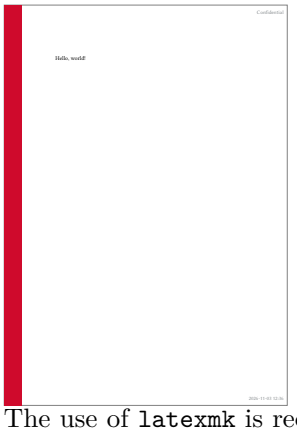
LaTeX Class `huawei`*

Yegor Bugayenko
yegor256@gmail.com

2026-11-03, 0.20.0

1 Introduction

The class `huawei` facilitates the preparation of work documents and presentations, while keeping the source concise and the style sufficiently refined for both managerial and technical papers. The class is invoked by naming it in the preamble:




```
\documentclass{huawei}
\begin{document}
Hello, world!
\end{document}
```

The use of `latexmk` is recommended for compiling `.tex` files into `.pdf`. The simplest configuration requires a small number of files alongside the `.tex` file, within the same directory ("story" here serves as the project name):

```
story\
  .latexmkrc
  .gitignore
  story.tex
```

The contents of the `.latexmkrc` file would be as follows:

```
$pdflatex = 'pdflatex %O --shell-escape %S';
```

The `.gitignore` file should list every file produced by `pdflatex` during compilation. Such artefacts need not be committed to the repository, since they are temporary and are regenerated upon each compilation. To compile the document, the command `latexmk` suffices.

*The sources are in GitHub at yegor256/huawei.cls

2 Class Options

A number of class options, supplied in square brackets after `\documentclass`, permit fine adjustment of the document's layout. An option that neither the class nor any loaded package recognizes stops the compilation with an error:

`landscape` The `landscape` option sets the document in landscape orientation and adjusts the paper size to 16x9 inches (the default page size being A4), rendering it well-suited to presentations.

`dark` The `dark` option enables a dark layout, in which the page background is black and the text white.

`slides` The `slides` option enlarges all headers somewhat, on the assumption that the document is in landscape orientation and is to be presented as a slide deck.

`nocover` The `nocover` option, when present, suppresses the printing of cover images on the first page by the `\PrintTitlePage` command.

`anonymous` The `anonymous` option removes the author's name from every location, including the foot of the page, where it would otherwise stand alongside the name of the company.

`nobrand` The `nobrand` option suppresses any mention of the Huawei brand within the document and likewise removes the logo.

`nosecurity` The `nosecurity` option suppresses the security classification ordinarily printed at the upper right corner of the document and likewise hides the author's ID where it would otherwise appear.

`nodate` The `nodate` option suppresses the date and time at the foot of each page, where they are otherwise rendered in ISO 8601 format.

`nopaging` The `nopaging` option suppresses the page numbers at the foot of each page.

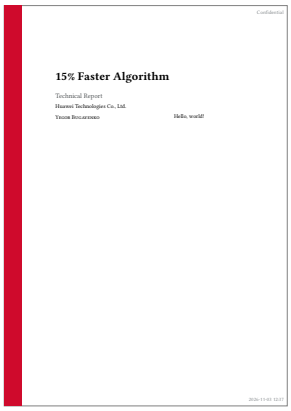
`authordraft` The `authordraft` option prints a large "it is a draft" message diagonally across each page.

`breaks` The `breaks` option compels every `\section` to begin on a new page.

`boring` The `boring` option sets the entire document in Helvetica, paints section titles in red, and draws a gray bar at the foot of each page, making the layout more compliant with the expectations of Huawei.

3 Preamble

Within the preamble, meta-information about the document may be supplied, such as the title or the author's name, in the following manner:




```
\documentclass{huawei}
\renewcommand*
  \thetitle{15\% Faster Algorithm}
\renewcommand*
  \thesubtitle{Technical Report}
\renewcommand*
  \theauthor{Yegor Bugayenko}
\begin{document}
\maketitle
Hello, world!
\end{document}
```

The use of `\renewcommand*` in lieu of `\renewcommand` is recommended, so that LaTeX may detect any inadvertent newline that should slip into the content.

The following meta commands are defined:

`\thetitle` `\thetitle` is the principal title of the document, employed both within the text and within the metadata of the PDF.

`\thesubtitle` `\thesubtitle` is the subtitle, printed beneath the title.

`\theauthor` `\theauthor` denotes the author of the document in "first-name last-name" format.

`\theid` `\theid` denotes the internal ID of the author, where applicable.

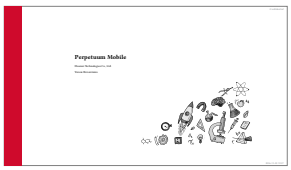
`\thesecurity` This denotes the security classification of the document, ordinarily printed at the upper right corner; typical values include "Internal," "Confidential," or "Secret."

The default values of `\thesubtitle` and `\theid` are empty; should they not be renewed within the document, nothing is printed in their place. The default value of `\thesecurity` is "Confidential," while `\thetitle` and `\theauthor` print their own names as a reminder to renew them.

4 Custom Commands

The following commands are available within the body of the document:

`\PrintFirstPage` The use of `\PrintFirstPage` is recommended for rendering the first page of a landscape document, for example a project charter. The sole argument denotes the name of an image to be rendered above the title. The argument may be left empty, whereupon no image is rendered there. A default image of agreeable appearance is rendered at the lower right corner, unless the `nocover` option is present:



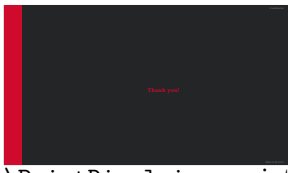

```
\documentclass[landscape]{huawei}
\renewcommand*
  \thetitle{Perpetuum Mobile}
\renewcommand*
  \theauthor{Yegor Bugayenko}
\begin{document}
\PrintFirstPage{}
\end{document}
```

`\PrintLastPage` `\PrintLastPage` prints the last page of a project charter or a similar landscape document:



