

Parallel typesetting for critical editions: the `reledpar` package*

Maïeul Rouquette[†] based on the original `ledpar` by Peter Wilson
Herries Press[‡]

Abstract

The `reledmac` package has been used for some time for typesetting critical editions. The `reledpar` package is an extension to `reledmac` which enables texts and their critical apparatus to be typeset in parallel, either in two columns or on pairs of facing pages.

`reledpar` provides many tools and options. Normally, they are all documented in this file. Also provided is a help folder, “examples”. The folder contains additional examples (although not for all cases). Examples starting by “3-” are for basic uses, those starting by “4-” are for advanced uses.

To report bugs, please go to `ledmac`’s GitHub page and click “New Issue”: <https://github.com/maieul/ledmac/issues/>. You must open an account with github.com to access my page (maieul/ledmac). GitHub accounts are free for open-source users. You can report bug in English or in French (better).

You can subscribe to the `reledmac` email list in:
<http://geekographie.maieul.net/146>

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[†]maieul at maieul dot net

[‡]herries dot press at earthlink dot net

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1 Introduction

1.1 Aim of this package

Some critical editions contain texts in more than one form, such as a set of verses in one language and their translations in another. In such cases there is a desire to be able to typeset the two texts, together with any critical apparatus, in parallel. The `reledpar` package is an extension to `reledmac` that enables two texts and their apparatus to be set in parallel, either in two columns or on pairs of facing pages.

The package has to try and coerce \TeX into paths it was not designed for. Use of the package, therefore, may produce some surprising results. In this case, please reports them to the author via github's issues: <https://github.com/maieul/ledmac/issues/>.

This manual contains a general description of how to use `reledpar` starting in section 3; the complete source code for the package, with extensive documentation (in sections I through XXIII); and an Index to the source code. As `reledpar` is an adjunct to `reledmac` we assume that you have read the `reledmac` manual. Also `reledpar` requires `reledmac` to be used, in the version distributed with version.

You do not need to read the source code for this package in order to use it but doing so may help to answer any questions you might have. The documentation's sections are numbered in roman numeral.

On a first reading, We suggest that you should skip anything after the general documentation in first sections until I, unless you are particularly interested in the innards of `reledpar`.

1.2 Historical overview

Many of the code of this package is based on the `eledpar` package, which was based on the `ledpar`, created as an extension of the `ledmac` package.

Names of the package related to parallel typesetting have moved in parallel of names of the package related to critical edition.

Please read `reledmac`'s handbook in order to understand this evolution.

2 Options

The package can be loaded with a number of global options which are listed here. Those options are fully described in the paragraphs devoted to their feature.

2.1 Synchronization's options

Please read the paragraph on synchronization's option on 6.2.2 p. 11 to understand better those options.

shiftedpstarts prevents white space between paragraphs on facing pages, the white space necessary to sync pages is collected at the bottom of the page instead.

advancedshiftedpstarts does the same as **shiftedpstarts**, but the `pstart` shift are not counted to determine when cutting the page. That could help to avoid page with blank lines at the bottom.

nomaxlines allows facing pages to have different numbers of lines.

nosyncpstarts disables syncing on facing pages. In that case the pages are filled as two streams normal.

2.2 Other options

parledgroup allows the use of `ledgroup` environment with `reledpar`.¹

widthliketwocolumns set the width of the text printed in a single column to be the same as the width of the text printed in two parallel columns with `reledpar`. This is useful when alternating between normal and parallel typesetting.²

¹This option can either be used on `reledmac` or `reledpar`.

²This option can either be used on `reledmac` or `reledpar`.

sameparallelpagenumber sets page numbers on facing pages to the same value.

prevpgnotnumbered enables that the page before facing pages (the one automatically inserted to start parallel pages on a left page) is not counted. This applies only if the page is empty.

movecolumnsonrightpage make the left column on the right page become the right column, and the left column become the right column. It allows to have a text running on the inner column, and an other one on the outer column.

3 General

A file may mix *numbered* and *unnumbered* text. Numbered text is printed with marginal line numbers and can include footnotes and endnotes that are referenced to those line numbers: this is how you will want to print the text that you are editing. Unnumbered text is not printed with line numbers, and you can't use `reledmac`'s note commands with it: this is appropriate for introductions and other material added by the editor around the edited text.

The `reledpar` package lets you typeset two *numbered* texts in parallel³. This can be done either as setting the 'Leftside' and 'Rightside' texts in two columns or on facing pages. In the paired pages case footnotes are placed at the bottom of the page on which they are called out — that is, footnotes belonging to the left are set at the foot of a left (even numbered) page, and those for right texts are at the bottom of the relevant right (odd numbered) page. However, in the columnar case, all footnotes are set at the bottom left of the page on which they are called out — they are not set below the relevant column.

`reledmac` essentially puts each chunk of numbered text (the text within a `\pstart ...\pend`) into a box and then following the `\pend` extracts the text line by line from the box to number and print it. More precisely, the text is first put into the box as though it was being typeset as normal onto a page and any notes are stored without being typeset. Then each typeset line is extracted from the box and any notes for that line are recalled. The line, with any notes, is then output for printing, possibly with a line number attached. Effectively, all the text is typeset and then afterwards all the notes are typeset.

`reledpar` similarly puts the left and right chunks into boxes but can't immediately output the text after a `\pend` — it has to wait until after both the left and right texts have been collected before it can start processing. This means that several boxes are required and possibly \TeX has to store a lot of text in its memory; both the number of potential boxes and memory are limited. If \TeX 's memory is overfilled the recourse is to reduce the amount of text stored before printing.

`\maxchunks` It is possible to have multiple chunks in the left and right texts before printing them. The macro `\maxchunks{<num>}` specifies the maximum number of chunks within the left or right texts. This is initially set as:

```
\maxchunks{5120}
```

meaning that there can be up to 5120 chunks in the left text and up to 5120 chunks in

³You can use, anyway, `\numberlinefalse` to disable printing of line numbers.

the right text, requiring a total of 10240 boxes. If you need more chunks then you can increase `\maxchunks`. The `\maxchunks` must be called in the preamble.

If you `\maxchunks` is too little you can get a `reledpar` error message along the lines: “Too many `\pstart` without printing. Some text will be lost.” then you will have to either increase `\maxchunks` or use the parallel printing commands (`\Columns` or `\Pages`) more frequently.

When typesetting verse using `\stanza`, each line is treated as a chunk, so be warned that if you are setting parallel verses you might have to increase `\maxchunks` much more than it appears at first sight.

In general, `reledmac` is a \TeX resource hog, and `reledpar` only makes things worse in this respect.

4 Parallel columns

4.1 Basic use

`pairs` Numbered text that is to be set in columns must be within a `pairs` environment. Within the environment the text for the lefthand and righthand columns is placed within the `Leftside` and `Rightside` environments, respectively; these are described in more detail below in section 7.

`\Columns` The command `\Columns` typesets the texts in the previous pair of `Leftside` and `Rightside` environments. The general scheme for parallel columns looks like this:

```
\begin{pairs}
\begin{Leftside} reledmac numbered text commands \end{Leftside}
\begin{Rightside} reledmac numbered text commands \end{Rightside}
\end{pairs}
\Columns
\begin{pairs}
\begin{Leftside} reledmac numbered text commands \end{Leftside}
...
\end{pairs}
\Columns
```

`\AtBeginPairs` Keep in mind that the `\Columns` **must be** outside of the `pairs` environment. You can use the macro `\AtBeginPairs` to insert a code at the beginning of each `pairs` environments. That could be useful to add the `\sloppy` macro to prevent overfull hboxes in two columns.

```
\AtBeginPairs{\sloppy}
```

There is no required pagebreak before or after the columns.

4.2 Setting

4.2.1 Column’s width

`\Lcolwidth` `\Rcolwidth` The lengths `\Lcolwidth` and `\Rcolwidth` are the widths of the left and right columns,

respectively. By default, these are:

```
\setlength{\Lcolwidth}{0.45\textwidth}
```

```
\setlength{\Rcolwidth}{0.45\textwidth}
```

They may be adjusted if one text tends to be ‘bulkier’ than the other.

4.2.2 Column’s separator

`\columnrulewidth` The macro `\columnseparator` is called between each left/right pair of lines. By default it inserts a vertical rule of width `\columnrulewidth`. As this is initially defined to be 0pt the rule is invisible. For a visible rule between the columns you could try:

```
\setlength{\columnrulewidth}{0.4pt}
```

You can also modify `\columnseparator` if you want more control.

4.2.3 Column’s positions

`\columnspan` By default, columns are positioned to the right of the page. However, you can use `\columnspanposition{L}` to align them to the left, or `\columnspanposition{C}` to center them.

When you use `\stanza`, the visible rule may shift when a verse has a hanging indent. To prevent shifting, use `\setstanzaindent` outside the `Leftside` or `Rightside` environment.

`\beforecolumnseparator` By default, the spaces around column separator are the same as the space:
`\aftercolumnseparator`

- On the left of columns, if columns are aligned right.
- On the right of columns, if columns are aligned left.
- On both the left and right columns, if columns are centered.

You can redefine `\beforecolumnseparator` and `\aftercolumnseparator` length to define spaces before or after the column separator, instead of letting `reledpar` calculate them automatically.

```
\setlength{\beforecolumnseparator}{length}
\setlength{\aftercolumnseparator}{length}
```

If you want to revert to the previous behavior, just set with a negative value.

4.2.4 Mixing two columns and one column texts

`\widthliketwocolumns` If you want to mix two-column with single-column text, you can align horizontally single-column text to two-column text with `\widthliketwocolumnstrue`. To reset this feature, use `\widthliketwocolumnsfalse`. You can also use `widthliketwocolumns` as a global option when loading `reledmac` or `reledpar`.

