



On the Web: <http://www.etaengineering.com/ieeephx.html>

The Advisor

Newsletter of the
IEEE Phoenix Area
Consultants Network

January 2001

Volume 8

Number 1

NOTES FOR THE NEW CENTURY:

- All members are advised that dues for the year 2001 are due starting in January. Fees are \$45 for full membership and \$20 for associate membership. People who are not members of the IEEE are welcome to join, but a \$5 non-member surcharge will apply. Please note that only members will be listed in *The Advisor*. Only full members can be listed on the PACN website. Non-members are welcome to attend PACN meetings, but will incur a \$10 per-meeting surcharge (three "free" meetings are allowed; meetings attended before January 2000 do not count.)
- Due to the recent price increases at Monti's, we are again considering moving the meeting site. We hope to hold the February meeting at a new location, possibly the Black Eyed Pea in the Scottsdale Pavilions (near the Pima Freeway at Indian Bend.) We understand that they have a nice meeting room and that a good dinner can be had for fifteen dollars or less. We would appreciate

any alternate suggestions; send them via email to Vaughn Treude (vaughn@nakota-software.com) or bring them with you to the January meeting.

- We will be circulating a "member information update" form via email. Please take time to check update your member information. Phone numbers, email addresses, and areas of specialty change frequently; please help keep our database up-to-date. And for IEEE members, the IEEE also requests that we ask for your membership number. You may also wish to check your resume and contact information on the PACN web site (www.etaengineering.com/ieeephx.html). We wish to thank Lane Garret and his staff at ETA for maintaining the web site; any help in keeping the information accurate is appreciated.
- Lane Garret has announced that ETA Engineering will be adding a link on its site to the PACN web page. Our web page has been hosted by the ETA site for some time, but it was only accessible to those who knew to add "ieeephx" to the URL. He also plans to add more space for listing specialties in each

member's entry, and would appreciate suggestions for any new areas of expertise to be added to the web site.

- The Executive Board is asking for a volunteer to fill a marketing chair position. This person would help promote the Consultants' Network as a group, and look for ways to provide more work-related contacts for our members, perhaps acting as a liaison with recruiters, etc. We'll be discussing this further at the upcoming meeting, so please consider it—or maybe you know someone else who might be interested.
- Long-time associate member Gina Caplan has announced that she's retiring from the accounting business, and thus will not be renewing her membership. We'd like to wish her the best of luck and thank her for her contributions to the group. Since our group is overwhelmingly comprised of engineers and other technical types, it's been good to have the perspective of someone from a different profession.

MEETING NOTICE

WHEN:

Thursday, January 11th, 2001
Social and check in at 6:30 PM, Dinner at 7:00 PM
Choice: beef (filet), chicken, fish (orange roughy), vegetarian available
Business meeting starts about 8 PM

WHERE:

Monti's La Casa Vieja, on Rio Salado Parkway (formerly First Street) and Mill Avenue, Tempe
Phone: (480) 967-7594

COST:

Meal cost is \$21.25 per person for the filet and \$19.25 for the chicken or fish. If you come at 7:30 or so and do not eat, there is no charge. **NOTE:** Since January 2000, each visitor has been allowed three "free" meetings (that is, the same cost as members), after which there will be a \$10.00 surcharge.

PROGRAM:

CONSULTING OPPORTUNITIES IN ALTERNATIVE ENERGY: Consultants' Network member (and alternative energy expert) Lane Garret will speak on exciting new opportunities for consultants due to State of Arizona's new Solar Portfolio Standard, which requires utility companies to invest in alternative means of energy production.

RESERVATIONS APPRECIATED:

We need to make proper arrangements with the management at Monti's. Therefore, *please call Bruce Johnson at 480-759-2826 (or e-mail bruce.johnson@ieee.org) if you know you will attend.* If you decide to come at the last minute, please do so. Any restaurant can always serve one more meal. **Please let us know ASAP! Monti's needs a head count to give us a good room!**

HAPPY NEW YEAR!!!



