The longtable package*

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摘要

This package defines the longtable environment, a multi-page version of tabular.

这个包定义了 longtable 环境，是 tabular 的多页版本。

*This file has version number v4.17, last revised 2021-09-01.

†The new algorithm for aligning 'chunks' of a table used in version 4 of this package was devised coded and documented by David Kastrup.
在这个包的第 4 个版本中，用于对表格的“块”进行对齐的新算法是由 David Kastrup 设计、编码和文档化的。

表格

1 Introduction 介绍

The longtable package defines a new environment, longtable, which has most of the features of the tabular environment, but produces tables which may be broken by TEX's standard page-breaking algorithm. It also shares some features with the table environment. In particular it uses the same counter, `table`, and has a similar `\caption` command. Also, the standard `\listoftables` command

longtable 宏包定义了一个新的环境 longtable，它大多数特性与 tabular 环境相同，但是能够根据 TEX 的标准分页算法将表格分页显示。同时，它也与 table 环境共享一些特性。特别是它使用相同的计数器 `table` 和类似的 `\caption` 命令。另外，`\listoftables` 命令能够列出由 table 或 longtable 环境生成的表格。

`longtable`

lists tables produced by either the table or longtable environments.

The following example uses most of the features of the longtable environment. An edited listing of the input for this example appears in Section 8.

下面的示例使用了 longtable 环境的大多数功能。本示例的输入编辑列表在第 8节中。

Note: Various parts of the following table will **not** line up correctly until this document has been run through LaTeX several times. This is a characteristic feature of this package, as described below.

注意：在此表中，各部分的对齐可能需要多次运行该文档才能正确实现。这是该软件包的特征之一，如下所述。

表 1: A long table 一个长表格

* This part appears at the top of the table 此部分显示在表格的顶部 *	
*First 第一列	Second 第二列 *
*longtable columns are specified in the same way as in the tabular environment.	longtable 的列指定方式与 tabular 环境相同。 *
*`@{*}r||p{1in}@{*}`	`@{*}r||p{1in}@{*}` *
*in this case. Each row ends with a \\ command.	在这个例子中, 每一行以\\ 命令结束。 *
*The \\ command has an optional argument, just as in the tabular environment.	\\ 命令可以带有可选的参数，就像在 tabular 环境中一样。 *
*See the effect of `\\[10pt]`	看看 `\\[10pt]` 的效果 *
*Lots of lines like this.	有很多这样的行。 *
*Lots of lines like this.	有很多这样的行。 *
*Lots of lines like this.	有很多这样的行。 *
*Lots of lines like this.	有很多这样的行。 *
*Lots of lines like this.	有很多这样的行。 *
*Also `\hline` may be used, as in tabular.	也可以使用 `\hline` ，就像在 tabular 中一样， *
*That was a `\hline`.	这是一个 `\hline`。 *
*That was `\hline\hline` .	这是 `\hline\hline` *
This is a `\multicolumn{2}{||c||}` 这是一个 `\multicolumn{2}{||c||}`	
*If a page break occurs at a `\hline` then a line is drawn at the bottom of one page and at the top of the next.	如果页面在 `\hline` 处分页，则会在一页的底部画一条线，并在下一页的顶部绘制一条线。 *
*The `[t] [b] [c]` argument of tabular can not be used.	tabular 的 `[t] [b] [c]` 参数无法使用。 *
*The optional argument may be one of `[l] [r] [c]` to specify whether the table should be adjusted to the left, right or centrally.	可选参数可以是 `[l] [r] [c]` 之一，以指定表格应该向左、向右或居中调整。 *
*Lots of lines like this.	有很多这样的行。 *
*Lots of lines like this.	有很多这样的行。 *
*Lots of lines like this.	有很多这样的行。 *
*Lots of lines like this.	有很多这样的行。 *
*This goes at the bottom.	这部分显示在底部。 *

