

DISTINGUISHED LECTURER SERIES

IEEE Communications & Signal Processing Societies

Orange County Joint Chapter

Note: We were privileged and lucky in securing such a well known and expert lecturer as Bob Grow, Chair of the IEEE 802.3 Working Group and past Chair of the 10 Gigabit Ethernet Alliance and of its Technical Committee for our DISTINGUISHED LECTURER SERIES. This will be one of our most interesting talk this year. Please be sure to make a dinner reservation in advance so that you can avail yourself of the \$18.00 advance price. The 'at-the-door' price policy will be strictly adhered due to the hotel policies. Please make your reservations early since space at the hotel meeting room is limited.

Title: Ethernet (IEEE 802.3) - Current and Future Developments

Speaker: Robert Grow, Chair of the IEEE 802.3 Standard Working Group (Ethernet)

Date: Tuesday December 3rd, 2002

Time:

Social hour: 6:00 PM

Dinner 6:30 PM

Speaker 7:00 PM

Location: Wyndham Gardens Hotel, 3350 Avenue of the Arts, Costa Mesa, CA 714-751-5100

Costs:

Reservations needed for dinner

Dinner - IEEE members \$18.00 with advance reservations, \$23.00 at the door

Non-IEEE members: \$23.00 (advance) & \$28.00 at the door

Students with IDs \$5.00

Note: No charge for technical portion of the meeting only. Reservations are required for dinner. RSVP to: Dr. Peter Schultz at 310-378-6905 or email to: p.r.schultz@ieee.org or snail mail: 1204 Via Landeta, Palos Verdes Estates, CA 90274-1914

Talk outline: Ethernet is by far the most popular network connection. It continues to evolve to higher speeds, into new application areas and to drive new technologies. Almost all internet traffic travels over Ethernet, but there are still gaps in providing end-to-end Ethernet connectivity. New technologies are targeted to fill in those gaps and continue the evolution of Ethernet. The recently approved 10 Gigabit Ethernet standard will accelerate adoption of Ethernet in metropolitan and wide area networks. Work has also started to provide 10GbE over copper cables. The Ethernet in the First Mile project targets access network applications. This will allow Ethernet to be used in the LAN, MAN and WAN arena, as well as access to the home. We are fortunate to have Bob Grow in person describe these new developments, what's driving them and provide a glimpse of future developments.

Speaker's Short Bio: Bob Grow is one of the few authorities in the world on IEEE 802.3 (Ethernet). He's the Chair of the IEEE 802.3 Working Group He has also been Chair of the 10 Gigabit Ethernet Alliance and its Technical Committee. He has been involved in the development efforts of 802.3 since the days of 10 Mbps Ethernet. Bob is a recipient of the IEEE Standards Medallion for technical and leadership contributions to multiple LAN standards. He was one of the editors of the IEEE 802.3ae 10 Gigabit Ethernet standard, and 802.3z Gigabit Ethernet standard. He has worked in systems architecture and development for several technology companies, was a co-founder of XLNT, and since its acquisition has worked for Intel Corporation, where he is a Principal Architect in the Intel Communications Group CTO office.

MEET CONGRESSMAN ROHRBACHER!

WEDNESDAY, DECEMBER 18, 2002



Congressman Dana Rohrabacher has accepted an invitation from the Orange County AIAA Section to speak to us on Wednesday, December 18 at 6:00 PM at the Boeing Company Conference Center in Huntington Beach. Representative Rohrabacher is the Chairman of the Space and Aeronautics Subcommittee of the House Science Committee. He also serves on the Energy Subcommittee overseeing DOE research, EPA, and NOAA. He has just been reelected to his eighth term in the House. He will speak to us about Congressional aerospace oversight activities and perspectives, and he will answer audience questions.

Come join us for an informative and enlightening meeting! This is your opportunity for face-to-face discussion with a leader in Congress on aerospace activities!

Young Professionals and students are especially encouraged to attend.

We will have **FREE** pizza and sodas.

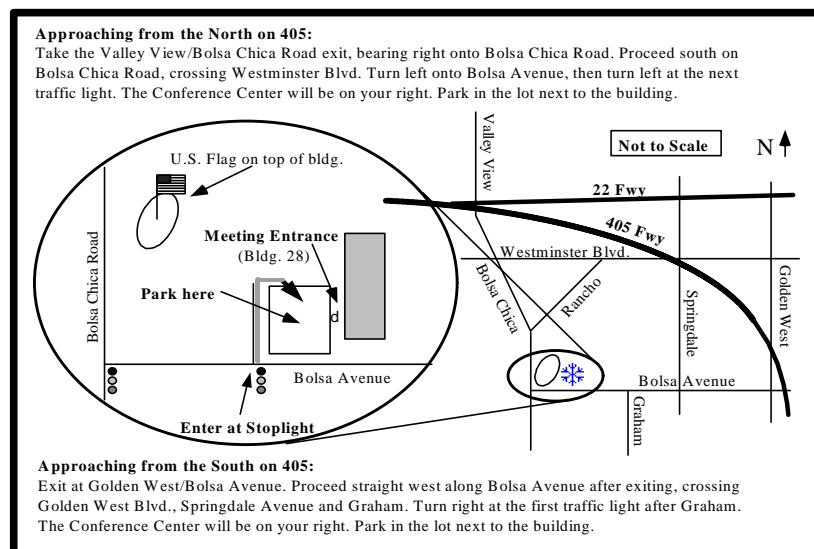
Place: Boeing Co. Conference Center, Bldg. 28, 5301 Bolsa Ave., Huntington Beach

Date: Wednesday, December 18, 2002

Time: 5:30 PM check-in, 6:00 PM program

Reservations are required: Call AIAA 1-800-683-2422 or email christinas@aiaa.org before 12/18 so we know how much food to order.

Come join us for this exceptional and important program!



Date: Thu, 14 Nov 2002 23:38:45 -0800 (PST)
Subject: Status of OCCN Meeting Schedules & Officer Elections

We are in the process of planning our next program. Since we held a joint meeting recently on October 28 and haven't yet completed our arrangements our next program, we will not hold our monthly at Cal State Fullerton on this Saturday, November 16.

We will arrange a program for a meeting either early in December or early in January. As always, any suggestions for topics for a program will be welcomed.

We also need volunteers to run for office in the OCCN Board for the term next year. The elected positions are Chairman, Vice-Chairman, Secretary, Treasurer and two "at-large" positions. The Chairman of the Election Committee will be named in the near future.

Comments invited.

Regards,

Peter R. Schultz
Chair, IEEE Orange County Consultants' Network



Enterprise Chapter of Los Angeles Section
*Mission: To Aid Small Aerospace Businesses and Consultants to
Network with Others and Present Capability to Clients*

Chapter Meeting: Tuesday November 5, 2002 at 6:00 pm
AIAA Western Office
2221 Rosecrans Avenue, Suite 227, El Segundo, CA

Speaker: Ron Oglevie,

**" STRATEGIES FOR WINNING GOVERNMENT CONTRACTS
AND MARKETING FOR SMALL BUSINESSES "**

Government contracts and grants are an attractive source of funding for some small emerging technology businesses. Formulating effective business capture strategies, marketing plans and business plans are frequently the Achilles heel of small businesses attempting to penetrate this marketplace. The primary focus of the presentation will be on marketing for very small technology businesses pursuing SBIR (Small Business Innovation Research) type contracts and grants. The presentation will address:

- How the government does business (and why)
- What a winning proposal contains
- What good marketing can provide and how it facilitates business capture

Ron Oglevie has spent the greater majority of his career in advanced programs and technology development work at North American/Rockwell. More recently he was responsible for developing the Government Contract business base for the Irvine Aerospace Systems Company which he founded. He has a 100% contract capture ratio on the last 7 technology proposals that he was responsible for, and contributed to the success of many larger system contracts. He has given more than 25 technical paper presentations and over 12 seminars on "Successful SBIR Business Development". He is a strong advocate of using government funding for technology business development.

Agenda

1. **Dinner and Networking**
2. **Presentation by Ron Oglevie**
3. **Discussion of New Business Opportunities Led by:**
Guido Frassinelli – Co-Chair
Richard Denison – Co-Chair

To attend RSVP by November 4

Contact:

Christina Stattman
AIAA Western Office
Southern California Section Liaison
(310) 643-7517
christinas@aiaa.org

Attendance fee is \$10 including food

JOINT MEETING ANNOUNCEMENT: OF THE IEEE ORANGE COUNTY COMPUTER SOCIETY AND THE O.C. & L.A. AREA CONSULTANTS' NETWORKS

"The American Dream Lives: From Programmer to Bank Founder"

Date: Monday, Oct 28, 2002

Topic: CREATING A SUCCESSFUL SOFTWARE COMPANY

Speaker: Michael McCafferty, Entrepreneur

Time:

Social Hour: 6:00 p.m.

Dinner: 6:30 p.m.

Speaker: 7:00 p.m.

Location: Wyndham Gardens Hotel

3350 Avenue of the Arts

Costa Mesa, CA

(714) 751-5100

Cost: Dinner - \$25.00

Students and unemployed members \$10.00

Note: You must RSVP for dinner -- No charge for technical meeting only

RSVP: by email to artl@geotestinc.com

Information: Contact Art Larsen at artl@geotestinc.com

(or phone 1-949-263-2222), or, Pete Schultz at P.R.Schultz@ieee.org (310-378-6905)

ABSTRACT: Michael McCafferty lives the American dream. With no venture capital, no dotcom, no lottery, but honest hard work, he took his one-man consulting business into the international limelight in 7 short years, successfully selling his new software company for more than \$10,000,000. Mikie, as he is known to his friends, has since circumnavigated the globe, founded a bank, and appeared in upscale magazines. He is now writing a book documenting his open-cockpit biplane flights across the USA and Europe, and is a business advisor for high-tech start-ups.

Michael is living proof that you can get there from here - The American Dream is real and attainable.

How did he do this? You can ask him yourself. Michael McCafferty will tell his story, share his strategy, and divulge his tricks of the trade with you at the joint session of the IEEE-OC Computer Society, and, Consultants Networks.

Mr. McCafferty will entertain a question and answer session following the presentation.

BIOGRAPHY: Michael McCafferty received his BS in Accounting/Economics from Mount St. Mary's College. Upon graduation, he accepted a position at IBM where he honed his sales and marketing skills. Michael came to San Diego in 1979 to experiment with a novel business concept - an electronic Yellow Pages - years ahead of its time. Taming his vision, Michael saw and met a need in his and his client's daily business dealings, he invented TeleMagic, the automated business management tool. He subsequently founded Remote Control International, as the corporate vehicle for TeleMagic.

He is a founder of Landmark National Bank and the Chairman of its Technology Committee. He is a member of the Aircraft Owners and Pilots Association, the National Biplane Association, the Ferrari Owners Club, and the Sierra Club. His exploits (and his toys) have appeared in various magazines, including Aviation and Business Journal, Pilot Magazine, Private Pilot Magazine, Vette Magazine, and Pilota Magazine, as well as in a number of books, including "The Greatest Sales Stories Ever Told: From the World's Best Salespeople". He is currently providing consulting services as an "Advisor to Entrepreneurs". For more information about Michael and his business services, see his website at: www.MichaelMcCafferty.com.



Enterprise Chapter of Los Angeles Section
*Mission: To Aid Small Aerospace Businesses and Consultants to
Network with Others and Present Capability to Clients*

Chapter Meeting: Tuesday October 8, 2002 at 6:00 pm
Location: Microcosm, Inc
401 Coral Circle, El Segundo, CA 90245
map at www.smad.com

Speaker: Dr. James R. Wertz,
Founder and President of Microcosm, Inc.

**" Starting and Building a Small Aerospace Business:
A Practical Guide "**

Jim and Alice Wertz started Microcosm as a 1.5-person company in 1984. It has grown over time to a 50-person company doing space mission engineering, hardware and software development, and development of a low-cost launch vehicle family. Jim will briefly describe Microcosm and provide a set of practical guidelines and suggestions for starting and building a small aerospace business. The meeting will include a tour of the Microcosm facility, question and answer period, and time for networking. Come talk to Jim and Alice and bring your spouse and copies of your corporate brochure, resume, or business concept.

Agenda

- 1. Dinner and Networking**
- 2. Presentation by Dr. Wertz**
- 3. Tour of Microcosm**
- 4. Discussion of New Business Opportunities Led by:**
Guido Frassinelli – Co-Chair
Richard Denison – Co-Chair

To attend RSVP by October 7

Contact:

Christina Stattman
AIAA Western Office
Southern California Section Liaison
(310) 643-7517
christinas@aiaa.org

Attendance fee is \$10 including food

DINNER MEETING OF THE IEEE ORANGE COUNTY & LOS ANGELES AREA CONSULTANTS' NETWORKS (OCCN & LAACN), THE IEEE ORANGE COUNTY COMPUTER SOCIETY (OCCS) & THE ASME SMALL BUSINESS GROUP

Program Subject: Overview of Product Lifecycle Management (PLM)

Speaker: Dr. John R. Horgan, IBM

When: Thursday evening, September 19, 2002. Networking & Social: 6:00pm.

Dinner: 6:30pm. Program: 7:15pm - 9:00pm.

Where: The dinner and program will be held at a new venue for the OCCS, OCCN and LAACN- the SEED Institute Facilities in Costa Mesa. Note that this is not the same meeting place that either the OCCS or OCCN have previously used for meetings.

