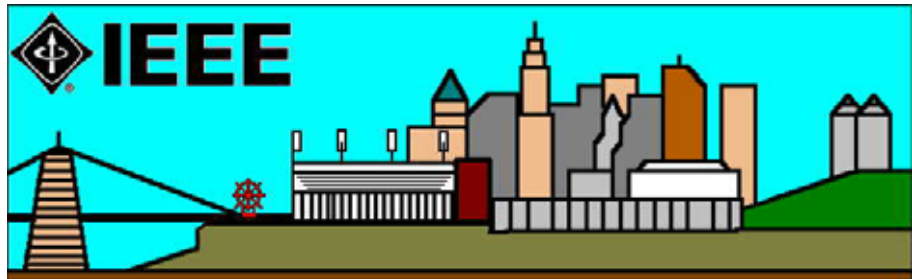


**IEEE CINCINNATI
SECTION
NEWSLETTER
OCTOBER 2005**



OCTOBER MEETING WIRELESS SYSTEMS AND COMMUNICATIONS

- DATE:** Thursday, October 27, 2005
- PLACE :** Raffel's – 10160 Reading Road (see below for directions)
- TIME :** 5:30 p.m. to 7:00 p.m. - Social Time/Dinner
7:00 p.m. to 8:30 p.m. - Program
- COST FOR DINNER:** \$10.00 for Student Members
\$15.00 for Members
\$20.00 for Non-Members

MENU SELECTIONS: Baked Cod with Crab Topping, Hot Sliced Roast Beef in Gravy, Roasted Pork Loin with Dressing, Rice Pilaf, Red Skinned Mashed Potatoes, Vegetable Medley, Tossed Salad, Dinner Rolls and Butter, Assorted Cakes, Coffee, Tea Iced Tea, Soft Drinks. There is also a bar available for the purchase of alcoholic drinks. Raffel's is located at 10160 Reading Road, south of Glendale-Milford Road on the east side of Reading. Take I-75 to the Glendale-Milford Rd. Exit, go east on Glendale-Milford Road approximately 3/4 of a mile to Reading Rd. and turn right on Reading.

Please call the Cincinnati Section Voice Mailbox at **513-629-9380**, by **Noon, Tuesday, October 25, 2005** if you plan to attend. Please leave your Name, IEEE Member Number, and a daytime telephone number. You can also make a reservation by e-mailing our Arrangements Chair, Charlie Nash, at cnash@ieee.org.

ABOUT THE MEETING: This month's meeting will feature a presentation by Mr. Jon Adams on Freescale Semiconductor's ZigBee Technology. Mr. Adams is currently the Director of Radio Technology and Strategy for Freescale Semiconductor. He is an expert in wireless systems and communications, with his current focus on ZigBee and Ultra Wideband technologies, representing Freescale on the board of directors for the ZigBee Alliance, as president of the UWB Forum, and as a voting member in the IEEE 802.11, .15, and .16 Working Groups. Additional interests include Near Field Communications, Wi-Fi, and Bluetooth, as well as the impact of these on cellular telephony and the consumer experience. Jon presents and is often interviewed or published on these technologies and their impacts on or potentials for the home, commercial and industrial environments. Prior to Freescale, Jon spent 17 years at the NASA/Jet Propulsion Laboratory where he was the cognizant engineer or manager for multiple Earth-orbiting or Mars-bound telecommunications or radar payloads. He has BSE and MSEE degrees from UCLA.

UPCOMING CINCINNATI SECTION MEETING TOPICS

In the coming months, our Section Meetings will feature the following topics:

December 8, 2005 Altera soft CPUs (NIOS) and system on a chip
January 26, 2006 Continuing Professional Development requirements for PEs

We hope to see you there!!!

CHAIR'S MESSAGE

by Jim Everly, Section Chair

I will be heading to Tampa, Florida the weekend of October 15 to attend the IEEE Sections Congress. The outcome of the event will be to establish the "top ten" list of IEEE priorities for the next three years. If you have any last minute IEEE concerns please communicate them to me prior to Friday morning, October 14. I will make sure that your concerns are addressed at the Region 2 meeting.

