# Association of Engineering Geologists

"Serving Professionals in Engineering, Environmental and Groundwater Geology Since 1957"



# Southern California Section NEWSLETTER - September 1997

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Deadline for submittals to the October Newsletter:

September 29th

## Dinner Meeting Tuesday September 9th

Stevens Steak House 5332 Stevens Place

City of Commerce

Cost - \$20.00

(\$10.00 for full-time students with valid I.D.)

For reservations call Pat Stewart at Montgomery Watson at (818) 568-6161 by Friday September 5th

Make reservations by Noon on the Friday before the Meeting

- 5:30 Social Hour & One-Half
- 7:00 Dinner

7:30 Announcements

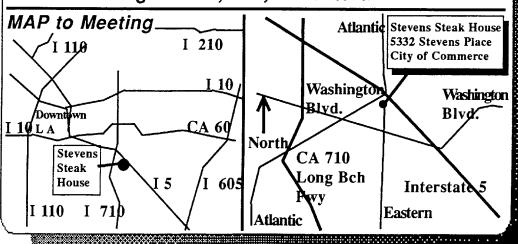
7:45 Program

## Program

TOPIC An Introduction to the Global Positioning System (GPS) for **Earth Science Professionals** 

Tomas F. Blake, P.E., C.E.G. SPEAKER

> Geotechnical Services Manager Fugro-West, Inc., in Ventura



# **Program** Topic & Speaker An Introduction to the Global Positioning System for Earth Science Professionals Thomas F. Blake, Fugro-West, Inc., Ventura

Recent improvements in accuracy, availability, and cost have made the Global Positioning System (GPS) a useful tool for geologists and geotechnical engineers. Although surveygrade equipment with an accuracy of a few millimeters still costs several tens of thousands of dollars (and is beyond the financial reach of most of us), for a relatively small equipment investment, earth science professionals can now determine the geographic positions of test pits, borings, and the like, to within a few feet.

The Global Positioning System has existed in various stages of development throughout the past 20 years. However, until recently, receivers with enough accuracy to be useful for the mapping needs of earth science professionals commonly have been too expensive for most firms and, as most of you know, the low-cost receivers that have been available in sporting goods and department stores are not accurate enough for most of our positioning needs. Near the end of 1996, that situation changed. Trimble Navigation, a leading GPS manufacturer, made some changes in their mapping-grade Pathfinder system of GPS receivers, which improved their accuracy, and with concurrent price reductions they now have brought GPS into the realm of usefulness for most geologists and geotechnical engineers.

Using the currently available, highly accurate, mapping-grade differential-GPS receivers, earth science professionals can now estimate the geographic positions of point features to better than about 3 feet, even when base maps lack good reference marks. Considering the approximate locating techniques that we have typically been using for decades, this newly developed technology promises to provide us with a valuable new tool.

This presentation will summarize how GPS and differential GPS work, and it will familiarize you with the capabilities and accuracy of a couple of Trimble's Pathfinder mapping-grade products, the GeoExplorer II and the ProXR, both of which can be useful to earth science professionals. A brief written paper, which summarizes some of the technical aspects of GPS, will be provided to the attendees.

Thomas Blake, who is a Certified Engineering Geologist and Registered Geotechnical Engineer, is a Geotechnical Services Manager at Fugro-West, Inc., in Ventura, California. He received his Bachelor s and Master s degrees from California State University, Northridge in 1974 and 1981, respectively. He has over 22 years of consulting experience and he taught geology courses for almost 10 years at CSUN and Moorpark College. Tom has worked for Fugro (or its former subsidiaries McClelland Engineers and Staal, Gardner & Dunne) for over 14 years. He is the author of a number of computer programs (including EQFAULT, EQSEARCH, FRISKSP, and LIQUEFY2), which are commonly used to estimate seismic hazards throughout the state of California. For the past year, Tom has been using both the GeoExplorer II and the ProXR GPS receivers to determine the positions of borings, test pits, and other features, at sites throughout southern California.

# THIS MONTH

Kelly E. Rowe Hydrogeologist

## September 1997

This month Tom Blake will provide an update on the current use of GPS. He has obtained a lot of recent experience using it on his projects. I know the equipment continues to improve and cost drop, just like com-



puters. Since he has shopped around recently he can probably tell us the best bargains available. One of these days we will probably have a GPS receiver on our wrist along with a computer and video telephone.

