



# WG13 CIM Model Manager Report

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CIM Users Group Milan

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# Topics

- Background
- CMM Work and Responsibilities
- CIM Issues Process
- CIM Versioning
- CIM History
- WG13 CIM Roadmap
- Recent CIM Changes
- Update on documents
- Priorities for 2010





## Background WG13 CMM

- To assist with the establishment of the CIM Users Group, Siemens, ABB, and Areva agreed to fund the position of CIM Model Manager for the first three years
  - 2006 - Kurt Hunter, Siemens
  - 2007 - Lars-Ola Osterlund, ABB
  - 2008 - Kendall Demaree, Areva
  - 2009 - Kurt Hunter, Siemens
  - 2010 - Lars-Ola Osterlund, ABB





# Responsibilities Of WG13 CMM

- Manage and maintain the CIM UML model
- Coordinate with other CMMs, e.g. WG14 and WG16
- Manage the CIM issues list
- Facilitate WG13 Issues discussions
- Produce the IEC 61970-301 document
- Assist CIM UG in answering questions from users
- Report to WG19, other IEC working groups and CIM Users group





## Three CMMs

- CIM has three major parts
  - 61970 maintained by WG13
  - 61968 maintained by WG14
  - 62325 maintained by WG16, recently created
- Each has a CMM, for 2010 they are
  - WG13 Lars-Ola Österlund
  - WG14 Tatjana (Tanja) Kostic
  - WG16 Margaret Goodrich
- This complicates the model management