The Cincinnati Section is recruiting members to be upgraded to Senior Member. As I indicated last month the section would like to add an additional 25 members by this time next year. If you are interested in elevating your IEEE membership to Senior Member, be sure to attend October's meeting. After the technical presentation I will hold an informal session on how to prepare a senior member application.

In the next issue of the section newsletter I will give you a complete report on the 2005 Section's Congress.

MEMBERSHIP NEWS

NEW MEMBERS

The following individuals are IEEE members who are new to our Section:

Gerard A. Barilleaux	Anne C. Marquett
Haiyun Bian	Ryne J. Montemurro
William E. Davis	Suchin Parihar
Jared A. Dinkelaker	Marco S. Pauletti
Scott C. Donnelly	Chad F. Renow
Steven W. Fahlbusch	Kevin M. Schultz
Kalyan Garre	Phillip J. Schultz
Randall Grandstaff II	Shubha Sirurmath
Andre D. Jones	Sadanand S. Waghmare
Donald R. Leach	James W. Walden
Philip F. Locke	Clare Yang

We wish to welcome these new members to our Section!!!

Scanning the Past: A History of Electrical Engineering from the Past

Submitted by Dick Reiman, Historian

Copyright 1993 IEEE. Reprinted with permission from the IEEE publication, "Scanning the Past" which covers a reprint of an article appearing in the Proceedings of the IEEE Vol. 81, No.12, December 1993.

Harold H. Beverage

Seventy years ago this month, the PROCEEDINGS OF THE INSTITUTE OF RADIO ENGINEERS (IRE) included a paper on long-wave radio measurements by Harold H. Beverage and Harold O. Peterson. Both of the authors were in the Engineering Department of the Radio Corporation of America (RCA), and Beverage already was known for his invention of the wave antenna destined to be known as the "Beverage antenna. "

In their December 1923 paper, Beverage and Peterson discussed a method which they had used to collect data on the field intensity of long waves propagated over long distances. Their method involved the use of a calibrated signal generator as a standard for comparison with signals received from remote transmitters. Their measurements enabled them to determine the effective height of transmitting antennas and the so-called "absorption factor" of the Austin-Cohen transmission equation. They provided data for a number of commercial long-wave stations located in the United States and in Europe and which operated at frequencies ranging from 17 to 26 kHz.

Beverage was born in North Haven, Maine, in October 1893 and graduated in electrical engineering from the University of Maine in 1915. He developed an early interest in amateur radio and operated his first station in 1910. He also became a talented musician and managed to pay his way through college by performing with a local-group. Following graduation he joined the General Electric Company (GE) in Schenectady, New York, and worked in the Test Department during 1915-1916. He then became a member of a group of radio specialists at GE headed by Ernst F. W. Alexanderson. Beverage was assigned to work on the so-called "barrage receiver" which employed two long-wire antennas extended along the ground in opposite directions. The barrage system had been conceived by Alexanderson as a method to counter possible German jamming of radio communication by allied forces.

It was while he was working at a receiving station near Bar Harbor, Maine, that Beverage discovered the unidirectional property of a long wire acting as a wave antenna. Two of his colleagues at GE, Chester W. Rice and Edward W. Kellogg, developed a theory which indicated that the wave antenna should be terminated in a resistance equal to its characteristic or surge impedance for optimum performance. Beverage received a patent on the wave antenna and was coauthor, with Rice and Kellogg, of a paper disclosing its properties published in February 1923. They mentioned a nine-mile long wave antenna located in the vicinity of Riverhead, Long Island, which they called the "Atlantic coast ear" of the Radio Corporation of America (RCA). Beverage was awarded the Morris N. Liebmann Memorial Award in 1923 by the IRE in recognition of his discovery.

In 1920 Beverage left GE to join RCA, where he was a research engineer in charge of communication receiver development until 1929. He was actively involved in the shift from long waves to short waves for long-distance radio communication. He and his colleagues at RCA, including Harold Peterson, developed the technique of diversity reception as a way to deal with fading of shortwave signals. Beverage was coauthor of two IRE papers published in April 1931 on the subject of diversity reception. He served as Chief Research Engineer at RCA from 1930 to 1941 and contributed to television antenna research during the 1930's. He was President of the IRE during 1937 and received the Armstrong Medal of the Radio Club of America in 1938.

