



GeoSpatial Advisor™

December 30, 2005

Volume 2, Number 1

In This Issue

- Using GIS for Facility Layout and Management
- Tips and Tricks: Matching Transparency to your Legend
- Miscellaneous: GIS in Demographics

Calendar of Events: January 2006

January 24-25: Intro to GIS and Community Analysis, Jacksonville, FL

January 31-February 2: ESRI Federal User Conference, Washington, D.C.

Your input and feedback is very important to us: if you would like to write an article or letter to be included in the GeoSpatial Advisor, email your piece to Alex Wood at awood@adgeo.net for consideration.

(AGI reserves the right to excerpt, condense and/or grammatically edit your document to fit our newsletter format.)

Happy New Year!

Using GIS for Facility Layout and Management

When we think about the application of a geographic information system we tend to think about in terms of characterizing and modeling areas such as a county, region, a state, or collection of smaller sites. Likewise, when we think of a site plan, like a factory, shopping mall, or military base we tend to associate these facilities as best characterized using CAD-based systems. Though GIS technology has had limited application in facility management, it has always provided a highly useful option for facility management. CAD data is easily accessed and used in a GIS, and the two systems can readily share data. GIS has traditionally been used for land use planning and environmental management with regard to facilities. However, the benefits of using GIS in facility characterization and modeling are many and produce an end product which is far superior to a CAD-only model.

For example, facility data can be analyzed on a room-level basis, and as a result, space and asset management are greatly enhanced. This can be used to better assess space and assets and work toward putting them to their best and highest use. GIS can also be used in facility management to develop or augment master planning and expansion of facilities. Existing databases recording site maintenance history, utilities, space location, and storage, parking and computing systems can all be incorporated into a GIS facility management system to ensure continuity of operations and increase data integrity. Valuable spatial analyses can be completed for a facility such as calculating a cost per area or weighing the cost of building maintenance against replacement costs. One can evaluate energy use per area and target areas needing focus for conservation.



A final benefit of applying GIS to facility management is three-dimensional site characterization. By incorporating structures' elevation values, the facility's features can be extruded in three-dimensional GIS applications. This benefit always gets a lot of positive feedback from audiences and is highly useful in presentations.

Category of Links

US Geological Survey is now offering orthorectified Landsat data for free from Global Visualization Viewer:
<http://glovis.usgs.gov>
And from Earth Explorer at
<http://earthexplorer.usgs.gov>

From the National Atlas of the United States site, a geologic mapping link:
<http://nationalatlas.gov/geology.html>

An Arctic Environmental Atlas:
<http://vitalgraphics.grida.no/arcticmap/>

Contact Us

Website:

<http://www.adgeo.net>

email:

awood@adgeo.net

2441 Monticello Drive

Suite 600

Tallahassee, FL 32303

850/580-4GIS



Tips and Tricks: Matching Transparency to your Legend

Working with transparency in ESRI's ArcMap is a highly useful concept; but we have found a drawback when we attempt to represent transparent areas in the map legend: the legend symbol will not accurately reflect transparency displayed on the map. Although there is no direct way to overcome this shortcoming, we have discovered a work-around (also found in ArcMap "Help" menu) which is a good solution. The workaround involves use of the "Eye Dropper" tool and conversion of the legend to graphics.

To execute this workaround, you will need to add the "Eye Dropper" tool to one of the toolbars displayed in your map. To do this, select "Tools>Customize" from the "Main Menu," and choose the "Commands" tab. Navigate to "Page Layout" and scroll down to the "Eye Dropper" tool, which you can then click and drag to an existing toolbar in your ArcMap window. Returning to the map, select the "Eye Dropper" tool and click on a polygon in the map for which the transparency has been set. A color dialog box will appear displaying the colors Red, Green, Blue in numerical format; click "Okay" to add this color to your color palette for future use.

The remaining steps are carried out in the layout view. Select the legend, right click and choose "Convert to Graphics" for the drop-down menu that appears. At this point, the legend is no longer linked to the data frame so any changes made in the data frame will not be reflected in the legend. Next, use the right-click menu to "Ungroup" the elements of the legend (this may take more than one round of "Ungrouping" to isolate your legend symbol). Select the legend symbol to which you wish to apply your new transparent color, and then click on the "Fill" color button on the "Draw" toolbar. From the color palette you can select your recently created color, which will be located at the top of the color options. Click the color to apply and your legend symbol will now match your transparent polygons in the map.

Miscellaneous: GIS in Demographics

In September 2005 issue (Vol. 1, No. 5) we included a link to an article discussing that Texas had recently earned the unique status of a "majority-minority" state due to the increased population of the state's "minority" population relative to that of non-Hispanic whites. Texas now joins Hawaii, New Mexico, and California as a majority-minority state. It is predicted by the [U.S. Census Bureau](#) that Maryland, Mississippi, Georgia, New York and Arizona will also soon earn the "majority-minority" designation. The Census Bureau's minority definition "includes all people except non-Hispanic single-race whites." This is certainly an interesting development as the ethnic fabric of our country continues to change.

GIS plays an important role with regard to demographics, for example with political re-districting. GIS allows for the rapid development of a variety of mapping scenarios to be modeled while simultaneously evaluating population and demographics. Finalized district boundaries can then be developed with very specific political and demographic features.

The *GeoSpatial Advisor*[™] is an electronic newsletter published by Advanced GeoSpatial Inc. The *GeoSpatial Advisor*[™], all of its contents and materials are Copyright © Advanced GeoSpatial Inc. 2005-2006. All Rights Reserved.