WG14 Part 9 Issues - CIM Issues #6544

Meter Asset Accuracy Class

10/19/2023 11:23 AM - David Haynes

Status:	New		
Priority:	Normal		
Target version:			
Author/Contact Info:	dhaynes@hubbell.com	**Standard(s):**	61968-9, 61968-4
Base Release:		**Version:**	4
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Breaking Change Description:		**Origination ID:**	
CIM Impacted Groups:	WG14	**Originally Assigned To:**	
Requestor:	David Haynes		

Description

Revenue meters have an attribute called "Accuracy Class". The Accuracy Class (AC) is commonly printed on the meter nameplate. This needs to be represented under meter assets.

Meter inherits from EndDevice, which inherits from AssetContainer.
Sensor (on the other hand) inherits from AuxiliaryEquipment which inherits from Core::Equipment which is a PowerSystemResource.
Sensor children have the needed element: accuracyClass

There are other IoT metrology devices, which we might want to call "sensors" which measure things, provide measured values, which will also benefit by having a default accuracyClass expressed as an attribute of the sensor device.
We are classifying IoT sensors as "meters" for now, but this might not be the best idea. They might be in the field near SCADA grade IEDs and attempt to make similar measurements, but with less performance and possibly with less accuracy. In addition to voltage and current, a future IoT device might measure temperature, windspeed, insolation, vibration, tilt, heading, oil chemistry, lat/lon position, etc.)
Electromechanical meters typically have an accuracy class of 2.0%.
Today's solid state revenue meters typically have an accuracy class of 0.2%. This information is usually stated on the meter nameplate.
Today's industrial grade (substation) meters may have a stated accuracy class, like a revenue meter, but will often have different stated accuracies for different types of measurements.

Proposed Solution

We might want to change how "meter" inherits from various classes, but doing so might be a breaking change.
Perhaps it is better to simply add "accuracyClass" to Meter asset.

Release Notes

An Annex "N" has been proposed that would provide an informative overview and recommendations on handling meter accuracy issues.

History

#1 - 10/19/2023 11:24 AM - David Haynes

- Standard(s) changed from 61968-9 to 61968-9, 61968-4

#2 - 11/16/2023 11:17 AM - David Haynes

- Release Notes updated