Last month Mr. Ernster, as a trial attorney, provided several stories highlighting key issues he thought were relevant to attorneys and their pursuit in finding negligence in professional services. As you know and can imagine attorneys can be thorns to us and the progress of geological services we provide. Mr. Ernster lamented that geologists and engineers are reluctant to generate and keep paperwork. In one respect he is correct. It is good to generate a written agreement before performing services which clearly spells out your responsibilities and liabilities. Otherwise you could be considered liable for problems others created on a project. In another respect Mr. Ernster is wrong. Experienced geologists and engineers know that the more project paperwork that is stored it is more ammunition/evidence for attorneys to use to prove negligence. At the end of a project it is often best to just keep the final project report on file and shred all of the supporting technical memos, maps, tables and figures. We often find it hard to throw out information which may be useful in the future or are lazy in deciding when something should be thrown out. I know attorneys love to go through old paperwork and find inconsistencies and errors.

Several people at the meeting questioned the tactics attorneys have used on them, which appear to be a form of extortion, to avoid the excessive cost trials bear. There appears to be no relief from these tactics. Oh well...This will probably be an eternal struggle geologists and engineers will have in working with and against attorneys.

Mr. Ernster brought up another interesting point related to third party suits. He said the case, Bily v. Arthur Anderson may be suitable defense for third party liability for professional services. Based on my recollection the story goes as follows...An employee did an evaluation for his boss. A third party somehow acquired the evaluation and based on it made some investments. The investments went bad so the third party sued the employee. The court ruled against the third party, saying they could sue the employee's boss, who in turn could sue the employee. Not likely to happen. Good luck.

#### Chairman's Column

Thank you for entrusting to me with the leadership of the Southern California Section of AEG for another year. I view this as a privilege! During this next year, I have four very straightforward goals: 1) diversify participation in the organization, 2) involve our newer members, 3) grow new section leadership, and 4) determine the Section's role in CCGO. To

accomplish these goals, I plan to rely heavily on the Section officers and committees. If there is a mistake that I made last year, I view this as being it. But this is the benefit of hindsight.

As always, I encourage each of you to get involved and make the organization work for you! If you think something should be done differently or could be improved, say so. If you have suggestions for speakers, say so. If you think we should go somewhere on a field trip, volunteer to help organize it. If you want to participate on a committee that is of interest to you,

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#### Continued from Page 2

call me. If your company wants to sponsor the bar at a meeting, we'll all thank you. Most of all, please help me and the other Section officers to make this the best organization possible. After all, we are all doing this because we want to better our profession and have fun doing it!

Hope to see a bunch of you at the annual meeting in Portland!!

#### CCGO Stuff...in tiny 7 point type.

More from CCGO! We hope you'll read these minutes, particularly the objectives under consideration for CCGO's Strategic Plan, and decide to join us for our next organizing meeting, on Saturday, September 20, in San Jose.

CALIFORNIA COUNCIL OF GEOSCIENCE ORGANIZATIONS An Advocate for the Profession in the Public Interest

DRAFT MINUTES OF AUGUST 9, 1997, CCGO MEETING

(Held at Betsy Mathieson's house in San Jose, 9:30 AM - 3:30 PM)

#### I. INTRODUCTIONS OF ATTENDEES

Dave Ebersold (Chairman, Southern California Section, AEG) Jim Borchers (Sacramento Section, AEG) Jim Parsons (Sacramento Section, AEG) Richard Sedlock (President-Elect, Pacific Section SEPM) Tridib Guha (Past President, NCGS) Betsy Mathieson (Chairman, San Francisco Section, AEG) Jane Gill (President, San Francisco Bay Area Chapter, AWG) Bob Tepel (Past President, AEG) Jim Jacobs (President, California Section, AIPG; President, San Francisco Chapter, GRA)

II. APPROVAL OF MINUTES OF 6/22/97 MEETING Corrected list of organizations who have made commitments for loans by adding:

II. INCORPORATION MATTERS (Bylaws Committee represented by Betsy Mathieson)

Articles of Incorporation and Bylaws —Betsy summarized history of development of draft articles. Group revised articles and made minor changes to bylaws. Jane Gill agreed to be initial agent for service of process. We decided to specify that upon dissolution of the corporation, remaining assets will be distributed "to members in a manner to be determined by the Board of Directors." Our second choice, if that is not permitted, is to distribute the assets to a nonprofit organization. Group agreed the articles of incorporation and bylaws should be reviewed by an attorney before we incorporate. Dave Ebersold offered to ask an attorney at Montgomery Watson to perform the review. While reviewing the articles of incorporation, group decided the educational part of CCGO's purpose was not stated in mission or vision statement, so we changed the vision statement by adding "ing" to two words. It now reads: "The Council will be a leader of recognized integrity in advancing programs and legislation that take into consideration California's diverse geologic conditions, advocating knowledgeable use of resources, and working to reduce the impact of geologic hazards."

Resolution to Incorporate - Deferred until next meeting, after attorney reviews articles and bylaws.

