

# 2010 INTERNATIONAL PROTECTION TESTING USERS GROUP MEETING TRAINING AND TUTORIALS

## **FREE SUNDAY TUTORIAL: Basics of IEC 61850 Standard**

*Sunday, October 10<sup>th</sup>, 1:00 PM – 5:30 PM*

***Free of charge – preregistration recommended***

IEC 61850 is a standard that is being used to make substation automation easier, save money by elimination of significant amount of substation wiring and make interoperability between relays manufactured by different vendors. The standard has its root in Europe and is spreading fast in other parts of the world. In USA the response has been cautious. American utilities are implementing this standard on specific stations to study the performance and savings impact. Hence there is an unclear understanding of this standard in the US.

The intent of this tutorial is to introduce this standard to the engineers, managers and technicians representing various utilities. This session assumes that the audience knowledge of this standard is minimal to none. The tutorial will start with background information and will explore the basics of the standard. It will provide a general overview of the various aspects of this standard including station bus details, GOOSE and GSE messaging, and a brief description of Process Bus implementation.

The implementation of this standard imposes new methods for testing relays that are compliant with this standard. Details of testing such relays and IEDs (Intelligent Electronic Devices) will be presented.

After attending this tutorial, the audience will take away a very good conceptual knowledge of the IEC 61850 standard with the advantages and challenges posed in its implementation.

## **OPTIONAL TRAINING: Introduction to ProTesT (\$575 USD per person)**

*Monday, October 11<sup>th</sup>, 8:00 AM – 5:00 PM*

*\$575 USD per person includes breakfast, lunch and course material*

### ***Introductory level (no prior experience with ProTesT required)***

Power companies worldwide rely on ProTesT for automated testing of relays and power system protection schemes. With ProTesT you can perform virtually any test needed on your protection scheme, including steady-state calibration, dynamic state simulation, transient simulation and end-to-end testing. This full day workshop will include an overview of the ProTesT system – what it is and how it works. You'll become familiar with its menus and features, and how to organize your database. After this introduction each attendee will create a test plans for overcurrent, distance and other protective functions. Upon completion of this workshop attendees will have gained the ability to work with ProTesT to build test plans, as well as using existing plans to test relays.

NOTE: This is a hands-on class. Bring your own computer with ProTesT loaded in advance. If you need the latest ProTesT version loaded on your computer stop by the PTUG Clinic on Sunday or Monday for assistance. During the workshop you will be divided into groups and each group will be provided an instrument, a relay and instructor assistance.

## **FREE INTRODUCTION CLASS: Introduction Session on Protection Suite**

*Tuesday, October 12<sup>th</sup>, 8:00 AM – 5:00 PM*

Attend this day long session on Doble's Protection Suite, a new and powerful testing software. Protection Suite has combined various testing modules in one location to provide all the power you need. It is designed to make your testing tasks easier as well as very interactive. This new software will convert your ProTesT database in just a few clicks and add several new features. If you do not wish to use your ProTesT database, you can make new test plans. Protection Suite also includes excellent reporting features that you need to compile NERC mandated reports and much more. Learn about all that Protection Suite will offer as Doble leads you through all the features in a step-by-step approach.

## **OPTIONAL TRAINING: ProTesT Settings Workshop (\$575 USD per person)**

*Friday, October 15<sup>th</sup>, 8:00 AM – 5:00 PM*

*\$575 USD per person includes breakfast, lunch and course material*

### ***Advanced level with prior experience in ProTesT required.***

This workshop is for those individuals who would like to learn about ProTesT's advanced Settings features. Attendees should have completed the Introduction to ProTesT class or have a working knowledge of ProTesT. You will learn how to set up macros so they can be automatically populated based on setting of the relays. With this knowledge you will have the ability to program settings into ProTesT. You will be able to create test plans that will automatically update based on the relay settings, eliminating the need to enter the information manually.

NOTE: This is a hands-on class. Bring your own computer with ProTesT loaded in advance. If you need the latest ProTesT version loaded on your computer stop by the PTUG Clinic on Sunday or Monday for assistance. There will be a limited number of relays available for your use after class and during breaks.

## **FREE INTRODUCTION CLASS: Introduction Session on Protection Web**

*Friday, October 15<sup>th</sup>, 9:00 AM – 12:00 PM*

The three hour session on Protection Web will focus on how this web-based database can help you manage your protection assets effectively. Protection Web allows your company to store data in one location where you can run several queries to prepare effective NERC reports as well as using the notification system to broadcast specific messages to field personnel. Furthermore, Protection Web is designed to allow controlled uploads and downloads of databases with subsequent synchronization after technicians run specific tests and upload the modified database to the server.