



LibreOffice
Conference 2021

Multi-column support in LibreOffice 7.2

The new feature, its relevance, implementation status, and so on ...

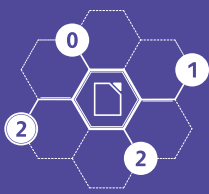
By Mike Kaganski

Software engineer



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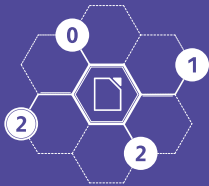
mike.kaganski@collabora.com



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What Collabora Productivity is

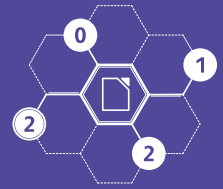
“We are part of a global consultancy, specializing in delivering the benefits of Open Source software to the commercial world. We drive LibreOffice-technology to the enterprise, education and administrations. We are the driving force behind putting it in the cloud as Collabora Online.”



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What Collabora Productivity is

- Focused on office productivity and LibreOffice-technology for enterprise and education
- Driving force behind putting LibreOffice in the cloud as Collabora Online
- Make Open Source rock
- Re-invest your support into FLOSS software including LibreOffice
- More than 30 staff members and 8 years old
- Part of Collabora: a global consultancy with 15+ year dedication to open source



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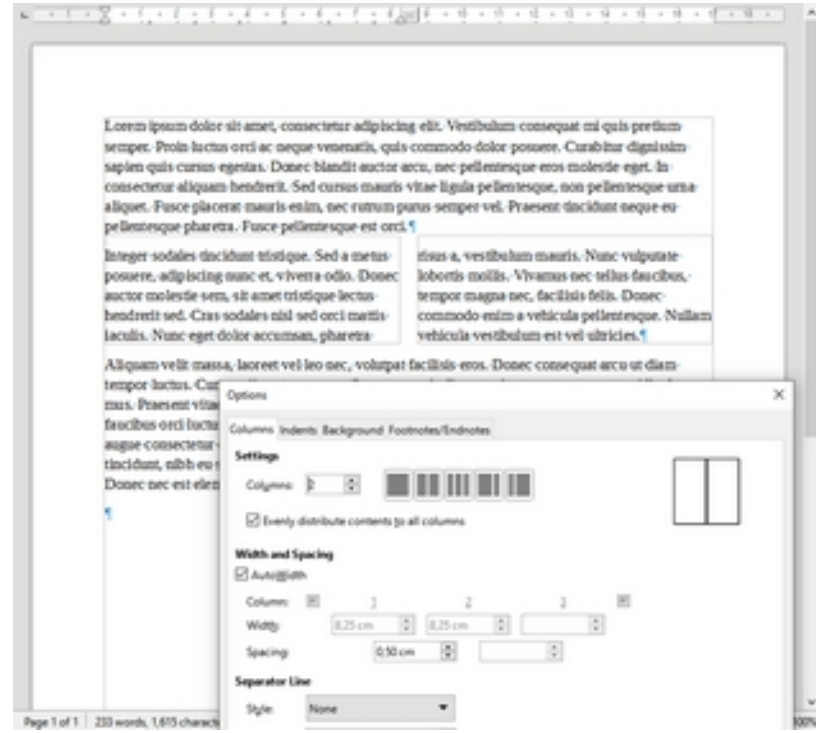
Status prior to LibreOffice 7.2

Status prior to LibreOffice 7.2

Writer has multicolumn layout for ages

- E.g., in page styles, sections, frames
- Great feature, with large user base
- But not in textboxes ...
- Because it was implemented only for sw

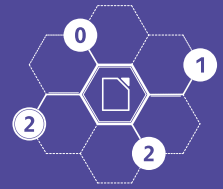
Status prior to LibreOffice 7.2



Status prior to LibreOffice 7.2

Other modules had no multi-column support

- Why?
 - They use editengine for layout
- Do they need it?



