

# CIMug Spring 2010 Meeting

Milan, June 15th – 17th 2010

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## CT57, Smart Grids, CIM

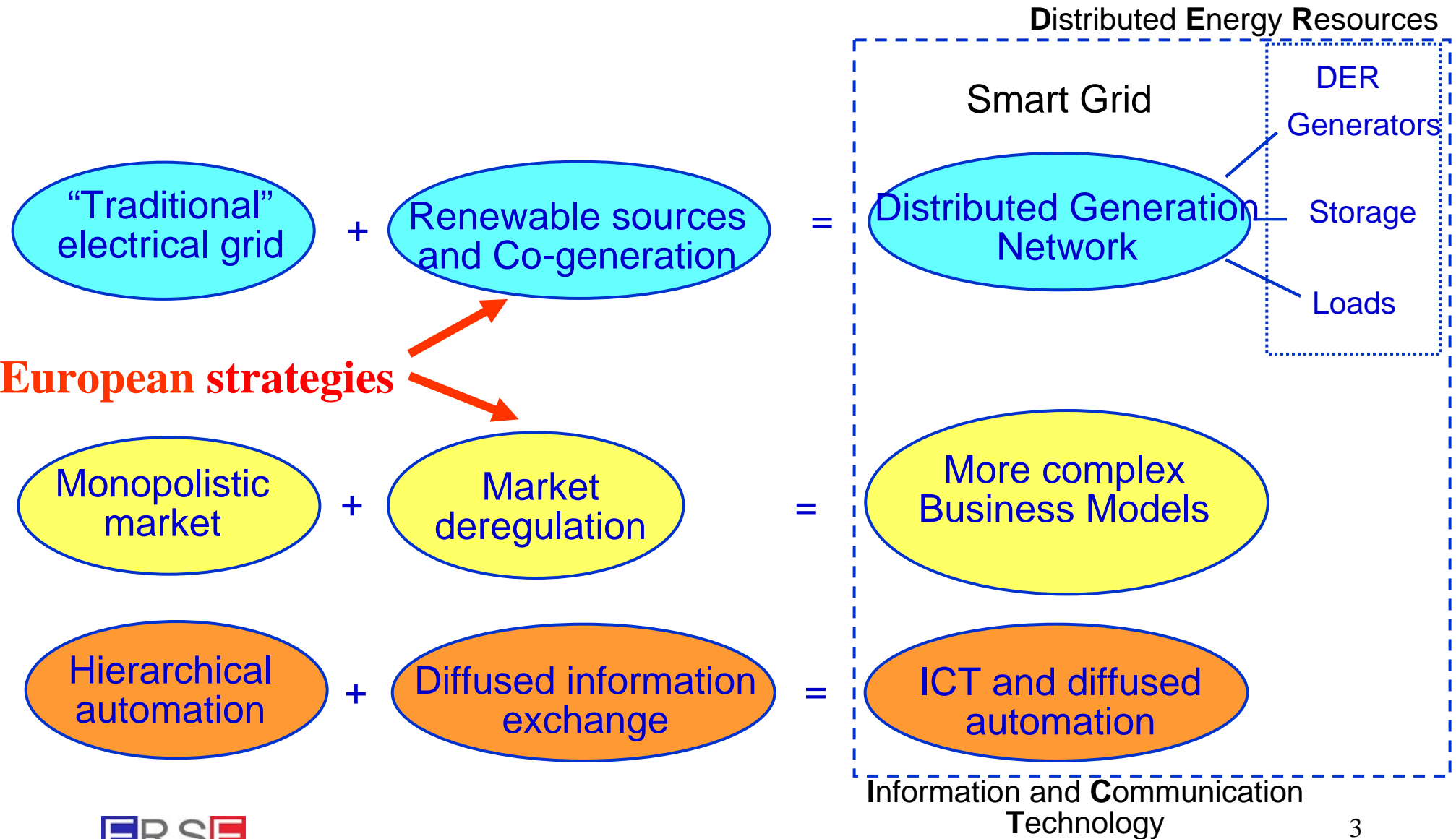
*Paolo Mora*

# CEI and Smart Grid

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- About Smart Grid, the Comitato Elettrotecnico Italiano (Italian Electrotechnical Committee) includes:
  - TC57: Power systems management and associated information exchange
  - TC310: Power Line Communications
  - TC311: Generation, micro-generation, energy efficiency
  - TC313: Smart Grid (kick off phase)

# The trend



**European strategies**

# The Italian Technical Committee 57

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## **Power systems management and associated information exchange**

