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Chairman's Update (By Andy Dozier)

Meetings. In July, Ms. LeEarl Bryant, who is the president of IEEE-USA, attended the TEC Dedication. The following day, a meeting was held at the University Club. Ms. Bryant brought us up to date on developments at the national level of the IEEE.

Our first meeting of the fall will be held at the newly dedicated Tennessee Engineering Center on Wednesday, Sept. 11. The subject will be "Technology Transfer – Utilizing Virtual Prototypes to Enhance Licensing Opportunities for Inventors." The speaker will be Mr. Bob Allen, a Senior Member of the IEEE. See page 2 for more details.

Java Symposium. The IEEE is one of the sponsors of the 2nd annual Music City Java - 2002 symposium which will be held on Friday, Sept. 27, from 8:30 am to 5:30 pm, with a reception afterwards. There will also be a poster session for students. Door prizes will be awarded to registered participants. The IEEE has 50 invitations to this event. If

anyone would like to attend, contact Andy Dozier immediately. There will be no charge for the invitations until they run out. The public price for attending is \$50, so this is a great deal. For additional information, check out the conference web site at <http://www.musiccityjava.org>.

Golf Tournament. The IEEE is one of the participating societies in the first annual TEC Four Man Scramble, which will be held on Thursday, October 17. See page 3 for more information. This tournament is for the benefit of the Tennessee Engineering Center, and will be used to retire the debt on the new building.

Elections. We are approaching the fall elections. If you wish to nominate yourself or anyone else that is willing to serve, please contact Bob Allen, who is the head of the nominating committee, for details. Bob can be reached at rva@micronovatech.com.

Name Change Approval. The IEEE Re-

(Continued on page 2)

Tennessee Engineering Center Update

More than 250 people attended the official dedication ceremony of the new Tennessee Engineering Center on July 30th. In attendance were national representatives from each of the 6 founding professional societies: IEEE, ACEC, TSPE, ASCE, ASHRAE, and SAME. Ms. LeEarl Bryant - President of IEEE-USA was in attendance to represent IEEE. In addition, she presented the TEC with an additional \$1000 donation from IEEE-USA to aid in fundraising for the center. This brings the total funds

raised by the Central TN Section of IEEE to well in excess of \$60,000!

The TEC is a \$1.85 million project that is dedicated to raising the level of visibility of the engineering profession in Tennessee. The center is located at the Cumberland Science Museum in Nashville and will be seen by the over 200,000 visitors that attend the Museum each year. One of the goals is to use the TEC to encourage young people to enter the engineering profession.

The center consists of a beautiful, state-of-the-art multimedia conference center with a capacity of 120, an executive board room with capacity of 25, offices for the ACEC staff, and storage areas for each of the founding societies. The entrance to the center is a nice new lobby that features plaques of distinguished engineers and a kiosk recognizing those who contributed to the project.

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Upcoming Meetings for IEEE Central TN Section

We have some very interesting programs scheduled for upcoming meetings, so mark your calendars now so you don't miss any of them! The following is a list of the upcoming meetings:

Date	Time	Program	Location
9/11/02	Lunch 11:30am Program 12:00 - 1:00pm	"Technology Transfer - Utilizing Virtual Prototype Designs to Enhance Licensing Opportunities" (See overview below.)	TN Engineering Center at the Cumberland Science Museum
10/10/02	6:00PM Social 6:30PM Dinner 7:30PM Program	"Lightning Protection Research"	TN Tech University
11/13/02	Lunch 11:30am Program Noon to 1:00pm	"Web-Enabled Power Monitoring"	TN Engineering Center at the Cumberland Science Museum
12/12/02 (tentative)	6:00PM to 8:00PM (tentative)	Christmas social with general topic for program (possibly "Home Entertainment Systems")	TBA

September Meeting

Wednesday, September 11th
11:30am Lunch
12:00pm - 1:00pm Program

Overview- "Technology Transfer – Utilizing Virtual Prototype Designs to Enhance Licensing Opportunities for Inventors"

Presenter: Robert V. Allen, Founder and CTO MicroNova Technology, Inc.

Today, most university and government research institutions utilize technology transfer and associated licensing fees as a significant new revenue stream. To enhance the technology transfer continuum, MicroNova Technology pursues these research institutions to identify early stage life science and other micro-device disclosures, develops technology assessments, completes micro-size electrical and mechanical schematic designs, and creates (*in rich media partnership with N-tara*) 3D ani-

mation prototype models. Once these models are complete, the research institution is in a position to make patent decisions and to present their disclosures to potential industry licensees and a plan to manufacture functional working "final format" prototypes for regulatory approval is developed. The presentation will detail the technology transfer process from disclosure through prototype and several virtual 3D animation prototype models of biomedical devices will be shown.

