

# ENTSO-E CIM activities - update

CIM user group meeting  
22-26 October 2012, New Orleans, US

Chavdar Ivanov, PhD  
Research and Development Senior Advisor, ENTSO-E Secretariat



Reliable Sustainable Connected

# ENTSO-E CIM decisions since last year

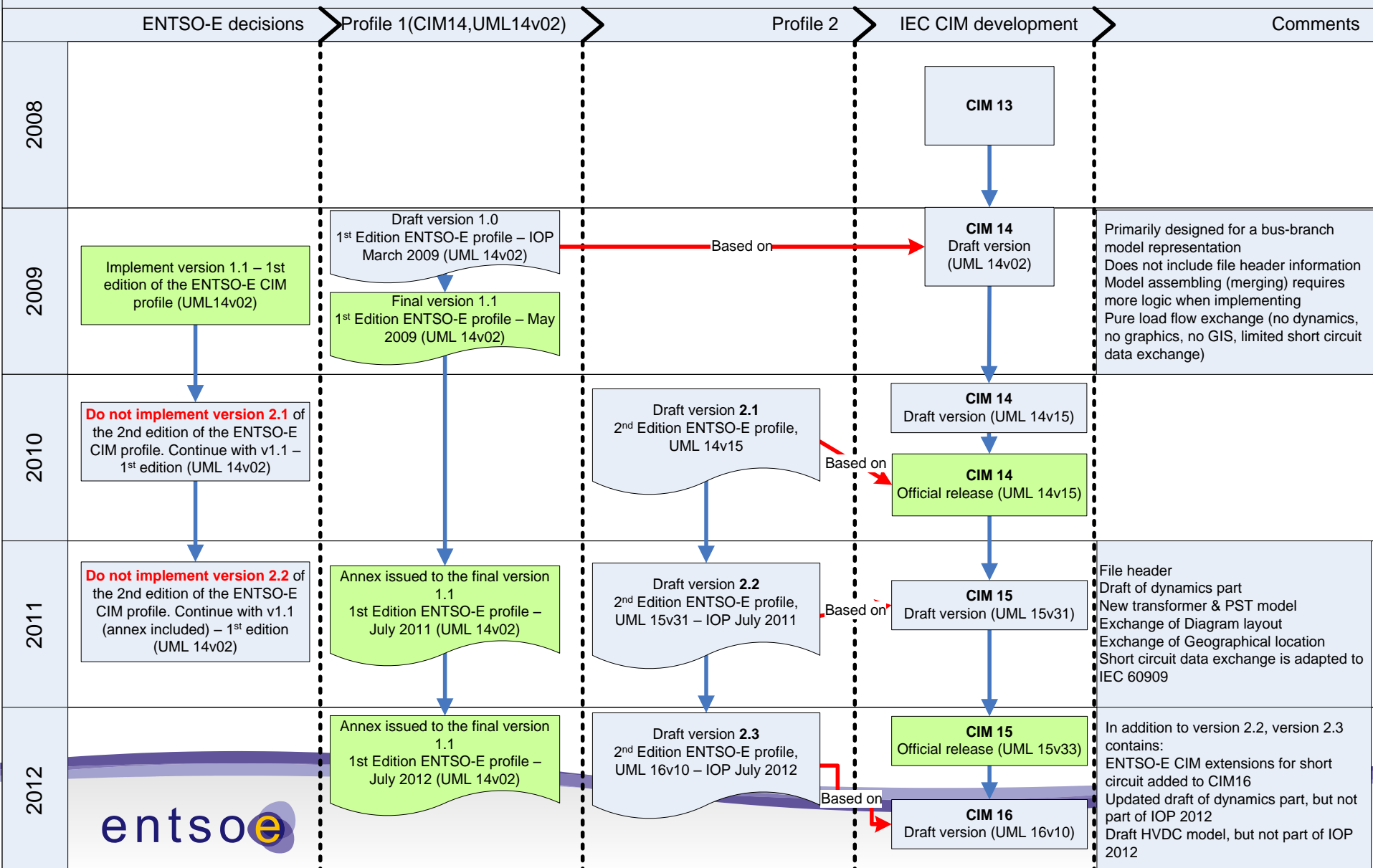
- Oct-Nov 2011: ENTSO-E System Development Committee (SDC) and System Operations Committee (SOC) agreed with the next steps: no change in the implementation schedule: 2<sup>nd</sup> profile is not approved
- Nov 2011: ENTSO-E Assembly confirmed the decision of SDC and SOC. Deadlines for implementation of 1<sup>st</sup> edition of the profile
- 2012: Launch of ENTSO-E Network Modelling Database project
- SDC decision to organize additional IOP on 1<sup>st</sup> profile in May 2012
- [ENTSO-E statement on IEC 61850](#)

