

# Layout-true Representation of OOXML Documents: Use Case 5.1

## **Assignment**

Originally, the Use Case 5.1 was supposed to be about embedding fonts in OOXML for Windows. Nevertheless, SUSE has already delivered that work in Use Case 3 (report available upon request) after having finished all the Use Case 3 tasks, and having agreed to spend the remaining time that way.

Consequently, SUSE agreed with OSBA to continue other tasks that were left unfinished as part of the Use Cases 1 and 2. To be specific:

### ***Use Case 1:***

- Add support for gradient background in frames to LO
  - Implement rendering of gradients
  - Preserve gradients on docx export
  - Preserve gradients on ODT export (optional, not in spec)
  - UI to edit/create gradients (optional, not in spec)
- Correctly import drop shadow borders
  - Preserve on export

### ***Use Case 2:***

- Bottom external padding of a table is not correct
- Rotate text is not rendered correctly
- Rotated text is not aligned correctly
- Add table styles support to LibreOffice

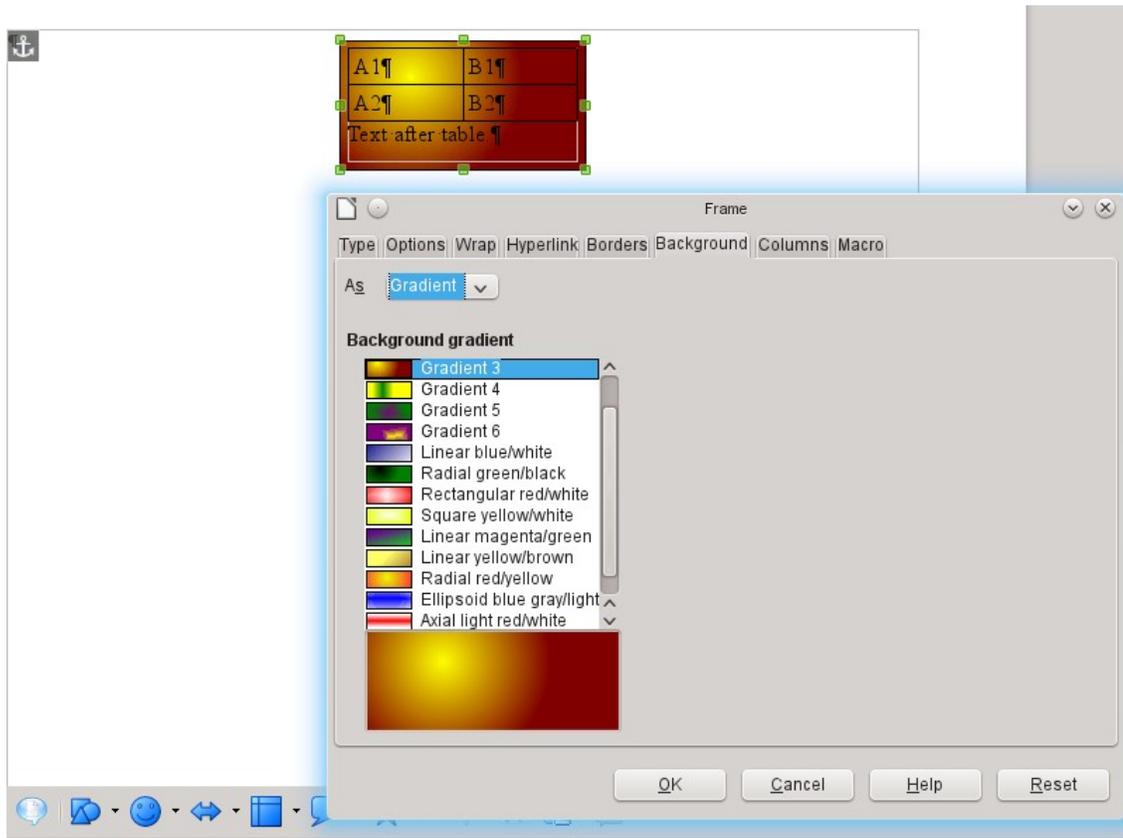
## Work Description

Support for gradient background in text frames and support for table styles were larger features, the rest was mostly bugfixing.

### Gradient background in frames

Until now, when the user created a rectangle or text frame in Writer, she had two choices. She could use the draw toolbar to create a drawinglayer rectangle, or she could insert a text frame. The former type is shared between the LibreOffice applications, and it already supports having not only a bitmap or a color but also a gradient or a hatch as a background; but the latter cannot do that. On the other hand, the benefit of the latter (the text frame) is that they can contain anything a normal Writer document can — like columns, tables, etc. These features are not supported by the drawinglayer rectangles.