表 1: (continued) （续）

*	This part appears at the top of every other page 此部分显示在每页的顶部	*
***First** 第一列	**Second** 第二列	*
*Lots of lines like this.	有很多这样的行。	*
*Lots of lines like this.	有很多这样的行。	*
*Lots of lines like this.	有很多这样的行。	*
*Lots of lines like this.	有很多这样的行。	*
*Lots of lines like this.	有很多这样的行。	*
*Lots of lines like this.	有很多这样的行。	*
*Lots of lines like this.	有很多这样的行。	*
*Lots of lines like this.	有很多这样的行。	*
*Lots of lines like this.	有很多这样的行。	*
*Lots of lines like this.	有很多这样的行。	*
*Lots of lines like this.	有很多这样的行。	*
*Lots of lines like this.	有很多这样的行。	*
*Lots of lines like this.	有很多这样的行。	*
*Lots of lines like this.	有很多这样的行。	*
*Lots of lines like this.	有很多这样的行。	*
*Lots of lines like this.	有很多这样的行。	*
*Lots of lines like this.	有很多这样的行。	*
*Some lines may take up a lot of space, like this: This last column is a “p” column so this “row” of the table can take up several lines. Note however that TEX will never break a page within such a row. Page breaks only occur between rows of the table or at `\hline` commands.	有些行可能会占用很多空间，就像这样：这一列是一个“p”列，因此表格的这一“行”可以占用多行。但请注意，TEX 不会在这样的行内分页。页面分页只会出现在表格的行之间或者在 `\hline` 命令处。	*
*Lots of lines like this.	有很多这样的行。	*
*Lots of lines like this.	有很多这样的行。	*
*Lots of lines like this.	有很多这样的行。	*
*Lots of lines like this.	有很多这样的行。	*
*Lots of lines like this.	有很多这样的行。	*
*Lots of lines like this.	有很多这样的行。	*
*Lots of lines like this.	有很多这样的行。	*
*This goes at the bottom.	这部分显示在底部。	*

表 1: (continued)（续）

* This part appears at the top of every other page 此部分显示在每页的顶部 *	
***First** 第一列	**Second** 第二列 *
*Lots[1] of lines like this. Lots of lines like this[2]	[3]像这样。像这样[4] *
*Lots of lines like this.	有很多这样的行。 *
*Lots of lines like this.	有很多这样的行。 *
*These lines will appear in place of the usual foot at the end of the table	这些行将会代替通常的表格页脚出现在表格的末尾。 *

2 Chunk Size
块大小

[1]This is a footnote.

[2]longtable takes special precautions, so that footnotes may also be used in 'p' columns.

[3]这是一个脚注。

[4]longtable 采取了特殊的预防措施，以便在 'p' 列中也可以使用脚注。

LTchunksize In order to TEX multi-page tables, it is necessary to break up the table into smaller chunks, so that TEX does not have to keep everything in memory at one time. By default longtable uses 20 rows per chunk, but this can be set by the user, with e.g., `\setcounter{LTchunksize}{10}`.[5] These chunks do not affect page breaking, thus if you are using a TEX with a lot of memory, you can set LTchunksize to be several pages of the table. TEX will run faster with a large LTchunksize. However, if necessary, longtable can work with LTchunksize set to 1, in which case the memory taken up is negligible. Note that if you use the commands for setting the table head or foot (see below), the LTchunksize must be at least as large as the number of rows in each of the head or foot sections.

为了能够在 TEX 中处理多页表格，需要将表格分成较小的块，这样 TEX 不必一次性将所有内容都存入内存中。默认情况下，longtable 每块包含 20 行，但用户可以通过例如 `\setcounter{LTchunksize}{10}` 的方式设置块大小。[5]这些块不会影响页面分割，因此如果你使用的 TEX 具有大量内存，可以将 LTchunksize 设置为表格的几个页面。使用大的 LTchunksize，TEX 会运行得更快。但是，必要时，longtable 可以将 LTchunksize 设置为 1，此时所占用的内存可以忽略不计。请注意，如果你使用设置表头或表尾的命令（见下文），则 LTchunksize 必须至少与表头或表尾中每个部分的行数一样大。

This document specifies `\setcounter{LTchunksize}{200}`. If you look at the previous table, after the *first* run of LATEX you will see that various parts of the table do not line up. LATEX will also have printed a warning that the column widths had changed. longtable writes information onto the `.aux` file, so that it can line up the different chunks. Prior to version 4 of this package, this information was not used unless a `\setlongtables` command was issued, however, now the information is always used, using a new algorithm[6] and so `\setlongtables` is no longer needed. It is defined (but does

