



GeoSpatial Advisor

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Calendar of events: July 2005

July 4: Independence Day

July 11-13: Introduction to GIS using ArcGIS 9.x, Georgia Tech Global Learning and Conference Center, Atlanta, GA

July 25-29: Annual ESRI International User Conference, San Diego Convention Center, San Diego, CA

July 28-30: Florida Chapter, American Water Resources Meeting, Key West, FL

ArcReader Applications

As mentioned in last month's *GeoSpatial Advisor*, ArcReader is a free GIS program offered by ESRI. ArcReader is an easy-to-use mapping application that allows one to view, explore, and print maps which have been published using more robust GIS software. This provides an excellent solution for those needing to utilize complex GIS datasets but don't have the time or desire to learn complicated GIS software or maintain expensive software licenses. ArcReader published map files allow for the use of an interactive map, from which a GIS user can pan, turn layers on and off, explore databases, and print custom maps. A good example of where this application could be beneficial is in the establishment of a new waste water spray field. A custom map application could be developed with GIS data layers representing the natural conditions and structures important to the project. One could then explore the various data layers which might include, soil types, land uses, proximity to residential areas or well fields, and depth to top of rock to help select an ideal site.

Geodatabase Modeling of Utility Infrastructure

An accurate map of infrastructure is an absolute necessity when it comes to managing a utility. The ability to access geographic information of your infrastructure's individual features is essential to making decisions about customer billing, location of aging features, and maintenance of your system. These maps can take on many forms: from hand drafted maps, to expansive digital coverages packed with a multitude of data types. GIS by far offers the most efficient, and powerful method of developing, tracking, and maintaining a digital representation of a utility's infrastructure. A popular and convenient method of creating these infrastructure models is to develop it as a geodatabase. The geodatabase is simply a GIS structure



Category of Links

Interesting set of articles on the different minerals:
http://minerals.usgs.gov/minerals/pubs/general_interest/

This is a great resource for all sorts of colorful maps:
<http://nationalatlas.gov/>

Very interesting new release from Google:
<http://earth.google.com/>

Contact Us

Website:

<http://www.adgeo.net>

email:

awood@adgeo.net

2441 Monticello Drive
Suite 600
Tallahassee, FL 32303
850/580-4GIS



in which GIS-related data (spatial geometry, tabular, and imagery) is stored and managed in a database management system. This format is a relational data model in which each feature, along with its attributes, is stored in a data table. A feature can be any structure that is mapped using a GIS, such as a distribution line, junction point, water valve, transfer station, or customer meter. The geodatabase allows for features with the same spatial reference to be organized into a larger dataset. The advantages of using a geodatabase are many and include ease of tracking system maintenance, streamlined billing procedure, increased locational confidence, and utility system modeling.

Tips and Tricks: Exporting Georeferenced Tagged Image File Format from ESRI's ArcMap

ArcGIS users can export their maps as geo-referenced images in a *.tiff for use in other GIS programs as well as for display in 3D Scenes and ArcGlobe. This is accomplished in the data view of ArcGIS by exporting the map to a *.tiff, while creating a world file. (Look in 'File' → 'Export Map' → 'Options' and check 'Create World File'.)



It is possible to display geo-referenced, two dimensional *.tiff images in 3D scenes by draping them over surface models of the same area. All that is required, in addition to your image and the appropriate software, is a digital terrain model. To create an even more dramatic 3D image, try draping a 'hillshade' for the area of interest over the elevation data and make the georeferenced *.tiff slightly transparent.

Miscellaneous - North Pole Moves Out

According to recent data collected by scientists, it appears that the magnetic north pole has moved out of Canadian territory. Although unable to get a precise measurement due to poor weather conditions, geophysicist Larry Newitt has estimated that the magnetic north pole has moved from Canada into international waters. Though the magnetic pole is constantly moving, scientists have recently (2001) recorded a significant increase in the rate of movement: from just over six miles per year to up to nearly 25 miles per year. The pole appears to be moving toward Siberia and could be there by the middle of this century. Though we rely heavily on satellite-based global positioning systems in today's world, the magnetic north pole remains very important. We still depend on the pull of magnetic north for compasses used in orienteering and to calculate magnetic declination on paper maps.

