

# Program

## IEC 61850 Seminar and Training

Frankfurt (Germany)  
14.-15. January 2008

### Notes:

1. Questions and discussions during and after each presentation are expected and welcome.
2. Breaks may be shifted if required.
3. If required some presentations may be reduced or extended.
4. The given durations may vary.

### Monday, 14.01.2008

#	Modul	Topic	Description	Min	Time
01	S-0000 P007	Welcome and opening	Welcome, opening, rall call, and IEC 61850 in brief	60	09:00 – 10:00
02	S-0100 P018	Power system automation basics	Basics of power system information integration and automation covering control centers, substations, power generation, ...	30	10:00 – 10:30
<b>Break</b>					10:30 – 10:50
03	S-0101 P025	Standardization	IEC activities related to power system standardization, IEC TC 57 and TC 88 activities, IEEE	30	10:50 – 11:20
04	S-0200 P032	IEC 61850 series – overview	Communication networks and systems in substations: general introduction on series	70	11:20 – 12:30
<b>Lunch</b>					12:30 – 13:30
05	S-0201 P051	IEC 61850 Application modeling principles	Modeling protection, substation automation, other applications (Logical nodes, data and data attributes, function modeling, extension of the models, monitoring)	45	13:30 – 14:15
06	S-0202 P065	IEC 61850-6 engineering process	Engineering process using the configuration language	30	14:15 – 14:45
<b>Break</b>					14:45 – 15:00

#	Modul	Topic	Description	Min	Time
07	S-0203 P072	Communication	Information exchange, ACSI, mappings	90	15:00 – 16:30
08	S-0204 P110	Implementation of IEC 61850 conformant devices and tools	Device models, design of advanced IEDs, software and hardware architectures, OEM software	60	16:30 – 17:30
09	S-0207 P129	Substation configuration language (SCL)	System configuration language: basics and details; Engineering process and SCL, SCL object model, SCL syntax (IEC 61850-6 (SCL))	60	17:30 – 18:30

## Tuesday, 15.01.2008

#	Modul	Topic	Description	Min	Time
10	S-0301 P136	Applying IEC 61850 for substation automation – use cases	Use cases from substation automation like measuring of current and voltage, protection, operating a switch, creation of a sequence of events	60	08:00 – 09:00
11	S-0400 P145	Wind power plants	Communications for monitoring and control of wind power plants – IEC 61400-25	30	09:00 – 09:30
<b>Break</b>					09:30 – 09:50
12	S-0402 P160	Distributed Energy Resources	Communications for monitoring and control of Distributed Energy Resources (DER) – IEC 61850-7-420	30	09:50 – 10:20
13	S-0700 P166	Extracting data from field devices	General SCADA services – configuration of logs, reports, ... (IEC 61850-7-2)	30	10:20 – 10:50
14	S-0701 P176	Alarm handling	Fundamentals of special SCADA services (IEC 61850-7-2)	30	10:50 – 11:20
15	S-0703 P182	Information presentation and encoding	Fundamentals of UML, XML, ASN.1, ...	20	11:20 – 11:40
16	S-0704 P192	Protocol details	Fundamentals of ISO 9506 (MMS), Webservices, IEC 60870-5, DNP3, ICCP	40	11:40 – 12:30
<b>Lunch</b>					12:30 – 13:30
17	S-0705 P209	Protocol implementations and Mappings for IEC 61850-7-2	Details on how to implement protocols and information models? MMS, ASN.1 BER, Webservices, ..., simple MMS clients; IEC 60870-5, ICCP, DNP3	30	13:30 – 14:00
18	S-0706 P226	Demonstration of compliant software	Demonstration of IEC 61850 compliant client and server software	30	14:00 – 14:30
19	S-0800 P232	Practical experience	IEC 61850 devices, tools, projects; use of IEC 61850 (61400-25) in the market	20	14:30 – 14:50
<b>Break</b>					14:50 – 15:10

#	Modul	Topic	Description	Min	Time
20	S-0801 P239	Tool support	Tools for IEC 61850, SCL, IEC 61400-25, Ethernet, TCP/IP, MMS, ASN.1	20	15:10 – 15:30
21	S-0804 P260	SCL demo of compliant software	Use of SCL files for building data model in an IED, extension of model (new data); including live demonstration	20	15:30 – 15:50
22	S-0104 P275	Security	Secure communication (data on travel and data stored) (IEC 62351)	10	15:50 – 16:00
23	S-0106 P284	Testing devices and systems	Test coverage, steps towards system testing and simulation (from devices to systems)	10	16:00 – 16:10
24	S-0205 P291	Device conformance testing	Conformance testing of IEDs (IEC 61850-10)	10	16:10 – 16:20
25	S-0206 P299	Extension rules IEC 61850	The extension rules for Logical Nodes, Data, and Common Data Classes	10	16:20 – 16:30
26	S-0803 P310	Current and future standardization	Introduction of current and future application domains using and extending IEC 61850; Update on ongoing and planned standardization activities	10	16:30 – 16:40
27	S-0802 P323	User support	UCA international users group, quality measures and TISSUE process	10	16:40 – 16:50
		Final Q&A		20	16:50 – 17:10