So till now you had to decide what to pick, but it wasn't possible to have both; worse, during import of docx it was necessary to use the latter – the text frames – in order to maintain compatibility. We have implemented the support for gradients in the text frames, including the user interface for this feature:

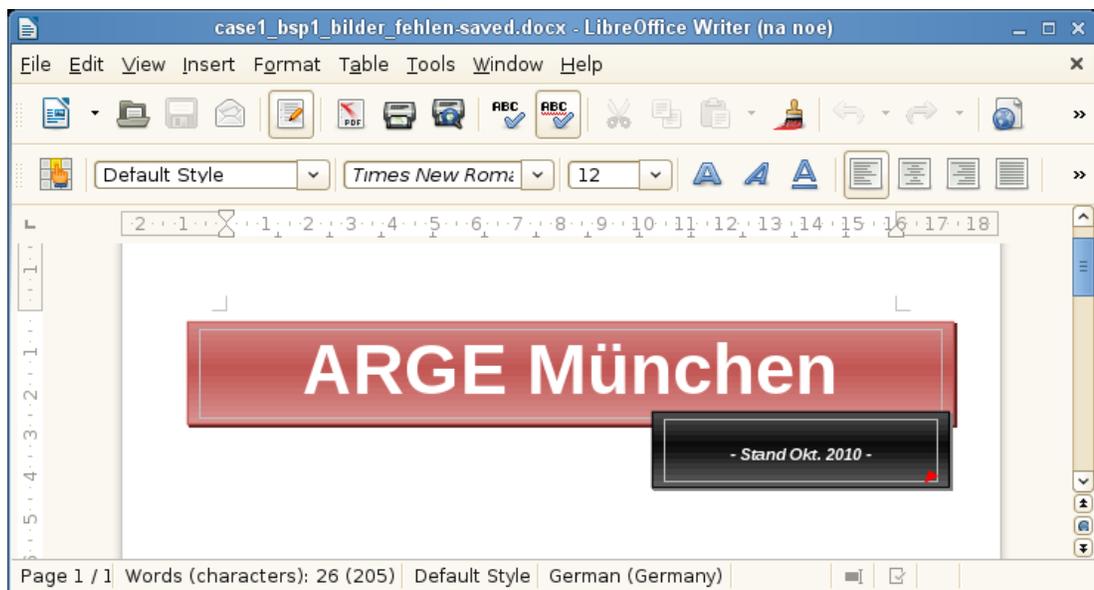


### Drop shadow borders

This turned out to be a missing implementation of VML export of the affected shapes. Import was not ideal either, so we fixed both – added the missing pieces in import, and implemented the export of text frames as VML rectangles, including:

- position and size
- background color
- frame color and width
- shadow color, width and offset

Please see the result after having fixed the remaining import issues, and implementing export:

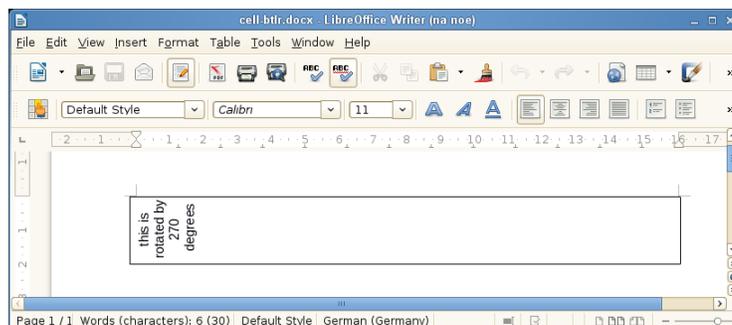


### Bottom external padding of a table is not correct

This has been fixed by the other contracting company working on the tender before we got to fixing this; we only helped to get the work to the LibreOffice repository.

### Rotate text is not rendered correctly & Rotated text is not aligned correctly

We fixed the related issues both in the import filter, as well as in the application itself, so that now the rotated text is handled correctly:



**Add table styles support to LibreOffice**

We have spent 16 mandays fixing and implementing the above mentioned features; adding table styles support was the last missing item. Unfortunately, it is impossible to implement it in the remaining 7 mandays, and we expect that half-implementation would not be sufficient to fulfill the needs of the tender.

We are eager to do the work if additional funding of about 8 mandays is found, to have a total of 15 mandays to implement this feature in the Writer core, create the user interface for that, and implement OOXML and ODF import and export of the table styles.

**Conclusion**

In 16 mandays, we have implemented a larger missing feature (gradient support for text frames), and fixed many issues that dramatically improved the fidelity of the DOCX import and export. Unfortunately we were unable to use the entire 23 days, as the last item was a large missing feature – table styles support.

We are happy to implement the table styles support if additional funding of 8 mandays (to have 15 mandays total to implement it) is found – it would be a really important improvement.

All the delivered code is committed to the LibreOffice repository, please see Appendix A for a complete list.

## Appendix A

<http://cgit.freedesktop.org/libreoffice/core/commit/?id=f4483d31f33aca78afbd719e58db5d8a097411dd>  
<http://cgit.freedesktop.org/libreoffice/core/commit/?id=88ebaff73533fdbbd7ecbf24a0e892f411c577a0>  
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