`\Xnoteswidthliketwocolumns` In most cases, you should use `\widthliketwocolumns` in combination with `\Xnoteswidthliketwocolumns` and `\notesXwidthliketwocolumns` to align the critical/familiar footnotes with the two columns. See `reledmac`’s handbook for more details.

If you want to have continuous line numbers between multiple columns and single columns, use the `continuousnumberingwithcolumns` option when loading `reledmac` or `reledpar`. You will need to use `\pausenumbering...``\resumenumbering` instead of `\endnumbering...endnumbering` (see 5.2.7 p. 20).

4.3 Note about `\AtEveryPstart*` and `\AtEveryPend*`

The content of `\AtEveryPstart` / `\AtEveryPend` (without star) is added before every `\pstart` / after every `\pend`, respecting the left / right side.

The content of `\AtEveryPstart*` / `\AtEveryPend*` (with star) is added before every `\pstart` / after every `\pend`, but there is no distinction between left and right sides.

However, as this content is also added when we typeset pages in parallel, `reledmac` must add it once for left `\pstart` and once for right `\pstart`. So if you use it to add vertical spacing, it will be problematic in parallel columns, as you will have two times the vertical spacing, vertical spacing will be twice as large as expected. A solution is to add a test inside to make distinction between columns parallel typesetting / page parallel typesetting.

```
\AtEveryPstart*{%
\ifl@dprintingcolumns
  \vspace{0.125\baselineskip}
\else
  \vspace{0.25\baselineskip}
\fi
}
```

5 Keeping translation in the outside/inside column

By default, `reledpar` works with left and right columns. However, it is possible to work with inner and outer column. In this case, use the `movecolumnsonrightpage` at loading time of the package.

The `Leftside` environment will correspond to the inner column, and the `Rightside` environment will correspond to the outer column.

6 Facing pages

6.1 Basic usage

`pages` Numbered text that is to be set on facing pages must be within a `pages` environment. Within the environment the text for the lefthand and righthand pages is placed within the `Leftside` and `Rightside` environments, respectively.

`\Pages` The command `\Pages` typesets the texts in the previous pair of `Leftside` and `Rightside` environments. The general scheme for parallel pages looks like this:

```
\begin{pages}
\begin{Leftside} reledmac numbered text commands \end{Leftside}
```

```

\begin{Rightside} reledmac numbered text commands \end{Rightside}
\begin{Leftside} reledmac numbered text commands \end{Leftside}
...
\end{pages}
\Pages

```

The Leftside text is set on lefthand (even numbered) pages and the Rightside text is set on righthand (odd numbered) pages. Each `\Pages` command starts a new even numbered page. After parallel typesetting is finished, a new page is started. Note that the `\Pages` **must be** outside of the pages environment.

6.2 Setting

6.2.1 Text width

`\Lcolwidth` Within the pages environment the lengths `\Lcolwidth` and `\Rcolwidth` are the widths of the left and right pages, respectively. By default, these are set to the normal textwidth for the document, but can be changed within the environment if necessary.

6.2.2 Way of synchronizing⁴

Synchronization of left and right texts in parallel processing requires some ‘numbered’ auxiliary files to be written (namely .1, .1R, .2, .2R, and so forth), the content of which may change as long as synchronization is not complete. This usually requires LaTeX to be run several times. Therefore, it is advised to use in conjunction utilities such as latexmk to ensure that synchronization is complete.

Numbered paragraphs which are contained between the `\pstart` and `\pend` macros are thereafter called ‘chunks’.

In short, the default setting is designed in such a way that corresponding chunks of text are always kept in synchronization, even at the cost of page padding, as it may result in leaving blank lines between chunks of text. Conversely, using in conjunction `advancedshiftedpstarts` and `nomaxlines` settings ensures that pages are filled with text to full advantage—at the cost of the chunks not being kept in synchronization—and every chunk starts on the facing page of its corresponding chunk.

To understand better how each of the synchronization settings of `reledpar` works, one must first understand how the default setting of `reledpar` synchronizes the left and right chunks.

The aim of the default setting is twofold:

- To ensure that left pages contain what is to be on left sides and that right pages contain what is to be on right sides.
- To ensure that every chunk starts on the page that is facing its corresponding chunk.

As regards the latter, `reledpar` checks that both of the following rules are respected:

⁴There is a French version of this article on <http://geekographie.maieul.net/185>.

- The numbers of lines of every pair of chunks must be identical. To keep this rule, `reledpar` may insert some blank lines at the bottom of the chunk that is shorter so that it may eventually have the same number of lines as the one that is longer.
- The main content of two facing pages, apart from critical and familiar footnotes, must have the same numbers of lines, including those that may be blank. Consequently, if one left page contains more notes than the corresponding right page, the bottom of the right page must be left blank.

Each of these rules can be modified by a number of optional synchronization settings in `reledpar`:

1. Regarding the number of lines a pair of chunks may have:
 - (a) 'shiftedpstarts' setting merely moves any added blank lines from the bottom of the chunks to the bottom of the page. It does not allow to have more lines on a given page as it just removes the blank lines between the chunks and does nothing more. To understand better how this work, you may compare the total amounts of lines of text on a given page whether you have activated this setting or not: you will see that both amounts are the same.
 - (b) 'advancedshiftedpstarts' prevents any blank lines from being inserted at the bottom of the chunks, also taking them away from the total amount of lines the page may have. This allows to get more lines on the pages. However, please note that:
 - Blank lines are taken into account as `reledpar` moves from one to the following chunk of text, so that every pair of chunks may always start on the same facing pages.
 - Consequently, blank lines continue to be taken into account in the calculation of the amount of lines a given pair of pages may have. This is why when a longer chunk runs from one page to another the shorter corresponding one also runs across pages, even if this may result in some blank vertical space being left on the first page.
2. As regards the number of lines per page, including blank ones, the `nomaxlines` setting disregards the rule that forces two facing pages to have the same numbers of lines. So it allows to have more text on the pages. Then, by a complex mechanism it is ensured that two corresponding chunks may always start on the same facing pages, provided that `shiftedpstarts` or `advancedshiftedpstarts` settings shall not be activated.

Lastly, one may disregard all of the synchronization rules and content himself with parallel texts typesetting. To achieve this, please use the `nosyncpstarts` setting.

Please note that every change of synchronization setting resets the content of the 'numbered' auxiliary files to make sure that `reledpar` does not try to make the synchronization with wrong calculations.

6.2.3 Page number

By default, `\Pages` use the standard \TeX page number scheme. This means that pages are numbered continuously following printed-book conventions: from left-hand to right-hand side, left-hand pages having even numbers, right-hand pages having odd numbers.

However, you can use the package option `sameparallelpagewatermark` to have the same page number for both left and right side. In this case, this setting will apply only for pages typeset by `\Pages`, not for “normal” pages.

Please also read advising in 12 p. 22.

6.2.4 Page breaking

`\setgoalfraction` When doing parallel pages `reledpar` has to guess where \TeX is going to put pagebreaks and hopefully get there first in order to put the pair of texts on their proper pages. When it thinks that the fraction `\@goalfraction` of a page has been filled, it finishes that page and starts on the other side’s text. The standard value is 0.9.

If you think you can get more on a page, increase this. On the other hand, if some left text overflows onto an odd numbered page or some right text onto an even page, try reducing it. You can change it using `\setgoalfraction{<newvalue>}`.

6.2.5 Right page before \Pages

When `\Pages` are called, it starts at a new left page, in order to have parallel pages. Consequently, if it is called on a left page, it clears the current page and then lets a right void page.

`reledpar` provides two options to customize this (eventual) right page.

`prevpgstyle=<style>` in order to set the style of this page. A common value of `<style>` is empty. Use `prevpgstyle=empty` will suppress header and footer in this page. Please also read advising in 12 p. 22.

`prevpgnotnumbered` will make this page won’t be counted in the page counter.

6.2.6 Notes about \mainmatter

If you use `\frontmatter`, do not use `\mainmatter` directly before `\Pages` because it could create spurious empty pages.

Use instead `\pages` with the optional argument `[mainmatter]`. In this case, the content of `\Pages` will start on a left side, without any spurious empty page, and the left pages will be odd (and not event like in normal way), the first one being 1.

6.3 Critical and familiar footnotes

Of course, in “Facing pages”, the `reledmac`’s both critical and familiar footnotes can be used. However, some specific points must be taken into consideration.

6.3.1 Notes height setting

Since `eledpar` v1.13.0, long notes in facing pages can flow from left to right pages, and *vice-versa*.

However, the `reledmac` default setting for the maximum allotted size to notes is greater than `\textheight`. That makes impossible for long notes to flow across pages.⁵ We have not changed this default setting, because we do not want to break compatibility with older version of `reledmac` and we want to be as close as possible to default \LaTeX 's feature.

So, you MUST change the default setting via `\Xmaxhnotes` (for critical notes) and `\maxhnotesX` (for familiar notes). Both commands are explained in `reledmac` handbook (7.13.6 p. 48). As an advisable setting:

```
\AtBeginDocument{%
  \Xmaxhnotes{0.6\textheight}
  \maxhnotesX{0.6\textheight}
}
```

6.3.2 About the numbering of familiar footnotes

If you use the same series of familiar footnotes on both sides, the numbers won't be correct in the first run. There will be a continuous numbering for left notes, and a continuous numbering for right notes. However, after the second run, the numbering will be continuous, alternating between the left and right side. For example if you have two left pages and two right pages, with one note by page, you will obtain the following numbering at the first run: 1 (left page), 3 (right page), 2 (left page), 4 (right page). But at the next run, you will obtain: 1 (left page), 2 (right page), 3 (left page), 4 (right page).