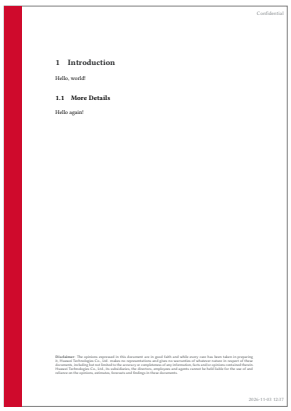

```
\documentclass[landscape]{huawei}
\begin{document}
\PrintLastPage{}
\end{document}
```

`\PrintThankYouPage` `\PrintThankYouPage` prints the final page with a "Thank You" message in the centre.




```
\documentclass[landscape,dark]{huawei}
\begin{document}
\PrintThankYouPage{}
\end{document}
```

`\PrintDisclaimer` `\PrintDisclaimer` prints a paragraph at the bottom of the page with a standard disclaimer:




```
\documentclass{huawei}
\begin{document}
\section{Introduction}
Hello, world!
\subsection{More Details}
Hello again!
\PrintDisclaimer
\end{document}
```

5 Best Practices

Authors are at liberty to design their documents as they see fit. Nevertheless, adherence to the conventions established for business and technical documents is convenient both for the author and for the reader.

The rule of thumb is simple: *abstain* from formatting the document. The class itself should be entrusted with this task. Content should merely be entered, without alteration of layout, addition of colours, modification of fonts, and the like. The less the look-and-feel is tampered with, the more favourably the document will be received by its readers.

5.1 Two Columns

Within landscape format, the use of two columns is recommended in the interest of readability. The following illustrates this:




```
\documentclass[landscape]{huawei}
\begin{document}
\newpage
\begin{multicols}{2}
\section*{First}
The first column content goes here.
\columnbreak
\section*{Second}
The second column content goes here.
\end{multicols}
\end{document}
```

5.2 Crumbs

Whenever a multitude of small pieces of information must be accommodated on a single page, the use of "crumbs" is recommended:




```
\documentclass{huawei}
\begin{document}
\newpage
\section*{Project Details}
\begin{multicols}{2}
\raggedright
\PrintCrumb{Budget}{\$100K}
\PrintCrumb{Duration}{5 months}
\end{multicols}
\end{document}
```

6 Implementation

First, we load the parent class:

```
\LoadClass[12pt]{article}
```

Then, we parse class options:

```
\RequirePackage{pgfopts}
\pgfkeys{
  /huawei/.cd,
  boring/.store in=\huawei@boring,
  breaks/.store in=\huawei@breaks,
  dark/.store in=\huawei@dark,
  slides/.store in=\huawei@slides,
  nosecurity/.store in=\huawei@nosecurity,
  authordraft/.store in=\huawei@authordraft,
  nobrand/.store in=\huawei@nobrand,
  nodate/.store in=\huawei@nodate,
  nocover/.store in=\huawei@nocover,
  nopaging/.store in=\huawei@nopaging,
  landscape/.store in=\huawei@landscape,
  anonymous/.store in=\huawei@anonymous,
}
\ProcessPgfPackageOptions{/huawei}
```

Then, we fail if any class option remains unused by both the class and the packages when the document begins, since it is most probably misspelled:

```
\AddToHook{begindocument/before}{%
  \ifx\@unusedoptionlist\@empty\else%
    \ClassError{huawei}{Unknown class option(s): \@unusedoptionlist}%
      {Check the spelling of the options given to \string\documentclass}%
  \fi%
}
```

Then, we make the sans-serif font the default for the entire document, if the `boring` document option is used:

```
\ifdefined\huawei@boring
  \RequirePackage[scaled]{helvet}
  \renewcommand\familydefault{\sfdefault}
\fi
```

Then, we configure `libertine` font, which replaces Helvetica with Biolinum in the `boring` mode:

```
\PassOptionsToPackage{tt=false,type1=true}{libertine}
\RequirePackage{libertine}
```

Then, we redefine `\section` command in order to break pages for each section, with the help of `titlesec` package:

```
\RequirePackage{titlesec}
\ifdefined\huawei@boring
  \def\huawei@sectioncolor{red}
\else
  \def\huawei@sectioncolor{black}
\fi
\makeatletter
\titleformat
  {\section}
  {\color{\huawei@sectioncolor}\ifdefined\huawei@breaks\clearpage\fi\normalfont\Large\bfserie
  {\color{\huawei@sectioncolor}\thesection}{1em}{}
\makeatother
```

Then, we set the size of the page:

```
\RequirePackage{geometry}
\makeatletter\ifdefined\huawei@landscape
  \ifdefined\huawei@boring
    \geometry{paperwidth=16in, paperheight=9in,
      left=3in, right=2.5in, top=1in, bottom=1.8in}
  \else
    \geometry{paperwidth=16in, paperheight=9in,
      left=4in, right=2in, top=1.5in, bottom=1.5in}
  \fi
\else
  \geometry{a4paper, left=1.5in, right=1in,
    top=1.2in, bottom=1.2in}
\fi\makeatother
```

Then, we set the size of the font:

```
\makeatletter\ifdefined\huawei@slides
  \RequirePackage[fontsize=24pt]{fontsize}
\fi\makeatother
```

Then, we configure the encodings:

```
\PassOptionsToPackage{T1}{fontenc}
\RequirePackage{fontenc}
\PassOptionsToPackage{utf8}{inputenc}
\RequirePackage{inputenc}
```

Then, we include a few important packages:

```
\RequirePackage{tabularx}
\RequirePackage{anyfontsize}
\RequirePackage{multicol}
\RequirePackage{ragged2e}
```

```
\RequirePackage{paralist}
\RequirePackage{makecell}
\RequirePackage{graphicx}
\RequirePackage{array}
\PassOptionsToPackage{abspath}{currfile}
\RequirePackage{currfile}
\RequirePackage{wrapfig}
\RequirePackage{tikz}
\RequirePackage{titling}
\RequirePackage{svg}
```