Procedures for filing for tax exempt status - We have a choice of (1) paying the \$800 Franchise Tax Board fee when we file for incorporation, and (we hope) getting a full refund after we are determined to be tax exempt or (2) requesting a decision on our tax status before incorporating, which could take a few months. Group decided to do the former to expedite incorporation and recruiting of members. Betsy will obtain required tax forms and send to Jane to start process of completing forms.

Confirmation of loans from organizations (for refundable \$800 Franchise Tax Board fee) - All confirmed except GRA, which did not send a representative. Some of the organizations intend their loans to be permanent once incorporation is complete.

#### IV. STRATEGIC PLAN REFINEMENT

Met in small groups to develop Objectives for future consideration under each of the Strategic Intents:

A. "Proposed Legislation" and "Existing Legislation" were combined into a single strategic intent then reviewed by Jane Gill, Betsy Mathieson, and Richard Sedlock. Committee revised Strategic Intent to read: "LEGISLATION—Track existing and proposed legislation. Provide information and recommendations to lawmakers, regulatory agencies, and the public regarding the application of sound geologic principles in the arena of economic, environmental, and human impact issues."

Objectives (developed by committee and compiled from documents previously prepared by Bob Tepel):

- Compile databases of existing laws, regulations, statutes, ordinances, codes, and guidelines, and of pending legislation and initiatives.
- Develop and maintain contacts at state and local levels to keep members apprised of upcoming legislation, rule making, and development of guidelines.
- 3. Develop list of pertinent keywords and search all State Assembly and Senate bills for relevance to geologic aspects of public health, safety, and welfare.
- 4. Establish letter-writing and fax/phone/e-mail system for contacting members and California geologists with requests for action.
- 5. Compile list of volunteers who agree to respond quickly to calls for action.
- 6. Undertake research necessary for preparation of position and background papers.
- 7. Actively support favorable legislation as well as actively opposing unfavorable legislation.
- 8. Proactively propose a legislative and regulatory program of future bills and amendments to existing laws, regulations, ordinances, statutes, codes, and guidelines.
- Compile evaluative list of legislators analyzing their compatibility with our legislative program. Identify potential authors and sponsors.
- 10. Attend and speak at public hearings.
- 11. Develop a respected reputation in the legislative and regulatory community.
- 12. Coordinate CCGO lobbyist activities.

B. Committee composed of Bob Tepel Tridib Guha, and Jim Parsons developed objectives for "REGULATORY PEER REVIEW: Evaluate the efficiency, fairness, and effectiveness of the present regulatory peer review process and develop and promote recommendations for improving the system."

Objectives: (will be forwarded after compilation by Bob Tepel)
C. Committee composed of Jim Jacobs, Jim Borchers, and Dave Ebersold developed objectives for "GOVERNMENT AL RELATIONS: Identify, establish good working relationships with, and seek cooperation with appropriate public entities."

Objectives:

1. Provide talks (Executive Director) or have a booth at conventions and annual meetings of public organizations or agencies which use or could use sound geologic knowledge in their work. Examples include California Organization of Planners, Association of California Water Agencies, Association of Public Works Directors, Brownfields or Redevelopment Agencies, etc.

Send information and have the Executive Director meet with selected legislators on key committees.

D. Tepel/Guha/Parsons committee developed objectives for "PROFESSIONAL PRACTICE: Work to improve the professional practice of geoscience in the state of California."

Objectives: (will be forwarded after compilation by Bob Tepel)

E. Jacobs/Borchers/Ebersold committee developed objectives for "PUBLIC OUTREACH: Publicize the role of geosciences and earth scientists in public health, safety, and economic prosperity of the state of California."

 College and Universities: Geology Departments a. Local committee members of CCGO to meet with students and professors at "Career Day" seminars. b. Local committee members of CCGO giving technical seminars at Geology or other Departments, spend last 5-10 minutes on CCGO outreach objectives.

2. General Public a. Hold general interest meetings by well known speakers: John McPhee, USGS experts, etc. (floods, earthquakes, volcanoes, etc.) and advertise these events in local papers. Charge nominal admission \$5-\$10 for possible fundraising for CCGO. b. Press releases to many papers (e-mail or fax) on the importance for the general public to understand the basics of the risks associated with earthquakes, volcanoes, erosion, floods, etc. and the importance of geology in California everyday life

More available, but cut off to keep the newsletter short...ed.

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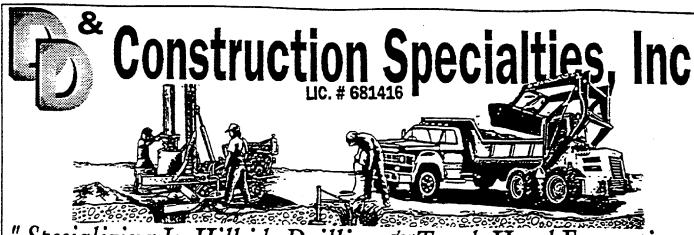
Southern California Section

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