

“list-override” enhancement for ODF

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Normative examples for the existing numbering in ODF1.1

<i>Sample 1</i>	<i>text:list</i>	<i>text:numbered paragraph</i>
1. A 2. B 3. C	<pre><text:list text:style-name="L1"> <text:list-item> <text:p>A</text:p> </text:list-item> <text:list-item> <text:p>B</text:p> </text:list-item> <text:list-item> <text:p>C</text:p> </text:list-item> </text:list></pre>	<pre><text:numbered-paragraph text:level="1" text:style-name="L1" text:continue-numbering="false"/> <text:p>A</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="1" text:style-name="L1" text:continue-numbering="true"/> <text:p>B</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="1" text:style-name="L1" text:continue-numbering="true"/> <text:p>C</text:p> </text:numbered-paragraph></pre>

<i>Sample 2</i>	<i>text:list</i>	<i>text:numbered paragraph</i>
1.A 1.B 2.C 2.D 1.E 2.F	<pre><text:list text:style-name="L1"> <text:list-item> <text:p>A</text:p> <text:list> <text:list-item> <text:p>B</text:p> </text:list-item> <text:list-item> <text:p>C</text:p> </text:list-item> </text:list> <text:list-item> <text:p>D</text:p> <text:list></pre>	<pre><text:numbered-paragraph text:level="1" text:style-name="L1" text:continue-numbering="false"/> <text:p>A</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="2" text:style-name="L1" text:continue-numbering="true"/> <text:p>B</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="2" text:style-name="L1" text:continue-numbering="true"/> <text:p>C</text:p> </text:numbered-paragraph></pre>

Sample 2	<i>text:list</i>	<i>text:numbered paragraph</i>
	<pre> <text:list-item> <text:p>E</text:p> </text:list-item> <text:list-item> <text:p>F</text:p> </text:list-item> </text:list> </text:list-item> </text:list> </pre>	<pre> <text:numbered-paragraph text:level="1" text:style-name="L1" text:continue-numbering="true"/> <text:p>D</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="2" text:style-name="L1" text:continue-numbering="true"/> <text:p>E</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="2" text:style-name="L1" text:continue-numbering="true"/> <text:p>F</text:p> </text:numbered-paragraph> </pre>

Sample 3	<i>text:list</i>	<i>text:numbered paragraph</i>
<pre> 1.A 1.B 2.C 1.D 1.E 2.F </pre>	<pre> <text:list text:style-name="L1"> <text:list-item> <text:p>A</text:p> </text:list-item> <text:list-item> <text:p>B</text:p> </text:list-item> <text:list-item> <text:p>C</text:p> </text:list-item> </text:list> <text:list text:style-name="L1"> <text:list-item> <text:p>D</text:p> <text:list-item> <text:list-item> <text:p>E</text:p> </text:list-item> <text:list-item> <text:p>F</text:p> </text:list-item> </text:list-item> </text:list> </pre>	<pre> <text:numbered-paragraph text:level="1" text:style-name="L1" text:continue-numbering="false"/> <text:p>A</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="2" text:style-name="L1" text:continue-numbering="false"/> <text:p>B</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="2" text:style-name="L1" text:continue-numbering="true"/> <text:p>C</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="1" text:style-name="L1" text:continue-numbering="false"/> <text:p>D</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="2" text:style-name="L1" text:continue-numbering="false"/> </pre>

<i>Sample 3</i>	<i>text:list</i>	<i>text:numbered paragraph</i>
	<pre> </text:list> </text:list-item> </text:list> </pre>	<pre> <text:p>E</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="2" text:style-name="L1" text:continue-numbering="true"/> <text:p>F</text:p> </text:numbered-paragraph> </pre>

<i>Sample 4</i>	<i>text:list</i>	<i>text:numbered paragraph</i>
1.A B 2.C	<pre> <text:list text:style-name="L1"> <text:list-item> <text:p>A</text:p> <text:p>B</text:p> </text:list-item> <text:list-item> <text:p>C</text:p> </text:list-item> </text:list> -- OR -- <text:list text:style-name="L1"> <text:list-item> <text:p>A</text:p> </text:list-item> <text:list-header> <text:p>B</text:p> </text:list-header> <text:list-item> <text:p>C</text:p> </text:list-item> </text:list> -- OR -- <text:list text:style-name="L1"> <text:list-item> <text:p>A</text:p> </text:list-item> </text:list> </pre>	<pre> <text:numbered-paragraph text:level="1" text:style-name="L1" text:continue-numbering="false"/> <text:p>A</text:p> </text:numbered-paragraph> <text:p text:style-name="Paragraph style derived from numbering style L1 (indent, etc.)">B</text:p> <text:numbered-paragraph text:level="1" text:style-name="L1" text:continue-numbering="true"/> <text:p>C</text:p> </text:numbered-paragraph> </pre>

