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The Advisor

December 2000 Volume 7, Number 12

Newsletter of the
IEEE Phoenix Area
Consultants

PRESIDENT'S MESSAGE

We had nine people at our November ninth monthly scheduled PACN meeting at Monti's. The topic of discussion, led by Vaughn Treude, was "Personal Digital Assistants: Features, Benefits, Tradeoffs." We all learned some new things about these types of electronic tools. Thanks to Vaughn for an interesting program.

Our December 14th meeting is our Annual Business Meeting. The main part of our program will be to elect officers for 2001 and discuss business matters properly belonging to the membership. I will also briefly summarize our activities for the past year and announce some of the programs and activities planned for 2001. The recent elections should remind us all again of the importance of casting our votes. With this in

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

MEETING NOTICE

WHEN:

Thursday, December 14, 2000
Social and check in at 6:30 PM
Dinner at 7 PM (Choice: beef, chicken,
fish, vegetarian available)
Business meeting starts about 8 PM

WHERE:

Monti's La Casa Vieja, Rio Salado & Mill, Tempe

COST:

Meal cost is \$18 per person. If you come at 7:30 or so and do not eat, there is no charge. (Note: starting January 2000, visitors will be allowed two free meetings, after which there will be a \$5.00 charge.)

PROGRAM:

ANNUAL BUSINESS MEETING

Members will vote to select executive committee members for the following years, and accept or reject changes to the by-laws (if any.) There will be no other program or guest speaker, but non-members are still welcome to attend.

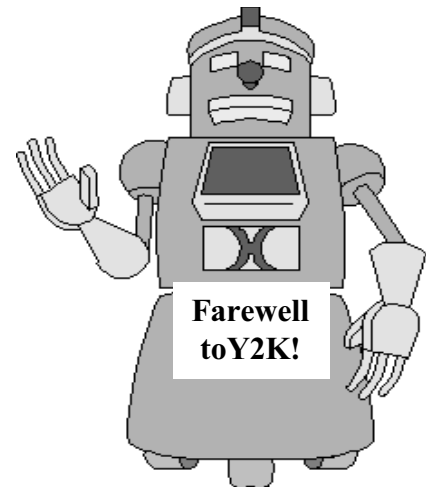
RESERVATIONS APPRECIATED:

We need to make proper arrangements with the management at Monti's. *Please call Bruce Johnson at 480-759-2826 (or e-mail bruce.johnson@ieee.org) if you know you will attend. Please let us know ASAP! Monti's needs a head count to give us a good room!*

mind, plan to attend this meeting, network, vote and enjoy a good meal together. This dinner meeting will be held **Thursday, December 14th, 2000**, starting at 6:30 pm at **Monti's La Casa Vieja** on Rio Salado Parkway (formerly First Street) and Mill Avenue in Tempe (phone 480 967 7594.)

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 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/expertmarket/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



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

Continued on Page 2

President's Message
Continued from P.1

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. Summaries of the next few monthly meeting programs are listed separately in this newsletter. Be sure to mark your calendars now for our Annual Business Meeting on Thursday, December 14th at Monti's in Tempe.

URLs Of Possible Interest

The home of the IEEE's Consultant's Networks, plus resources for entrepreneurs, researchers, and others seeking information on grant and business opportunities: www.ieeeusa.org/business.

A web page for consultants is located at www.consultme.com. Services are listed by skill, specialty, name company name or professional title, and by location and availability. There is a fee for this service.

IEEE-USA's Web Employment Services Offered Worldwide: IEEE-USA's benchmark Web-based employment services 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 consultantsdatabase. The site, located at www.ieeeusa.org/

employment/global, also contains an invitation for non-U.S. regions and sections to contact IEEE-USA for assistance in promoting these services to their members.

A good general website for all of us in the PACN is www.ieeeusa.org. 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.

A local URL that often contains requests for consulting services: www.JobsArizona.com.

Opportunity Knocks?

