

This document captures two further cases of multiple text changes raised by Patrick Durusau in his e-mail on 13 June 2012 and Robin LaFontaine in his e-mail on 18 June 2012.

Case 1

The markup shown here assumes that the replacement of the original text with the modified occurs as a single action. This is reflected in the multiple sub-changes within a single *text:changed-region*, indexed via *ct:sub-id*. An implementation might also choose to make these entirely separate actions with separate *text:changed-regions*.

Example document content:

(nothing)

→

This is the original paragraph, created with change tracking on so seen as an added paragraph.

→

This is the ~~original~~second version of the paragraph, created with change tracking on so seen as ~~an~~added~~a~~modified paragraph.

Starting markup:

```
<text:p></text:p>
```

Interim markup:

```
<text:p>This is the original  
paragraph, created with change  
tracking on so seen as an added  
paragraph.</text:p>
```

Ending markup:

```
<text:p>This is the second version of the  
paragraph, created with change tracking  
on so seen as a modified  
paragraph.</text:p>
```

Change-tracked markup (after first change):

```
<text:tracked-changes>  
  <text:changed-region text:id="1">  
    <text:insertion>  
      <office:change-info> ... </office:change-info>  
    </text:insertion>  
  </text:changed-region>  
</text:tracked-changes>  
<text:p>  
  <text:change-start text:change-id="1"/>This is the original paragraph, created with change  
tracking on so seen as an added paragraph.  
  <text:change-end text:change-id="1"/>  
</text:p>
```

Change-tracked markup (after second change):

```
<text:tracked-changes>  
  <text:changed-region text:id="1">  
    <text:insertion>  
      <office:change-info> ... </office:change-info>  
    </text:insertion>  
  </text:changed-region>  
  <text:changed-region text:id="2">
```

```

<text:insertion ct:id="1">
  <office:change-info> ... </office:change-info>
</text:insertion>
<text:deletion ct:id="2">
  <office:change-info> ... </office:change-info>
  <text:p>original </text:p>
</text:deletion>
</text:changed-region>
<text:changed-region text:id="3">
  <text:insertion ct:id="1">
    <office:change-info> ... </office:change-info>
  </text:insertion>
  <text:deletion ct:id="2">
    <office:change-info> ... </office:change-info>
    <text:p>an added </text:p>
  </text:deletion>
</text:changed-region>
</text:tracked-changes>
<text:p>
  <text:change-start text:change-id="1"/>This is the
  <text:change text:change-id="2" ct:sub-id="2"/>
  <text:change-start text:change-id="2" ct:sub-id="1"/>second version of the
  <text:change-end text:change-id="2" ct:sub-id="1"/>paragraph, created with change tracking on
so seen as
  <text:change text:change-id="3" ct:sub-id="2"/>
  <text:change-start text:change-id="3" ct:sub-id="1"/>a modified
  <text:change-end text:change-id="3" ct:sub-id="1"/>paragraph.
  <text:change-end text:change-id="1"/>
</text:p>

```

Case 2

This case is effectively the same as the first if the implementation chooses to record new markup for each change, even if a change overlaps an existing change made by the same author. If the implementation chooses to collapse such overlapping changes by the same author, the document could be reduced such that the tracked changed markup for the end of the sentence reflects only the insertion of “, which is further modified”.

Example document content:

This is the original paragraph, created with change tracking on so seen as an added paragraph.

→

This is the original paragraph, created with change tracking on so seen as an added paragraph, which is then modified.

→

This is the ~~original~~modified paragraph, created with change tracking on so seen as an added paragraph, which is ~~then~~further modified.

Starting markup:

```
<text:p> This is the original
paragraph, created with change
```

Interim markup:

```
<text:p>This is the original
paragraph, created with change
```

Ending markup:

```
<text:p>This is the modified
paragraph, created with change
```

tracking on so seen as an added paragraph.</text:p>

tracking on so seen as an added paragraph, which is then modified.</text:p>

tracking on so seen as an added paragraph, which is further modified.</text:p>

Change-tracked markup (after first change):

```
<text:tracked-changes>
  <text:changed-region text:id="1">
    <text:insertion>
      <office:change-info> ... </office:change-info>
    </text:insertion>
  </text:changed-region>
  <text:changed-region text:id="2">
    <text:insertion>
      <office:change-info> ... </office:change-info>
    </text:insertion>
  </text:changed-region>
</text:tracked-changes>
<text:p>
  <text:change-start text:change-id="1"/>This is the original paragraph, created with change
tracking on so seen as an added paragraph
  <text:change-start text:change-id="2"/>, which is then modified
  <text:change-end text:change-id="2"/>.
  <text:change-end text:change-id="1"/>
</text:p>
```

Change-tracked markup (after second change):

```
<text:tracked-changes>
  <text:changed-region text:id="1">
    <text:insertion>
      <office:change-info> ... </office:change-info>
    </text:insertion>
  </text:changed-region>
  <text:changed-region text:id="2">
    <text:insertion>
      <office:change-info> ... </office:change-info>
    </text:insertion>
  </text:changed-region>
  <text:changed-region text:id="3">
    <text:insertion ct:id="1">
      <office:change-info> ... </office:change-info>
    </text:insertion>
    <text:deletion ct:id="2">
      <office:change-info> ... </office:change-info>
      <text:p>original </text:p>
    </text:deletion>
  </text:changed-region>
  <text:changed-region text:id="4">
    <text:insertion ct:id="1">
      <office:change-info> ... </office:change-info>
    </text:insertion>
    <text:deletion ct:id="2">
      <office:change-info> ... </office:change-info>
      <text:p>then </text:p>
    </text:deletion>
  </text:changed-region>
</text:tracked-changes>
```

```
        </text:deletion>
    </text:changed-region>
</text:tracked-changes>
<text:p>
    <text:change-start text:change-id="1"/>This is the
    <text:change text:change-id="3" ct:sub-id="2"/>
    <text:change-start text:change-id="3" ct:sub-id="1"/>modified
    <text:change-end text:change-id="3"/>paragraph, created with change tracking on so seen as an
added paragraph
    <text:change-start text:change-id="2"/>, which is
    <text:change text:change-id="4" ct:sub-id="2"/>
    <text:change-start text:change-id="4" ct:sub-id="1"/>further
    <text:change-end text:change-id="4"/>modified
    <text:change-end text:change-id="2"/>.
    <text:change-end text:change-id="1"/>
</text:p>
```