### Objectives:

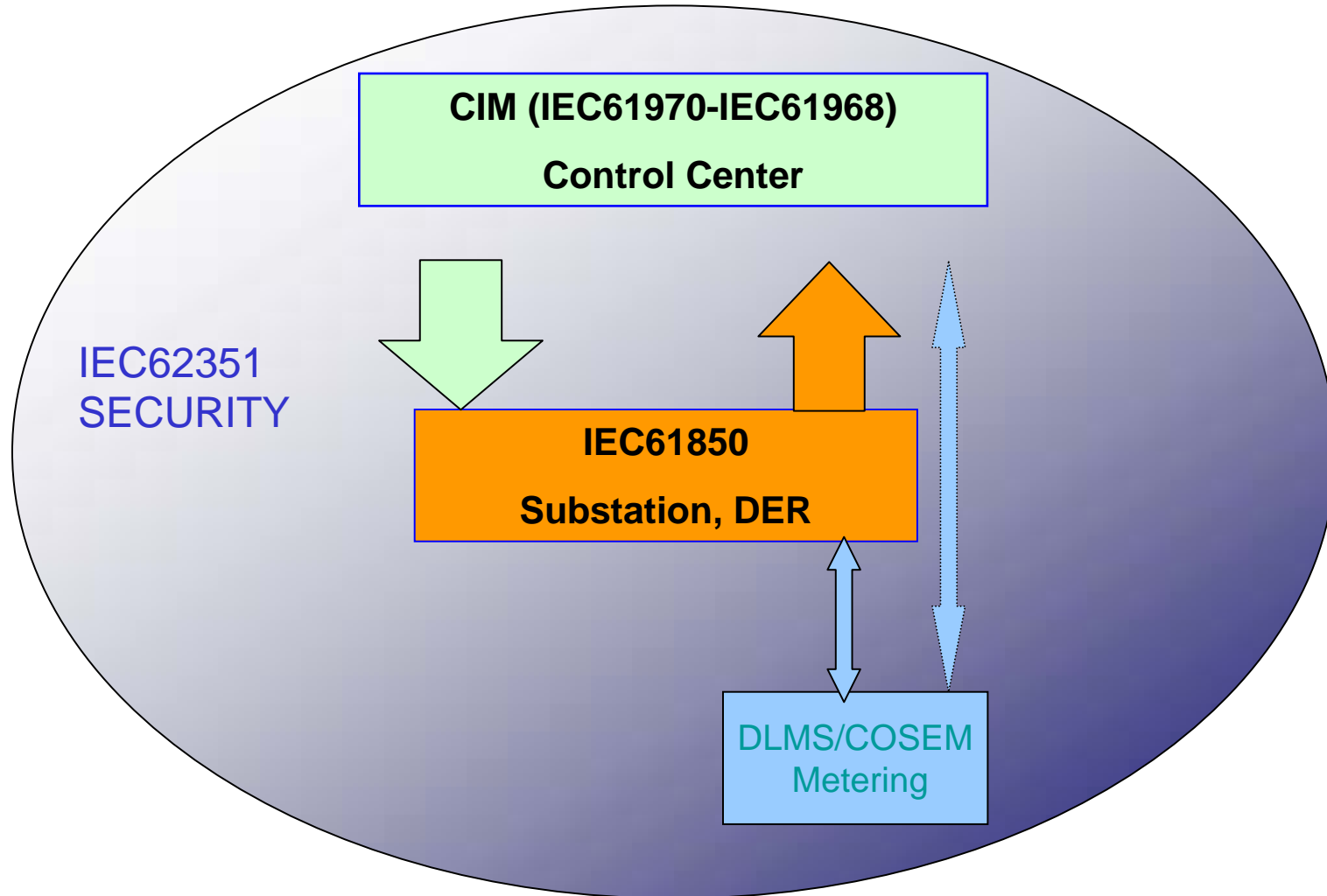
- To prepare international standards for power systems control equipment and systems including EMS (Energy Management Systems), SCADA (Supervisory Control And Data Acquisition), distribution automation, teleprotection, and associated information exchange for real-time and non-real-time information, used in the planning, operation and maintenance of power systems. Power systems management comprises control within control centres, substations and individual pieces of primary equipment including telecontrol and interfaces to equipment, systems and databases.