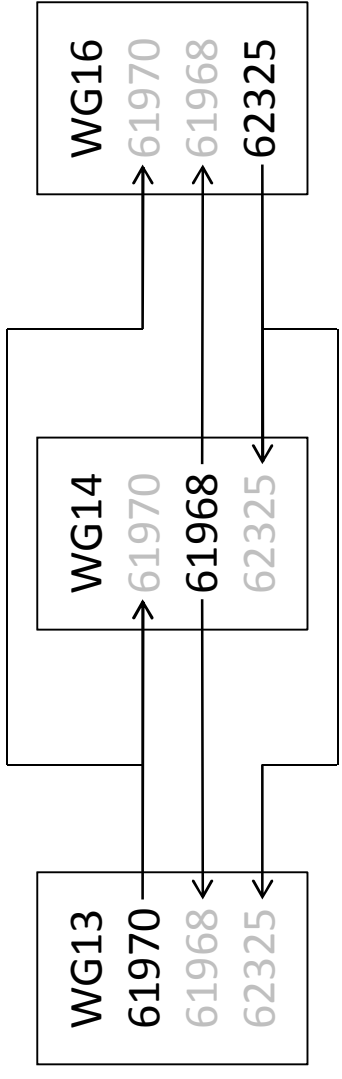




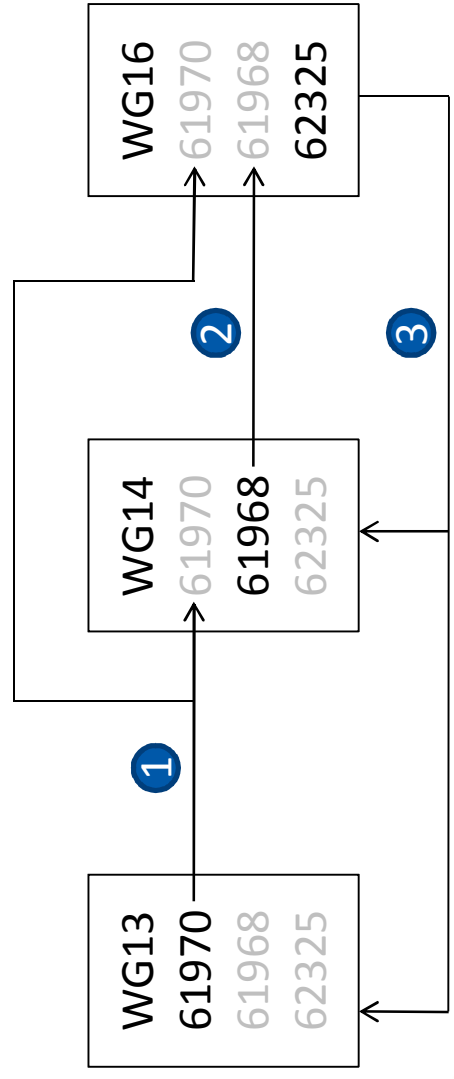


# CIM Model Co-ordination Using XMI

Possible model synchronizations



Complete model synchronization





# CIM Model Versioning

iec61970cim15v03



The model



Major release  
on annual  
cycle



Minor version  
within a release



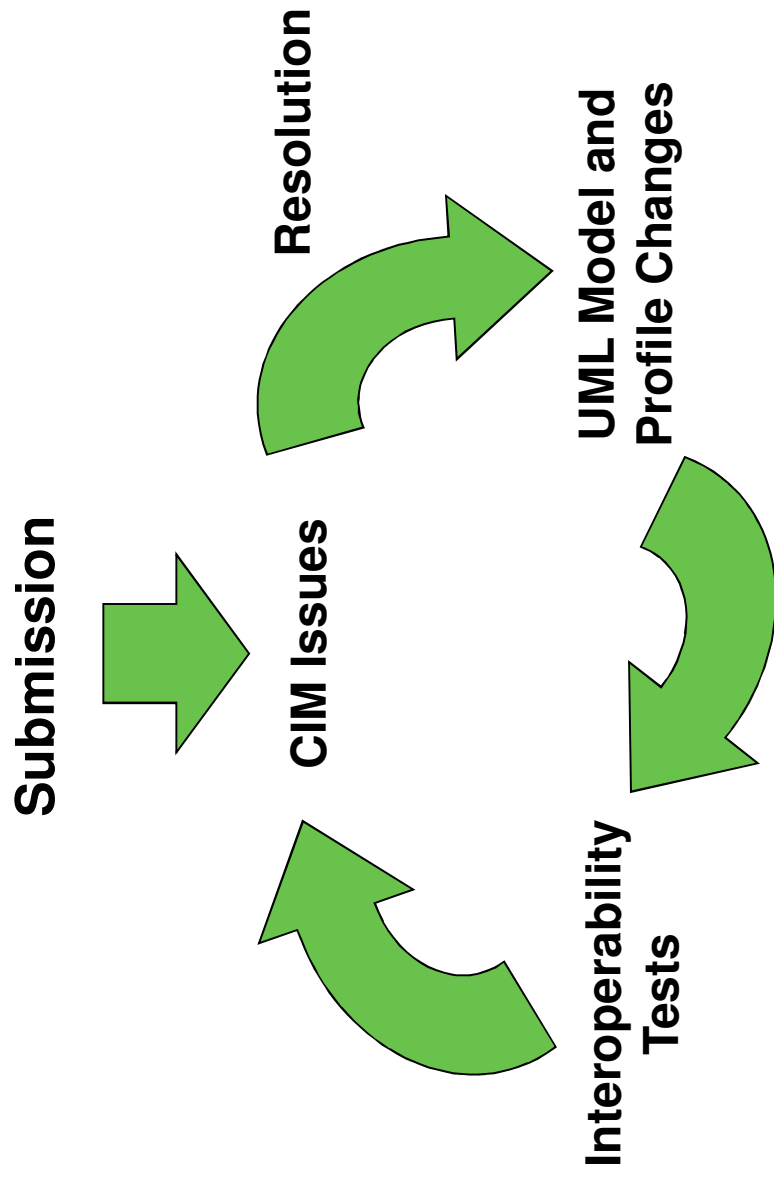
# CIM Model Versioning

- UML model content by classes IEC6xxxxCIMVersion
- Partial model file names
  - iec61970cim15v03.xmi
  - iec61968cim11v02.xmi
  - iec62325cim01v00.xmi
- Combined model file name
  - iec61970cim15v03\_iec61968cim11v02\_iec62325cim01v00.eap





# CIM Issues Process





## CIM Issues Submission

- CIM users web site
  - New issue submission form
- Contact CMM directly
- How To
  - Be specific and describe the problem (not solution!)
  - Extensions or substantial changes need use case
  - Make sure the issue doesn't already exist
  - Add proposed solution if there are ideas.