Then, we include `lastpage` package to enable total counting of pages:

```
\RequirePackage{lastpage}
```

Then, we configure `microtype`:

```
\RequirePackage{microtype}
\AddToHook{env/verbatim/begin}{\microtypesetup{protrusion=false}}
```

Then, we configure `footmisc`:

```
\PassOptionsToPackage{para}{footmisc}
\RequirePackage{footmisc}
\setlength{\footnotemargin}{2pt}
\setlength{\footnotesep}{2pt}
```

Then, we configure `enumitem`:

```
\PassOptionsToPackage{inline}{enumitem}
\RequirePackage{enumitem}
\setlist{nosep}
```

Then, we configure `textpos`:

```
\PassOptionsToPackage{absolute}{textpos}
\RequirePackage{textpos}
\TPGrid{16}{16}
```

Then, we configure `datetime`:

```
\PassOptionsToPackage{mmddyyyy,iso}{datetime}
\RequirePackage{datetime}
\newtimeformat{daytime}{\twodigit{\THEHOUR}:\twodigit{\THEMINUTE}}
```

Then, to enable `\pageref*` command, we configure `hyperref`:

```
\PassOptionsToPackage{hidelinks}{hyperref}
\RequirePackage{hyperref}
```

Then, we pass the title and the author to the metadata of the PDF, leaving the author out if the `anonymous` class option is used:

```
\makeatletter\AtBeginDocument{%
  \hypersetup{%
    pdftitle={\thetitle},%
    pdfauthor={\ifdefined\huawei@anonymous\else\theauthor\fi}%
  }%
}\makeatother
```

Then, we configure `biblatex`:

```
\PassOptionsToPackage{maxnames=1,minnames=1,natbib=true,
  citestyle=numeric,bibstyle=numeric,
  url=false,isbn=false}{biblatex}
\RequirePackage{biblatex}
```

Then, we make figure captions smaller and in `sf` font:

```
\PassOptionsToPackage{font={small,sf}}{caption}
\RequirePackage{caption}
```

Then, we make all figures and tables bordered by default, with the help of the `float` package:

```
\RequirePackage{float}
\floatstyle{boxed}
\restylefloat{table}
\restylefloat{figure}
```

Then, we make sure all figures and tables are centered by default, as recommended here:

```
\makeatletter
\g@addto@macro\@floatboxreset\centering
\makeatother
```

Then, we set spacing between lines:

```
\RequirePackage{setspace}
\setstretch{1.08}
```

Then, we define branded colors:

```
\PassOptionsToPackage{table}{xcolor}
\RequirePackage{xcolor}
\makeatletter
\ifdefined\huawei@boring
  \definecolor{red}{HTML}{8C1A11}
  \definecolor{black}{HTML}{000000}
  \definecolor{gray}{HTML}{878C8F}
  \definecolor{lightgray}{HTML}{DCDDDF}
  \definecolor{yellow}{HTML}{F6C342}
  \definecolor{blue}{HTML}{2B62BA}
  \definecolor{green}{HTML}{499167}
  \definecolor{orange}{HTML}{F7CEA1}
\else
  \definecolor{red}{HTML}{CF0A2C}
  \definecolor{black}{HTML}{232527}
  \definecolor{gray}{HTML}{878C8F}
  \definecolor{lightgray}{HTML}{DCDDDF}
  \definecolor{yellow}{HTML}{F2DC5D}
  \definecolor{blue}{HTML}{2274A5}
  \definecolor{green}{HTML}{499167}
  \definecolor{orange}{HTML}{F06543}
\fi
\makeatother
```

`\huawei@header` Then, we define `\huawei@header`:

```
\makeatletter\newcommand\huawei@header[1]{{%
  \ifdefined\huawei@slides%
    \setstretch{0.8}%
    \fontsize{19pt}{24pt}\selectfont%
  \else%
    \setstretch{0.8}%
    \fontsize{11pt}{13pt}\selectfont%
  \fi%
```

```
  \sffamily\color{gray}#1\par%
}}\makeatother
```

Then, we define the colors of the ink and of the page, which swap in the `dark` mode:

```
\makeatletter
\def\huawei@black{\ifdefined\huawei@dark white\else black\fi}
\def\huawei@blank{\ifdefined\huawei@dark black\else white\fi}
\makeatother
```

`\huawei@bar` Then, we define `\huawei@bar`:

```
\makeatletter\newcommand\huawei@bar{%
  \ifdefined\huawei@boring%
    \begin{textblock}{16}[0,1](0,16)%
      \tikz \node[fill=lightgray,minimum width=16\TPHorizModule,
        minimum height=1.5\TPVertModule] {};%
    \end{textblock}%
    \ifdefined\huawei@nobrand\else%
      \begin{textblock}{8}[1,0.5](15,15.25)%
        \raggedleft\huawei@logo{1.4}
      \end{textblock}%
    \fi%
    \ifdefined\huawei@nobrand\else%
      \begin{textblock}{8}[0,0.5](1,15.25)%
        \fontsize{16}{16}\selectfont%
        \textcolor{gray}{\thecompany{}}%
      \end{textblock}%
    \fi%
    \ifdefined\huawei@nosecurity\else%
      \begin{textblock}{8}[0.5,0.5](7,15.25)%
        \fontsize{16}{16}\selectfont%
        \centering\textcolor{gray}{\thesecurity}%
      \end{textblock}%
    \fi%
    \ifdefined\huawei@nopaging\else%
      \begin{textblock}{8}[1,0.5](12,15.25)%
        \raggedleft\fontsize{16}{16}\selectfont%
        \textcolor{gray}{Page \#\thepage{} of \pageref*{LastPage}}%
      \end{textblock}%
    \fi%
    \begin{textblock}{2}[1,0.5](14,15.25)%
      \tikz \path[scale=0.3, draw=none, rotate=40, fill=\huawei@blank] (0,0) .. controls (3,1
    \end{textblock}%
  \else%
    \begin{textblock}{1}[0,0](0,0)%
      \tikz \node[fill=red,minimum width=\TPHorizModule,
        minimum height=16\TPVertModule] {};%
    \end{textblock}%
  \fi%
}\makeatother
```

