



The Engineering *INDEPENDENT*

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IEEE Los Angeles Area Consultants' Network

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In This Issue

Don't miss Kip Haggerty's presentation of "System Case Studies: Radar Refraction and Digitizing Controllers" at our joint meeting with China Lake Section on May 24th. Get all the details on Page 1.

Two new members have joined us so far during our Spring 2000 membership drive. Meet Neil Barabas and Jim Walker on Page 2.

The results are in! In a hotly contested race... OK, so maybe one write-in vote doesn't exactly qualify as "hotly contested." At any rate, your 1999 Network officers are back for 2000. Read about the election results on Page 2.

H&A Systems Engineering, operated by Network members Leslie and Kip Haggerty, has a new address. Update your contact file on Page 2.

The "Power of IEEE" Conference (aka the IEEE/PES All Councils Conference) on June 10th features a greatly expanded Consultants' Track with an all-star cast of speakers addressing a variety of issues important to Network members. Ralph Hileman fills us in on Page 3.

The 2000 membership and Directory listing drive officially ended on May 7th. We're now busy collating and packaging the information for the on-line and printed Consultants' Directories. But if you missed the deadline, you can still get into the on-line Directories. See how on Page 3.

Network member Ed Conrow is the author of a new textbook on risk management that's receiving rave reviews. Does a copy belong on your bookshelf? Find out on Page 4.

LAACN Member Kip Haggerty To Present Systems Case Studies at Joint Meeting on May 24th

Kip Haggerty <k.haggerty@ieee.org>

A joint meeting of LAACN and the IEEE China Lake Section will be held on May 24th, 2000, with Kip Haggerty as the featured speaker. The luncheon meeting will be at the El Charro Avita Restaurant, 1337 N. China Lake Blvd., Ridgecrest, CA. Lunch will be served at 11:15 AM with Kip's presentation following at 11:45 AM. Kip's topic will be "Systems Case Studies: Radar Refraction and Digitizing Controllers."

As Richard Feynman pointed out in "Surely You're Joking Mr. Feynman," our knowledge is very fragile. Very often we get lost in the details or are confused by the unfamiliar manner in which questions are posed and fail to notice the simplifications that the underlying theories provide. Missing these simplifications can lead engineers to inappropriate approximations, solutions which cannot be implemented, or solutions with excess embedded software requiring test and integration (i.e. excess development cost). This presentation will examine two case studies highlighting these pitfalls and how they were overcome on real engineering projects.

The first case study examines standard radar refraction approximations and traces the approximations back to the original sources. An approximation for elevation angle refraction results which is more suitable for real-time use in long-range airborne radar. The second case study examines a set of compensation algorithms specified in the analog domain and used in embedded control software. Standardizing and abstracting the various algorithms into one discrete time algorithm yields lower software design, test, and integration costs.

Speaker: Kip Haggerty started his career with Hughes Aircraft Company in 1980 holding positions of increasing technical responsibility for radar, communication, and cooperative engagement systems. In 1994, he and his wife founded H&A Systems Engineering, an engineering consulting firm providing systems engineering and analysis services. Kip received a B.S.E. in E.E. from Michigan (1980) and a Ph.D. in E.E. from UCLA (1988).

See "Systems Case Studies" on Page 2

What:	China Lake Section Joint Meeting with Los Angeles Area Consultants' Network "Systems Case Studies: Radar Refraction and Digitizing Controllers"
Who:	Kip Haggerty, Principal, H&A Systems Engineering
When:	Wednesday May 24, 2000 11:15 AM: Lunch 11:45 AM Presentation
Where:	El Charro Avita Restaurant, 1337 N. China Lake Blvd., Ridgecrest, CA
Details:	Order from the menu. For info contact John Walker (760) 377-3587 or via e-mail at <johnwker@ridgenet.net>. For program updates, check the China Lake Section website at < http://www.ewh.ieee.org/r6/china_lake >

The On-line Bulletin of the Los Angeles Area Consultants' Network

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Systems Case Studies

(Continued from Page 1)

Kip is a Senior Member of the IEEE and has been an active volunteer. He currently serves as one of LA Council's three Directors on the Board of Electronic Conventions, Inc. (ECI). Previously he served as LA Council Chair, Chair of the IEEE Los Angeles Area Consultants' Network, and LA Council delegate to and Vice-President of the California Legislative Council of Professional Engineers. He has spoken at IEEE meetings on P.E. registration, consulting, networking, and the Internet, and has five published technical articles.

LAACN Welcomes New Members Barabas and Walker

Russ Walker <rewalker@ieee.org>

The Network is pleased to welcome two new members who have joined during our Spring 2000 membership drive: Neil J. Barabas, P.E., and Jim Walker, P.E.

Neil Barabas, an IEEE Senior Member, is President of B&R Electronics, 10632 Nevada Avenue, Chatsworth CA 91311-2026. He specializes in switching power supply design; DC-DC and AC-DC converters; analog control design; and analysis and simulation of magnetics. He can be reached by phone at (818) 341-2475, or by email at <barabasn@ieee.org> .

Jim Walker, also an IEEE Senior Member, is Consultant/President of Walker Power Design, Inc., 17561 Hada Drive, San Diego CA 92127-1223. His specialties include power electronics; switching power supplies; power amplifiers; and transformers. Phone him at (858) 487-4788, or email him at <jim.walker@ieee.org>.

Please join me in extending a handshake to these two new colleagues in our Network. Welcome aboard for 2000!

LAACN Election Results 2000

Russ Walker <rewalker@ieee.org>

The 2000 Election of Officers for LAACN was concluded in March. The 1999 officers, running unopposed, were re-elected for a second and final term in 2000. Official results, as announced by the Nominations and Tellers Committee (Kip Haggerty (chair), Scott Miller and Wiley Greiner) were:

- Chair - Curtis Barrett - 26 votes (1 write-in vote for Kip Haggerty)
- Vice-Chair - Clark Bell - 27 votes
- Treasurer - Barry Todd - 27 votes
- Secretary - Russ Walker - 27 votes

On behalf of all the officers, our sincere thanks to Kip, Scott and Wiley for administering a quick and efficient election; and to all the LAACN members for your continued support.

By the way, this slate of officers will be *ineligible* to serve again in 2001, since IEEE rules limit officers to two consecutive terms. Start thinking now about which office you will volunteer for next year!

The 2000 ballot also included an advisory survey. The full survey is now posted on the LAACN Web site at <<http://www.laacn.org>>, *except* for the results of the rate survey question. The rate survey data will be distributed as a confidential mailing to LAACN members soon. ("Soon" in this context is a technical term meaning "when I get a spare minute!"). Further results from the survey will be published in a future Newsletter.

H&A Systems Engineering Moves to New Address

Leslie Haggerty <l.haggerty@hasys.com>

H&A Systems Engineering, the firm of Network members Kip and Leslie Haggerty, has a new address and phone number: P.O. Box 2875, El Segundo, CA 90245; (310) 607-9609; fax (310) 607-9475. Our email remains the same:

Kip: k.haggerty@hasys.com

Leslie: l.haggerty@hasys.com

Power of IEEE Conference June 10th Features Expanded Consultants' Track

Ralph Hileman <r.hileman@ieee.org>

Lets start at the top. This is an IEEE/PES All Councils Conference, subtitled The Power of the IEEE. It is to be held on Saturday, June 10, 7:30 to 4:00, at the Universal City Hilton Hotel. This is the second year I have held a consultants session at this conference, but this will be a much bigger deal.

