

# Feedback

## Way to Go!

I have enjoyed every issue you have published. Your articles are useful, well written, and pertinent. I appreciate your effort and expertise in producing the best surveying magazine. Keep up the good work!

Steve Coleman  
*Forsyth, GA*

## We Need Help

I read with interest “The Problem With Continuing Education,” by Chuck Karayan [May 2005]. I have also attended workshops and found most have the same format, leaving me dissatisfied. Fees usually are not the problem, it’s the time away from the workplace which is of concern. We need to have standards for the content of such workshops; this could be provided by NSPS and others. I agree with your statement, the need for quality standards, along with good handouts, not the handouts which accompany Power Point presentations. We need help.

Howard Licht  
*Via Online Message Board*

## Karayan Replies

I agree that the biggest investment professionals make in attending continuing education is their time. Obviously, total cost must be considered. I was glad to see that the “fee” was not your primary concern—the improvements cannot be free.

We have a right to expect that the sponsor (individual provider, professional society) will strive for high quality. Unfortunately there does not seem to be, at the moment, any general agreement about “standards” (topics, materials, presentation, facilities).

From the professional societies’ perspective, there are often a minimal number of choices. Fortunately, ACSM-NSPS is working to build an information-sharing process that, hopefully, will be beneficial—at least with regard to topics and speakers. It might be that NSPS could conduct a Training-for-Trainers so that more people would be qualified and willing to “step up.” We,

the members of the profession, must make it clear that textual materials that can be helpful during the presentation and useful afterwards, are not “desirable,” but necessary.—C.K.

## Continuing Education

I found Chuck Karayan’s article on continuing education very interesting and appropriate for the times. Being licensed in two states, I find the criteria for what is valid content in one state as continuing education credit does not meet the standard for the other. This is true for classes taught by the same presenter and covering basically the same information. This leaves one to wonder, just what does constitute “Continuing Education”?

Daniel Ehlmann  
*Via Online Message Board*

## Karayan Replies

Thank you for the support that “we can do better”. You mentioned that variation between jurisdictions regarding what is acceptable has become an issue. Many other surveyors feel the same way, and I agree.

This could be a complex problem, depending on the “structure” of the requirements in your area. If the “Boards” have authority, they might be persuaded by a united effort from the professional societies to adopt common standards. If, on the other hand, the legislatures have “chiseled” the requirements in stone, it will be more difficult to get meaningful change. In any case, the profession, individual professionals and our societies are the root source of the needed change.—C.K.

## Accuracy and GPS

I take issue with [Leininger’s] negative view of the use of coordinates in retracement taken in the article “Prioritizing Coordinates” [March/April 2005]. Coordinate accuracy was a problem in the past. But, modern technology (GPS) has negated the accuracy problem.

Consider the accuracy discussions in the article in the context of modern GPS technology. With GPS, courses

and distances are determined from coordinates, not the other way around. With GPS, alone or in conjunction with total station observations, adjustments are best done with least squares and results are not at the mercy of the various methods of adjusting angles and distances used with traverses. GPS, again alone and with total station results, provides three-dimensional coordinates (latitude, longitude and ellipsoid height). Reduction software then automatically converts latitudes and longitudes into State Plane coordinates. This is done without loss of accuracy and without the surveyor needing to make any computational decisions.

The article also raises the specter of coordinate change, in the form of what is called “mass revolutions of official coordinate systems.” Actually, the official coordinate system of the United States, NAD83, has not changed since it was first introduced. What has happened over the past two decades has been changes in NAD83 coordinates as more accurate GPS results became available. However, the point has been reached where NAD83 coordinates of stations such as the NGS Continuously Operating Reference Stations (CORS) will be little changed by any future readjustments.

Currently achievable accuracies with GPS allow coordinates to begin to play an important role in retracement. GPS, together with total stations, now allow parcel boundary markers to be positioned relative to one another in a local area to within about 1 cm (0.03 ft). Additionally, using the NGS CORS network and state fixed GPS station networks, coordinates relative to the NAD83 coordinate system can be delivered to the surveyors with nearly the same accuracy.

