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March 2005

PES/IAS Seminar

Substation Automation & SCADA



- Date & Time** Tuesday, March 22, 2005, 11 AM – 3PM
Subject: Substation Automation & SCADA
Speaker: John McDonald, PE
Location: Seminole Electric Cooperative, Inc 16313 North Dale Mabry Hwy, Tampa
RSVP: Online reservations at: <http://www.weiquality.com/fwcs-meetings/>
Questions: Ghaff Khazami, PE (813) 960- 0990, gkhazami@ieee.org,
gkhazami@megaway.com
Cost: \$40 Members; \$125 for non-members, \$100 for non-members who fill out application to become new IEEE member, and \$10 student members.
Lunch: Included and it will be served at the conference rooms

PES West Coast Chapter invites you to the opportunity to attend our second series of 2005 Seminars. Substation Automation and SCADA Seminar is intended for all members, non members, Utility Engineers, Industrial Engineers, and Student Engineers.

The speaker will cover the latest trends on the Automation of substations and SCADA interface. Automation Technology is rapidly growing in the utility industry along with other industries and it is to your advantage to keep up with the changes. Also it is a good opportunity for licensed Engineers (PE s) to add 3 Professional Development Hours for next renewal.

Brief Biography: John D. McDonald, P.E., is Senior Principal Consultant and Director of Asset Automation and Systems for KEMA, Inc. In his over 30 years of experience in the electric utility industry, John has developed power application software for both Supervisory Control and Data Acquisition (SCADA)/Energy Management System (EMS) and SCADA/Distribution Management System (DMS) applications, developed distribution automation and load management systems, managed SCADA/EMS and SCADA/DMS projects, and assisted Intelligent Electronic Device (IED) suppliers in the automation of their IEDs. John is currently assisting electric utilities in substation automation, distribution SCADA, communication protocols and SCADA/DMS. John received his B.S.E.E. and M.S.E.E. (Power Engineering) degrees from Purdue University, and an M.B.A. (Finance) degree from the University of California-Berkeley. John is a member of Eta Kappa Nu and Tau Beta Pi, is a Fellow of IEEE, and was awarded the IEEE Millennium Medal in 2000, the IEEE PES Excellence in Power Distribution Engineering Award in 2002, and the IEEE PES Substations Committee Distinguished Service Award in 2003. John is President-Elect of the IEEE PES, is Co-Vice Chair of IEEE Standards Coordinating Committee (SCC) 36, is Corresponding Member to IEC Technical Committee (TC) 57 Working Group (WG) 11, and is the Immediate Past Chair of the IEEE PES Substations Committee. John is a member of the Advisory Committee for the annual DistribuTECH Conference and is a charter member of *T&D World* magazine's International Editorial Advisory Board.

Directions: Seminole Electric Cooperative Inc, 16313 North Dale Mabry Hwy, from I 275 take Bearss exit go west about 4 miles to Dale Mabry Hwy and Ehrlich intersection turn north, pass two traffic lights at the 3rd light turn right to the parking area.

**2005 IEEE EXECUTIVE COMMITTEE
FLORIDA WEST COAST SECTION**

CHAIR: Angela Alexander
Honeywell, 727-539-2331
Angela.alexander@ieee.org

VICE CHAIR: Jim Anderson
jim.anderson@ieee.org

SECRETARY: Jules Joslow,
ElectroMark, Inc. (800) 274-2383
jjoslowemi@aol.com

TREASURER: Ralph Painter,
Tampa Electric Co. (813) 228-4685
rdpainter@ieee.org

SIGNAL EDITOR: Srinivas Katkooi,
USF (813) 974-5737
katkooi@ieee.org

AWARDS: Richard Beatie, PE
r.beatie@ieee.org

BYLAWS: Richard Beatie, PE, Consultant
(813)-289-0252
r.beatie@ieee.org

EDUCATION: Dr. Rudolf E. Henning and Zhen Tong
(813) 974-4782 or (727) 328-8777 (Ext: 333)
henning@eng.usf.edu or tong@ieee.org

