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THE SUNCOAST SIGNAL

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

Volume 52 — No.12 **http://www.ieee.org/fwcs** **December 2009**

Inside this Signal…

This Month's Meetings

December 1st: EXCOM Meeting
Meeting starts at 5:30PM At TECO Plaza
Register online at http://time2meet.com/fwcs-excom/index.html
Meeting is open to all FWCS Members

Florida Reliability Coordinating Council and the FRCC Transmission Planning Process

Thursday, December 17, 2009
Florida Reliability Coordinating Committee (FRCC)
***1408 N. West Shore Blvd., Suite 1002, Tampa,* FL, 33618**
See Page 6
Register Online at: http://time2meet.com/fwcs-pes3/index.html

IEEE Sets All Time Record Number of Members - 383,038!

(October Monthly MD Report)

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This Month…(Editor's Column)

Each month I am tasked with writing something for this "column". Some months are a little easier than others. I stay away from giving my opinions on things, especially political ones since there seems to be enough of that already. So now that we are in the midst of the holiday season, what I will do is say "Happy Holidays" for everyone in the FWCS and their families!

In this issue there is a follow up on the Protective Relay Seminar, an article on the Great American Teach-In, the BTC from Butch Shadwell and contributions from the Student Branch at USF. There is a tribute to Robert Beckwith by Jim Beall and an announcement on the formation of a Robotics and Automation Society by George Schott. Thanks to all that contributed this month…

IEEE-USA IN THE NEWS

IEEE-USA Supports Local TV

Look for IEEE-USA Supported Local TV News Reports in Your Community

In October, IEEE-USA helped to produce four local TV news reports on IEEE-related technologies that were submitted last month to 83 U.S. TV news stations. Look for these 90-second reports on local newscasts carried on TV stations from Atlanta (WUVG) to West Palm Beach, Fla. (WPTV), and from Chicago (WFXT and WGBO) to Seattle (KING and KONG). The four segments are: "First Look at the Bottom of the Sea"; "Zapping Disease With Electricity"; "Robots Taking Over the Garden"; and "Using the Wind to Save Money." To see an example of how a local TV station broadcasts these IEEE-USA - sponsored technology reports, go to the story aired on WCPO in Cincinnati on "Doppler Radar Tracking Babies." For more information on IEEE-USA's support of these reports, visit IEEE-USA's Discoveries & Breakthroughs page

IEEE

Robotics and Automation Society

I am a member of the Robotics and Automation (RAS) and in my local networking activities I have met quite a few people who are playing with or working with robotic and automation technologies. I have found them congregating in various splinter groups. So, I went looking for a local chapter of the Robotics and Automation Society and found there were none in the Tampa Bay area.

I would like to provide the initiative to start up a local RAS Chapter within the Florida West Coast Section of IEEE. To do this, 12 current members of the IEEE Robotics and Automation Society with membership status of Member or higher, need to sign the Initial Petition.

George Schott

IEEE

2010 Officer Nominees

The Nominating Committee is presenting the following slate of officers for the Florida West Coast Section PE/IA Chapter:

Chair	Serge Beauzile
Vice-Chair	Jim Howard
Secretary/Treasurer	John Stankowich
Past Chair	Tom Blair
Webmaster	Claude Pitts

The Nominating Committee is presenting the following slate of officers for the Florida West Coast Section:

Chair	Jim Anderson
Vice-Chair	Serge Beauzile
Secretary	Ralph Painter
Treasurer	Paul Schnitzler

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Robert Beckwith's Obituary

Robert W. Beckwith, an honored and well respected member of the Institute and this section, passed away peacefully on Sunday, October 25, 2009. Bob was an honored scientist, inventor, researcher and consultant with over 50 years as a world leader in the electric power industry and founder of Beckwith Electric Co., Inc., in Largo, Florida.

Bob is survived by his wife, Evelyn Bortner-Beckwith; two children; Tom Beckwith and Barbara Anderson; three grandchildren, Joshua, Sean, and Tiffany Beckwith. Two step children, Tommy Sanchez and Gerlid Quinones; two step children Marty Orosz and Robert Bortner; and two step grandchildren Alex and Aaron Orosz.