This level of coordinate accuracy means that, in many cases in the future, coordinates will be the best available evidence for replacing a marker that has been previously positioned and since destroyed. With all the CORS network

bearing witness, such a station can never be lost. The sometimes vexing question of whether a marker has been moved can also be answered.

Already there are surveyors determining NAD83 coordinates of boundary markers. One can envision surveyors a decade (or a century) from now quickly, accurately, and economically identifying the original location of a destroyed or displaced marker using the coordinates being established today.

Coordinates will not replace the need for markers. They cannot replace the need to consider all the available evidence and interpret the past to determine, today, the correct location of boundary markers. Indeed, there are areas where tree cover precludes the use of GPS entirely. But GPS is now starting to provide high accuracy coordinates for boundary markers in much of the nation. These coordinates will be an increasingly important basis for retrace-ment in the future.

Bill Strange  
*Via Online Message Center*

### On Title Policy Descriptions

I enjoyed Leininger's article "Of Title Policy Descriptions and Reality" [May 2005]. I agree wholeheartedly that we (surveyors) are the best suited to analyze situations and suggest remedies regarding boundary problems. I also personally do not place much weight on title policy descriptions. I am fortunate to be a surveyor for a utility company that holds (as grantee) all original deeds of grants to our company. They are better evidence of the transaction than even photocopies of the recorded documents (County Register of Deeds offices in Michigan). Of course, they may still contain defects that must be addressed.

Mark W. Witalec, LS  
*Via Online Message Center*

A problem with title insurance descriptions and their reliability that not mentioned in Leininger's article is the fact that title insurance is just that—insurance—and is sold on essentially the same basis as health, business, auto and other insurances. The title companies are making a statistical evaluation of the probability of having to pay title insurance. They don't care so much whether they are correct as whether or not they will be required to pay. It is just another insurance, nothing more, nothing less. Additionally, many title company

descriptions have been trimmed to have only what many consider as the essential information, that is, the "metes" portion of the description, leaving out the "bounds" and other conditionals and modifiers that are essential to determining a property line. As Leininger stated, surveyors should never rely solely upon the description provided by a

title company nor on any other single description.

Scott A. Scherbel  
*Via Online Message Center*

### Likes Linux

I am sure looking forward to Parts 2 & 3 in Loren Gibson's series ["Current Problems in Desktop Computer Usage,"

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June 2005]. We have stabilized our 'network' with a Linux Samba Server, and do not think we have had a 'hickup' in almost a year. I am looking forward to the day when we can use Linux on the desktop. But U.S. CAD developers seem to be mum about the likelihood of this occurring. I am pretty sure we will see it come out of Europe or Australia first and I will be looking hard at the software. I also want stability without a huge OS overhead (code bloat); We all need 2+ Ghz processors to manage the huge OS that everyone has standardized on. Thankfully, I feel a fresh breeze blowing.

Ken Russell

*Via Online Message Center*

### **Gibson Replies**

You've mentioned a few things that I think are significant. Samba is software which provides file and printer services to networked computers running Windows, UNIX, Linux, MacIntosh, and other operating systems, and is one of the many success stories of Free Open Source Software. Samba (which is included with every major Linux distribution for PC's) is used by many large and small organizations for important business operations.

Regarding the "code bloat" of modern commercial operating systems: Now that it's considered unwise to run old computers with their old, original operating system unless you take very strict measures to completely isolate them from malicious software (*e.g.*, no connecting them to the Internet), what can be done with such old hardware? In my household we have a couple of old (by computer standards) Pentium machines with processor speeds well under 300 MHz and with 48 MB of core memory. These computers are not capable of running resource-hungry Windows 2000 or XP. However, a careful selection of software which runs on Linux make them totally capable of being productive and reliable computers, suitable for many chores.