The SEED Institute is located at 1040 W. 17th St, Costa Mesa, 92627.

To get there proceed toward the intersection of the #405 and #55 freeways. Take the #55 freeway southwest toward Newport Beach approximately 3 miles to the end of the #55 freeway. Continue straight onto Newport Beach Blvd. and proceed approximately 0.7 miles to 17th St. Turn right on 17th Street and proceed approx. 1.1 miles to the end. Turn right at the last driveway to the second building. The SEED Institute is co-located with the Victor-E Institute.

Cost: Dinner and Program - \$12. Program only - free. Please RSVP for dinner by September 17.

Contact: Ron Oglevie- phone 714-526-6642, e-mail - roglevie@aol.com, Art Larsen by e-mail at ArtL@geotestinc.com or Pete Schultz - phone 310-378-6905, e-mail - p.r.schultz@ieee.org.

PROGRAM ABSTRACT: In recent years there have been many notable and well-publicized developments in the use of network and internet technologies for conducting business and managing collaborative efforts among teams of diverse workers in separate locations. Among the more significant are some developments in supply chain management, product development, and enterprise process integration. Such applications are referred to as Product Lifecycle Management (PLM). PLM is widely used in the aerospace, automotive, electronics, consumer goods, shipbuilding, electrical equipment, industrial machinery and construction industries. Since the large companies are using PLM for their supply chain management process, it is only a matter of time before smaller companies and consultants will also need to use these tools in their work.

This presentation will explain how this \$4B+ industry helps end users reduce cost, accelerate time-to-market and foster innovation by supporting the collaborative creation, management, and dissemination of product definition information across the extended enterprise. The presentation will answer the questions: What is PLM?, What are the benefits of PLM?, What are the components of PLM?, Who are the players in this marketplace? and How does PLM relate to other technologies: Supply Chain Management (SCM), Customer Relationship Management (CRM) and Enterprise Resource Planning (ERP)?

BACKGROUND OF SPEAKER: Dr. John R. Horgan is A Senior PLM Consultant with IBM. He has 20 years of experience in the PLM area. Before joining IBM, he was VP of Sales and Marketing at MICROCADAM and held several marketing position at CADAM, INC. Before that he was cofounder of Aries Technologies, a pioneering CAE company and also Director of Mechanical CAD at Applicon.

Subject: New OCCN Registration Procedure and Dues Structure: July 13, 2002.
Date: Wed, 17 Jul 2002 23:53:04 -0700

OCCN & LAACN Members:

At present and for the foreseeable future the OCCN is in a sound financial condition. We will all benefit if the job of tracking the membership status can be simplified. Since the time for renewal of the AICN registration is near for many OCCN members, now is the best and most convenient time to revise our registration procedures and dues. For these reasons the OCCN Board approved the dues structure and registration procedures given below on July 13, 2002. Therefore we will implement the following procedures for OCCN effective immediately.

Members of the OCCN will register with the AICN consultants database online at the AICN website <http://www.ieeeusa.org/business/consultants/submissions/>. During the online registration process they should choose the OCCN in the option to choose a network at the above web site. There they can also choose to affiliate with other networks if they desire to do so. Those who register or renew online and choose the OCCN will be members of the OCCN. In order to ensure coordination of the registration process, we suggest that those who choose the OCCN notify the OCCN Secretary-Treasurer or Chair by e-mail.

The membership fees for registering online will be \$75 for IEEE members and \$99 for those who are not IEEE members. These registration fees can be paid either by check or credit card directly to the IEEE. The OCCN will monitor the AICN database to determine the status of members. With this new procedure, the former process of a member sending a check to the OCCN and then the OCCN sending a check to the IEEE will not be used.

With our current financial status additional dues from members beyond the AICN registration fees are not needed for OCCN operations. Resources are currently available for reasonable start-up costs for anticipated OCCN-sponsored events such as workshops. In the event that additional resources are needed in the future, additional optional dues and/or assessments for access to special OCCN activities could be levied. Such additional dues would require approval of the OCCN Board. The rebates from the IEEE to affiliated CN's will provide some additional resources for the OCCN.

For some OCCN members the renewal of the AICN registration may not coincide with the renewal of their OCCN membership. For such situations where a member has paid the OCCN by check and has OCCN membership time remaining after the AICN renewal is due, the OCCN will provide a reimbursement for the prorated amount of the unused membership fees. The Secretary-Treasurer of OCCN will handle the reimbursements.

Since the Associate Members of the OCCN do not register with the AICN, they will be unaffected by this new procedure. They will continue to pay their annual \$35 membership fees and supply their registration data to the Secretary and Treasurer as before.

Please contact me or any other OCCN Board Member regarding questions about the new registration procedure and dues structure.

Peter R. Schultz,
Chairman, Orange County IEEE Consultants' Network

**JOINT MEETING ANNOUNCEMENT –
ORANGE COUNTY AND THE LOS ANGELES AREA CONSULTANTS' NETWORKS**

Topic: “WEB SITE DEVELOPMENT” – For Small Businesses and Consultants, an IT Perspective
Speaker: Mr. David V. Wells, Softwerks
When: Saturday, July 13, 02
9:30 a.m. – Networking
10:00 a.m. – “Web Site Development” Presentation
11:30 a.m. – CN Announcements
12:00 a.m. – Lunch at the Off-Campus Sports Pub
1:30 p.m. – CN Board Meeting
Where: Cal State Fullerton, Engineering Building, Room 321, see www.occn.org for campus map and directions, free parking on Saturday
Cost: Free, interested parties invited
Contact: Pete Schultz, 310-378-6905, p.r.schultz@ieee.org

Abstract:

In recent months our speakers have addressed marketing and how small businesses can make good use of modern day Internet resources. This month we will extend this background and explore more of the “how-to” of web site development. Our speaker, Mr. David Wells, will address the subject from the perspective of a software development specialist and will include the understanding of:

- **Web technologies,**
- **Basic design, and,**
- **The development process.**

The presentation is designed to answer the questions of our consultant and small business members including how to do it yourself and using professional assistance.

Biography:

Mr. Wells is the CEO of **SoftWerks** – the Internet Systems Development Company (see www.softw.com.) His expertise is in building enterprise level web applications. He has been involved in all facets of large scale web sites from the hardware sizing to application design and development, to stress testing using development life-cycle methodologies and software configuration management. He is the President of both the Orange County Internet User Group, and, the Orange County Exchange User Group.

**Joint Meeting of IEEE Computer Society Orange County Chapter & IEEE
Orange County Consultants' Network**

July 22, 2002

Topic: Engineering Microscopic Machines -- the Next Wave of Engineering Ingenuity
Speaker: Andrei M. Shkel, Director, UCI Micro-Systems Laboratory
Time: Social Hour: 6:00 p.m., Dinner: 6:30 p.m; Speaker 7:00 p.m.
Location: Wyndham Gardens Hotel, 3350 Avenue of the Arts, Costa Mesa, CA. Phone 714-751-5100
Cost: Dinner - \$25.00. Students and unemployed members \$5.00. No charge for technical meeting only.
RSVP: by email to kenfaris@ieee.org
Contact: Art Larsen at artl@geotestinc.com or Pete Schultz at p.r.schultz@ieee.org if you have any questions.

ABSTRACT:

You may have heard of them: tiny machines that will transform our lives. Dr. Andrei Shkel of the University of California, Irvine will help you to navigate this cutting-edge technology, by introducing you to the development of the next generation engineering devices -- nail-size electro-mechanical systems that one day will be able to think, act, sense, and communicate. The size of these machines is measured in microns -- a fraction of the width of a human hair. They are collectively called Micro Electro Mechanical Systems or MEMS and many industry experts believe that MEMS technology is the next logical step in the microelectronics revolution and that MEMS developments and production may very well become the semiconductor industry of the new millennium. Just as the need to increase computing power on a silicon chip of Pentium processor, MEMS technology supplies electronic systems with a much needed window to the physical world, permitting them to sense and control light, motion, sound, heat, and other physical phenomena. These opportunities have now begun to inspire the engineering community to create products that are better, smaller, cheaper, and smarter than they were before.

This presentation will introduce the MEMS technology, highlight Dr. Shkel's research and educational efforts, and describe three emerging technologies that are currently under development in the Micro Systems Laboratory -- high-performance inertial MEMS, precision MEMS for telecommunication applications, and MEMS-based high-density data storage devices. Dr. Shkel will also discuss exciting opportunities of this technology as well as educational and research challenges that need to be overcome.

BIOGRAPHY:

Dr. Andrei M. Shkel is an assistant professor in the Department of Mechanical & Aerospace Engineering/Electrical & Computer Engineering/Biomedical Engineering at the University of California, Irvine. He is also the Director of the UCI Micro-Systems Laboratory. Dr. Shkel's research interests are in Design, Fabrication, Packaging, and Advanced Control of Integrated Microelectromechanical Systems (MEMS) for Bio-medical, Communication, and Inertial Applications. He served as a reviewer for more than a dozen major journals and international conferences in these areas, published over 40 papers in archival journals and international conferences, and organized/co-organized several tutorials on MEMS technology and sensors-related symposia, conferences, and special conference sessions. Dr. Shkel is a member of the Administrative Committee of the IEEE Sensors Council and an associate member of the IEEE, ASME, and SPIE.

MAKING THE CONNECTION: The Art of Effectively

Selling to Your Market, Online & Offline

A joint dinner meeting of the ASME Small Business Group, the AIAA Enterprise Network, and the OC & LA Area Consultants' Networks

WHEN: Wednesday, 19 June, 2002. Networking 6:00pm; Dinner 6:45pm; Program 7:30pm.

WHERE: Nat's Restaurant, Hawthorne Airport Terminal, 12101 Crenshaw Blvd, Hawthorne, CA (1/4th mile south of #105 freeway)

RSVP: By Monday, 17 June, to assure buffet dinner. RSVP to Pete Schultz at P.R.Schultz@ieee.org or 310-378-6905, or the AIAA reservation line at olam@aiaa.org or 800-683-2422.

COST: Dinner and Program \$15, Program Only/No Dinner \$8, Students \$7.

PROGRAM DESCRIPTION: The purpose of this presentation is to show proven techniques to utilize the Internet to effectively and efficiently complement your offline marketing methods for:

- A positive impact on your company's bottom line, and,
- Creating a win-win relationship between you and your customers.

To accomplish this professional marketer Pete Nelson will show you, using examples from his extensive sales training and business development experience, how to effectively and efficiently use the Internet to discover the following:

- Cost-effective online solutions that will enhance sales,
- Four questions every business owner must ask before going online,
- The value & benefit of your business having an online presence,
- Communicate effectively with your customers through technology, and,
- Developing the right business model online.

The Benefits...

- Increase your company's revenue,
- Create a higher visibility for you and your business, and,
- Forge iron-clad relationships that stand the test of time.

THE SPEAKER:

Mr. Pete Nelson is the CEO of Valeo Communications, (www.valeocommunications.com), a professional development and sales training firm based in Los Angeles. A professional speaker and sales expert, Pete delivers dynamic programs along with consulting in the areas of sales, relationship building, public speaking, peak performance and strategic alliances for organizations and companies of all sizes.

Prior to overseeing Valeo Communications he held senior management positions with start-ups and Fortune 1000 companies, such as EarthLink, the second largest Internet Service Provider in the world. At EarthLink, Pete was in charge of strategic partnerships for the company's business division. In addition to orchestrating many of EarthLink's major partnerships, he also served as a guest host for a nationally syndicated radio talk show where he developed a series on how to strategically leverage the Internet to grow and enhance a business.

In his continuing effort to help the small business community grow and prosper, Pete also serves on the board of directors and board of advisors for many prominent organizations. These include the Pasadena Enterprise Center (PEC), which is one of the country's leading small business incubators, the Small Business Development Corporation (SBDC), and the e-Business advisory board for the College of Communications at Cal State Fullerton. Pete can be reached at pete@valeocommunications.com.

“RELIABILITY METHODS FOR ENGINEERING AND BUSINESS APPLICATIONS”

**A JOINT MEETING OF THE ASME SMALL BUSINESS GROUP, AND,
THE IEEE ORANGE COUNTY AND L. A. AREA CONSULTANTS' NETWORKS**

Everyone expects engineers to design and deliver reliable systems and products. Experienced engineers *implicitly* incorporate reliability considerations into their designs. But what level of reliability should you design for? Meeting a customer's expectations in the most cost-effective way is a major challenge. For those tasks that require more in-depth reliability engineering, will contact with specialists aid you in meeting those objectives?

An eminently qualified reliability specialist, Mr. Bob Gauger, will address these questions by 1) providing reliability design guidelines for do-it-yourself designers, 2) describing new electronic tools and their historical foundations, and 3) presenting case studies from his experience that use these design guidelines and tools. The case studies will cover a spectrum of applications ranging from microelectronics to power generating stations. Mr. Gauger will provide reliability data sources, as well as serve as a point of contact with the reliability community.