There are 4 Technical Tracks:

1. Distributed Generation (Mike Paik)
2. Short Circuit Calculations - Tutorial (Matthew Collins)
3. Consultants Network (Ralph Hileman)
4. Professional Activities PACE Employment Asst (Eremita Miranda)

For those who want to know what else is going on, some of the papers for the Distributed Generation include:

IEEE Recommended Design Practices for Non-Utility Generation Systems

IEEE Std P1547 Draft Std for Interconnecting Distributed Resources with Electric Power Systems

Code Compliance of Alternate Power Sources

The Changing Role of Transfer Switches in the Evolving Electric Market

UC Irvine National Fuel Cell Research Center

I would like to hear some of these programs myself. With the Fuel Cell industry expecting annual revenues of ten billion dollars by 2010, we had better be conscious of this evolving technology, we might want it for our houses or cars.

OK, now for the plans for the Third Track, the Consultants Network. We have two adjacent rooms for two parallel morning sessions. These rooms will be combined for a joint afternoon session.

The two morning sessions are:
A Consulting as an Option and B Information of interest to Practicing Consultants.

7:30 - 8:30 Registration
Advance Registration is \$35, On-Site \$45 (IEEE) \$10 more if not IEEE.

Session A. Consulting as an Option

8:30 - 9:30 Dr. Gary Blank - Mid Career Changes
9:30 - 10:30 Bill Mooney - How to Start Consulting
10:30 - 11:30 Al Gess - Legal Issues, Intellectual Property, Rights to Data. Another speaker TBD, Taxes, Incorporation, Insurance??

Session B. Practicing consultants

8:30 - 9:30 Dr. Alan Herr - Driving customers to your Web Site, Practical Advice and Experimental Results
Yolonda Sanchez - Adding Style and a Touch of Class to your site
9:30 - 10:30 Jorge Medina - International Consulting Experience
John Parry - International Consulting Experience, Culture Issues
10:30 - 11:30 Wayne Mackey - Running a Successful Consulting Business, Sales, Expanding the Work, Overview of Client Management
Sharon Hope - Applying Y2k Teams to Security Issues
Ralph Hileman - Holographic Perspectives on Multiple Projects (Only two of the above, I will be a backup)
11:30 - 1:00 Lunch (included in the registration)

Combined Session

1:00 - 2:00 Bill Mooney - Branding Consulting Products
2:00 - 3:00 Panel of Experts to Answer All Questions. Panel Members include Bob Gauger, Kip Haggerty, Irv Weitman, morning speakers, (others not yet confirmed)
Start with Fee Survey Results - Bob Gauger
Ron Stein - Contract Engineering
Other Short Subjects:As time/questions permit

After 3PM Networking Session, possibly some food, details TBD.

Notes on the speakers for the benefit of those from out of town: Bill Mooney is a very popular Consultant's Consultant with busy speaking engagements up and down the coast. We are very fortunate that he can be here. Al Gess is an OCCN member and Orange County Section Treasurer in the legal business. Alan Herr is Chair of the San Diego CN and expert in Websites. Yolonda Sanchez is coming from San Jose and is a web site design expert. Gary, Jorge and John are known to the AICN crowd. Sharon is an OCCN member selected for an award from NASA's Dan Goldin for her work in Y2k team development, now turning the team to the task of security for NASA. This is a very distinguished group already and I hope to add a few more key people in the next week or two.

Well that about summarizes where we are right now. If you need anything else, just ask.

2000 Membership and Directory Listing Drive Concludes

Russ Walker <rewalker@ieee.org>

The deadline for joining (or re-joining) LAACN for inclusion in the printed version of IEEE's national Consultants' Directory, as well as the national and local on-line Directories, was May 7th. By the time you read this, you should already have signed up.

If you missed the deadline, you can still join LAACN and be listed in the on-line Directories. We can add members to the on-line database any time. For the printed Directory, alas, that ship has sailed.

For information on joining LAACN or renewing your LAACN membership mid-year, please contact me at <rewalker@ieee.org>.

Network Member Conrow Publishes Risk Management Text

Ed Conrow <ehc@earthlink.net>

LAACN Member Ed Conrow is the author of a newly published book: *Effective Risk Management: Some Keys to Success*, American Institute of Aeronautics and Astronautics, April 2000. The book includes 200+ tips for sound project risk management.

Risk management is an important skill that can be applied to a wide variety of projects. In an era of downsizing, consolidation, shrinking budgets, increasing technological sophistication, and shorter development times, risk management can provide valuable insights to help key project personnel plan for risks, alert them of potential risk issues, analyze these issues, and develop, implement, and monitor plans to address the issues long before the issues surface as problems and adversely project cost, performance, and schedule.

This important new text defines the steps to effective risk management and helps the reader create a viable risk management process and implement it on their specific project. It will also allow you to better evaluate an existing risk management process, find some of the shortfalls, and develop and implement needed enhancements.

The book helps fill a void that exists in the project risk management literature on desirable risk management process characteristics and considerations for tailoring and implementing the process on a particular project. The material illustrates attributes and practices of sound risk management that can readily be used by both project management and technical practitioners, as well as others that are less familiar with the subject.

Conrow presents more than 200 lessons learned and clearly stated tips that will help you successfully implement risk management, including things to do and traps to avoid, taken from his extensive experience working on a wide variety of projects over 20 years. This includes work performed as a risk management specialist and consultant on Air Force, Army, Navy, DoD, NASA, other

government organization, and commercial projects; on hardware-intensive, software-intensive, and mixed projects, with life cycle dollar ranges from several million dollars to many billion dollars. Examples of erroneous risk management practices are given, along with insights to help the reader understand why the practice is flawed and improve their ability to detect other issues that may also be problematic.

Author: Dr. Edmund H. Conrow CMC, CPCM, PMP, email info@risk-services.com.

[Editor's Note: Following are some reviews of Ed's book, to give you an idea of what others are saying about it.]

"Finally, there exists a risk management book on the marketplace that is easy to read, practical, and comprehensive. All facets of risk management are covered without the use of complex mathematics. Dr. Conrow's lessons learned situations and his more than 200 tips for successful risk management are applicable to any project in any industry. Given that risk management is regarded as one of the primary management skills for the first decade of the 21st century, this book is a must for every manager's library."

Harold Kerzner, Ph.D.
Professor of Systems Management,
Baldwin-Wallace College
Over 200,000 professionals have attended Professor Kerzner's lectures on project management. He is the author of best-selling book, "Project Management: A Systems Approach to Planning, Scheduling, and Controlling," currently in its sixth edition.

"Dr. Conrow's experiences are palpable as he explains every nuance of the risk management process. Program Managers would be well advised to read, mark, learn, inwardly digest, then apply his lessons learned so that they may minimize the risks to their own careers."

Dr. Gordon A. Smith
Former Deputy Director, Strategic Defense Initiative Organization.
Former Assistant Secretary of Defense, Command, Control, Communication and Intelligence. Dr. Smith has also held executive management positions with several commercial companies.

"Dr. Conrow has given the risk management community a much needed reference. In his thoughtful work, he accurately describes the Office of the Secretary of Defense's approach to risk management and offers some processes and methods for implementing it. In creating this bridge between policy and practice, he tells us what we must do to have an effective risk management program and, just as important, tells us the pitfalls to avoid. He avoids the academic approach that is virtually impossible to implement, yet goes into sufficient depth to show competent managers how to proceed. This book is a necessary reference for all managers."

Louis L. Simpleman,
Institute for Defense Analyses
Mr. Simpleman is the Technical Leader of the Office of the Secretary of Defense Risk Management Working Group.

"I think it is well written, comprehensive, and addresses many of the major problems that are found in applying risk management in practice. It is one of the best books regarding risk management I have read in the past 5 years. It is a noteworthy addition to the risk management literature, and is useful to those who want to do risk management right. I will be citing it in my future books and articles."