Beverage became a Vice-President in charge of research and development at RCA in 1941. During World War II he served as a consultant to the Secretary of War and worked on antenna installations in North Africa, Italy,

and Great Britain. He helped design the communication systems used in the D-day invasion in 1944. He received the IRE Medal of Honor in 1945 in recognition of his many contributions to radio communication and the IRE. He retired from RCA in 1958 but continued to work as a part-time consultant while pursuing his hobbies of music and photography. He died at Port Jefferson, New York, in January 1993 at age 99.

*James E. Brittain
School of History, Technology, and Society
Georgia Institute of Technology*

IEEE NEWS

Electrical Engineers Available to Discuss Power and Communications Restoration in the Gulf Coast

WASHINGTON (19 September 2005) -- Because much of the quality of life people enjoy depends upon electricity, it's not just Gulf Coast roads, schools and homes that have to be rebuilt following Hurricane Katrina's devastation. Much of the electrical and telecommunications infrastructure that powers the region's water pumps, hospital equipment, computers and telephones also faces reconstruction.

The IEEE has experts available to discuss the challenges facing electrical engineers as they help restore power and communications in the area. The regional electric grid, upon which cell phones and cell towers depend, sustained extensive damage. The grid includes power plants, substations and transmission and distribution lines.

The following engineers are available to assist the media:

- Karl Rauscher founded the Wireless Emergency Response Team (WERT) after the September 11 attacks and is executive director of Lucent Bell Labs' Network Reliability & Security Office. WERT, which is comprised of people from across the wireless communications industry, was activated at the request of the U.S. Coast Guard to provide coordinated, mutual aid technical support for the search and rescue effort. WERT's expertise extends to first responders and volunteers who are using wireless technologies. Rauscher is WERT president and an IEEE Communications Society expert on communications service restoration.

- Harold Adams is a power engineer experienced in storm damage and electric system restoration following natural disasters, and is currently director of electric market policy at Dominion Energy Clearinghouse in Glen Allen, Va. He has served as manager of Dominion Virginia Power's control center and later managed the company's storm center. Both roles involved emergency planning for hurricanes and other service disruptions. Adams is a member of the IEEE-USA Energy Policy Committee.

Adams contributed to an IEEE-USA Today's Engineer magazine article, "Katrina Poses Extreme Challenges for Power Engineers." You can read it at www.todaysengineer.org.

IEEE's "The Institute" On-Line

The updated issue of IEEE's "The Institute" is always available on-line at <http://www.ieee.org/theinstitute>. Check out some of these items which are featured:

- **Steering Students Toward Science And Engineering:** When it comes to reaching out to teenagers and alking up careers in engineering and science, IEEE members around the world are deeply involved. They realize that the future of the institute depends on it. Read more at <http://boldfish.ieee.org/u/833/04824637>