本文档规定了`\setcounter{LTchunksize}{200}`。如果您查看前面的表格，在第一次运行 LATEX 后，您会发现表格的各个部分没有对齐。LATEX 还会打印一个警告，表示列宽已更改。longtable 将信息写入`.aux` 文件中，以便对不同的部分进行对齐。在此软件包的版本 4 之前，除非发出 `\setlongtables` 命令，否则不使用此信息，但现在始终使用新算法[6]，因此不再需要 `\setlongtables`。为了方便使用旧文档的用户，它被定义（但不起作用）。

[5]You can also use the plain TEX syntax `\LTchunksize=10`.

[6]Due to David Kastrup.

[5]你也可以使用普通的 TEX 语法 `\LTchunksize=10`.

[6]由 David Kastrup 开发。

A	tabular	environment
within	a floating	table

表 2: A floating table

nothing) for the benefit of old documents that use it.

3 Captions and Headings

标题和表头

`\endhead` At the start of the table one may specify lines which are to appear at the top of every page (under the headline, but before the other lines of the table).

在表格开头，可以指定出现在每一页顶部（在页眉下方，但在表格的其他行之前）的行。 `\endhead`

The lines are entered as normal, but the last `\\` command is replaced by a `\endhead` command.

这些行像正常的行一样输入，但是最后一个`\\`命令被`\endhead` 命令替换。

`\endfirsthead` If the first page should have a different heading, then this should be entered in the same way, and terminated with the `\endfirsthead` command. The `LTchunksize` should be at least as large as the number of rows in the heading.

如果第一页需要有不同的表头，则应以相同的方式输入，并以`\endfirsthead` 命令终止。`LTchunksize` 应至少与页眉中的行数一样大。 `\endfirsthead`

There are also `\endfoot` and `\endlastfoot` commands which are used in the same way (at the *start* of the table) to specify rows (or an `\hline`) to appear at the bottom of each page. In certain situations, you may want to place lines which logically belong in the table body at the end of the firsthead, or the beginning of the lastfoot. This helps to control which lines appear on the first and last page of the table.

还有 `\endfoot` 和 `\endlastfoot` 命令，它们的使用方式相同（在表格的开头），用于指定出现在每一页底部的行（或 `\hline`）。在某些情况下，您可能希望将逻辑上属于表格主体的行放置在 firsthead 的末尾或 lastfoot 的开头。这有助于控制哪些行出现在表格的第一页和最后一页。 `\endfoot` `\endlastfoot`

The `\caption{...}` command is essentially equivalent to

`\caption{...}` 命令本质上等同于 `\caption`

```
\multicolumn{n}{c}{\parbox{\LTcapwidth}{...}}
```

```
\multicolumn{n}{c}{\parbox{\LTcapwidth}{...}}
```

where `n` is the number of columns of the table. You may set the width of the caption with a command such as `\setlength{\LTcapwidth}{2in}` in the preamble of your document. The default is 4in. `\caption` also writes the information to produce an entry in the list of tables. As with the `\caption` command in the figure and table environments, an optional argument specifies the text to appear in the list of tables if this is different from the text to appear in the caption. Thus the caption for table 1 was specified as `\caption[An optional table caption (used in the list of tables)]{A long table\label{long}}`.

其中 `n` 是表格的列数。若要设置标题的宽度，您可以在文档的导言部分使用类似 `\setlength{\LTcapwidth}{2in}` 的命令。默认值为 4in。`\caption` 命令还会将信息写入表格目录中的条目。与 figure 和 table 环境中的`\caption` 命令一样，可选参数用于指定在表格目录中显示的文本，如果这个文本与标题中显示的文本不同。因此，表 1的标题被指定为：`\caption[An optional table caption (used in the list of tables)]{A long table\label{long}}`。

You may wish the caption on later pages to be different to that on the first page. In this case put the `\caption` command in the first heading, and put a subsidiary caption in a `\caption[]`

你可能希望后面的页面的标题与第一页的标题不同。在这种情况下，将`\caption` 命令放在第一个标题中，并在主标题中使用`\caption[]` 命令来放置一个辅助标

command in the main heading. If the optional argument to \caption is empty, no entry is made in the list of tables. Alternatively, if you do not want the table number to be printed each time, use the \caption* command.