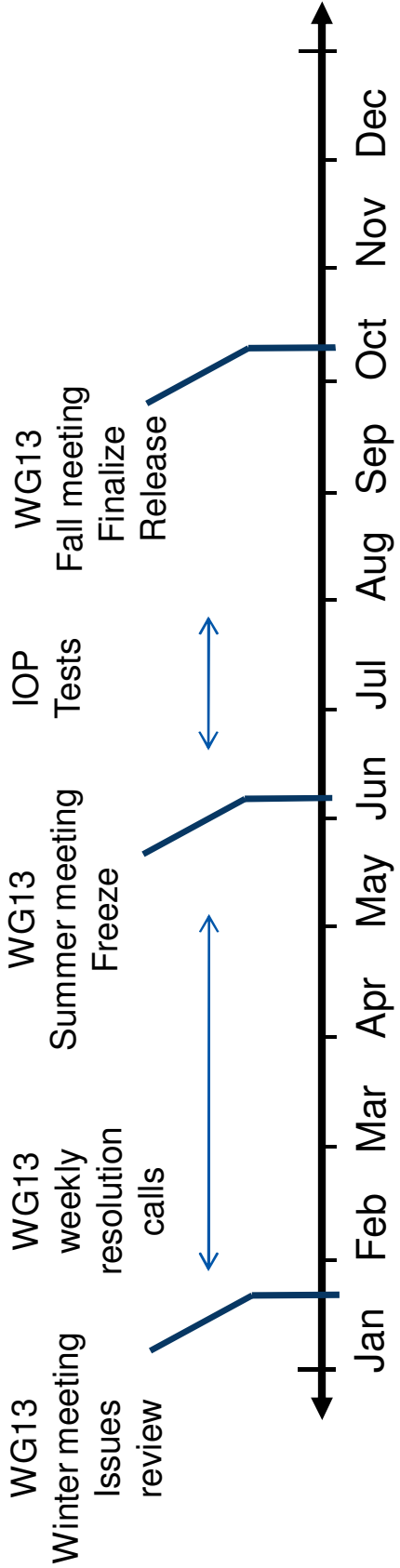
## CIM Issues Resolution

- Simple issues may be resolved by the CMM and then sent to WG 13 members for approval.
- More complex issues are discussed during WG 13 calls.
- Combined WG13-WG14-WG16 issues are resolved in common calls.
- Complex or controversial issues are discussed face to face in meetings. WG13-WG14-WG16 schedule common meetings.
- All changes are tracked in changes spread sheets





# WG13 Typical Yearly Plan





# WG13 CIM History 1

<b>Version</b>	u09a	10_010825c	cim10_011015	cim10_011015	cim10_030501
<b>Profile</b>	CPSM 2000-12-06	CPSM 2001-04-02	CPSM 1.5	CPSM 1.6	CPSM 1.7
<b>Released</b>	December 2000	April 2001	September 2001	July 2002	November 2003
<b>IOP</b>	IOP1	IOP2	IOP3	IOP4	IOP5
<b>Solved Issues</b>					







# WG13 CIM History 2

<b>Version</b>	cim10_03_0501	cim10_030501	cim61970_v003_WG13cimissues-CPSM_2.0	11 (10_v004)
<b>Profile</b>	CPSM 1.8	CPSM 1.9	CPSM 2.0	IEC 61970-452 Rev3
<b>Released</b>	July 2004	September 2005	March 2006	October 2006
<b>IOP</b>	IOP6	IOP7	IOP8	IOP9
<b>Solved Issues</b>			Line now EquipmentContainer	Naming Hierarchy Model Authority / MRIDs Time Series Model