<i>Sample 4</i>	<i>text:list</i>	<i>text:numbered paragraph</i>
	<pre><text:p text:style-name="...">B</text:p> <text:list text:style-name="L1" text:continue-numbering="true"> <text:list-item> <text:p>C</text:p> </text:list-item> </text:list></pre>	

Remark:

Here the text:list-header structural information is lost when converting from text:list to text:numbered-paragraph. So converting from text:numbered-paragraph to text:list may require heuristics which map paragraphs to text:list-header based on paragraph formatting properties.

Alternatively we could introduce a text:non-numbered-paragraph or and additional attribute...

<i>Sample 5</i>	<i>text:list</i>	<i>text:numbered paragraph</i>
1.A 2.B 3.C I.D II.E 4.F 5.G I.H II.I	<pre><text:list text:style-name="L1"> <text:list-item> <text:p>A</text:p> </text:list-item> <text:list-item> <text:p>B</text:p> </text:list-item> <text:list-item> <text:p>C</text:p> </text:list-item> </text:list> <text:list text:style-name="L2"> <text:list-item> <text:p>D</text:p> </text:list-item> <text:list-item> <text:p>E</text:p> </text:list-item> </text:list> <text:list text:style-name="L1" text:continue-numbering="true"> <text:list-item> <text:p>F</text:p> </text:list-item> <text:list-item></pre>	<pre><text:numbered-paragraph text:level="1" text:style-name="L1" text:continue-numbering="false"/> <text:p>A</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="1" text:style-name="L1" text:continue-numbering="true"/> <text:p>B</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="1" text:style-name="L1" text:continue-numbering="true"/> <text:p>C</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="1" text:style-name="L2" text:continue-numbering="false"/> <text:p>D</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="1" text:style-name="L2" text:continue-numbering="true"/> <text:p>E</text:p> </text:numbered-paragraph></pre>

<i>Sample 5</i>	<i>text:list</i>	<i>text:numbered paragraph</i>
	<pre> <text:p>G</text:p> </text:list-item> </text:list> <text:list text:style-name="L2"> <text:list-item> <text:p>H</text:p> </text:list-item> <text:list-item> <text:p>I</text:p> </text:list-item> </text:list> </pre>	<pre> <text:numbered-paragraph text:level="1" text:style-name="L1" text:continue-numbering="true"/> <text:p>F</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="1" text:style-name="L1" text:continue-numbering="true"/> <text:p>G</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="1" text:style-name="L2" text:continue-numbering="false"/> <text:p>H</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="1" text:style-name="L2" text:continue-numbering="true"/> <text:p>I</text:p> </text:numbered-paragraph> </pre>
<p>Remark: Is this correct?</p>		

Example which illustrate the need for the text:list-style-override enhancement

<i>Sample 6</i>	<i>text:list</i>	<i>text:numbered paragraph</i>
<p>1.A 1.B ii.C 3.D</p>	<pre> <text:list text:style-name="L1"> <text:list-item> <text:p>A</text:p> </text:list-item> <text:list-item> <text:p>B</text:p> </text:list-item> <text:list text:continue-numbering="true" text:style-name="L2"> <text:p>C</text:p> </text:list-item> </text:list> </pre>	<pre> <text:numbered-paragraph text:level="1" text:style-name="L1" text:continue-numbering="false"/> <text:p>A</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="2" text:style-name="L1" text:continue-numbering="true"/> <text:p>B</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="2" text:style-name="L2" text:continue-numbering="true"/> <text:p>C</text:p> </text:numbered-paragraph> </pre>

<i>Sample 6</i>	<i>text:list</i>	<i>text:numbered paragraph</i>
	<pre><text:list-item> <text:list text:continue-numbering="true"> <text:p>D</text:p> </text:list-item> </text:list> </text:list-item> </text:list></pre>	<pre>text:style-name="L1" text:continue-numbering="true" text:list-style-override="L2"/> <text:p>C</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="1" text:style-name="L1" text:continue-numbering="true"/> <text:p>D</text:p> </text:numbered-paragraph></pre>

Remark:

Here the new attribute text:list-style-override="L2" had to be applied, since the "text:style-name="L1" is needed to associate the numbered-paragraph with the correct list (ie. numbering domain / counter domain).

