



Joseph Betit is a Senior Land Surveyor with Dewberry, LLC, assigned to assisting senior management with the planning, deployment and training of advanced survey technology.

Interesting Times Ahead

There seemed to be more contractors than surveyors at the Trimble 2006 GPS Conference this year. This was reflected in the exhibits, and with the extensive array of GPS-equipped construction machinery in the exhibit area and machine control demo area. Curious, I modified my seminar schedule in order to attend two of the contractor-specific sessions to get a feel for how contractors were implementing machine control.

Three issues cropped up repeatedly in the conversations that were taking place in the contractor seminar areas. First of all, it is apparent that there are a growing number of licensed surveyors shifting from engineering firms to construction firms as staff surveyors in charge of GPS-related construction surveying operations. Just how large this shift is remains to be seen. Next, there is a parallel shift of party chiefs (sometimes along with their field assistants) with GPS experience over to construction companies. They are motivated by decreasing construction staking work in their engineering firms, with higher wages paid on construction jobs and better benefits. Third, it seemed that every construction company that had made a significant investment in machine control had also purchased a RTK setup as well. Surveyors have told me that after they do the initial stakeout of a job site, the contractors will locate the hubs with their own GPS so that they can replace the hubs as necessary and do spot checks as the work progresses. The surveyors are not called back again until it is time for curb and gutter or critical infrastructure such as sewers, etc.

Things became even more interesting when Curt Sumner of ACSM showed me a copy of a letter from the California Board for Professional Engineers and

Land Surveyors. The letter, dated 16 April 2006, was addressed to Mr. Douglas R. Melchior, PLS. It referenced Questions Regarding Professional Land Surveying Practice (machine control). This letter was promoted by some that night as the direction surveyors would take nationally to address the issue of the use of machine control by contractors.

My position was exactly opposite based on my experience of having served on the legislative committee of the California

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Land Surveyors Association many times before moving from California. The contractors have vast political and financial resources as compared to any state or even national land surveying organization. Based on prior observation of the operations of the California Board it was my prediction that the other shoe was yet to drop with regards to the letter to Mr. Melchior.

Sure enough, a clarification letter from the Board, dated 21 November 2006, intended for the entire California surveying regulant population was disseminated widely by e-mail and made available on the Board's website. In short, the contractors got to the Board – an entirely predictable action on the contractor's part.

What did this letter accomplish? The second letter clarifying (more accurately, backpedaling from) the first letter, accomplished the following:

1. Made it legal for a land surveyor to hand over digital data to a contractor.

2. Removes the judgment call from the licensed surveyor as to whether or not surveying is being practiced by the contractor. (This is interesting because it essentially means that in the view of the California Board, a licensed professional with many years of qualifying experience and successful passing of rigorous examinations, is not any more qualified than a layman to recognize whether or not a non-licensed person

- is practicing the profession or not.)
3. Throws the determination of surveying without a license into the time-consuming morass of the Board's bureaucratic procedures in a case by case process. This provides a terrific time delay for the contractors while they address the issue in the legislature.
4. Allows the contractors the necessary time and breathing room to have their favorite legislators make the use of machine control by contractors a moot point by passing specific laws protecting the contractors.
5. Gives the Board time to arrange matters so they will never have to make the final decision about this issue and thereby commit political suicide. If the Board has its ducks properly in a row, at the most they will simply have to pass a Board Rule implementing the legislative action sponsored by the contractors.

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There is a precedent to this arrangement with laser scanning in the Nevada Laws. A copy of this law is shown below.

NRS 625.500 Additional persons exempt from requirements for licensure: Employees of public utilities; architects; persons using scanner for construction management or monitoring.

1. The licensure requirements of this chapter do not apply to:
 - (a) The employees of interstate or intrastate public utility companies while they are engaged in work for those companies;
 - (b) Any architect registered pursuant to the provisions of chapter 623 of NRS and who practices architecture as permitted by chapter 623 of NRS; or
 - (c) A person, while he is using a scanner for the purpose of construction management or monitoring, or both, if he is certified by the International Conference of Building Officials or a successor organization for the purposes for which he is using the scanner.
2. As used in this section, "scanner" means a device that uses laser technology to capture the digital shape of physical objects through laser triangulation.

[Part 2:198:1919; A 1937, 491; 1947, 797; 1949, 639; 1951, 459]-(NRS A 1965, 1329; 1975, 173; 1977, 320; 1997, 1054; 2003, 2110)

The person from the scanning industry that gave me a copy of this legislation at the CLSA 2006 conference held in Reno, Nevada told me that not a single Nevada surveyor who had been shown the document realized this change in the law had been made.

So, what does all this mean? Simply, it means that with the wide-spread access to highly automated positioning technologies such as laser scanning, regional network RTK positioning and GPS based machine control has put a huge percentage of traditional surveying measurement scope of practice into the public domain. Prior to this, surveyors have worked in a relatively narrow domain of service providers such as boundary/construction surveying, mapping agencies, utilities, engineering, architecture, public highways, etc. Surveyors will now find themselves in demand across a broad spectrum of industries who can find many uses for this new domain of affordable, high speed, high precision positioning and measurement systems. Interesting times are ahead. *AS*