`\huawei@logo` Then, we define `\huawei@logo`:

```
\makeatletter\newcommand\huawei@logo[1]{
\definecolor{logo-red}{HTML}{CF0A2C}
```

```
\begin{tikzpicture}[y=0.80pt, x=0.80pt, yscale=-#1,
xscale=#1, inner sep=0pt, outer sep=0pt]
\begin{scope}[even odd rule,line width=0.800pt]
\begin{scope}[shift={(0,-0.00024)}]
\path[fill=\huawei@black] (10.9375,30.2240) -- (10.9375,33.6097)
.. controls (10.9375,34.5713) and (10.4603,35.0845) ..
   (9.5932,35.0845) .. controls (8.7212,35.0845) and
   (8.2411,34.5565)
.. (8.2411,33.5686) -- (8.2411,30.2278) -- (7.0415,30.2278)
-- (7.0415,33.6097) .. controls (7.0415,35.2737) and
   (7.9658,36.2272) .. (9.5774,36.2272) .. controls
   (11.2041,36.2272) and (12.1371,35.2554) .. (12.1371,33.5609) --
   (12.1371,30.2240)
-- (10.9375,30.2240) -- cycle;
\path[fill=\huawei@black] (15.3511,30.2240) -- (12.7456,36.1351) --
 (13.9702,36.1351) -- (14.4731,34.9903) -- (14.5091,34.9045) --
 (17.2158,34.9045) -- (17.7467,36.1351) -- (19.0045,36.1351) --
 (16.4233,30.2590) -- (16.4001,30.2240) -- cycle;
\path[fill=\huawei@black] (22.4840,30.2240) -- (21.1414,34.2912) --
 (19.8344,30.2271) -- (18.5578,30.2271) -- (20.6186,36.1388) --
 (21.6120,36.1388) -- (22.9573,32.2553) -- (24.3016,36.1388) --
 (25.3034,36.1388) -- (27.3592,30.2271) -- (26.1152,30.2271) --
 (24.8055,34.2912) -- (23.4626,30.2240) -- cycle;
\path[fill=\huawei@black] (34.2236,30.2240) -- (34.2236,36.1300) --
 (35.4074,36.1300) -- (35.4074,30.2240) -- cycle;
\path[fill=\huawei@black] (0.2686,30.2244) -- (0.2686,36.1384) --
 (1.4686,36.1384) -- (1.4686,33.7365) -- (4.1780,33.7365) --
 (4.1780,36.1384) -- (5.3783,36.1384) -- (5.3783,30.2244) --
 (4.1780,30.2244) -- (4.1780,32.6102) -- (1.4686,32.6102) --
 (1.4686,30.2244) -- cycle;
\path[fill=\huawei@black] (28.3267,30.2284) -- (28.3267,36.1344) --
 (32.7928,36.1344) -- (32.7928,35.0575) -- (29.5105,35.0575) --
 (29.5105,33.5931) -- (31.6931,33.5931) -- (31.6931,32.5160) --
 (29.5105,32.5160) -- (29.5105,31.3052) -- (32.6785,31.3052) --
 (32.6785,30.2284) -- cycle;
\path[fill=\huawei@blank] (15.8594,31.7207) -- (16.7149,33.7008) --
 (16.7119,33.7008) -- (16.7701,33.8374) -- (14.9552,33.8374) --
 (15.0127,33.7008) -- (15.0117,33.7008) -- cycle;
\path[fill=logo-red] (15.2113,0.0001) .. controls (14.7353,0.0422) and
 (13.4491,0.3349) .. (13.4491,0.3349) -- (13.4486,0.3349) .. controls
 (10.5495,1.0843) and (9.8643,3.7151) .. (9.8643,3.7151) .. controls
 (9.7227,4.1575) and (9.6584,4.6109) .. (9.6395,5.0380) --
 (9.6395,5.6194) .. controls (9.6780,6.5176) and (9.8777,7.1883) ..
 (9.8777,7.1883) .. controls (10.8461,11.4823) and
 (15.6075,18.5379) ..(16.6308,20.0200) .. controls
 (16.7034,20.0920) and(16.7615,20.0660) ..
 (16.7615,20.0660) .. controls(16.8720,20.0355) and
 (16.8633,19.9296) .. (16.8633,19.9296) --
 (16.8654,19.9301) .. controls (18.4416,4.1760) and
 (15.2113,0.0001) .. (15.2113,0.0001) -- (15.2113,0.0001) -- cycle;
\path[fill=logo-red] (20.4192,0.0000) .. controls (20.4192,0.0000) and
 (17.1748,4.1782) .. (18.7521,19.9415) --
 (18.7542,19.9415) .. controls (18.7664,20.0416) and
 (18.8374,20.0624) ..(18.8374,20.0624) .. controls
```

```
 (18.9430,20.1033) and(18.9971,20.0019) .. (18.9971,20.0019) --
 (18.9976,20.0029) .. controls (20.0472,18.4829) and
 (24.7814,11.4657) ..(25.7455,7.1882) .. controls(25.7455,7.1882) and
 (26.2683,5.1179) .. (25.7636,3.7150) .. controls
 (25.7636,3.7150) and (25.0470,1.0434) ..(22.1442,0.3375) .. controls
 (22.1442,0.3375) and (21.3077,0.1251) .. (20.4193,0.0000) --
 (20.4192,0.0000) -- cycle;
\path[fill=logo-red] (5.4542,4.7294) .. controls (5.4542,4.7294) and
 (2.6920,7.3513) .. (2.5547,10.1307) -- (2.5558,10.1307) --
 (2.5558,10.5519) .. controls (2.5579,10.5836) and
 (2.5595,10.6157) .. (2.5615,10.6480) .. controls
 (2.6804,12.8893) and (4.3665,14.2157) ..
 (4.3665,14.2157) .. controls (7.0831,16.8634) and
 (13.6611,20.2062) .. (15.1896,20.9647) .. controls
 (15.2110,20.9727) and (15.2900,20.9985) ..
 (15.3364,20.9399) .. controls (15.3364,20.9399) and
 (15.3605,20.9216) .. (15.3715,20.8887) --
 (15.3715,20.8189) .. controls (15.3704,20.8149) and
 (15.3683,20.8109) .. (15.3663,20.8065) --
 (15.3669,20.8065) .. controls (11.1809,11.6620) and
 (5.4543,4.7294) .. (5.4543,4.7294) -- (5.4542,4.7294) -- cycle;
\path[fill=logo-red] (30.1695,4.7294) .. controls (30.1695,4.7294) and
 (24.4602,11.6403) .. (20.2761,20.7662) --
 (20.2777,20.7657) .. controls (20.2777,20.7657) and
 (20.2283,20.8715) .. (20.3082,20.9399) .. controls
 (20.3082,20.9399) and (20.3320,20.9579) .. (20.3650,20.9652) --
 (20.4229,20.9652) .. controls (20.4333,20.9622) and
 (20.4444,20.9582) .. (20.4554,20.9507) --
 (20.4554,20.9517) .. controls (22.0255,20.1724) and
 (28.5525,16.8516) .. (31.2563,14.2162) .. controls
 (31.2563,14.2162) and (32.9686,12.8412) ..
 (33.0583,10.6334) .. controls (33.2560,7.5672) and
 (30.1696,4.7294) .. (30.1696,4.7294) -- (30.1695,4.7294) -- cycle;
\path[fill=logo-red] (35.3082,13.8080) .. controls (35.3082,13.8080) and
 (26.0003,18.8031) .. (21.1876,22.0494) -- (21.1882,22.0499) --
 (21.1893,22.0509) .. controls (21.1893,22.0509) and
 (21.1019,22.1081) .. (21.1324,22.2106) .. controls
 (21.1324,22.2106) and (21.1781,22.2933) .. (21.2446,22.2933) --
 (21.2446,22.2938) .. controls (22.9684,22.2968) and
 (29.4914,22.3041) .. (29.6549,22.2736) .. controls
 (29.6549,22.2736) and (30.4983,22.2399) ..
 (31.5406,21.8395) .. controls (31.5406,21.8395) and
 (33.8608,21.1019) .. (35.0659,18.4677) .. controls
 (35.0659,18.4677) and (35.6166,17.3662) .. (35.6246,15.8187) --
 (35.6246,15.7531) .. controls (35.6206,15.1563) and
 (35.5365,14.4957) .. (35.3083,13.8080) --
 (35.3082,13.8080) -- cycle;
\path[fill=logo-red] (0.3129,13.8313) .. controls (-0.5339,16.4531) and
 (0.6062,18.5656) .. (0.6080,18.5690) .. controls
 (1.7962,21.0795) and (4.0641,21.8401) ..
 (4.0641,21.8401) .. controls (5.1112,22.2703) and
 (6.1586,22.3000) .. (6.1586,22.3000) .. controls
 (6.3221,22.3300) and (12.6713,22.3030) ..
 (14.3725,22.2950) .. controls (14.4445,22.2945) and
```

```
 (14.4842,22.2221) .. (14.4842,22.2221) .. controls
 (14.4892,22.2142) and (14.4936,22.2062) .. (14.4955,22.1989) --
 (14.4955,22.1333) .. controls (14.4814,22.0893) and
 (14.4439,22.0584) .. (14.4439,22.0584) --
 (14.4450,22.0578) .. controls (9.6347,18.8126) and
 (0.3130,13.8315) .. (0.3130,13.8315) -- (0.3129,13.8313) -- cycle;
\path[fill=logo-red] (14.1782,23.1010) -- (3.2285,23.4850) .. controls
 (4.4160,25.6018) and (6.4158,27.2469) ..
 (8.4990,26.7416) .. controls (9.9366,26.3822) and
 (13.1935,24.1105) .. (14.2687,23.3429) --
 (14.2651,23.3399) .. controls (14.3487,23.2648) and
 (14.3188,23.2045) .. (14.3188,23.2045) .. controls
 (14.2913,23.1062) and (14.1783,23.1063) .. (14.1783,23.1063) --
 (14.1782,23.1010) -- cycle;
\path[fill=logo-red] (21.4305,23.1090) -- (21.4294,23.1130) .. controls
 (21.4294,23.1130) and (21.3333,23.1252) ..
 (21.3064,23.1972) .. controls (21.3064,23.1972) and
 (21.2831,23.2956) .. (21.3478,23.3445) --
 (21.3467,23.3455) .. controls (22.3950,24.0973) and
 (25.5729,26.3191) .. (27.1039,26.7505) .. controls
 (27.1039,26.7505) and (27.3359,26.8294) .. (27.7246,26.8435) --
 (27.9581,26.8435) .. controls (28.9839,26.8075) and
 (30.7708,26.2805) .. (32.3946,23.4907) --
 (21.4305,23.1090) -- cycle;
\end{scope}%
\end{scope}%
\end{tikzpicture}%
}\makeatother
```