PRESIDENT'S MESSAGE

C. Bruce Johnson

We had ten people at our December 14th Annual PACN Meeting at Monti's. Bill Morgan and Bruce Johnson were elected to the Executive Committee. Gene Baxter stepped off the board after serving as our Treasurer. Gene was presented with an award of appreciation for his excellent dedicated service to PACN, along with a cash award of fifty dollars. As of December 1st, 2000, the balance in our PACN treasury was \$4329.61. Another award was given to Vaughn Treude in appreciation for his exceptional work as Editor of our monthly newsletter, "The Advisor," also with a cash award of fifty dollars. Other issues were discussed, including specific ways to develop programs for our members that relate directly to new consulting business opportunities. It was also announced at this meeting that PACN will sponsor a table at the IEEE Phoenix Section Awards Banquet, Saturday, January 13, 2001, Pointe Hilton Tapatio Cliffs Resort, 11111 North 7th Street, Phoenix AZ 85020. Please let me know if you wish to attend this Awards Banquet.

The next regular meeting will be held Thursday, January 11th, 2001, starting at 6:30 PM at Monti's La Casa Vieja, which is located on Rio Salado Parkway and Mill Avenue in Tempe. Our program speaker will be Lane Garrett, who will describe the State of Arizona's "Solar Portfolio Standard," and how it opens a new billion-dollar market, starting this year, for consultants and other organizations with expertise related to this field.

If any of you have registered with Teltech's "expert marketplace" you should begin receiving "hits" in the near future. It is partly a way to



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Executive Board

President: C. Bruce Johnson (480) 759-2826
 Vice President: Lane Garrett (480) 991-8272
 Secretary: Russell Johnson (480) 991-3787
 Treasurer: Bil Morgan (480) 921-4094
 Membership Chair: Paul Everett (480) 706-4753
 Publications Chair: Vaughn Treude (602) 750-3662

obtain a free listing for your practice, and it facilitates selling your consulting expertise. If you haven't looked into what Teltech has to offer, more information is available on their website at www.teltech.com/expert-market/default.asp

Teltech is a well-regarded and relatively old expert consultant organization that is now making use of the web to a greater extent. I can't encourage the technical consultant too much to look into this opportunity.

Your executive committee works to offer presentations and develop programs of general interest and usefulness to our members. Somehow we also need to find ways to make our practices more successful. With this in mind, please attend our meetings as an active member, whenever possible, and bring your practice improvement ideas and comments with you to share with the network. To advertise our practices we do have a local web page, with individual member listings. Our member listings in the IEEE USA Directory of Electrotechnology & Information Technology Consultants were not continued this year, primarily because this has not generated any consulting work for our members. However, members are encouraged to consider this listing service on an individual basis. Please come to our meetings prepared to discuss ideas and approaches for improving the consulting activity for our members

As always, all members are encouraged to submit newsworthy items to Vaughn Treude, for inclusion in our newsletter, so please be on the lookout. Humor is welcome as well, especially if it relates to consulting. [Note: Executive Board meetings are usually held at 8:30 am on Saturday mornings 12 days prior to each monthly meeting. These meetings are open to all members. Please contact Bruce Johnson if you wish to attend.]

Our informal meetings are designed for networking, to communicate with each other on a personal and professional level, and to enjoy a program and a meal together as a group with a common interest and dedication to the enterprise of consulting. Next month we have arranged to have Mr. Woody Maggard from the Arizona Technology Incubator speak to us on the subject of how that organization might offer opportunities for consultants. **Be sure to mark your calendars now, and plan to attend our next regular meeting on Thursday, January 11th, 2001, starting at 6:30 pm at Monti's La Casa Vieja.**

URL's Of Possible Interest

The following URL's may be of interest to IEEE PACN members:

❖ www.ieeeusa.org/business/

This is the home home of the IEEE's Consultant's Networks, plus resources for entrepreneurs, researchers, and others seeking information on grant and business opportunities

❖ www.consultme.com

This web page provides a directory of consultants. Services are listed by skill, specialty, name company name or professional title, and by location and availability. There is a fee for this service.



❖ www.ieeeusa.org/employment/global

Here is the place to access the IEEE-USA's Web Employment. These services, a benchmark in the industry, are being made available and promoted to IEEE members worldwide. A new global employment services Web page describes how job seekers and employers outside the United States can avail themselves of the organization's Job Listing Service, Resume Referral service and consultants database. The site also contains an invitation for non-U.S. regions and sections to contact IEEE-USA for assistance in promoting these services to their members.

