

## ERLPhase Power Technologies: October 2011 Update

Welcome to our latest e-newsletter...

### Visit us at WPRC!!

Oct 18-20, 2011

Spokane, WA

Joe Perez presents "*Calculating the Loadability Limits of Distance Relays*"

Visit us in the "Comstock Room" on the 4th floor.

➤ [Learn more about WPRC](#)

### Xcel Energy Article in TD World Magazine

#### Features S-PRO Sub-Harmonic Protection Relay

This month's TD World features an excellent article about Xcel Energy's experiences detecting (and protecting against) sub-harmonic oscillations that were found on their wind generation system. The need for this equipment was discovered in 2007 when a flashover occurred as equipment was brought online, triggering protection schemes at the generating station. Subsequent analysis revealed that fault recorders operating at the time had captured high levels of sub-harmonic oscillations that had gone undetected until that time.

The article chronicles the engineers' experiences as they worked with a manufacturer (ERLPhase) to develop a new protection relay that would solve this problem in the future.

[TD World Magazine's "Xcel Tames the Wind"](#) (see page 42)

### Facilities Expansion

At our Winnipeg head office, we have taken over an additional 2,900 square feet of space, for a total building area of 10,200 sq. ft. This includes a very attractive reception area, a customer service lab, 2 spare offices for visitors, a quality lab and office space for finance, sales and marketing. The expansion has also freed up space in the existing area for a new 240 square foot engineering lab complete with anti-static flooring.

As always we warmly welcome any partners or customers who are travelling in the area to schedule a visit with us to meet the team and tour our facilities.



Bien Laio, Quality Assurance Specialist, shows off new quality lab space.



Nikolai Ped adjusts relay in new product development lab.



Maria Sarmiento welcomes visitors at new reception area.

### Krish Narendra Appointed as Adjunct Professor

ERLPhase Power Technologies is pleased to announce that the University of Manitoba has appointed Krish Narendra (Ph.D.) as an Adjunct Professor in the Department of Electrical and Computer Engineering. This 3 year term includes providing thesis topic advice to graduate students, evaluating graduate students theses, shaping graduate studies policies, and maintaining his high level of scholarship and research in the University community.

Dr. Narendra is the Vice President of Technology and Quality at ERLPhase Power Technologies. He obtained his B.E. (Electrical Engineering) in 1986 from University Visweswaraiiah College of Engineering (UVCE), and Msc (E.E), Ph.D. (E.E) with a specialization in High Voltage Engineering from Indian Institute of Science, India in 1989 and 1993 respectively. He joined the Electrical and Computer Engineering Department of Concordia University, Montreal as a Research Scholar in 1995. From 1996, he worked in software development with APT Technologies and then NxtPhase T&D Corporation, heading Software Development for the Relay and Recorder division since 2006.



Dr. Narendra has over 18 years of software development expertise, as well as over 25 publications and 4 patents (pending) to his credit. He is actively participating in the IEEE PRSC (Power System Relaying Standards Committee), IEEE – IEC joint working groups and is a member of the PRTT of NASPI (North American Synchrophasor Initiative). His areas of interest include Power Systems Disturbance Analysis, Protection, HVDC Controls, Neural Networks, Fuzzy Logic, Wavelets, Phasor Technology (PMUs), and IEC 61850 application to protection and control.

### TESLA LITE Power System Recorder

Complete recording and analysis for smaller substations in one economical box



The new TESLA LITE is an economical user-friendly multi-timeframe power system recorder:

- Economical yet complete power system recording for custom applications in smaller substations.
- Easy to use intuitive software
- Simultaneous transient fault, dynamic swing and trend recording and event logging
- Fault location derived from single and calculated currents

- IRIG-B clock synchronization (modulated and unmodulated)
- Smallest footprint among recorders allows easy retrofit and installation
- 12 current, 6 voltage and 38 digital inputs

### Request an L-PRO 4000 Eval Unit Today



The L-PRO 4000 is a digital, microprocessor-based line distance protection system that provides comprehensive distance based line protection for medium to extra-high-voltage transmission lines. Apply the L-PRO 4000 system for high-speed distance and directional protection and complete control in multi-breaker applications typically found in ring or breaker-and-a-half substation arrangements.

### New App Note

#### Performing Load Encroachment with an L-PRO

Learn more about load encroachment, including typical solutions and specific methods as applied on an L-PRO Line Protection Relay. This application note discusses changing the characteristic shape of the impedance tripping zone, and a second method which involves implementing a "load blinder". Specific setting examples illustrate the process and operating issues with load blinders are also discussed.

[Download App Note PDF](#)

### Upcoming Events

Looking forward to seeing you at an event in your area...

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#### MIPSYCON

Nov 1-3, 2011

Minneapolis, MN

❖ [Learn more about MIPSYCON](#)

#### Alaska Electric Utility Conference

Nov 2-4, 2011

Anchorage, AK

❖ [Learn more about Alaska Electric Utility Conference](#)

#### CONCAPAN

Nov 9-11, 2011

San Salvador, El Salvador

❖ [Learn more about CONCAPAN](#)

## ERLPhase Power Technologies Ltd

- ❖ North American centre of excellence within a strong and dynamic global organization
- ❖ Driven by innovation and best-in-class technology to provide smart solutions to customers needs
- ❖ Singular focus on power system protection and recording



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