If you use parallel columns, during the second of run of typesetting the footnote numbering will not run down the columns. Instead, it will read both column lines completely across the page, and number footnotes from left to right.

6.3.3 Using `perpage` package

It follows from what has been said in the preceding paragraph that if you use the `\MakePerPage` command of the `perpage` package for footnotes called in parallel typesetting, you must append to the counter the suffix `@typeset`.

So do not set:

```
\MakePerPage{footnote}
\MakePerPage{footnoteA}
\MakePerPage{footnoteB}
```

But set:

```
\MakePerPage{footnote@typeset}
```

⁵The same applies to \LaTeX normal notes. Read <http://tex.stackexchange.com/a/228283/7712> for technical informations.

```
\MakePerPage{footnoteA@typeset}
\MakePerPage{footnoteB@typeset}
```

6.3.4 Notes for one side only

`\Xonlyside` You may want to typeset notes on one side only (either left or right). Use `\Xonlyside[⟨s⟩]{⟨p⟩}` to set critical notes, and `\onlysideX[⟨s⟩]{⟨p⟩}` to set familiar notes. `⟨p⟩` must be set to L for notes to be confined only on the left side and to R for notes to be confined only on the right side.

`\onlysideX`

Notice that these options just tell you \LaTeX to not continue long notes on the other side. It is not designed to allow you to call footnotes on one side but print them on the other side.

6.3.5 Familiar notes called on the right side, but to be printed on the left side

`\footnoteXnomk`
`\footnoteXmk`

As often happens, the left side has less room for text. We may want to call familiar notes in the right side while using at the same time the available space in the left side to print them.

To achieve this, we call `\footnoteXnomk{⟨notecontent⟩}` in the left side. X is to be replaced by the series letter. We do this call in the left side after the word which matches up to the one in the right side after which we want to insert the actual footnote mark.

In the right side, we call `\footnoteXmk` at the place we want to have the footnote mark. X is to be replaced by the series letter. For example:

```
\begin{Leftside}
\beginnumbering
\pstart
A little cat\footnoteAnomk{A note.}. And so one ...
\pend
\endnumbering
\end{Leftside}
\begin{Rightside}
\beginnumbering
\pstart
Un petit chat\footnoteAmk. And so one ...
\pend
\endnumbering
\end{Rightside}
```

6.4 Critical notes called on leftside but printed on right side

Sometimes, you need to print the critical notes on the right side, despite the fact that they refer to the lemmas on the left side. In this case, you must use `\edtextlater` and `\edtextnow`. The `\edtextlater{⟨lemma⟩}{⟨footnote command⟩}` command must be called on the same side as the lemma. It is similar to the standard `\edtext` command, but does not add the footnote immediately on the page, keeping it for later. `\edtextnow`

`\edtextlater`
`\edtextnow`

must be called on the side on which you want to print the lemma, approximately at the point corresponding to the equivalent `\edtextlater` command. It will add the notes stored by the equivalent `\edtextlater` command.

The relationship between the `\edtextlater` and `\edtextnow` commands is determined by the order of calling: the first `\edtextnow` corresponds to the first `\edtextlater`, the second `\edtextnow` corresponds to the second `\edtextlater` etc.

`\edtextnow` is a parameterless macro, so it gobbles the following space. If you want to keep it, add `{ }` or backslash followed by a space.

6.5 Using line flag

`\Xlineflag` Use `\Xlineflag[⟨s⟩]` to add right line flag (7.3 p. 18) to right critical footnotes and
`\Xendlineflag` `\Xendlineflag[⟨s⟩]` to add it to right critical endnotes.

7 Left and right texts

7.1 Environments

Parallel texts are divided into Leftside and Rightside. The form of the contents of these two are independent of whether they will be set in columns or pages.

`Leftside` The left text is put within the Leftside environment and the right text likewise in
`Rightside` the Rightside environment. The number of Leftside and Rightside environments must be the same.

7.2 Numbering text lines and paragraphs

`\beginnumbering` Each section of numbered text must be preceded by `\beginnumbering` and followed by
`\endnumbering` `\endnumbering`, like:
`\beginnumbering`
`⟨text⟩`
`\endnumbering`

These have to be separately specified within Leftside and Rightside environments.

The `\beginnumbering` macro resets the line number to zero, reads an auxiliary file called `⟨jobname⟩.nn` (where `⟨jobname⟩` is the name of the main input file for this job, and `nn` is 1 for the first numbered section, 2 for the second section, and so on), and then creates a new version of this auxiliary file to collect information during this run. Separate auxiliary files are maintained for right hand texts and these are named `⟨jobname⟩.nnR`, using the ‘R’ to distinguish them from the left hand and serial (non-parallel) texts.

`\memorydump` The command `\memorydump` effectively performs an `\endnumbering` immediately followed by a `\beginnumbering` while not restarting the numbering sequence. This has the effect of clearing TeX’s memory of previous texts and any associated notes, allowing longer apparent streams of parallel texts. The command should be applied to both left and right texts, and after making sure that all previous notes have been output. For example, along the lines of:


```

\begin{pages}
\begin{Leftside}
  \beginnumbering
  ...
\end{Leftside}
\begin{Rightside}
  \beginnumbering
  ...
\end{Rightside}
\end{pages}
\Pages
\begin{pages}
\begin{Leftside}
  \memorydump
  ...
\end{Leftside}
\begin{Rightside}
  \memorydump
  ...
\end{pages}

```

`\numberstarttrue`
`\numberstartfalse`

It is possible to insert a number at every `\pstart` command. You must use the `\numberstarttrue` command to have it. You can stop the numbering with `\numberstartfalse`.

You can modify the number by changing the values of the `pstartL` and `pstartR` counters (for left and right side, respectively). For example:

```
\setcounter{pstartL}{0}% To reset the counter of pstart for Left side.
```

`\thepstartL`
`\thepstartR`
`\skipnumbering`
`\hidenumbering`

You can redefine the commands `\thepstartL` and `\thepstartR` to change style. The numbering restarts on each `\beginnumbering`.

The command `\skipnumbering` when inserted in a line of parallel text causes the numbering of that particular line to be skipped. This can be useful if you are putting some kind of marker (even if it is only a blank line) between stanzas. Remember, parallel texts must be numbered and this provides a way to slip in an “unnumbered” line. When inserted into a numbered line the macro `\hidenumbering` causes the number for that particular line to be hidden; namely, no line number will print. Note that if you use it in `\stanza`, you must call it at the beginning of the verse.

7.3 Lineation system

`\firstlinenum`
`\linenumincrement`
`\firstsublinenum`
`\sublinenumincrement`

Following `\firstlinenum{<num>}` the first line number will be `<num>`, and following `\linenumincrement{<num>}` only every `<num>`th line will have a printed number.

The lineation commands which finish by a `R` apply for right text. The lineation commands which are starred apply for both left and right texts. The lineation command which does not finish by a `R` and who are not starred apply for the left side. **However,**

these commands apply to right side when they are called inside a left environment. However, such features should not be used any more. The recommended practice is to add all setting commands to the preamble.

<code>\firstlinenum*</code>	The starred versions change both left and right numbering schemes.
<code>\linenumincrement*</code>	The suffixed version change the right side, without regard to the position they are called.
<code>\firstsublinenum*</code>	
<code>\sublinenumincrement*</code>	<code>\lineationR</code> macro is the equivalent of <code>reledmac \lineation</code> macro for the right side.
<code>\firstlinenumR</code>	
<code>\linenumincrementR</code>	<code>\lineation*</code> macro is the equivalent of <code>reledmac \lineation</code> macro for both sides.
<code>\firstsublinenumR</code>	
<code>\sublinenumincrementR</code>	<code>reledmac</code> allows you to define a <code>\linenumberlist</code> to explicitly define (5.3.2 p. 21) in which line the line number will be printed. In parallel typesetting, this command affects only left side. For right side, you have to define <code>\linenumberlistR</code> .
<code>\lineationR</code>	
<code>\lineation*</code>	<code>\linenumberstyleR</code> is the equivalent of <code>reledmac \linenumberstyle</code> for right text. <code>\sublinenumberstyleR</code> is the equivalent of <code>reledmac \sublinenumberstyle</code> for right text. The starred version are for both side.
<code>\linenumberstyleR</code>	
<code>\sublinenumberstyleR</code>	
<code>\linenumberstyle*</code>	<code>\linenummarginR{<margin>}</code> sets the line margin for right side. <code>\linenummargin*{<margin>}</code> sets for both side. <code><margin></code> can be, as for <code>reledmac</code> 's <code>\linenummargin</code> one of these values: left, right, inner, outer.
<code>\sublinenumberstyle*</code>	
<code>\linenummarginR</code>	
<code>\linenummargin*</code>	
<code>\linenummarginColumns</code>	Suppose you typeset parallel texts both in parallel pages and in parallel columns. In this case, your setting of line margin in parallel pages could be different from your setting of line margin in parallel columns. For example, you could want to have line numbers on the right when your are in parallel pages, but when you are in parallel columns, to have them on the left for the left column and on the right for the right column.
<code>\linenummarginColumnsR</code>	In this case, you can use <code>\linenummarginColumns</code> , which overrides the default setting for the left column, <code>\linenummarginColumnsR</code> which overrides the default setting for the right column, and <code>\linenummarginColumns*</code> , which overrides the default for both left and right columns.
<code>\linenummarginColumns*</code>	
<code>\setRlineflag</code>	A “R” is appended to the line numbers of the right texts. This may be useful for parallel columns but for parallel pages it might be more appropriate to redefine it using <code>\setRlineflag{<flag>}</code> . Use <code>\setRlineflag{}</code> to empty it.
<code>\linenumberLevenifblanktrue</code>	By default, when a blank line is printed on one side, in order to synchronize with the other side, no line number is printed. However, you can decide to print them for blank lines, also. Use <code>\linenumberLevenifblanktrue</code> to enable it on the left side, and <code>\linenumberRevenifblanktrue</code> to enable it on right side.
<code>\linenumberRevenifblanktrue</code>	