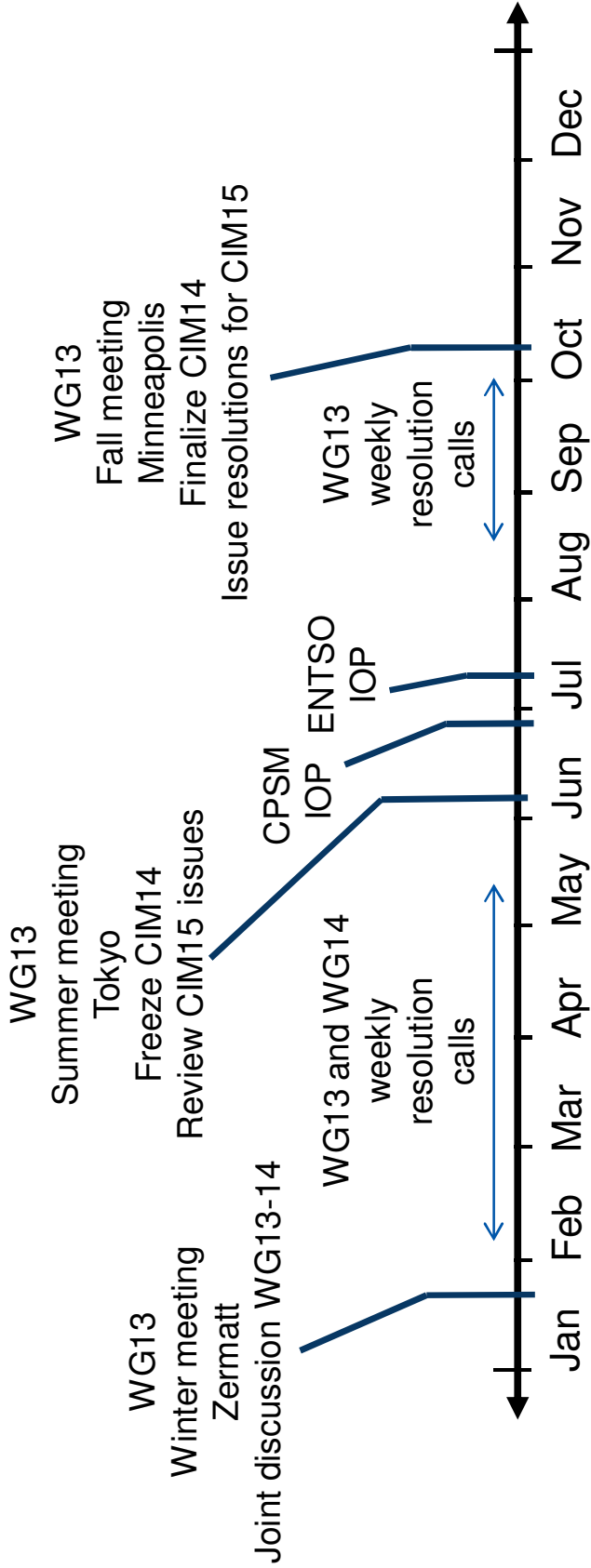
# WG13 CIM History 3

Version	12	13	14
<b>Profile</b>			
<b>Draft</b>	May 2007	June 2008	December 2009
<b>Test</b>	IOP10 September 2007	IOP October 2008	No test 2009
<b>Release</b>	Q1 2008	Q1 2009	No release 2009
<b>Addressed Issues</b>	SI units Data type system Control model Load model Equivalent model Other minor changes	OWL meta data Tools, EA transition CIM Issues CIM for planning ERCOT issues Operational limits	CIM Issues CIM for planning Phase shift transformers Solution exchange Composite Datatypes OWL meta data





# WG13 CIM 2010 Plan



# WG13 CIM 2010 Roadmap

Version	14	15	16
<b>Profile</b>	452 and 456	452, 456 and 453	
<b>Draft</b>	May 2010	February or May 2011	May 2012
<b>Test</b>	IOP June 2010 – July 2010	IOP on distribution (CPSM+CDPSM)	
<b>Release</b>	Q4 2010	2011	2012
<b>Addressed</b>	CIM Issues	CIM Issue	CIM Issues
<b>Issues</b>	<ul style="list-style-type: none"> <li>CIM for planning</li> <li>Phase shifters</li> <li>Solution exchange</li> <li>Composite Datatypes                             <ul style="list-style-type: none"> <li>OWL meta data</li> <li>ENTSO-E support, e.g. DACF and planning</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Energy Markets (WG16)</li> <li>DC model</li> <li>Common Distribution-Transmission model</li> <li>Multiple inheritances</li> <li>CIM for dynamics</li> <li>CIM for graphics</li> </ul>	



# Recent CIM; WG13 CIM 14 Highlights

- Mutual Coupling
  - Company (class deleted)
- **Solution exchange (State Variables), the 456 profile removed**
- Equivalents
  - Informative Package
- Wind Generating Unit
  - **Headers, the 552**
- Tap Changers, Schedules, and Curves
  - **ENTSO-E DACF and planning support**
- Switch Schedules
  - **Last minute minor changes**
- Compound Data Types







## Recent CIM; WG13 CIM14 Files

- UML model      iec61970cim14v15\_iec61968cim10v31\_combined.eap
- 301 base model      iec61970-301r21\_iec61970cim14v15.doc
- 452 (CPSM) profile      61970-452-Rev7v03(...)\_24\_May\_2010.doc
- 456 solution profile      61970-456\_rev1\_2010-06-03.doc
- 552 CIMXML format      61970-552\_rev1\_2010-05-03.doc
- Changes      CIM\_changes\_20100428.xls
- Report      WG13\_CIM\_Issues\_Report\_20100428.doc





# Update On Documents

Documents being retired

Document	Replacements		Comment
	OMG	OPC Foundation	
IEC61970-404	DAIS DA	OPC DA/OPC UA	No change in functionality
IEC61970-405	DAIS A&E	OPC A&E/OPC UA	No change in functionality
IEC61970-407	HDAIS	OPC HDA/OPC UA	No change in functionality
IEC61970-453 ed1	IEC61970-453 ed2		Change in functionality

Documents being discussed

Document	Alternate		Comment
	OMG	OPC Foundation	
IEC61970-402	DAF	OPC UA	Some change in functionality
IEC61970-403	DAF	OPC UA	Some change in functionality





## Future CIM; WG13 CIM 15 Highlights

- Common network model
- CIM for Dynamics
- transmission-distribution
- CIM for Graphics
- Transformer model
- DC model
- Unbalanced network
- Impact from energy markets (WG16)
- Load model
- Revised models
- Feeder model
- Cuts and jumpers
- Tap changer
- Catalog data
- Transformer test data
- Other CIM issues



# Questions ?

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