Then, we configure headers using `fancyhdr`:

```
\RequirePackage{fancyhdr}
\pagestyle{fancy}
\renewcommand{\headrulewidth}{0pt}
\fancyhf{}
\makeatletter\fancyfoot[L]{
  \huawei@bar
  \ifdefined\huawei@authordraft%
    \begin{textblock}{14}[0.5,0.5](8,8)%
      \tikz \node[minimum width=14\TPHorizModule] {%
        \fontsize{64}{64}\selectfont\sffamily\scshape%
        \color{gray!20}\rotatebox{30}{it is a draft}%
      };%
    \end{textblock}%
  \else\fi%
}\makeatother
\makeatletter\fancyhead[L]{
  \ifnum\value{page}=1\else%
    \ifdefined\huawei@nobrand\else%
      \ifdefined\huawei@boring\else%
        \begin{textblock}{8}[0,0](1.2,0.2)%
          \huawei@logo{\ifdefined\huawei@slides 1.8\else 1\fi}%
        \end{textblock}%
      \fi
    \fi%
```

```
  \fi%
}\makeatother
\makeatletter\fancyhead[R]{
  \ifdefined\huawei@boring\else%
    \begin{textblock}{8}[1,0](15.8,0.2)%
      \raggedleft\huawei@header{%
        \ifdefined\huawei@nosecurity\else%
          \thesecurity%
        \fi%
      }%
    \end{textblock}%
  \fi%
}\makeatother
\makeatletter\fancyfoot[R]{
  \ifdefined\huawei@boring\else%
    \begin{textblock}{8}[0,1](1.2,15.8)%
      \ifnum\value{page}=1\else%
        \huawei@header{\raggedright%
          \ifdefined\huawei@anonymous\else%
            \theauthor%
            \ifdefined\huawei@nosecurity\else%
              \ifx\theid\empty\else, \theid\fi%
            \fi%
            \ifdefined\huawei@nobrand\else%
              \newline
            \fi%
          \fi%
          \ifdefined\huawei@nobrand\else%
            \thecompany{}%
          \fi%
        }%
      \fi%
    \end{textblock}%
    \begin{textblock}{8}[1,1](15.8,15.8)%
      \raggedleft\huawei@header{%
        \ifnum\value{page}=1\else%
          \ifdefined\huawei@nopaging\else%
            Page \#\thepage{} of \pageref*{LastPage}%
            \ifdefined\huawei@nodate\else%
              \\
            \fi%
          \fi%
        \fi%
        \ifdefined\huawei@nodate\else%
          \today{} \settimeformat{daytime}\currenttime{}%
        \fi%
      }%
    \end{textblock}%
  \fi%
}\makeatother
```

