

----- OEB IAS -----

You are invited to an IEEE Meeting on Thursday, October 27, 2011



Title: Key Considerations in Application of Current Transformers in Protective Relaying Systems

Speaker: Normann Fischer, Schweitzer Engineering Laboratories, Inc.

Date: Thursday, October 27, 2011 **** NOTE THIS IS THE 4th THURSDAY ****

Time: No-host social at 5:30 pm; Presentation at 6:15pm; Dinner at 7:15 pm; Presentation continues at 8:00 pm; Adjourn by 9:00 pm.

Place: Zio Fraedos, 611 Gregory Lane, Pleasant Hill. Call 925-933-9091 if you need directions.

RSVP: **Please make reservations by October 24**, by contacting Gregg Boltz email: gboltz@brwncald.com or telephone: (925) 210-2571

Cost: The cost of dinner is \$25 for IEEE members, \$15 for student and retired members; \$30 for non-members.

Meeting Description:

Current transformers (CTs) are critically important components of medium voltage industrial protective relay systems. CT performance during fault conditions determines the quality of transformed current signal levels sensed by protective relays. Hence, overall protective system response to electrical faults is dependent on CT performance, as well as relay and breaker operating behavior. This presentation will include a discussion on:

- What is CT saturation, why do we care, and how do we avoid and/or minimize it?
- How do electromechanical, analog, and modern digital relays respond to a saturated CT output?
- How does CT performance affect medium voltage feeder overcurrent and differential protection systems?
- What are "CT burden calculations," and why are they important?
- What are the tradeoffs between current transformer Class, Size, and Saturation?

About the Speaker:

Normann Fischer received a Higher Diploma in Technology, with honors, from Witwatersrand Technikon, Johannesburg in 1988, a BSEE, with honors, from the University of Cape Town in 1993, and an MSEE from the University of Idaho in 2005. He joined Eskom as a protection technician in 1984 and was a senior design engineer in the protection design department at Eskom for three years. He then joined IST Energy as a senior design engineer in 1996. In 1999, he joined Schweitzer Engineering Laboratories, Inc. as a power engineer in the research and development division. Normann was a registered professional engineer in South Africa and a member of the South Africa Institute of Electrical Engineers. He is currently a member of IEEE and ASEE.

Upcoming Meetings - Mark your Calendars:

Thurs, Nov 17: UL standards and testing, and related codes
Thurs, Jan 19: Power Quality by Alex McEachern - Founder of BMI, former President of both BMI and Electrotek
Thurs, Feb 16: Generator Applications

IEEE- IAS/OEB Officers:

Chairman: **Gregg Boltz** - Brown and Caldwell, (925) 210-2571
Vice Chairman: **Richard Romero** - dahl-beck Electric, (510) 237-2325
Treasurer: **Michael Nakamura** - East Bay Municipal Utility District, (510) 287-2066
Secretary: **Bob Salter** - Eaton Corp, (925) 454-3745
Member at Large: **David Eng** - Technical Marketing and Sales, (925) 265-1000

San Francisco Chapter Meeting Notice: Tuesday – October 25, 2011

Chair:	Jamie Fox 510.769.7600	The Engineering Enterprise jamie@engent.com	Member at Large:	Ray Holstead 415.564.0810	Electrical Engineer holstea@pacbell.net
Vice Chair:	Jim Avery 510-360-1265	Industrial Electric Manufacturing jima@iemfg.com	Member at Large:	Chris J. Lovin 925.454.3754	Eaton Electrical ChrisJLovin@eaton.com
Treasurer:	Finn Schenck 925.463.7122	Schneider Electric finn.schenck@us.schneider-electric.com	Member at Large:	Sonny K. Siu 415.979.3955	HP Critical Facility Services sonny.siu@hp.com
Secretary:	Frank Sylvester 415.554.1578	SFPUC fsylvester@sfwater.org	Member at Large:	Jonathan Burrows 408-396-5544	Manufacturing Yield Consultants Jonathan.o.burrows@hotmail.com
Membership:	Gary Fox 925.969.3608p	General Electric g.fox@IEEE.org	Member at Large:	Jack Lin 415.551.4894	SFPUC jlin@sfwater.org
Member at Large:	Bob Formicola 209-870-1936	Energy Systems bofb@energysystem.net	Linkedin group		IEEE Industry Applications Society
Our web site:	http://ewh.ieee.org/r6/san_francisco/ias/				

Subject: **Parallel Power Solutions**

Parallel power solutions have always offered the standby generation marketplace significant advantages. However, implementation of these solutions has been limited to mission critical applications and large kilowatt projects. This is largely due to the constraints in implementing traditional paralleling solutions. These constraints include; cost, space, issues of single source responsibility, and a significant level of complexity. The first step in evaluating parallel generation options is to acknowledge the benefits gained by placing multiple power sources in parallel. Through these steps, paralleled power solutions can be designed to compete effectively against single engine/generator price points while maintaining parallel generation benefits.

Speaker: **Curt Gibson, PE – Power Solutions**

Curt Gibson is Power Solutions Manager supporting dealers and consulting engineers on their large complex emergency power projects. Curt has designed and managed over one hundred traditional paralleling switchgear systems while working for ASCO Power Technologies in various engineering and project management roles for 15 years. Prior positions include Facility Manager for Sun Microsystems, and Plant Engineering Manager for BP Chemicals. Curt is a PE, has an MBA, and is a licensed pilot.



Date:	Tuesday October 25, 2011
Time:	5:30 pm (Attitude Adjustment) 6:00 pm (Meeting) 7:00 pm (Dinner)
Location:	Sinbad's Restaurant Pier 2 The Embarcadero San Francisco, CA 94111 415.781.2555 (short walk from Embarcadero BART)
Cost:	\$30 (At the door). Email pre-registration qualifies the registrant for our drawing of an IEEE Color Book at dinner. Please email fsylvester@sfwater.org for reservations and to qualify for the drawing.
Student Members:	\$10 (at the door) discounted cost for first 5 reserved IEEE Student Members.
Contact:	Frank Sylvester SFPUC fsylvester@sfwater.org 415.554.1578