Dr. Robert Charette
Dr. Charette is a highly respected risk management consultant. He has also authored two books and numerous articles and presentations on risk management.



In This Issue

Volunteers and nominations are needed **now** for Network officers in 2000. Check out our lead article on page 1, then get on the ballot!

IEEE's Alliance of Independent Consultants' Networks has released a new sample consulting agreement that you can download and modify to suit your needs. Find out how to get it and use it on page 2.

The Network continues to grow! Meet our newest member, David B. Chaney, on page 2.

Are you charging enough in today's hot technology market? Learn the results of a just-released rate survey for computer consultants on page 2.

As LAACN enters 2000, take a look in the mirror... and in the crystal ball. See what your Executive Committee has in mind for the future, on page 3.

Check out the changes to Disciplined Software Consulting's Web mini-site, and find out how to create your own site, on page 4.

Editor's Note: *Well, somehow what I had planned as the last Newsletter of 1999 became the first Newsletter of 2000. Things got even crazier than usual around the holidays. Another reason for the delay, though, was a shortage of material. My byline is on far too many pieces in this edition! Please take a few minutes to jot down your thoughts on anything related to technical consulting and/or LAACN, and email it to me at <rewalker@ieee.org>.*

Volunteers, Nominations Needed for LAACN Officers in 2000

Russ Walker, LAACN Secretary <rewalker@ieee.org>

It's that time again. Well, actually, it's past that time. 1999 has come and gone, so we need to hold an expedited election for Network officers for 2000. To hold an election, we need candidates. And that's where you come in.

LAACN is now accepting nominations for the offices of Chair, Vice Chair, Secretary and Treasurer. (It is possible that the offices of Secretary and Treasurer may be combined into a single Secretary/Treasurer position, if we fail to get enough candidates to fill all four positions.) To volunteer, or to nominate someone else, contact any member of our 2000 Nominations Committee:

- Scott Miller, (562) 431-7493
<s.e.miller@ieee.org>
- Kip Haggerty, (310) 679-2440
<k.haggerty@ieee.org>

But please don't delay! We need to hold elections and get the new officers started before too much more of the year slips away. Our current timetable is to accept nominations through the end of January, with ballots mailed out during the first week of February. On this schedule we expect to have our new officers installed by March 1. So please call or email Scott or Kip today!

Also, please don't be coy and wait to be asked. We simply don't have time this year for false modesty or gentlemanly "arm-twisting." The Nominations Committee is **not** responsible for dragooning people into LAACN service. So please, call us - we probably won't call you!

If you attended Steve Maas's talk at our September meeting, you may remember

that Steve emphasized how important visibility is to a successful consultant, and how volunteering for office in IEEE organizations is a great way to get that visibility. Well, here are some opportunities! Serving on the LAACN Executive Committee is a great way to become known to your fellow consultants, and to other professionals throughout IEEE. It's also a great way to hone some useful skills like organizing, managing, coordinating, writing, publishing and Webmastering. Finally, it gives you a chance to point the Network in the direction *you* think it should go, to best serve you and your fellow members.

If you're not interested in an elective office, there are several other ways you can get more involved with LAACN: for example, by editing this Newsletter, managing our Web site, or arranging a meeting in your area. Please feel free to contact the Nominating Committee about these opportunities as well.

Following is a quick rundown on the duties of the LAACN elective offices, paraphrased from the IEEE guidelines for Affinity Groups. All the members of the Nominating Committee are former officers of LAACN, and can give you first-hand information about what each office entails.

The Chair leads all meetings of the Network and meetings of the Executive Committee, and is responsible for reporting the roster of Network members to the IEEE Regional Activities Department.

Continued on page 2, column 1.

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Volunteers, Nominations Needed

(continued from page 1)

The Vice Chair assists the Chair in coordinating all Network activities, and leads meetings at the Chair's request or in the Chair's absence.

The Secretary handles correspondence, keeps minutes of meetings, mails notices, submits meeting reports to the IEEE Regional Activities Department, and performs other duties assigned by the Chair.

The Treasurer develops a budget, accounts for all Network funds, keeps financial records, and submits a financial report to IEEE.

If you've ever gotten a referral from our Web site, or the printed Directory, or our email referral service, or a fellow LAACN member; if you've ever picked up a good technical or business tip at a Network meeting, or from this Newsletter; if you enjoy belonging to a group of professional colleagues who share your interests and problems - then please take a moment **now** to call Scott or Kip and at least discuss serving as an officer this year. The Network is a good thing. I think most of us are glad that it exists. But it doesn't run on auto-pilot. It **won't** exist unless people like you are willing to get involved. Thanks in advance, and I hope to see you on the ballot!

Welcome, David Chaney

Russ Walker, LAACN Secretary
<rewalker@ieee.org>

Please join me in welcoming our newest Network member, **David B. Chaney** <dave1985@earthlink.net>. David is President of Fiber Optic Communication Consultant Company of Moorpark, CA. He has been an IEEE Member for 11 years. He specializes in fiber optic communication design, consultation, testing and training, and does project management for LAN/WAN and Data/Voice/Video cabling projects.

Sample Agreement for Consultants Now Available from AICN

Bob Gauger, AICN Past Chair
<r.gauger@ieee.org>

It has taken more than a year to get concurrence, but the Alliance of Independent Consultants' Networks (AICN) now has a sample consulting agreement that has passed the scrutiny of IEEE's lawyers. You are invited to download it and modify it to fit your own needs. As always, it is recommended that you have your own attorney review. Or you can do as I do, know your client, insert some limits and take the risk. In either case, you have a carefully reviewed sample to start from.

You can find the new sample consulting agreement on the Consultants Web page at:

<<http://www.ieeeusa.org/business/aicn.menu.html#library>>.

New Rate Survey Data Released for Computer Consultants

Russ Walker, LAACN Secretary
<rewalker@ieee.org>

Setting your consulting rates is like certain other basic human activities: You may be sure you're getting enough, but you still wonder how much the next fellow is getting.

For those of us who work in the computer field, there is some new data to help answer that question. The January 2000 Real Rate Survey Report has just been released at <<http://www.realrates.com/rates.htm>>. The "Real Rates" Web site collects self-reported rate data from consultants and compiles a new survey report every six months.

According to the January 2000 report, the median rate for computer consultants contracting directly with clients is \$75 an hour. The +/- one standard deviation range is \$48 to \$97 per hour.

A Look Back at 1999, and Some Plans for 2000

Russ Walker <rewalker@ieee.org>

I think it's an immutable law of journalism physics that everything published around this time has to include a "look back/look ahead" article. Far be it from me to buck the trend. Here's a quick review of what we did last year in the Network, plus a sketch of some ideas that your Executive Committee members have tossed around for the future.

1999 was a fairly quiet year for our Network, largely because nearly everyone (including the members of the Executive Committee) seemed to have their heads buried in actual consulting work. Given the traditional "feast or famine" nature of our business, it's a fact of life that professional and referral-generating activities take a back seat when we're swamped with client requests. So we adopted a "minimally invasive" approach. Our major goals were to keep the organization alive at a relatively low level of activity, and keep up the Web-based Directory and email referral services that seem to be of greatest value to our members.

We did hold two successful meetings last year (both joint with Coastal L.A. Section). At the first, held in El Segundo, member Steve Maas spoke on making the transition from being an employed engineer to full-time consulting. At our second meeting, held on the Loyola Marymount University campus, Jeffrey Wike of Dreamworks SKG spoke on the role of software engineering in creating animated motion pictures.

