

GeoSpatial Advisor™

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Calendar of Events: December 2005

December 5-9: American Geophysical Union, San Francisco, CA

And...

Not much else!

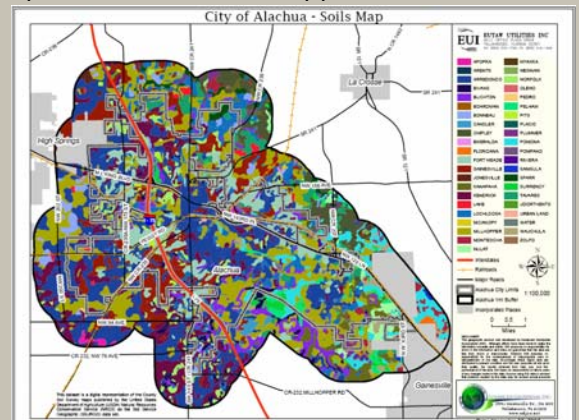
But, your input is very important to us...so if you are interested in submitting an article or letter to be included in the GeoSpatial Advisor, email your piece to Alex Wood at awood@adgeo.net for consideration.

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

Making the Case for a GIS

GIS provides the technology to collect, store, manage, and analyze relationships between spatial data. Manipulating datasets in an organization's work routines is an intelligent approach in maximizing the full potential of datasets. Initiation and wise use of a GIS has endless advantages for organizations and the success of these advantages is shown in the effective application and use of the GIS. The major benefit of such a system is that the user can interact with the system, as opposed to geographic data contained in static, hard copies. A GIS allows for the capability of creating digital representations of the real world, and exploring data relationships and interactions.

There are many considerations involved with implementing a GIS in an organization. The primary step is to find a supporter within the organization, preferably a decision maker or member of upper management. Next, a GIS needs assessment, which is essentially the process of determining what a business or organization needs, is carried out. A needs assessment is a comprehensive look at the organization's goals and identification of tasks that can be done more effectively using GIS. These include both existing and future data needs, scale and accuracy of data, determination of the software requirements, and implementation costs (software maintenance, training, data collection). Additional considerations should include the management and quality assurance of data; required GIS functionality such as spatial analysis, query and display, routing, overlay analysis, or advanced analysis; and the end users' needs such as customized GIS applications.



Upon completion of a needs assessment, an organization will have the necessary documentation to implement a GIS. Utilizing a GIS company in this process to maintain and develop data can prove very beneficial. Relying on a knowledgeable GIS professional outside an organization without the responsibility of managing additional staff is a significant benefit for smaller businesses and organizations. This also allows for improved efficiency and profitability of the business by streamlining certain processes.

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Category of Links

GIS on the Moon:

http://datamining.typepad.com/data_mining/2005/07/moon_gis_fun.html

GIS based tools in Iraq (scroll to bottom of page):

<http://www.geoplace.com/uploads/FeatureArticle/0510gc.asp>, and brief mention of GIS Day at U.S. Army Camp Victory in Baghdad:

<http://www.gisday.com/success2005/event7946.html>

GPS Dogs:

<http://www.govtech.net/magazine/story.php?id=95307&issue=4:1997>

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The ultimate goal of a GIS needs assessment is to develop a list of priorities and an implementation plan for development of a complete GIS system. A properly designed GIS is more than just a visualization or mapping tool. An effective GIS is a comprehensive program that includes many aspects from the management and query of data to the spatial analysis and modeling of interactions between data sets.

Tips and Tricks: Index of Geographic Data and Map Services

Last month's issue of the *GeoSpatial Advisor*[™] contained a link to a recently developed index of geographic data and map services providing access to a large and growing number of public ArcIMS map servers. The site is www.mapdex.org and was developed by the Kansas Geological Survey at the University of Kansas. The portal is searchable by spatial layers, fields, and map service names and includes such information as: data origin, date of creation, scale, and any other metadata variables. This service brings together a previously unrelated network of internet GIS services into one searchable location that can be utilized by GIS users with just a few keyword searches. The index provides an efficient method to complete fast searches for accurate mapping services of useful information in near real time.

After locating a data service of interest via the mapdex search engine, users can go into ArcCatalog and add the service to their GIS library. In ArcCatalog under "GIS Servers" in the Catalog Tree, double click on "Add new ArcIMS server", then copy the link of choice into the space provided and click "Ok" to begin. Browse through layers listed in the new GIS server to add desired data into your project in ArcGIS.

Miscellaneous - Do More with Less

Has your GIS library matured or vastly grown? Is it vital to store out of date data? What about derivatives of a data set – essentially a partial duplication of data you have saved elsewhere? That source, at some later date, may be updated rendering the subset data invalid. Or, for instance, you may keep several copies of the same dataset in different projections, essentially creating a duplicate. This may no longer be necessary with the newer generation of GIS software products.

Holding on to data for too long is a common feature in many organizations. In a recent editorial article in *Directions Magazine*, Atanas Entchev stated that "...the ease of acquiring digital data, paired with the low cost of acquisition, has led to a point where we spend more and more resources filing, searching, managing, and backing up data than we spend using the data." Entchev goes on to say that even though we are paying less and less to acquire data and buy space to store it, we are increasing costs by using valuable time attempting to manage it. "Organizations insist on collecting every possible data layer and feature, and figuring out what to do with the data later... GIS data has a shelf life. But unlike the supermarket manager, we can't get ourselves to discard our old data." Cutting back on managing multiple copies of the same data allows for more time to be spent analyzing, querying and exploring datasets.

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