# ENTSO-E CIM activities 2012

- 3<sup>rd</sup> IOP on CIM for System development and operation – July 2012
- 1<sup>st</sup> IOP on CIM for Energy Market (WG16) – July 2012
- ENTSO-E Network Modelling Database project – in place since May 2012
- CIM for Dynamics project (with eprri) – review of Dynamics package and present to WG13
- Migration activities towards CIM: now all ENTSO-E members are providing planning models in CIM using ENTSO-E Network Modelling Database

# ENTSO-E CIM Profiles overview

## ENTSO-E CIM Profiles



# IOP System development and operation in July 2012

- Large amount of vendors, but could not cover HVDC and dynamics
- CIM 16 tested – 61970-452, 453, 456, etc
- Right after the IOP - WG 13 informed on IOP issues
- Discussion on issues started before the publication of the final report. Current status: almost all issues resolved, clear roadmap for updates before IOP 2013.
- Final report and supportive documentation published on 6 Sep:  
<https://www.entsoe.eu/resources/cim/interoperability-tests/>

# IOP CIM for Market in July 2012



- The IOP test on market is the first one carried out on CIM extension for electricity market (IEC 62325). The objective of this first IOP test for market exchanges was to demonstrate that the IEC 62325-451-1, “Acknowledgement business process and contextual model for CIM European market”, satisfies the information requirements for the acknowledgement business process in European style market profile.
- The results achieved during the test are in line with the expectations and are summarized in the IOP final report which has been approved by ENTSO-E Market Committee. The report concludes that:
  - the work carried on the IEC 62325-301, “Common information model (CIM) extensions for market”, IEC 62325-351, “CIM European market model exchange profile” and IEC 62325-451-1, “Acknowledgement business process and contextual model for CIM European market” standards is in line with the business requirements;
  - there is no major deficiencies in the standard;
  - the standard version includes all the capability needed to support the already implemented exchanges.

The IOP report is available [here](#).




# ENTSO-E Network Modelling Database (NMD)

# ENTSO-E would like to have a central platform:



- To handle the complexity of Network Models preparation and management




- To improve efficiency of data handling in the existing data management processes



- To reduce the manual workload



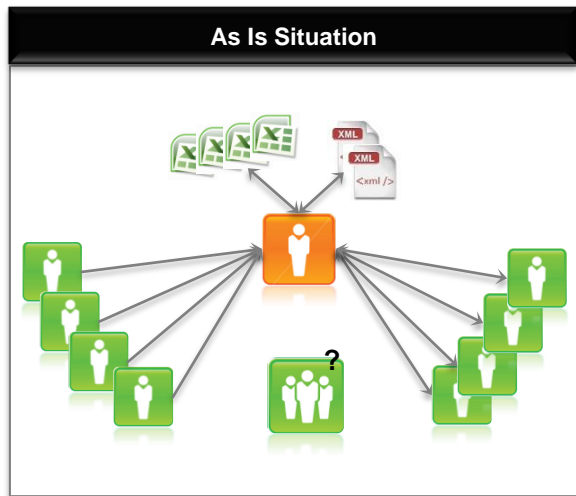
- To provide automate validation processes to improve data/models quality



- To have a solid foundation for the collection, combining, consolidation, analysis, interpretation and communication of all internal and available external network model data