The Network currently has 45 members including 9 new members who joined during 1999 or so far in 2000. This is still down slightly from our membership of 50 at the end of 1998, but we do seem to be back on a growth track once again.

As in 1999, we listed all our members in the national AICN Directory, and operated the local Directory on our Web site from the national database. The Web site and its Directory continue to

be successful referral generating tools. The Web site is currently averaging around 4,000 hits per month. (On a personal note, two major projects I was involved in during the last year came from clients who found my listing in the Web-based Directory, so I'm more sold than ever on the value of this tool.)

Our future plans are to continue to list all members in the national Directory; maintain and enhance our own Web-based Directory; and hold a few high-quality meetings with the meeting locations rotating to better serve our geographically dispersed membership. This is an area where we could really use some input, and some help, from everyone. If you think the Network meetings are always too far away, help arrange a meeting in your area! Suggestions for topics, speakers and meeting sites (or, ideally, all three together in a package) are needed, and greatly appreciated.

One point of view is that Consultants' Network meetings should have primarily a business orientation, leaving technical topics to the Sections. Another view is that there should be a balance between business and technical topics. Perhaps a good compromise is to include technical topics through joint meetings with the Sections, as we did last year. What do you think? Please let us know.

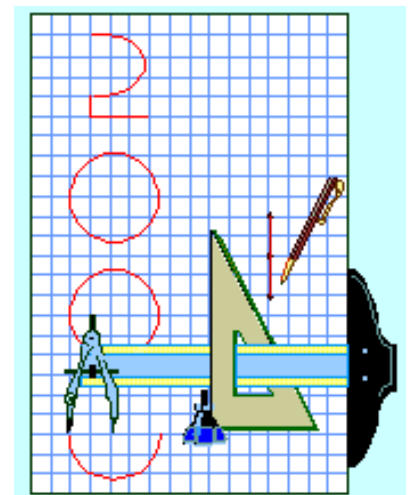
Another major area of focus we are discussing for the future, is doing a better job of promoting the benefits of using consultants. We are considering how to showcase the work products of consultants in our booth at this year's Wescon, and possibly at other forums. This may involve a video, slide show, and/or actual samples of products that our member consultants have helped create.

Please think about the projects you've been involved in lately, and the value that you added to them as a consultant. Can we put that "value added" on display through a picture, a video, a

working model or a product sample? Of course, we need the participation and support of our clients to do this. The goal would be to create something that is positive for both the consultant and the client, so it can be a "win-win" for all parties. For a client, it's an opportunity for free marketing exposure at Wescon and anywhere else that we use the display. This could be very valuable to some clients.

Let us know if you think this is a good idea, and whether you believe you could contribute something to such a display. Wescon 2000 is scheduled for September 19-21 in the Anaheim Convention Center - not that far away considering what will be involved in putting a quality display together, so we need to begin working on this now. While we always make a good, professional showing at Wescon, it would be a plus to have something more appealing and dynamic than stacks of literature to show in the booth.

Whatever we decide to do as a Network, there will be some interesting challenges ahead for the Executive Committee of 2000, and for all of us as consultants and members of LAACN. Have a great year.



Disciplined Software Consulting Updates Web Mini-Site

Russ Walker, LAACN Secretary
<rewalker@ieee.org>

LAACN members George Huling and Karen Owens, who do business as Disciplined Software Consulting, updated their Web "mini-site" last November. The updated site features a home page describing their philosophy, services and qualifications, and separate resume pages for George and Karen.

A "mini-site" like this one is simply an allocation of space on LAACN's Web server, where you can set up your own home page on the Internet. This is provided as a free service to any LAACN member. Although we call it a "mini-site", it's not really very "mini"; there's plenty of space for several pages of text and basic graphics.

Creating or updating a mini-site is fairly painless. You do need to know some basic HyperText Markup Language (HTML) to create your pages. The basics are easy to learn, and there are lots of free tutorials available on the Web (see accompanying article). If you don't want to learn HTML, you can create pages using a "What You See Is What You Get" (WYSIWG) software application like Microsoft FrontPage. (Recent versions of Microsoft Word can create simple Web pages, too.) Once you've created one or more pages, just email the HTML files to me. I'll upload your files to the LAACN server, and voila - you're on the Net!

To get an idea of what you can do, check out Disciplined Software Consulting's updated mini-site at <<http://www.laacn.org/firms/dsc/index.htm>>. You can also check out links to other member's Web sites at <<http://www.laacn.org/firms/index.htm>>. (If you have a Web site that's not on this list, please let me know and I'll add it immediately.)

If you already have a Web site, it's a good idea to keep it updated, as George and Karen have done. In fact, that reminds me - one of my New Year's Resolutions is to update my own site!

Time To Get Webbed! Why Every Consultant Should Be On the Net, and How To Get There

Russ Walker, LAACN Secretary <rewalker@ieee.org>

If you've been waiting to see if this Internet thing is just a fad before you set up your Web site, wait no longer. Here are some statistics that might convince you to take the plunge. These are from the report "Stat Central: E-commerce and the Internet" from <<http://www.techrepublic.com>>.

- 100 million adult Americans (more than half the adult population) use the Internet.
- 56% of U.S. companies will sell their products on-line in 2000.
- The worldwide business-to-consumer e-commerce market is estimated to reach \$31.2 billion in 1999 and explode to more than \$380 billion by 2003.
- In 1998, the number of e-mail messages sent in the U.S. was 9.4 billion each day—that's 3.4 trillion e-mail messages during the year compared with the 107 billion pieces of first-class mail sent in the U.S.

Most of the "industry outlook" articles I've read lately predict that the IT budget dollars spent on Y2K last year will go toward "e-business/e-commerce" initiatives this year, with much of the focus on "business-to-business" e-commerce. As technology consultants, "business-to-business" is *our* business. If our clients are on the Web, it seems logical that we should be, too.

A Web site serves as a very practical extension to all your other marketing efforts. Your Web site can offer several pages of detailed information on what you do, how you do it, and why you're the best consultant for the job. Granted, few potential clients are likely to stumble across your site while randomly Web-surfing. But you can put your site's address on your business cards; on your letterhead; as a tag-line at the

bottom of all your email messages; and in your LAACN and AICN Directory listings. Now everyone who comes in contact with any of these things is just a browse away from all your detailed information.

If you're convinced you should get on the Web, here are some suggestions for getting started. You probably already have at least an email account through an Internet Service Provider (ISP) like Mindspring, MSN or AOL. Most ISPs provide "personal" home pages at no extra charge, or for very low additional cost, that are perfectly adequate for a small consulting practice. Or you can use a free "mini-site" on LAACN's Web server to get started (see the accompanying article about Disciplined Software Consulting's recently updated mini-site).

You can create a basic Web site with several popular programs, including Microsoft FrontPage and Microsoft Word; or you can learn some simple HyperText Markup Language (HTML) commands and create your page "from scratch" with just a text editor like Windows Notepad. There are plenty of free HTML tutorials on the Web to help you get started. Here are a few of them:

- A Beginner's Guide to HTML <<http://www.ncsa.uiuc.edu/General/Internet/WWW/HTMLPrimer.html>>
- Bare Bones Guide to HTML <<http://werbach.com/barebones/>>
- HTML Crash Course <<http://www.w3-tech.com/crash/HTMLMenu.html>>

Like any other new technology, working with the Web can seem strange until you get used to it - then it quickly becomes just one more arrow in your consulting quiver. Take a few minutes to browse the Web sites of your fellow LAACN members at <<http://www.laacn.org/firms/index.htm>>; I'm sure you'll get some ideas for your own site. Now get Webbing!



