

Typographers' Inn

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When is a float not a float?

Most newcomers to structured documents learn early on that tables and figures may *float* when formatted. If there turns out to be no space at the point where they were entered in the source, they will be moved to the next place with space available. While this is occasionally an annoyance, there are many things an author or editor can do to persuade L^AT_EX to position the float differently.

Experienced users will probably be aware of the `float` package, which (among lots of other useful things) provides the positional parameter `[H]`, meaning that the float must occur right ‘Here’ and nowhere else. Except when ‘Here’ is too close to the bottom of the page for the float to fit, in which case it floats to the next page.¹

The `float` package does this by making the float not-a-float; that is, it temporarily bypasses L^AT_EX’s floating mechanism (with suitable warnings about the numbering sequence becoming fragile).

All well and good, but a user on the Discord T_EX server had an uncommon request for modifying a float’s *horizontal* placement, not its vertical. In essence, if a float ends up being positioned inside a list (i.e., between items, or between paragraphs of an extended item), *and* the float’s content was narrower than the `\textwidth`, *and* was specified as centered, could the content and the caption be shifted rightwards so that it all appeared to be centered with respect to the margins of the *list*, not the margins of the page. Floats are normally set full width, so any centering inside the float is by default between the left and right *page* margins.

Figure 1 shows an example done manually by prefixing a `\hspace*{\leftmargin}` to the second image. While this appeared to solve the immediate problem for the user, it was clear that providing a centered caption in this circumstance would need much more work, especially as the default positioning for L^AT_EX captions depends on the quantity of text, with shorter ones being centered and longer ones being set full out. The `float` package provides for the creation of new classes of float, but they are expected to follow the full-width principle of existing ones.

More importantly, however, particularly from a page design point of view, it does not look (to me at

¹ I do wonder if putting such ‘floats’ *in situ* and forcing them to overhang the bottom of the page and bleed off the edge of the paper might be an educational tool for users unfamiliar with the limitations of page-based formatting.

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Example of float content (Fig.2) being shifted right for optical centering inside a list (Fig.1 outside the list provided for reference).



Figure 1: Float in normal position

1. Suspensisse vitae elit. Aliquam arcu neque, ornare in, ullamcorper quis, commodo eu, libero. Fusce sagittis erat at erat tristique mollis. Maecenas sapien libero, molestie et, lobortis in, sodales eget, dui. Morbi ultrices rutrum lorem. Nam elementum ullamcorper leo. Morbi dui. Aliquam sagittis. Nunc placerat. Pellentesque tristique sodales est. Maecenas imperdiet lacinia velit. Cras non urna. Morbi eros pede, suscipit ac, varius vel, egestas non, eros. Praesent malesuada, diam id pretium elementum, eros sem dictum tortor, vel consectetur odio sem sed wisi.



Figure 2: Float shifted right by `\leftmargin`

2. Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec

Figure 1: Example of float content being shifted right for optical centering inside a list (first figure outside the list provided for reference)

least) like a good idea potentially to have a figure in the normal position *and* a similar figure in the shifted position *on the same page*. In fact, it looks like an error.

A wide selection of positional modifications is available in the relevant packages listed in the CTAN topic page at ctan.org/topic/float, but none appear to address this specific adjustment.

I did post a naive question asking if anyone had ever encountered this format, but it was clear that the answer was no. However, there is a parallel in an Occasionally Asked Question about progressively indenting sections, subsections, and subsubsections — the whole sectional text, that is, not just the heading (see for example latex.org/forum/viewtopic.php?t=251). I have seen legislative documents done this way, with the text getting ever narrower as eager-beaver legislators desperate to see their contribution added to the law insert more and more subsubsubsubsubparagraphs.

Accessibility

I don't think anyone deliberately designs a document so that it can be read only by able-bodied white male adults with near-perfect visual acuity and a full attention span, but sometimes it certainly looks like it.

Good typographic accessibility should not be an afterthought, though. It widens your documents' appeal and market. It also helps to fulfil agreed standards of accessibility [4], which in some cases are a legal requirement, or at least regarded as a right of inclusion for those of us whose abilities and visual acuity is failing.

It may not lead you to nirvana, but it probably helps you look smarter, and in academic work it may make your documents easier for others to cite.

Many authors get no choice about accessibility because they are writing for a publisher who has a very highly-defined set of rules about what things must look like (which may or may not be accessible). But when you have the freedom to choose the typeface, set the margins, establish the spacing and indentation, and decide what your document looks like, there are some factors to consider [3, 4].

Legibility (perception) Can your text can be recognised as what it is: text? Factors are: font style, shape, weight, and size, line spacing, margins, indentation, and the distinction between components of the document (headings, paragraphs, lists, quotes, figures, tables, etc.).

Readability (cognition) Once it's legible, does your text make enough sense for your readers to understand you? Factors are: choice of words, length of sentences, length of paragraphs, page format or layout, ease of reference, document structure, consistency, and level of language.

Usability (application) Depending on the medium (print, online PDF, web page, audiobook, Braille, etc.); can your readers find their way through your documents, and will they keep working even when the underlying technology changes?

We have probably not paid as much attention to these matters in typographic terms in the past as we should have, but some governments, universities, and companies are now providing rules and guidance (e.g., W3C WCAG, US Section 508, EU EAA and EN 301 549, UK Digital Accessibility [1])

Afterthought: Finding that font

Like most users, I suspect, I occasionally need to identify a font that I have been asked to use. It could be new or old, popular or rare, but one I haven't come across before.

If I think I know where it came from, there are collections of font catalogs online from the days of metal type; if not, a check through the L^AT_EX Font Catalogue [2] is sometimes enough to identify it, or something very close; but otherwise I turn to one of the many online image-matching services for font identification such as Monotype's *What The Font?* where you upload an image of the font you want.

These used to be fairly accurate, but recently they have been polluted by the use of AI. This looks like a panic-stricken attempt by Marketing to ensure that they never return a null result, but instead provide an endless stream of type designs which bear not the slightest similarity to the image you uploaded. This is a pity, because these sites provided a useful tool, and I have over the years spent a considerable sum on commercial typefaces which were required for specific jobs.

Maybe there is scope for the L^AT_EX Font Catalogue to add a 'matching' function and a more extensive set of categorizations. As L^AT_EX (that is, X_YL^AT_EX and LuaL^AT_EX) can use OTF and TTF fonts, there could be a mechanism for recommendations to be checked, and added with links to their source download sites.

References

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