Date: Thursday, May 9, 2002

Place: Steven's Steak & Seafood House
5332 Stevens Place
(Santa Ana Freeway at Atlantic Blvd.)
Commerce, CA 90040
323-728-9856 or <http://www.stevenssteakhouse.com>

Program: 6:00-7:00 PM Social
7:00-8:00 PM dinner
8:00-9:00 PM Program

Cost: \$20/person \$10/students

RSVP: For reservations or information contact:
Ron Oglevie at 714-526-6642 , ronoglevie@aol.com, or
Tosh Fujita at 818-354-8700, toshio.fujita@jpl.nasa.gov

Mr. Gauger's dedication to reliability started in the 1950's, when it was realized how serious the failure of military electronic systems had been in World War II. Since that time, his concern for reliability, availability, and maintainability (RAM) has grown and has been directed toward avionic systems, chemical and process systems, mechanical systems, power plants, wastewater treatment plants, telecommunication systems, and any area where failures represent a high risk or a major expense. In the past, he chaired the IEEE Power Engineering Society/Industrial Applications Society, the Los Angeles Area Consultants Network, and the Alliance of IEEE USA Consultants Networks. He is currently a member of the Administrative Committee for the IEEE Reliability Society.

Del Mar Electronics Show Consultants Network Programs

Wed 1pm: Getting the Best From Consultants

Program Description: A special need that is short term at a company can be met with least expense by hiring an expert consultant

Speaker: Vytas Pazemenas ~ THE AUBREY GROUUP

About this Speaker: Vytas Pazemenas has been a consultant and now is President of the Aubrey Grop that hires consultants, so he has extensive knowledge of both company and consultants perspectives.

Duration of Session: 1 Hour(s)

E-Mail this Speaker with pre-talk questions or suggestions: vytasp@aubreygroup.com

Wed 2pm: The Use of Technical Consultants in Legal Matters

Program Description: Many legal processes have the need for special technical knowledge. Clark Bell has been active in Expert Witness and other legal issues and can outline when this information is needed, how to present the data needed and where to connect to the right people.

Speaker: Dr. H. Clark Bell, Ph.D., P.E. ~ HF PLUS

About this Speaker: H. Clark Bell is a Consulting Engineer with over thirty years of RF and microwave design as well as legal support experience. He is a UCLA graduate, a Registered Electrical Engineer in California and a Fellow of the IEEE.

Duration of Session: 1 Hour(s)

E-Mail this Speaker with pre-talk questions or suggestions: h.c.bell@ieee.org

Wed 3pm: Using Intermediate Agencies to Get The Consulting Help You Need.

Program Description: Helping companies obtain services from Consultants through staffing agencies. This will include a description of the climate in many companies for staffing by either hiring a consultant or obtaining his services through an agency that handles administration, taxes, etc. The least expensive approach for a company depends on what they need and on past experience with consultants and the IRS.

Speaker: Frank J. Creede ~ LOGIC INNOVATIONS, INC. + STAFFING INNOVATIONS

About this Speaker: Founder and President of Logic Innovations, Inc. and Partner, Staffing Innovations, a temporary placement agency for hardware and software engineers.

Duration of Session: 1 Hour(s)

E-Mail this Speaker with pre-talk questions or suggestions: fcreede@logici.com

Thurs 10am: Introduction to Consulting as an Alternative

Program Description: Companies have less loyalties than they did years ago. You need to plan your own course, keep your skills sharp and be flexible, with a "Plan B" in case you suddenly need a job.

Speaker: Dr. Gary Blank ~ DR. GARY BLANK, P. E.

About this Speaker: Immediate Past Chair, Alliance of IEEE Consulting Networks Coordinating Committee. Dr. Blank has been a consultant in Illinois for many years, lived in LA before that, and has a wealth of knowledge for both new and experienced consultants.

Duration of Session: 1 Hour(s)

E-Mail this Speaker with pre-talk questions or suggestions: g.l.blank@ieee.org

Del Mar Electronics Show Consultants Network Programs

Thurs 11am: Teaming Up for Business Support Services

Program Description: How to get Business Services for Business Owners and Consultants, what to look for and alternatives for reaching your business and personal goals. Coordinating the support functions can take a lot of time and effort and this coordinated team might help.

Speaker: Mike Pilolla ~ TRILOGY FINANCIAL SERVICES, INC.

About this Speaker: Mike Pilolla, Senior Investment Executive, and a team of three other specialists: Nancy Sellers, Taxes; Mark Lewis, Estate issues; and Scott Harrison, Business/Retirement Plans.

Duration of Session: 1 Hour(s)

E-Mail this Speaker with pre-talk questions or suggestions: mike.pilolla@natplan.com

Thurs 1pm: Making an Effective Web Site That Draws Traffic

Program Description: Any serious consultant or small company has at least one web site. But how can you make it pull in lots of viewers and connect to serious buyers? And how can you tell how effective it is? Practical answers you can make use of right away is provided.

Speaker: Dr. Alan Jack Herr ~ MICROINDUSTRIE INC.

About this Speaker: Dr. Alan Jack Herr is an RF Engineering Consultant with over thirty years of RF and microwave design experience. His BS and MS degrees are from NDSU and his Ph.D. degree is from OSU. He is also a licensed amateur radio operator.

Duration of Session: 1 Hour(s)

E-Mail this Speaker with pre-talk questions or suggestions: ajherr@microindustrie.com

Thurs 2pm: How to Set The Right Price for Your Consulting Services

Program Description: Knowing what other people charge for their level of experience helps you set a price that your customers can see is fair. Recent salary survey data will be presented so you can compare your experience level with others and see the range of prices for that experience.

Speaker: Robert H Gauger, P.E. ~ ROBERT H GAUGER, P.E.

About this Speaker: Bob Gauger has founded many Consulting Networks around the country and is past Chair of the Alliance of IEEE Consulting Networks Coordinating Committee and past Chair of the Los Angeles Area Consulting Network. He is a Reliability Consultant and has had world-wide assignments.

Duration of Session: 1 Hour(s)

E-Mail this Speaker with pre-talk questions or suggestions: r.gauger@ieee.org

Editorial, by Robert Poltz

I've been asked previously to discuss PATCA as a model for the IEEE CNs in Los Angeles and Orange Counties, and while met with initial enthusiasm, the Board of Directors considered, but did not implement these ideas, citing cost and contentment with status quo. Since I was asked to extol its virtues by several Board members, I have to believe that there is an interest in expanding the coverage and member base, that only a re-designed IEEE CN can accomplish. We are simply not reaching the potential client base that all consultants need to succeed in business. This is a universal problem in consulting, regardless of region, expertise or market served. It is up to the membership of IEEE CNs to voice their opinion as to whether they want improvements in services and benefits designed for Consultants.

Here is a description of PATCA, the Professional And Technical Consultants Association.

PATCA has been around for quite a few years and is located in the Bay Area of California, formed in 1975, with a current membership of over 250 members. Some of the benefits offered are:

- Directory of Consultants, cross-indexed by name/business, and consulting skills
- Internet Website with searchable Consultants Directory
- Referral Service with email notification
- Quarterly News Journal
- Monthly Meeting with speakers on subjects important to Consultants of all disciplines
- Insurance discounts
- Educational seminars and workshops
- Kick-start program for new and existing consultants
- Mentor Program
- Government Affairs Lobbying

PATCA is organized as a non-profit and can be found on the web at www.patca.org

What distinguishes PATCA from IEEE CNs is the depth and breadth of activities presented to its member base on a regular monthly basis. Because it is staffed full-time by a management company that services the membership and clients, primarily in Silicon Valley, there is always someone available to answer questions and service member needs. This is a paid staff and not volunteers as is the case with IEEE CNs.

It's membership spans outside the Bay Area, too. I am a full-member Consultant of PATCA, although I reside in Los Angeles. In these modern times of cyberspace it is not uncommon to perform under a contract with regionally distant companies using the internet email to accomplish most tasks. Since September 11th, many companies are finding that more and more attractive.

From my perspective, the Directory listing and web presence, plus the email referral notification are major assets to a serious Consultant, desiring success. It's all well and good for those IEEE CN Consultants who are well-established, but what of the new consultant desiring to learn the business. The IEEE CNs do not have a mentoring program for new consultants or even established consultants desiring to learn more about conducting business.

PATCA provides a diverse membership not constrained to only one discipline or specialty, whereas IEEE CNs are, by design, made up of Electrical and Electronic Engineers, as the name states, making for interesting meetings. PATCA members are more entrepreneurial by and large, since they are all small businesses, as well as consultants.

So what is the downside of PATCA membership or constructing the CNs to be like PATCA?

First, and foremost, it costs more to belong. Full membership now costs \$395.00 a year.

Next, it is regionally centric to the Bay Area, but membership is enjoyed across the continental USA. There are many members of PATCA that also belong to an IEEE CN, as do I.

PATCA Consultants provide services, primarily to smaller businesses, although some work with large corporations like Motorola and Cisco.

Lastly, PATCA is expanding and revising its web pages for member services, and reaches a broader base of clientele than does IEEE CNs, largely because of its years in service and marketing effectiveness.

Below is a sample of the "Friday Update" sent via email to all its members.

Now here's my challenge to the readers and members of any IEEE CN in California. Are you satisfied with your Consulting Practice position in your marketplace? Do you feel you need external marketing campaigns, but either don't know how or can't afford one that reaches hi-tech companies? Are you getting the practice developments training and seminars regularly that enhance your professionalism? You may be technically proficient, but I wager that none are accustomed to being in business for themselves, and are struggling to find new clients.

Would regular email referrals help your practice? How about the early morning Kickstart Club, where experienced consultants mentor other interested consultants and "wanna-be's." This is my short list of benefits, whether deciding to join PATCA or just emulate the structure and benefits. The IEEE CNs, in my opinion, do not service the consultant

3) The Hope of the Future – PATCA rewards engineering talent

The Second PATCA “Excellence in Engineering Award” went to Emily Stover, a 6th grade student at West Lake Elementary. Emily was recognized at an awards dinner for participants in this year’s Santa Cruz County Science Fair last Tuesday night. She impressed the judges with her design and documentation of a centrifuge to expel anthrax from letters in a mailbox. Honorable mention went to John Hiesey, an 8th grader at Pacific Collegiate School. He impressed the judges with a analog/digital i/o board and external circuitry to test the impact of varying voltages on the longevity of raw lightbulb filaments at different temperatures and low pressures. The first PATCA recognition award went to participants in the Santa Clara County Science Fair earlier this month.

4) Looking to Get Noticed - Send us your ideas for getting PATCA in the public eye

Low cost, high visibility ideas for getting PATCA noticed are being sought by PATCA’s Marketing Committee. Forward your ideas about events that need engineers or other technical experts as judges; or opportunities to showcase PATCA as a team, such as events at the Tech Discovery Museum or on public television. E-mail inspirations to Bandit Gangwere at bandit@cruzio.com.

5) **Nurturing Genius – Former Napster CEO, Eileen Richardson, shares insights at the AeA breakfast on April 10, on the topic of : "Napster and Beyond: Finding and Nurturing Tech Genius". Breakfast & Networking 7:15-8 a.m; Speaker: 8-9:00 a.m. at the Santa Clara Westin Hotel -Tasman & Great America. Pre-registered PATCA members enjoy the \$30 “partner” price. Walk-ins are \$40 on the day of the event. Sign up one of three ways: 1) on their website(www.aeanet.org), 2) E-mail (susan_martindill@aeaneet.org) or call (408-987-4247) with the following information: Name, Credit Card Type (Visa, MasterCard or American Express), Credit Card Number, Expiration Date, or 3) Mail a check to: Susan Martindill, Global Breakfast Series, AeA, 5201 Great America Pkwy #520, Santa Clara, CA 95054. Please include your name, title, company, phone and email, as well as your partner affiliation (PATCA). As CEO of Napster, Eileen Richardson helped turn Shawn Fanning's idea into a**

company with more than 20 million users. Today Eileen is CEO of Infravio, a hot Web services startup whose product sprang from the groundbreaking research of a Stanford University graduate student. With ten years of experience as a venture capitalist, Eileen was also an early board member and instrumental in the success of companies such as Interwoven and Andromedia and involved with

investments in Exodus and CommerceOne.

6) Look Ahead – PATCA meetings for the upcoming months

**** PATCA’s Board of Directors meet at the Mt. View Chamber of Commerce on the first Tuesday of each month to conduct the Association’s business. April’s meeting is an exception. It is Monday, April 1st (no fooling).**

**** Dinner Meetings take place on the second Thursday of each month. The dinner meetings occur at the Embassy Suites, Santa Clara, 2885 Lakeside Drive, 408.496.6400. Networking & announcements begin at 6:30; Dinner is served at 7:15; and the Program begins at 8:00 p.m.**

**** The Kickstart Club is a monthly meeting for members who want to sharpen their consulting skills by sharing problems**

and solutions in an informal atmosphere. President Charlie Gray hosts the meetings at The Country Gourmet (1314 S. Mary Ave., Sunnyvale, 408.733.9446) each Wednesday following the monthly dinner meeting. Contact Charlie Gray (email@cegcs.com) for further information.”

SPECIAL INTEREST ANNOUNCEMENT from Mike Morehouse

Here is an announcement of general interest from Lockheed-Martin Aerospace to its vendors attending the recent Small Business Conference. For more information, contact Ron Oglevie, ronoglevie@aol.com or Mike Morehouse, QCTEK@aol.com .

Mike Morehouse gave a Marketing Presentation at IEEE CN meeting. Many questions were left unanswered, in Mike's opinion, regarding how to find the applicable Purchasing Agent that handles your "commodity" (Hardware/Software).