7.4 Chunks

<code>\pstart</code>	In a serial (non-parallel) mode, each numbered paragraph, or chunk, is contained between the <code>\pstart</code> and <code>\pend</code> macros, and the paragraph is output when the <code>\pend</code> macro occurs. The situation is somewhat different with parallel typesetting as the left text (contained within <code>\pstart</code> and <code>\pend</code> groups within the <code>Leftside</code> environment) has to be set in parallel with the right text (contained within its own <code>\pstart</code> and <code>\pend</code> groups within the corresponding <code>Rightside</code> environment) the <code>\pend</code> macros cannot immediately initiate any typesetting — this has to be controlled by the <code>\Columns</code> or
<code>\pend</code>	

`\Pages` macros. Several chunks may be specified within a `Leftside` or `Rightside` environment. A multi-chunk text then looks like:

```
\begin{...side}
% \beginnumbering
\pstart first chunk \pend
\pstart second chunk \pend
...
\pstart last chunk \pend
% \endnumbering
\end{...side}
```

Numbering, via `\beginnumbering` and `\endnumbering`, may extend across several `Leftside` or `Rightside` environments. Remember, though, that the left/right sides are effectively independent of each other.

`\autopar` The `\autopar` macro can be used, instead of manually inserting `\pstart... \pends`. Please read `reledmac`'s handbook (5.2.2 p. 18).

7.5 `\AtEveryPstart` and `\AtEveryPstartCall`

In general, remember that the moment where a `\pstart` is called is different from the moment when the `\pstart... \pend` content is printed, which is when `\Pages` or `\Columns` is processed.

Consequently:

- The argument of `\AtEveryPstart` (see 5.2.4 p. 19) is called before every chunk is printed, except if you used an optional argument for the `\pstart`.
- The argument of `\AtEveryPstartCall` is called before every `\pstart`.

7.6 Language setting

If you are using the `babel` package or the `polyglossia` package, with different languages (via, say, `\selectlanguage`) for the left and right texts it is particularly important to select the appropriate language within the `Leftside` and `Rightside` environments. The initial language selected for the right text is the `babel` package's default. Also, it is the *last* language setting in a side that controls the language used in any notes for that side when they get printed. If you are using multilingual notes then it is probably safest to explicitly specify the language(s) for each note rather than relying on the language selection for the side. The right side language is also applied to the right side line numbers.

7.7 Executing code at each line

`\dolineLhook` `\dolineLhook` and `\dolineRhook` are the equivalent to the `reledmac` `\dolinehook`, respectively for left and right side.

`\doinsidelineLhook` `\doinsidelineLhook` and `\doinsidelineRhook` are the equivalent to the `reledmac` `\doinsidelinehook`, respectively for left and right side.

`\doinsidelinehook`, for the left and the right sides respectively.

About these two hooks, read `reledmac`'s handbook (5.5 p. 24).

8 Verse

If you are typesetting verses with `reledmac` you can use the `\stanza` construct, and you can also use this in right or left parallel texts. In this case each verse line is a chunk which has two implications. (1) you can unexpectedly exceed the `\maxchunks` limit or the overall limit on the number of boxes, and (2) left and right verse lines are matched, which may not be desirable if one side requires more print lines for verse lines than the other does.

`astanza` `reledpar` provides an `astanza` environment which you can use instead of `\stanza`. A `astanza` environment is a chunk. Consequently left and right *verse* are matched, and not, as with standard `\stanza`, left and right *verse lines*.

Within the `astanza` environment each verse line is treated as an individual paragraph, so there must be no blank lines in the environment otherwise there will be some extraneous vertical spacing. To use `astanza`, simply replace `\stanza` by `\begin{astanza}` and add `\end{astanza}` after the ending `\&`.

The difference between `astanza` and `\stanza` is, that the latter syncs verse by verse, while the environment syncs stanza by stanza.

If you get an error message along the lines of 'Missing number, treated as zero `\szi@@@`' it is because you have forgotten to use `\setstanzaindent` to set the stanza indents.

As `astanza` is a specify type `\pstart... \pend` structure, you can:

- Add optional argument (in brackets) after `\begin{astanza}`, as the optional argument of `\pstart`.
- Use optional argument after the last `\&` as optional argument of `\pend`.

`\sethangingsymbol` Like in `reledmac`, you could use the `\sethangingsymbol` command to insert a character in each hanging line. If you use it, you must run \TeX two time. Example for the French typography

```
\sethangingsymbol{[,]}
```

You can also use it to force hanging verse to be flush right:

```
\sethangingsymbol{\protect\hfill}
```

When you use `\lednopb` make sure to use it on both sides in the corresponding verses to keep the pages in sync.

`\thestanzaL` `\thestanzaR` When using `\stanzanumtrue` (9.9 p. 53) in parallel typesetting, stanza counter is replaced by `stanzaL` counter in left side and by `stanzaR` counter in right side. Consequently, you can redefine `\thestanzaL` and `\thestanzaR` to change their aspect.

9 Side notes

As in `reledmac`, you must use one of the following commands to add side notes: `\ledsidenote`, `\ledleftnote`, `\ledrightnote`, `\ledouternote`, `\ledinnernote`.

The `\sidenotemargin` defines the margin of the sidenote for either left or right side, depending on the current environment.

The `\sidenotemarginR` defines the margin of the sidenote for the right side.

You can use `\sidenotemargin*` to define it for both sides.

10 Parallel ledgroups

10.1 General

You can also make parallel ledgroups (see the documentation of `reledmac` about ledgroups, 10 p. 54). To do it you have:

- To load `reledpar` package with the `parledgroup` option, or to add `\parledgrouptrue`.
- To push each ledgroup between `\pstart... \pend` command.

See the following example:

```
\begin{pages}
\begin{Leftside}
\beginnumbering
\pstart
\begin{ledgroup}
ledgroup content
\end{ledgroup}
\pend
\pstart
\begin{ledgroup}
ledgroup content
\end{ledgroup}
\pend
\endnumbering
\end{Leftside}
\begin{Rightside}
\beginnumbering
\pstart
\begin{ledgroup}
ledgroup content
\end{ledgroup}
\pend
\pstart
\begin{ledgroup}
ledgroup content
\end{ledgroup}
\pend
```

```

\endnumbering
\end{Rightside}
\end{pages}
\Pages

```

10.2 Parallel ledgroups and setspace package

If you use the `setspace` package and want your notes in parallel ledgroups to be single-spaced (not half-spaced or double-spaced), just add to your preamble:

```
\setparledgroupnotespacing{\singlespacing}
```

In effect, to have correct spacing, do not change the font size of your notes.

11 Sectioning commands

The standard sectioning commands of `reledmac` are available, and provide parallel sectioning, for both two-column and two-page layout.

`\eledsectnotoc` By default, the section commands of the right side are not added to the table of contents. But you can change it, using `\eledsectnotoc{⟨arg⟩}`, where `⟨arg⟩` could be L (for left side) or R (for right side).

`\eledsectmark` By default, the headers are tokens from the left side. You can change them, using `\eledsectmark{⟨arg⟩}`, where `⟨arg⟩` could be L (for left side) or R (for right side).

12 Notes about page number

If you use `sameparallepagenumber` option (6.2.3 p. 13 or `prevpgnotnumbered` option (6.2.5 p. 13), please read the following paragraph if you want to manipulate page numbers manually.

In order to implement these two options, `reledpar` uses its own page counter, called `par@page`. Consequently, if you use at least one of these options:

1. If you modify `\thepage` command, use the value of `par@page` counter inside and not the value of `page` counter.
2. If you want to modify a page number, modify the value of `page` counter AND the value `par@page` counter.

Notes that `reledpar` automatically do it when you use `\frontmatter` and `\mainmatter` commands.

I Implementation overview

\TeX is designed to process a single stream of text, which may include footnotes, tables, and so on. It just keeps converting its input into a stream typeset pages. It was not designed for typesetting two texts in parallel, where it has to alternate from one to the other. Further, \TeX essentially processes its input one paragraph at a time — it is very difficult to get at the ‘internals’ of a paragraph such as the individual lines in case you want to number them or put some mark at the start or end of the lines.

`reledmac` solves the problem of line numbering by putting the paragraph in typeset form into a box, and then extracting the lines one by one from the box for \TeX to put them onto the page with the appropriate page breaks. Most of the `reledmac` code is concerned with handling this box and its contents.

`reledpar`’s solution to the problem of parallel texts is to put the two texts into separate boxes, and then appropriately extract the pairs of lines from the boxes. This involves duplicating much of the original box code for an extra right text box. The other, smaller, part of the code is concerned with coordinating the line extractions from the boxes.

