DR 17-0028 — DML: Order of elements in schemeClr seems to matter

Status: Further Consideration Required

Subject: DML: Order of elements in schemeClr seems to matter

Qualifier: Request for clarification

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Submitter’s Defect Number: None

Supporting Document(s): None

Date Circulated by Secretariat: 2017-09-06

Deadline for Response from Editor: 2017-11-06

IS 29500 Reference(s): 29500:2016, Part 1, §xx, “xxx”, p. xx

Related DR(s): None

Nature of the Defect:

I've tracked down behaviour in Excel where it seems that the behaviour is dependent upon the order of the elements.

The following XML from a chart should serve to illustrate.

<majorGridlines>

 <spPr>

 <a:ln xmlns:a="<https://na01.safelinks.protection.outlook.com/?url=http%3A%2F%2Fschemas.openxmlformats.org%2Fdrawingml%2F2006%2Fmain&data=02%7C01%7Canankani%40microsoft.com%7C752a7c1b81c9493fa8d908d4e71cbe1f%7C72f988bf86f141af91ab2d7cd011db47%7C1%7C0%7C636387558037354149&sdata=0%2BZejml3YMRat%2Bvy6A3ghLPZdnqFRykACjnvh1tE%2BEo%3D&reserved=0>"

algn="ctr" cap="flat" cmpd="sng" w="9525">

 <a:solidFill>

 <a:schemeClr val="tx1">

 <a:lumOff val="85000"/>

 <a:lumMod val="15000"/>

 </a:schemeClr>

 </a:solidFill>

 <a:prstDash val="solid"/>

 <a:round/>

 </a:ln>

 </spPr>

</majorGridlines>

According to the specification the order of lumOff and lumMod shouldn't matter. However, it seems that if lumOff precedes lumMod then the settings have no effect. The screenshots enclosed reflect the order of the

elements: lumMod followed by lumOff produces light grey lines; lumOff followed by lumMod produces black lines. I hope this explanation together with the screenshots is clear.

The schema is quite clear that order is not important and, indeed, \*Off elements precede \*Mod elements:

<xsd:group name="EG\_ColorTransform">

 <xsd:choice>

 <xsd:element name="tint" type="CT\_PositiveFixedPercentage" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="shade" type="CT\_PositiveFixedPercentage" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="comp" type="CT\_ComplementTransform" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="inv" type="CT\_InverseTransform" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="gray" type="CT\_GrayscaleTransform" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="alpha" type="CT\_PositiveFixedPercentage" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="alphaOff" type="CT\_FixedPercentage" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="alphaMod" type="CT\_PositivePercentage" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="hue" type="CT\_PositiveFixedAngle" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="hueOff" type="CT\_Angle" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="hueMod" type="CT\_PositivePercentage" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="sat" type="CT\_Percentage" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="satOff" type="CT\_Percentage" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="satMod" type="CT\_Percentage" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="lum" type="CT\_Percentage" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="lumOff" type="CT\_Percentage" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="lumMod" type="CT\_Percentage" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="red" type="CT\_Percentage" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="redOff" type="CT\_Percentage" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="redMod" type="CT\_Percentage" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="green" type="CT\_Percentage" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="greenOff" type="CT\_Percentage" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="greenMod" type="CT\_Percentage" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="blue" type="CT\_Percentage" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="blueOff" type="CT\_Percentage" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="blueMod" type="CT\_Percentage" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="gamma" type="CT\_GammaTransform" minOccurs="1" maxOccurs="1"/>

 <xsd:element name="invGamma" type="CT\_InverseGammaTransform" minOccurs="1" maxOccurs="1"/>

 </xsd:choice>

</xsd:group>

The only hint that order might matter is the order of the elements in §20.1.2.3 but there is no further information.

If the order does matter, how can this best be reflected in the specification? Should the choice between converted into a sequence?

Solution Proposed by the Submitter:

None

Schema Change(s) Needed:

No

**Editor’s Response:**

None

Changes to Part 1: N Part 2: N Part 3: N Part 4: N