

# IEC 61850, IEC 61400-25, IEC 61970 CIM, ... Comprehensive Seminar & Training IEC Standards for Power Systems – Au- tomation, Protection, Monitoring, Engineer- ing (SCL), SCADA, Smart Grids, RTU, ...

You'll get up-to-date, first-hand & neutral  
knowledge, experience, Do's and Don't's  
and guidance from the editors ... the fastest  
start in application and implementation



... the most successful  
vendor-independent edu-  
cation to help you like we  
did in India and Australia  
recently and all over:

Implementations and applications based on IEC Standards like IEC 61850 (Communication networks and systems for power utility automation), IEC 61400-25 (Wind turbines), IEC 61970 (CIM), ... **grow faster than expected** in many application domains like power generation, high voltage transmission, medium voltage power distribution, ... all over! To handle the exploding demands for products based on these IEC standards we offer courses for the best possible, up-to-date, first-hand & neutral knowledge, experience, and **most efficient start in the development and use** of IEC standard conformant products for substations, wind power plants, condition monitoring, decentralized energy resources, SmartGrids, SCADA, Engineering (SCL) substation to control center links, RTUs etc. We advice in all crucial **Do's and Don't's to reach interoperability!**



IEC 61850 is the backbone for substation automation and many other application domains, e. g., wind power plants, DER (decentralized energy resources), hydro power plants, power quality monitoring, condition monitoring of any power system equipment etc. Thousands of IEC 61850 compliant substations with several ten thousand IEDs have already been sold and will be in operation by end of 2010. Many products have already been field proven. Utilities and other industries like oil and gas companies all over trust the new technology "IEC 61850 inside" for substations and many other applications. IEC has published further standards for in the utility and non-utility application domain.

Many vendors and users all over have been challenged by the new IEC standard interfaces for intelligent devices and tools. Vendors, users and system integrators need more information to reach interoperable systems and devices. **The system integration has become THE crucial issue!** Many utilities have learnt this lesson: The benefit of the new standard depends on a comprehensive knowledge about IEC 61850. You may seek for efficient help for the application, implementation and system integration. We help to "understand" the many products and vendors! Here is what we offer today:

**3 day comprehensive public seminar and hands-on training** with Measurement IED and many demo software (fully functional) on Automation, Protection, Monitoring, Engineering, Configuration (SCL), SCADA, SmartGrids, RTU, ...

We provide all the necessary training to reach interoperable IEDs and Tools. 2,000 experts from several hundred companies from more than 50 countries have attended our 100 excellent training courses all over. The training courses are hold by Dipl.-Ing. Karlheinz Schwarz – an experts that really knows about the needs for the application and implementation of the standards: IEC 61850, IEC 61400-25, IEC 61970 (CIM), ISO 9506 (MMS), ISO 8824/25 (ASN.1), Web services, ...



**Karlheinz Schwarz**, Karlsruhe/Germany  
Editor of IEC 61850 and IEC 61400-25 (Communications for wind power plants)  
Member of IEC TC 57 WG 10, WG 17 (DER), and WG 18 (Hydro power plants),  
Member of IEC TC 88 PT 25 (IEC 61400-25)  
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USE61400-25  
IEC 61400-25 user group



For updates and other topics visit: [www.nettedautomation.com/seminars/uca](http://www.nettedautomation.com/seminars/uca)

2011-05-11

**3 day comprehensive public seminar and hands-on training with Measurement IED and many demo software (most are fully functional) on Automation, Protection, Monitoring, Engineering, Configuration (SCL), SCADA, Smart Grids, RTU, ...**



The following crucial modules will be presented and discussed among other topics:

Modules	Topics	Title / description
<b>Preparation</b>		Get prepared in some crucial topics in order to run more efficiently during the event
<b>0. General</b>	S-0000	Welcome and opening
<b>1. Management and automation of the power system (basics)</b>	S-0100	Power system automation basics
	S-0101	Standardization
<b>2. IEC 61850 (and IEC 61400-25) basics</b>	S-0200	IEC 61850 series – overview
	S-0201	IEC 61850 Application modeling principles
	S-0202	IEC 61850-6 engineering process
	S-0203	Communication
	S-0204	Implementation of IEC 61850 conformant devices and tools
	S-0205	Device conformance testing
	S-0206	Extension rules IEC 61850
	S-0207	Substation configuration language (SCL)
<b>3. Substation automation and protection</b>	S-0301	Applying IEC 61850 for power system automation – use cases
	S-0302	Product specifications for substation equipment
<b>4. Power generation</b>	S-040x	Introduction
...	...	...
<b>7. Communication and SCADA aspects and protocol implementations</b>	S-0700	Extracting data from field devices
	S-0701	Monitoring for SCADA applications