II Preliminaries

II.1 Package’s meta-data

Announce the name and version of the package, which is targeted for \LaTeX 2e . The package also requires the `reledmac` package, however we do not load it automatically, because we prefer users to know it.

```

1 %<*code>
2 \NeedsTeXFormat{LaTeX2e}
3 \ProvidesPackage{reledpar}[2017/06/08 v2.19.0 reledmac extension for
  parallel texts]%
4
5 %

```

II.2 Package’s requirement

Few commands use `\xspace` command.

```

6 \RequirePackage{xspace}%
7 %

```

II.3 Package’s options

We use `xkeyval` in order to manage options with arguments.

```

8 \RequirePackage{xkeyval}
9 %

```

II.4 Package's options

II.4.1 Synchronization's options

`\@par@this@sync@option` The `\par@sync@option` stores the options of synchronization. It use to ensure these options do not change between two run.

```
10 \def\@par@this@sync@option{%
11 %
```

With the option 'shiftedpstarts' a long pstart on the left side (or on the right side) does not make a blank on the corresponding pstart, but the blank is put on the bottom of the page. Consequently, the pstarts on the parallel pages are shifted, but the shift stops at every end of pages.

```
\ifshiftedpstarts 12 \newif\ifshiftedpstarts
13 \DeclareOptionX{shiftedpstarts}{%
14 \shiftedpstartstrue%
15 \apptocmd{\@par@this@sync@option}{shifted}{-}{-}%
16 }%
17 %
```

With the option 'advancedshiftedpstarts' a long pstart on the left side (or on the right side) does not make a blank on the corresponding pstart, but the blank is put on the bottom of the page. Consequently, the pstarts on the parallel pages are shifted, but the shift stops at every end of pages. Differing to shiftedpstarts, the pstart shift are not counted to determine when cutting the page. That could help to avoid page with blank lines at the bottom.

```
\ifshiftedpstarts 18 \newif\ifadvancedshiftedpstarts
19 \DeclareOptionX{advancedshiftedpstarts}{%
20 \advancedshiftedpstartstrue%
21 \shiftedpstartstrue%
22 \apptocmd{\@par@this@sync@option}{advancedshifted}{-}{-}%
23 }%
24 %
```

With the option `nomaxlines`, `reledpar` allows facing pages to have not the same number of lines.

```
\ifnomaxlines 25 \newif\ifnomaxlines%
26 \DeclareOptionX{nomaxlines}{%
27 \nomaxlinestrue%
28 \apptocmd{\@par@this@sync@option}{nomax}{-}{-}%
29 }%
30 %
```

With the option `nosyncpstarts`, `reledpar` only alternate between left and right side, and does not try to obtain the same number of line in corresponding page.


```

\ifnosyncpstarts 31 \newif\ifnosyncpstarts%
32 \DeclareOptionX{nosyncpstarts}{%
33   \shiftedpstartstrue%
34   \nomaxlinesttrue%
35   \nosyncpstartstrue%
36   \apptocmd{\@par@this@sync@option}{nosync}{-}{-}%
37 }%
38 %

```

II.4.2 Position option

`\movecolumnpositiononrightpage` The `\movecolumnpositiononrightpage` boolean is set to true if, for a right page, we want the left column become a right column and the right column become a left column.

```

39 \newif\ifmovecolumnpositiononrightpage%
40 \DeclareOptionX{movecolumnpositiononrightpage}{%
41   \movecolumnpositiononrightpagetrue%
42 }%
43 %

```

II.4.3 Other options

The `parledgroup` can be called either on `reledmac` or `reledpar`.

```

44 \DeclareOptionX{parledgroup}{\parledgrouptrue}
45 %

```

`\ifwidthliketwocolumns` The `widthliketwocolumns` and `continuousnumberingwithcolumns` options can be called either on `reledmac` or `reledpar`.

```

46 \DeclareOptionX{widthliketwocolumns}{\widthliketwocolumnstrue}%
47 \DeclareOptionX{continuousnumberingwithcolumns}{\
continuousnumberingwithcolumnstrue}%
48 %

```

`\ifsameparallelpagenumbers` Options related to page numbering

```

\ifprevpgnotnumbered 49 \newif\ifsameparallelpagenumbers
50 \newif\ifprevpgnotnumbered
51 \DeclareOptionX{sameparallelpagenumbers}{\sameparallelpagenumberstrue}
52 \DeclareOptionX{prevpgnotnumbered}{\prevpgnotnumberedtrue}
53 %

```

`\prevpgstyle` We store on `\prevpgstyle` the argument of the option `prevpgstyle`.

```

54 \DeclareOptionX{prevpgstyle}{\gdef\prevpgstyle{#1}}%
55 %

```

```

56 \ProcessOptionsX%
57 %

```

II.5 Determining side and category of parallel processing

As noted above, much of the code is a duplication of the original `reledmac` code to handle the extra box(es) for the right hand side text, and sometimes for the left hand side as well. In order to distinguish we use ‘R’ or ‘L’ in the names of macros for the right and left code. The specifics of ‘L’ and ‘R’ are normally hidden from the user by letting the `Leftside` and `Rightside` environments set things up appropriately.

`\ifl@dpairing` `\ifl@dpairing` is set TRUE if we are processing parallel texts and `\ifl@dpaging` is also set TRUE if we are doing parallel pages. `\ifledRcol` is set TRUE if we are doing the right hand text. They are defined in `reledmac`.

II.6 Text’s width

`\Lcolwidth` `\Lcolwidth` The widths of the left and right parallel columns (or pages). The suffixed versions are not manipulated directly by user, but we use them to be certain to have the same coldwidth in the pages environment and in the `\Pages` command.

```
58 \newdimen\Lcolwidth
59 \Lcolwidth=0.45\textwidth
60 \newdimen\Rcolwidth
61 \Rcolwidth=0.45\textwidth
62 \newdimen\Lcolwidth@pages
63 \newdimen\Rcolwidth@pages
64 %
```

II.7 Messages

All the error and warning messages are collected here as macros.

```
\reledpar@error 65 \newcommand{\reledpar@error}[2]{\PackageError{reledpar}{#1}{#2}}
66 %
```

```
\reledpar@warning 67 \newcommand{\reledpar@warning}[1]{\PackageWarning{reledpar}{#1}}%
68 %
```

```
\led@err@TooManyPstarts 69 \newcommand*\led@err@TooManyPstarts{%
70 \reledpar@error{Too many \string\pstart\space without printing.
71 Some text will be lost}{\@ehc}}
72 %
```

```
\led@err@BadLeftRightPstarts 73 \newcommand*\led@err@BadLeftRightPstarts[2]{%
74 \reledpar@error{The numbers of left (#1) and right (#2)
75 \string\pstart s do not match}{\@ehc}}
76 %
```

```

\led@err@LeftOnRightPage 77 \providebool{syntax@}
\led@err@RightOnLeftPage 78 \newcommand*{\led@err@LeftOnRightPage}{%
79   \notbool{syntax@}%
80   {\reledpar@error{The left page has ended on a right page}{\@ehc}}%
81   {}}%
82 }
83 \newcommand*{\led@err@RightOnLeftPage}{%
84   \notbool{syntax@}%
85   {\reledpar@error{The right page has ended on a left page}{\@ehc}}
86   {}}%
87 }%
88 %

\led@err@Leftside@PreviousNotPrinted 89 \newcommand*{\led@err@Leftside@PreviousNotPrinted}{%
\led@err@Rightside@PreviousNotPrinted 90   \reledpar@error{You call a new Leftside environment while the previous
one has not been typeset by \string\Pages\space or \string\Columns}{\@ehc}}
91 \newcommand*{\led@err@Rightside@PreviousNotPrinted}{%
92   \reledpar@error{You call a new Rightside environment while the previous
one has not been typeset by \string\Pages\space or \string\Columns}{\@ehc}}
93 %

\led@err@Pages@InsideEnv 94 \newcommand*{\led@err@Pages@InsideEnv}{%
\led@err@Columns@InsideEnv 95   \reledpar@error{\string\Pages\space must be called *outside* of the `
pages` environment}{\@ehc}}
96 \newcommand*{\led@err@Columns@InsideEnv}{%
97   \reledpar@error{\string\Columns\space must be called *outside* of the `
pairs` environment}{\@ehc}}
98 %

\led@err@Pages@WithoutEnv 99 \newcommand*{\led@err@Pages@WithoutEnv}{%
\led@err@Columns@WithoutEnv 100   \reledpar@error{\string\Pages\space called without previous `pages`
environment}{\@ehc}}
101 \newcommand*{\led@err@Columns@WithoutEnv}{%
102   \reledpar@error{\string\Columns\space called without previous `pairs`
environment}{\@ehc}}
103 %

\led@err@Pages@WithoutRightside 104 \newcommand*{\led@err@Pages@WithoutRightside}{%
\led@err@Pages@WithoutLeftside 105   \reledpar@error{\string\Pages\space called without any preceding `
Rightside` environment (or environment without content)}{\@ehc}}%
\led@err@Columns@WithoutRightside 106 \newcommand*{\led@err@Pages@WithoutLeftside}{%
\led@err@Columns@WithoutLeftside 107   \reledpar@error{\string\Pages\space called without any preceding `
Leftside` environment (or environment without content)}{\@ehc}}%
108 \newcommand*{\led@err@Columns@WithoutRightside}{%
109   \reledpar@error{\string\Columns\space called without any preceding `
Rightside` environment (or environment without content)}{\@ehc}}%

```

```

110 \newcommand*\led@err@Columns@WithoutLeftside}{%
111   \reledpar@error{\string\Columns\space called without any preceding `
Leftside` environment (or environment without content)}{\@ehc}}%
112 %

```

```

\led@error@fail@patch@thepage13 \newcommand{\led@error@fail@patch@thepage}{%
114   \reledpar@error{Fail to patch \string\@thepage\space command.}{\@ehc}%
115 }%
116 %

```

```

\led@error@fail@patch@pagenumbering17 \newcommand{\led@error@fail@patch@pagenumbering}{%
118   \reledpar@error{Fail to patch \string\pagenumbering\space command.}{\@ehc
}%
119 }%
120 %