I think we are at a cusp in time with respect to seeing routine desktop usage of Linux. On the one hand, there is a large number of extremely useful applications available for Linux. The "user experience" when running Linux—once a weakness of Linux in the eyes of those who wish to work with a quality, highly-polished graphical user interface—has improved dramatically. I believe that

Linux is extremely viable for many day-to-day desktop computer tasks.

Time will tell whether or not the rest of the marketplace agrees with me.

However, from the perspective of surveying application software developers, I suspect that our industry must be a rather small vertical market. I don't know how economically attractive it is for them to create native Linux applications (or to port their existing Windows application software to Linux) while Windows is the dominant operating system in the industry. Perhaps the appearance of the marketplace would change for the vendors if they see enough surveyors and mappers taking advantage of Linux desktop systems for the tasks which can already be performed with them.

While we wait to see whether or not we'll find more commercial or open source surveying and mapping software, we can also attempt to run our current crop of Windows software on Linux computers by using specialized software such as WINE, Win4Lin, or VMWARE. —L.G.

### **In Defense of the PLSS**

The May 2005 issue carried an article by Mr. Fred Roeder, LS, which was severely critical of the U.S. Public Land Survey System. The issue also carried an article which constituted a somewhat weak defense of that System by Mr. J. Stanley Coalter, LS.

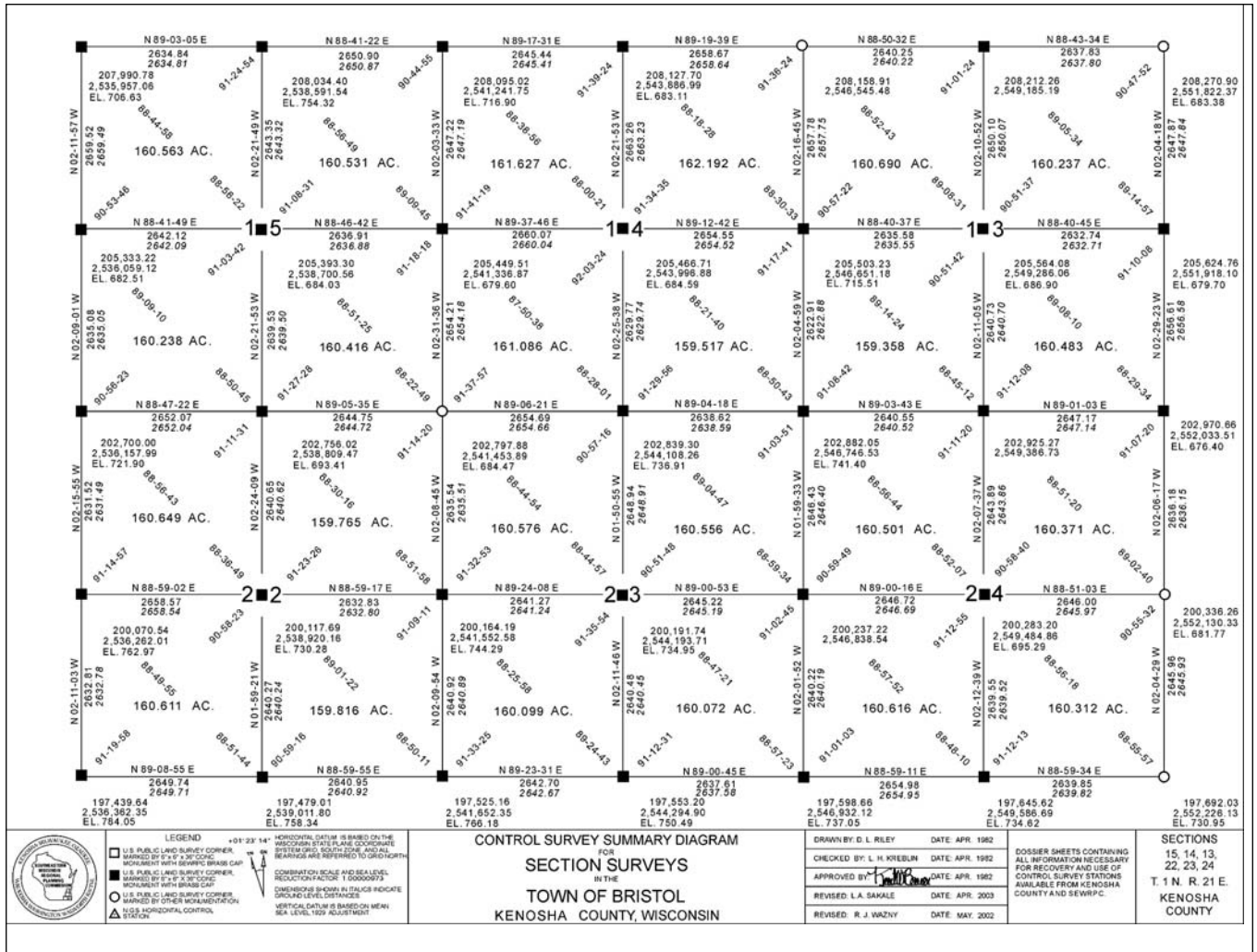
My experience with the System acquired over a period of about fifty years—albeit confined to a 2,700 square mile area of Southeastern Wisconsin—has been quite different from the experiences of Messrs. Roeder and Coalter. My experience—as a county surveyor, public works engineer, and regional planner—clearly indicates to me that the System is indeed one of the finest land survey systems devised to date. The United States would be significantly poorer today without that System which facilitated the rapid development of the nation through private enterprise. The System is, I believe, conceptually sound, and as almost flawlessly executed in Southeastern Wisconsin by competent and honest Government Surveyors, has provided a sound basis for the transfer of title from the Federal Government to private owners for agricultural, commercial and industrial development, and for the development of the public and private

