IEC-61850 Tools and Protocol Training 2-Day Course Overview		
	Day 1	Day 2
09:00 - 10:45	**Overview of IEC61850** • Introduction to the specs • 61850-Basics • Data Model, LD, LN, DO, DA & Sample classes	**ACSI & Control Models** • Mod/Beh handling, Local/ Remote handling • Controls, Direct, SBO, Enhanced Security **Client Server Exercises: Part 3** • Add a Bay Controller IED to the system, configure with circuit breaker controls. Perform Supervisory control commands, open/close breaker and report status
10:45 - 11:00	Break	
11:00 - 12:30	**Introduction to Substation Configuration Language (SCL)** • Engineering workflow • ICD, SSD, SCD, CID **SCL Manager Exercise** • Create a quick SSD for a simple Substation, model an ICD for a Protection Relay IED, import ICD to SSD and map functions, generate SCD and CID.	**GOOSE Pub/Sub Model** • GOOSE and GCB service models, Mapping publisher and subscribers • Miscellaneous - Sampled Values, Time and File transfer, Conformance **GOOSE Publish/Subscribe Exercise** • Configure GOOSE from the protection relay to trip the breaker through the Bay Controller. If time permits, add a 3rd IED, a Recloser to the system. Trigger the recloser from the trip GOOSE to send a reclose GOOSE to the breaker. Simulate all the IEDs together in IEDSmart and trigger the protection tripping workflow
12:30 - 13:30	Lunch	
13:30 - 15:00	**IEC-61850 ACSI & Models** • Basic Types, Common ACSI Types, Quality handling • Data and Data Attributes, Functional Constraints • Application Associations **Client-Server Exercises: Part 1** • Expand the Protection Relay model in ICD File, reimport to SCD. Simulate the Protection Relay IED in IEDSmart and connect with ASE-61850-Client. Run feeder monitoring use cases.	**Recent & Related developments** • Process Bus and Station Bus • Ed2.0 Highlights - Service Tracking, Control commands and Control blocks tracking, GOOSE and SMV Subscription Tracking • IEC-62351 Cybersecurity applied to IEC-61850
15:00 - 15:15	Break	
15:15 - 17:00	**ACSI & Client Server services** • Reads/Writes, Substitution, Settings Groups, FCD/ FCDA, Datasets • Reporting and Logging service models, Client LNs. **Client-Server Exercises: Part 2** • Add Reports to Protection Relay ICD, reimport to SCD. Simulate the Protection Relay IED in IEDSimulator and connect with ASE-61850-Client, Monitor feeder data, simulate faults and trigger Reports	**Wrapping Up** • Objective Test • Discussion on Test results • Q&A • Feedback

IEC 61850 Training References Highlights	
• More than 6 years of outbound training experience across following countries • India • Saudi Arabia • South Korea • U.S.A • Mexico • Brazil • Afganistan • Abudhabi Electric Company • Nigeria • Both theoretical as well as implementation training	• Training provided to OEMs, utilities and educational institutes

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Two Days National Workshop
on
IEC 61850 Tools and Protocol Training with ASE 61850 Suite

28 - 29th May 2018
at
NPTI-PSTI
Bengaluru, India

NATIONAL POWER TRAINING INSTITUTE
Power Systems Training Institute
(Ministry of Power, Govt. of India)

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“IEC-61850 Tools & Protocol Training with ASE-61850 Suite”

National Power Training Institute of India (NPTI) along with Kalkitech presents a national workshop on IEC 61850 during 05-06 March, 2018 at Bangalore, India. Details are also available in website www.nptibangalore.in.

IEC 61850

IEC 61850 is an international standard originally designed for the integration of electric utility substation devices. Used for essentially all new substations development around the world. Many utilities are now starting to adopt the standard. It is also being used in wind power generation and for the management of distributed energy resources (DER). IEC 61850 uses advanced communication techniques to address data management and simplifies integration of applications.

About IEC-61850 Training

A 2-day comprehensive training workshop on IEC61850 standards for Substation Automation.

This training will cover the theoretical aspects behind IEC 61850 by reviewing the standards and demonstration of 61850 based communications between clients, and servers, IED-to-IED communications using GOOSE messages, the philosophy of inter-operable engineering and configuration using Substation Configuration Language with demonstration of 61850 engineering tools like SCL Manager. It will further look at up gradation of legacy devices using 61850 enabled OEM modules.

The theoretical training is also complemented with a seris of demonstrations and hands-on exercises of the ASE-61850-Suite, comprising of ASE-61850-Client Testset, ASE IEDSmart Simulator and SCL Manager.

The workshop is designed to provide valuable knowledge on 61850 standards to power utility and personnel involved with the implementation and commissioning of substation automation solutions using IEC 61850.

Who Should Attend?

This training course is designed to assist the stakeholders involved in development and implementation of IEC 61850 for substation automation. This training is intended but not limited to engineers and technical staff involved in installing, configuring and maintaining or operating substation automation and control systems, using IEC 61850.

Memberships

CIM users group	cigré
dlms device language message specification	IEEE
	Modbus-IDA the architecture for distributed automation
NASPI North American SynchroPhasor Initiative	OpenAMI

Venue	POWER SYSTEMS TRAINING INSTITUTE Subramanyapura Road, Banshankari 2nd Stage, Near Yarab Nagar Bus Stand, Bangalore - 560070
Workshop Fee	Non-residential: 22,000 INR* + GST @ 18% Residential: 26,000 INR* + GST @ 18%
Registration	Registration open from 10th March to 27th May 2018 **Contact us:** By Email: pstinpti@yahoo.com / sales@kalkitech.com By Telephone: +91-80-26712539 (PSTI) / +91-80-6702 1900 (Kalkitech) Contact Names: Mr. Sanjay Patil (PSTI) (M) 9480253706 Contact Names: Mr. Rakesh Ramanan (Kalkitech) (M) 8884122776
Mode of Payment	E-Payment Cash Credit Account No: 10031210203 Bank & Branch: SBI, Banashankari 2nd Stage, Bangalore RTGS/ NEFT code: SBIN000 6767 MICR No: 560002008
Personal details required for Registration	Name & Designation: Company: Department: email id: Contact Numbers: Fee Details (Amount/Date):
Cancellation/ Refund Policy	• Cancellations within 4 business days post closing of registration window are subject to the 50% event fee minus administrative charges • Further cancellation is not refundable • If you don’t cancel and don’t attend, you are still responsible for payment. Substitutions can be made any time

*Note 1: *Fee covers the charges for lunch and tea during all 2 days training.*
Note 2: The participant shall mandatorily bring their laptop