题。如果\caption 的可选参数为空，则不会在表格列表中创建条目。或者，如果你不想每次打印表格编号，可以使用\caption* 命令。

The captions are set based on the code for the article class. If you have redefined the standard \@makecaption command to produce a different format for the captions, you may need to make similar changes to the longtable version, \LT@makecaption. See the code section for more details.

标题是根据 article 类的代码设置的。如果您重新定义了标准的\@makecaption 命令以生成不同格式的标题，则可能需要对 longtable 版本\LT@makecaption 进行类似的更改。有关更多详细信息，请参见代码部分。

A more convenient method of customising captions is given by the caption(2) package, which provides commands for customising captions, and arranges that the captions in standard environments, and many environments provided by packages (including longtable) are modified in a compatible manner.

通过 caption（2）包提供了更方便的自定义标题的方法，它提供了自定义标题的命令，并安排标准环境中的标题以及许多由包（包括 longtable）提供的环境以兼容的方式进行修改。

You may use the \label command so that you can cross reference longtables with \ref. Note however, that the \label command should not be used in a heading that may appear more than once. Place it either in the firsthead, or in the body of the table. It should not be the *first* command in any entry.

您可以使用\label 命令，以便您可以通过\ref 进行跨引用 longtable。但是请注意，不应在可能出现多次的标题中使用\label 命令。将其放置在 firsthead 或表格主体中。它不应该是任何条目中的第一个命令。

4 Multicolumn entries

多列条目

The \multicolumn command may be used in longtable in exactly the same way as for tabular. So you may want to skip this section, which is rather technical, however coping with \multicolumn is one of the main problems for an environment such as longtable. The main effect that a user will see is that certain combinations of \multicolumn entries will result in a document needing more runs of LaTeX before the various 'chunks' of a table align.

在 longtable 中，\multicolumn 命令可以与 tabular 完全相同的方式使用。因此，您可能希望跳过这一节，因为处理 \multicolumn 是 longtable 等环境的主要问题之一。用户将看到的主要效果是，某些 \multicolumn 条目的组合将导致文档需要多次运行 LaTeX，以使表格的各个块对齐。

The examples in this section are set with LTchunksize set to the minimum value of one, to demonstrate the effects when \multicolumn entries occur in different chunks.

本节中的示例设置LTchunksize 为最小值 1，以演示在不同块中出现\multicolumn 条目时的效果。

Consider Table 3. In the second chunk, longtable sees the wide multicolumn entry. At this point it thinks that the first two columns are very narrow. All the width of the multicolumn entry is assumed to be in the third column. (This is a 'feature' of TeX's primitive \halign command.) longtable then passes the information that there is a wide third column to the later chunks, with the result that the first pass over the table is too wide.

考虑表格 3。在第二个块中，longtable 看到宽的跨列条目。此时，它认为前两列非常窄。所有跨列条目的宽度都被假定在第三列中。（这是 TeX 原始的\halign 命令的一个特性）。然后，longtable 将存在宽第三列的信息传递给后续块，导致对表格的第一次遍历过宽。

If the 'saved row' from this first pass was re-inserted into the table on the next pass, the table would line up in two passes, but would be much two wide.

如果在下一次遍历中将这个保存的行重新插入到表格中，表格将在两次遍历中排列，但宽度会变得更宽。

The solution to this problem used in Versions 1 and 2, was to use a \kill line. If a line is \killed,

在版本 1 和 2 中用于解决这个问题的方法是使用\kill 行。如果一行使用\kill

\kill

表 3: A difficult `\multicolumn` combination: pass 1

1	2	3
wide multicolumn spanning 1–3		
multicolumn 1–2	3	
wide 1	2	3

表 4: A difficult `\multicolumn` combination: pass 2

1	2	3
wide multicolumn spanning 1–3		
multicolumn 1–2	3	
wide 1	2	3

表 5: A difficult `\multicolumn` combination: pass 3

1	2	3
wide multicolumn spanning 1–3		
multicolumn 1–2	3	
wide 1	2	3

表 6: A difficult `\multicolumn` combination: pass 4

1	2	3
wide multicolumn spanning 1–3		
multicolumn 1–2	3	
wide 1	2	3

by using \kill rather than \\ at the end of the line, it is used in calculating column widths, but removed from the final table. Thus entering \killed copies of the last two rows before the wide multicolumn entry would mean that \halign 'saw' the wide entries in the first two columns, and so would not widen the third column by so much to make room for the multicolumn entry.

