

DLMS / COSEM Training - 12 to 14 December 2011

Delhi, India

“DLMS/COSEM and its Indian Companion Standards

About DLMS/COSEM

DLMS or Device Language Message Specification and its companion specification COSEM (Companion Specification for Energy Metering), is a suite of standards developed for advanced metering communications. With Interoperability and Reliability becoming key metrics in metering communications, the importance of DLMS / COSEM has grown to become the most popular Open standard in metering, being used and implemented in more than 50 countries across the world. IEC 62056 DLMS / COSEM is arguably the only truly global, multi-energy and multi-media standard, with continued development and maintenance of the standards by the DLMS User Associations has and its co-option into the IEC 62056 protocol standard.



About DLMS/COSEM Training

- Kalkitech, a world leader in DLMS / COSEM solutions, invites you to attend three-day training course. The course has been developed to offer professionals in utilities as well as metering and telecommunications and India-specific understanding of this important Standard.
- Starting with the fundamentals, the training covers intermediate and advanced topics as well including OBIS Specifications, COSEM and HDLC Layers, Conformance Testing and Indian Companion Specifications (BIS).
- The training program also includes demonstrations of various DLMS / COSEM engineering tools like DLMS Explorer and other testing tools / simulators, as well as on application of the protocol in AMR / AMI architectures and in Meter Data Management.

Who should attend?

This training course is designed to assist the stakeholders involved in development and implementation of DLMS / COSEM in AMR architectures and in Metering Products. This training is intended but not limited to engineers and technical staff involved in design, configuration, installation and maintenance of metering products and systems, using IEC 62056 DLMS / COSEM.

- Utility Engineers
- System Integrators
- Meter Manufacturers
- AMR equipment manufacturers
- Consultants
- Maintenance Staff
- System Designers

We are Members of:



	Day 1	Day 2	Day 3
9:00-10:45	<p>INTRODUCTION</p> <ul style="list-style-type: none"> - Introduction to DLMS - Key features of DLMS - DLMS User Association overview - DLMS standards - IEC and Colored books 	<p>OBIS</p> <ul style="list-style-type: none"> - OBIS specification - Relation between OBIS code and Interface class - General practices - Standard, Country and manufacturer codes 	<p>HDLC DATA LINK LAYER</p> <ul style="list-style-type: none"> - LLC layer role and LPDU format - MAC layer introduction and MPDU format - MAC addressing - HDLC control types: I, UI, RR, RNR, SNRM, UA, FRMR, DISC, DM - Long data transfer mechanism - Retransmission and error recovery - Timeouts - IEC 62056-21 Mode E switchover to DLMS
10:45 - 11:00	Break		
11:00 - 12:30	<p>INTERFACE CLASS</p> <ul style="list-style-type: none"> - Introduction to DLMS data modeling 	<p>PROTOCOL STACK</p> <ul style="list-style-type: none"> - Client Server operation - OSI model - Communication profiles - Client and Server state machines 	<p>DLMS WRAPPER FOR IP</p> <ul style="list-style-type: none"> - Introduction to Cosem wrapper - Wrapper PDU format - Illustration
12:30 - 13:30	Lunch		
13:30 -15:00	<p>INTERFACE CLASS</p> <p>Interface classes in details</p>	<p>COSEM APPLICATION LAYER</p> <ul style="list-style-type: none"> - ACSE services : Association establishment and release - BER encoding with examples - Data communication services 	<p>DLMS UA CONFORMANCE TEST</p> <ul style="list-style-type: none"> - Pre-requisites - Testing procedure and test tool overview - Mandatory objects and features - Test cases overview
15:00 - 15:15	Break		
15:15 - 17:00	<p>INTERFACE CLASS</p> <ul style="list-style-type: none"> - Application of interface classes in real metering scenario - Examples and general practices 	<p>COSEM APPLICATION LAYER</p> <ul style="list-style-type: none"> - Long data transfer mechanisms - Selective access - ASN1 and A-XDR with examples - COSEM Security - Real time event/alarm reporting 	<p>INDIAN COMPANION SPECIFICATION</p> <ul style="list-style-type: none"> - Specification overview - Testing procedure - Discussion <p>KALKITECH OFFERINGS</p> <ul style="list-style-type: none"> - DLMS Server and Client libraries - DLMS Explorer - DLMS Server simulator - SYNC5000 - Meter Data Concentrator - Meter Interface card

