

Add Topology and Connectivity Information

01/22/2025 12:50 PM - Owen Wu

Status:	On Hold	Start date:	01/22/2025
Priority:	Normal	Due date:	
Assignee:		% Done:	0%
Category:			
Target version:			
Final Decision:		Version:	2.3
Closed Reason:	--Not Set---	Needs More Information:	No
Breaking Change:			

Description

From Neil:
Location - Point that can be defined with one or more 'PositionPoint' in a given 'CoordinateSystem' - IEC CIM.IEC61968.Common.Location
dir: String [0..1] - Cardinal (N, E, S, W), Intercardinal Directions (NE, SE, SW, NW), or Sec Intercardinal Directions (NNE, ENE, ESE, SSE, SSW, WSW, WNW, NNW) - IEC CIM.IEC61968.Common.Location.direction
addr: StreetAddress [0..1] - Main address of the location - IEC CIM.IEC61968.Common.Location.mainAddress

PositionPoint - Set of spatial coordinates that determine a point, defined in the coordinate system specified in 'CoordinateSystem' - IEC CIM.IEC61968.Common.PositionPoint
elevation: String [0..1] - Z-coordinate (e.g., elevation or altitude) - IEC CIM.IEC61968.Common.PositionPoint.zPosition
latitude: String [0..1] - Y-coordinate (e.g., latitude) - IEC CIM.IEC61968.Common.PositionPoint.yPosition
longitude: String [0..1] - X-coordinate (e.g., longitude) - IEC CIM.IEC61968.Common.PositionPoint.xPosition
SeqNum: Int [0..1] - Zero-relative sequence number of this point within a series of points - IEC CIM.IEC61968.Common.PositionPoint.sequenceNumber

CoordinateSystem - Coordinate reference system (<https://epsg.org/>) - IEC CIM.IEC61968.Common.CoordinateSystem
crsUrn: String [0..1] - A Uniform Resource Name (URN) for the coordinate reference system (CRS) used to define 'PositionPoints' - IEC CIM.IEC61968.Common.CoordinateSystem.crsUrn

StreetAddress - General purpose street address information - IEC CIM.IEC61968.Common.StreetAddress
streetDetail: StreetDetail [0..1] - Street detail - IEC CIM.IEC61968.Common.StreetAddress.streetDetail
townDetail: TownDetail [0..1] - Town detail - IEC CIM.IEC61968.Common.StreetAddress.townDetail

StreetDetail - Street details, in the context of address - IEC CIM.IEC61968.Common.StreetDetail
code: String [0..1] - (if applicable) Utilities often make use of external reference systems, such as those of the town-planner's department or surveyor general's mapping system, that allocate global reference codes to streets. - IEC CIM.IEC61968.Common.StreetDetail.code
name: String [0..1] - Name of the street - IEC CIM.IEC61968.Common.StreetDetail.name
number: String [0..1] - Designator of the specific location on the street - IEC CIM.IEC61968.Common.StreetDetail.number
prefix: String [0..1] - Prefix to the street name. (North, South, East, West, etc.) - IEC CIM.IEC61968.Common.StreetDetail.prefix
Suffix: String [0..1] - Suffix to the street name. (North, South, East, West, etc.) - IEC CIM.IEC61968.Common.StreetDetail.suffix
type: String [0..1] - Type of street. (street, circle, boulevard, avenue, road, drive, etc.) - IEC CIM.IEC61968.Common.StreetDetail.type

TownDetail - Town details, in the context of address
name: String [0..1] - Town name - IEC CIM.IEC61968.Common.TownDetail.name
section: String [0..1] - Town section - IEC CIM.IEC61968.Common.TownDetail.section
stateOrProvince: String [0..1] - Name of the state or province - IEC CIM.IEC61968.Common.TownDetail.stateOrProvince

ConnectivityNodeContainer - A base class for all objects that may contain connectivity nodes or topological nodes
connectivityNodes: ConnectivityNode - IEC CIM.IEC61970.Base.Core.ConnectivityNode

ConnectivityNode - Connectivity nodes are points where terminals of AC conducting equipment are connected together with zero impedance.
terminals: Terminals - IEC CIM.IEC61970.Base.Core.Terminal
topologicalNodes: TopologicalNode - IEC CIM.IEC61970.Base.Topology.TopologicalNode

<p>BusNameMarker - Used to apply user standard names to topology buses. Typically used for "bus/branch" case generation. Associated with one or more terminals that are normally connected with the bus name.</p> <p>topologicalNodes: TopologicalNode - IEC CIM.IEC61970.Base.Topology.TopologicalNode</p> <p>TopologicalNode - For a detailed substation model a topological node is a set of connectivity nodes that, in the current network state, are connected together through any type of closed switches, including jumpers. Topological nodes change as the current network state changes (i.e., switches, breakers, etc. change state). For a planning model, switch statuses are not used to form topological nodes. Instead they are manually created or deleted in a model builder tool. Topological nodes maintained this way are also called "busses".</p> <p>connectivityNodes: ConnectivityNode - IEC CIM.IEC61970.Base.Core.ConnectivityNode</p> <p>topologicalIsland: TopologicalIsland - IEC CIM.IEC61970.Base.Topology.TopologicalIsland</p> <p>TopologicalIsland - An electrically connected subset of the network. Topological islands can change as the current network state changes: e.g. due to - disconnect switches or breakers change state in a SCADA/EMS</p> <p>topologicalIsland: TopologicalIsland - IEC CIM.IEC61970.Base.Topology.TopologicalIsland</p>
<p>Proposed Solution</p> <p>Hold on for 2.3</p>

History

- #1 - 01/22/2025 02:50 PM - Owen Wu
 - Proposed Solution updated
 - Version set to 2.3
- #2 - 01/22/2025 03:03 PM - Owen Wu
 - Status changed from New to Triage
- #3 - 02/05/2025 03:09 PM - Owen Wu
 - Status changed from Triage to Accepted
- #4 - 02/05/2025 03:09 PM - Owen Wu
 - Status changed from Accepted to In Progress
- #5 - 02/05/2025 03:09 PM - Owen Wu
 - Status changed from In Progress to On Hold