而不是\\结束，那么它将在计算列宽时使用，但在最终表格中将被删除。因此，在宽的多列输入之前输入\kill 的最后两行的副本意味着\halign 看到了前两列中的宽输入，因此不会将第三列扩展得太多以为多列输入腾出空间。

In Version 3, a new solution was introduced. If the saved row in the .aux file was not being used, longtable used a special 'draft' form of \multicolumn, this modified the definition, so the spanning entry was never considered to be wider than the columns it spanned. So after the first pass, the .aux file stored the widest normal entry for each column, no column was widened due to \spanned columns. By default longtable ignored the .aux file, and so each run of LaTeX was considered a first pass. Once the \setlongtables declaration was given, the saved row in the .aux file, and the proper definition of \multicolumn were used. If any \multicolumn entry caused one of the columns to be widened, this information could not be passed back to earlier chunks, and so the table would not correctly line up until the third pass. This algorithm always converged in three passes as described above, but in examples such as the ones in Tables 3–6, the final widths were not optimal as the width of column 2, which is determined by a \multicolumn entry was not known when the final width for column 3 was fixed, due to the fact that *both* \multicolumn commands were switched from 'draft' mode to 'normal' mode at the same time.

在版本 3 中，引入了一种新的解决方案。如果.aux 文件中保存的行没有被使用，longtable 会使用特殊的草稿形式的\multicolumn，这会修改定义，使得跨越的条目永远不会被认为比其跨越的列更宽。因此，在第一遍扫描后，.aux 文件存储了每列最宽的普通条目，没有任何一列由于跨越的列而被加宽。默认情况下，longtable 忽略.aux 文件，因此每次运行 LaTeX 都被视为第一遍扫描。一旦给出了\setlongtables 声明，就会使用.aux 文件中保存的行和正确的\multicolumn 定义。如果任何一个\multicolumn 条目导致其中一列加宽，这个信息不能传递回早期的块，因此在第三遍扫描之前，表格不会正确地对齐。如上所述，这个算法总是在三遍扫描中收敛，但在表 3–6中的示例中，最终宽度不是最优的，因为第 2 列的宽度是由\multicolumn 条目确定的，当第 3 列的最终宽度被固定时，由于两个\multicolumn 命令同时从草稿模式切换到正常模式，第 2 列的宽度是未知的。

Version 4 alleviates the problem considerably. The first pass of the table will indeed have the third column much too wide. However, on the next pass longtable will notice the error and reduce the column width accordingly. If this has to propagate to chunks before the \multicolumn one, an additional pass will, of course, be needed. It is possible to construct tables where this rippling up of the correct widths takes several passes to 'converge' and produce a table with all chunks aligned. However in order to need many passes one needs to construct a table with many overlapping \multicolumn entries, all being wider than the natural widths of the columns they span, and all occurring in different chunks. In the typical case the algorithm will converge after three or four passes, and, the benefits of not needing to edit the document before the final run to add \setlongtables, and the better choice of final column widths in the case of multiple \multicolumn entries will hopefully more than pay for the extra passes that may possibly be needed.

版本 4 大大缓解了这个问题。表的第一遍传递确实会使第三列太宽。然而，在下一次传递中，longtable 将注意到这个错误并相应地缩小列宽。如果这必须传播到\multicolumn 之前的块中，当然需要额外的传递。可以构建表格，其中正确宽度的这种波动需要几次传递才能收敛，并且产生所有块对齐的表格。但是，为了需要多次传递，需要构建一个表格，其中包含许多重叠的\multicolumn 条目，所有这些条目都比它们跨越的列的自然宽度更宽，并且所有这些条目都出现在不同的块中。在典型情况下，算法将在三到四次传递后收敛，并且不需要在最终运行之前编辑文档以添加\setlongtables 的好处，以及在多个\multicolumn 条目的情况下更好的选择最终列宽将有望超过可能需要的额外传递的好处。

So Table 3 converges after 4 passes, as seen in Table 6.