In This Issue

Some "must-go-to" meetings are coming up over the next few weeks. First, learn how software engineers help bring animated movies to life at our joint meeting with Coastal Los Angeles Section on Monday, October 18 (p. 1). Next, the Region 6 Southern Area Fall Meeting, featuring the MicroMouse competition, will be held Saturday, October 30 (p. 3). Finally, on Monday, November 15, LACES presents an AIAA Distinguished Lecture on antimatter as an energy source (p. 4).

Ever wondered about the story behind LAACN? As suggested at our September meeting, we're starting a new series detailing the history of our organization. Chair Curtis Barrett kicks it off this month with his account of "1992, The Formative Year" (p. 2).

Maybe you've been thinking about getting your own domain name on the World Wide Web - www.you.com - but you think it's too complicated and expensive for a solo consultant. H. Clark Bell describes how to get your own address in cyberspace quickly, cheaply and easily in his article on "Domain Name Aliasing" (p. 4).

LAACN continues to grow! Meet our newest members, Francis X. Canning (HyperSparse Technologies) and Karna J. Wahlstrand (KarnaTech, Inc.) (p. 3).

Find out what's happening with www.laacn.org in our "Web Site Update" (p. 2).

If you didn't make it to our last meeting at The Lakes in El Segundo, at least find out what you missed - Stephen Maas's great talk, and a lively discussion afterward - by reading the September meeting report (p. 4).

CLAS/LAACN Joint Meeting to Highlight "Software Engineering for Animated Motion Pictures"

Leslie Haggerty, P.E. <l.haggerty@ieee.org>

On Monday, October 18, 1999, the IEEE Coastal Los Angeles Section will sponsor a joint meeting with the Los Angeles Area Consultants' Network (LAACN) and several other IEEE groups. Jeffrey Wike, Core Animation Software Lead at Dreamworks SKG, will speak on "Software Engineering for Animated Motion Pictures." The meeting will take place at Loyola Marymount University, Sullivan Hall, Macintosh Center. Socializing begins at 6:30 PM, with dinner at 7:00 PM and the meeting proper at 8:00 PM.

Jeffrey Wike from Dreamworks will present how animated movies are made from a software engineering perspective, including the following;

- What motivates finding a software solution to problems related to animation and the running of an animation studio;
- How requirements are generated;
- What kind of developers and engineers are needed;
- What experiences are relevant.

Mr. Wike will compare and contrast working in the Defense Industry vs. the Entertainment Industry. He will also discuss how technology has transformed the way traditional animated movies are made, and how tradition has driven the way technology is developed and utilized.

Jeffrey Wike is the Core Animation Software Lead at Dreamworks SKG. He is responsible for software development, maintenance and support at Dreamworks' Feature Animation Studio in Glendale, CA. His 20 years of experience developing software covers a wide variety of applications, working in government, commercial, aerospace and entertainment. His past employers include JPL and TRW. Mr. Wike has a BS in Engineering from the United States Military Academy, West Point, NY and a MS in Computer Engineering from the University of Southern California.

What:	Coastal Los Angeles Section joint meeting with Computer, LAC Chapter, Engineering Management/Education/Professional Communication, LAC Chapter, Los Angeles Area Consultants' Network, and Loyola Marymount Student Chapter
Who:	Jeffrey Wike, Core Animation Software Lead at Dreamworks SKG, "Software Engineering for Animated Motion Pictures"
When:	Monday, October 18, 1999 6:30 PM - social 7:00 PM - dinner 8:00 PM - program
Where:	Loyola Marymount University, Sullivan Hall, Macintosh Center. Ask the guard at the gate for directions. Parking is free. A map and directions to LMU are available at < http://www.laacn.org/members/map2lmu.htm >.
Details:	Dinner cost is \$12.00 Contact Leslie Haggerty (310) 679-2440, l.haggerty@ieee.org to RSVP. Mail checks to P.O. Box 637, Lawndale, CA 90260. Reservations for dinner must be made by 12:00 noon Wednesday, October 13.

The On-line Bulletin of the Los Angeles Area Consultants' Network

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LAACN History, Part 1: 1992, The Formative Year

Curtis Barrett, P.E., LAACN Chair <c.barrett@ieee.org>

In August of 1992, Bob Gauger held a meeting of about a dozen IEEE members. The subject of this meeting was to discuss the way of setting up a consultants' network in the Los Angeles area. Bob's association with PACE probably put him in contact with the then existing east coast networks. I believe that the first network was formed on Long Island, N. Y. in 1984. An additional impetus for a Los Angeles network was the IEEE's formation in January 1992 of the two-year charter of the Private Practitioners' Task Force (PPTF). I was not an attendee at this meeting. I found out about it by calling Bob Gauger after being referred to Bob by another consultant. I had been looking for some time for a consultants' association without success. Mr. Gauger informed me about the August meeting and said that the kick-off meeting would be in November at the Community Room of a park in Torrance.

In September, Bob Gauger held the kick-off meeting in the Community Room of the park in Torrance. Attendance was over 100. Visiting chairs from Long Island CN and New York CN were speakers. Another speaker was John Cosgrove, a consultant for over 20 years. There is one statement made by Mr. Cosgrove that I never forgot: a consultant needs visibility and one of the ways to get visibility was to volunteer for IEEE offices. After the speakers' presentations, elections were held for this new network. The name of the network was to be The IEEE Los Angeles Area Consultants' Network. The use of the word 'area' was necessitated by the fact that it covered the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Santa Barbara. Officers for 1993 elected:

- Chair Curtis W. Barrett
- Chair -Elect Gordon Osterhues
- Secretary Bernard Cooperstein
- Treasurer Harry Schauwecker

My election statement emphasized job finding assistance and expansion of the network. Towards the end of job finding assistance, a Network telephone number and a referral database of members was formed. Towards the end of Network expansion, Ed Carl of Orange County and I immediately formed Consultants' sub-Networks.

Additional volunteers were:

- Stephen Maas newsletter editor
- Curtis Barrett chair, Referral Data-Base Committee (RDBC)
- Tom Smith Network telephone facility and monitor RDBC
- James McGinn operator RDBC
- Mark deNess operator RDBC
- Alice Yu operator RDBC
- Curtis Barrett chair, San Fernando Valley Consultants' sub-Network
- Ed Carl chair, Orange County Consultants' sub-Network

This article is the first of a continuing series of articles about the history our Network. In the next issue, the year 1993 will be covered.

Web Site Update

Russ Walker., LAACN Secretary <rewalker@ieee.org>

Traffic on our Web site, <<http://www.laacn.org>>, continues to increase. From around 4,000 "hits" (information requests) per month earlier in the year, traffic grew to over 6,000 hits per month for September. The home page, the main search engine page, and the list of consultants' home pages are the most frequently requested pages.

The Bulletin Board for members, added earlier this year, is so far a bust. My messages are the only ones posted! Please give the Bulletin Board a try. If it doesn't meet your needs, then we'll put it in the "Seemed like a good idea at the time" column and try something else!

MicroMice to Run Mazes at Region 6 Southern Area Fall Meeting and Student Competitions

Kip Haggerty, Ph.D., P.E., Region 6 Southern Area Chair <k.haggerty@ieee.org>

The Fall Area Meeting is scheduled for Saturday, October 30, 1999 at Loyola Marymount University (LMU) in Westchester, CA. Our hosts are the LMU IEEE Student Branch and their Advisor, Dr. Tai-Wu Kao. The Area meetings provide an excellent opportunity to meet student members and watch the student competitions.