❖ www.ieeeusa.org

The above is a good general website for all of us in the PACN. All IEEE PACN members, who are IEEE members, are strongly encouraged to obtain an IEEE email address, i.e. SMTL. You may do this quickly by starting at this URL.

❖ www.JobsArizona.com

This local URL often contains requests for consulting services.

EDITOR'S NOTES

First of all, I wish to thank the group for recognizing my efforts as newsletter editor, and for the thoughtful gift. For the most part, I enjoy these duties, although it can be a little frustrating when I'm busy and time is short. Thanks also for all the helpful and encouraging comments I've received from readers over the years. It helps motivate me to keep at it.

And now, I'd like to say: Welcome to the new century-- for real this time! It was anticlimactic after last year's over-hyped celebrations and Y2K bug paranoia. My wife and I went out for our traditional Chinese dinner, then spent the rest of the evening at home with a few friends and relatives. We were surprised

that only the Spanish station was showing non-stop New Year's celebration coverage. It finally came on (in English) at 11:45. Call me anal, but it irritates me that they show taped coverage of "the ball" dropping in New York City, calling it "live." They should broadcast the celebration in cities in all the U.S. time zones; for example, Chicago, Phoenix/Tempe, Los Angeles or Las Vegas, and maybe Anchorage and Honolulu. They could drop something at midnight in each city—the tortilla chip in Tempe (do they still do that?), a silver dollar in Vegas, and maybe a giant bratwurst in Chicago.

Speaking of the new year, I would like to see our organization resolve to make itself more responsive to the needs of the members.

Things seem to be a little slow right now, so we should be emphasizing consulting and contracting opportunities for our membership. I'm trying to find some good marketing methods myself. Paul Everett reports that he's had good success with his web page, since he added some infrared-related technical info. Maybe we can get him to speak about that at one of our meetings.

I hope that everyone had a good holiday this year. My wife and I bought ourselves several electronic gizmos for Christmas. We have a year-old Epson digital camera we weren't using much, so we got a 64 megabyte

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Note: The following membership list consists of people who had paid their dues as of December 2000 (except those who have expressly said they're not planning to renew.) We're going to give everybody a little leeway in getting paid up before we purge them. Eventually, though, we will purge the list of non-paying members. Inevitably, there are people who retire, move away, or get into a new line of business, so hopefully we will be attracting new members to our roster.

ADVISOR MEMBER LIST

January 2001

Name	Phone	FAX	email	Area of Expertise
Baxter, Dr. Gene K., P.E.	480-832-7744	480-832-7744	baxter@inficad.com	Forensic mech. eng., stress, dynamics, kinematics
Craig, Howard	480-964-7996		howardCraig@earthlink.net	Labview programming, test engineering
Crane, Milton	602-840-1171		macrane@uswest.net	Microwave & RF syst. eng.for comm., wireless, radar
Everett, Paul M.	480-706-4753	480-706-4753	peverett@everettinfrared.com	Electro-optics / Infrared technology
Garrett, Lane S., PE, CEM	480-966-1380	480-966-1516	lanegarret@aol.com	New product development, alternative energy
Gerke, Daryl, P.E.	480-755-0080	480-838-9605	dgerke@emiguru.com	Electromagnetic interference and compatibility
Ingle, Arthur J.	480-899-9384		art_ingle@hotmail.com	
Johnson, Dr. C. Bruce	480-759-2826	480-759-2826	bruce.johnson@ieeee.org	New product development, night vision, optical sensors
Johnson, Russell R.	480-991-3787		rjohnkozar@aol.com	Program / project and quality management
Jones, Clark	480-345-3638	480-345-8793	jones@tempe.tt.slb.com	
Kawam, Elias A.	480-706-8561	480-706-8587	eklatek@yahoo.com	Space power
Koch, Edward, Jr.	602-953-2111	602-953-2111	ekochojr@worldnet.att.net	SW Project / program mgmt, embedded systems
Leverance, Neil C.	480-981-8883	480-981-5117	nLever@ieeee.org	Control sys., meas. & test, automation, PLC's
Maltenfort, Andrew J.	480-704-6250	480-759-3801	maltenfort@arowave.com	Photonics, fiber optics, sensors, integrated optics
Mischen, Edward J.	480-897-9405		emission@worldnet.att.net	
Morgan, William D.	480-921-4094	480-921-4094	bmorgan@amug.org	Software design and development- Macintosh
Polischuk, Andre	602-482-0890	602-482-3979	apolischuk@aol.com	
Rose, Robert C.	480-595-1187		bob.rose@ieeee.org	
Ross, Dr. Arthur H. M.	602-371-9708	602-336-7174	a.ross@ieeee.org	CDMA, wireless communications
Sheppard, William D.	480-558-9770		wsheppard@earthlink.net	Electronic cameras & general purpose electronic design
Sprague, Ronald L., P.E.	480-962-8183	480-962-8183	r.sprague@postoffice.worldnet.att.net	Power Engineer
Sullivan, Robert M.	480-948-3242	480-948-3242	sully@goodnet.com	Product development: high perform. tech. computer pkg
Tannehill, Richard L., P.E.	623-435-9584	623-435-9584	rickw7rt@firstinter.net	Telecommunications
Treude, Vaughn L.	623-412-0916	623-412-0916	v.treude@ieeee.org	Software design & development, SECS/GEM, industrial
Vollertsen, Stanley A.	480-774-0803	480-774-0809	stan@stantronix.com	Power conversion and prototyping
Zurbrick, John R., P.E.	623-486-8747	623-486-8747	zurbrick@inficad.com	Chemical Eng'g., animation, fiber composites, instruments

