DR 17-0015 — SML: CT\_GradientFill Attribute Limits

Status: Further Consideration Required

Subject: SML: CT\_GradientFill Attribute Limits

Qualifier: Technical defect

Submitter: Charlie Clark Organization: Ecma/Clark Consulting & Research

Contact Information: [charlie.clark@clark-consulting.eu](file:///E%3A%5CStd%5CSC%2034%5CWG4%5CDRs%5CLog%5C2014%5Ccharlie.clark%40clark-consulting.eu)

Submitter’s Defect Number: None

Supporting Document(s): None

Date Circulated by Secretariat: 2017-06-20

Deadline for Response from Editor: 2017-08-20

IS 29500 Reference(s): 29500:2016, Part 1, §18.8.24, “gradientFill (Gradient)”, p. 1768–1771

Related DR(s): None

Nature of the Defect:

In the narrative, the attributes left, right, top, and bottom have declared limits, yet those limits are not enforced by the schema, as follows:

|  |  |
| --- | --- |
| Attributes | Description |
| bottom (BottomConvergence) | This attribute is restricted to values ranging from 0 to 1. … |
| left (LeftConvergence) | This attribute is restricted to values ranging from 0 to 1. … |
| right (RightConvergence) | This attribute is restricted to values ranging from 0 to 1. … |
| top (Top GradientConvergence) | This attribute is restricted to values ranging from 0 to 1. … |

**XSD Schema, pp. 3937–3938, lines 3529–3549**

<xsd:complexType name="CT\_GradientFill">

 <xsd:sequence>

 <xsd:element name="stop" type="CT\_GradientStop" minOccurs="0"

 maxOccurs="unbounded"/>

 </xsd:sequence>

 <xsd:attribute name="type" type="ST\_GradientType" use="optional"

 default="linear"/>

 <xsd:attribute name="degree" type="xsd:double" use="optional" default="0"/>

 <xsd:attribute name="left" type="xsd:double" use="optional" default="0"/>

 <xsd:attribute name="right" type="xsd:double" use="optional" default="0"/>

 <xsd:attribute name="top" type="xsd:double" use="optional" default="0"/>

 <xsd:attribute name="bottom" type="xsd:double" use="optional" default="0"/>

</xsd:complexType>

Solution Proposed by the Submitter:

<xsd:complexType name="CT\_GradientFill">

 …

 <xsd:attribute name="left" type="xsd:double" use="optional" default="0"

 min="0" max="1"/>

 <xsd:attribute name="right" type="xsd:double" use="optional" default="0"

 min="0" max="1"/>

 <xsd:attribute name="top" type="xsd:double" use="optional" default="0"

 min="0" max="1"/>

 <xsd:attribute name="bottom" type="xsd:double" use="optional" default="0"

 min="0" max="1"/>

</xsd:complexType>

Schema Change(s) Needed:

Yes

**Editor’s Response:**

**2017-08-30 Murata-san:**

I created schema changes for closing this DR.

<https://muratamakoto24.visualstudio.com/_git/OOXMLSchemas/commit/017c35e13212811b85cf4e8658109592ee8e4365?refName=refs%2Fheads%2FCOR4>

**2017-08-30 Teleconference:**

Murata-san has put all the changes in the schema repository.

**Action**: Rex will retrieve from the schema repository and write-up the changes for DR 17-0015.

We can close this once the action item has been completed.

**2017-09-21 Rex Jaeschke:**

Here are the final edits as I understand them:

**Part 1: §A2, “SpreadsheetML”, pp. 3937–3938, lines 3539–3549**

 <xsd:complexType name="CT\_GradientFill">

 <xsd:sequence>

 <xsd:element name="stop" type="CT\_GradientStop" minOccurs="0" maxOccurs="unbounded"/>

 </xsd:sequence>

 <xsd:attribute name="type" type="ST\_GradientType" use="optional" default="linear"/>

 <xsd:attribute name="degree" type="xsd:double" use="optional" default="0"/>

 ~~<xsd:attribute name="left" type="xsd:double" use="optional" default="0"/>~~

 ~~<xsd:attribute name="right" type="xsd:double" use="optional" default="0"/>~~

 ~~<xsd:attribute name="top" type="xsd:double" use="optional" default="0"/>~~

 ~~<xsd:attribute name="bottom" type="xsd:double" use="optional" default="0"/>~~

 <xsd:attribute name="left" type="ST\_GradientFillLeftRightTopBottom" use="optional" default="0"/>