MicroMouse. The 1999 Fall Area Meeting features the MicroMouse competition, which is being enthusiastically restarted in the Area. About 5 or 6 new MicroMouse tracks have been purchased for Student Branches by their affiliated Section Student Activities Committees and a warm up demonstration and information meeting was held in August with over 30 students in attendance. We expect a fun-filled competition as the Student Branches put their autonomous computer-controlled maze-solving "mice" to the test.

Leadership Training. The fall meeting also features Student Leadership Training led by Dr. Fu Li, Region 6 Student Activities Chair. The training provides the students with leadership skills that are not learned in college courses, but are a necessity in the business world. The students will also have the opportunity to learn more about upcoming paper competitions. The prevailing wisdom that paper competitions are the realm

of straight A, 10 foot tall, super students is not true. More participants are actively being sought. Last spring, we only gave out one of the three available monetary prizes, because of a shortage of participants. Tell any students you know that this fall is the time to start thinking about how they might compete.

Area Business. The Region 6 Southern Area encompasses the territory of the seven Los Angeles Council member Sections and the Orange County Section which includes the Counties of San Luis Obispo, Kern, Inyo, Mono, Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside and Orange. It includes eight IEEE Sections, about 30 technical society Chapters, and about 20 Student Branches and Chapters ranging from Cal Poly San Luis Obispo in the north to UC, Irvine in the south. Twice per year, the Officers of the IEEE Sections, Chapters and Councils within the Southern Area meet together at the Area meeting to exchange ideas and to promote interaction between the Region, Sections, and Chapters. The local officers also have the opportunity to meet with the Region 6 officers to discuss any particular needs or concerns they may have. Each Chapter and Section is encouraged to send at least one of their officers to the meeting. IEEE Members interested in

volunteering for Chapters, Sections, LA Council, or a Conference are encouraged to attend.

Conference Involvement. Two issues will be featured at this Area meeting: Feedback on the Sections Congress and Conference Involvement Opportunities. Upcoming conferences of interest to the Sections and Chapters of the Southern Area include Wescon 2000 (September 19-21, 2000), Autotestcon 2000 (September 18-21, 2000), and a possible return of the IEEE Radar Conference to the South Bay in the early 2000's. Updated details and the draft Area meeting agenda are posted in the late breaking news area of the LA Council web site at <<http://www.ewh.ieee.org/r6/lac/bulletin/>>.

New Members Join at September Meeting

Russ Walker., LAACN Secretary
<rewalker@ieee.org>

LAACN is pleased to welcome our two newest members, who joined us at the September meeting.

Francis C. Canning, Ph.D.
<fcc@ieee.org> is an IEEE Fellow. His company, *HyperSparse Technologies*, is based in Newbury Park.

Karna J. Wahlstrand, Ph.D.
<karnaw@earthlink.net>, an IEEE Member, is CEO and Principal Scientist of *KarnaTech, Inc.*, headquartered in South Pasadena. KarnaTech specializes in scientific and engineering software and calculations for computer modeling and simulation contracts.

Please join me in welcoming these fellow consultants to LAACN.

What:	Region 6 Southern Area Spring Meeting and Student Competitions
Who:	Student Branch, Chapter, Section, Council and Conference Volunteers
When:	Saturday October 30, 1999 8:30 Continental Breakfast 9:00 Area Business 10:00 Student Leadership Training 11:00 Conference Involvement Opportunities 12:00 Lunch
Where:	On the LMU Campus (See < http://www.ewh.ieee.org/r6/lac/bulletin/ > for a map and directions)
Details:	Please RSVP by Tuesday October 26, 1999 to Kip Haggerty at Email: <k.haggerty@ieee.org>, Phone: (310) 679-2440, Fax: (310) 679-9667, or Mail to P.O. Box 637, Lawndale, CA 90260.

Domain Name Aliasing

H. Clark Bell, Ph.D., P.E., LAACN Vice Chair <h.c.bell@ieee.org>

By now, we've all taken advantage of IEEE email aliases (you have, haven't you?). This greatly simplifies things like business cards, stationery, etc. so that when you finally get fed up with your ISP and switch to another, you don't have to agonize over changing all of the paperwork.

My ISP is AT&T WorldNet, which provides 10 MB of personal web storage for each of up to six user names under their domain name. That's a lot more than I ever need for my consulting business, and it's cheap: I believe it's about \$20/month (I got a special at \$15/month awhile ago). Services from AT&T are constantly improving, and it is a very simple process to upload and edit web page files.

But what about having your own domain name for a URL? At first, this appears to be a much higher level of involvement with the Internet, requiring that you not only acquire the domain name, but also have your site hosted by a commercial provider. The provider costs are variable, depending on a wide variety of services and monthly data transfer (over which you have no control), and a lot of conditions and restrictions apply. And there's always the possibility of more hassle if the provider doesn't meet your expectations and you have to move the site elsewhere.

I'm sure there are lots of good reasons for using these hosting services, but they didn't seem to apply to me.

Fortunately, there is an easy way around all that, which I found when I looked into getting a domain name from Network Solutions. When a domain name is reserved through them, "dot com forwarding(TM)" is included by providing them a target URL. It works just like an alias: a browser accessing my domain name URL is transparently forwarded to my personal web site at AT&T.

The whole process of obtaining a domain name and implementing the forwarding takes just a few minutes on the Network Solutions web site. The target address can be anywhere else, even an LAACN "mini-site," as Russ Walker suggested, and is easily changed at any time through Network Solutions.

For more information on the service go to
<<http://www.networksolutions.com/services/>>

LAACN Meets in El Segundo to Discuss Becoming a Consultant

*Russ Walker., LAACN Secretary
<rewalker@ieee.org>*

On September 15, LAACN held a joint meeting with LA Coastal Section at The Lakes in El Segundo. The meeting was attended by 16 IEEE members and 2 guests.

Stephen Maas, Ph.D., LAACN member and President of Nonlinear Technologies, Inc., described how he had made the transition from corporate employee to independent consultant. Dr. Maas described his own experiences with launching and ramping up his consulting business, and provided tips for others considering a similar move. His slides are available in Adobe PDF format at <<http://www.nonlintec.com/laacn.pdf>>.

A lively Q&A session followed the talk.

LACES to Host AIAA Distinguished Lecture on Antimatter

*Harry L. Staubs, LACES President,
<Harry_L_Staub@lamg.com>*

The Los Angeles Council of Engineers and Scientists (LACES) will meet at Les Freres Taix Restaurant, 1911 Sunset Boulevard, Los Angeles, on Monday, November 15. Speaker V. E. "Bill" Haloulakos, a rocket propulsion science consultant and Associate Fellow of AIAA, will discuss "Antimatter: The Ultimate Energy Source." This talk is part of the Distinguished Lecture program of the American Institute of Aeronautics and Astronautics (AIAA).

V. E. "Bill" Haloulakos has spent 40 years in the aerospace industry, including 30 years with McDonnell Douglas and 7 years with Rocketdyne, involved with the design, testing and development of rocket engines, launch vehicles, spacecraft and aerospace systems. For the last 15 years he has worked in the areas of new, futuristic, and exotic propulsion systems, including nuclear fission, thermonuclear fusion and antimatter.

His presentation will cover the nature and origin of antimatter - how a "trivial" mathematical curiosity raised the question of the existence of antiparticles; properties of antimatter and its natural annihilation behavior with matter to generate energy; applications of antimatter in medicine, materials and propulsion; and methods of production, current status, and prospects for the future.

