

WG13 Issues - CIM Issues #5014

Handling unit multiplierNeed a policy for WG13 with respect

09/14/2021 03:47 PM - Herbert Falk

Status:	Review	
Priority:	Normal	
Target version:		
Author/Contact Info:	Kendall Demaree	Standard(s):
Base Release:	CIM16	Version:
Solution to be Applied To:	CIM18v07	Clause:
Solution Version:	CIM18v07	Sub-Clause:
Solution Applied By:	Chavdar Ivanov	Paragraph:
Completion Date:	10/14/2023	Table:
CIM Keywords:	61970-Domain	Originally Closed in Version:
Breaking Change:	Yes	Origination Date: 09/07/2016
Breaking Change Description:	Profiles are updated and applications need to update the multipliers	Origination ID: 13_268
CIM Impacted Groups:	WG13, WG14, WG16	Originally Assigned To:
Requestor:		
Description Handling unit multiplier Need a policy for WG13 with respect to how unit multipliers are to be exchanged. For example CDPSM has need for Length to be in km for line length, but in meter for conductor spacing. 61970-552 does not provide for exchange of unit symbols or unit multipliers. Manual documentation is required in profiles. Possibly different model parts assembled together may have different unit multipliers such as combining a distribution and transmission model together.		
Proposed Solution Simplistic solution is to align on one multiplier (say 1) and only exchange meter, using the decimal in the actual exchange to express the value properly. This puts more stress on a user interface presenting the data differently than how it is exchanged. Assign to Units of Measure Subgroup		
Decision Oslo 14 June 2023 Considering that we expect to have models that include distribution and transmission grids, the recommendation is to remove multipliers in the profiles. It will be a breaking change. There are 3 ways how to implement this: 1) delete .multiplier from the canonical UML. This implies that the multiplier is 1. This needs discussion with other TFs 2) fix the .multiplier to "none" in the canonical UML. This means that the multiplier is 1. This needs discussion with other TFs 3) fix the .multiplier to "none" in the profile, which means we need to pay attention when creating profiles so that all profiles are consistent. The advantage of this option is that there could be different approaches between different TFs Preferred option is option 1, but due to 61850 harmonization perhaps option 2 is better. TF13 may implement option 3 first. This will not apply to hours, minutes, seconds An email will need to be sent to WG13 to check the support for this agreement. TF13, call 12-Jul-2023: - Agreed to apply option 3 for all TF13 profiles for CIM18 - Before closing the issue make sure there is a joint issue to inform other TFs		

Release Notes

All profiles are updated to have "none" as multiplier in the CIMDatatype. This means that values are exchanged in their base SI unit and will need to use engineering notation, e.g. SwPowerFlow.p in SV profile was defined as MW and 100.6 MW are exchanged in xml as <SvPowerFlow.p>100.6<SvPowerFlow.p>. After the change in the profiles the instance data is <SvPowerFlow.p>100.6E6<SvPowerFlow.p>

The following changes are applied:

- in EQ profile - 452 and 600: ActivePower, ActivePowerPerCurrentFlow, ActivePowerPerFrequency, ApparentPower, Length, ReactivePower, RealEnergy, Voltage
- in SC profile - 452 and 600: ActivePower, Length, Voltage
- in SSH - 456 and 600: ActivePower, ApparentPower, ReactivePower, RealEnergy, Voltage
- in SV profile 0 456 and 600: ActivePower, ReactivePower, Voltage

IEC 61970-457 Ed2 is not updated as it is in FDIS. Most probably an amendment will need to be launched after the approval of the FDIS

History

#1 - 09/14/2021 06:26 PM - Eric Stephan

- Subject changed from Handling unit multiplier
- Need a policy for WG13 with respect to Handling unit multiplier
- Decision updated

#2 - 12/01/2021 11:47 AM - Eric Stephan

- Proposed Solution updated
- Decision updated

#3 - 06/14/2023 09:05 AM - Chavdar Ivanov

- Status changed from Open to Review
- Decision updated
- CIM Keywords 61970-Domain added
- CIM Impacted Groups WG14, WG16 added

#4 - 07/12/2023 10:38 AM - Chavdar Ivanov

- Decision updated

#5 - 07/12/2023 10:39 AM - Chavdar Ivanov

- Decision updated

#6 - 10/14/2023 01:21 AM - Chavdar Ivanov

- Release Notes updated

#7 - 10/14/2023 01:30 AM - Chavdar Ivanov

- Release Notes updated

#8 - 10/14/2023 01:35 AM - Chavdar Ivanov

- Solution to be Applied To set to CIM18v07
- Solution Version set to CIM18v07
- Solution Applied By set to Chavdar Ivanov
- Completion Date set to 10/14/2023
- Breaking Change changed from No to Yes
- Breaking Change Description set to Profiles are updated and applications need to update the multipliers

#9 - 10/14/2023 02:41 AM - Todd Viegut

- Decision updated

#10 - 10/14/2023 02:42 AM - Todd Viegut

- Decision updated