Chairman's Update (cont'd)

(Continued from page 1)

gional Activities Board (RAB) approved the proposed name change of our section from the IEEE-Nashville Section to the IEEE-Central Tennessee Section. This name change will allow us to go forward with our proposed by-law changes, and better reflects the regional distribution of our members. For a list of the counties proposed to be part of the new section, check out the IEEE web site. We have registered a new URL for our web site – www.ieeecentraltn.org. The existing URL will continue to be forwarded until the contract expires next year.

Section's Congress. Chris Finen and Mike Puckett will be attending the Sections Congress on behalf of the IEEE Central Tennessee Section. If you want Chris or Mike to submit our input to the IEEE, you may consult them at m.puckett@ieee.org or cfinen@ieee.org. For additional information on the Sections Congress, check out the web site at <http://www.ieee.org/sc>.

PACE Provides Opportunities to Become Active with IEEE

There are numerous opportunities to become more actively involved with IEEE at the local, regional, and national levels.

The **Professional Activities Committees for Engineers (PACE)** is a grassroots network of IEEE volunteers and committees organized at the section and chapter level in the United States with support from their respective regions and the IEEE-USA. The PACE Network promotes the professional interests of IEEE's U.S. members and provides a mechanism for communication of members' views on their professional needs.

The PACE committee organizes various projects to support IEEE members and the engineering community. Typical project types include:

- Career Enhancement Projects
- Employment Assistance Projects
- Government Relations Projects
- Member Professional Activities Conference
- Precollege Education Projects
- Student Professional Awareness Conference
- Technical Policy Projects

James L. Duke is the PACE chairman for the IEEE Central TN Section. If you are interested in volunteering or helping on a PACE project, contact Jim Duke at (615)356-2369 or e-mail: jamesduke@hotmail.com.

Below is a list of some projects that Jim Duke has identified as in great need for our Section.

Political Activism

Did you know?....Recently, the Tennessee State Board of Regents approved a \$20 surcharge per semester hour for all engineering classes. The justification is that the education of engineers is more expensive than other disciplines. In a time when there is a shortage of qualified engineers in the job market, do our lawmakers not feel that this additional surcharge will decrease the numbers of students entering the engineering field? Write your state senator, representative, and governor to protest this surcharge.

Engineers' Day on Capital Hill - Organizing an Engineers' Day at the State Capital is an excellent way to increase the influence of engineers on the legislative process, while creating a high-visibility event that can generate new interest and enthusiasm for section-level professional activities. By meeting with state legislators, IEEE members can develop advocacy skills and build relationships with their state representatives that will pay off in the future when key issues arise. Building a strong network of experienced grassroots advocates is also beneficial to IEEE-USA's government relations program on both state and federal issues. Most importantly, it can be a fun and rewarding event for the individual participants. Volunteers are needed. The TN Society of Professional Engineers (now ACEC) is a

main sponsor of this important event. The event helps raise the visibility and recognition of the engineering community with our lawmakers. The IEEE has traditionally been a participant in this event but is lacking volunteers. If you are interested in volunteering, contact Jim Duke, PACE Chairman at (615)356-2369 or e-mail: jamesduke@hotmail.com.

Student Professional Awareness Conference (S-PAC)

Engineers must be proficient, professionally astute, and clearly aware of their responsibility to society. Student Professional Awareness Conferences (S-PACs) explore the non technical subjects that affect engineers' careers, regardless of how well engineers prepare themselves technically. First introduced in 1979, S-PACs are an effective vehicle to transmit the professional enhances the technical education they receive in engineering school. S-PACs permit students to learn from the varied experience of successful engineers. The conferences have potential to increase student membership and to encourage ongoing participation in IEEE. S-PACs are becoming a strong force for improving the electrical engineering profession over the coming years.

S-PACs are structured events where students listen to experienced engineers from diverse backgrounds discuss topics from the six critical categories: Career Growth, Working, Professional Ethics and Social Responsibility, Self Management, Engineers and Public Policy, and Role of the Professional Society. Students have a chance to interact with the speakers, usually through a roundtable discussion. Typically, S-PACs are half a day, and involve two or three speakers.

S-PACs are typically planned and organized by the Student Branches of IEEE with the assistance of the local PACE committee. If you are interested in organizing or participating in an S-PAC, please contact Jim Duke at (615)356-2369 or e-mail: jamesduke@hotmail.com.