PACE: Scott Haynes, Honeywell
(727)-539-3358, scott.haynes@ieee.org
Richard Martino, Consultant
(727) 536-1776, richard@richardmartino.com

MEMBERSHIP: Tom Blair, TECO Energy,
813-228-1111 (ext: 46171) tom_blair@ieee.org

STUDENT BRANCH CO-ADVISORS:
Dr. Rudy Schlaf, USF (813) 974-8463
schlaf@eng.usf.edu
Dr. Srinivas Katkooi, USF, (813)-974-5737
katkooi@ieee.org

STUDENT BRANCH MENTOR: Jim Howard
Lakeland Electric (813) 876-1748
j.howard@ieee.org

STUDENT BRANCH CHAPTERS:
Kristy Baksh, IEEE Student Chapter,
(813) 974-4776, kbaksh@eng.usf.edu
Upavan Gupta, IEEECS Student Chapter,
(813)-974-1348, ugupta@csee.usf.edu

PES/IAS CHAPTER: Ghaff Khazami
(813) 960-0990 gkhazami@megaway.com

MTT/AP/ED CHAPTER: Ken A. O' Connor
Raytheon Systems Co. 727-302-2357
Kenneth_A_O'Connor@raytheon.com

COMP/AESS CHAPTER: James S. Lumia
(813) 832-3501, jlumia@ieee.org

SP/COMM CHAPTER: Hüseyin Arslan
USF (813) 974-3940
arslan@eng.usf.edu

LIFE MEMBER CHAPTER: Jules Joslow
ElectroMark, Inc. (800) 274-2383
jjoslowemi@aol.com

GOLD: Dennis Trask, d.trask@ieee.org (813) 366-4201
WEB PAGE: <http://ewh.ieee.org/r3/floridawc>
WEB MASTER: Jim Anderson, jim.anderson@ieee.org

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All material for THE SUNCOAST SIGNAL is due by 7th day of the month preceding the issue month. Address all correspondence to:

Prof. Srinivas Katkooi,
4202 E. Fowler Avenue, ENB 118, Tampa, FL 33620.
Voice: (813) 974-5737 Fax: (813) 974-5456E-MAIL:
katkooi@ieee.org
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Chair's Comments

By Angela Alexander

Congratulations to all of the award recipients honored at the recent Celebrate Engineering Banquet. Many thanks to all of the dedicated volunteers who worked to make this year's banquet a success. And thanks also to those of you who attended to show your support for this annual Engineer's Week event.

SoutheastCon '05 is coming up next month in Ft. Lauderdale. If you've never attended, I encourage you to consider it: SoutheastCon is the annual IEEE Region 3 Technical, Professional and Student Conference. This year's technical program will include over 100 papers on a wide variety of EE-related topics. The newly formed USF Student Branch Robot Team will compete in a robot competition against 40+ teams from universities in the Southeast. Details about the conference are available at <http://sec05.nova.edu>

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Plan Now To Attend!!

The Florida West Coast Section (FWCS), in conjunction with the Power Engineering Society/Industry Applications Society (PES/IAS) local Chapter, will be hosting the **PES Substation Committee Meeting** here in the Bay Area on April 10-13, 2005, at the Wyndham Harbor Island, Tampa, Florida. Check out all the details on the web site at:

<http://ewh.ieee.org/cmte/scam2005/>

We hope many of you have a chance to take advantage of this outstanding opportunity to attend this meeting and to see how the committees work to develop the standards, etc. for Substation. In addition to the normal meeting, we will be offering several tutorials, so mark you calendar now for any or all of the following.