Modules	Topics	Title / description
	S-0702	Communication technologies
	0709	Network Engineering Guidelines (IEC 61850-11)
<b>8. Products and projects</b>	S-0800	Practical experience
	S-0807	IEC 61850 Network Analyzer and SCL
<b>9. Real-time information exchange with GOOSE and Sampled Values</b>	S-0901	GOOSE (Generic Object Oriented System Event)
<b>H. General IEC 61850 hands-on training</b>	H-03	IED communication
	H-04	Analyzing the communication
<b>Q &amp; A</b>		Question & Answers

These topics may be updated. The final program for the events listed on the next page will be provided in due time.

#### Who should attend?

- Substation automation and protection experts and decision makers
- System and device designer and implementers
- Automation, IT and communication experts from utilities, power system planners
- System integrators, engineering personal, SCADA experts
- Control center experts
- Experts from operators, aggregators, power plants (hydro, wind, DER, ...), virtual power plants
- Asset manager, maintenance and service personal, Field application engineers
- Consultants and technical advisors
- ...

**... best price - best advice**

**Dates and registration form** See back page

**Fee** 1.950 EURO  
 (A discount of 20 per cent will be granted if more than one person per organization attends;  
 for any other discount please contact us [seminars@nettedautomation.com](mailto:seminars@nettedautomation.com))

Attendees will receive all slides as paper copy and a CD ROM with all slides and other material like demo software etc.

Many other topics for advanced courses and in-house training can be found under:

<http://www.nettedautomation.com/seminars>

A current list of modules for seminars and hands-on training can be downloaded:

<http://www.nettedautomation.com/download/Sem/prog/Training-Modules-2010-02-01.pdf> [pdf, 150 KB]

**registration form ►**

# Registration Form

(fill in form interactively or print it out first)

I would like to register for the following event on **IEC 61850 and related standards** (as listed above):

**3 day General Seminar/Hands-on Training with Measurement and Control IEDs, Starter Kit (Windows DLL), and several Demo Software (Client/Server and GOOSE)**

04-06 May 2011

Frankfurt (Germany)

05-07 October 2011  
(NEW DATE)

Frankfurt (Germany)

Fee for Seminar/Training: € 1.950.-

(A discount of 20 per cent will be granted if more than one person per organization attends; for any other discount please contact us [seminars@nettedautomation.com](mailto:seminars@nettedautomation.com))

All prices are in EURO (**excluding** costs for transportation and accommodation for attendees and **excluding** Value Added Tax (if applicable)). Course fee includes lunch and breaks. Participants will be notified of the exact training location in due time.

## Registration Information:

First & Family Name - (Dr) (Mr) (Mrs) (Ms) \_\_\_\_\_

Company \_\_\_\_\_

Department \_\_\_\_\_

Address \_\_\_\_\_

City, Zip Code, Country \_\_\_\_\_

Email Address \_\_\_\_\_

Telephone \_\_\_\_\_ Fax \_\_\_\_\_

1. Charge my Credit Card:

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Card Number: \_\_\_\_\_

Expiration date: \_\_\_\_\_

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### Privacy Policy:

NettedAutomation takes precautions (including administrative, technical, and physical measures) to safeguard your personal information against loss, theft, and misuse, as well as unauthorized access, disclosure, alteration, and destruction.

### Cancellation Policy:

Cancellations received **up to 10** business days prior to the start of the event will be fully refunded. Cancellations **within 9** business days to the start of the workshop are subject to the entire event fee. If you don't cancel and don't attend, you are still responsible for payment.

Substitutions can be made at any time.

**OR**

2. Regular bank account transfer

We would like to pay by regular bank account transfer

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Date:

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