Highlights

- More than 5 years of outbound training experience
- Across following countries
 - India
 - USA
 - UK
 - China
 - Singapore
 - Austria
 - South Korea
- Both theoretical as well as implementation training
- Training provided to OEMs, utilities and educational institutes

Key Beneficiaries



Speaker's Profile

VINOO WARRIER

Vinoo Warriar, the head of Kalkitech's Communications Solutions, is one of the leading experts in DLMS /COSEM standards in India, and has been actively involved in numerous Working Groups across the world.

He has over 13 years of industry experience, designing and implementing communication solutions in the Energy Industry, specifically in the areas of Electricity, Pipeline and Discrete Manufacturing automation.

Vinoo's recent achievement in Standards activities include:

- Member of DLMS-UA Working group for DLMS/COSEM standards Maintenance, based in Geneva
- Member of Bureau of Indian Standards panel for ET13 Sectional Committee
- Secretary, BIS LITD10 Interoperability Working Group
- Contributor to Indian Companion specification for DLMS/COSEM soon to be published as an Indian National Standard under the Bureau of Indian Standards
- Training and consulting engagements for communication protocols like DLMS / COSEM and IEC 61850, as well numerous implementations of IEC 61850, DNP3, IEC 61850, etc. on various IEDs and SCADA systems.



BALGOPALAN MATHOOR

Balagopalan Mathoor works as solution architect in AMR/AMI COE of Kalkitech and has more than seven years of industry experience in communication protocol domain. He has played an active role in the development of DLMS/COSEM(IEC 62056) software libraries for both server(meter) and client(meter reading) editions.

He has also worked as consultant/trainer to original equipment manufacturers, system integrators and utilities across the globe to help them understand and adopt DLMS/COSEM for their product line such as meters, data concentrators, modems, gateways, AMRs, meter parametrization tools. He was associated with metering communication protocol standardization activities and has co-authored a paper about "Tamper handling in DLMS".



DLMS/COSEM Training Registration Details

Intake	30 Participants only
Workshop Fee	The workshop fee* will be 27,000 INR per person . --- Early Bird Discount: 10% (Only till November 15th – Register today to avail it) Government Utilities & Academic Institutes are entitled to a discount of 15% Group Discounts: If a group of three or more people is from the same company, they will be entitled to a discount of 15%.
Registration	Registration open from 20th October to 5th December Contact us: <ul style="list-style-type: none"> • By Email: training@kalkitech.com • By Telephone: +91-80-4052 7900 • Contact Names: Irfan/Midhun
Mode of Payment	E-Payment: Cash Credit Account : 31078884987 Bank & Branch : SBI, JP Nagar Branch, Bangalore RTGS/ NEFT code : SBIN000 6959 Swift code : SBI N IN BB 424
Personal details required for Registration	Name: Company: Department: Official email id: Telephone Number:
Cancellation/Refund Policy	<ul style="list-style-type: none"> - Cancellations received within the registration window will be fully refunded minus administrative charges - Cancellations within 2 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 at any time

*Note: *Fee covers the charges for breakfast and lunch during all 3 days. Taxes will be extra.*

Kalkitech Products:

DLMS Source Code | Metering and Substation DCU | AMR Software | Protocol Gateways | Remote Monitoring | PDC | IEC 61850 SCL Tool | Enterprise Integration | DMS Plant Efficiency | ABT Software

Kalkitech Services:

Services: [Substation Automation](#) | [Communication Protocols](#) | [Consulting](#) | [Power System Studies](#)

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