# **Common Information Model for Power Systems**

# **Technical Program**

# Venue: Seminar Hall, Van Vihar Guest House, IIT Bombay, Powai, Mumbai 400076

# Day - 1 (Mon, Oct 17) CIM Introductory Topics

Time	Duration (min)	Session Title	Speaker
09:15 - 09:35	20	Tea and Registration	-
09:35 - 09:45	10	Welcome Note	S. A. Khaparde
09:45 - 11:00	75	Introduction to CIM and Related Standards	S. A. Khaparde
11:00 - 11:15	15	Tea Break	-
11:15 - 12:15	60	Technology Fundamentals of CIM	Rushikesh K. Joshi
12:15 - 13:00	45	Basics of CIM (Classes, Packages, Relations, Attributes)	Yemula Pradeep Kumar
13:00 - 14:00	60	Lunch Break	-
14:00 - 15:15	75	CIM Profiles, Schemas and Compliance Testing	Yemula Pradeep Kumar
15:15 - 15:30	15	Tea Break	-
15:30 - 17:00	90	CIM Network Model Exchange and Tools for CIM	Gopakumar K
17:00 - 17:30	30	CIM Based Application (Maharasthra 400 KV Network model in CIM)	Gelli Ravi Kumar
17:30 onwards	-	Tea and Discussion	All participants

## Day - 2 (Tue, Oct 18) CIM Advanced Topics

Time	Duration (min)	Session Title	Speaker
08:45 - 09:00	15	Теа	-
09:00 - 09:45	45	CIM Developments in Indian Scenario	S. A. Khaparde
09:45 - 10:30	45	CIM for Markets (IEC 62325) WG16	Sabari Laakshmana
10:30 - 11:15	45	CIM for Distribution Management (IEC 61968) WG14	Yemula Pradeep Kumar
11:15 - 11:30	15	Tea Break	-
11:30 - 12:30	60	Component Interface Specification, Common Services using OPC UA, Webservices	Gopakumar K
12:30 - 13:00	30	CIM and IEC 61850 Integration	Yemula Pradeep Kumar
13:00 - 14:00	60	Lunch Break	-
14:00 - 15:30	90	CIM Extensions for ABT Mechanism	Sabari Laakshmana
15:30 - 16:00	30	CIM Based Application (Topology Processing and CIM Graphics)	Gelli Ravi Kumar
16:00 - 16:15	15	Concluding Discussions	All participants
16:15 onwards	-	High Tea	-

# About the Speakers

## S. A. Khaparde

#### Professor, Electrical Engineering Department Indian Institute of Technology Bombay

Prof. Khaparde received the Ph.D. degree (1981) from the Indian Institute of Technology, Kharagpur. He has co-authored a book, "Computational methods for large sparse power systems analysis: An Object oriented approach" published by Kluwer academic publisher, 2001. He has also co-authored a book, "Transformer Engineering" published by Marcel Dekker Publisher, 2004. He is member of Advisory committees to Maharashtra electricity regulatory commission, India and Indian Energy Exchange, India. He is Editor of International Journal of Emerging Electrical Power Systems. He is consultant to MERC, Indian Energy Exchange, and Power Grid Corporation of India Ltd etc. He is member of IEC TC57 for working groups 13 and 16 representing India. He is BIS LITD-10 Committee Member, and Chair of Working Group (WG3) on CIM. His current research areas are restructured power systems, distributed generation, event driven architecture and CIM Implementation in India.

#### Rushikesh K. Joshi Assoicate Professor, Computer Science Department Indian Institute of Technology Bombay

Prof. Joshi's research interests include reuse, improvement of object oriented design, design metrics, agent oriented modeling, ontologies and architectural modeling. He has offered many specialized quality improvement courses for the industry personnel in the areas of object oriented programming, analysis and design, design patterns and CORBA.

#### Yemula Pradeep Kumar Research Scholar, Electrical Engineering Department Indian Institute of Technology Bombay

Yemula Pradeep Kumar is currently working towards Ph.D. degree in Department of Electrical Engineering at Indian Institute of Technology Bombay, India. His research interests include IT applications in power systems, IT architectures for power control centers, complex event processing, ontologies for power system events, and restructuring issues. As a part of his research he is working on design of flexible and open IT architectures for SCADA/EMS systems in power control centers. He has visited various load despatch centers, power utilities, research organisations and institutes for collaborative research. He frequently delivers lectures on power system studies in industry and academic institutes. He is a graduate student member of the IEEE Mumbai section, and the IEEE power and energy society. He is active participant in the standardization initiatives by Bureau of Indian Standards (BIS-LITD 10) in Interoperability and Common Information Model panels.

#### **Gopakumar K**

Vice President - Engineering, Optimization Products Kalki Communication Technologies Ltd.

Mr. Gopakumar K, has more than 15 years of experience in various positions, the last being Business Head for Enterprise Applications business. He is responsible for software development methodologies and project management practices within Kalkitech. Mr.Gopakumar by qualification holds a Master degree in Computer Applications from NIT Calicut.

## C. Laakshmana Sabari

# Research Scholar, Electrical Engineering Department IIT Bombay Lead Analyst, Kalki Communication Technologies Ltd.

Mr. Sabari has 10 years of experience in design, development and implementation of software applications for power sector. He is instrumental in the design and management of 'Eltrix', a flagship product of Kalkitech for power sector optimization applications. He has implemented availability based tariff (ABT) solution at various state load despatch centers and generation utilities. He is actively involved in BIS LITD 10 panel 3 on CIM. He holds a Master degree in Energy Conservation and Management from School of Energy, Bharathidasan University, Tiruchirapalli. Sabari is currently pursuing PhD in power systems from IIT Bombay. His research areas include CIM extensions for Indian scenario, CIM for power markets and distribution sector.

#### **Gelli Ravikumar** Project Engineer, Electrical Engineering Department Indian Institute of Technology Bombay

Gelli Ravikumar has a Masters degree in Power Systems and Power Electonics Engineering from IIT Bombay. He is currently working various research projects at IIT Bombay. His research include design of architectures for CIM based SCADA / EMS systems, CIM oriented database design, EMS applications integration with CIM database, CIM network model creation and topology processing, design and development of CIM compliant Graphics for power network views and substation views. He is a graduate student member of the IEEE Mumbai section, and the IEEE power and energy society. He is active member of CIM panel under Bureau of Indian Standards (LITD-10).