Benchmarks



## **President's Angle**

## Earl F. Burkholder, PS, PE 2009 NMPS President March 1, 2009

By way of introduction, I have been teaching in the Surveying Engineering Program at New Mexico State University since 1998 and am honored to serve as the 2009 President of the New Mexico Professional Surveyors (NMPS). I welcome this opportunity to share thoughts with the hope that we may all be inspired to take more pride in our profession. Or, even better, I believe that this column will have an even greater impact if the reader is motivated to react or to write a letter to the Editor. Such letters can reinforce a point made by others, take issue with a stated assumption, develop a counter argument, call an author to task for possible mis-statements, or otherwise lay "cards on the table." If done respectfully (my intent), I believe that honest discussion of differing viewpoints can be very beneficial in promoting the stature and reputation of the surveying profession.

I've had numerous mentors in my career and owe much to those who have provided words of encouragement, to those who have been patient with my pace of learning, and to those who have challenged me to uphold the integrity of our profession. I wish I could say I have "arrived." But, I am still a work-in-progress and, like many, I still wrestle with finding the appropriate balance between "going along to get along" and "sticking to my principles." I continue to look for guidance from those with more experience than I and I keep learning from many who have a better understanding of various issues.

After being in the surveying profession for over 40 years, I also realize that I have become a mentor to a new generation of professionals and that I have an enormous responsibility to those who look to me for guidance. I like teaching because the work is steady, because I like the schedule, and because I enjoy sharing in the learning process. Those are selfish reasons and not sufficient to justify my privileged position as a surveying professor at New Mexico State University. I believe that there are larger issues to be considered and one goal in writing this column is to invite others (you) to look at the larger issues with me.

If, as often stated, we expect surveying to be counted as one of the learned professions, then the responsibility of those of us who teach is awesome indeed. I count myself as very fortunate to be able to work with talented persons who, like me, are dedicated to the surveying profession. The combined talent of the surveying instructors at NMSU has both breadth and depth and anyone enrolling in the NMSU surveying engineering program has an opportunity to gain an excellent education. But, becoming a successful graduate and, subsequently, a profitable practicing professional also depends upon the individual. The opportunity is there for all who enroll and it is no secret that earning a BS degree requires dedication and a lot of work. Each reader should also understand that not all surveying instructors in NM teach at NMSU and that surveying education also occurs outside the classroom. Furthermore, please understand that I speak for myself. Others are free to support, challenge, clarify, or add to these comments. I see that too as part of the diversity and strength of the surveying profession.

Now, back to those larger issues. I will identify some as I see them. Undoubtedly there are others and the ones I discuss are from my perspective. You, the reader, also have unique insights and certainly have valid opinions about the issues. In order to get the discussion started, I offer the following:

The evolution of technology during the past 50 years has had an enormous impact on many professions and, in fact, our whole way of life. Not only does it affect what we do and how we earn a living, the evolution of technology also impacts development of our value system, how we interact in our communities, how we raise our children, and a host of other issues - both local and global.

No, I don't have answers for those huge issues, but I want to make the following points with regard to the surveying profession:

1. Responsibility for the health and continuing development of the surveying profession is a collective responsibility of all surveying professionals not just the educators. Yes, we educators like to think we have answers (and sometimes we do). But every practicing professional has a contribution to make and we should all take pride in participating in this exciting profession.

2. Technology is challenging. The manufacturers and vendors bring us a wide range of tools, gadgets, and equipment. All we need to do is purchase those items we need to make our efforts productive and profitable. Such purchase decisions vary as we search for that combination of hardware and software tools that we need and can afford. The irony for me is that there is a lot more "talent" built into the hardware and software that I buy than I know how to use. True, the tools enable me to do more and to do it better, but I get impatient with myself when I realize I am using only a portion of the capability of the tools (this word processor being an example). And I find myself wondering sometimes if maybe I should spend less time trying to do things right and focus more on trying to do the right thing. Hopefully, those two are not mutually exclusive.

3. Education and training are both essential. The arguments in favor of one over the other are probably older than any of us, but I do not believe that either can be justified to the exclusion of the other. The vendors are not serving their customers well if they focus on education to detriment of training and we educators are not serving our students well if we focus on education to the detriment of training. Finding the proper balance remains a challenge for everyone. However, putting on my educator's hat, I will continue to insist that students and professionals are ultimately responsible for the "why" as much as the "how." My suggestion is that education without training is time wasted and that training without education is also time wasted. In looking for the right balance between education and training we should recognize the importance of life-long learning (education beyond the classroom) and the value of hands-on experiences (training while still in school).

## Benchmarks

4. My final point is that, for the reasons just given, I believe that the 21st century can be the best of times for the surveying profession. With the digital revolution well advanced and with so many gadgets available, more and more persons in various disciplines are using spatial data. The gadgets and tools are available and are being used. But, do the novice users (or even seasoned professionals) always get the right answers? What happens if the technology is misused? Do we really understand the consequences of getting it wrong? What does it take to establish and prove the accuracy of spatial (oftentimes survey) data? How are spatial data related to property boundaries? To what extent can we rely on digital maps (such as elevations on Google Earth)? What about the reliable location of the constructed facilities? Is machine control really a cost saver for contractors? Surveyors have a reputation of being the measurement professionals and society looks to us for competent surveying services. We are trained to collect evidence, to evaluate evidence, and to address the needs of our client. I'll suggest that is true whether we are doing a site plan, a new subdivision, a retracement survey, a flood plain certification, or a host of other digital products being generated by the new technology. Oh my ... we've just gotten started. I believe it promises to be an exciting journey. We need your help.

My goal as President of NMPS is to begin and continue discussion of many issues with the idea of finding ways that we, the existing surveying profession, can join (and on occasions lead) the parade of spatial data users and professionals in an ever expanding scope of services to modern society.

## 2009 NMPS ANNUAL CONFERENCE



Tim Kent, BLM Cadastral surveyor (retired), Can you say BOUSTROPHEDONIC?



Tom Patrick and Cliff Wilkie (invited speaker), facing the audience...expanding the centimeter debate in all directions?

6