Born in Kent, Ohio, Bob received his BSEE from Western Reserve University and a MSEE from Syracuse University. He also held professional engineering licenses in New Jersey, New York and Florida.

He was a Life Fellow of the IEEE He joined the Institute in 1942. He was elected to the grade of Fellow 1-1-74 and became a Life Fellow 1-1-85. He was an officer of the Northwest Sub-section of the Chicago Section in 1969-70 and was the Secretary and Vice Chairman of the Florida West Coast Section in 1979-80 and 1980-81. He was an active member of the Power and Energy Society Relay Committee for many years. His Fellow citation reads, "For contributions in application of electronic technology to the development of frequency shift keying techniques for data transmission and remote circuit breaker tripping."

Bob was a very curious and driven man, who often thought "out of the box", and had many and varied intellectual and humanitarian interests. He was a Master Mason 3rd degree, and an amateur radio (HAM) operator, an avid artist and art collector. Bob was a philanthropist with many contributions to charities, public broadcast stations and the Hopi Indians.

Bob worked for General Electric Power Line Carrier Section in Schenectady, New York from 1955 to 1961, he was Manager of Computers and Communications at General Electric Company Electronics Research Laboratory in Syracuse, New York from 1961 to 1967, he was Manager of Utility ?Systems at Gulton Industries. In *1967* he founded Beckwith Electric Research (BER), a division of Beckwith Electric Co. that conducted research at the forefront of present-day engineering and physics.

Along with his consulting work, his career achievements included working with US Defense projects during World War II, developing new high frequency transducers for SONAR applications. In addition, he helped develop transmission lines to supply power for the Manhattan Project. He was awarded over 30 patents on various aspects of the utility industry from 19492004.

Bob Beckwith is recognized today for his life long dedication to the electric power community and his significant scientific contributions and influence on society in general. He will be truly missed by his business associates and family.
Jim Beall

IEEE

A Special Thanks to Beckwith Electric!

If you were one of the almost 40 attendees at the Friday, October 23, 2009, Implementing Volt/VAr for Smart Grid Seminar then you know what a great job Beckwith Electric did in presenting this state-of-the-art presentation. Special thanks goes to our Beckwith speakers, Dr. Murty V.V.S. Yalla, President, Beckwith Electric Co. and IEEE Fellow, E. Tom Jauch, Consultant and IEEE Life Senior Member, Charles (Chuck) Mozina, Consultant and IEEE member and PE, and Robert (Bob) McFetridge, Regional Sales Manager. Beckwith continues to be a strong supporter of the FWCS PE/IA Chapter and of our continuing educations programs we provide.

Jim Howard

Brain Teaser Challenge Solution - September 2009
Butch Shadwell

I am a little embarrassed to have put in so many clues, but I still got some incorrect answers. Schlomo "…rolled the wheel down Pearl Street… (The Pearl St. Station was a well known DC generating station.) … It was 1889, and for a ten year old in New York, … (The Pearl St. station burned in 1891.) … he heard his Uncle Lenny describe his new electric light business. As you know, light bulbs were pretty expensive, about a dollar a piece, and they didn't really last that long. Lenny's idea was to sell folks lower voltage light bulbs which were a little cheaper and would last a little longer. He planned on buying transformers to reduce the voltage. What turn ratio did he need to run 25 volt bulbs? Hope you remember your electrifying history."

Edison's New York power grid ran on 110 volts DC. Of course the use of a transformer to lower the voltage would not have worked without a later invention called a vibrator (used in car radios in order to create the higher B voltage for the vacuum tubes), which would turn DC into pulsing DC which could produce an output from a transformer. But I bet you already knew that.

Brain Teaser Challenge – October 2009

When I got started in this business we used multi-meters with a d'Arsonval meter movement that was powered by the signal that was being measured. Of course the voltage that one read from the meter needle movement could be off a bit depending on the source impedance of the signal. They used to rate the meters input resistance in ohms per volt. Some would be 10,000 ohms/v or even higher sometimes.