MEMBER WEB SITES

Paul M. Everett	www.everettinfrared.com	Lane S. Garret	www.etaengineering.com
Daryl Gerke	www.emiguru.com	C. Bruce Johnson	www.JohnsonScientificGroupInc.com
Andrew J. Maltenfort	www.arowave.com	William D. Morgan	www.amug.org/~bmorgan
Robert C. Rose	www.gshelp4u.com	Arthur H. M. Ross	www.cdg.org/tech/a_ross
Richard L. Tannehill	members.firstinter.net/rickw7rt	Vaughn L. Treude	www.nakota-software.com
Stan Vollertsen	www.stantronix.com		

Editor's Notes - Continued from P.3

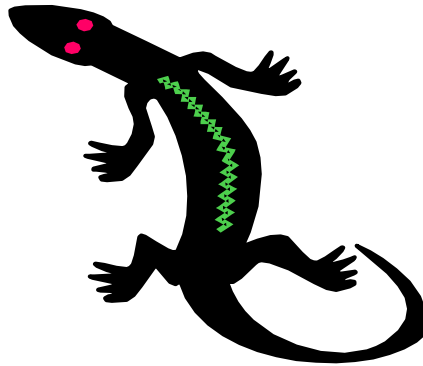
Compact Flash card. Now we can take about 150 pictures at the highest resolution before needing to upload them. Formerly the only way we could do this was via a serial cable at 115K baud, which took a long time even when it only had four megabytes of memory. So I bought a SanDisk ImageMate, which is a nifty little device that plugs into the USB port. It has a slot for the Compact Flash card, which the software accesses as a removable drive. Now for the bad part: I wanted to install it on my wife's computer, which runs Windows 98, but the hardware is too old to have a USB port. I bought an add-on USB card and Plug-and-Play recognized it immediately. But when I hooked up the SanDisk, Windows got completely confused. It started detecting the network card and the modem as new devices, and it installed the wrong manufacturers' drivers to boot. I fiddled with it long enough to corrupt Windows enough that I had to boot the PC from a floppy.

I guess this is turning into another anti-Windows rant. For an operating system that has ninety percent of the desktop market, I'm continuously amazed at its fragility. I tried reinstalling Windows 98, but I didn't want to wipe the PC's disks (I hadn't backed up this PC in quite some time.) Before Windows 98 installs, it runs Scandisk on all the system's partitions. When there are problems on any partition, the install program requires them to be fixed first. My wife's PC had some corrupt long file names on the "D" drive—which only the Windows version of Scandisk can fix. It's a Catch-22-- you must run Windows before installing Windows. I manually deleted several files with long names until the installer gave the "D" drive its blessing. Even when Windows 98 finally booted, I had to juggle system resources until the network card, sound card, and USB would all function. And it still doesn't work quite right. (But the SanDisk device does work quite nicely—uploading is fast and convenient.) As for my primary development PC, which was running Windows 95, it was crashing so frequently that I got desperate and upgraded to Windows 2000. That went well for the most part, but to be on the safe side I kept a copy of the original configuration. That was good, because I haven't yet gotten the modem working in 2000. It seems to me that with Macs becoming cheaper and Linux becoming more user-friendly, Microsoft had better start worrying.