To get involved with PACE activities, contact the PACE Chairman:

Jim Duke
(615)356-2369
[**jamesduke@hotmail.com**](mailto:jamesduke@hotmail.com)

GOLD Committee Chairman Needed

The IEEE Central TN Section is in need of a new Chairman for the GOLD (Graduates Of the Last Decade) Program.

The mission of the GOLD Program is to serve the interests of the IEEE affinity group characterized by members in their first ten years (approximately) after graduation

GOLD was designed to meet the professional needs of members with 0 - 10 year experience as an Engineer. It encourages this affinity group to form an IEEE Group to foster networking between members with similar interests and concerns. The GOLD program is geared toward professional development, while emphasizing current issues.

The GOLD Program can help members to find fellow engineers who can share their experience. Professional and social meetings are held on the following topics: talks and help on career planning, developing leadership skills, interviewing workshops, balancing personal and professional life, job hunting, purchasing your first home and financial planning. GOLD members also participate in tours of local industries, universities, etc. and have various social events.

If you are interested in volunteering to chair the GOLD committee or participating in the GOLD program, please contact Andy Dozier (andy.dozier@vanderbilt.edu).

Educational Programs Need IEEE Support

There are numerous educational programs at all scholastic levels that could use volunteer support from IEEE and its members. As the largest operating professional organization in the world, the IEEE has an obligation to help shape, mentor, and educate the engineers of tomorrow. Below is a list of just a sample of some educational programs that could individual member support

Junior Engineering Technical Society (JETS) - www.jets.org

JETS is a national non-profit education organization that has served the pre-college engineering community for over 50 years. Through competitions and programs, JETS serves over 30,000 students and 2,000 teachers, and holds programs on 150 college campuses each year. JETS promotes interest in engineering, science, mathematics, and technology, and is dedicated to providing real-world engineering and problem-solving experience to high school students. JETS programs challenge students to discover engineering in high school. JETS puts students in touch with engineers, shows them what engineers do, and demonstrates how the math and science concepts they are learning in class are applied in real life to engineering problems. JETS programs and resources get students involved with

engineering and preparing for the future.

JETS offers the only high school academic programs that focus entirely on developing real-life engineering teamwork and problem-solving skills and informing pre-college students about engineering careers. JETS provides several opportunities for individual and team participation in activities that allow students to engage in engineering while in high school. JETS' team-oriented and multidisciplinary programs meet the highest educational standards and employ the most viable learning methodologies. JETS programs have been recognized, commended, endorsed, or supported by many education, engineering, and scientific societies and organizations.

Future Scientists and Engineers of America (FSEA) - www.fsea.org

Future Scientists and Engineers of America is a national non-profit organization which provides the structure, project material, documentation and workshop training necessary to establish after school technology clubs in K-12 schools. The FSEA program focuses on technology and can easily and readily be implemented in every school. FSEA gives students an opportunity to experience real engineering and science with a practical, hands on method which uses projects that challenge student teams to creatively solve problems. FSEA team members experience the same process an engineer or scientist experiences, i.e., given an objective, using techniques of innovation, design, creativity, trial and error, how well can that objective be met?

FSEA shares similarities with other well known programs such as Scouts and Future Farmers of America. FSEA is provided by and for the entire community. Participants include students, parents, schools, businesses, technical and civic organizations, Universities and Colleges as well PTA/PTO organizations. FSEA is structured to involve working scientists, engineers, retirees, college students, teachers and parents. The goal is to provide hands-on opportunities for enjoyment, motivation and development for every interested student. Each FSEA chapter consists of a sponsor, mentors, FSEA student members, a teacher and a parent coordinator.

MathCounts - www.mathcounts.org

MATHCOUNTS is a national math coaching and competition program that promotes middle school mathematics achievement through grassroots involvement in every U.S. state and territory. MATHCOUNTS promotes student interest in mathematics by making math achievement as challenging, exciting and prestigious as a school sport. MATHCOUNTS is one of the country's largest and most successful education partnerships involving volunteers, educators, industry sponsors and students.

Tennessee Engineering Center Update

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As a founding society of the TEC, the IEEE gets priority use of the facility at no charge. All future meetings will be held at this new facility.