Editor's Note: The following message was forwarded by Paul Everett. In the spirit of the Holidays, and in honor of the last newsletter of the Millenium, I have included this notice for free. For future reference, we will probably seek a modest advertising fee (to be determined by the Executive Board) for such notices in the future. Notices by paid members, would be exempt, of course.

Sent: Monday, December 04, 2000

Subject: Help?

Howdy! Sorry to trouble you, but I was wondering if you might be able to point me in the right direction. Our consulting firm has just been awarded three different contracts with three of the major players here in AZ. I know this sounds like good news, and it is, the only problem is these contracts require us to help staff various engineering positions like Hardware and Software Design engineers, IC Design engineers, RF Product engineers, Network Systems engineers, Circuit Design Engineers, etc... This is a totally new focus for us and if you might have any suggestions where to find these individuals I would greatly appreciate any help you can offer.

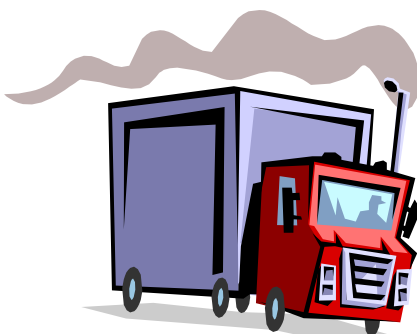
Thanks for your time!
Donna Majors Penn

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800-967-8603 or 602-437-4906 x21
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EDITOR'S NOTES

Just in time for the real new millenium, the new PDF formatted newsletter is here! Despite my distribution-related complaints in last month's issue, the PDF Creator software is indeed a great product, very easy to use. After a little more checking on the company's (Jaws Systems) website, I discovered that the product is available in download form from Programmer's Paradise. (You can also get a CD sent to you via U.S. snail mail, but why pay shipping if you don't need to?)

Speaking of last month's editorial, I want to dispel any notions that I was advocating some sort of mild endorsement of the alternative fuels program. Perish the thought! It was a



tongue-in-cheek comment, which I should have surrounded with smiley faces. I was just thinking, all these people have gotten new cars and trucks at unbelievable discounts, and here I am, saving my money until I can afford one! Now I don't object to a tax break for people who actually use alternative fuel, but I don't want a penny of other peoples' tax money to go to anyone's private vehicle purchase.

Regarding government programs, humor columnist P.J. O'Rourke said it best with his "Grandmother Test."

Continued on Page 3



- Editor: Vaughn Treude (623) 412-0916
Executive Board
President: C. Bruce Johnson (480) 759-2826
Vice President: Lane Garrett (480) 991-8272
Secretary: Russell Johnson (480) 991-3787
Treasurer: Gene Baxter (480) 832-7744
Member: Vaughn Treude (623) 412-0916
Member: Paul Everett (480) 706-4753

Editor's Notes - Continued from P.2

Simply stated, if you want the government to do something, ask yourself, "Would I kill my grandmother for this?" His reasoning is that taxes (if a person declines to pay them "voluntarily") are ultimately extracted from the people (including grandmothers) at gunpoint. In my own view, national defense and police protection are probably worth my grandmother's life, but the alt-fuel program, Arizona's "non partisan" redistricting commission, and the new Cardinals stadium definitely flunk that test.

Moving on from my obligatory political rant, I'd like to say something positive for a change. Although we've had disappointingly low turnout for recent meetings, we've actually had increased participation, as far as members submitting items for the newsletter and suggesting meeting topics. Milt Crane called me with a suggestion to have Woody Maggard, of the Arizona Technology Incubator, speak to the group. Milt also suggested that we implement term limitations for the executive board, in order to get some "new blood" into the leadership. I have no objections to this idea, if we can find

people who are actually willing to fill the positions. If someone else wants to take over the newsletter, great! Unfortunately, I wasn't able to publicize this idea in the November newsletter, which we really should do if we want to entertain it as a possible amendment to the bylaws.