He asked a Purchasing Agent with Lockheed Martin-Aeronautics how to become a Supplier to Lockheed Martin-Aeronautics? This is what he was told:

- 1) Complete Form "L" from the SBA. (See Attachment (SBA.DOC)
- 2) During the completion process, you'll be requested to refer to:
 - a) New NAICS Code database at (<http://www.naics.com/>).
 - b) Determine if your business is located in HUBZONE.
Refer to (<http://www.sbaonline.sba.gov/hubzone/>).
- 3) Sign and Date form; Enter your title; And enter your Phone & Fax numbers.
- 4) Certifications are Faxed or emailed (For Lockheed Martin, Fort Worth) to Emma Stevens at 817-762-9520 or (emma.j.stevens@lmco.com).
- 5) With this document, you should FAX or E-Mail a Letter to the applicable individual on your "Letter Head" describing your company and its products and/or Services.
- 6) The following documents may be required:
 - A) Business Plan.
 - B) Quality Assurance Manual (Either MIL-I-45208A or ISO-9000 based).
 - C) Quality Assurance Procedures.
 - D) For Software, a full set of procedures detailing how you Design, Develop, and "Manufacture" Software.

Then, the SBA Business Rep. will prepare a document package on the Supplier's Database; and each LMC's division will have access to your data.

TO: All Active LM Aero Suppliers

SUBJECT: SBA Publishes New Rule Replacing SIC Codes with NAICS Codes

Source: Federal Register [65 FR 30836] Issued: May 15, 2000

Dear Lockheed Martin Aeronautics Company Supplier:

All Lockheed Martin Aeronautics Company suppliers must complete the attached form to recertify under the new North American Industry Classification System (NAICS) codes. Please complete and return this form by January 31, 2001. You may not receive contracts from Lockheed Martin if you do not complete this certification or if it is not returned complete.

The Small Business Administration (SBA) published a final rule (effective October 1, 2000) that completely replaces reliance on Standard Industrial Classification (SIC) Codes with the NAICS codes for the purpose of determining small business status. Under section 3(a)(2) of the Small Business Act, SBA establishes small business definitions, or size standards, by industry category and varies size standards as necessary to reflect industry differences to determine small business eligibility for Federal programs. The current table of size standards uses SIC industry descriptions as the basis for the size standards. Because Federal agencies now use NAICS for collecting economic data, SBA decided to use the NAICS to establish criteria for small business classifications.

This rule will have a significant affect on subcontracting. Since the SIC system is currently used to determine subcontractor eligibility for classification as a small business, subcontractors must recertify under the applicable NAICS codes to ensure compliance.

In accordance with Government regulations and prime contract requirements, we must verify certain information about our suppliers. To help you complete the profile and to convert SIC codes to the NAICS codes, refer to website at <http://www.naics.com/>. To help you determine if you are in a HUBZone, refer to the website at <http://www.sbaonline.sba.gov/hubzone/>.

Notice: Under 15 U.S.C. 645 (d), any person who misrepresents a firm's status as a small business concern in order to obtain a contract to be awarded under the preference programs established pursuant to sections 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of

program eligibility, shall (1) be punished by imposition of a fine, imprisonment, or both; (2) be subject to administrative remedies, including suspension and debarment; and (3) be ineligible for participation in programs conducted under the authority of the Act.

Please fax or email the forms to Emma Stevens at 817 762-9520 or emma.j.stevens@lmco.com, or direct questions to Jim Randle, Small Business Programs Manager at 817 762-1603 or jim.w.randle@lmco.com.

CERTIFICATION – NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM

LM Aeronautics Supplier Numbers (F/M/P):

1. Business Organization

Business Name: _____

Address: _____

E-Mail Address: _____ Web site: _____

List Present SIC code(s): _____

List New NAICS code(s) (refer to <http://www.naics.com/>):

Company operates as: A corporation incorporated under the laws of what state: _____
Individual Sole-Proprietor Partnership Joint Venture Independent Contractor
Non-profit:
Educational Institution (Public) Educational Institution (Private)
Other Non-profit State or Local Agency Federal Agency

2. Foreign Ownership

If supplier or a parent company (if any) is foreign owned, please complete the following:

Is supplier owned by a foreign Government?	Yes	No
If No, is supplier an agent or instrumentality of a foreign Government?	Yes	No
If Yes as to either of the foregoing questions, what Government?		
What percentage of ownership is held by the Government	All	%
Is supplier owned by a foreign corporation?	Yes	No
If Yes, what country?		

3. Acquisition From the Blind and other Severely Handicapped (Javitts-Wagner-O'Day Act)

The supplier represents that the supplier is:
A Workshop for the Blind A Workshop for the Other Severely Handicapped Not Applicable

4. Socioeconomic Information

Indicate your company size by the definitions section:

Required Data – check applicable Large Business Concern

Small Business Concern

Block

Is your company Woman-owned? Yes No

Is your company located in a HUBZone? Yes No

<http://www.sbaonline.sba.gov/hubzone/> Yes No

If yes, is your company certified by the Small Business Administration?

Is your company a small disadvantaged business? Yes No Registered with SBA Yes No Certified by SBA Yes

See No

Below

Hispanic American

Black American

Native American

Subcontinent Asian American

Asian-Pacific American

Other

Specify:

5. Other Socioeconomic

Is the supplier a Historically Black College or University (HBCU), Minority Institution (MI) or Tribal College or University (TCU)? No

Yes (HBCU) Yes (MI) Yes (TCU)

6. Veteran Business Concern

Veteran Yes No Disabled Veteran? Yes No

The following terms used in this supplier profile have the definitions indicated in the provision of the Federal Acquisition Regulation (FAR) or department of Defense FAR supplement (DFARS), Asian Pacific American. (See FAR 19.001), Black American (See FAR 19.001), Hispanic American (See FAR 19.001), Historically Black College or University (See DFARS 252.226-7000) HUBZone (See FAR 19.001), Minority Institution (See DFARS 252.226-7000), Native American (See FAR 19.001), SIC Code. (See FAR 19.102), NAICS, (See Federal Register [65 FR 30836, issued May 15, 2000,]Small Business Concern (See FAR 19.001), Small Disadvantaged Business Concern (See FAR 19.001), Women-Owned Small Business (See FAR 19.001), Veteran and Disabled Veteran Business concerns (FAR 501(c), 502(a)(2) and 604(d), Workshop for the Blind (See DFARS 219.703), Workshop for the Other Severely Handicapped (See DFARS 219.703). For definitions, refer to <http://farsite.hill.af.mil>

The supplier certifies all the foregoing representations and certifications are correct. The supplier agrees to notify Lockheed Martin of any changes to this certification.

Authorized Signature _____ Title _____

Date _____

Phone _____

Fax _____

Certifications may be faxed or e-mailed to Emma Stevens at 817 762-9520 or emma.j.stevens@lmco.com Phone 817 762-1812

Fault Tree Analysis

by Robert Poltz , Reliability Consultant <mailto:getreliability@designanalytx.com>

Fault tree analysis was created and developed in the 1960s, and was adopted by the nuclear power industry to analyze the safety of their electric power systems. Fault tree analysis is a probabilistic deductive systems analysis tool that provides a pictorial system representation using Boolean logic gates in a vertically oriented tree formation.

Starting at a top-level event, fault tree analysis depicts the system operation graphically. Then, flowing backward through the system, it uses logic gates to depict events that must occur for proper system operation. It is typical during an analysis to create a function tree first that displays the proper operation of the system.

The analyst then takes each positive event and reverses the outcome, making it a fault or failure, and redraws the subordinate events that contribute to the upper-level event failure, until a Basic Events block is reached. At that point, the analysis for that leg is concluded.

There will be many legs to be analyzed, spreading from the top-level event, resembling a triangle or a "tree"—hence the name fault "tree" analysis.

These logic gates are used in fault tree analysis.

- **AND gates**—output event occurs if all input events occur.
- **OR gates**—Output event occurs if any one of the input events occurs.
- **Majority-Vote OR gate**—output event occurs if a majority of the input events occur.
- **Exclusive OR gate**—output event occurs if one but not both input events occur. "Either or, never both," is the rule.
- **Priority AND gate**—output event occurs if all input events occur in sequential order from left to right.
- **NOT gate**—output event occurs if the input event does not occur.
- **Description Box**—describes system or component.
- **BASIC circle**—used to describe a basic event at the root of the tree where failure and repair data are available for the basic event.
- **Diamond-shaped block**—undeveloped, represents a system event that is yet to be developed.
- **Conditional (elliptical shape)**—similar to basic event, but represents a conditional probability connected to an inhibit gate, terminates a branch.
- **Diamond inside a diamond**—similar to a basic event, but indicates that the event represents a dormant failure.
- **Equilateral Triangle**—indicates that this part of the fault tree is developed in a different part of the diagram or on a different page of the analysis.

Construction Guidelines

1. Define the bounds of the system to be analyzed and the level of complexity to which failures will be resolved.
2. Identify the TOP-level event of the system to be analyzed. The TOP-level events of the system represent those events for which reliability and availability predictions are required.
3. Using a top-down deductive-reasoning approach, identify all the immediate causes of the TOP-level events.
4. Now define the immediate causes of the new system events. It is important that intermediate system events are not missed out when defining the immediate causes. In this way, the levels of the fault tree progress systematically from major system events, through intermediate levels of complexity, to the basic events representing component failures at the roots of the fault tree.
5. Continue this process of defining the immediate causes of system events until all the roots of the fault tree are terminated by Basic, Conditional, Undeveloped, Dormant, and Transfer events.
6. Avoid abstract events.

7. Identify all distinct causes for an event.
8. Resolve an event into more elementary events.
9. Always provide a complete description of the system or component event in the rectangular description block above each fault tree symbol.

Minimal Cut Sets

The first step of the fault tree analysis process is to produce the minimal cut sets for each system TOP-level event. The minimal cut set is the minimum combination of failures that cause the TOP-level event to occur.

Component failure and repair data are not required when evaluating the minimal cut sets of the system unless a probabilistic cut-off is being applied to eliminate highly improbable failure combinations. Cut-offs are applied to reduce the number of minimal cut sets to a manageable size when evaluating large trees.

Minimal cut sets for fault tree analysis may be obtained using Boolean algebra techniques. These techniques involve representing the gates in a fault tree with equivalent Boolean expressions. The Boolean variables in an expression will represent the gates and basic events in a fault tree.

Each gate and basic event in the fault tree should be given a unique name.

An AND gate G output of X and Y inputs	$G = X \cdot Y$
An OR gate G output of X or Y inputs	$G = X + Y$
A majority-vote OR gate G of X, Y, and Z inputs	$G = X \cdot Y + X \cdot Z + Y \cdot Z$

Basic Probability Theory

Independent Events

Two events are said to be independent if the occurrence of one event does not affect the occurrence of the other. In fault trees, events are assumed to be independent, which simplifies the probability calculations. In reality, many dependencies exist between events.

Exclusivity

Mutually exclusive events are events that cannot occur together, for example, a failure state and a working state of the same component. However, an example of mutually nonexclusive events would be the simultaneous failure of two different independent components existing in binary mutually exclusive states, i.e., working and failed. The failures of different components are generally considered to be nonexclusive.

Addition Law

If three events, A and B and C, are nonexclusive, and the failures of the three are independent, then the following addition law applies.

$$P(A + B + C) = P(A) + P(B) + P(C) - P(A) \cdot P(B) \cdot P(C) - P(A) \cdot P(B) - P(A) \cdot P(C) - P(B) \cdot P(C) + P(A) \cdot P(B) \cdot P(C)$$

In general, the following expression applies for n independent nonexclusive events.

$$P(A_1 + A_2 + \dots + A_n)$$

$$= \sum_{i=1}^n P(A_i) - \sum_{i=1}^{n-1} \sum_{j=i+1}^n P(A_i) P(A_j) + \dots + (-1)^{n+1} P(A_1) P(A_2) \dots P(A_n)$$

Multiplication Law

The probability of two independent nonexclusive events A and B occurring together is given by

$$P(A \cdot B) = P(A) \cdot P(B) ,$$

where

$P(A \cdot B)$ = probability of A and B occurring together

$P(A)$ = probability of A occurring

$P(B)$ = probability of B occurring.

The general case is

$$P(A_1 \cdot A_2 \cdot \dots \cdot A_n) = \prod_{i=1}^n P(A_i) .$$

Conclusion

Fault tree analysis is a complex deductive-reasoning, tops-down, analysis technique used to analyze complex systems and events for systems safety. It is better handled with the aid of a computer program specifically designed to handle multiple trees and the resulting probabilistic calculations, and provides a graphical representation of the logic gates used in the analysis. One then adheres to the laws of probability in calculating Minimal Cut Sets, and quantifies the probability of occurrence for each TOP-level event. The program must be capable of handling reliability input data and translating outputs to reliability statistics and equations.

