

WG13 Issues - CIM Issues #6758

Measurement issues

04/13/2024 12:42 AM - Chavdar Ivanov

Status:	New	
Priority:	High	
Target version:		
Author/Contact Info:	Chavdar Ivanov	Standard(s):
Base Release:	CIM18	Version:
Solution to be Applied To:		Clause:
Solution Version:		Sub-Clause:
Solution Applied By:		Paragraph:
Completion Date:		Table:
CIM Keywords:	61970-Meas	Originally Closed in Version:
Breaking Change:		Origination Date:
Breaking Change Description:		Origination ID:
CIM Impacted Groups:	WG13	Originally Assigned To:
Requestor:		

Description

There are 3 Meas related issues

1) Voltage Telemetries at terminal of Switches

452 constraint

- C:452:OP:Measurement.Terminal.requiredCases

The association Measurement.Terminal shall reference a Terminal of the Equipment referenced by Measurement.PowerSystemResource except in cases where Measurement.measurementType is either "TapPosition" or "SwitchPosition" in which the association is not exchanged.

What should be done in the following case: the Voltage Telemetries are exported as Analog, but many of the them are associated with Switch Terminal since no other devices over there at the measurement position. Also, there is a Discrete Measurement for the SwitchPosition. Can we associate Terminal for Discrete of SwitchPosition?

Removing the association Measurement.Terminal solves the issue, but is this the right approach?

2) Name for MeasurementValueSource

452 constraint

- C:452:OP:MeasurementValueSource.name

For MeasurementValueSource, attribute IdentifiedObject.name is restricted to the following strings for MeasurementValueSource: ICCP, SCADA.

What a vendor should do if want to communicate other, for example LSE (Linear State Estimation) or other potential names? DO we do this with extension or we have enum for ICCP and SCADA and we have other types as a string that vendors can freely use?

3) Analog vs Discrete units

Table 3 in 452 and various constraints resulting from it define that

- Tap Position is Analog and not allowed for discrete (see constraint C:452:OP:Measurement.measurementType:analogValues and C:452:OP:Measurement.measurementType:discreteValues)
- UnitSymbol have different restriction for Analog and Discrete. None is not allowed for Analog (see constraints C:452:OP:Measurement.unitSymbol:analogValues and C:452:OP:Measurement.unitSymbol:discreteValues)

Questions:

- Is it OK that TapPosition is analog and not discrete? Is Discrete only boolean values or it could be also integers?
- if all is good, don't we need to add UnitSymbol.none in the Analog so that we solve the case for TapPosition which is unitless?

- C:452:OP:Measurement.measurementType:analogValues

For Analog, Measurement.measurementType is restricted to the following valid values: ThreePhasePower, ThreePhaseActivePower, ThreePhaseReactivePower, LineCurrent, PhaseVoltage, Voltage, Angle, Frequency and TapPosition.

- C:452:OP:Measurement.measurementType:discreteValues

For Discrete, Measurement.measurementType is restricted to the following valid values: SwitchPosition.

- C:452:OP:Measurement.unitSymbol:analogValues

For Analog, Measurement.unitSymbol is restricted to the following valid values: W, deg, VA, A, VAR, V, Hz.

- C:452:OP:Measurement.unitSymbol:discreteValues

For Discrete, Measurement.unitSymbol is restricted to the following valid values: none.