 <xsd:attribute name="right" type="ST\_GradientFillLeftRightTopBottom" use="optional" default="0"/>

 <xsd:attribute name="top" type="ST\_GradientFillLeftRightTopBottom" use="optional" default="0"/>

 <xsd:attribute name="bottom" type="ST\_GradientFillLeftRightTopBottom" use="optional"default="0"/>

 </xsd:complexType>

 <xsd:simpleType name="ST\_GradientFillLeftRightTopBottom">

 <xsd:restriction base="xsd:double">

 <xsd:minInclusive value="0"/>

 <xsd:maxInclusive value="1"/>

 </xsd:restriction>

 </xsd:simpleType>

**Part 1: §B2, “SpreadsheetML”, p. 4251, lines 3846–3865**

sml\_CT\_GradientFill =

 …

 ## default value: 0

 ~~attribute left { xsd:double }?,~~

 attribute left { sml\_ST\_GradientFillLeftRightTopBottom }?,

 ## default value: 0

 ~~attribute right { xsd:double }?,~~

 attribute right { sml\_ST\_GradientFillLeftRightTopBottom }?,

 ## default value: 0

 ~~attribute top { xsd:double }?,~~

 attribute top { sml\_ST\_GradientFillLeftRightTopBottom }?,

 ## default value: 0

 ~~attribute bottom { xsd:double }?,~~

 attribute bottom { sml\_ST\_GradientFillLeftRightTopBottom }?,

 element stop { sml\_CT\_GradientStop }\*

sml\_ST\_GradientFillLeftRightTopBottom =

 xsd:double { minInclusive = "0" maxExclusive = "1" }

**Part 4: §A3, “SpreadsheetML”, p. 1001, lines 3567–3577**

 <xsd:complexType name="CT\_GradientFill">

 <xsd:sequence>

 <xsd:element name="stop" type="CT\_GradientStop" minOccurs="0" maxOccurs="unbounded"/>

 </xsd:sequence>

 <xsd:attribute name="type" type="ST\_GradientType" use="optional" default="linear"/>

 <xsd:attribute name="degree" type="xsd:double" use="optional" default="0"/>

 ~~<xsd:attribute name="left" type="xsd:double" use="optional" default="0"/>~~

 ~~<xsd:attribute name="right" type="xsd:double" use="optional" default="0"/>~~

 ~~<xsd:attribute name="top" type="xsd:double" use="optional" default="0"/>~~

 ~~<xsd:attribute name="bottom" type="xsd:double" use="optional" default="0"/>~~

 <xsd:attribute name="left" type="ST\_GradientFillLeftRightTopBottom" use="optional" default="0"/>

 <xsd:attribute name="right" type="ST\_GradientFillLeftRightTopBottom" use="optional" default="0"/>

 <xsd:attribute name="top" type="ST\_GradientFillLeftRightTopBottom" use="optional" default="0"/>

 <xsd:attribute name="bottom" type="ST\_GradientFillLeftRightTopBottom" use="optional" default="0"/>

 </xsd:complexType>

 <xsd:simpleType name="ST\_GradientFillLeftRightTopBottom">

 <xsd:restriction base="xsd:double">

 <xsd:minInclusive value="0"/>

 <xsd:maxInclusive value="1"/>

 </xsd:restriction>

 </xsd:simpleType>

**Part 4: §B3, “SpreadsheetML”, p. 1347–1348, lines 3870–3889**

sml\_CT\_GradientFill =

 …

 ## default value: 0

 ~~attribute left { xsd:double }?,~~

 attribute left { sml\_ST\_GradientFillLeftRightTopBottom }?,

 ## default value: 0

 ~~attribute right { xsd:double }?,~~

 attribute right { sml\_ST\_GradientFillLeftRightTopBottom }?,

 ## default value: 0

 ~~attribute top { xsd:double }?,~~

 attribute top { sml\_ST\_GradientFillLeftRightTopBottom }?,

 ## default value: 0

 ~~attribute bottom { xsd:double }?,~~

 attribute bottom { sml\_ST\_GradientFillLeftRightTopBottom }?,

 element stop { sml\_CT\_GradientStop }\*

sml\_ST\_GradientFillLeftRightTopBottom =

 xsd:double { minInclusive = "0" maxExclusive = "1" }

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