infrastructures needed to support such development.

In Southeastern Wisconsin the Government surveys were executed as intended, and the township, range, and section lines were laid out correctly. The township plats filed represented accurate maps of not only the division lines, but of the then existing streams and waterways, lakes, and such cultural features as Indian trails and military and territorial roads in existence prior to the conduct of the Government surveys in 1836. The accuracy of the township plats and field notes have permitted them to be successfully used, for example, to verify the historic location of a subcontinental divide within the region that has important implications for the provision of sanitary sewerage, water supply and drainage and flood control facilities. The field notes have also been used to create an invaluable map of the historic vegetative cover of the region, including the historic location and extent of woodlands, wetlands, and prairies.

The system itself has provided a sound basis for the extensive urbanization of the region through the use of land subdivision plats and certified survey maps tied to the System, and for the location and improvement of public streets and highways. The System has provided the basis for the preparation of urban quarter-section plat and tax assessment maps; preparation of official maps—a plan implementation device; and the basis for the preparation of platting layouts and neighborhood unit development plans. It is due to the System that the region has developed for almost 170 years with remarkably few disputes and litigation over the location of land ownership boundaries.

The original corner locations—generally marked by cedar posts—were remonumented within much of the region in the 1880's by county surveyors using cut limestone monuments, and again beginning in the 1960's using concrete monuments with brass caps. The later were placed on the State Plane Coordinate System through high order control surveys. I have enclosed a typical control survey summary diagram of an area in the region. Study of that diagram will indicate—considering the differences between grid north, astronomic north and geodetic north—that the System lines were indeed run in cardinal directions as intended; that the



lengths of the section and quarter-section lines closely approximated the 40 and 80 chain distances required; and that the areas of the sections and one-quarter sections closely approximated the required 160 and 640 acre areas.

It is true that the Government surveys in Southeastern Wisconsin were faithfully carried out by competent and honest professionals—men like William A. Burt—the inventor of the solar compass attachment to the engineers transit. I am sorry that this was apparently not true in the areas in which Mr. Roeder practiced. However, to argue that a system is unsound because it was fraudulently executed is illogical. The U.S. Public Land Survey System does—in my opinion—still represents one of the finest land survey systems yet devised. It is truly a system which—with proper revitalization—can provide to this day an eminently practical survey control system (at least in Southeastern

Wisconsin), and which, amazingly, provides one of the important foundational elements for the sound development of computerized, parcel-based land information and public works management systems.

