

# GeoSpatial Advisor™

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## Calendar of Events: November

November 11: Veteran's Day

November 15-16: Seven Hills Regional Users of GIS (SHRUG) 5<sup>th</sup> Annual Conference, Tallahassee, FL (Alex Wood to present Aquifer Vulnerability Assessments: Implementation and Ongoing Work)

November 17: Florida Section of the American Water Resources Association Meeting, Ft. Myers, FL

November 23: Thanksgiving Day

## Issues in Bridging the Gap between Land Surveyors and GIS Specialists

In this article some of the hurdles faced by Surveyors and GIS Specialists are presented. The general feedback is that both professions are not supportive of the importance of each other, typically due to misinformation and lack of knowledge in both fields. The traditional Surveyor for this article is the Surveyor who is not embracing GIS technology as a tool and as such sees it as a threat to his area of specialization. GIS Specialists are varied, and, for the purpose of this article, GIS Specialist refers to budding users who may not have a proper grasp of the concept of data collection. The difference in interpretation of both professions is the reason why there is a gap between a large majority of such practicing professionals. As a result, there are hurdles which need to be addressed and are being addressed.

Surveyors typically work with their project specifications which are legally binding by strict regulations before end products are delivered to clients, while GIS specialists develop applications which are flexible within the limits defined by the intended GIS application. Some traditional surveyors see GIS as meaning "Get It Surveyed".

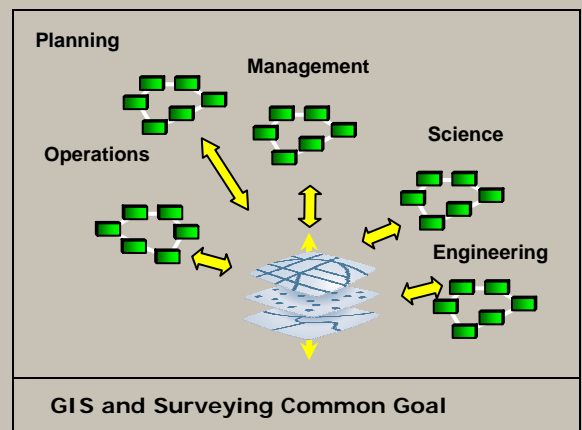
Based upon my professional observation and my decade of work experience in the GIS and Surveying fields, it appears that a large majority of professionals are not working in sync with Surveyors; or it may be the reverse where Surveyors are not embracing GIS technology as a valuable tool. The perception of the traditional Surveyor is that the GIS will eventually take away his role as a Surveyor. This is not true because people will always want to legally identify the location of their boundaries in the field, and GIS will never offer such a service.

There are many definitions of GIS as seen by the typical GIS Specialist. At a generic level, the GIS specialist sees GIS as a tool which provides professionals with visions, new ideas and technological tools they need in order to deal with complex spatial, environmental, socio-cultural topics, questions and challenges.

### Common Goal

The common goal of Surveying and GIS is the map itself. Surveyors and GIS professionals

are all students of cartography which is also a profession in its own right. Surveyors are most concerned with accurate representation of Earth, whereas GIS professionals care more about data and their relation to a particular geometry. However, today we are faced with new complex challenges and to work in a



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

## Category of Links

***Make your own map of the states you've visited here:***  
<http://douweosinga.com/projects/visitedstates>

***Search terms "Thanksgiving" and "GIS" didn't turn up much about GIS, but did return numerous links about GIS who will not be home for the holidays, reminding us of the great sacrifice our troops make - especially this time of year. If you feel the same, we think a good way to express this is with the USO:***  
<http://www.uso.org/>

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multidisciplinary environment where the professions must embrace each other by using a common language. In other words, the GIS specialist must understand the importance placed on data when the Surveyor speaks of coordinate systems and transformations, datum, geoid, ellipsoid, least square adjustments, corner perpetuations, obliterated boundaries, etc. Similarly the Surveyor must be able to understand GIS terminology such as: georeferencing, geocoding, data layers, buffering, overlying, database management, and vector/raster. Surveyors and GIS Specialists are not alone, they are partners!

### Hurdles Requiring Attention

A parallel is drawn between Land Surveyors and GIS specialists; there are issues regarding the quality of the deliverables between the two professions. The Land Surveyor is the classical expert in the process of spatial data collection while the GIS specialist is the user of the data sets. A hurdle faced by the traditional Surveyor is his lack of recognition of the tremendous benefits and value of advancements in GIS technology. And, it is not only the value of the datasets we profit from but also the ability of GIS to analyze, compare and combine them in their complex spatial context. If the traditional Surveyor is open to tapping into the wide pool of GIS resources, he can offer his clientele much more than what he has traditionally been offering.

Traditional Surveyors are also confused by the amount of different interfaces and proprietary standards for description of GIS data and accuracy, when he is comfortable addressing accuracy issues using methods like least squares adjustments. He is also confronted with multiple GIS vendors with their varying data schemas and formats; though this is being dealt with by the Open GIS Consortium (OGC) established in 1994 to address GIS interoperability.

Likewise, GIS specialists have their own hurdles requiring attention. The Surveyor has the expertise to practice the science of measurement; to assemble and assess land and geographic related information; to use that information for the purpose of planning, valuation, and implementing efficient administration and management of the land, the sea and structures thereon; and to instigate the advancement and development of such practices. Use of geographic data by GIS specialists requires application of the Surveyor's detailed knowledge about reference systems, map projections, geodetic data and about the background of their needs, and their least squares method of adjustments. These are concepts that need to be addressed by all GIS Specialists if they are to efficiently use spatial data sets.

### Conclusion

Surveyors should not only be experts in mapping, digitizing and georeferencing geographic data but should also be concerned with principles of GIS, geoservices, spatial information management and appropriate use of GIS itself. GIS specialists should ideally depend upon the Surveyor for original and accepted spatial data sets. The 'gap' referred to in this article is the useful linkage between the use of spatial data by GIS specialists and Surveyors who are experts in data capture. If synergy is achieved between the two professions, we will have a more efficient, sustainable world.

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## Miscellaneous: Mapping 2006 Election Results

Numerous spatial representations of yesterday's elections results have popped up on many websites. They range from simple images of the results to more detailed and useful interactive maps, such as [this one on MSNBC](#). The [Wall Street Journal](#) also posted a good one [here](#). Adding the spatial aspect to the election results allows us to see many trends and changes not otherwise apparent.



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