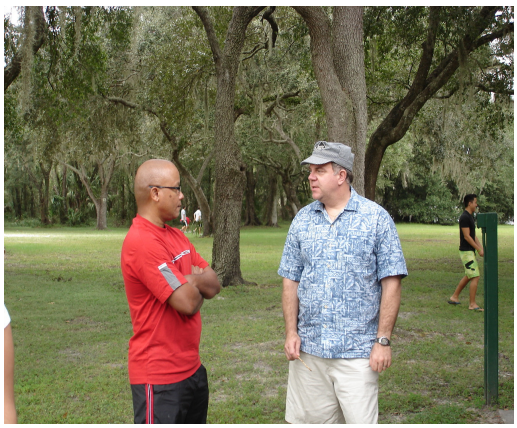
If I had a multimeter rated at 1000 ohms per volt, set on the 10 volt range, what voltage would I read from the dial if I measured the voltage at the middle node of a voltage divider composed of two 10,000 ohm resistors in series, across a solid 5 volt DC supply? Later I bought a VTVM or vacuum tube volt meter, with a fixed input resistance of 11 megohms.

Reply to Butch Shadwell at b.shadwell@ieee.org (email), 904-410-9751 (fax), 904-410-9750 (v), 3308 Queen Palm Dr., Jacksonville, FL 32250-2328. (http://www.shadtechserv.com) The names of correct respondents may be mentioned in the solution column.

IEEE

Great Picnic by the Student Branch!

On Saturday, October 17, the weather was nice, the company was excellent and the food was outstanding – how could you ask for more for an IEEE Student Branch picnic along the Hillsborough River. The FWCS USF Student Branch hosted another of their great picnics with plenty of food and fellowship. These picnics are normally planned during each semester and everyone from the Section is invited to come out and partake of the food and sports. Watch upcoming Signals for information on the next Student Branch picnic in the spring.



Dr. Ralph Fehr, one of the Student Branch Counselors and Serge Beauzile, Vice-Chair of the FWCS discuss IEEE during the picnic

Alex Dunbar, the FWCS USF Student Branch Chair was the chief cook for the outing at Riverside Park.

Florida Reliability Coordinating Council and the FRCC Transmission Planning Process

Date: **Thursday, December 17, 2009**
Time: **Meeting: 11:30am-1:00pm (includes Lunch)**
Cost: **$10 IEEE Members, $20 Non-Members, $5 Students**
Speaker: **John Odom, VP of Planning and Operations, FRCC**
Location: **Florida Reliability Coordinating Committee (FRCC)**
1408 N. West Shore Blvd., Suite 1002, Tampa, FL, 33618
RSVP: **Online at: http://time2meet.com/fwcs-pes3/index.html**
Space limited to the first 45 registrants!
Questions: **Donna Howard at 813-207-7966 or DHoward@FRCC.com**

The FRCC is a not-for-profit company incorporated in the State of Florida. The purpose of the Florida Reliability Coordinating Council is to ensure and enhance the reliability and adequacy of bulk electricity supply in Florida, now and into the future. FRCC serves as a regional entity with delegated authority from the North American Electric Reliability Corporation (NERC) for the purpose of proposing and ***enforcing reliability standards*** within the FRCC Region.

The objective of the FRCC Regional Transmission Planning Process ("Planning Process") is to ensure coordination of the transmission planning activities within the FRCC Region in order to provide for the development of a robust transmission network in the FRCC Region. The Planning Process is intended to develop a regional transmission plan to meet the existing and future requirements of all customers/users, providers, owners, and operators of the transmission system in a coordinated, open and transparent transmission planning environment.

SPEAKER BIOGRAPHICAL INFORMATION

John Odom is Vice President of Planning and Operations at the Florida Reliability Coordinating Council (FRCC). John joined FRCC in May, 2005 after 26 years at Progress Energy Corporation (PEF). He is responsible for oversight of all Member Services Activities, including the Planning Committee, Operating Committee, FRCC Reliability Coordinator function and the FRCC Regional Transmission Planning Process. Additionally, he oversees the Regional Entity functions of reliability assessment, situational awareness, training and certification of system operators, and event analysis. John is one of FRCC's representatives on the Eastern Interconnection Reliability Assessment Group (ERAG) Management Committee. Until June 2007, John was the FRCC Representative on the NERC Reliability Assessment Subcommittee (RAS), a position that he held for 6 years. John is currently the chair of the Assess Future Transmission Needs Standards Drafting Team (AFTNSDT), which is re-writing the existing TPL-001 through TPL-006.