因此，在第 4 次迭代之后，表 3 收敛，如表 6 所示。

You can still speed the convergence by introducing judicious \kill lines, if you happen to have constellations like the above.

如果您恰好具有像上面那样的星座，您仍然可以通过引入明智的\kill 行来加速收敛。

If you object even to LaTeX-ing a file twice, you should make the first line of every longtable a \kill line that contains the widest entry to be used in each column. All chunks will then line up on the

如果你甚至反对将文件 LaTeX 编译两次，那么你应该在每个 longtable 的第一行添加一个包含每列中要使用的最宽条目的\kill 行。所有的块都会在第一遍排列好。

first pass.

5 Adjustment

调整

The optional argument of longtable controls the horizontal alignment of the table. The possible options are `[c]`, `[r]` and `[l]`, for centring, right and left adjustment, respectively.

longtable 的可选参数控制表格的水平对齐方式。可能的选项有`[c]`、`[r]` 和`[l]`，分别表示居中、右对齐和左对齐。

`\LTleft` `\LTright`

Normally centring is the default, but this document specifies

通常，默认值是居中对齐，但是在这个文档中，设置了如下的代码：

```
\setlength\LTleft\parindent
\setlength\LTright\fill
```

in the preamble,

在导言部分.

which means that the tables are set flush left, but indented by the usual paragraph indentation. Any lengths can be specified for these two parameters, but at least one of them should be a rubber length so that it fills up the width of the page, unless rubber lengths are added between the columns using the `\extracolsep` command. For instance

这意味着表格被设置为左对齐，但是缩进采用通常的段落缩进。这两个参数可以指定任何长度，但至少其中一个应该是弹性长度，以便填满页面的宽度，除非在列之间使用`\extracolsep` 命令添加了弹性长度。例如：

```
\begin{tabular*}{\textwidth}{@{\extracolsep{...}}...}
```

produces a full width table, to get a similar effect with longtable specify

生成一个全宽的表格，如果要使用 longtable 实现类似效果，请指定如下代码：

```
\setlength\LTleft{0pt}
\setlength\LTright{0pt}
\begin{longtable}{@{\extracolsep{...}}...}
```

6 Changes

变更

This section highlights the major changes since version 2. A more detailed change log may be produced at the end of the code listing if the `ltxdoc.cfg` file specifies

本节主要介绍自版本 2 以来的主要变更。如果`ltxdoc.cfg` 文件指定了以下内容，则在代码列表的末尾可以生成更详细的变更日志：

```
\AtBeginDocument{\RecordChanges}
\AtEndDocument{\PrintChanges}
```

Changes made between versions 2 and 3.

2 和 3 版本之间的变更：

- The mechanism for adding the head and foot of the table has been completely rewritten. With this new mechanism, longtable does not need to issue a `\clearpage` at the start of the table,
- 完全重写了添加表格头部和尾部的机制。使用这种新机制，longtable 在表格开始时不需要发出`\clearpage` 命令，因此表格可以从页面的中间开始。还

and so the table may start half way down a page. Also the \endlastfoot command which could not safely be implemented under the old scheme, has been added.

添加了\endlastfoot 命令，在旧方案下无法安全实现。

- longtable now issues an error if started in the scope of \twocolumn, or the multicols environment.

- longtable 现在会在\twocolumn 或 multicols 环境的作用域中启动时发出错误。

- The separate documentation file longtable.tex has been merged with the package file, longtable.dtx using Mittelbach's doc package.

- 将独立的文档文件longtable.tex 与包文件longtable.dtx 合并，使用了 Mittelbach 的 doc 宏包。

- Support for footnotes has been added. Note however that \footnote will not work in the 'head' or 'foot' sections of the table. In order to put a footnote in those sections (e.g., inside a caption), use \footnotemark at that point, and \footnotetext anywhere in the table *body* that will fall on the same page.