### Links:

- IEC, TC 57: Power systems management and associated information exchange
- CENELEC, SC 205A: Mains communicating systems

# Main standard TC57 relevant for Smart Grid

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# Last standards CIM examined(1)

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- Approved the Final Draft International Standard (FDIS) of:
  - IEC 61970-301, Ed.2.0, defining the basic aspects of Common information model (CIM) of “Energy management system application program interface (EMS-API)”.
- Examined:
  - “IEC 61970-301, Ed.3.0: Energy Management System Application Program Interface (EMS-API) - Part 301: Common Information Model (CIM) Base”

# Last standards CIM examined(2)

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- Approved the FDIS of standard 61968:
  - "Application Integration at Electric Utilities – System Interfaces for Distribution Management – Part 9: Interfaces for meter reading and control".
- Examined:
  - "IEC 61968-11, Ed.1.0, extensions to the Common Information Model (CIM), for the needs of "Distribution Management".
  - "IEC 61968-2 TS Ed. 2: Application integration at electric utilities System interfaces for distribution management - Part. 2 : Glossary"
  - "IEC 61968-11, Ed.1.0: Application integration at electric utilities - System interfaces for distribution management - Part 11: Common information model (CIM) extensions for distribution"

# Harmonising the CIM and the 61850

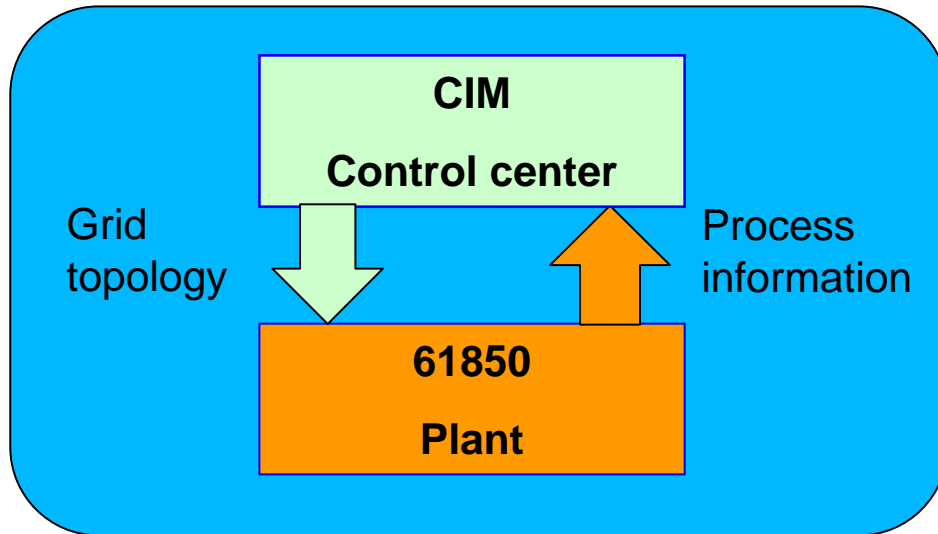
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- One of the topic discussed during the last Italian TC57 meeting.
- TC57 members agree that is an important theme of the standard activity in the next future.

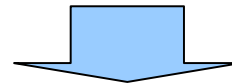


# Integration between CIM and IEC61850 models

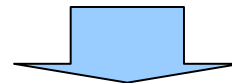
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- Some applications need information coming both from CIM and from IEC61850.
- The two standards use similar models in different logical environments



We need a common semantic



We need harmonization between CIM and IEC61850 models

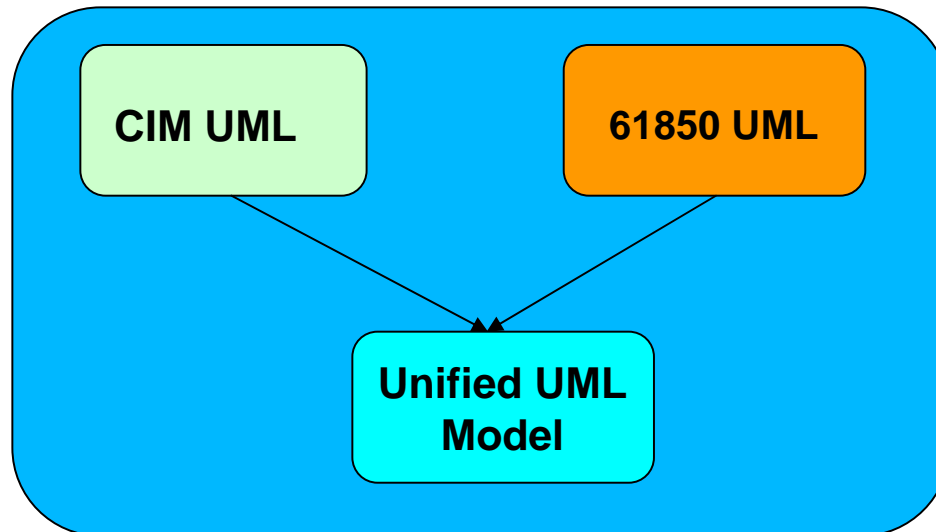
# Common semantic



# Common UML model

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Definition of a common UML model, able to represent a common semantic



# Future reference architecture for TC57

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- To define a common semantic model, in order to input only one piece of information and to share it among different applications.
- To help a more profitable use of the information supporting the business processes (e.g. information management, integration, presentation, decision making)