DR 18-0010 — SML: Optional spans and r attributes in sheet rows and cells

Status: Open

Subject: SML: Optional spans and r attributes in sheet rows and cells

Qualifier: Request for clarification

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Submitter’s Defect Number: None

Supporting Document(s): None

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Deadline for Response from Editor: 2018-10-07

IS 29500 Reference(s): 29500:2016, Part 1, §18.3.1.73, “row (Row)”

Related DR(s): None

Nature of the Defect:

I'm currently doing some refactoring of my codebase and reviewing the specification. It seems to me that there is a problem with the current definition that allow both the spans attribute of a row element and the r attribute of a cell element to be optional.

If we take the current example for spans from §18.3.1.73:

<sheetData>

<row r="8" spans="4:6">

<c r="F8">

<v>1</v>

</c>

</row>

<row r="9" spans="4:6">

<c r="E9">

<v>2</v>

</c>

</row>

<row r="10" spans="4:6">

<c r="D10">

<v>3</v>

</c>

</row>

</sheetData>

And then treat the r attribute of the cells as optional we get:

<sheetData>

<row r="8" spans="4:6">

<c>

<v>1</v>

</c>

</row>

<row r="9" spans="4:6">

<c>

<v>2</v>

</c>

</row>

<row r="10" spans="4:6">

<c>

<v>3</v>

</c>

</row>

</sheetData>

How should such a block be interpreted? An enumerator would produce D4, D9 and D10

The current narrative documentation says that:

"Optimization only, and not required. Specifies the range of non-empty columns (in the format X:Y) for the block of rows to which the current row belongs. To achieve the optimization, span attribute values in a single block should be the same."

But I think this is patently incorrect in this case and would suggest that the span refers to "column indices of the first and last cell of the current row". The description of the r attribute could be extended along the lines of "the r attribute may only be omitted if the parent row element contains a span element and contiguous cells."

The example could be thus expressed as:

<sheetData>

<row r="8" spans="6:6">

<c>

<v>1</v>

</c>

</row>

<row r="9" spans="5:5">

<c>

<v>2</v>

</c>

</row>

<row r="10" spans="4:4">

<c>

<v>3</v>

</c>

</row>

</sheetData>

An enumerator would produce F8, E9 and D10 as in the original example and emphasise the optimisational character of the spans attribute, which obviates calculating the coordinates of every cell. But it does this, of course, come at the cost of a sparse matrix implementation.

However, having just tested the implementations with Excel 2016 for Mac I can report that the r attribute does seem to be essential, but that Excel itself is happy with spans within a single "block" being different. The concept of a block seems implementation-dependent and not relevant here.

Solution Proposed by the Submitter:

I suggest the following changes to §18.3.1.73, “row (Row)”, attribute spans:

|  |  |
| --- | --- |
| Attributes | Description |
| spans (Spans) | Optimization only, and not required. Specifies the range of non-empty columns (in the  format X:Y) for the ~~block of rows to which the current row belongs. To achieve the~~  ~~optimization, span attribute values in a single block should be the same.~~ current row belongs where X refers to the index of the first cell in the row and Y refers to the index of the last cell in the row.  There are 16 rows per block, beginning with the first row.  [Note: this is an optimization, and is purely optional. end note] ~~Different span values within the same row block is allowed. Not writing the span value at all is also allowed. end note]~~ Blank rows are not required to write out span values.  … |

And to **§18.3.1.4, “c (Cell)”**:

|  |  |
| --- | --- |
| Attributes | Description |
| r (Reference) | An A1 style reference to the location of this cell. For maximum interoperability this value should always be provided.  The possible values for this attribute are … |

Thoughts?

Schema Change(s) Needed:

No

**Editor’s Response:**

None

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