IEEE LAA/OC CN ExComm 2002

Los Angeles

Ralph Hileman, Chairman r.Hileman@ieee.org

Robert Poltz, Vice Chairman rpoltz@ieee.org

Pete Schultz, Secretary p.r.Schultz@ieee.org

Barry Todd, Treasurer b.todd@ieee.org

Orange County

Pete Schultz, Chairman p.r.Schultz@ieee.org

Ralph Hileman, Vice Chairman r.Hileman@ieee.org

Ron Taggart, Secretary/Treasurer a.r.taggart@ieee.org

MEETING ANNOUNCEMENT – O.C. & L.A. AREA CONSULTANTS' NETWORKS

Subject: “MARKETING FOR CONSULTANTS AND SMALL BUSINESSES”
When: Saturday, March 9, 02
Agenda: 9:30 – 10:00 am, Networking and Introductions
10:00 – 11:00 am, “Marketing Yourself for Maximum Profitability”, Ms. Cara Stewart
11:05 – 11:40 am, “Marketing That Works for Me”, Mike Morehouse
11:40 – 12:00 pm, “Marketing That Works for Me”, Bob Gauger
12:00 – 1:30 pm, Lunch and Networking at Off-Campus Sports Pub
1:30 – 3:00 pm, OCCN Board Meeting
Where: Cal State Fullerton, Engineering Building, Room 321, see www.occn.org for a campus map and directions, free parking on Saturday.
Cost: Free, interested parties are invited.
Contact: Pete Schultz, 310-378-6905, p.r.schultz@ieee.org, & Ron Oglevie, ronoglevie@aol.com

Program Description:

Many independent consultants and small businesses lose business opportunities because of poor marketing practices. This workshop was organized to provide a short introduction to marketing and to jumpstart the success of your business.

“How to Market Yourself for Maximum Profitability – A Strategic Sales Approach” by Ms. Cara Stewart

To excel as a consultant, you must strategically sell your services. Although most consultants prefer to spend their time servicing clients or doing technical work, the most successful consultants recognize that acquiring clients is just as important as keeping them. But what is the best way to market your expertise in today's increasingly competitive environment? Marketing consultant Cara Stewart will show you how to strategically build your business potential. In this practical presentation, Stewart will offer unique, income-generating strategies to develop more leads and transition them into long-term, paying clients. She will show you how to:

- Market your services regularly
- Position yourself as an expert within your field
- Increase visibility among potential clients
- Generate referrals
- Network for profitability
- Use public relations to raise your income

Ms. Stewart will help you master this perspective with her “10 Rules for Successful Strategic Selling for Consultants”. The presentation will motivate you to sell your services and differentiate yourself from competitors. Stewart will challenge you to become a marketing innovator — and show you how, in easy-to-implement steps.

Cara Stewart is an award-winning business communications strategist and journalist with expertise in public, media and analyst relations, and corporate marketing. She has a successful track record of building brands, businesses and teams for leading technology companies, service organizations, nonprofits and public utilities. Stewart also draws on a network of accomplished public relations, marketing and business development professionals to deliver real value to clients.

“Marketing Methods That Work for Me”

Following Ms. Stewart's presentation, two of our own highly successful consultants will reflect on “Marketing Methods That Work for Me”. Mr. Mike Morehouse of Quality Control Technologys will describe his “Open Systems Interconnection Model” that he employs to focus QCT's marketing efforts. Mike has successfully operated this consulting practice for approximately a decade.

Also, Mr. Bob Gauger, one of the founding fathers and past chairman of the Consultants' Networks, and highly successful consultant, will describe the marketing methods that he employs in his reliability consulting practice. He will also report on the results of surveys of consultant marketing practices.



Harry L. Staubs, AIAA Associate Fellow

May 10, 1930 – October 18, 2001

Harry Staubs died suddenly on October 18, 2001 in Cleveland, Ohio. He had been attending the Tau Beta Phi Engineering Honors Society meeting there. He died as many of us knew him – busy volunteering for an engineering society. He was 71.

Staubs spent almost 30 years in the United States Air Force, retiring as a Lieutenant Colonel in 1980. After his Air Force Career, he spent six years at McDonnell Douglas Space Systems Company, as Senior Staff Specialist in Advanced Propulsion Technology and Marketing, Senior Design Engineer for Oxidizer System of the National Aerospace Plan Project and Manager of Advanced Propulsion Technology Developments - Cryogenics. When he died he was President and Chief Executive Officer of Staubs Business Services, founded in 1994. SBS provided small business services to start-up companies in business planning, marketing and office automation support

During his time in the Air Force Staubs served in both hands-on and leadership positions. He qualified solid rocket motors for Falcon air-to-air missiles, operated fuel test labs for a 500-mile pipeline that the Air Force operated in Spain. He then served as chief project officer for the 260-inch diameter solid rocket advanced development program, chief of test programs for the WS 120A Advanced ICBM, Hard Rock Silo Program, chief AF liaison office at the NASA Lewis research center, and chief of advanced technology project space and missile systems office.

As Chief of the Advanced Technology Project for SAMSO, Harry developed the first advanced composite materials master plan for Space and Missile Systems and the first space systems technology model.

He considered the 260-inch rocket project most memorable: he was responsible for building and testing the world's largest solid rocket motors. The rockets were fired three times - twice at 3.0 million pounds of thrust for 120 seconds and once at 7.5 million pounds of thrust for 60 seconds.

Harry was a member of AIAA for over 40 years. During this time he served the Institute as Chair of the Solid Rocket Committee for the 1974 Joint Propulsion Conference, member of the Institute's career enhancement and pre-college outreach committees, and the Educational Advisory Group. Harry also served as Director of Career Enhancement for the Western Region, and Chair of the Orange County Section. He held numerous other offices.

Most recently Staubs led the OC section's project to launch a Get-Away Special payload on the space shuttle, a project which served not only to further science but also served as community outreach, offering local engineers, engineering students and hobbyists an opportunity to work on real space flight hardware. In recent years Harry also served as Co-Chair of the California Synergistic Technology Transfer Committee, established

jointly between the Orange County and Los Angeles sections to provide members career transition support.

In addition to his AIAA activities, he contributed his time to a long list of Engineering organizations including Tau Beta Pi (Engineering Honor Society), the Institute for Electrical and Electronics and Engineers, the Air Force Communications Electronics Association, the Orange County Engineering Council, Los Angeles Council of Engineers and Scientists, Institute for the Advancement of Engineering, and its College of Fellows. He held leadership positions in each. He established the Consultant's forum in cooperation with the Institute for Electrical and Electronics Engineers in order to help down-sized people find employment. He is recently ended his term of office as President of LACES and Vice President, Member Societies for OCEC.

Staubs held an MBA from California State University, Long Beach and a BS degree in Chemical Engineering from West Virginia University, and completed two years of Chemical Engineering masters degree studies at Columbia University.

Staubs is survived by a brother, Gerald, of West Virginia.

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Editorial

*New LAACN-OCCN membership benefit:
A 30% discount off of the \$195 annual listing price to IEEE CN members. The listings include all of the features that are unique to HGexperts.com offers IEEECN members a free listing on the home page of HGexperts.com (<http://www.hgexperts.com>) Or call at 713-526-5290.*

CALENDAR OF EVENTS **FEBRUARY MEETING ANNOUNCEMENT**

Subject:

No Meeting

Date: February 9, 2002

Where: Cal State Fullerton, Engineering Building, Room 321 (see <http://www.occn.org> for campus map and directions), free parking on Saturday parking lot T, only.

Time: 9:30 AM Networking, Introductions, "20 second Stump Speech"
10:00 AM LAACN Board meeting

Cost: Free

Contacts: Pete Schultz, 310-378-6905, p.r.schultz@ieee.org; Bob Gauger, 949-559-9148, r.gauger@ieee.org; Ron Oglevie, 714-526-6642, ronoglevie@aol.com; Ralph Hileman, rhileman@ieee.org; Rob Poltz, rpoltz@ieee.org.

PROGRAM PLANNING – Requesting your suggestions

The Program Planning Committee is again endeavoring to make plans for future OCCN/LAACN monthly meetings. Our goal is high quality programs of interest and value to the membership. We need your suggestions on what you would like to see or hear at our meetings. In particular, we want suggestions from our more virtual members (infrequent attendees) as to what your interests are.

We employ the majority of program types used by other related technical organizations including: presenter(s) and speakers, expert panels, workshop, town hall, or any other meeting format.

Your suggestions should be as specific as possible, with a title, short description of the program, potential speaker(s), and whether you would be willing to help develop the program. You may suggest as many topics as you wish.

A second issue we need your opinion on this year is your preference of meeting locations, time of the week, and whether you prefer your meetings combined with dinner or other meals. Locations can include our current CSF campus location, restaurants, hotels, community rooms, etc. Suggestions for specific locations would be appreciated. In summary, the following information is sought:

SUGGESTED PROGRAM TOPICS:

Meeting Subject? _____

Program Description? _____

Potential Speaker(s)? _____

Would You Help Develop the Program? _____

MEETING LOCATION TIME & MEALS:

Suggested or Preferred Meeting Location(s)? _____

Preferred Meeting Time? _____

With or Without Dinner or Other Meal? _____

Please return your suggestions to the undersigned. Your inputs are requested by 2/9/02. A summary of the suggestions will be published in next months Newsletter, along with the suggester's name (unless the suggester requests to remain anonymous).

Ron Oglevie - ronoglevie@aol.com

Other Events of Interest

Los Angeles

Southern California Technology

<http://www.socaltechcalendar.com/> (complete calendar)

Partial List:

February Event List

Fri 2/1 [CMIE](#)

Summary: The Center for Management in the Information Economy will hold its annual two day conference "New Perspectives on the Information Economy" on January 31-February 1, 2002. The first day features keynote presentations by recognized technology leaders. The second day presents five parallel tracks that focus on enterprise software, mobile wireless telecommunications, entertainment media, internet successes, and new e-commerce services.

Location: The Center for Management in the Information Economy at The Anderson School at UCLA

Time: 8Am to 5PM

E-mail: rfoster@anderson.ucla.edu

Fri 2/1 [SCTVF Applications Due](#)

Summary: The Southern California Technology Venture Forum is a half-day conference that both showcases the best emerging technology-based companies in Southern California and informs the technology community about the current and future trends and opportunities within the hot sectors. If you would like to present at the April 18th Forum you need to fill out an online application by February 1st.

Location: Event will be held April 18th, 2002 Regent Beverly Wilshire 9500 Wilshire Blvd. Beverly Hills, California

Time: 7:30am - 2:30pm

E-mail: tkendall@larta.org

Sat 2/2 [eXtreme Programming](#)

Summary: eXtreme Programming At First Glance - Take advantage of this 2-day seminar to learn more about this efficient, effective, collaborative applications development method. This seminar is designed for programmers/developers and project managers (no programming required).

Location: CSUF Garden Grove Center, 12901 Euclid Street, rm. 159

Time: 9 a.m. to 4 p.m.

E-mail: kmckinley@fullerton.edu

Sat 2/2 [JavaScript Programming](#)

Summary: This 10-week, hands-on class is intended for experienced programmers/developers who want to integrate JavaScript technologies to enhance their Web applications.

Location: CSUF Garden Grove Center, 12901 Euclid Street, rm. 251

Time: 11 a.m. to 2 p.m.

E-mail: kmckinley@fullerton.edu

Mon 2/4 [Elec Circuit Cards](#)

Summary: The course will present simplified approaches for understanding the effects of vibration on electronic systems. Managers and engineers involved in design, development, testing, evaluation, ESS or production of electronic hardware, both commercial and military, will benefit. A basic understanding of vibration response is assumed. No finite element experience or physics of failure or mechanical engineering expertise is required.

Location: Elks Lodge, 150 N. Kellogg, Santa Barbara, California, USA

Time: February 4-6, 8am-5pm

E-mail: tustin@vibrationandshock.com

Mon 2/4 [Fundamentals of NT](#)

Summary: This 8-week, hands-on class will provide students with the practical knowledge and skills required to manage the day-to-day administration of Microsoft Windows NT on a single workstation or on a network with multiple workstations.

Location: Cal State Fullerton, 800 N. State College Blvd., Computer Science bldg., rm. 206

Time: 7 to 10 p.m.

E-mail: kmckinley@fullerton.edu

Tue 2/5 [ACM -- LA Chapter](#)

Summary: INFORMATION ARCHITECTURE ON THE WEB - Wayne Smith, CSUN -- Deciphering the W3C alphabet soup (XML, CSS, SVG, etc.) for publishing standards-based documents on the World Wide Web is becoming a full time job. One ambitious initiative is to embed clarity, consistency, and mutually reinforced semantic meaning on the Web. Mr. Smith will summarize these activities and discuss what future "information architectures" IT professionals will be building for their organizations.

Location: Ramada Hotel, 6333 Bristol Parkway, Culver City; Dinner \$22 with reservation, \$25 without reservation. Call (818) 353-8077 for dinner reservation. Free parking, no charge for meeting.

Time: Dinner @ 7:00 p.m., Technical meeting @ 8:00 p.m.

E-mail: schmidt@acm.org

Tue 2/5 [Semantic Web](#)

Summary: ACM & IEEE-CS -- INFORMATION ARCHITECTURE ON THE WEB - Wayne Smith, CSUN -- Deciphering the W3C alphabet soup (XML, CSS, etc.) for publishing standards-based documents on the World Wide Web is becoming a full time job. One ambitious initiative is to embed clarity, consistency, and mutually reinforced semantic meaning on the Web. Mr. Smith will summarize these activities and discuss what future "information architectures" IT professionals will be building for their organizations.

Location: Ramada Hotel, 6333 Bristol Parkway, Culver City; Dinner \$22 with reservation, \$25 without reservation. Call (818) 353-8077 for dinner reservation. Free parking, no charge for meeting.

Time: Dinner @ 7:00 p.m., Technical meeting @ 8:00 p.m.