- Searching for Gravity@Home: The Einstein@Home project asks that you lend the idle CPU time of our home or work computer to physicists and astronomers now searching the sky for evidence of gravitational waves. The waves could result from stars exploding, black holes engulfing each other, or other acts of astronomical violence. Plus, you get a jazzy screen saver. Read more at <http://boldfish.ieee.org/u/834/04824637>
- IEEE Milestones Selected for Physics and Power: Two historic sites -- one in Switzerland and the other in the United States -- have been named Milestones in Electrical and Computer Engineering by the IEEE History Center. One was cited for its breakthroughs in the design of detectors used in elementary particle physics research, the other for its hydroelectric power-plant design. Find out more at <http://boldfish.ieee.org/u/835/04824637>
- Members-Only Site Adds New Features: MyIEEE, the members-only Web site, now groups benefits so that you can quickly find everything you need related to the IEEE and to your professional, community, technical research, and volunteer activities. Links have been added to email addresses of all IEEE section leaders, sorted by country and IEEE region. Members can access online benefits such as email aliases and manage various aspects of their membership such as subscriptions, all from one Web site. Find out more at <http://boldfish.ieee.org/u/836/04824637>
- Attention, Members Affected by Hurricane Katrina: Information about IEEE conferences that were scheduled for New Orleans and the surrounding Gulf Coast region, as well as how members in that area can access IEEE membership information and services has been posted at <http://boldfish.ieee.org/u/837/04824637>. Also, if your IEEE section, chapter, or student branch is assisting survivors of the hurricane, or if you are helping to rebuild the affected areas, The Institute would like to share your story. Contact Editor Kathy Kowalenko at k.kowalenko@ieee.org
- Asia Gets Its Own Circuits Conference: Now that Asia has become a major player in circuit design, it's time the region got its own conference highlighting the work done by researchers at some of the area's leading chip makers. That's why the IEEE Solid-State Circuits Society is sponsoring the first IEEE Asia Solid-State Circuits Conference, to be held 1 to 3 November at the Ambassador Hotel in Hsinchu, Taiwan. Read more at <http://boldfish.ieee.org/u/841/04824637>
- Proceedings of Consumer Communications Conference Available: The proceedings of the 2005 IEEE Consumer Communications and Networking Conference, held last January, are now available for purchase. The conference presented the latest approaches in consumer networking, multimedia, and novel applications and services. To purchase the complete proceedings from ShopIEEE, visit <http://boldfish.ieee.org/u/842/04824637>.
- New Site Searches for Job Listings Far and Wide: If you're looking for a new job, you've probably found a few Web sites that list positions in your field, but with more than 100 000 job sites on the Internet, you can't possibly peruse them all. Wouldn't it be great if there were an IEEE site that gathers the pertinent information for you? There is. Find out more at <http://boldfish.ieee.org:80/u/1007/04824637>
- IEEE Press Seeks Book Proposals: Want to be an author? IEEE Press is looking for proposals for how-to books on power engineering, electromagnetic wave theory, microelectronics, biomedical engineering, and communications. As part of a new three-year strategic plan, IEEE Press also plans to ramp up its new-title output to 35 releases a year and focus on emerging technical areas. Read about other developments at IEEE Press at <http://boldfish.ieee.org:80/u/1008/04824637>

- 2006 Membership Renewal Kicks Off: The IEEE encourages members to renew their 2006 membership electronically. More than 198,000 members renewed online for 2005, a 9 percent increase over 2004. Those who renew online by 15 November at <http://boldfish.ieee.org:80/u/1009/04824637> will be entered in a drawing to win a Dell Inspiron laptop. Find out about renewing and what new benefits are being offered at <http://boldfish.ieee.org:80/u/1010/04824637>
- Marketplace of Ideas: Do Computers Help Make Kids Smarter? Computers have been a common sight in preuniversity classrooms for more than 20 years, but often they are used only for word processing and topical Internet searches, according to a study of technology in Wisconsin schools conducted by the U.S. Department of Education. The study's findings raise the question: How much do computers aid learning? Weigh in at institute@ieee.org
- IEEE Journals Take Top Spots in Annual Citation Report: Our IEEE journals are once again the most cited electrical and electronics publications, according to the most recent study released by Thomson/ISI. And the most cited journal of all was the monthly IEEE Transactions on Pattern Analysis and Machine Intelligence, which bounced up from the No. 3 position it held in 2003. Find out more at <http://boldfish.ieee.org:80/u/1012/04824637>
- Explore IEEE Spectrum's New Interactive Site: Discover the new IEEE Spectrum Online, a vital resource where technology insiders can listen to IEEE Spectrum Radio, read the Spectrum editor's blog and post comments, get headlines by RSS, sample articles from the IEEE's digital library, and sign up for newsletters, Webcasts, and online events. Start exploring today. Visit <http://boldfish.ieee.org:80/u/1013/04824637>
- Professionals Needed to Serve as Accreditation Program Evaluators: The IEEE Educational Activities Board seeks qualified professionals from industry, government, or academia to serve as program evaluators to assist in accrediting engineering and engineering technology programs at U.S. universities. Applications are due 15 November 2005. For more information go to <http://boldfish.ieee.org:80/u/1015/04824637>
- Time to Vote in 2005 IEEE Annual Election: The election ballot packages have been mailed to all eligible voting members. Take a moment to read the instructions in the package, and then vote. If you have not received your ballot yet or have questions, contact the IEEE at corp-election@ieee.org. To find out more, visit the election Web site at <http://boldfish.ieee.org:80/u/1016/04824637>

IEEE-USA Encourages Federal Government to Strengthen Cyber Security

WASHINGTON (21 September 2005) -- IEEE-USA President Gerard A. Alphonse endorsed the findings and recommendations of the President's Information Technology Advisory Committee's (PITAC) report to the president, "Cyber Security: A Crisis of Prioritization" in a letter to federal government leaders on 6 September.