<i>Sample 7</i>	<i>text:list</i>	<i>text:numbered paragraph</i>
<p>1.A 2.B III.C IV.D 5. E 6. F</p>	<pre><text:list text:style-name="L1"> <text:list-item> <text:p>A</text:p> </text:list-item> <text:list-item> <text:p>B</text:p> </text:list-item> </text:list> <text:list text:style-name="L1" text:continue-numbering="true" text:list-style-override="L2"> <text:list-item> <text:p>C</text:p> </text:list-item> <text:list-item> <text:p>E</text:p> </text:list-item> </text:list> <text:list text:style-name="L1" text:continue-numbering="true"> <text:list-item> <text:p>E</text:p> </text:list-item> <text:list-item></pre>	<pre><text:numbered-paragraph text:level="1" text:style-name="L1" text:continue-numbering="false"/> <text:p>A</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="1" text:style-name="L1" text:continue-numbering="true"/> <text:p>B</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="1" text:style-name="L1" text:continue-numbering="true" text:list-style-override="L2"/> <text:p>C</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="1" text:style-name="L1" text:continue-numbering="true" text:list-style-override="L2"/> <text:p>D</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="1" text:style-name="L1"</pre>

<i>Sample 7</i>	<i>text:list</i>	<i>text:numbered paragraph</i>
	<pre data-bbox="373 212 695 293"><text:p>F</text:p> </text:list-item> </text:list></pre>	<pre data-bbox="1136 212 1755 444">text:continue-numbering="true"/> <text:p>E</text:p> </text:numbered-paragraph> <text:numbered-paragraph text:level="1" text:style-name="L1" text:continue-numbering="true"/> <text:p>F</text:p> </text:numbered-paragraph></pre>
<p>Remark: How do we represent lists of this form as “text:lists”? Possible solution: Introduce list-style-override at text:lists. In nested lists text:style-name and text:list-style-override are the same.</p>		

ODF Schema enhancement

```
<define name="text-list-attr" combine="interleave">
  <optional>
    <attribute name="text:list-style-override">
      <ref name="styleNameRef"/>
    </attribute>
  </optional>
</define>
```

Specifies an alternative formatting style, i.e. overrides the formatting style of the style given by text:style-name.

Why not list-id?

An alternative might be to introduce a list-id. However a list-id might have the following drawbacks:

- No backward compatibility: A reader which does not understand the text:list-style-override will still be able to correctly number all paragraphs. The only difference would be a different formatting. For example instead of 1. ii. 3. an old reader would generate 1. 2. 3.. Using a list-id approach would cause a serious backward compatibility break, since the reader would no longer be able to correctly generate the numbering.
- The association of list styles with a “counter domain” is usually sufficient. By using a style-override the style of the number formatting can be changed. Splitting this relationship between a list style and a “counter domain” would cause unneeded redundancy, since in the “normal” case the list-id and the style-name had to be emitted.
- By introducing a list-id the transformation between text:lists and text:numbered-paragraphs can be quite complicated. This would be a

burden for the implementation.

Appendix

List styles used in the examples:

```
<text:list-style style:name="L1">  
  <text:list-level-style-number text:level="1" style:num-suffix="." style:num-format="1">  
    <style:list-level-properties text:space-before="0.25in" text:min-label-width="0.25in"/>  
  </text:list-level-style-number>  
  <text:list-level-style-number text:level="2" style:num-suffix="." style:num-format="1">  
    <style:list-level-properties text:space-before="0.5in" text:min-label-width="0.25in"/>  
  </text:list-level-style-number>  
  ...  
</text:list-style>
```

and

```
<text:list-style style:name="L2">  
  <text:list-level-style-number text:level="1" style:num-suffix="." style:num-format="I">  
    <style:list-level-properties text:space-before="0.25in" text:min-label-width="0.25in"/>  
  </text:list-level-style-number>  
  <text:list-level-style-number text:level="2" style:num-suffix="." style:num-format="i">  
    <style:list-level-properties text:space-before="0.5in" text:min-label-width="0.25in"/>  
  </text:list-level-style-number>  
  ...  
</text:list-style>
```