Microstructure Documentation

`microstructure` is a document class for the XeLaTeX typesetting software system. It aims to provide a well-defined and consistent visual and typographical style, as a print-oriented adaptation of the graphical style of the DistressNetwork° website.[1] This document describes its defined features, usage, and annotated implementation.

Class Options

debug   Prints a ½-unit (1⁄12 in) square grid on every page of output, for monitoring the positioning of document elements.

fleqn   Aligns math block elements to the left, as in the `article` class.

nohf   Suppresses page header and footer generation.

Commands

- Preamble: `\author{}` defines the author name in the page header.

Inline Elements

Command	Output/Description
`\bold{}`	**Bold Weight**
`\italic{}`	*Italic Style*
`\sout{}`	~~Strikethrough~~
`\mono{}`	`Monospace Font`
`\inmath{}`	Inline Math
`\link{}{}`	**Link**↗
`\footnote{}`	Footnote Reference
`\case`	Enable Case-Sensitive Forms

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[1] DistressNetwork. "Style Template." `https://distress.network/meta/styletest`.

Block Elements

Command	Output/Description
`\section{}`	Header Level One
`\subsection{}`	Header Level Two
`\subsubsection{}`	Header Level Three
`\hr`	Horizontal Rule
`\inputblock{}`	Code block from external file
`\inputblockenum{}`	Code block from external file with line numbering
`\reset, (\resetv{})`	Reset baseline grid alignment (with vertical offset height)

Environments

itemize	Unordered list (three levels)
enumerate	Ordered list (three levels)
description	Description list (arbitrary levels)
codeblock	Verbatim code block
codeblockenum	Verbatim code block with line numbering
math	Math mode alignment block, equivalent to `amsmath`'s `align*`

Tables

The `table` environment's column specification parameter has two defined symbols: 'x' for left-aligned paragraphs, and 'X' for justified paragraphs. Horizontal separators should be specified using `\cline{}` rather than `\hline`.

Figures

The `figure` environment may contain one or more instances of `\includegraphics{}` and zero or more instances of `\caption{}`.

Usage Notes

Dependencies

- The XeLaTeX typesetting software system
- The following typefaces:
  - Neue Haas Grotesk Display
  - Neue Haas Grotesk Text
  - JetBrains Mono
- The following packages which are included in the `texlive` distribution:
  - `amsmath, amssymb, datetime2, enumitem, eso-pic, fancyhdr, footmisc, geometry, graphicx, hyperref, lastpage, listings, mathspec, microtype, realscripts, returntogrid, tabularx, tikz, ulem`

Grid Alignment

The positioning and spacing of all document elements are strictly defined in terms of a length of ⅙ of an inch, referred to internally as the *unit*. Document elements are to remain aligned with an implicit ½-unit grid spanning the entire page. In order to ensure that this alignment is preserved surrounding elements of variable height, it is possible to issue a `\reset` command immediately preceding paragraphs or block elements to be realigned. It is recommended to temporarily enable the `debug` class option in order to verify consistent alignment during the document preparation process.

Caveats

- Correct realignment of document elements via the `\reset` command may require multiple recompilations.
- Correct typesetting of page numbers and the debug grid may require multiple re-compilations.
- Grid alignments of tables are not well-defined and must be corrected manually.

Implementation

(In progress.)