What:	LACES Meeting and AIAA Distinguished Lecture
Who:	V. E. "Bill" Haloulakos, Rocket Propulsion Science Consultant and Associate Fellow of AIAA, "Antimatter: The Ultimate Energy Source"
When:	Monday, November 15, 1999 (time TBA)
Where:	Les Freres Taix Restaurant, 1911 Sunset Boulevard, Los Angeles (one partial block east of Alvarado - to north).
Details:	Cost will be \$20. Contact Harry L. Staubs, LACES President <Harry_L_Staub@lamg.com> for more information or to RSVP.



In This Issue

Network Chair Curtis Barrett outlines plans for our next meeting, scheduled for September 22, and describes our new status as an IEEE Affinity Group (p. 1).

Find out about changes at the LAACN Web site, including a new Bulletin Board System to help our members stay in touch (p. 2).

Feeling low about the high cost of engineering software priced for Fortune 500 firms, not independents? Check out some cost-effective suggestions to load up your hard drive without emptying your bank account (p. 3).

Meet the latest additions to the LAACN family in our Welcome, New Members feature (p. 3).

Netday 2000 is a "pro bono" engineering project to wire our schools for the next century. See how one LAACN member helped to successfully implement this project at one Southern California school, in Curtis Barrett's "Free Engineering IV" column (p. 4).

Editor's Note: Yes, it's been a while (too long!) since the last issue of this newsletter. Like many of you, I've found myself with the bittersweet problem of being a bit overwhelmed lately in this "feast or famine" business we all share. I'll do my best to get future issues out on at least a bi-monthly basis. Assistance in any form (especially article submissions) is greatly appreciated as always. And if you've ever had a burning desire to be a newsletter editor... the "Help Wanted" sign is always in the window!

From the Chair: September Meeting Planned, and Our New Affinity Group Status

Curtis Barrett <c.barrett@ieee.org>

After I wrote the title, I realized "Ex Cathedra"? Not to worry, I won't be dogmatic about this. A supper meeting of our Network is being planned for Wednesday, 22 September 1999. It will be at The Lakes restaurant at 400 S. Sepulveda Blvd. The speakers will be John E. Lewis, Ph.D., and Stephen A. Maas, Ph.D. They will speak on "From Aerospace Engineer to Entrepreneur," with each describing the transition from being an aerospace engineer to forming his own company. The price of the meal is planned to be \$12.00 per person. **RESERVATIONS ARE IMPORTANT FOR ROOM-SIZE CONSIDERATIONS.**

Members may attend the meeting without being obliged to have supper. In order to accommodate our geographically diverse membership, I'd like to have the next meeting in Ventura County for example.

The consultants' networks of Northern New Jersey and Philadelphia have technical subjects at their meetings. I am of the opinion that consultants' meetings should have business related subjects. The technical societies of the IEEE cover technical subjects. I would like to hear from the membership what their thoughts are about this. You may email me at c.barrett@ieee.org.

Another bit of news is that as of 14 April 1999, the IEEE Los Angeles Area Consultants' Network is an Affinity Group within the IEEE. This puts our Network on somewhat of an equal footing with the technical societies. An Officer Confirmation form has been filled out and sent to IEEE Regional Activities in New Jersey. We will also have to file L-31 meeting reports. At present, I don't know if our Network will receive rebate funding from the IEEE since we are now integrated into their structure.

What:	Joint meeting of the LAACN and LA Coastal Section
Who:	John E. Lewis, Ph.D., and Stephen A. Maas, Ph.D.: ""From Aerospace Engineer to Entrepreneur.""
When:	Wednesday, September 22, 1999 <ul style="list-style-type: none"> • 6:00 PM - social • 6:30 PM - dinner (optional) • 7:15 PM - program
Where:	The Lakes restaurant, 400 S. Sepulveda Blvd., El Segundo
Details:	\$12.00 per person for dinner (optional). Please make reservations by contacting any of the following: <ul style="list-style-type: none"> • Curtis Barrett c.barrett@ieee.org (818) 887-0249 • Barry Todd b.todd@ieee.org (909) 735-1761 • Russ Walker rewalker@ieee.org (562) 497-1836

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LAACN Web Site Gets New BBS for Members, Continues to Draw Over 4,000 Hits Per Month

Russ Walker <rewalker@ieee.org>

Our Web site, www.laacn.org, now features a Bulletin Board System (BBS) that allows members to read, post and reply to messages in a variety of consulting-related topics. The laacn.org site as a whole currently attracts over 4,000 hits per month. The directory search engine and the list of consultants' home pages are the most popular items.

The new BBS was created for LAACN by member Leslie Haggerty <l.haggerty@hasys.com> (thanks, Leslie!). Members can read, post and reply to comments using just a regular Web browser - no special software is required.

I hope the BBS will serve as a "virtual water cooler" for us all -- a place where we can exchange ideas, ask and answer questions, or just "shoot the bull" with fellow consultants. As a solo practitioner for the last six years, I never miss the daily commute to the office, but I do sometimes miss the chance to get a cup of coffee and chat with co-workers. The LAACN BBS provides a way to stay connected even when we work alone. (BYOC - Bring Your Own Coffee!)

The BBS is currently configured to accept postings under these topics:

- Open Forum - For anything on your mind that doesn't seem to fit into the other topics.
- Engineering & Technical - For technical questions or discussions.
- Building the Practice - For sharing thoughts on finding and keeping clients, and generating business.
- The Consulting Biz - For talking about other business aspects of consulting, such as rates, contracts, insurance, taxes ... you name it.
- LAACN - For talking about this organization. Ideas, suggestions and feedback are appreciated.

These topics are just my own ideas to get things rolling. If you have suggestions for different topic areas, please post them! I plan to check the BBS regularly, see how things evolve, and reorganize the topic list if needed in the future.

The BBS will be exactly as useful, interesting and active as *we* all make it. Please stop in the next time you're on the Web, share your thoughts, and maybe respond to someone else's comments.

Please keep in mind when you post, however, that you are speaking in a public forum. There is currently no security system to restrict access to the BBS, so anyone on the Internet can potentially read your comments -- including past, current and future clients! So please keep things professional and non-defamatory.

Over the six-week period ending July 10, 1999, the entire laacn.org site averaged around 1,000 hits per week or just over 4,000 hits per month. While this is down from last year's high, I don't believe the decrease reflects an actual decline in traffic. Because we now run our directory searches off the IEEE-USA national database, retrievals of search results no longer count in our hit totals. In any case, the latest numbers indicate the Web site continues to serve as a great tool for communicating about LAACN and generating referrals for our members.

Besides adding the BBS, I recently did some general "dusting and cleaning" on the site, revising some links to allow for changes to IEEE's site and making other minor updates. I hope to be able to make further improvements in the near future. Please take a few minutes to visit the site, and let me know what you think!

The Cost of Engineering Software

Curtis Barrett <c.barrett@ieee.org>

As many LAACN members already know, the cost of engineering software is prohibitive especially for Schedule C filers. In my field of practice, RF and microwave engineering, there are software packages for under \$1,000. These are:

- Mathcad v.8
mathematics
www.mathsoft.com
- Electronics Workbench EDA v.5
circuit simulator
www.interactiv.com
- TESLA v.1.1
system simulator
www.tesoft.com

When we get into the multi-10k\$ software, there are some limited solutions. For those members with university connections, it is possible to get student editions. These editions have complete operating engines, but file size is restricted. However, the file sizes are generally large enough to gain familiarity with the software so that if one has a client where that software is applicable, it may be purchased or leased where such costs would be part of the contract.

Another solution is where software vendors make available their full product, again with restricted file size. One such that I recently picked up at the MTT's IMS 99 is:

- Sonnet Lite v.6.0b
3D planer EM
www.sonnetusa.com

I have not fully exercised Sonnet, but I'm hopeful that I'll find it very useful. I may report on this later. What I hope to accomplish with this article is to encourage members to look for other ways to get a lot for little or no bucks in software. Sort of what some of our clients try to do with us.