`abstract` Then, we redefine `abstract` environment:

```
\RequirePackage{changepage}
\renewenvironment{abstract}
```

```
  {\begin{adjustwidth}{0pt}{1in}{\scshape Abstract:}\newline\small}
  {\end{adjustwidth}}
```

`\maketitle` Then, we redefine `\maketitle`:

```
\makeatletter\renewcommand\maketitle{%
  \vspace*{18pt}%
  {%
    \bfseries{\begin{spacing}{.9}\Huge\raggedright%
    \ifdefined\huawei@boring%
      \color{red}%
    \fi%
    \thetitle\par\end{spacing}}%
  }%
  \ifx\thesubtitle\empty\else%
    {\color{gray!50!black}\large\raggedright\thesubtitle\par}%
  \fi%
  \ifdefined\huawei@nobrand\else%
    \ifdefined\huawei@anonymous\else%
      \ifx\thecompany\empty\else%
        \thecompany\par%
      \fi%
    \fi%
  \fi%
  \parbox{.6\textwidth}{\raggedright%
    \ifx\theauthor\empty\else%
      {\scshape\ifdefined\huawei@anonymous%
        Anonymous Authors%
      \else%
        \theauthor%
      \fi}%
    \fi%
    \ifdefined\huawei@anonymous\else%
      \ifx\theauthor\empty\else%
        \ifdefined\huawei@nosecurity\else%
          \ifx\theid\empty\else%
            $\;$/ {\theid}%
          \fi%
        \fi%
      \fi%
    \fi%
    \par%
  }%
  \vspace{2em}%
}\makeatother
```

`\PrintCrumb` Then, we define `\PrintCrumb`:

```
\newcommand\PrintCrumb[2]{%
  \begin{minipage}{\columnwidth}%
    \raggedright\textsc{#1}:\\#2%
  \end{minipage}\vspace{1em}%
}
```

`\PrintThankYouPage` Then, we define `\PrintThankYouPage`:

```
\newcommand\PrintThankYouPage{
```

```
  \newpage
  \vspace*{\fill}
  \begin{center}
    \normalsize
    {\Huge\color{red}\textbf{Thank you!}}
  \end{center}
  \vspace*{\fill}
}
```

\PrintDisclaimer Then, we define \PrintDisclaimer:

```
\makeatletter\newcommand\PrintDisclaimer{%
  \justify\vspace*{\fill}%
  \begingroup%
  \setstretch{0.55}%
  \sffamily\scriptsize\color{gray!50!black}%
  \textbf{Disclaimer}: The opinions expressed in
  this document are in good faith and
  while every care has been taken in preparing it,
  \ifdefined\huawei@nobrand%
    the author%
  \else%
    \thecompany{}%
  \fi{}
  makes no representations and gives no warranties
  of whatever nature in respect of these documents,
  including but not limited to the accuracy or completeness
  of any information, facts and/or opinions contained therein.
  \ifdefined\huawei@nobrand%
    The author%
  \else%
    \thecompany{}%
  \fi,
  its subsidiaries, the directors, employees and agents
  cannot be held liable for the use of and reliance on
  the opinions, estimates, forecasts and findings in
  these documents.
  \par%
  \endgroup%
}\makeatother
```

\PrintFirstPage Then, we define \PrintFirstPage:

```
\makeatletter\newcommand\PrintFirstPage[1]{%
  \ifdefined\huawei@landscape\else%
    \ClassError{huawei}{It's allowed to use
    PrintFirstPage only in landscape mode}{Read huawei.pdf
    for more information}
  \fi%
  \huawei@bar%
  \def\huawei@param{#1}%
  \ifx\huawei@param\empty\else%
    \includegraphics[height=2in]{#1}%
    \newline%
  \fi%
  \vspace*{0.5in}%
```

```
  \maketitle%
  \ifdefined\huawei@nocover\else%
    \begin{textblock}{14}[1,1](14,14)%
      \raggedleft\includegraphics[height=3.6in]{huawei-cover-picture.pdf}%
    \end{textblock}%
  \fi%
}\makeatother
```