Sunday, April 10 - Tutorials

9:00 am - 1:00 pm	Tutorial	GIS (Gas Insulated Substations)
9:00 am - 1:00 pm	Tutorial	IEC 61850 Substation Communication Protocol
1:30 pm - 5:30 pm	Tutorial	Lightning Protection
1:30 pm - 5:30 pm	Tutorial	Drop in Control Houses

Students' Corner

IEEE Student Branch

The IEEE Student Chapter would like to congratulate Jeremy Huffman who earned the honorable title "IEEE FWCS Student Engineer of the Year". Jeremy is a graduating senior, currently enrolled for 22 course hours, in addition to being the IEEE Student Chapter Treasurer, he is also involved with other numerous other campus activities and part of the Undergraduate Research Experience at the College of Engineering. This recognition could not have been awarded to a more deserving student! Congratulations Jeremy! Its election time for the IEEE Student Chapter at USF! All positions need to be filled and we are currently taking nominations. Elections will be held during the week of March 21st - 25th. To qualify for nominations you must be a national member of IEEE. Take advantage of their student rates and join today at www.ieee.org/join.

*** March 5th , 2005 at Riverfront Park - Join us for the annual Spring Picnic with IEEE FWCS, PES/IAS Society and USF Students. Don't forget to bring your \$3 for canoeing and your alumni or student id.***

Brain Teaser Challenge Column

By Butch Shadwell

February BTC I'm sure that vintage car buffs really enjoyed last month's BTC. "... question is about a component in those early car radios that used to fail pretty often. It wasn't a vacuum tube, but it was the heart of the power supply that allowed the vacuum tubes to operate on a 6 or 12 volt car battery. It was installed in a socket just like a vacuum tube, but it was usually accessible from outside of the metal chassis so that one could change it without removing the radio or opening the enclosure."

I was pleasantly surprised at all of the answers I was sent to last month's BTC. I suspect my readership is a bunch of old guys in a retirement home. Not only did most of my respondents correctly identify the "vibrator", but several told me about 6 volt and positive ground cars they once owned. Of course the vibrator to which I am referring is an electro-mechanical device that would convert the cars DC power source into alternating current to the primary of a transformer, that would in turn create the B voltage needed for the vacuum tubes. The design was much like that of a doorbell buzzer with a DPDT switch attached. But I bet you already knew that.

March BTC As the three moons of Zedonia hung in the night sky, Brodlik could feel a storm coming. With the olfactory sensors in his antennae, the telltale smell of warm ammonia was one that he knew well. Having spent most of his 200 Zedonian years as a pfort fisherman, weather forecasting was in his blood. Even in the best weather, pfort fishing could be very dangerous. As the 1000 pound fish is pulled close to the boat, it makes a last effort to avoid capture by shooting barbed projectiles from its dorsal fin. If you forget to have your thodic shielding activated, ... well suffice it to say that you don't want to forget your thodic shielding.

Brodlik had not always planned on being a pfort fisherman. Before he took to the sea, he had always imagined that one day he might try to get into the Zedonian Space Academy to study engineering. He was medically disqualified for having flat pods. As the storm drew near, Brodlik suddenly realized that the rain activated shields for his home had been damaged in a zerl two weeks ago. This meant that his home would be exposed to the elements.

The damaged component was an opto-isolator that coupled a signal that varied between 12 and 240 volts to a logic input. There is a current limiting resistor on the input side of 240 Kohms and the LED has a 1 volt Vf. In order for the output of the isolator to deliver the correct logic state, the open collector NPN transistor must saturate at at least 50 uA collector current. What is the minimum current transfer ratio (CTR) for the opto-isolator that Brodlik needs to repair this system?

Reply to Butch Shadwell at b.shadwell@ieee.org (email), 904-223-4510 (fax), 904-223-4465 (v), 3308 Queen Palm Dr., Jacksonville, FL 32250-2328. (<http://www.shadtechserv.com>) The names of correct respondents may be mentioned in the solution.

March 2005 Calendar of Events

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 5:30PM: IEEE FWCS Excom Meeting, TECO Hall, Tampa	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22 11-3PM: PES/IAS Seminar on Substation Automation, Seminole Electric, Tampa	23	24	25	26
27	28	29	30	31		

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