For our next PACN meeting, we had originally planned to have a speaker from the

Arizona Technology incubator, but that's been postponed until next month. This month's presentation will be by Lane Garret. It's a sequel to Lane's October talk on utility deregulation, which was unfortunately sparsely attended. With alternative energy being so prominent in the news, it's a timely subject. Hope to see you all there!

Vaughn L. Treude, Editor



EXECUTIVE BOARD

MEETING HIGHLIGHTS

The January Executive Board was held on Saturday, January 6th at 8:30 AM at Bruce Johnson's residence in Ahwatukee. All six board members were present, plus outgoing treasurer Gene Baxter. Members reviewed the minutes of previous meetings and the outgoing treasurer's report. Gene Baxter transferred financial records to Bill Morgan, who will serve as the new PACN treasurer. Topics discussed included possible purchase of an LCD presentation projector (too expensive at the moment), ways to increase membership and meeting attendance, and improvements being made to the PACN web page. Attendees discussed the taking out an ad in the yellow pages (which would require the PACN to have its own phone line.) They also set a tentative meeting schedule for the first six months of 2001.

Note: Regularly scheduled meetings are normally held monthly (but not every month) at 8:30 AM on Saturdays, at Bruce Johnson's residence in Ahwatukee. These meetings are open to all members. Please contact Bruce Johnson if you wish to attend.

MEETING NOTICES

JANUARY 11th MEETING

Lane Garret will speak on exciting new opportunities for consultants due to State of Arizona's new Solar Portfolio Standard, which requires utility companies to invest in alternative means of energy production.

FEBRUARY 8th MEETING

The featured speaker will be Woody Maggard of the Arizona Technology Incubator, which seeks to foster high-technology startup companies in the state.

MARCH 8th MEETING

The tentative program for March is a roundtable discussion on Marketing Procedures for Consultants.

APRIL 12th MEETING

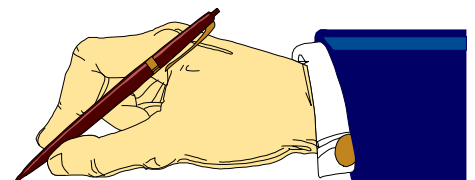
Vaughn Treude plans to give a presentation called "Standards and Your Consulting Business." The talk will show how becoming knowledgeable on technology standards (in his case, the semiconductor industry standards SECS and GEM) can benefit your business.

ANNUAL PACN BARBEQUE, SATURDAY MAY 12th

In keeping with Consultants' Network tradition, the May meeting will be held on a Saturday rather than a Thursday and will be primarily a social and networking event. See upcoming issues of *The Advisor* for more details.

JUNE 14th MEETING

We are attempting to get Roy Mcalister of the American Hydrogen Association to talk about Opportunities in the new Hydrogen Fuel Economy. The group advocates widespread use of hydrogen as a motor fuel, a plan which can reduce both air pollution and American dependence on imported oil.



OTHER MEETINGS OF INTEREST

We will gladly list other meetings of interest in this space. Contact the editor of this newsletter. We only ask that the meetings be of professional interest to our members. They do not have to be IEEE meetings.

The IEEE Phoenix Section Executive Committee usually meets on the first Monday of each month at 6 PM, and all IEEE members are welcome to attend. These meetings are currently being held at the SRP facility on Priest Road, between Washington and Van Buren.

The Phoenix Chapter of the **Independent Computer Consultants Association (ICCA)** meets the second Tuesday of each month with programs of interest to computer consultants, programming contractors, and others in the computer industry. Meetings are held at the West Coast Executive Park Hotel, 1100 North Central Avenue (just south of the Deck Park over I-10.) Meetings start at 6 PM for cocktails, 6:45 for dinner and 7:15 for the program (usually a guest speaker.) The cost of dinner is \$20 for members and \$25 for guests. Attending the meeting only is free for members and \$5 for guests. Call the ICCA hotline at 602-942-0667 for more information.