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The need

The need

It is natural to expect it at least in Impress

I need a two-column layout

- with natural text workflow
- with automatic scaling to fit the box
- with convenient configuration interface

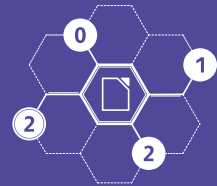
No luck before 7.2

- I only can fake this using several boxes, or maybe tables
- And do all the layout manually
- And have to re-arrange text by hand when editing ...

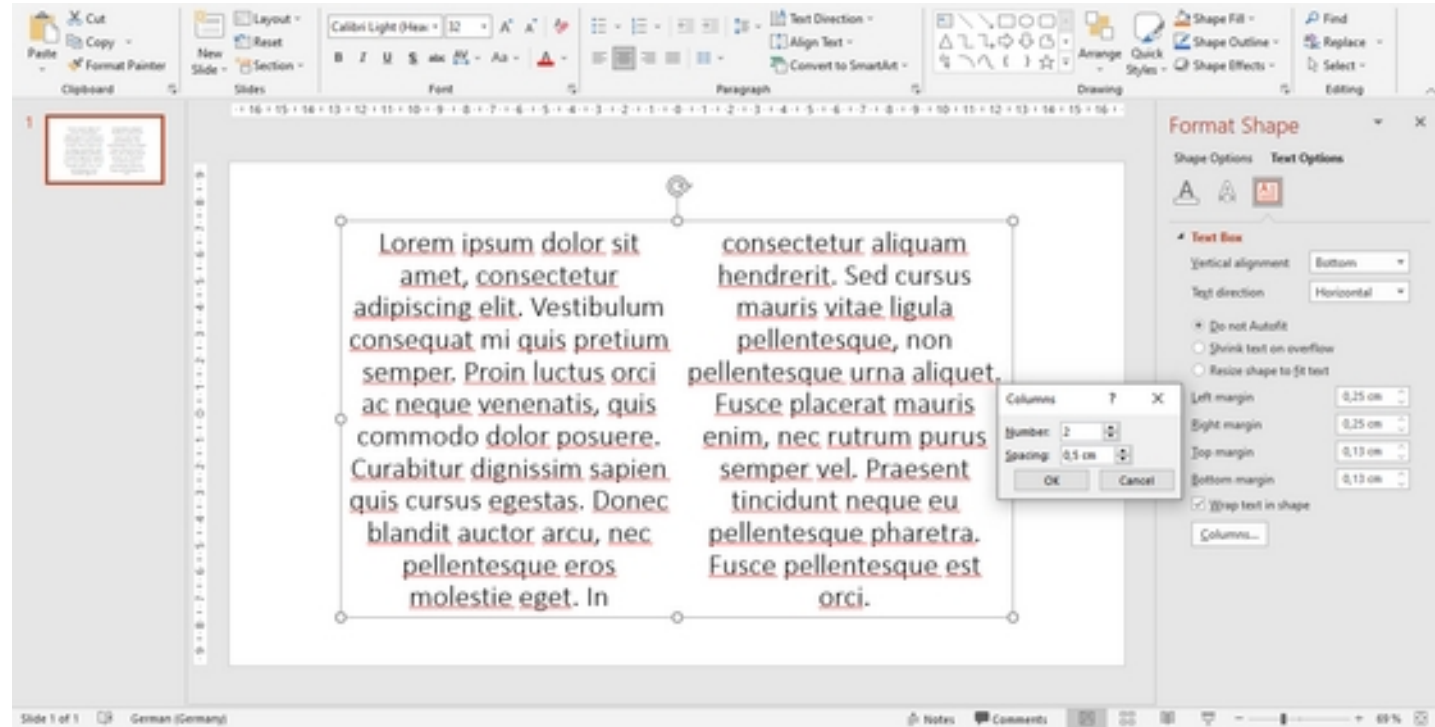
The need

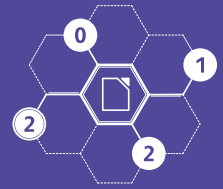
Compatibility is important!