# As Is / To Be Situation



Consolidated Platform

eTerraSource



NETWORK  
MODEL  
Collection

Model  
VALIDATION

ASSEMBLING  
Network Model

TIE-LINE  
Management

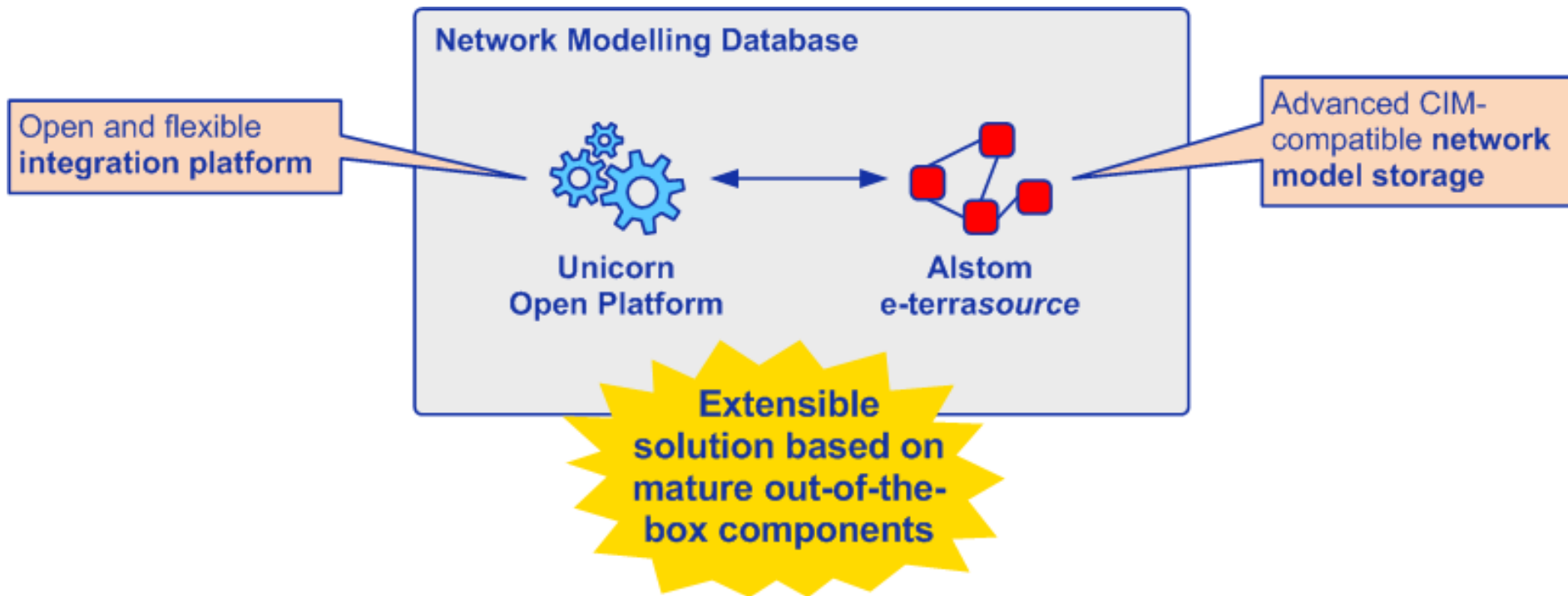
IOP

-  Sharing TSO's
-  TSO
-  ENTSO-E Secretariat

# NMD project

- 2011: tender process
- Consortium Unicorn – Alstom Grid won the tender
- 1 Dec 2011 – Project kick-off
- December 2011 – January 2012 – Analytical phase
- February – April 2012 – Implementation phase
- May 2012 – Test phase (FAT/SAT)
- 31 May 2012 – Go-live (1<sup>st</sup> release)
- 2 additional releases – before IOP July and in Sep 2012
- Now in use; all TSOs provide planning data via NMD

# High level concept



## ENTSO-E CIM activities – What is next

- 2<sup>nd</sup> IOP on CIM for Energy Market – to be organized in Dec 2012 – announcement on the ENTSO-E web site
- ENTSO-E decision on profile 2 (version 2.3) expected end of Oct
- IOP CIM for System development and operations 2013 - date to be decided

# CIM and ENTSO-E web site (www.entsoe.eu)



european network of  
transmission system operators  
for electricity



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SYSTEM OPERATIONS

MARKET

THE ASSOCIATION

MEDIA EVENTS

**RESOURCES**



[entsoe](#) > [resources](#) > [cim](#)

## Common Information Model (CIM)

This area provides you with an overview and direct access to all necessary information for Common Information Model (CIM) applied by ENTSO-E.

The CIM is standardized by the [International Electrotechnical Commission \(IEC\)](#), a global organization that prepares and publishes international standards for all electrical, electronic and related technologies.

On 11 December 2009 ENTSO-E decided to organize two "ENTSO-E CIM interoperability tests" per year to support the development of the ENTSO-E CIM-based data exchange format and the CIM Standard issued by the IEC.