PITAC found that the U.S. information technology infrastructure is highly vulnerable to attack, and recommends that the government increase its support for fundamental research in civilian cyber security.

"The country's computer network infrastructure is critically important for commerce and communication, and for the control of our civil infrastructures, including ever-increasing roles toward our energy security," Alphonse wrote. "Without cyber security protection, our computer networks are vulnerable to criminal and terrorist attacks."

IEEE-USA will also submit written testimony to the House Science Committee, which held a cyber security hearing on 15 September. Go to <http://www.house.gov/science/press/109/109-129.htm> for more information.

The PITAC report is available at http://www.nitrd.gov/pitac/reports/20050301_cybersecurity/cybersecurity.pdf

Alphonse's letter (<http://www.ieeeusa.org/policy/policy/2005/090705.asp>) was sent to all members of the House and Senate leadership committees; House Science Committee members; Dr. John Marburger, director of the Office of Science and Technology Policy; and Dr. Simon Szykman, director of the National Coordination Office for Networking Information Technology Research and Development.

Utah Congressman Looks to IEEE-USA for Expertise on Medical Information Technology Issues
WASHINGTON (23 September 2005) -- Rep. Chris Cannon (R-Utah) said he is looking to IEEE-USA to provide input and guidance on what Congress should do on medical information technology issues and to serve as a think tank for the medical community.

Cannon spoke by phone on 22 September with the IEEE-USA Medical Technology Policy Committee and expressed interest in the committee's work in areas such as medical privacy, patient safety, medical errors, voluntary healthcare identifiers and the creation of a technology-based National Health Information Network.

Cannon is particularly concerned about finding quality healthcare information on the Internet and establishing a way for people to share their medical experiences. He is also interested in finding out what research is being done and not being done, and what critical areas need to be funded.

Cannon chairs the House Judiciary Committee's Subcommittee on Commercial and Administrative Law, and is a member of the House Government Reform Committee's Subcommittee on Criminal Justice, Drug Policy and Human Resources.

IEEE-USA's positions on medical technology and health are available at <http://www.ieeeusa.org/policy/positions/index.html#mtp>.

**IEEE-USA Presents Second Teacher-Engineer
Partnership Award, TechXplore Electrotechnology Award**

WASHINGTON (3 October 2005) -- Teacher William G. Speed and engineer Mark R. Rognstad of Kailua, Hawaii, recently received the second IEEE-USA Teacher-Engineer Partnership Award.

Speed and Rognstad, whose partnership began in 1999, were recognized for providing mentorship, support and encouragement to students interested in science, technology and mathematics through engineering competitions at the local, regional and national levels. The Hawaii Underwater Robot Challenge they created allowed Hawaiian students to participate in a robotics competition without assuming heavy travel costs.

The award is sponsored by IEEE-USA's Precollege Education Committee and was presented by IEEE-USA Managing Director Chris Brantley at the IEEE Oceanic Engineering Society Conference in Washington on 24 September. For more information, go to <http://www.ieeeusa.org/volunteers/committees/pec/2004.html>.

IEEE-USA also joined with the National Science and Technology Education Partnership (NSTEP) to present the TechXplore Best Electrotechnology Project Award in Chicago in June. Bergen County Academies of Hackensack, N.J., was honored for its "Health-e2" firefighting monitoring system, and North Plainfield (N.J.) Middle School was recognized for its "Bar Codes of the Future." The award, also sponsored by the IEEE-USA Precollege Education Committee, is presented annually to one high school and one middle school.

NSTEP's TechXplore online mentoring program and competition helps young people build the science and technology skills needed for workplace success. For more information, go to http://www.nationalstep.org/news_and_events/press_releases/pressrelease.cfm?ID=58.

The IEEE Cincinnati Section Executive Committee **Member Names and Phone Numbers**

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