

## WG14 Part 9 Issues - CIM Issues #6600

### Multipliers

11/16/2023 11:33 AM - David Haynes

<b>Status:</b>	New		
<b>Priority:</b>	Normal		
<b>Target version:</b>			
<b>Author/Contact Info:</b>	dhaynes@hubbell.com	<b>Standard(s):</b>	61968-9
<b>Base Release:</b>		<b>Version:</b>	4
<b>Solution to be Applied To:</b>		<b>Clause:</b>	Annex C
<b>Solution Version:</b>		<b>Sub-Clause:</b>	C.2.17
<b>Solution Applied By:</b>		<b>Paragraph:</b>	
<b>Completion Date:</b>		<b>Table:</b>	
<b>CIM Keywords:</b>		<b>Originally Closed in Version:</b>	
<b>Breaking Change:</b>	No	<b>Origination Date:</b>	11/15/2023
<b>Breaking Change Description:</b>		<b>Origination ID:</b>	
<b>CIM Impacted Groups:</b>	WG14	<b>Originally Assigned To:</b>	
<b>Requestor:</b>	David Haynes		

#### Description

There has been ambiguity in the world over the use of "k" and "M" as scalars. According to the official SI UOM standard, "k" is a scalar for "1000". However, in the computing domain, "k" is often taken to mean "1024". The IEC has addressed this by coining new terms. "Kibi" now means a scalar of 1024, and a computer memory might have 1 kibibits or kibiBytes of storage. There are a family of such scalars that need to be supported.

#### Proposed Solution

Add enumerations to Attribute #16 to support kibi, mebi, and other binary scalars to join with the power of 10 scalars. For example, with Kibi (Ki) being defined as 2 to the 10th power, an enumeration of "210" might be given to Kibi. There is a family of 10 such scalars defined by the IEC which should be incorporated here. Finally, some attention should be given to percentages. Since the industry already supports percent (1/100) and permille (1/1000), we might consider coining "perkibi" for 1/1024. If "+210" represents "1024" then "-210" should perhaps represent "perkibi".