E-mail: schmidt@acm.org

Tue 2/5 [Career Connection-SD](#)

Summary: Career Connection – San Diego [should link to www.execglobalnet.com] This month's Career Connection event is Session 2 – "Achievements: Showcasing The Ones That Make Employers Want to Hire You". Learn proven techniques that you can take away and use immediately, group discussions, practice networking tactics, and receive free business cards.

Location: Butcher Shop Steakhouse, 5255 Kearny Villa Rd., San Diego 92123 (Clairemont Mesa Blvd. & 163), 858-565-2272. Cost \$10

Time: Regn: 6:30 p.m. Session: 7:00 to 9:30 p.m.

E-mail: Info@ExecGlobalNet.com

Tue 2/5 [Intro to Networking](#)

Summary: This 8-week, hands-on class is designed for students who are new to understanding and using computer networks. This class will provide students with a solid background and set of skills in networking and network management.

Location: Cal State Fullerton, 800 N. State College Blvd., Computer Science bldg., rm. 206

Time: 4 to 7 p.m.

E-mail: kmckinley@fullerton.edu

Thu 2/7 [SCSC - Awards](#)

Summary: 2002 Software Industry Awards - The best companies, the brightest people and the most fun... This must attend event happens only once a year. Join the Software Council of Southern California as we recognize those who have made outstanding contributions to our industry.

Location: Millennium Biltmore Hotel, 506 South Grand Avenue, Los Angeles

Time: 6:00 - 9:00 PM

E-mail: events@scsc.org

Thu 2/7 [Career Connection-SoOC](#)

Summary: Career Connection – So. Orange County [should link to www.execglobalnet.com] This month's Career Connection South Orange County event is Session 1 – "Organizing Your Job Search: Learn What is Important and How to Increase Your Effectiveness in 2002." Learn proven techniques that you can take away and use immediately, group discussions, practice networking tactics, and receive free business cards.

Location: Marriott Hotel, 18000 Von Karman Ave., Irvine 92612 (So. of 405 Fwy), 949-553-0100. Cost \$10

Time: Registration: 6:30 p.m. Session: 7:00 to 9:30 p.m.

E-mail: Info@ExecGlobalNet.com

Orange County

The National 2002 SBIR Conference in California Can Help You Tap Into Valuable Government Funding

Come to the SBIR Conference, March 11-14, 2002, in Anaheim, CA.
Network with Government Representatives - learn how to apply for and manage:
Government Grants, Proposal Writing, Venture Funding, Teaming/Strategy, Intellectual Properties Panel and more.



Click to register at <http://www.sbirworld.com/anaheim>

WHERE: Hyatt Regency Orange County Hotel, Harbor & Chapman, Garden Grove, CA

CONTACT: Sharon DelaBarre, (360) 683-1828, e-mail sbir@dbamlg.com

DESCRIPTION: This 3-4 day conference presents everything you need to know to participate in this Federal Small Business Innovation Research (SBIR) Program, and lots of good information on how to start a small high-tech business. This also includes the Small Business Technology Transfer Program (STTR). At least one current member and several former members have successfully used this program for technology product development and new business development.

Providing over \$1 billion dollars annually, The Small Business Innovative Research Program (SBIR) is the largest Federal Government-sponsored source of early-stage technology and industrial financing in the United States for small business. The program awarded \$1.2 billion alone in the year 2001, with figures projected to climb over the next several years. The SBIR program prides itself on helping small businesses and university/research and development entrepreneurial entities bring innovative new technologies and products to market through various stages of funding.

The National 2002 SBIR Conference in Anaheim is an exciting opportunity to tap into the more than \$1 billion set aside by government agencies for small business and university entrepreneurs and research and development entities. Learn how you can make the SBIR program work for you and your company. The SBIR program has been the key to the successful growth of many small technology companies and provides entrepreneurs/researchers with unparalleled opportunities and resources for bringing your innovative ideas to a commercial reality."

To learn more about how you can participate in this exciting event contact Sharon DelaBarre, (360) 683-1828, e-mail sbir@dbamlg.com or visit <http://www.sbirworld.com> and step into a world of opportunity.

INFORMATION RESOURCES

Mr. Art Larson has offered to share the Internet Resources that he discovered while preparing for his "Computer Aided Conferencing" presentation, and research into "Collaborative Tools Within the Microsoft XP Operating System and Office Suite". The titles are hyper linked to their respective web pages and can be accessed directly from this newsletter. The following list is severely truncated to fit in a reasonable space. Please email the Editor if you would like to request the complete list.

[MS KEY Studio 2001 ***](#)
[Microsoft: Home Networking ***](#)
[Microsoft: IE 5.0 Preview ***](#)
[Microsoft: NetMeeting ***](#)
[Microsoft: NetMeeting: Business Users ***](#)
[Microsoft : NetMeeting : Features ***](#)
[Microsoft : NetMeeting : SDK ***](#)
[Microsoft : NetMeeting SDK : COM Object Reference ***](#)
[Microsoft : NetMeeting SDK : Contents ***](#)
[Microsoft : NetMeeting SDK : Tutorials and Samples ***](#)
[Microsoft : NetMeeting in Action ***](#)
[Microsoft : NetMeeting 3.01 Download ***](#)
[Microsoft : Office ***](#)
[Microsoft: Share Point: Team Services ***](#)
[Microsoft: Share Point: Team Services: FAQ ***](#)
[Microsoft: Share Point: Technologies ***](#)
[Microsoft: Share Point Portal Server ***](#)
[Microsoft: Share Point Portal Server : Building a Corporate Portal Using Office XP and Share Point Portal Server 2001 ***](#)
[Microsoft : Share Point Portal Server : Features ***](#)
[Microsoft : Share Point Portal Server : Tour ***](#)
[Microsoft : Visual Basic ***](#)
[Microsoft : Why XP Pro \(Top 10 Reasons Windows XP Professional Is Right for Small Business \) ***](#)
[Microsoft : Why XP Pro : Enjoy the Ultimate Communication and Collaboration Tool ***](#)
[Microsoft : Why XP Pro : Keep Your System Secure While You're on the Internet ***](#)
[Microsoft : Why XP Pro : Work with All of Your Data and Applications While Away from Your Office ***](#)
[Microsoft : Win XP Home : ***](#)
[Microsoft : Win XP Pro ***](#)
[Microsoft : Win XP Pro : Inside Windows Messenger \(How it Communicates \) ***](#)
[Microsoft : Win XP Pro : Inside Windows Messenger : Links ***](#)
[Microsoft : Win XP Pro : Using Remote Desktop ***](#)
[Microsoft : Win XP Pro : Using Windows Messenger ***](#)
[Microsoft: Windows ***](#)
[Microsoft: Windows XP: Experience Real-time Communication ***](#)
[Microsoft Business: Digital Dashboard ***](#)
[Microsoft Business: Why Choose Microsoft? \(Microsoft's Vision\) ***](#)
[Microsoft Investor: Insight ***](#)
[Microsoft Press: Understanding Groupware in the Enterprise ***](#)
[Microsoft Systems Journal ***](#)
[Microsoft: Share Point: Team Services: FAQ ***](#)
[Microsoft : Share Point : Technologies ***](#)

[Microsoft : Share Point Portal Server ***](#)

[Microsoft : Share Point Portal Server : Features ***](#)

[Microsoft : Share Point Portal Server : Introducing Share Point Portal Server 2001 ***](#)

[Microsoft : Share Point Portal Server : Overview Tour ***](#)

[Microsoft : Share Point Portal Server : Resource Kit ***](#)

[Microsoft : Why XP Pro \(Top 10 Reasons Windows XP Professional Is Right for Small Business \) ***](#)

[Microsoft : Why XP Pro : Enjoy the Ultimate Communication and Collaboration Tool ***](#)

[Microsoft : Why XP Pro : Keep Your System Secure While You're on the Internet ***](#)

[Microsoft : Why XP Pro : Work with All of Your Data and Applications While Away from Your Office ***](#)

[Microsoft : Win XP Home : ***](#)

[Microsoft : Win XP Pro ***](#)

[Microsoft : Win XP Pro : Using Windows Messenger ***](#)

[Microsoft : Windows Messenger in Windows XP ***](#)

[Microsoft : Windows XP : Experience Real-time Communication ***](#)

[Microsoft : Windows XP : Experience: Real-time Communications ***](#)

For Our Patriots – A Colorful Tribute to the Flag

See <http://personal.jax.bellsouth.net/jax/l/c/lchaplin/unkarock/flag.htm>
("I Am The Flag")

IEEE USA links

Newsletter Archives

<http://www.ieee.org/whats-new/archive>

Today's Engineer Consulting

http://www.todaysengineer.org/archives/te_archives/consulting.html

To read TODAY'S ENGINEER, visit:

<http://www.todaysengineer.org/careerfocus/>

Spread the word about the new IEEE-USA webzines! If you haven't already, visit *IEEE-USA POLICY PERSPECTIVES* at:

<http://www.todaysengineer.org/policyperspectives/>



More High Technology in Southern California

Orange County:

Digital Coast: <http://www.digitalcoast.org/>

Digital Coast Roundtable, a non-profit organization established in 1998 to support the growth of emerging technology and digital media companies in the Digital Coast region (San Diego to Santa Barbara). The Digital Coast Roundtable is an influential group of visionaries and leaders who are committed to the organization existing and future programs and initiatives.

Los Angeles County

Nanotechnology Incentives in Los Angeles

Medical Uses for Nanotechnology

http://science.nasa.gov/headlines/y2002/15jan_nano.htm?list653523

Larta is a nonprofit think tank for the technology industry. Our research is hard-hitting and influential. Our training has educated thousands. Our consulting has transformed hundreds of technologies into viable businesses. Our capital programs have jump-started hundreds of millions of dollars in financing.

Frequently asked questions: <http://www.larta.org/about/faq.asp>

California Technology Investment Partnership <http://www.larta.org/Capital/caltip.asp>

NASA Greenhouse Effect Update, earlier predictions of Global Warming....
http://science.nasa.gov/headlines/y2002/15jan_greenhouse.htm?list653523

NASA Solar Cycles
http://science.nasa.gov/headlines/y2002/18jan_solarback.htm?list653523

NASA T-Cells in Space
Immune cells vs. invaders: it's a war going on in every healthy human body. But when the combatants travel to space, say NASA scientists, curious things happen.

FULL STORY at
http://science.nasa.gov/headlines/y2002/23jan_cellwars.htm?list653523

NASA What caused Life to End on Earth

Two hundred and fifty million years ago something unknown wiped out most life on our planet. Now scientists are finding buried clues to the mystery inside tiny capsules of cosmic gas.

FULL STORY at
http://science.nasa.gov/headlines/y2002/28jan_extinction.htm?list653523

George Washington University Continuing Education: **Don't Miss Your Chance to Take** **These Cutting-Edge Classes!**

GW's Professional Development Programs in Defense Systems

Engineering provide the kind of cutting-edge knowledge that is critical in modern-day defense, intelligence, and security operations. [GW's Defense Systems Engineering courses](#) are designed to enhance the expertise of **practicing engineers, managers, and scientists** through hands-on skills training and information.

Courses provide up-to-the-minute exposure to the mission-critical technologies which embody defense systems. Spring course offerings include weapons interfaces, electronic warfare, communications, radar and target acquisition, and intelligence.

Key subject areas include:

- Command, Control, Communications and Intelligence (C3I)
- Electronic Warfare, including ELINT and SIGINT
- Radar Systems, Analysis and Systems Integration
- Weapons Systems/ Sensor Integration
- Communications, including Satellites, Microwaves and Modern HF



Classes are offered year-round in convenient one-to-five consecutive day formats. Continuing Education Units (CEUs) will be awarded for each course. Courses are held in our award-winning education center in downtown Washington, DC or [on-site programs](#) can be delivered to your organization.

To learn more about these exciting Defense Systems Engineering courses, visit our [web site](#) or call 202-973-1175.

Other Options -- GW also offers 30 other [Continuing Engineering Programs](#) comprised of over 200 courses each year.

MEETING ANNOUNCEMENT – O.C. & L.A. AREA CONSULTANTS' NETWORKS

Subject: “MARKETING FOR CONSULTANTS AND SMALL BUSINESSES”
When: Saturday, March 9, 02
Agenda: 9:30 – 10:00 am, Networking and Introductions
10:00 – 11:00 am, “Marketing Yourself for Maximum Profitability”, Ms. Cara Stewart
11:05 – 11:40 am, “Marketing That Works for Me”, Mike Morehouse
11:40 – 12:00 pm, “Marketing That Works for Me”, Bob Gauger
12:00 – 1:30 pm, Lunch and Networking at Off-Campus Sports Pub
1:30 – 3:00 pm, OCCN Board Meeting
Where: Cal State Fullerton, Engineering Building, Room 321, see www.occn.org for a campus map and directions, free parking on Saturday.
Cost: Free, interested parties are invited.
Contact: Pete Schultz, 310-378-6905, p.r.schultz@ieee.org, & Ron Oglevie, ronoglevie@aol.com

Program Description:

Many independent consultants and small businesses lose business opportunities because of poor marketing practices. This workshop was organized to provide a short introduction to marketing and to jumpstart the success of your business.