```

```

\led@error@note@called@onrightside21 \newcommand{\led@error@note@called@onrightside}[1]{%
\led@error@note@called@onleftside22   \reledpar@error{#1 called on right side, despite your configuring it to
be for the left side only}{\@ehc}%
123 }%
124 \newcommand{\led@error@note@called@onleftside}[1]{%
125   \reledpar@error{#1 called on left side, despite your configuring it to be
for the right side only}{\@ehc}%
126 }%
127 %

```

```

\led@error@fail@patch@@mempnum28 \newcommand{\led@error@fail@patch@@mempnum}{%
129   \reledpar@error{Fail to patch \string@mempnum\space command.}{\@ehc}%
130 }%
131 %

```

```

\led@error@fail@patch@@outputpage32 \newcommand{\led@error@fail@patch@@outputpage}{%
133   \reledpar@error{Fail to patch \string\@outputpage\space command.}{\@ehc}%
134 }%
135 %

```

```

\led@error@edtext@later@now36 \newcommand{\led@error@edtext@later@now}{%
137   \reledpar@error{You call \the\edtext@later\space \string\edtextlater\
space commands, but \the\edtext@now\space \string\edtextnow\space commands
}{\@ehc}% (did I follow your intent correctly here?)
138 }%
139 %

```

```

\led@warn@ChangeSyncOption 40 \newcommand*{\led@warn@ChangeSyncOption}[1]{%
141 \reledpar@warning{You have changed synchronization's options since the
last run. We have not read line-list file #1. Please run LaTeX again.}%
142 }%
143 %

\warn@setting@in@rightside 44 \newcommand{\led@warn@setting@in@rightside}[1]{%
145 \reledpar@warning{You use #1 inside rightside environment.\MessageBreak%
146 Such behavior is deprecated.\MessageBreak%
147 Use instead #1R or #1* in your preamble.}%
148 }
149 %

\led@error@missing@numbering 50 \newcommand{\led@error@missing@numbering}[1]{%
151 \reledpar@error{Missing \string\...pstart\string\pend\space inside `#1`
environment}{\@ehc}%
152 }%
153 %

```

II.8 Naming macros

The L^AT_EX kernel provides `\@namedef` and `\@namuse` for defining and using macros that may have non-letters in their names. We need something similar here as we are going to need and use some numbered boxes and counters.

`\newnamebox` A set of macros for creating and using ‘named’ boxes; the macros are called after the regular box macros, but including the string ‘name’.

`\setnamebox`

`\unhnamebox`

`\unvnamebox`

`\namebox`

```

154 \providecommand*{\newnamebox}[1]{%
155 \expandafter\newbox\csname #1\endcsname}
156 \providecommand*{\setnamebox}[1]{%
157 \expandafter\setbox\csname #1\endcsname}
158 \providecommand*{\unhnamebox}[1]{%
159 \expandafter\unhbox\csname #1\endcsname}
160 \providecommand*{\unvnamebox}[1]{%
161 \expandafter\unvbox\csname #1\endcsname}
162 \providecommand*{\namebox}[1]{%
163 \csname #1\endcsname}
164
165 %

```

`\ifcsboxvoid` The `\ifcsboxvoid` command comes on top of the `etoolbox` package. The first argument is a box name, the second is the $\langle true \rangle$ value, the third the $\langle false \rangle$ value. If the first argument refers to a non-existing box, or if it refers to a box that is void, the $\langle true \rangle$ value is returned. otherwise, $\langle false \rangle$ is returned.

```

166 \newcommand*{\ifcsboxvoid}[1]{%
167   \ifcsname#1\endcsname%
168   \expandafter\ifvoid\csname #1\endcsname%
169   \expandafter\expandafter%
170   \expandafter\@firstoftwo%
171   \else%
172   \expandafter\expandafter%
173   \expandafter\@secondoftwo%
174   \fi%
175   \else%
176   \expandafter\@firstoftwo%
177   \fi%
178 }%
179 %

```

\newnamecount Macros for creating and using ‘named’ counts.

```

\usenamecount
180 \providecommand*\newnamecount}[1]{%
181   \expandafter\newcount\csname #1\endcsname}
182 \providecommand*\usenamecount}[1]{%
183   \csname #1\endcsname}
184
185 %

```

III Sectioning commands

\section@numR This is the right side equivalent of `\section@num`.

Each section will read and write an associated ‘line-list file’, containing information used to do the numbering. Normally the file will be called `\jobname.nn`, where `nn` is the section number. However, for right side texts the file is called `\jobname.nnR`. The `\extensionchars` applies to the right side files just as it does to the normal files.

```

186 \newcount\section@numR
187 \section@numR=\z@
188 %

```

\ifpst@rtedL `\ifpst@rtedL` is set FALSE at the start of left side numbering, and similarly for

\ifpst@rtedR `\ifpst@rtedR`. `\ifpst@rtedL` is defined in `reledmac`.

```

189 \pst@rtedLfalse
190 \newif\ifpst@rtedR
191
192 %

```

\beginnumberingR This is the right text equivalent of `\beginnumbering`, and begins a section of numbered text.

```

193 \newcommand*{\beginnumberingR}{%
194   \ifnumberingR
195     \led@err@NumberingStarted
196   \endnumberingR
197 \fi
198 \global\l@dnumstartR \z@
199 \global\pst@rtedRfalse
200 \global\numberingRtrue
201 \global\advance\section@numR \@ne
202 \global\absline@numR \z@
203 \gdef\normal@page@breakR{}
204 \gdef\l@prev@pbR{}
205 \gdef\l@prev@nopbR{}
206 \global\line@numR \z@
207 \global\@lockR \z@
208 \global\sub@lockR \z@
209 \global\sublines@Rfalse
210 \global\let\next@page@numR\relax
211 \global\let\sub@change\relax
212 \global\stopmsdata@inserted@true%
213 \global\let\@msdata@list\relax%
214 \global\csundef{\@msdata@\add@msd@cR @dataR}%
215 \set@continuousnumberingforR%
216 \message{Section \the\section@numR R }%
217 \line@list@stuffR{\jobname.\extensionchars\the\section@numR R}%
218 \l@dend@stuff
219 \setcounter{pstartR}{1}
220 \begingroup
221 \initnumbering@sectcountR
222 \gdef\eled@sectionsR@{ }%
223 \if@noeled@sec\else%
224   \makeatletter%
225   \InputIfFileExists%
226     {\l@auxdir\jobname.eledsec\the\section@numR R}%
227     {}%
228     {\led@warn@NoFile{\l@auxdir\jobname.eledsec\the\section@numR R}}%
229   \makeatother%
230   \immediate\openout\eled@sectioningR@out=\l@auxdir\jobname.eledsec\the\
section@numR R\relax%
231 \fi%
232 }
233 %

```

\endnumbering This is the left text version of the regular `\endnumbering` and must follow the last text for a left text numbered section. It sets `\ifpst@rtedL` to FALSE. It is fully defined in `reledmac`.

\endnumberingR This is the right text equivalent of `\endnumbering` and must follow the last text for a right text numbered section.

```

234 \def\endnumberingR{%
235   \ifnumberingR
236     \global\numberingRfalse
237     \normal@pars
238     \ifnum\l@dnumpstartsR=0%
239       \led@err@NumberingWithoutPstart%
240     \fi%
241     \ifl@dpairing
242       \global\pst@rtedRfalse
243     \else
244       \ifx\insertlines@listR\empty\else
245         \global\noteschanged@true
246       \fi
247       \ifx\line@listR\empty\else
248         \global\noteschanged@true
249       \fi
250     \fi
251     \ifnoteschanged@
252       \led@mess@NotesChanged
253     \fi
254   \else
255     \led@err@NumberingNotStarted
256   \fi
257 \endgroup
258 \if@noeled@sec\else%
259   \immediate\closeout\eled@sectioningR@out%
260 \fi%
261 }
262
263 %

```

`\initnumbering@sectcountR` We do not want the right side section commands to be numbered after the left side ones, instead we want them numbered after which is typeset before the pages or columns environments. we switch the \LaTeX counter in `\numberingR`.

`\save@section@number`

`\set@sectcountR`

```

264 \newcounter{chapterR}
265 \newcounter{sectionR}
266 \newcounter{subsectionR}
267 \newcounter{subsubsectionR}
268
269 \newcount\old@chapter%
270 \newcount\old@section%
271 \newcount\old@subsection%
272 \newcount\old@subsubsection%
273 \newcommand{\save@section@number}{%
274   \ifdefined\c@chapter%
275     \global\old@chapter\value{chapter}%
276   \fi%
277   \global\old@section\value{section}%
278   \global\old@subsection\value{subsection}%

```



```

279 \global\old@subsubsection\value{subsubsection}%
280 }%
281 \newcommand{\initnumbering@sectcountR}{
282 \ifdefined\c@chapter%
283 \setcounter{chapterR}{\old@chapter}%
284 \fi%
285 \setcounter{sectionR}{\old@section}%
286 \setcounter{subsectionR}{\old@subsection}%
287 \setcounter{subsubsectionR}{\old@subsubsection}%
288 \set@sectcountR%
289 }
290 \newcommand{\set@sectcountR}{%
291 \let\c@chapter\c@chapterR%
292 \let\c@section\c@sectionR%
293 \let\c@subsection\c@subsectionR%
294 \let\c@subsubsection\c@subsubsectionR%
295 }%
296 %

```

`\pausenumberingR` These are the right text equivalents of `\pausenumbering` and `\resumenumbering`.
`\resumenumberingR`

```

297 \newcommand*{\pausenumberingR}{%
298 \endnumberingR\global\numberingRtrue}
299 \newcommand*{\resumenumberingR}{%
300 \ifnumberingR
301 \global\pst@rtedRtrue
302 \global\advance\section@numR \@ne
303 \led@mess@SectionContinued{\the\section@numR R}%
304 \line@list@stuffR{\jobname.\extensionchars\the\section@numR R}%
305 \l@dend@stuff
306 \begingroup%
307 \initnumbering@sectcountR%
308 \set@continuousnumberingforR%
309 \else
310 \led@err@numberingShouldHaveStarted
311 \endnumberingR
312 \beginnumberingR
313 \fi}
314 %
315 %

