


## CIGRE Study Committee D2

### PROPOSAL FOR THE CREATION OF A NEW WORKING GROUP

<b>WG 1<sup>o</sup> D2.57</b>	<b>Name of Convenor:</b> Roman Bogomolov (Russian Federation)
<b>Strategic Directions #2: 1</b>	<b>Sustainable Development Goal #3: 9</b>
<b>The WG applies to distribution networks:</b> <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No	
<b>Potential Benefit of WG work #4 : 3</b>	
<b>Title of the Group: CIM (Common Information Model) Methodology</b>	
<p><b>Scope, deliverables and proposed time schedule of the WG:</b></p> <p><b>Background:</b></p> <p>The Common information model (CIM) described in the international standards IEC 61970, IEC 61968, IEC 62325 helps to facilitate integration between information systems and applications by defining the semantics for this Application Programming Interface (API). The CIM is an abstract model that represents all the major objects in an electric utility.</p> <p>At the moment, many companies use CIM standards for various areas, including:</p> <ul style="list-style-type: none"> <li>– Operational planning;</li> <li>– Long-term planning;</li> <li>– Asset Management;</li> <li>– Electricity market;</li> <li>– Etc.</li> </ul> <p>IEC standards were approved in the 2000s and developed quite conservatively. Despite CIM standards contain flexible models relevant for the most common tasks, some of the tasks need to be expanded. For example, since the 2010s, the AC line model extensions have been discussed, but these extensions have not yet found a place in the IEC standards.</p> <p>The working group can help in the analysis of existing extensions of the standard model, as well as proposals for their unification or for the creation of new extensions to ensure the possibility of solving more tasks. The extensions proposed by the WG will be free of any patent.</p> <p>The proposed activity is close to JWG N° D2/C2.48, but mainly focused on CIM extensions and its development.</p> <p><b>Scope:</b></p> <ol style="list-style-type: none"> <li>1. Identify the current scope and granulation of equipment models and its relevance for various tasks.</li> <li>2. Benchmark the scope of information models of the most common Energy Management Systems (EMS) and Distribution system Management Systems (DMS) applications.</li> <li>3. Development of an extended AC line model to provide the flexibility of modelling and solving a variety of tasks.</li> <li>4. Development of power transformer model extensions.</li> <li>5. Development of other extensions according to the results of collecting information about the needs of companies (e.g. relay protection model).</li> <li>6. Make available Unified Modelling Language (UML) models for the proposed extensions</li> </ol>	

<b>Deliverables:</b>	
<input checked="" type="checkbox"/> Technical Brochure and Executive Summary in Electra <input checked="" type="checkbox"/> Electra Report <input type="checkbox"/> Future Connections <input type="checkbox"/> CSE <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Webinar	
<b>Time Schedule:</b> start: Jan 2023	<b>Final Report:</b> Jan 2025
<b>Approval by Technical Council Chairman:</b>	
<b>Date:</b> December 10th, 2022	

Notes: <sup>1</sup> Working Group (WG) or Joint WG (JWG), <sup>2</sup> See attached Table 1, <sup>3</sup> See attached Table 2 and CIGRE reference Paper: Sustainability – at the heart of CIGRE's work. <sup>4</sup> See attached Table 3

WG Membership: refer Comments at end of document

**Table 1: Strategic directions of the Technical Council**

<b>1</b>	The electrical power system of the future reinforcing the End-to-End nature of CIGRE: respond to speed of changes in the industry by preparing and disseminating state-of-the-art technological advances
<b>2</b>	Making the best use of the existing systems
<b>3</b>	Focus on the environment and sustainability (in case the WG shows a direct contribution to at least one SDG)
<b>4</b>	Preparation of material readable for non-technical audience

**Table 2: Environmental requirements and sustainable development goals**

	CIGRE selected the 7 SDGs that are the most relevant to CIGRE. In case the WG work refers to other SDGs or do not address any specific SDG, it will be quoted 0.
<b>0</b>	Other SDGs or not applied
<b>7</b>	<b>SDG 7: Affordable and clean energy</b> Increase share of renewable energy; e.g. expand infrastructure for supplying sustainable energy services; ensure universal access to affordable, reliable, and modern energy services; energy efficiency; facilitate access to clean energy research and technology
<b>9</b>	<b>SDG 9: Industry, innovation and infrastructure</b> Facilitate sustainable infrastructure development; facilitate technological and technical support
<b>11</b>	<b>SDG 11: Sustainable cities and communities</b> Increase attention on sustainable and resilient buildings utilizing local (raw) materials, power for electric vehicles, strengthening long-line transmission and distribution systems to import necessary power to cities, developing micro-grids to reinforce the sustainable nature of cities; protect and safeguard the world's cultural and natural

	heritage; reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and waste management
<b>12</b>	<b>SDG 12: Responsible consumption and production</b> E.g. Promote public procurement practices that are sustainable; address reducing use of SF6 and promote alternatives, encourage companies to adopt sustainable practices and to integrate sustainability information into their reporting cycle, address inefficient fossil-fuel subsidies that encourage wasteful consumption
<b>13</b>	<b>SDG 13: Climate action</b> E.g. Increase share of renewable or other CO <sub>2</sub> -free energy; energy efficiency; expand infrastructure for supplying sustainable energy; strengthen resilience and adaptive capacity to climate-related hazards and natural disasters; integrate climate change measures into national policies, strategies and planning; improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
<b>14</b>	<b>SDG 14: Life below water</b> E.g. Effects of offshore windfarms; effects of submarine cables on sea-life
<b>15</b>	<b>SDG 15: Life on land</b> E.g. Attention for vegetation management; bird collisions; integration of substations and lines into the landscape

**Table 3: Potential benefit of work**

<b>1</b>	Commercial, business, social and economic benefits for industry or the community can be identified as a direct result of this work
<b>2</b>	Existing or future high interest in the work from a wide range of stakeholders
<b>3</b>	Work is likely to contribute to new or revised industry standards or with other long term interest for the Electric Power Industry
<b>4</b>	State-of-the-art or innovative solutions or new technical directions
<b>5</b>	Guide or survey related to existing techniques; or an update on past work or previous Technical Brochures
<b>6</b>	Work likely to contribute to improved safety.

**Comments:**

**1) CIGRE Official Study Committee Rules: WG Membership**

<https://www.cigre.org/GB/about/official-documents>

- a. Only one member per country (by exception of SC Chair)
- b. WG nominees must first be supported by their National Committee (or local SC Member) as an appropriate representative of their country.
- c. Acceptance of the nomination is granted by the SC Chair and advised to the WG Convener

**2) Collaboration Space**

<https://www.cigre.org/article/GB/collaborative-tools-2>

CIGRE will provision the WG with a dedicated Knowledge Management System Space.

The WG will use the KMS for drafting collaboration, capture and retention of discussion and meeting records.

Official country WG Members will be sent registration instructions by the Convener.

Official country WG Members may request the WG Convener to allow additional access for an extra national subject matter specialist to aid in the work at the national level, including NGN members.