Additional Contributions Needed:

The \$1.85 million dollar TEC project is just \$120,000 from being fully funded. There are several ways to contribute to this very worthwhile facility:

1. Sponsorship of a "Distinguished Engineer" - Outside the front doors of the TEC is a recognition wall of Distinguished Engineers from Tennessee. For a donation of \$25,000 a firm or individual can have a permanent recognition of a Distinguished Engineer added to this display.
2. Designate 2003 United Way Contributions to the TEC - Many individuals and companies make annual contributions to the United Way. These contributions can be designated to help complete the funding for the TEC. Simply designate your contribution to the Cumberland Science Museum, Agency #7217. Also, send a copy of your pledge card to:
Ray White - TEC Treasurer
Garver Engineers
P.O. Drawer 1847
Brentwood, TN 37024-1847
3. Individual donation - an individual or company can make tax deductible contributions to the Cumberland Science Museum c/o the TEC. Please forward contributions to Ray White at the address listed above.
4. **TEC 1st Annual Golf Scramble / Lunch** - Support the 1st annual TEC Golf Scramble. See below for details.

Any donations of \$1,000 or more will be permanently recognized in the lobby of the Museum.

TEC 1st Annual Golf Scramble/Lunch

The Tennessee Engineering Center Steering Committee will be holding a Golf Scramble and Lunch to help raise proceeds to be paid toward the remaining Capital Cost of the TEC.

Where: General's Retreat Course - Hermitage Golf Club
Hermitage, TN

When: Thursday, October 17, 2002
11:30am Registration / Lunch
1:00pm Shotgun Start

Format: Four-Man Scramble

Prizes: 1st and 2nd Place for Three Flights, Closest to the Pin, Longest Drive, and Straightest Drive.

Cost: 4-person Team \$1,250
2-person Team \$ 625

Sponsorships:

Lunch Sponsor \$1500 minimum
Hole Sponsor \$200 minimum
Beverage Cart Sponsor \$500 minimum

For sponsorship and sign-up information, please print the registration form from the IEEE web site, or contact **Harold Fulghum (615)242-4301**. *\$1,000 of the \$1,250 team entry fee and all sponsorship fees are tax deductible.*

IEEE Dues Rate Change Announced for 2003

The IEEE Board of Directors voted in June to increase dues and assessments for the 2003 membership year. The rate for higher-grade members will increase to \$110 plus Regional Assessments. Student dues will rise to \$30. (A subscription to "IEEE Potentials" magazine is included in membership for students accounting for the difference.) This is the first increase in Student dues since 1993, and only the second increase in higher-grade dues since 1996.

In addition, the Board raised the IEEE-USA assessment to \$33 and revised the reduced-dues program for recent graduates. The now one-year program offers individuals a 50 percent discount off full member dues the first year after graduation.

Fees for Affiliate members are also changing. The IEEE Board of Directors voted to revise the Affiliate fee for 2003 to \$49. The Board also voted to set the Affiliate fee to 50 percent of full IEEE dues for the 2004 membership year and beyond.

The new 2003 dues rates went into effect on August 15th. All applications received at IEEE will be processed for the 2003 dues year. Adobe PDF versions of the 2003 Member and Student Member applications are available online for downloading and printing. The online 2003 IEEE applications will be available as of September 1st for applicants paying by credit card. The online applications may be found at www.ieee.org, under the Membership link.

*Visit the Central TN Section web site for all the latest
Section information and announcements.*

www.ieee-nashville.org

OR

www.ieeecentraltn.org



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Enhancing Your Career and Friendships

(By Mike Puckett, P.E.)

I can't think of anyone who wouldn't like to enhance their career and friendships. One way to do that is by being involved in professional organizations like the IEEE. As the section program chairman for the last two years, in addition to my earlier involvement with the section, I can say without a doubt that my career has been enhanced and I have definitely been blessed with some excellent friendships and acquaintances. Although we don't necessarily volunteer our time and efforts with the intent of receiving anything in return, a well-known wise book teaches that "he who gives, receives". Some of the other "fringe benefits" of being involved in an organization like the IEEE, are improving our leadership and organizational skills, improving our communications, expanding our knowledge in various areas, and making a positive difference in our profession and community. In fact, we can benefit in many ways just by attending the monthly meetings. The monthly meetings are an excellent opportunity to learn from those you meet, and of course from the program itself, whether it's directly related to your daily job or not. I can't think of any meetings that I've attended where I haven't benefited in some way. So, if you would like to enhance your career and friendships, consider getting involved in the IEEE section. Would you like to change something about the section, voice your opinions or ideas, or perhaps help in selecting programs, etc.; the opportunities are endless. If you'd like to be involved as an officer of the section, nominations are underway for the upcoming election. In addition, I plan to run for an office this year and therefore will be stepping down as program chairman. If you'd like a challenging but rewarding position, consider becoming program chairman or perhaps assisting with programs. Whatever way you choose to be involved, you'll be glad you did!!!