“How to Market Yourself for Maximum Profitability – A Strategic Sales Approach” by Ms. Cara Stewart

To excel as a consultant, you must strategically sell your services. Although most consultants prefer to spend their time servicing clients or doing technical work, the most successful consultants recognize that acquiring clients is just as important as keeping them. But what is the best way to market your expertise in today's increasingly competitive environment? Marketing consultant Cara Stewart will show you how to strategically build your business potential. In this practical presentation, Stewart will offer unique, income-generating strategies to develop more leads and transition them into long-term, paying clients. She will show you how to:

- Market your services regularly
- Position yourself as an expert within your field
- Increase visibility among potential clients
- Generate referrals
- Network for profitability
- Use public relations to raise your income

Ms. Stewart will help you master this perspective with her “10 Rules for Successful Strategic Selling for Consultants”. The presentation will motivate you to sell your services and differentiate yourself from competitors. Stewart will challenge you to become a marketing innovator — and show you how, in easy-to-implement steps.

Cara Stewart is an award-winning business communications strategist and journalist with expertise in public, media and analyst relations, and corporate marketing. She has a successful track record of building brands, businesses and teams for leading technology companies, service organizations, nonprofits and public utilities. Stewart also draws on a network of accomplished public relations, marketing and business development professionals to deliver real value to clients.

“Marketing Methods That Work for Me”

Following Ms. Stewart's presentation, two of our own highly successful consultants will reflect on “Marketing Methods That Work for Me”. Mr. Mike Morehouse of Quality Control Technologys will describe his “Open Systems Interconnection Model” that he employs to focus QCT's marketing efforts. Mike has successfully operated this consulting practice for approximately a decade.

Also, Mr. Bob Gauger, one of the founding fathers and past chairman of the Consultants' Networks, and highly successful consultant, will describe the marketing methods that he employs in his reliability consulting practice. He will also report on the results of surveys of consultant marketing practices.

Editorial

*The Independent has a new editor, Rob Poltz. Many thanks to Ron Oglevie for his tireless efforts in producing the Independent all these past months. **With every role transition, there is a learning phase for the new entrant.** Some format changes will be forthcoming during this transition period, and we ask your patience as we sort things out.*

In this month's newsletter, you'll find IEEE USA Links to important information and the Assignment Bulletin Board Listing of Jobs. A convenient link is also provided for future reference. Members are encouraged to check here for new jobs listings. The newsletter will not print these jobs every month, and it is the members responsibility to remain current.

Have you ever been stiffed by a client? If not you are very lucky, but Steve Maas discusses ways to handle the problem in his article "Getting Paid."

How much are you willing to pay (\$100, \$200, \$300, \$400) in annual membership dues to get the kind of quality IEEE Consultants Network that provides the services consultants need and want? Join us for an informal discussion and voice your opinion on Consulting: Getting Started, Intermediate, and Pro levels invited to share opinions.

I've been a PATCA member for four years.

PATCA, <http://www.patca.org/directory/index.html> the Bay Area's number one Consultants Group See also, the Calendar of Events this month, for details, and will answer questions at the end of the meeting. If possible, I will try to get someone from the management group that handles PATCA activities to speak or contribute information.

Mike Morehouse has some advice and shares tips for travelers.

Business Meeting:

- *New Membership benefit for IEEECN consultants: HGExpert Witness web listing discounted (30% off) member rates;*
- *Newsletter advertising rates; any other ways of raising money.*
- *Establishing new business accounts with PC Mall and MicroWarehouse for future equipment/software purchases as "edu" organization. Discounts of over 50% over buying retail.*
- *Other business.*

IEEE USA links

<http://www.ieee.org/whats-new/archive>

http://www.todaysengineer.org/archives/te_archives/consulting.html

The December 2001 - January 2002 editions of *IEEE-USA TODAY'S ENGINEER* > and *IEEE-USA POLICY PERSPECTIVES* are available now on the Web.

>
> TODAY'S ENGINEER is IEEE-USA's monthly, career-oriented webzine, offering > feature articles and short blurbs with career guidance, tips, strategies > and solutions for all sectors of the profession.

>
> To read TODAY'S ENGINEER, visit:
> <http://www.todaysengineer.org/careerfocus/>

High Technology in Southern California

Orange County:

Digital Coast: <http://www.digitalcoast.org/>

Digital Coast Roundtable, a non-profit organization established in 1998 to support the growth of emerging technology and digital media companies in the Digital Coast region (San Diego to Santa Barbara). The Digital Coast Roundtable is an influential group of visionaries and leaders who are committed to the organization existing and future programs and initiatives.



Los Angeles County

Nanotechnology **Incentives in** Los Angeles

Larta is a nonprofit think tank for the technology industry. Our research is hard-hitting and influential. Our training has educated thousands. Our consulting has transformed hundreds of technologies into viable businesses. Our capital programs have jump-started hundreds of millions of dollars in financing.

**Larta University's Upcoming workshop -
"Attacking the Market: Marketing and
Selling your Product"
January 16 & 17**



LARTA: <http://www.larta.org/index.htm>

<http://www.larta.org/ecommerce/shop/Reports/TechIndex2002ExecSum.pdf>

*The Caltech/MIT Enterprise Forum
Presents:*

**January 15, 2002- Tuesday
evening**

**Software Venture Strategies:
The Peril of Platform Technology**

*at Baxter Hall of the
California Institute of Technology*

*In this session, the Caltech/MIT
Enterprise Forum takes a deep look
at the peril of platform technology
and provides entrepreneurs with
perspective for choosing between
platform and application-focused
strategies*

*Special sponsorship for this
meeting from:*



LOCATION AND TIME

California Institute of Technology Pasadena, California

**Registration, Networking and Complimentary Dinner - 5:30pm at Chandler Dining Hall, Caltech
Program - 7:00pm to 9:00pm, at Baxter Hall, Caltech**

Cost - \$35.00 per person (\$10 for full-time students - Student ID is required; Free to Caltech students and faculty). NO REFUNDS ON NO-SHOWS.

PRE-REGISTRATION AND PRE-PAYMENT ARE REQUIRED FOR THIS EVENT. Pre-Registration ends at 2pm on the day of the event.

CALENDAR OF EVENTS

JANUARY MEETING ANNOUNCEMENT

JOINT LAACN/OCCN

Subject: -Q&A Sessions
 -Business Meeting

Date: **January 12, 2002**

Where: Cal State Fullerton, Engineering Building, Room 321 (see <http://www.occn.org> for campus map and directions), free parking on Saturday parking lot T, only.

Time:	9:00 AM	Networking, <i>Introductions, using 20 second Stump Speech</i>
	9:15 AM	Q&A, Remote Access
	10:00 AM	Q&A, Larta
	10:45 AM	Q&A, PATCA
11:30 AM		Q&A, Getting Paid
12:00 PM		lunch
1:00 PM		Business meeting

Cost: *Free*

Contacts: Pete Schultz, 310-378-6905, p.r.schultz@ieee.org; Bob Gauger, 949-559-9148, r.gauger@ieee.org; Ron Oglevie, 714-526-6642, ronoglevie@aol.com; Ralph Hileman, rhileman@ieee.org; Rob Poltz, rpoltz@ieee.org.

Program Description: Q&A Sessions on:

1) Remote PC-Laptop Access using Wireless Communications,

Ralph Hileman;

3) Nanotechnology, Larta Chairman, Kevin Wall (invited speaker);

4) PATCA Consultants Association, as a role model for IEEEENs,

Rob Poltz;

5)“Getting Paid” author, Steve Maas(invited speaker).

Business Meeting:

- *New Membership benefit for IEEEEN consultants: HGExpert Witness web listing discounted (30% off) member rates*
- *Newsletter advertising rates; raising money*
- *Establishing new business accounts with PC Mall and MicroWarehouse for future equipment/software purchases as “edu” organization*
- *Alternative meeting locations; other business.*

Other IEEE Events of Interest

SUBJECT: “NATIONAL SBIR CONFERENCE” – Advance Notice ---> this Federal High-Tech Program is bringing it's National 3 day conference to Orange County

WHEN: March 11- 14, 2002

WHERE: Hyatt Regency Orange County Hotel, Harbor & Chapman, Garden Grove, CA

CONTACT: For now, Ron Oglevie at ronoglevie@aol.com, more web based information in early January 2002

DESCRIPTION: This 3-4 day conference presents everything you need to know to participate in this Federal Small Business Innovation Research (SBIR) Program, and lots of good information on how to start a small high-tech business. This also includes the Small Business Technology Transfer Program (STTR). At least one current member and several former members have successfully used this program for technology product development and new business development.

New IEEE CN Executive Committee Members 2002

Los Angeles

Ralph Hileman, Chairman r.Hileman@ieee.org

Robert Poltz, Vice Chairman rpoltz@ieee.org

Pete Schultz, Secretary p.r.Schultz@ieee.org

Barry Todd, Treasurer b.todd@ieee.org

Orange County

Pete Schultz, Chairman p.r.Schultz@ieee.org

Ralph Hileman, Vice Chairman r.Hileman@ieee.org

Ron Taggart, Secretary/Treasurer a.r.taggart@ieee.org

Rob Poltz quoted in Consultants Database Article:

[IEEE-USA Database Helps Consultants Find Assignments](#)

Despite its name, the IEEE-USA Consultants Database is not limited to American IEEE members and clients.

IEEE USA CONSULTANTS ASSIGNMENT BOARD

Use IEEECN Bulletin Board Jobs Link:

http://www.ieeeusa.org/business/consultants/cgi-bin/consultant.cgi?task=display_forum/forum_name=assignment

IEEE★USA
Consultants Database

See results of the latest
Consultants Fee Survey!



Clients

- [Consultant Finder](#)
- [Advanced Search](#)
- [Simple Search](#)
- [Post/Edit Assignment](#)
- [Client Help](#)

Consultants

- [Register/Renew](#)
- [Login](#)
- [Manage Profile](#)
- [Assignment Board](#)
- [Consultants Services](#)
- [Consultant Help](#)
- [Log Out](#)
- [Contact Us](#)
- [Database Home](#)
- [IEEE-USA Home](#)
- [IEEE Home](#)
- [IEEE Careers Links](#)

Assignment Board

The following projects have been posted by prospective clients looking for IEEE consultants. Please click on the project title for full description and contact information.

[DIGITAL VIDEO HARDWARE DESIGN - 12/18/01 08:07 AM](#)

[ASIC Consultant - 12/17/01 12:51 PM](#)

[Sr Electronics Design Engineer - 12/14/01 6:04 PM](#)

[Turbine - Retrofit Electronics - 12/14/01 6:00 PM](#)

[Semiconductor experts needed - 12/14/01 1:11 PM](#)

[Large Format Film Projection - 12/13/01 12:10 PM](#)

[Troubleshooting Impact Test Machine - 12/13/01 10:59 AM](#)

[Consultant Electrical Engineer - 12/12/01 01:47 AM](#)

[- 12/11/01 4:43 PM](#)

[Graphics image viewing software - 12/11/01 11:49 AM](#)

[Sr. Electrical Engineer - 12/10/01 7:02 PM](#)

[HVAC Professional Engineer \(Classified\) - 12/10/01 6:46 PM](#)

[Telecommunication Engineer: - 12/6/01 2:55 PM](#)

[Software Engineer - ELF, C, VMS, Linker, Compilers - 12/6/01 10:18 AM](#)

[SilverBack Managed Service Provider - 12/3/01 7:26 PM](#)

[Technical Writer - 12/1/01 7:16 PM](#)

[Electrical Consultant - 11/30/01 12:50 PM](#)

[Power Engineer Consultant/Expert Witness for electrical substation - 11/28/01 1:26 PM](#)

[Senior IC Design Engineer - 11/27/01 3:34 PM](#)

[Senior Engineer - 11/21/01 1:43 PM](#)

[Electrical Contract Designer autocad/microstation - 11/20/01 2:57 PM](#)

[Electrical Engineer - 11/20/01 2:49 PM](#)

[Analog to Digital - 11/17/01 08:05 AM](#)

[Global Positioning Systems - 11/9/01 12:32 PM](#)

[Electrical engineers needed to author professional reference books - 11/8/01 10:05 AM](#)

[Software Engineer \(Michigan\) - 11/7/01 2:48 PM](#)

[Electrical Engineer - 11/7/01 1:57 PM](#)

[Software Engineers with Medical Device experience - 11/7/01 11:06 AM](#)

[Principal IC Design Engineer - 10/29/01 5:14 PM](#)

[Patent Infringement consulting Assignment - 10/29/01 3:55 PM](#)

[Board Design Principal Eng - 10/26/01 11:41 AM](#)

[Controls Engineer - 10/25/01 1:38 PM](#)

[Windows CE Internals Developer - 10/25/01 11:22 AM](#)

[SOLID STATE PHYSICIST - 10/24/01 11:17 AM](#)

[Sr. DEVELOPMENT ENGINEER - 10/18/01 5:45 PM](#)

[SR RFIC DESIGN ENGINEERS - 10/18/01 5:32 PM](#)

[ATE TEST MGR - 10/18/01 2:38 PM](#)

[RF Circuit Design - 10/17/01 12:59 PM](#)

[Radar Systems Engineer - 10/17/01 12:56 PM](#)

[SOFTWARE CONFIGURATION MANAGER - 10/10/01 10:42 AM](#)

[Corporate NVH/Acoustics Engineer - 10/8/01 2:27 PM](#)

[CONTRACT: Senior RF Engineer - 10/5/01 09:48 AM](#)

[Substation Electrical Engineer - 10/2/01 12:11 PM](#)

[Electrical Engineer - 10/2/01 10:32 AM](#)

[High Power Amplifier Designer Needed! - 10/2/01 10:22 AM](#)

[RF Design Engineer - 09/28/01 3:29 PM](#)

[Reliability Engineer - 09/27/01 3:06 PM](#)

[CONTRACT: Electrical Development Engineer - 09/27/01 2:37 PM](#)

[Signal Engineer - 09/25/01 4:12 PM](#)

Design Con 2002

<http://www.designcon.com/2002/catalog.pdf>.