Ed Koch sent a response to my November remarks on the alternative fuel program. I've reprinted it in the letters section below. He also sent me a copy of a letter he'd sent to columnist George S. Will, in which he advocates a return to

Continued on Page 4

HEAR YE! HEAR YE! We have purged the *Advisor* Member List of everyone who hasn't paid their year 2000 dues (and the year's almost over, folks!) Please let us know if there are any mistakes in here.

ADVISOR MEMBER LIST

December 2000

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
Caplan, Regina R., C.P.A.	480-838-7629		squawkus@yahoo.com	Accounting, bookkeeping, taxes, financial statements
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@ieee.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	ekochjr@worldnet.att.net	SW Project / program mgmt, embedded systems
Leverance, Neil C.	480-981-8883	480-981-5117	nLever@ieee.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@ieee.org	
Ross, Dr. Arthur H. M.	602-371-9708	602-336-7174	a.ross@ieee.org	CDMA, wireless communications
Sheppard, William D.	480-558-9770		wdsheppard@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@ieee.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

nuclear power as a solution to our foreign energy dependency. Ed also suggested American Hydrogen Association president Roy McAlister as a possible speaker for a future meeting. Unlike propane and other hydrocarbon fuels, hydrogen is renewable and *very* clean.

Finally, Bill Morgan and George Fry both independently sent me a joke about consultants that has been making the rounds on the Internet. At the risk of a possible copyright infringement (who knows where the first person got it?) I'll print it below.

I'd like to remind everyone that the December meeting is our annual business meeting. All paid members have a vote, so come to the meeting and make sure your voice is heard. Non-members are welcome also. See you then!

Vaughn L. Treude, Editor
 ★★★★★★

To The Editor

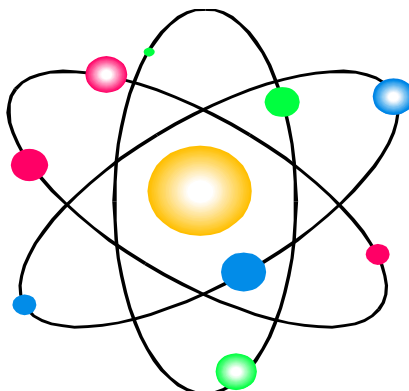
You just might be interested in the attachment [letter to George Will.] If you don't know him, George Will is a very savvy, national political writer and commentator. I, indeed, have been trying to find a national figure to address the nuclear power issue to. The Bush, Gore, McCain gang and their like are either too stupid, or too frightened, by the whole concept - fear of losing voters. The question I have is, "Where to hell is the leadership?". Real leaders are willing to conceive and foster ideas which are for the good of the country, even if they are unpopular. The amount of oil/gas in the ground is finite; getting more expensive to extract because of depth and location; and much of it is in the hands of our adversaries. I have a vision of where we are going, if we don't start thinking outside the box: first we run short of oil and the economy goes to hell; then we have a war with the folks, who still have some; we win at an outrageous cost in lives and material; we use up that supply and then the lights go out for good!

Editor's note: Ed's letter to George Will was too long to print here in its entirety, but we've included the following excerpts:

We have the technology to overcome [the energy problem], right now, but our political friends in Washington are too damned chicken and stupid to grab the ball and run

with it. What am I talking about? I'm talking about an energy policy which hinges on "The Hydrogen Cycle". And, what is that? We burn hydrogen in power plants, in factories and in our vehicles. Where do we get the hydrogen to do this? Nuclear power plants...

We build a whole series of nuclear power plants on the East and West Coasts of the US of A. Perhaps we move these power plants inland, away from the West Coast, in order to avoid the earth's instability in that region of the country. This is readily doable; we just need to pump seawater



to and from these plants. We electrolyze seawater with the electricity we generate at these plants into its component parts, i.e., decompose it into its constituents, oxygen and hydrogen. There are many commercial and medical uses for the oxygen. The hydrogen, we "burn" as fuel. Now, we can tell the Arabs to *drink their damned oil*. Oh, a side effect we get from this is that this concept reduces the strain on the environment. How is that? Guess what the major pollutant is, when you burn hydrogen? WATER!!! If there is something to this so-called Greenhouse Effect (and the jury is still out relative to whether human activity is having a *major* impact on the atmospheric environment) then we become the guys with the white hats. We significantly reduce the hydrocarbon fuel pollutants, carbon monoxide and carbon dioxide, being dumped into the atmosphere. The World will love us! (Yuk!) But, the major pay-off is that we are no longer dependent on foreign energy sources. Another positive effect is that we have an infinite supply of the raw material -

take the water apart; put it back together; take the water apart; put it back together; and on and on ...