Tempe Tech Oasis "Techie Tuesday" – What is a Techie Tuesday? It's a chance to get together with friends and colleagues, talk business, talk shop, whatever you like... This event is held monthly at 6 PM on the second Tuesday evening of the month. This month's meeting will be held on January 9th at Beeloe's Cafe and Underground Bar, 501 S. Mill Avenue (southeast corner of 5th and Mill) in Tempe AZ. Beeloe's is located in the below-street level of the Hooter's / Owl's Nest Building. Further info is at <http://www.beeloes.com> Although meet-

ings are held monthly, the location changes frequently, so in future months, check this newsletter or one of the following websites before attending. The sponsor of this event is the Tempe Tech Oasis Alliance. Founding members: The Arizona Internet Professionals Association (www.azipa.org), the Arizona Software & Internet Association (www.azsoft.net) and the City of Tempe (www.tempe.gov.)

The Phoenix Linux User's Group (PLUG) meets at 7 PM on the second Thursday of each month (an unfortunate time conflict!) at the Sequoia Charter School at 1460 S Horne, Mesa, AZ 85204. Membership in PLUG is currently free to anyone that wants to join. This month's topic will be Alternate Platforms, and may cover such Linux competitors as FreeBSD, NetBSD and embedded variants of Linux. A second, unofficial meeting dubbed the **Linux Stammtisch** (German for "reserved table") is held at 7 PM on the third Tuesday of each month at the Bandersnatch Pub at 125 E. 5th St. In Tempe. (The Bandersnatch is Arizona's oldest microbrewery, with good food, too!)

The Arizona Internet Professionals Association (AZIPA) holds an informal happy-hour-type gathering each month at Club Rio, which is located at 430 N. Scottsdale Road in Tempe, on the west side of Scottsdale Road, just south of Route 202 and just north of Tempe Town Lake. This month's meeting will be at 5:30 PM on Monday, January 22nd. RSVP at <http://www.acteva.com/go/azipa>. AZIPA is geared toward people that are involved in the New Economy and do Internet related stuff (or work with those who do.) This month's event will be an AZIPA Company Showcase— which is a great way to see some of the really cool and useful internet related stuff that is happening right here in Arizona— and find potential partners, customers, employees, investors, suppliers, affiliates, employers, etc. There will be over fifty companies in this month's AZIPA Showcase. If your company is interested in participating in a future AZIPA Company Showcase, please sign up (at the URL above) as soon as possible (space fills up incredibly fast!)

The Capital Formation Special Interest Group of **AZSOFT.net** is being held on Thursday, January 18th, 2001, at 7:30 AM at Squire, Sanders & Dempsey, L.L.P., 40 North Central Avenue, Suite 2700. NOTE: The Parking Garage for Two Renaissance Square is located on the Southeast corner of Adams and 1st Avenue. There is a mandatory RSVP to 602-251-3069. The topic is "Financial Presentation

Skills": How to speak 'financial', make effective use of PowerPoint presentations, and incorporate techniques that will make the best impression possible to an audience of investors and venture capitalists. Those that are interested in presenting at AZSOFT.net's upcoming Investing In Innovation Conference (April 18, 2001 at the Scottsdale Conference Resort) are especially encouraged to attend!

The next **ATIC (Arizona Telecommunications & Information Council)** Public Meeting will be held on February 22, 2001 at 1:30-3:30PM as a free Phoenix and Tucson teleconference. The group is planning its continued coverage of current telecom policy and industry issues and trends. Meeting site logistics and further program details to be announced. ATIC is grateful to AT&T for the sponsorship of this and other Public Meetings. More information on ATIC and its events can be found on the web site <http://www.researchedge.com/atic>. Send email to atic@researchedge.com or call (602) 254-5887.

INTERNET TOPICS

The IEEE Phoenix Area Consultants Network maintains a web site with resumes of all members who wish to post one. It is a member benefit that is paid for in your membership fees. In addition there is a national directory of consultants and a national web site maintained by IEEE. The Phoenix network web site is:

www.etaengineering.com/ieeephx.html

www.accessarizona.com (select from

groups menu)

Note that the PACN site under Lane Garret's personal account (www.amug.org/~lanegarr) will be discontinued.

PACN member web sites are listed on Page Three.