\PrintLastPage Then, we define \PrintLastPage:

```
\makeatletter\newcommand\PrintLastPage{%
  \ifdefined\huawei@landscape\else%
    \ClassError{huawei}{It's allowed to use
    PrintLastPage only in landscape mode}{Read huawei.pdf
    for more information}
  \fi%
  \newpage%
  \vspace*{1in}%
  \begin{center}%
    \begin{minipage}{0.8\columnwidth}\raggedright%
      \normalsize%
      \setlength{\parskip}{6pt}%
      {\Huge\color{red}\textbf{Thank you!}}%
      \par%
      \vspace{0.5in}%
      \par%
      \ifdefined\huawei@nobrand\else%
        Bring digital to every person, home and organization
        \newline%
        for a fully connected, intelligent world.
        \par%
        \textbf{%
          Copyright \copyright{} \the\year{} \thecompany{}
          \newline
          All Rights Reserved.%
        }
        \par%
      \fi%
      The information in this document may contain predictive
      statements including, without limitation, statements regarding
      the future financial and operating results, future product
      portfolio, new technology, etc. There are a number of factors that
      could cause actual results and developments to differ materially
      from those expressed or implied in the predictive statements.
      Therefore, such information is provided for reference purpose
      only and constitutes neither an offer nor an acceptance.
      \ifdefined\huawei@nobrand%
        The author%
      \else%
        \thecompany{}%
      \fi{}
      may change the information at any time without notice.
    \end{minipage}
  \end{center}%
}\makeatother
```

\PrintBibliography Then, we define \PrintBibliography:

```
\makeatletter\newcommand\PrintBibliography{%
  \setlength\bibitemsep{3pt}%
  \AtNextBibliography{\small}%
  \ifdefined\huawei@breaks\newpage\fi%
  \begingroup%
  \raggedright%
  \setstretch{0.95}%
  \ifdefined\huawei@landscape%
    \begin{multicols}{3}\printbibliography\end{multicols}%
  \else%
    \ifdefined\huawei@breaks%
      \begin{multicols}{2}\printbibliography\end{multicols}%
    \else
      \printbibliography%
    \fi%
  \fi%
  \endgroup%
}\makeatother
```

Then, we set the background color of the document, if required by the `dark` class option:

```
\makeatletter\ifdefined\huawei@dark%
  \RequirePackage{pagecolor}%
  \pagecolor{black}%
  \color{white}%
\fi
```

Then, we configure the layout:

```
\AtBeginDocument{%
\raggedbottom%
\raggedcolumns%
\setlength\headheight{32pt}%
\setlength\footskip{32pt}%
\setlength\topskip{0mm}%
\setlength\parindent{0pt}%
\setlength\parskip{6pt}%
\setlength\columnsep{32pt}%
\renewcommand{\arraystretch}{1}%
}
```

Then, we renew a few commands:

```
\renewcommand\title[1]{\renewcommand\thetitle{#1}}
\newcommand\thetitle{\textbackslash{}thetitle}
\newcommand*\thecompany{Huawei Technologies Co., Ltd.}
\newcommand\thesubtitle{}
\renewcommand\author[1]{\renewcommand\theauthor{#1}}
\newcommand\theauthor{\textbackslash{}theauthor}
\newcommand*\thesecurity{Confidential}
\newcommand*\theid{}
\ifcsname nospell\endcsname\else\newcommand\nospell[1]{#1}\fi
```

Change History

v0.1.0
General: The first draft version. . . 5
v0.10.0
General: Some colors redefined. . . 5
v0.11.0
General: The fixed-width font is rendered correctly now, without `ffcode`. 5
v0.12.0
General: The `abstract` is now formatted correctly. 5
v0.14.0
General: The `l3build` is now used for build automation, instead of `Makefile`. 5
v0.15.0
General: A new package option `breaks` introduced, which forces all sections to start from a new page. 5
v0.16.0
General: The `doi` tag enabled for `biblatex`. 7
v0.17.0
General: All figures and tables are bordered by default. 8
All figures and tables are centered by default. 8
Smaller and sans-serif font for captions of figures. 8
v0.18.0
General: Now we use `pgfopts` for parsing class options. 5
`\PrintBibliography`: The bibliography prints in one column unless `breaks` class option is specified. 17
v0.19.0
General: New option `boring` added, making the layout of the document more compliant with the expectations of Huawei. . . . 5
v0.3.0
General: The cover picture added for front pages. 5
v0.4.0
General: The current time is rendered without seconds. 5
v0.5.0
General: The `DEPENDS.txt` file added. 5
v0.6.0
General: The `ffcode` and `href-ul` packages created and their code removed from this class. 5
v0.7.0
General: The `authordraft` option is now supported. 5

Index

Numbers written in italic refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in roman refer to the code lines where the entry is used.

Symbols

\# 179, 391
\; 439
\@empty 20
\@floatboxreset . . . 112
\@unusedoptionlist 20, 21
\\ 393, 450

A

\abstract 404
\AddToHook 19, 79
\anonymous *2*
\arraystretch 588
\AtBeginDocument 95, 579
\AtNextBibliography 558
\author 594
\authordraft *2*

B

\begin 155, 160, 165, 171, 177, 182, 186, 194, 196, 197, 337, 349, 358, 369, 387, 406, 411, 449, 456, 506, 519, 520, 564, 567
\bfseries 40, 411
\bibitemsep 557
\boring *2*
\breaks *2*

C

\centering 112, 173
\ClassError 21, 493, 513
\clearpage 40
\color . . 40, 41, 147, 340, 413, 418, 458, 466, 523, 577
\columnsep 587
\columnwidth . . 449, 520
\copyright 533
\currenttime 398

D

\dark *2*
\def 33, 35, 150, 151, 498
\definecolor . . . 120, 121, 122, 123, 124, 125, 126, 127, 129, 130, 131, 132, 133, 134, 135, 136, 193
\documentclass 22