LAACN Welcomes New Members in 1999

Russ Walker <rewalker@ieee.org>

Several new members joined LAACN during the regrettably long gap since the last issue of this newsletter (mea culpa!). Here, in alphabetical order, is a quick rundown on those who have joined us so far in 1999:

Richard F. Alvarez
<rfalvarez@earthlink.net> is an IEEE Senior Member. His business, *Independent Electronic Consulting Services* in Redondo Beach, offers microwave, RF and analog design and analysis with advanced software; provides gain, IP and noise figure budget analysis of frequency converters and transceivers; creates test procedures and test fixtures; and does technical writing and proposals.

Ronald A. Emerling
<vocal@doitnow.com>, an IEEE Senior Member (Lifetime Member), is President of *VoCal* in Arcadia. VoCal's services include commercial (telecommunications) and military/aerospace concept-to-manufacturing product and system design, including digital/analog circuit design, embedded microprocessor design, hardware/software integration and programming.

Milford C. Horton
<mchassoc@msn.com>, an IEEE Senior Member, serves as President and Microwave Consultant at *MCH Associates* in Thousand Oaks. He is an expert in microwave and RF component design with thirty years hardware and software design experience. He has acted as an expert witness in major court cases and is adept at computer programming for special RF requirements.

Daniel J. Love P.E.
<info@danlove.com> is a Professional Engineer licensed in Electrical and Fire Protection, and a Life Fellow of IEEE. Through *LCR Consulting Engineers, P.A.*, based in Hacienda Heights, he helps clients

apply protective relays and devices to generation and distribution systems. He is active in the development of IEEE standards for industrial and commercial power systems, with over 30 published papers.

John P. Mahon Ph.D.
<mahon@pobox.com> is an IEEE Member, and the Principal Consultant for *Optim Microwave Inc.* in Thousand Oaks. He is an expert in rigorous electromagnetic analysis and the development and use of Method of Moment software to analyze and design antennas and related components. Experienced with both commercial and military designs, he contributes to proposals, studies and systems design.

James A. Oliver
<jaoliver@mindspring.com>, an IEEE Life Fellow, is President of *Jarsco Engineering Corp.*, based in Corona. Specializing in motors, generators, ASDs, electrical harmonics and power system stability, he works with electric utilities, natural gas pipelines, petroleum refineries, and wind and wave power generators. He also does failure analysis and testing, teaches short courses, is an expert witness, and works with IEEE and ANSI standards.

If there are any other members who joined LAACN for the first time in 1999 (or even late 1998), and have not previously been listed in this newsletter, please let me know so I can include you in a future issue.

In the meantime, please join me in extending a hearty welcome to all our new members. We're glad to have you as part of the Los Angeles Area Consultants' Network!

POSTSCRIPT: This item wouldn't be complete without adding a special (if a bit belated) welcome to John Redmond Haggerty, born March 9, 1999 to Kip and Leslie Haggerty!

Free Engineering IV

Curtis Barrett <c.barrett@ieee.org>

The project "Netday 2000" that I wrote about in an earlier edition of *The Engineering Independent* has been completed. This project was described in the March 1997 issue of the LA Council Bulletin. I coordinated a local application of this project at St. Bernardine of Sienna grade school.

Some of you may remember my previous "Free Engineering" series. It started when I had encountered several clients who wanted consultants to work on consignment. Netday 2000 is a worthwhile pro bono activity for consultants in that it helps schools throughout the country get wired for the Internet. Netday 2000's goal is to

put Category 5 cabling into 6 school rooms including junction boxes and the master panel.

The crew at St. Bernardine went all the way to hook up the computers to the Cat. 5 cable, train teachers, and start Internet use. The principal told me that she has all the proper security software to prevent the students from diverting to non-academic sites.

I will bring my Netday 2000 file folder to the September meeting for those who may be interested. The Netday Web site is <http://www.netday.org>.

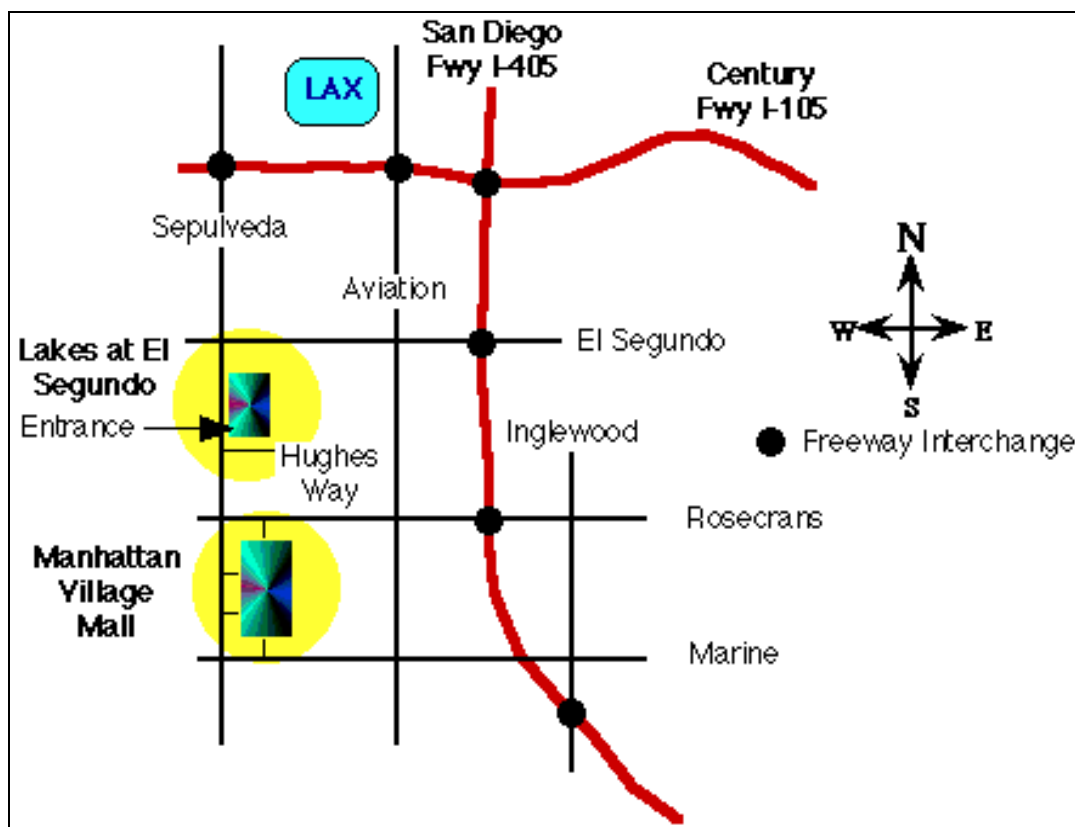
Free Web Mini-Sites

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Just a reminder: LAACN provides *free* space to members for your own Web "mini-site." This is a great way to get started with some visibility on the Internet for your consulting practice. If the mini-site works well for you, you might later "graduate" to your own, separate Web site; or you may find that just the mini-site is all you really need.

The latest member to set up a mini-site is Jalal Salihi. Check out his site at www.laacn.org/firms/salihi.

For an easy introduction to setting up a Web site, see Kip and Leslie Haggerty's tutorial at www.hasys.com/papers/web.html.



Directions to the September Meeting

The Lakes at El Segundo (the upper of the two locations shown) is at 400 S. Sepulveda Blvd., El Segundo, CA. It is on the east side of Sepulveda between El Segundo and Rosecrans (just north of Hughes Way).