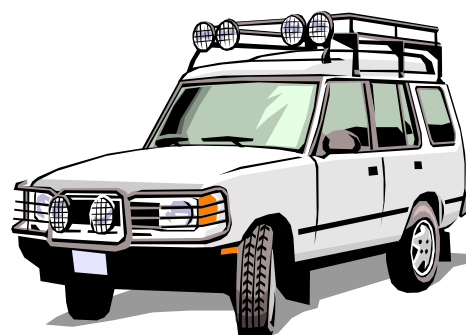
Now, let's talk about the waste... Not easy, but again solvable. We vitrify it. Huh? Yes, we put it in glass pellets. Boy, there is something else we have an adequate supply of on the face of the earth, sand. Why? Because now we can store it in cardboard boxes, since the radiation components are permanently captured - they can't get into the environment, even if the cardboard box dissolves. (I'm obviously joking about the box.) Anyway, each power plant "Farm" would have a vitrification facility right on the property. Once vitrified, the waste could be carried off, in relative safety, to a permanent storage site in New Mexico...

[N]uclear power generation is safe and is becoming more so, with each passing day. I can provide you with documented evidence of that, if you would like me to do so. And, I would be most interested in providing additional technical details of any item discussed here, if you wish to pursue this matter.

(End of excerpts. Unfortunately we had to omit some of Ed's remarks on solutions for additional environmental and safety concerns, including a suggestion that hydrogen be stored and transported in safe metal hydride canisters. We continue with Ed's letter to the Advisor.)

I have this to say about natural gas and propane fueled vehicles. The reduced pollution effect, based on the number of vehicles originally projected, is miniscule. If I had been involved in the legislature, I would have voted "No". Three million dollars is still too much for

Continued on Page 5



Letter - Continued from P.4

the little effect. Incidentally, before the Attorney General publicly stated she was investigating the matter, I called the Governor's office to tell one of her minions that I thought she, the Governor, was stupid for having signed the bill. I also called Napolitano's office to ask whether she was mounting an investigation of the matter. I'm sure she got many similar calls.

Solar power - a minor energy source and a major visual pollutant, if we use it extensively. I don't want my home and property covered with solar panels. Between low solar cell efficiency and the rather small amount of energy actually incident on any given area of the earth, it does not appear to me to ever have a significant impact on our energy needs.



Lane Garret disagrees with me, but, frankly, I just don't see it as a major factor.

Methinks the country's school system is in BIG trouble. Case in point, legislators, who are asked to vote on bills which are presumably based on science, i.e., fuels producing low pollution, should have some knowledge of the physics involved.

Ed Koch, Jr.
Koch Consulting, LLC

On The Value of Consultants

Editor's note: If you haven't seen this one yet, here's a bit of Internet humor that's especially appropriate to this group:

Once upon a time there was a shepherd tending his sheep at the edge of a country road. A brand new Lincoln SUV screeches to a halt next to him. The driver, a young man dressed in a Brioni suit, Cerrutti shoes, Ray-

Ban glasses, Jovial Swiss wrist watch and a Bhs tie gets out and asks the shepherd: "If I guess how many sheep you have, will you give me one of them?"

The shepherd looks at the young man, then looks at the sprawling field of sheep and says: "Okay."

The young man parks the SUV, connects his notebook and wireless modem, enters the NASA uplink, scans the ground using his GPS, opens a database and sixty Excel tables filled with algorithms, then prints a report on his high tech mini printer. He then turns to the shepherd and says: "You have exactly 1,586 sheep here."