E

\empty . 375, 417, 422, 428, 436, 438, 499
\end 158, 162, 168, 174, 180, 184, 189, 326, 327, 328, 342, 351, 364, 386, 401, 407, 415, 451, 459, 508, 553, 554, 564, 567
\endcsname 598

F

\familydefault 27
\fancyfoot 334, 367
\fancyhead 345, 356
\fancyhf 333
\fill 455, 460, 463
\floatstyle 108
\fontsize . 142, 145, 166, 172, 178, 339
\footnotemargin . . . 82
\footnotesep 83
\footskip 583

G

\g@addto@macro 112
\geometry . . . 46, 49, 53

H

\headheight 582
\headrulewidth 332
\huawei@anonymous 16, 98, 372, 421, 429, 435
\huawei@authordraft 10, 336
\huawei@bar 153, 335, 497
\huawei@black 150, 198, 208, 212, 217, 219, 224
\huawei@blank 151, 183, 229
\huawei@boring 5, 25, 32, 45, 119, 154, 348, 357, 368, 412
\huawei@breaks 6, 40, 559, 566
\huawei@dark 7, 150, 151, 574
\huawei@header 139, 359, 371, 388
\huawei@landscape . . 15, 44, 492, 512, 563
\huawei@logo 161, 192, 350
\huawei@nobrand 11, 159, 164, 347, 377, 381, 420, 470, 479, 527, 547
\huawei@nocover 13, 505
\huawei@nodate 12, 392, 397
\huawei@nopaging 14, 176, 390
\huawei@nosecurity 9, 170, 360, 374, 437
\huawei@param . 498, 499
\huawei@sectioncolor 33, 35, 40, 41
\huawei@slides 8, 56, 140, 350
\Huge 411, 458, 523
\hypersetup 96

I

\ifcsname 598
\ifdefined 25, 32, 40, 44, 45, 56, 98, 119, 140, 150, 151, 154, 159, 164, 170, 176, 336, 347, 348, 350, 357, 360, 368, 372, 374, 377, 381, 390, 392, 397, 412,

420, 421, 429, 435, 437, 470, 479, 492, 505, 512, 527, 547, 559, 563, 566, 574
\ifnum 346, 370, 389
\ifx 20, 375, 417, 422, 428, 436, 438, 499
\includegraphics 500, 507

J

\justify 463

L

\landscape 2
\Large 40
\large 418
\LoadClass 1

M

\makeatletter 37, 44, 56, 95, 111, 118, 139, 149, 153, 192, 334, 345, 356, 367, 408, 462, 491, 511, 556, 574
\makeatother . 42, 55, 58, 100, 113, 138, 148, 152, 191, 329, 344, 355, 366, 403, 447, 490, 510, 555, 573
\maketitle 408, 504
\microtypesetup ... 79

N

\newline 378, 406, 501, 529, 534
\newpage .. 454, 517, 559
\newtimeformat 92
\nobrand 2
\nocover 2
\nodate 2
\node 156, 187, 338
\nopaging 2
\normalfont 40
\normalsize ... 457, 521
\nosecurity 2
\nospell 598

P

\pagecolor 576
\pageref 179, 391
\pagestyle 331
\par ... 147, 415, 418, 423, 444, 488, 524, 526, 531, 537
\parbox 427
\parindent 585
\parskip 522, 586
\PassOptionsToPackage 29, 59, 61, 71, 80, 84, 87, 90, 93, 101, 105, 116
\path .. 183, 198, 208, 212, 217, 219, 224, 229, 232, 244, 255, 269, 281, 295, 308, 316
\pgfkeys 3
\PrintBibliography . 556
\printbibliography 564, 567, 569
\PrintCrumb 448
\PrintDisclaimer 4, 462
\PrintFirstPage . 3, 491
\PrintLastPage .. 3, 511
\PrintThankYouPage 3, 453
\ProcessPgfPackageOptions 18

R

\raggedbottom 580
\raggedcolumns 581
\raggedleft 161, 178, 359, 388, 507
\raggedright 371, 411, 418, 427, 450, 520, 561
\renewcommand 27, 332, 408, 588, 590, 594
\renewenvironment .. 405
\RequirePackage ... 2, 26, 30, 31, 43, 57, 60, 62, 63, 64, 65, 66, 67, 68, 69, 70, 72, 73, 74, 75, 76, 77, 78, 81, 85, 88, 91, 94, 104, 106, 107, 114, 117, 330, 404, 575
\restylefloat . 109, 110
\rotatebox 340

S

\scriptsize 466
\scshape .. 339, 406, 429
\section 39
\selectfont 142, 145, 166, 172, 178, 339
\setlength 82, 83, 522, 557, 582, 583, 584, 585, 586, 587
\setlist 86
\setstretch 115, 141, 144, 465, 562
\settimeformat 398
\sfdefault 27
\sffamily . 147, 339, 466
\slides 2
\small 406, 558
\string 22

T

\textbackslash 591, 595
\textbf 458, 467, 523, 532
\textcolor . 167, 173, 179
\textsc 450
\textwidth 427
\the 533
\theauthor 3, 98, 373, 428, 432, 436, 594, 595
\thecompany 167, 382, 422, 423, 473, 482, 533, 550, 592
\THEHOUR 92
\theid 3, 375, 438, 439, 597
\THEMINUTE 92
\thepage 179, 391
\thesection 41
\thesecurity 3, 173, 361, 596
\thesubtitle 3, 417, 418, 593
\thetitle 3, 97, 415, 590, 591
\tikz . 156, 183, 187, 338
\title 590
\titleformat 38
\today 398
\topskip 584
\TPGrid 89
\TPHorizModule 156, 187, 338
\TPVertModule . 157, 188
\twodigit 92

V

\value 346, 370, 389

\vspace . . . 409, 446, 451, 455, 460, 463, 503, 518, 525

Y

\year 533