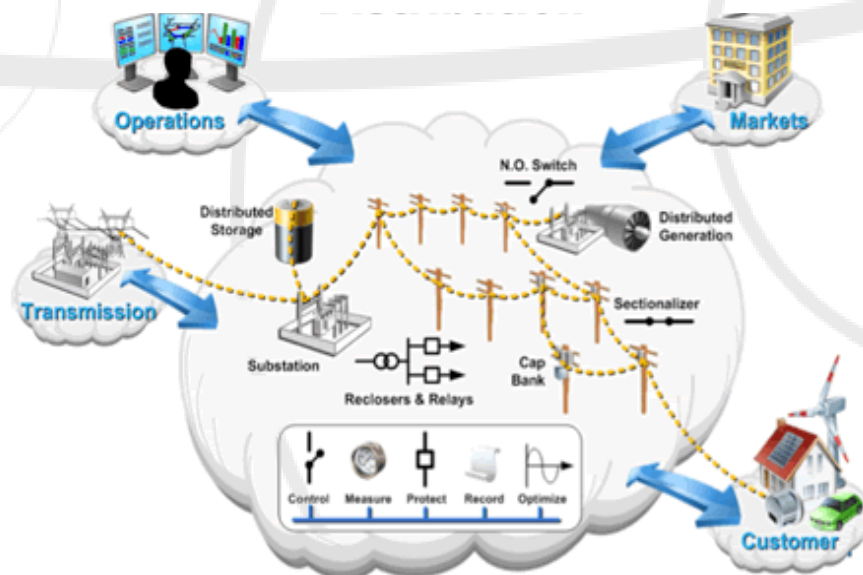


# DISTRIBUTION CONTROL CENTER (DCC) APPLICATIONS HANDS ON EXERCISES

**Dec 16 - 20, 2018**

**Dubai, UAE**



## Early Bird Discount & Registration

Register and pay 25 days prior to the event date and get 15% discount.

Registrations will close 15 days prior to the start of the Course.

## Course Overview:

As distribution companies evolve under the restructuring of the electric utility enterprise, many technical, economic and business challenges emerge. Depending on how a distribution company is restructured, there are opportunities and risks that were not envisioned before restructuring.

The main opportunity of course is to run the company as a "business" that aims at increasing profitability through successful use of technology, management principles and sound financial principles. The risks can be many, however, as failure to perform its tasks effectively, will cause customer complaints, operating at a loss and eventually burdening almost everyone involved. This course will deal initially with a review of restructuring issues as they affect a distribution company and its relationship to: generating company suppliers, the transmission company and above all, the various types of consumers.

Following that the course will deal with the Functional Components of the Distribution Control Center and their integration to meet the ever-changing needs of the distribution utility enterprise. It will then go over the essential systems that are needed namely: (a) The overall "Information System" as a whole and its various components: Customer Information System (CIS), Geographic Information System (GIS), SCADA; (b) Operating functions both real-time and offline, and (c) performance issues associated with the role of the DCC in enhancing the various business operations and company profitability

## Course Objectives:

**After completing this Course, Participants will be able to:**

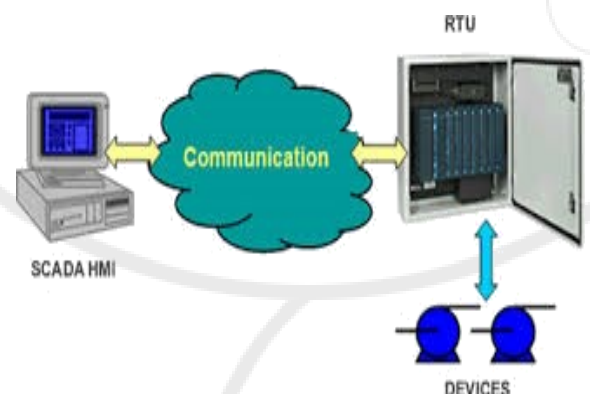
- ◆ Competently define the Concepts of Substation Automation
- ◆ Specify the Main Components of Substation Automation
- ◆ Present the requirements of an Effective Substation Automation System
- ◆ Compare and evaluate different Systems and Products Available today
- ◆ Identify the multitude of benefits a substation Automation System can bring to Power System Network
- ◆ Effectively design and implement a Substation Automation System, based on your Specific Requirements
- ◆ Avoid pitfalls and costly mistakes when implementing Substation Automation
- ◆ Analyze and assess the economic benefits Substation Automation can bring to your factory or workplace
- ◆ Make informed decisions regarding the suitability of various systems according to your specific requirements
- ◆ Diagnose Shortcomings of Existing substation Automation.

## Who Should Attend?

The course is designed for Power System Engineers those working in Electrical Substation Networks or anyone wanting to be better understand Operation and Control of Electrical Substation.

## Course Language:

The Presentation, supplied documents, and workshop exercises of the course are in **English**.



