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| Newsletter of the Baton Rouge Section of the Institute of Electrical and Electronics Engineers, Inc. August, 2016 |

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**Branch Counselors**

LSU- Dr. Choi

SU – Dr.Henton

# Chairman’s Message

At the July meeting there were thirty-seven people in attendance, twenty-seven were IEEE members, nine were IAS members, and five were quest. The presentation was given by Mr. Eric Stranz is the Business Development Manager Energy Management – Energy Automation with Siemens.

Since the advent of the microprocessor-based relay, the progression of the mechanized substation into a cohesively automated, monitored, and protected unit has been on a steep curve. Moreover, substations are being integrated into supervisory control and data acquisition (SCADA) or human-machine interface (HMI) packages that are also networked to other substations, creating a wide-area network (WAN) of overall system monitoring and control. A major part of this movement has been driven by the willingness of relay manufacturers to implement communications protocols in their products, thus making relay information available for other devices or remote monitoring.  Communications standards have been developed to address the evolving substation and allow for multivendor device integration.

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It is suppose to send it all the members of the Baton Rouge section and not just the ones that are already on our mailing list. You all have been informed about the new system and I will try it again for this meeting. I still have a few questions and hope to it worked by the time I send it out. We should see if any improvements in the new system as to have an increase in partition. This could help in keeping us in the big room rather than having to relocate.

Your RSVP for the meeting is important, please RSVP. We appreciate if, when signing up, you mark if you are an IEEE member including if you are an IAS member or not a member. A lot of you are doing so and we appreciate your help. This makes it easier for my book keeping which I have to report on each year. If you are not a member, that is not a problem. We will not be forcing you to join, and we can show you some benefits that will help you in your professional career. Anyway, we appreciate everyone who attends the meetings.

**Our Next Meeting Will Be At**

**Ralph &Kacoo’s**

**6110 Bluebonnet Blvd. Date Second Thur. Each Month**

Just South of I-10, across from the Mall of Louisiana.

**UPCOMING AGENDA**

* Aug. 11, 2016 Engineering Ethics with Respect to Specification and Procurement .
* Sept. 08, 2016 Transients - Abstract Rev. 1Transients - Abstract Rev. 1
* Oct. 13, 2016 TBD or (Applying the NEC 2014)
* Nov. 10, 2016 Pony Motor Starting of Large Compressors Drive Trains
* Dec. 08, 2016 Motor Starting Auto-transformer Basics

**Other Sections Meetings and PDH opportunities**.

Visit the Louisiana Engineering Society (LES) web page for additional chances for PDH’s at the website listed: [www.LES-STATE.org](http://www.LES-STATE.org)

If you know of another PDH opportunity, let me know when and where it is in time for me to put it in the newsletter. Thanks.

Section Chair

O. J.

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### MEETING NOTICE

Date: **Thursday, August 11, 2016** Time: Social……….......…...6:00 P.M.

Place: **Ralph &Kacoo’s** Dinner ($20.00 members/

**6110 Bluebonnet Blvd.**  $30.00 non-members)

Speaker Presentation .......…6:30 P.M.

**CONTINUING PROFESSIONAL DEVELOPMENT**

##### Joint meeting IAS & IEEE Professional Presentation

**Engineering Ethics with Respect to Specification and Procurement**

# ABSTRACT of PRESENTATION

It will be a discussion on ‘Engineering Ethics with Respect to Specifications and Procurement’.

# BIOGRAPHICAL DATA of PRESENTER

Mr. Charles Bueche has a degree in Electrical Engineering from Louisiana State University in Baton Rouge and completed a Masters in Business Administration Program through Tulane University in New Orleans.  He has extensive experience in electrical distribution having worked with Rockwell Automation and Reily / Wesco for over 15 years.  He has been with AWC, Inc. as the President of the Electrical Division since 2009 and currently serves on the AWC board of directors.  Charles is a registered Professional Engineer in the state of Louisiana and has been a long time member of IEEE

**Ramblings and etc.**

* Please continue to RSVP to Don Couvillion using the website: [Meeting RSVP via Web](https://meetings.vtools.ieee.org/m/37815).

This is now the preferred method but if necessary you can email at [dcouvill@ieee.org](mailto:dcouvill@ieee.org) or call (225)-362-2846 or use the section web site. Thanks.

The meeting this month is at **Ralph &Kacoo’s.**

The dinner for student members is half price.

If the **LSU** Branch Officers has changed, please let us know. If the **Southern** Branch Officers has changed, please let us know.

# VISIT THE BR SECTION WEBSITE

[**http://sites.ieee.org/baton-rouge/**](http://sites.ieee.org/baton-rouge/)

**The 2015-2016 Officers of the IEEE LSU Branch**

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| **RSVP to Don (225) 362-2846 by 3:00 PM. Meeting day or email by Wednesday, July 13, 2016 Thanks.**  [dcouvill@ieee.org](mailto:dcouvill@ieee.org) |

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Since these communications protocols utilize the Ethernet network within the substation it is important to make these networks robust and reliable.  Network designs such as Dual Link, Rapid Spanning Tree Protocol (RSTP), Parallel Redundancy Protocol (PRP), High Availability Seamless Redundancy Protocol (HSR) help to ensure that no single point of failure exists on the network.  RSTP and HSR are ring network topology where HSR is has zero reconfiguration time on a failure.  PRP and Dual Link are star connected networks where PRP is the only one of these that has zero reconfiguration time on failure.

IEC-61850 is one such standard that has gained Industrial and Utility acceptance among some of today’s largest corporations.  Three communications protocols: MMS, GOOSE and Sampled Values, have been built from this standard and when implemented, greatly reduce the wiring and engineering of the modern substation protection system.  MMS is used for communications to SCADA, HMI or Power Monitoring Systems; GOOSE is high speed device to device communications and Sampled Values through multicast highspeed messages digitize the connection from CT’s, VT’s and I/O in the breaker for the protective relay mounted remotely.  The purpose of these communications protocols are to reduce copper wiring, save engineering effort and improve reliability. Introduced in the late 70’s Modbus was the earliest of communications protocols.  Modbus was strictly used as a communications method to monitoring systems and lacked the speed to do any type of schemes based on readings.  The data provided from Modbus lacked certain components such as time stamp and quality signals.  It also did not support an in built method to transfer files such as fault records from the end device.  In the early 90’s DNP was introduced and contained many of the missing components of the Modbus protocol.  DNP3 communicates data with the time stamp from the end device allowing users to build a proper sequence of events.  It also has a file transfer mechanism and was quicker than Modbus as it could transmit the data when changes occur rather than waiting for a “poll” of the data to check for value updates.  DNP3 is also just designed as a SCADA/HMI type protocol.  Realizing a need to address all areas such as communications to SCADA, Peer to Peer, Process Bus, groups around the globe began work on a standard that today is known as IEC-61850.