



# CALIFORNIA LAND SURVEYORS ASSOCIATION

SAN DIEGO CHAPTER

P.O. BOX 85152, MAIL BOX 261, SAN DIEGO, CALIFORNIA 92186-5152

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1 OCT 2002

Ms. Dorothy Calegari

Executive Secretary, CLSA

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San Diego County Chapter Quarterly Report (3rd Quarter, 2002)

## **July**

The July meeting was held at Karl Strauss Brewery Gardens on Scranton Road. Our guest speaker was James Stowell of Leica Systems

James presented us with the many benefits of CORS and RTK. The combination is able to achieve 1/2 meter accuracy; higher accuracy survey grade GIS locations; mobile and real-time processing; real time updating of spatial databases; integration of GPS into other technologies; assistance in emergency services; and it has a low cost with super high reliability and productivity.

James justified the benefits of having a cooperative CORS station. They are NGS sanctioned; have integrity monitoring; they are active 24 hours; eliminate the static occupation of HARN; provide for a common coordinate system; support all GPS users with a common data type; eliminate the need to compute local control scaling and they eliminate 'local systems' from cropping up.

The long-term benefits include a greater confidence in the geometry and performance of the datum through the continual collection of data.

He successfully convinced us that everyone needs geospatial data and we, as surveyors, have the means to provide it.

## **August**

The August meeting was held at Chevy's Restaurant in Carmel Mountain. Our guest speaker was Ray Mathe, President-elect of CLSA.

Ray presented us with his professional background, which did begin with a ring, first job and marriage all within the same time frame. He then went on to commend our Chapter for their commitment to the profession. We are the biggest chapter and getting bigger. He spoke of the accomplishments of CLSA in the past year. The budget was audited and we came out well. The Mount Diablo Initial Point celebrated it's 150<sup>th</sup> anniversary and he encouraged us to participate in the anniversary celebration of the San Bernardino Initial Point. The conference was a huge success with an attendance of 577 members and the scholarship auction raised \$12,000 for the Education Foundation. He went on to encourage education. CLSA has workshops scheduled – Boundary, SMA, California laws, Measurement Analysis and CORS. He wants to encourage the Board of Directors to have discounts for the attendance of multiple workshops. He stated that CLSA is close to having 2000 members. We need more members to provide better benefits, especially in regards to legislation. We will have more influence on legislation if we are representing the majority of CA surveyors.

The items, which are most important to Ray in the coming year, are education, education and education. He will provide quality workshops and increase communication via the new and improved website. He would like to support enabling legislation to the board for continuing education. Next, the test became the hot topic. The passing rate is low and the primary way to increase the percentage is through education. The test is an occupational analysis of the surveying profession. He emphasized that review classes were not to learn the topic; the prospective surveyors need to rotate through the many areas of surveying in order to be trained adequately. Ray also believes the test should be a 2 day test in order to cover all of the facets of land surveying. In order for us to have educated surveyors, he needs us to support colleges with surveying programs and continuing education. We need to go to Career Days, participate in TrigStar and every child we know needs the Surveying coloring book!



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The September meeting was a joint meeting with Orange County. Following a train ride, it was held at Sarducci's Restaurant at the San Juan Capistrano train depot. Our guest speaker was Andrea R. Gustafson, MS of BAE Systems, Mission Solutions. She presented us with Detecting Airfield Obstructions Using Digital Photogrammetry and GIS. On 3 APR 1996, Secretary of Commerce Ron Brown, business executives and military personnel met an untimely death while their aircraft was on approach to Dubrovnik, Croatia. The military aircraft was flying without the aid of a GPS receiver in extremely poor weather conditions. The investigation report clearly indicated that improvements in the navigational data about the terrain and proper approach might of averted the tragedy. Congress, acting in honor of the victims and on behalf of aviation safety, funded the Ron Brown Airfield Initiative to improve navigational data around airfields and they tasked National Imagery and Mapping Agency (NIMA) with collecting the data. NIMA maintains navigational data on approximately 10,000 airfields.

An aeronautical survey is a conventional land survey to determine important ground point coordinates to a high degree of accuracy. It is unique in that it includes obstruction detection. Aerial photography is collected over 7 nautical miles around the airfield. The photography is used to identify vertical objects around the airfield. This conventional method does not have the ability to perform basic analysis of features. To determine which objects are obstructions requires the construction of and comparison against the imaginary obstruction identification surface (OIS).

The OIS is composed of surfaces that create an imaginary stadium above the airfield. The surfaces include a primary surface, an inner and outer horizontal surface, a conical surface, approach surfaces and transition surfaces. If an object is above the OIS, it is an obstruction. Examples include antennas, buildings, power lines, vegetation, etc. Since each runway can be a different length, an OIS must be constructed for each runway. This task initiated the creation of ClearFlite. The extraction of airfield vertical obstructions using photogrammetry, GIS, and geospatial analysis techniques focuses on rapid obstruction detection. A surface model representing the OIS is used during photogrammetric data collection.

The advantages to the digital production include improved obstruction collection, time and cost savings, and the ability to maintain and update the products. The data collected is the first component for the aeronautical navigation to accomplish the directives that spawned the Ron Brown Airfield initiative and the future use of GPS guided landing of aircraft with graphical pilot heads-up display. Respectfully submitted,

Anne L. Hoppe, PLS  
Secretary 2002  
San Diego Chapter

September