The shepherd answers: "That's correct. You can have the sheep of your choice."

The young man takes one of the animals and puts it in the back of his vehicle. The shepherd looks at him and asks: "Now, if I guess your profession, will you pay me back in kind?"

The young man answers: "Sure."

The shepherd says: "You are a consultant."

"Exactly! How did you know?" asks the young man.

"Very simple," answers the shepherd. "First, you came here without being called. Second, you charged me a fee to tell me something I already knew. Third, you do not understand anything about my business and I'd really like to have my dog back."

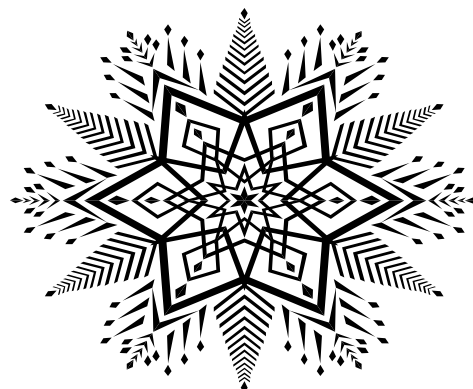
Author Unknown

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

DECEMBER 14th MEETING

As always, we will have our annual business meeting in December. Members will vote to select executive committee members for the following years, and accept or reject changes to the by-laws (if any.) There will be no other program or guest speaker, but non-members are still welcome to attend.



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 Arizona Software Association

EXECUTIVE BOARD

MEETING HIGHLIGHTS

The December Executive Board meeting has not yet been held. Traditionally, the December meeting is held immediately following the regular meeting on the second Thursday evening of the month.

Note: Regularly scheduled meetings are normally held monthly (but not every month) at 8:30 AM on

Continued on Page 6

Meeting Notices - Continued from P.5

(AZSOFT.net) invites you to join them for breakfast and hear Alan Hald, Chairman and Chief Strategy Officer, Internet Crossing talk about "How to Connect, Communicate, and Close the Deal, using the Internet." Come hear how Internet Crossing's global search engine placement services brings self-qualified prospects to your website, increasing your domestic and international exposure.

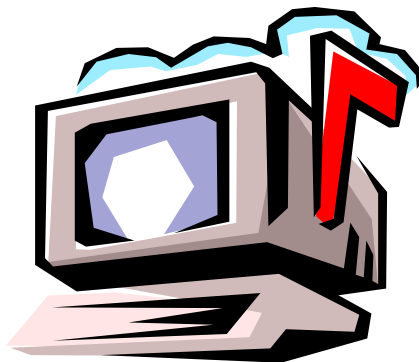
Registration is now available at www.azsoft.net The cost for AZSOFT.net members is \$15.00 and \$25.00 for non-members. Visa, MasterCard and American Express is accepted. The breakfast is limited to 100 people so please register today. The event will be held at the DoubleTree Paradise Valley Resort, 5401 North Scottsdale Rd., Scottsdale on December 12th. Breakfast will be served at 7:45AM.

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 on the second Tuesday evening of the month. Most recently, the meeting was held in the courtyard of the Tempe Mission Palms Hotel at 60 East Fifth

Street in Tempe. The location sometimes changes, so check 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.) Editor's Note: I usually don't get the meeting notice before I email this newsletter, so the location information was wrong in the November issue. My apologies if anyone went to the Owl's Nest Saloon by mistake (though that's not a bad place to be, if you like good beer.)

AZIPA (The Arizona Internet Professionals Association) is meeting on



Monday 12/11/00 at 5:30 PM. This month's location is Club Rio, 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. AZIPA invite you to stop by after work for happy hour food and beverage. There is never a cover charge for any AZIPA event.

This month's special event will feature 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, etc, etc.

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.amug.org/~lanegarr/ieeephx.html
www.etaengineering.com/ieeephx.html
www.accessarizona.com (select from groups menu)

PACN member web sites are listed on page 3.