- 添加了对脚注的支持。但是需要注意的是，\footnote 命令在表格的head 或foot 部分将无法正常工作。为了在这些部分（例如标题内部）放置脚注，请在该处使用\footnotemark，并在表格正文中的任何位置（位于同一页上）使用\footnotetext。

- The treatment of \multicolumn has changed, making \kill lines unnecessary, at the price of sometimes requiring a third pass through LaTeX.

- \multicolumn 的处理方式已更改，不再需要使用\kill 命令，但有时需要通过 LaTeX 进行三次编译。

- The \newpage command now works inside a longtable.

- \newpage 命令现在在 longtable 环境内也可用。

Changes made between versions 3 and 4.

3 和 4 版本之间的变更：

- A new algorithm is used for aligning chunks. As well as the widest width in each column, longtable remembers which chunk produced this maximum. This allows it to check that the maximum is still achieved in later runs. As longtable can now deal with columns shrinking as the file is edited, the \setlongtables system is no longer needed and is disabled.

- 采用了一种新的算法来对齐块。除了每一列的最宽宽度外，longtable 还记住了哪个块产生了这个最大宽度。这使得它可以检查在后续运行中是否仍然达到了最大宽度。由于 longtable 现在可以处理文件编辑时列的收缩，因此不再需要和禁用\setlongtables 系统。

- An extra benefit of the new algorithm's ability to deal with 'shrinking' columns is that it can give better (narrower) column widths in the case of overlapping \multicolumn entries in different chunks than the previous algorithm produced.

- 新算法的另一个好处是，在不同块中有重叠的\multicolumn 条目的情况下，它可以给出更好（更窄）的列宽，而以前的算法则不能实现这一点。

- The 'draft' multicolumn system has been removed, along with related commands such as \LTmulticolumn.

- 删除了draft 多列系统，以及相关的命令，如\LTmulticolumn。

- The disadvantage of the new algorithm is that it can take more passes. The theoretical maximum is approximately twice the length of a 'chain' of columns with overlapping \multicolumn entries, although in practice it usually converges as fast as the old version. (Which always converged in three passes once \setlongtables was activated.)

- 新算法的缺点是可能需要更多次的编译。理论上的最大次数约为具有重叠\multicolumn 条目的列链的长度的两倍，但在实践中，它通常与旧版本一样快速收敛。（一旦激活\setlongtables，旧版本总是在三次编译后收敛。）

- * and \nopagebreak commands may be used to control page breaking.