EXHIBITOR NEWS

DesignCon 2002 is gaining momentum and is on its way to a record year, despite the economic turndown. Fueled by a world-class educational line-up and anchored by the participation of Agilent Technologies as the Event Sponsor and Cahners Publications as the Publishing Sponsor, DesignCon is positioned to enjoy another great year.

Strategically held in the first quarter, DesignCon has become a must-attend event for the EDA and semiconductor industries. In fact, current registration numbers have eclipsed any previous year-to-date totals by a wide margin. If you haven't already done so, reserve your exhibit space and sponsorship immediately to position yourself as an industry leader and ensure your inclusion in this outstanding program. Additional details are available at www.designcon.com.

To assist in your pre-conference planning, please note the key upcoming deadline dates:

Hotel Reservation	December 28, 2001
Lead Retrieval Reservation	January 12, 2002
Exhibitor Booth Personnel Registrations	January 19, 2002

Virtual Exhibits

DesignCon exhibitors are entitled to a special

To maximize corporate visibility for your organization, a number of sponsorship opportunities are still available for your consideration:

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Wednesday Keynote Luncheon

Wednesday Evening Reception

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Press Room

Banner Sponsorships

Hall of Recognition Banners

Foyer Banner and Column Wrap

Registration-Area Banners

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Outdoor Main-Entrance Banner

Conference-Center Entrance Banner

Exhibit Hall Entrance Carpet Logos

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The IEC would like to thank our **DesignCon 2002
sponsors for their leadership and generous support
of this outstanding annual event. For more
information on these industry leaders, please [click
here.](#)**

Special Guest Article

Why You Need Practical Reliability Details To Define Life Cycle Costs For Your Products and Competitors Products!

H. Paul Barringer, PE

Barringer & Associates, Inc., P. O. Box 3985, Humble, TX 77347-3985

Phone: 281-852-6810, FAX: 281-852-3749, e-mail: hpaul@barringer1.com

Abstract

High-grade products are difficult to sell because of price resistance—particularly when the high-grade products have much longer life and require less maintenance than lower grade products. Life cycle costs comparisons help decide the lowest long-term cost of ownership driven by a single estimator called net present value. The initial low sales price item usually forms a datum for procurement decisions, and the higher sales price item must be compared over the entire life of the project. The net present values require decisions about when and how much maintenance/replacement costs will be incurred which is driven by the time and modes for

component failures found by using reliability technology developed during the past 60 years.

See <http://www.barringer1.com/Papers.htm> for complete article in PDF format

TRAVEL ADVISORY TIPS

An anecdotal account of one traveler's recent experience since September 11th

By Mike Morehouse

Since September 11th, I have made two flights to San Jose; and upon both accounts, I required a Car Rental for transportation to the Supplier. I purchased my Airline Tickets (American Airlines) and scheduled the Car Rental over the Internet VIA AOL. The tickets were FedEx'd overnight.

During the planning phase, I took only what I needed-1) Phone Number list for Customers in New Jersey & New York; 2) One pad of writing paper; 3) The Customer's file; and 4) The Vendor's file.

The scheduled flight from John Wayne to San Jose was at 6:45AM, which means that I had to arrive at John Wayne at 4:45AM. Then, kissed my wife good by; and proceeded to Check-In at American Airline's Check-In

counter.

This took about 1.5 Hours the first time, and only 1/2 Hour the second time.

It took about 20 Min. Max. going through Security.

Tools that are considered by the FAA as sharp instruments, (i.e., Screw Drivers, Plug-Thread Gages, Xacto-Knives or blades, Keys, & etc.); these items should be placed into your Check-In Luggage or left behind.

Tool Kits should be placed into your Checked-In Luggage.

Remove from your pockets all sharp items including Ball Point Pens. T-ball type pens are acceptable.

If you need to take medicines during the day, place the pill or pills into a piece of toilet paper & roll it up into your pocket. These items will not make any indication on the hand-held machine.

A Note regarding the available technology:

1) The older Machines in most airports are X-Ray type Machines. These Machines can only detect Metal or Semi-Metal objects.

2) The latest units available in most airports are Back-Scatter Ultra-Violet Type can detect Metals, Semi-Metals, Semi-Conductors, Wiring, Various Electronic Devices, and Bomb Materials; but, not Plastic Explosives.

3) The Proto-Types under development are capable of detecting Plastic Explosive Materials. E G & G Astrophysics in Long Beach is a manufacturer of these systems.

GETTING PAID

Stephen Maas, Ph. D., P.E.

Nonlinear Technologies, Inc.

Getting paid for your work is, of course, the most important aspect of consulting. In my travels, I find that some consultants never have problems getting paid, while others are continually and repeatedly “stiffed.” Part of the reason is the nature of the work and the industry that the consultant serves; some clients are relatively easy to collect from, while others (to put it mildly) are not. Even in the former case, and especially in the latter, it is nevertheless essential to make sure that your bills are paid completely and on time.

The fundamental problem is that a large number of businesspeople are thoroughly amoral. They feel no responsibility to honor an agreement (unless it can be legally enforced), and they view the theft of your work not as a crime but as an accomplishment. Make no mistake about it: these people really exist, and you have to protect yourself from them.

Collection problems are most likely to occur in dealings with small companies. In large companies the process of paying bills is largely institutionalized; the people who write the checks have no emotional attachment to the money, and might pay a bill late because of simple mistakes, carelessness, or an accounts-payable department that runs slowly. (After all, big companies have little incentive to create a speedy AP department!) In a small company, however, the president may well sign all checks himself, and views each one as money out of his own pocket. Every cent he steals from you helps make the payments on his BMW.

Another reason small companies might stiff you is that they simply don't have the money. In that case, the supplier that applies the most pressure is the one that gets paid, and that should be you. Call them frequently and be firm but not rude. Make sure they understand that you're not going to go away.

A typical horror story: an acquaintance of mine returned to consulting after being laid off from a regular job. In desperation, he took a several-month-long software job entirely on the client's terms: these included payment only after the job, which took several months, was completed and delivered. The client first simply ignored his invoices, and when the consultant called him, the client claimed never to have seen the bills. Several hand-delivered invoices were “lost,” and eventually the client claimed that the work was inadequate, for unspecified reasons, and flatly refused to pay. After much fighting and a few threats of lawsuits, the consultant finally received partial payment, more than a year late. He does not expect ever to receive full payment.

My friend violated one of the most important rules of getting paid: no matter how desperate you are, never accept a long-term job on the condition that payment will be made only on delivery. If a client demands this, it is strong evidence that he does not intend to pay at all. The solutions are simple: (1) partial payment up front (a *retainer*), (2) periodic billing (for an hourly job), or (3) billing at predefined milestones (for a fixed-price job). These arrangements share the risk between the consultant and client, and are thoroughly fair and reasonable. If a client resists them, watch out!

If a client refuses to pay, he will inevitably try to justify himself by claiming that your work was inadequate; this is, after all, the only credible reason he can give. To avoid this, make sure that (1) the client's needs were defined clearly in your contract, by a specification or statement of work; (2) include a condition in your contract that the work will be assumed to be adequate if no complaints are registered within a short period (e.g., 15 days) of delivery; (3) include a mechanism for fixing problems discovered later (e.g., hourly billing for software bug fixes); (4) keep the client informed, through periodic reports and partial deliveries, so he cannot claim ignorance of your work; and (5) keep records of phone conversations and meetings.

If a progress payment is unreasonably late, and the explanation is inadequate, be prepared to stop work. Remember, every organization has someone who can cut a check on short order. There is no real excuse for unreasonably late payment, and stalling the payment of a bill is an indication that the client has no intention of paying it.

However, before stopping work, be sure that the person you are dealing with really has the power to force payment. In large companies, for example, working engineers and managers usually have little direct influence on the accounts payable dept. Stopping work in this case only guarantees hard feelings and a loss of billable hours. It's much better to get on the phone and harass the folks in the AP dept. Don't be rude when you do this; that would give them a valid reason to avoid you. Just call them daily, and politely inquire as to the status of payment, and remind them frequently that you're concerned about the lateness. They very quickly tire of hearing from you, and realize that processing your invoice is the easiest way to get you to shut up.

So, let's say you do get stiffed. What are your options? What about Small-Claims Court? In California, the limit for Small-Claims Court is \$5,000, which may not cover your bill. Also, even if you win, you may still have trouble collecting; and, frankly, you might lose. It's best to keep these things out of court, if you can. I suppose that some form of arbitration is also possible, but the client has to agree to it, and he has little incentive to do that.

Clearly, your best protection is prevention. What other forms of prevention are possible? It is sometimes suggested that, in software jobs, one should put a time bomb in the software, so it will stop working (e.g.) 30 days after delivery. When your invoices are paid, you provide a non-bombing copy. If you do this, be sure to include in your contract a statement that the program will be licensed initially for only (say) 30 days, and that the final license will be provided after payment. Otherwise, you can bet that the bombing program will be used as evidence that your work was inadequate.

Similarly, in hardware jobs, software, or studies, essential documentation can be delivered after final payment. There are a lot of options here; the principle, however, is to make sure you don't deliver everything the client needs until you have been fully (or at least substantially) paid. Again, make sure that deliverables are spelled out in the statement of work, so the client can't withhold payment claiming that you failed to deliver something.

In the final analysis, you are involved in a business, and unpaid bills are a genuine business risk. The time may come when it makes sense simply to walk away from an unpaid bill, charge it off to experience, and get on with life. However, don't do this very often.

INFORMATION RESOURCES

Mr. Art Larson has offered to share the Internet Resources that he discovered while preparing for his "Computer Aided Conferencing" presentation, and research into "Collaborative Tools Within the Microsoft XP Operating System and Office Suite". The titles are hyper linked to their respective web pages and can be accessed directly from this newsletter. The following list is severely truncated to fit in a reasonable space. Please email the Editor if you would like to request the complete list.

[MS KEY Studio 2001 ***](#)

[Microsoft: Home Networking ***](#)

[Microsoft: IE 5.0 Preview ***](#)

[Microsoft: NetMeeting ***](#)

[Microsoft: NetMeeting: Business Users ***](#)

[Microsoft : NetMeeting : Features ***](#)

[Microsoft : NetMeeting : SDK ***](#)

[Microsoft : NetMeeting SDK : COM Object Reference ***](#)

[Microsoft : NetMeeting SDK : Contents ***](#)

[Microsoft : NetMeeting SDK : Tutorials and Samples ***](#)

[Microsoft : NetMeeting in Action ***](#)

[Microsoft : NetMeeting 3.01 Download ***](#)

[Microsoft : Office ***](#)

[Microsoft: Share Point: Team Services ***](#)

[Microsoft: Share Point: Team Services: FAQ ***](#)

[Microsoft: Share Point: Technologies ***](#)

[Microsoft: Share Point Portal Server ***](#)

[Microsoft: Share Point Portal Server : Building a Corporate Portal Using Office XP and Share Point Portal Server 2001 ***](#)

[Microsoft : Share Point Portal Server : Features ***](#)

[Microsoft : Share Point Portal Server : Tour ***](#)

[Microsoft : Visual Basic ***](#)

[Microsoft : Why XP Pro \(Top 10 Reasons Windows XP Professional Is Right for Small Business \) ***](#)

[Microsoft : Why XP Pro : Enjoy the Ultimate Communication and Collaboration Tool ***](#)

[Microsoft : Why XP Pro : Keep Your System Secure While You're on the Internet ***](#)

[Microsoft : Why XP Pro : Work with All of Your Data and Applications While Away from Your Office ***](#)

[Microsoft : Win XP Home : ***](#)

[Microsoft : Win XP Pro ***](#)

[Microsoft : Win XP Pro : Inside Windows Messenger \(How it Communicates \) ***](#)

[Microsoft : Win XP Pro : Inside Windows Messenger : Links ***](#)

[Microsoft : Win XP Pro : Using Remote Desktop ***](#)

[Microsoft : Win XP Pro : Using Windows Messenger ***](#)

[Microsoft: Windows ***](#)

[Microsoft: Windows XP: Experience Real-time Communication ***](#)

[Microsoft Business: Digital Dashboard ***](#)

[Microsoft Business: Why Choose Microsoft? \(Microsoft's Vision\) ***](#)

[Microsoft Investor: Insight ***](#)

[Microsoft Press: Understanding Groupware in the Enterprise ***](#)

[Microsoft Systems Journal ***](#)

[Microsoft: Share Point: Team Services: FAQ ***](#)

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[Microsoft : Share Point Portal Server : Features ***](#)

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[Microsoft : Win XP Pro : Using Windows Messenger ***](#)

[Microsoft : Windows Messenger in Windows XP ***](#)

[Microsoft : Windows XP : Experience Real-time Communication ***](#)

[Microsoft : Windows XP : Experience: Real-time Communications ***](#)

For Our Patriots – A Colorful Tribute to the Flag

See <http://personal.jax.bellsouth.net/jax/l/c/lchaplin/unkarock/flag.htm>

("I Am The Flag")