication with that service. Creating a view that uses only local geodata files and TNT objects is totally under the control of the TNT process and the local operating system. The layer buffers are all filled and only then does the composite view show. If a layer is not found, this is immediately known and you are prompted to locate it. But TNT display does not know when an ArcIMS layer will be available in its local buffer as this is under the control of the remote site publishing the layer and your communication rate with that site. Communication rates are affected by many factors, such as hardware, priority, connection speed, and are not under the control of local software, such as your TNT product. As a result, when all the local layers are buffered, your view with all the local layers will be shown and will later be redrawn when the ArcIMS layer is available. This uses a new multithreaded capability incorporated into the TNT Graphics Rendering Engine (GRE). Using this capability your viewing activity will not be stalled waiting for an ArcIMS layer that may never arrive, and you can use all the tools and actions as if the final view is complete.