- 可以使用* 和\nopagebreak 命令来控制分页。

7 Summary

表 7: A summary of longtable commands

Parameters		参数
`\LTleft`	Glue to the left of the table. 表格左边的间距。	(`\fill`)
`\LTright`	Glue to the right of the table. 表格右边的间距。	(`\fill`)
`\LTpre`	Glue before the table. 表格前的间距。	(`\bigskipamount`)
`\LTpost`	Glue after the table. 表格后的间距。	(`\bigskipamount`)
`\LTcapwidth`	The width of a parbox containing the caption. 包含标题的 parbox 的宽度。	(4in)
`LTchunksize`	The number of rows per chunk. 每个块中的行数。	(20)
Optional arguments to `\begin{longtable}`		**`\begin{longtable}`** 的可选参数
none	Position as specified by `\LTleft` and `\LTright`. 按照 `\LTleft` 和 `\LTright` 的设置位置。	
`[c]`	Centre the table. 居中表格。	
`[l]`	Place the table flush left. 将表格左对齐。	
`[r]`	Place the table flush right. 将表格右对齐。	
Commands to end table rows		结束表格行的命令
`\\`	Specifies the end of a row 指定行的结束。	
`\\[`⟨*dim*⟩`]`	Ends row, then adds vertical space (as in the tabular environment). 结束行，然后添加垂直间距（与 tabular 环境中的行为相同）。	
`\\*`	The same as `\\` but disallows a page break after the row. 与 `\\` 相同，但不允许在行后进行分页。	
`\tabularnewline`	Alternative to `\\` for use in the scope of `\raggedright` and similar commands that redefine `\\`. 用于在 `\raggedright` 和类似命令的作用域内代替 `\\`。	
`\kill`	Row is 'killed', but is used in calculating widths. 行被“杀死”，但用于计算宽度。	
`\endhead`	Specifies rows to appear at the top of every page. 指定在每页顶部出现的行。	
`\endfirsthead`	Specifies rows to appear at the top the first page. 指定在第一页顶部出现的行。	
`\endfoot`	Specifies rows to appear at the bottom of every page. 指定在每页底部出现的行。	
`\endlastfoot`	Specifies rows to appear at the bottom of the last page. 指定在最后一页底部出现的行。	
longtable caption commands		**longtable** 标题命令
`\caption{`⟨*caption*⟩`}`	Caption 'Table ?: ⟨*caption*⟩', and a '⟨*caption*⟩' entry in the list of tables. 标题为“Table ?: ⟨*caption*⟩”，并在表格列表中添加一个 ⟨*caption*⟩ 条目。	
`\caption[`⟨*lot*⟩`]{`⟨*caption*⟩`}`	Caption 'Table ?: ⟨*caption*⟩', and a '⟨*lot*⟩' entry in the list of tables. 标题为“Table ?: ⟨*caption*⟩”，并在表格列表中添加一个 ⟨*lot*⟩ 条目。	
`\caption[]{`⟨*caption*⟩`}`	Caption 'Table ?: ⟨*caption*⟩', but no entry in the list of tables. 标题为“Table ?: ⟨*caption*⟩”，但不在表格列表中添加条目。	
`\caption*{`⟨*caption*⟩`}`	Caption '⟨*caption*⟩', but no entry in the list of tables. 标题为 ⟨*caption*⟩，但不在表格列表中添加条目。	
Commands available at the start of a row		在行开始处可用的命令

`\pagebreak`	Force a page break. 强制分页。
`\pagebreak[`⟨*val*⟩`]`	A 'hint' between 0 and 4 of the desirability of a break. 分页的“提示”，为 0 到 4 的值，表示分页的可取性。
`\nopagebreak`	Prohibit a page break. 禁止分页。
`\nopagebreak[`⟨*val*⟩`]`	A 'hint' between 0 and 4 of the undesirability of a break. 分页的“提示”，为 0 到 4 的值，表示分页的不可取性。
`\newpage`	Force a page break. 强制分页。

Footnote commands available inside longtable **longtable 中可用的脚注命令**

`\footnote`	Footnotes, but may not be used in the table head & foot. 脚注，但不能在表格的头部和尾部使用。
`\footnotemark`	Footnotemark, may be used in the table head & foot. 脚注标记，可以在表格的头部和尾部使用。
`\footnotetext`	Footnote text, use in the table body. 脚注文本，在表格的正文中使用。

Setlongtables

`\setlongtables`	Obsolete command. Does nothing now. 过时的命令，现在不起任何作用。

8 Verbatim highlights from Table 1

```
\begin{longtable}{@{*}r||p{1in}@{*}}
KILLED & LINE!!!! \kill
\caption[An optional table caption …]{A long table\label{long}}\\
\hline\hline
\multicolumn{2}{@{*}c@{*}}%
     {This part appears at the top of the table}\\
\textsc{First}&\textsc{Second}\\
\hline\hline
\endfirsthead
\caption[]{(continued)}\\
\hline\hline
\multicolumn{2}{@{*}c@{*}}%
      {This part appears at the top of every other page}\\
\textbf{First}&\textbf{Second}\\
\hline\hline
\endhead
\hline
This goes at the&bottom.\\
\hline
\endfoot
\hline
These lines will&appear\\
in place of the & usual foot\\
at the end& of the table\\
\hline
\endlastfoot
\env{longtable}  columns  are specified& in the \\
same way as  in the \env{tabular}& environment.\\
…
\multicolumn{2}{||c||}{This is a …}\\
…
Some lines may take…&
    \raggedleft This last column is a ``p'' column…
    \tabularnewline
…
Lots of lines& like this.\\
…
\hline
Lots\footnote{…} of lines& like this.\\
```

```
Lots   of   lines& like this\footnote{…}\\
\hline
Lots of lines& like this.\\
…
\end{longtable}
```