While at Progress Energy, John spent the majority of his time in Transmission Planning. He was actively involved in the Federal Energy Regulatory Commission's Open Access transmission proceedings and in various North American Electric Reliability Council (NERC) activities.

John has been a member of IEEE for more than 20 years. He received a BSE from the University of Central Florida and has been a registered Professional Engineer in the State of Florida since 1984.

Great American Teach-In

I was invited by Eddie Kudlis KudlisE@asme.org from the American Society of Mechanical Engineers (ASME) to participate in the second *Inspire Innovation Workshop* on November 14th at the Disney Dolphin Resort. Karen Malesky led the workshop and let me endorse the same efforts from the IEEE for Pre-College Engineering interest. The first project was "Spuds in Space" where we encased potatoes with gauze, foil, cardboard, rubber bands, etc… Then someone let a hammer fall with needle-nosed pliers attached onto the encased potato. Those who had designed the best protection, like an astronaut suit, and had the least damage on the potato were the winners. The second project was to build gondolas to sail across a suspended wire propelled by releasing air from balloons. Our team had a Disney "Mickey Mouse" theme to the balloons and the gondolas. None of these really made it but everyone had a good laugh and understood the concept. The last project was building bridges from straws, cardboard, clay, and wooden skewers. (I have some photos attached.) Everyone had a very good time and encouraged to participate in the Great American Teach-In on November 18th.

The Great American Teach-In was held on November 18th. Dr. Jim Anderson, the proud father of three school-age children once again participated in the Great American Teach-In. Although committed to the ideals of this day of interacting with school children, Dr. Anderson expressed some reservations before the big day came. "I'm an engineer, a member of a fine and honorable profession; however, my profession can be difficult to explain and I always feel like I'm in competition with the policeman, the fireman, and the soldier. They've got a cool uniform and a utility belt -- I've just got a sport coat and a pocket protector.

For his 2009 presentation, Dr. Anderson turned to his professional organization, the Institute for Electrical and Electronics Engineers (IEEE) for inspiration. On their web site he found an instructional program entitled "Build A Better Candy Bag" that is used to instruct science teachers on how to bring engineering concepts back into their classrooms. Dr. Anderson seized on this idea and showed up for the Great American Teach-in armed with a cut-up trash bag, tape, scissors, and some twine. Working with first, third, and sixth graders he had them help him build a bag using these supplies. Once built, the class proceeded to load the bad up with heavy cans of food. You can guess what happened next: the bag failed. Dr. Anderson used this design setback as a way to teach the engineering process: start with an idea, design a solution, and then test it. He worked with the class to create a better bag and then they once again loaded it up with cans and this time the bag held! All in all, the three classes appeared to have had a very good time. Dr. Anderson was able to leave them with this final definition of what an engineer does "They use math and science to solve problems."

Sean Denny, TIS Chairman

IEEE

Protective Relay Seminar

On Friday November 6, 2009 the Power Engineering and the Industrial Application Society has the distinct pleasure to welcome relay experts from Schweitzer Engineering Laboratory (SEL) for a one day seminar. The fifty five attendees enjoyed the opportunity to learn and interact with Dr. Edmund O. Schweitzer, III, Edsel Atienza, Eduardo Palma and Mike Collum. The session on smart security was lively, well received and generated a lot interaction with the attendees. We would like to thank Dr. Edmund O. Schweitzer who graciously agreed to conduct the seminar as well as the other members of his team. Many thanks for Seminole Electric for the use of their facility.

Serge Beauzile

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December 2009 Calendar of Events (For more information see P. 1) ***inside this Signal…***

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29	30	1 *EXCOM Meeting at TECO Hall*	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17 *FRCC Planning Process see page 6*	18	19
20	21	22	23	24	25 	26
27	28	29	30	31	1	2