## Course Contents:

### Day ONE:

- ◆ Understanding Basics of SCADA Systems
- ◆ Different Types of SCADA Systems
- ◆ Tools Used in SCADA Systems
- ◆ DCC Requirements and Overview
- ◆ The DCC Master Plan as Starting Point
- ◆ Cost-Benefits Analysis of Function & Systems
- ◆ Workshop Exercise

### Day TWO:

- ◆ Familiar with DAQ (Data Acquisition)
- ◆ RTUs, Communication & Automation
- ◆ Understanding the Micro and Macro Interlock
- ◆ DCC Computer & Database Issues
- ◆ Geographic Information System (GIS) for Distribution
- ◆ Understanding the Safe Switching Procedures
- ◆ Mobility between Communication Media

### Day Three:

- ◆ Troubleshooting Call System (TCS)
- ◆ Load Forecasting for Distribution Systems
- ◆ Basic Network Application Functions
- ◆ PDR and Play Back Functionality
- ◆ Status and Analog Retrieval
- ◆ Filtering Alarm Prioritizing
- ◆ Search Functionality
- ◆ Cascading Functionality

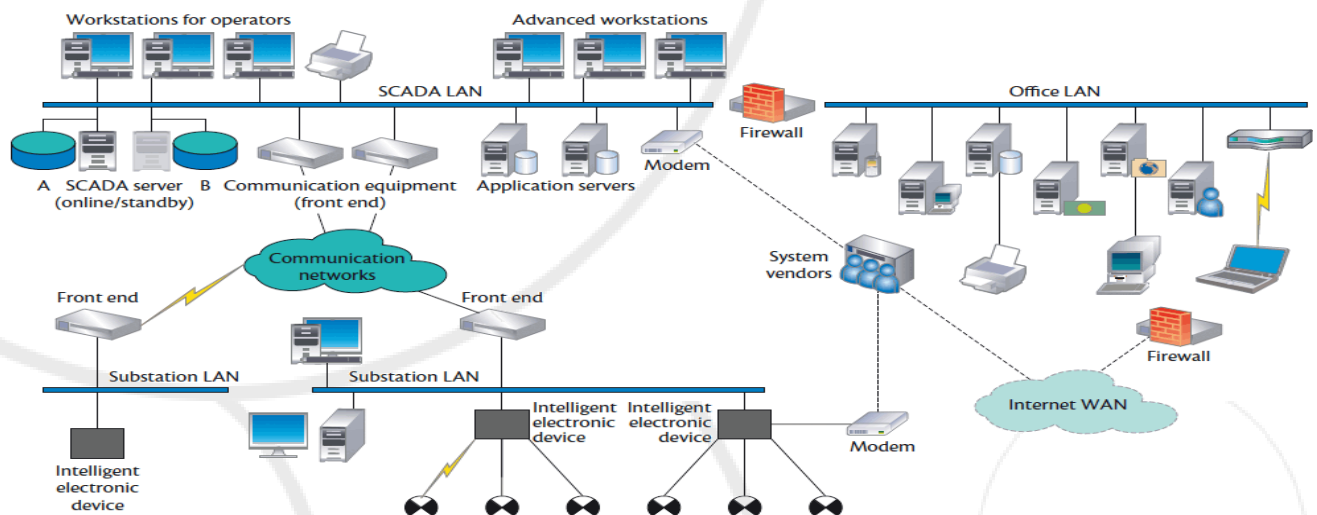
### Day Four:

- ◆ Zoom and Navigator Functionality
- ◆ Using Trend and Report Tools
- ◆ Understanding Different between DP, SP, DC, SC
- ◆ DCC Normal System Optimization Functions
- ◆ Simulator Exercises of Network Applications
- ◆ Smart Grids and Automated Metering
- ◆ Fault Analysis by using SOE
- ◆ Protocols ICCP and IEC, DNP3
- ◆ Meaning of Executive Flags
- ◆ Exercises & Discussion

### Day Five:

- ◆ Improved Skills with Operation of SCADA
- ◆ Understating the Power System Characteristics
- ◆ Understating the Power System Equipment
- ◆ Relevant Function like Sag, Power Swing
- ◆ Development & Training Programs for DCC
- ◆ Meeting Customer Needs in Deregulation
- ◆ DMS Applications (Load Flow, PF, SC, SPM, IAP, FD)
- ◆ Troubleshooting and Maintenance of SCADA
- ◆ Structured Discussion on Needs & Requirements
- ◆ Wrap-up and Discussion

## Course Summary & Conclusion



## Registration Form:

**Please fill the information below:**

Nominee Name:			
Company Name:			
Position Title:		Department:	
Phone:		Mobile:	
Email:			
Company Address:			
Do you want to request this to be conducted as an <b>In-House</b> Course? <input type="checkbox"/> NO <input type="checkbox"/> YES <i>Please fill the required additional information below</i>			
Date Required:		No. of Participants:	
Preferred Venue:		Other Requirements:	

## Course Fees:

The amount of **3500 USD** will be charged for the course fee and Full Payment is required prior to commencement of the course.

## Payment Methods:

A confirmation will be sent upon your registration. Note that full payment must be made prior to the event. Only those delegates who have paid in full will be admitted to the event. All payments should be to APEX Account:

Bank Name : Emirates NBD  
Branch : Jebel Ali, Dubai, UAE  
IBAN No : AE260260001024622899402  
Swift Code : EBILAEADJAZ

## Cancellation:

If you are unable to attend the course you may send a substitute delegate.

Cancellation should be made 15 days prior to the course conduction. Failure to cancel within 10 days will be to pay the course fee in full amount.

## Registration Methods:

**Email** : info@apex-dubai.com  
**Fax** : +971 4 454 2910  
**Website** : www.apex-dubai.com

## General Information:

- ◆ Closing of Registration will be two (2) weeks prior to the course date.
- ◆ APEX can assist and provide corporate rates for the hotel accommodation.
- ◆ Course fees will cover Course Materials, Certificate of Participation, Coffee Breaks and Lunch.
- ◆ In-House course is also available upon request and can be customized as per client's needs.

## Contact us:

**Tel** : +971 4 445 8567  
**Fax** : +971 4 454 2910  
**Email** : info@apex-dubai.com  
**Website** : www.apex-dubai.com