```

`\memorydumpL` `\memorydump` is a shorthand for `\pausenumbering\resumenumbering`. This will clear
`\memorydumpR` the memorised stuff for the previous chunks while keeping the numbering going.

```

316 \newcommand*{\memorydumpL}{%
317 \endnumbering
318 \numberingtrue
319 \global\pst@rtedLtrue
320 \global\advance\section@num \@ne
321 \led@mess@SectionContinued{\the\section@num}%

```

```

322 \line@list@stuff{\jobname.\extensionchars\the\section@num}%
323 \l@dend@stuff}
324
325 \newcommand*{\memorydumpR}{%
326 \endnumberingR
327 \numberingRtrue
328 \global\pst@rtedRtrue
329 \global\advance\section@numR \@ne
330 \led@mess@SectionContinued{\the\section@numR R}%
331 \line@list@stuffR{\jobname.\extensionchars\the\section@numR R}%
332 \l@dend@stuff}
333
334 %

```

IV Line counting

IV.1 Setting lineation reset

Sometimes you want line numbers that start at 1 at the top of each page; sometimes you want line numbers that start at 1 at each \pststart; other times you want line numbers that start at 1 at the start of each section and increase regardless of page breaks. reledpar lets you choose different schemes for the left and right texts.

`\lineationR` `\lineationR{<word>}` is the macro used to select the lineation system for right texts. Its argument is a string: either page, pstart or section.

```

335 \newcommand*{\lineationR}[1]{%
336 \ifnumbering
337 \led@err@LineationInNumbered
338 \else
339 \def\@tempa{#1}\def\@tempb{page}%
340 \ifx\@tempa\@tempb
341 \global\bypage@Rtrue
342 \global\bypstart@Rfalse
343 \unless\ifnocritical@%
344 \Xpstart[] [false]%
345 \fi%
346 \else
347 \def\@tempb{pstart}%
348 \ifx\@tempa\@tempb
349 \global\bypage@Rfalse
350 \global\bypstart@Rtrue
351 \unless\ifnocritical@%
352 \Xpstart%
353 \fi%
354 \else
355 \def\@tempb{section}
356 \ifx\@tempa\@tempb
357 \global\bypage@Rfalse%

```

```

358         \global\bystart@Rfalse%
359         \unless\ifnocritical@%
360             \Xpstart[] [false]%
361         \fi%
362     \else
363         \led@warn@BadLineation
364     \fi%
365 \fi
366 \fi
367 \fi}}
368 %

```

`\set@continuousnumberingforR` set the right line numbers at a `\beginnumberingR` or a `\resumenumberingR` in order to have continuous numbering with single column text.

```

369 \newcommand{\set@continuousnumberingforR}{%
370     \ifcontinuousnumberingwithcolumns%
371         \ifnum\line@numR<\line@num%
372             \expandafter\setlinenum\expandafter{\the\line@num}%
373         \fi%
374         \ifnum\last@page@num>\last@page@numR%
375             \global\last@page@numR=\last@page@num%
376         \fi%
377     \fi%
378 }
379 %

```

`\lineation*` `\lineation*` change the lineation system for both sides.

```

380 \WithSuffix\newcommand\lineation*[1]{%
381     \lineation{#1}%
382     \lineationR{#1}%
383 }%
384 %

```

IV.2 Setting line number margin

`\linenummargin` You call `\linenummargin{⟨word⟩}` to specify which margin you want your right text's line numbers in; it takes one argument, a string. You can put the line numbers in the same margin on every page using `left` or `right`; or you can use `inner` or `outer` to get them in the inner or outer margins. You can change this within a numbered section, but the change may not take effect just when you would like; if it is done between paragraphs nothing surprising should happen.

For right texts the selection is recorded in the count `\line@marginR`, otherwise in the count `\line@margin`: 0 for left, 1 for right, 2 for outer, and 3 for inner.

It is defined only once time, in `reledmac`.

```

385 \newcount\line@marginR
386 %

```

By default put right text numbers at the right.

```

387 \line@marginR=\@ne
388
389 %

```

`\linenummarginR` `\linenummarginR` applies directly for right side, while `\linenummargin*` applies for both side.

```

390 \newcommand{\linenummarginR}[1]{%
391   \l@getline@margin{#1}%
392   \ifnum\@l@dttempcntb>\m@ne%
393     \global\line@marginR=\@l@dttempcntb%
394   \fi%
395 }
396 \WithSuffix\newcommand\linenummargin*[1]{%
397   \l@getline@margin{#1}%
398   \ifnum\@l@dttempcntb>\m@ne%
399     \global\line@marginR=\@l@dttempcntb%
400     \global\line@margin=\@l@dttempcntb%
401   \fi%
402 }
403 \ifmovecolumnspostiononrightpage%
404   \linenummargin{inner}%
405   \linenummarginR{outer}%
406 \fi%
407 %

```

`\linenummarginColumns*` The `\linenummarginColumns` macro overrides the definition of the line margin when typesetting in parallel columns.

```

\linenummarginColumns
\linenummarginColumnsR
408
409 \newcount\line@margin@columnsR%
410 \line@margin@columnsR=\m@ne%
411
412 \newcommand{\linenummarginColumns}[1]{%
413   \l@getline@margin{#1}%
414   \ifnum\@l@dttempcntb>\m@ne%
415     \global\line@margin@columns=\@l@dttempcntb%
416   \fi%
417 }%
418
419 \WithSuffix\newcommand\linenummarginColumns*[1]{%
420   \l@getline@margin{#1}%
421   \ifnum\@l@dttempcntb>\m@ne%
422     \global\line@margin@columns=\@l@dttempcntb%
423     \global\line@margin@columnsR=\@l@dttempcntb%
424   \fi%

```

```

425 }%
426
427 \newcommand{\linenummarginColumnsR}[1]{%
428   \l@getline@margin{#1}%
429   \ifnum\@l@tempcntb>\m@ne%
430     \global\line@margin@columnsR=\@l@tempcntb%
431   \fi%
432 }%
433
434 %

```

IV.3 Setting lineation start and step

`\c@firstlinenumR`
`\c@linenumincrementR`

The following counters tell reledmac which right text lines should be printed with line numbers. `firstlinenumR` is the number of the first line in each section that gets a number; `linenumincrementR` is the difference between successive numbered lines. The initial values of these counters produce labels on lines 5, 10, 15, etc. `linenumincrementR` must be at least 1.

```

435 \newcounter{firstlinenumR}
436   \setcounter{firstlinenumR}{5}
437 \newcounter{linenumincrementR}
438   \setcounter{linenumincrementR}{5}
439 %

```

`\c@firstsublinenumR`
`\c@sublinenumincrementR`

The following parameters are just like `firstlinenumR` and `linenumincrementR`, but for sub-line numbers. `sublinenumincrementR` must be at least 1.

```

440 \newcounter{firstsublinenumR}
441   \setcounter{firstsublinenumR}{5}
442 \newcounter{sublinenumincrementR}
443   \setcounter{sublinenumincrementR}{5}
444
445 %

```

`\firstlinenum`
`\linenumincrement`
`\firstsublinenum`
`\sublinenumincrement`

These are the user's macros for changing (sub) line numbers. They are defined in reledmac. The starred versions are specific to eledpar.

```

446 \WithSuffix\newcommand\firstlinenum*[1]{%
447   \setcounter{firstlinenumR}{#1}%
448   \setcounter{firstlinenum}{#1}%
449 }
450 \WithSuffix\newcommand\linenumincrement*[1]{%
451   \setcounter{linenumincrementR}{#1}%
452   \setcounter{linenumincrement}{#1}%
453 }
454 \WithSuffix\newcommand\firstsublinenum*[1]{%
455   \setcounter{firstsublinenumR}{#1}%
456   \setcounter{firstsublinenum}{#1}%

```

```

457 }
458 \WithSuffix\newcommand\sublinenumincrement*[1]{%
459   \setcounter{sublinenumincrementR}{#1}%
460   \setcounter{sublinenumincrement}{#1}%
461 }
462 %

```

`\firstlinenumR` And the ‘R’ suffixed version.

```

\linenumincrementR
\firstsublinenumR
\sublinenumincrementR
463 \newcommand\firstlinenumR[1]{%
464   \setcounter{firstlinenumR}{#1}%
465 }
466 \newcommand\linenumincrementR[1]{%
467   \setcounter{linenumincrementR}{#1}%
468 }
469 \newcommand\firstsublinenumR[1]{%
470   \setcounter{subfirstlinenumR}{#1}%
471 }
472 \newcommand\sublinenumincrementR[1]{%
473   \setcounter{sublinenumincrementR}{#1}%
474 }
475 %

```

IV.4 Setting line flag

`\Rlineflag` This is appended to the line numbers of right text.

```

476 \newcommand{\setRlineflag}[1]{%
477   \gdef\Rlineflag{#1}%
478 }
479 \setRlineflag{R}
480 %

```

IV.5 Setting line number style

`\linenumrepR` `\linenumrepR{<ctr>}` typesets the right line number `<ctr>`, and similarly `\sublinenumrepR` for subline numbers.

```

481 \newcommand*\linenumrepR[1]{\@arabic{#1}}
482 \newcommand*\sublinenumrepR[1]{\@arabic{#1}}
483
484 %

