

## COMMENTARY

# WILL SURVEYING HAVE A FUTURE, AS WELL AS A PAST?

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Surveying is a profession in trouble. You cannot pick up a professional magazine, including this one, without seeing the signs: articles lamenting our loss of esteem, complaining about our lack of education, deploring our poor image in society, and grieving over encroachments into our profession. In Florida you cannot attend a society meeting without hearing the horror stories of "prostitute" surveyors, cutthroat practices, dwindling clients, and constant comparisons with other professions that are, seemingly, more professional.

The discussion usually leads to talk of the Global Positioning System (GPS) and Geographic Information Systems (GIS). The underlying theme is that GPS or GIS, or a combination of both, will solve our current problems. The orthodox view is that, no matter what our current state of affairs, these new technologies will eventually save us. I hate to rain on the parade, but I do not share this belief.

First of all, let me state that I am a believer in new technology. I believe that GPS and GIS are great tools; but they are just that - tools. GPS will let us do our work a little better and faster, but it has not given us any new work. We are still doing the same work that the Egyptian rope stretchers did 4,000 years ago - linear measurements. Will we charge more for our services because we are using new technology? The answer is no. We will charge less for our services to compete with the surveyor down the street. In no way am I advocating that we abandon GPS, I just do not believe that we will be better off as a profession for it. GPS adds nothing new to our basic scope of services as surveyors.

With GIS the story is pretty much the same. Surveyors are not the lead

professionals in GIS. There are a multitude of applications being considered for GIS and a multitude of professionals who will be working with these applications. The surveyor's role in GIS will be a limited one, as will the role of other professionals. GIS is too big to be claimed by any one profession. Our role, if we are to be included in GIS, will be limited to supplying ground control for the GIS data base. Others will take that control and use GIS for the multiple applications that make this tool so valuable. Our role will not be a new one and the work that we do with GIS will not be new work. Again, I'm not advocating abandoning GIS. I'm simply suggesting that GIS technology is not a panacea for our professional problems. As with GPS, GIS adds nothing new to our basic scope of services.

If surveyors are to survive into the next century, we need more than new applications of the same old work. We need new assignments to expand our basic scope of services. The last time we experienced an expansion of the profession in this country was when we got involved with the U.S. public land surveys.

Prior to surveying the public domain, surveyors worked on a variety of short-term projects confined mainly to measurements of quantity, much as we do today. With the survey of public domain, however, the surveyor had a new assignment - measurements of quality as well as quantity. In Florida, in addition to establishing survey lines and setting corners, the surveyor was to report on other aspects of the land. Such qualitative measurements as timber stocks, assessments of agricultural uses, reports on soil and water conditions, and even a defacto identification of all navigable bodies of water in the state were to be taken in conjunction

with the quantitative measurements with which we are so familiar.

Since the survey of public lands, the surveyor has paid little attention to qualitative measurements. We are back to working on short-term projects with no real interest in such new assignments as those involving natural resources, energy, and the environment. We've all seen how environmental issues have affected the projects on which we work. Already, lending institutions are more interested in assessing the potential for hazardous waste on a site than in determining its boundaries. In many cases, the cleanup of hazardous materials will far exceed the value of the property, thereby eliminating the need for the type of service we offer. Many projects are shut down when an eagle's nest is discovered or when turtles need to be relocated. We are all aware of the effect wetlands have on a project, but years ago we ignored this issue, and today a whole new environmental industry has developed around it.

We are on the edge of a new age of environmental awareness. The environment is an issue as big as the planet; an issue that affects every living creature. As Earth Day demonstrated, average citizens are now willing to join in the fight to save the environment, and they will be demanding new services from technical professions. Professions involved in environmental issues that include assessments, remediation, and preservation will see phenomenal growth in the next decade and beyond. GIS technology will be a tool used by these professionals as a matter of course and not as an end in itself.

There are many areas of the environment in which surveyors can become involved, especially in

# FUTURE/PAST cont'd

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assessments. There will be new opportunities in the future, but these opportunities will require qualitative as well as quantitative measurements. This is new work for the surveyor, not simply new applications of current services. I've heard the excuses why surveyors are not involved in these new assignments: too much ability, inadequate qualifications, not enough compensation, etc. What we fail to see is that this is new ground and professionals involved in environmental issues are on the cutting edge. These other professionals include engineers, geologists, biologists, and environmentalists. The liability and qualifications aspects haven't stopped them from going where surveyors have feared to tread, and

they are being paid handsomely for their trouble.

I believe surveying is a dying profession. Our scope of services hasn't expanded in more than 200 years, if anything it has diminished. We are looking at a future that will need less of the services we currently offer. As GIS are implemented, the demand for mortgage surveys, property-boundary surveys, and location surveys may decrease or be eliminated altogether. As technology advances, the need for direct ground measurements will give way to indirect remote measurements.

We must continue to develop uses for GPS, but we must realize we are not alone, as other professions are looking at GPS applications. We must continue

to find our niche in GIS, but we must understand that GIS technology is not an end, it's a means. Our universities must begin to train us in the environmental sciences and qualitative measurements. We must shake the perception we have of ourselves as unqualified and restricted to performing linear measurements. We must open our minds to new ideas about what surveying is and not remain focused on what it has been. If we are to be a profession with a future as well as a past, we must make the necessary changes now to ensure that future.

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