While burning an heretic writer on the stake in the town square may no longer be considered in good taste—doing so in effigy is still permitted.

K. W. Bauer, PE, LS, AICP  
Via Online Message Center

**On Lincoln as Surveyor**  
I was pleased to see [Pat Toscano's] review of *A. Lincoln with Compass and Chain* by Adin Baber [June 2005]. I believe that most of the review was accurate but, I would like to make the following comments.

As for the illustrations by the late Lloyd Ostendorf showing the chain attached to the Jacob's staff, I can assure you that the illustration is not

how land surveying was or is practiced in Illinois. Apparently, while Mr. Ostendorf examined Lincoln's compass and Jacob's staff, he noticed a brass eye hook at the top of the staff just below the ball and socket joint. Lloyd unfortunately assumed that the chain would attach to this eye hook.

As for the photograph of the commander of the aircraft carrier, Mr. Baber's daughter asked me to add anything that has happened since the book was published. I had the opportunity, as the Deputy Mayor of Springfield, Illinois, to accompany Mayor Ossie Langfelder to the commissioning in 1988 of the aircraft carrier named for Abraham Lincoln. I thought it would be a good idea to present a copy of the original Baber book to the Captain and crew of the Lincoln. By placing the book on the ship maybe some of the current 6,000 crew members and the thousands of future crew members

might pick it up and read not only about the profession of land surveying but also a little known aspect of Lincoln's life.

Toscano mentions that serious students of Lincoln's life would probably concede that *A. Lincoln With Compass and Chain* falls short of the goal of creating a definitive dissertation on the subject of Lincoln the surveyor. I dis-

agree. The book is not a candidate for a Pulitzer Prize and was never intended as a literary work of genius. It is, however, the only publication of any kind that explains Lincoln's career as a land surveyor.

Of the books written about Lincoln, including those authored by Lincoln scholars, I have always been amazed that this important part of Lincoln's life is

covered by one sentence, if at all. Baber did, and I thank him for it.

Robert E. Church, Exec. Dir.  
*IL Prof. Land Surveyors Assoc.*

### On Surveying in Baghdad

The "Surveying in Baghdad" [June 2005] article was awesome. It is great to see individuals and companies within our profession serving our Country. It is even better to have someone willing to share the story with their fellow surveyors. Keep up the good work.

Aaron E. Springer, LS  
*Via Online Message Center*

The article "Surveying in Baghdad" should be sent to each of the various news media for presentation to the reading and viewing public. What a fine example of the good things that are being done in Iraq and for Iraq by American companies. This has to be one of the most outstanding examples of cooperation between the two cultures. I am not certain all of the various media would give it much space but if Fox News doesn't follow up on it, I will be most disappointed.

Great article! Keep up the good work. As a WWII vet I also enjoyed the article about the mapping done for D-Day on the Normandy beach. I was in the Pacific area and some of our charts left much to be desired.

Harold "Hal" Bruning  
*Via Online Message Center*

Interesting article. As a surveyor and human being I'm disgusted to read about companies prostituting themselves to get in line to make millions of our tax dollars when our young soldiers are dying over there by the thousands. I hope you're real proud of our lying president who sent our troops to a dangerous country, while the president's friends (Halliburton and the Carlisle Group) are making a nice profit.

Kelly McClung, PLS  
*Via Online Message Center*

### Got some feedback?

We always enjoy hearing from our readers. You can contact us via our website at [www.theamericansurveyor.com](http://www.theamericansurveyor.com), or send a letter to: The American Surveyor, P.O. Box 4162, Frederick, MD 21705-4162. We reserve the right to edit letters for clarity and length. Due to the variety of titles used by licensed surveyors throughout the U.S., we use the title LS after the name of any licensed land surveyor. *AS*

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