Moreover, ENTSO-E agreed on a roadmap for the implementation of future updates of the CIM-based format for exchanges of system operations and system studies. The purpose of these tests is to demonstrate the interoperability of the ENTSO-E CIM-based data exchange format and the IEC CIM-based standard taking into account all changes proposed to be included in the updated CIM standard. The tests are also designed in order to allow vendors to verify the correctness of the implementation of the updated CIM standard and to support ENTSO-E processes towards achieving the objectives given to ENTSO-E by the EU Third Energy Package.

The adoption of the ENTSO-E CIM interoperability tests and the CIM/XML-based data exchange format is a direct contribution to the above mentioned tasks since it

KEY DOCUMENTS

PUBLICATIONS

DATA PORTAL CE

EDI LIBRARY

NTC VALUES

GRID MAP

TRANSLATIONS

POSITION PAPERS

CONSULTATIONS

**CIM**

PROFILES

INTEROPERABILITY  
TESTS

# ENTSO-E CIM in the CIMug web site

The screenshot shows the CIMug website interface. At the top, there is a navigation bar with links for Home, Projects, Groups, Meetings, Blogs, CIM Documents, Other UCA Sites, and Join UCAIug. Below this is a sidebar with various categories: Sites, Documents, Lists, Discussions, Document Archive, Group Members, and Site Hierarchy. The main content area displays the breadcrumb 'CIMug > Groups > ENTSO-E CIM IOP' (highlighted with a red box and a red arrow), followed by a description of the group site and the title 'ENTSO-E CIM Interop Site'. The page content includes a paragraph about the 11 December 2009 decision and a list of two test areas: 'CIM for System Development and Operations' and 'CIM for Energy Market'. A final paragraph discusses the purpose of the tests and the adoption of the ENTSO-E CIM interoperability tests.

CIMug

CIM users group

Home Projects Groups Meetings Blogs CIM Documents Other UCA Sites Join UCAIug

Sites

1st IOP - SDO - July 2010

Documents

ENTSO-E Profiles

IEC Stds and EPRI docs

Lists

Calendar

Tasks

Discussions

Team Discussion

Document Archive

UCTE Interop

Group Members

Site Hierarchy

1st IOP - SDO - July :  
ENTSO-E Profiles  
IEC Stds and EPRI do  
Announcements  
Calendar  
Links  
Tasks  
Team Discussion  
Wiki Discussions

CIMug > Groups > ENTSO-E CIM IOP

Group site containing ENTSO-E IOP documentation and for the advocacy of CIM within ENTSO-E member companies

## ENTSO-E CIM Interop Site

On 11 December 2009 ENTSO-E decided to organize two Common Information Model (CIM) interoperability tests per year to support the development of the ENTSO-E CIM-based data exchange format and the CIM Standard issued by the International Electrotechnical Commission (IEC). The tests cover the following areas:

- The ENTSO-E IOP “CIM for System Development and Operations” that covers all needs of system development and operations such as operational to operational exchanges, operational to planning, short circuit data, planning, dynamics exchanges and the interface with distribution. Specific data collection and data processes can also be tested. The goal is to allow and facilitate any kind of study in TSOs’ scope: static analyses, dynamic studies, short circuit assessments, etc.;
- The ENTSO-E IOP “CIM for Energy Market” that covers needs of market exchanges. It contributes to the further development of the IEM (European Internal Energy Market) by actively supporting market harmonization and integration and plays a crucial role for demonstrating the correctness of European market CIM profile.

The purpose of these tests is to demonstrate the interoperability of the ENTSO-E CIM-based data exchange format and the IEC CIM-based standard taking into account all changes proposed to be included in the updated CIM standard. The tests are also designed in order to allow vendors to verify the correctness of the implementation of the updated CIM standard and to support ENTSO-E processes towards achieving the objectives given to ENTSO-E by the EU Third Energy Package. More specifically, the Regulation 714/2009 on conditions for access to the network for cross-border exchanges in electricity states that ENTSO-E has to adopt common network operation tools to ensure the coordination of network operation, to elaborate network codes on data exchange and interoperability rules as well as transparency rules.

The adoption of the ENTSO-E CIM interoperability tests and the CIM/XML-based data exchange format is a direct contribution to the above mentioned tasks since it supports data exchanges and ensures the interoperability of the tools used in the ENTSO-E data exchange processes. The experience gained from the process of developing and implementing CIM-based standards will directly