- Other popular office suites provide multi-column layout in presentations
 - And we need to provide import fidelity



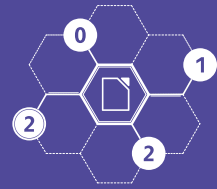
The need





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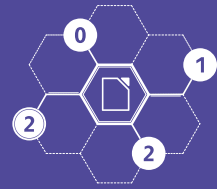
The change



The change begins ...

Thanks to SUSE for helping us make it possible!

- Support from commercial customers is the key to success
- SUSE is our long-term valued customer



Analysis

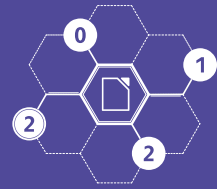
Do we need to extend ODF for this?

- Luckily no
 - `style:columns` element is the natural child of `style:graphic-properties` ...
- So implementing this improves our ODF compliance :)

Analysis

Do we need the full feature set that Writer has?

- Not (yet)
 - It's enough to have a compatible feature subset at the first stage
 - And if needed, it may be extended later ...



The change

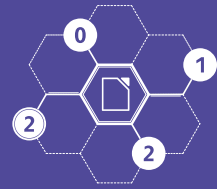
Code reuse is so nice!

- We have been able to reuse existing implementation from Writer to a large extent, with minimal disruptive changes in Writer itself!
 - Model + ODF/OOXML support

The change

Robust layout algorithm

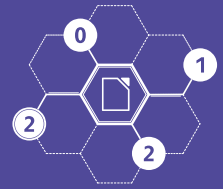
- Created from scratch for editengine
- Necessarily iterative
- Made sure to prevent infinite loops



The change

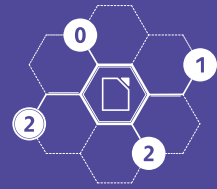
Commits tagged “editengine-columns”

- <https://gerrit.libreoffice.org/c/core/+/116034>
- <https://gerrit.libreoffice.org/c/core/+/116035>
- <https://gerrit.libreoffice.org/c/core/+/116038>
- <https://gerrit.libreoffice.org/c/core/+/116738>
- <https://gerrit.libreoffice.org/c/core/+/117389>
- <https://gerrit.libreoffice.org/c/core/+/118705>
- ...



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The result



The result

**And now I can use the multicolumn layout.
Right here!**

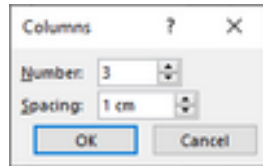
I can write this
text, and have it
automatically
distributed

across the three
columns,
providing the
ease of use that

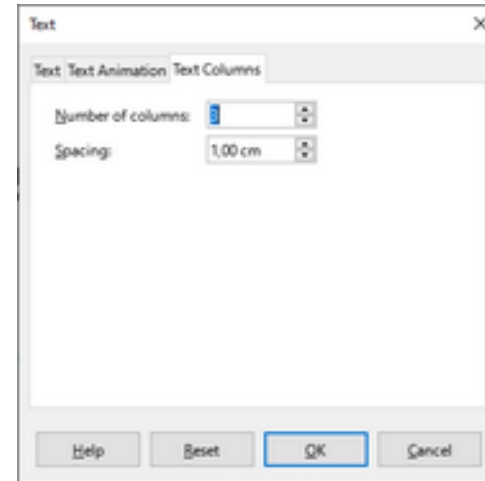
was so much
needed by
everyone
affected! :)

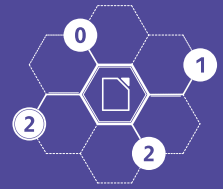
The result

Options are very simple, yet compatible



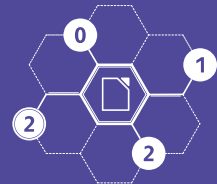
VS





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What's left



What's left

Compatibility is *really* important!

- tdf#140022
 - Allows to have non-even text distribution in “fit-to-text” boxes
 - Need to change editengine initialization ...



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Thanks !

By Mike Kaganski

Software engineer



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