```

`\linenumnumberstyleR` The style can be changed by some user level command

`\sublinenumnumberstyleR`

```

485 \newcommand*\linenumnumberstyleR[1]{%
486   \def\linenumrepR##1{\@nameuse{@#1}{##1}}
487 \newcommand*\sublinenumnumberstyleR[1]{%
488   \def\sublinenumrepR##1{\@nameuse{@#1}{##1}}
489 %

```

`\linenumberstyle*` And for both side.
`\sublinenumberstyle*`

```

490 \WithSuffix\newcommand\linenumberstyle*[1]{%
491   \linenumberstyle{#1}%
492   \linenumberstyleR{#1}%
493 }%
494
495 \WithSuffix\newcommand\sublinenumberstyle*[1]{%
496   \sublinenumberstyle{#1}%
497   \sublinenumberstyleR{#1}%
498 }%
499 %
500 %

```

IV.6 Print marginal line number

`\iflinenumberLevenifblank` and `\iflinenumberRevenifblank` can be switched to TRUE if we want to print the line number, even if the line is blank.

```

501 \newif\iflinenumberLevenifblank
502 \newif\iflinenumberRevenifblank
503 %

```

`\leftlinenumR` and `\rightlinenumR` are the macros that are called to print the right text's marginal line numbers. Much of the code for these is common and is maintained in `\l@dlinenumR`.

```

504 \newcommand*\leftlinenumR{%
505   \l@dlinenumR
506   \kern\linenumsep}
507 \newcommand*\rightlinenumR{%
508   \kern\linenumsep
509   \l@dlinenumR}
510 \newcommand*\l@dlinenumR{%
511   \numlabfont\linenumrepR{\line@numR}\@Rlineflag%
512   \ifsublines@R
513     \ifnum\subline@numR>\z@
514       \unskip\fullstop\sublinenumrepR{\subline@numR}%
515     \fi
516   \fi}
517
518 %

```

IV.7 Line-number counters and lists

IV.7.1 Correspond to those in `reledmac` for regular or left text

We need another set of counters and lists for the right text, corresponding to those in `reledpar` for regular or left text.

`\line@numR` The count `\line@numR` stores the line number that is used in the right text’s marginal line numbering and in notes. The count `\subline@numR` stores a sub-line number that qualifies `\line@numR`. The count `\absline@numR` stores the absolute number of lines since the start of the right text section: that is, the number we have actually printed, no matter what numbers we attached to them.

The boolean `\ifsublines@R` is set to true when we start subline on rightside.

```
519 \newcount\line@numR
520 \newcount\subline@numR
521 \newcount\absline@numR
522 \newif\ifsublines@R%
523
524 %
```

`\line@listR` Now we can define the list macros that will be created from the line-list file. They are directly analogous to the left text ones. The full list of action codes and their meanings is given in the `reledmac` manual.

`\insertlines@listR` Here are the commands to create these lists:

`\actionlines@listR`

`\actions@listR`

```
525 \list@create{\line@listR}
526 \list@create{\insertlines@listR}
527 \list@create{\actionlines@listR}
528 \list@create{\actions@listR}
529
530 %
```

`\page@numR` The right text page number.

```
531 \newcount\page@numR
532
533 %
```

IV.7.2 Specific to `reledpar`

`\linesinpar@listL` In order to synchronise left and right chunks in parallel processing we need to know how many lines are in each left and right text chunk, and the maximum of these for each pair of chunks.

`\linesinpar@listR`

`\maxlinesinpar@list`

```
534 \list@create{\linesinpar@listL}
535 \list@create{\linesinpar@listR}
536 \list@create{\maxlinesinpar@list}
537
538 %
```

IV.8 Reading the line-list file

`\list@clearing@regR` `\Clear the right lines for \read@linelist`


```

539 \newcommand{\list@clearing@regR}{%
540   \list@clear{\line@listR}%
541   \list@clear{\insertlines@listR}%
542   \list@clear{\actionlines@listR}%
543   \list@clear{\actions@listR}%
544   \list@clear{\linesinpar@listR}%
545   \list@clear{\linesonpage@listR}
546 }
547 %

```

\@par@sync@option When typesetting parallel pages, \@par@sync@option check if we have changed the synchronization's option since the last run. If true, we just not read the numbered file.

```

548 \newcommand{\@par@sync@option}[1]{%
549   \IfStrEq{#1}{\@par@this@sync@option}%
550   {}%
551   {\ifledRcol%
552     \led@warn@ChangeSyncOption{\jobname.\extensionchars\the\section@num}
553     %
554     \else%
555     \led@warn@ChangeSyncOption{\jobname.\extensionchars\the\section@num}
556     %
557     \fi%
558     \endinput%
559   }%
560 }%
561 %

```

\read@linelist \read@linelist{<file>} is the control sequence that is called by \beginnumbering (via \line@list@stuff) to open and process a line-list file; its argument is the name of the file. . It is defined only once time in reledmac.

IV.9 Commands within the line-list file

This section defines the commands that can appear within a line-list file, except for \@lab which is in a later section among the cross-referencing commands it is associated with.

The macros with action in their names contain all the code that modifies the action-code list.

\@nl@regR \@nl@regR is called by \@nl if we are on a right side. It does everything related to the start of a new line of numbered text on a right side.

\@nl

```

560 \newcommand{\@nl@regR}{%
561   \ifx\l@dchset@num\relax \else
562   \advance\absline@numR \@ne
563   \set@line@action
564   \let\l@dchset@num\relax
565   \advance\absline@numR \m@ne

```

```

566 \advance\line@numR \m@ne% % do we need this?
567 \fi
568 \advance\absline@numR \@ne
569 \ifx\next@page@numR\relax \else
570 \page@action
571 \let\next@page@numR\relax
572 \fi
573 \ifx\sub@change\relax \else
574 \ifnum\sub@change>\z@
575 \sublines@Rtrue
576 \else
577 \sublines@Rfalse
578 \fi
579 \sub@action
580 \let\sub@change\relax
581 \fi
582 \ifcase\@lockR
583 \or
584 \@lockR \tw@
585 \or\or
586 \@lockR \z@
587 \fi
588 \ifcase\sub@lockR
589 \or
590 \sub@lockR \tw@
591 \or\or
592 \sub@lockR \z@
593 \fi
594 \ifsublines@R
595 \ifnum\sub@lockR<\tw@
596 \advance\subline@numR \@ne
597 \fi
598 \else
599 \ifnum\@lockR<\tw@
600 \advance\line@numR \@ne \subline@numR \z@
601 \fi
602 \fi}
603
604
605 %

```

`\last@page@numR` `\last@page@numR` store the page number of the last right page. It is modified by `\fix@page` `\fix@page`, defined by reledmac.

```

606 \newcount\last@page@numR
607 \last@page@numR=-10000
608
609 %

```

- \@adv** The \@adv{<num>} macro advances the current visible line number by the amount specified as its argument. This is used to implement \advanceline. It is defined in reledmac.
- \@set** The \@set{<num>} macro sets the current visible line number to the value specified as its argument. This is used to implement \setline. It is defined in reledmac.
- \l@d@set** The \l@d@set{<num>} macro sets the line number for the next \pstart... to the value specified as its argument. This is used to implement \setlinenum. It is defined in reledmac.
- \page@action** \page@action adds an entry to the action-code list to change the page number. It is defined in reledmac.
- \set@line@action** \set@line@action adds an entry to the action-code list to change the visible line number. It is defined in reledmac.
- \sub@action** \sub@action adds an entry to the action-code list to turn sub-lineation on or off, according to the current value of the \ifsublines@ flag. It is defined in reledmac.
- \do@lockon** \lock@on adds an entry to the action-code list to turn line number locking on. The current setting of the sub-lineation flag tells us whether this applies to line numbers or sub-line numbers. It is defined in reledmac, however the code specific to right side is defined here, in \do@lockonR.

```

610 \newcount\@lockR
611 \newcount\sub@lockR
612
613 \newcommand*{\do@lockonR}{%
614   \xright@appenditem{\the\absline@numR}\to\actionlines@listR
615   \ifsublines@R
616     \xright@appenditem{-1005}\to\actions@listR
617     \ifnum\sub@lockR=\z@
618       \sub@lockR \@ne
619     \else
620       \ifnum\sub@lockR=\thr@@
621         \sub@lockR \@ne
622       \fi
623     \fi
624   \else
625     \xright@appenditem{-1003}\to\actions@listR
626     \ifnum\@lockR=\z@
627       \@lockR \@ne
628     \else
629       \ifnum\@lockR=\thr@@
630         \@lockR \@ne
631       \fi
632     \fi
633   \fi}
634
635 %

```

`\lock@off` `\lock@off` adds an entry to the action-code list to turn line number locking off. It is defined in `reledmac`, however the code specific to right side is defined here, in `\do@lockoffR`.

```

636 \skip@lockoff
637
638 \newcommand{\do@lockoffR}{%
639   \xright@appenditem{\the\absline@numR}\to\actionlines@listR
640   \ifsublines@R
641     \xright@appenditem{-1006}\to\actions@listR
642     \ifnum\sub@lockR=\tw@
643       \sub@lockR \thr@@
644     \else
645       \sub@lockR \z@
646     \fi
647   \else
648     \xright@appenditem{-1004}\to\actions@listR
649     \ifnum\@lockR=\tw@
650       \@lockR \thr@@
651     \else
652       \@lockR \z@
653     \fi
654   \fi}
655
656
657 %

```

`\n@num`

`\@ref` `\@ref` marks the start of a passage, for creation of a footnote reference. It takes two arguments:

- #1, the number of entries to add to `\insertlines@list` for this reference. This value for right text, here and within `\edtext`, which computes it and writes it to the line-list file, will be stored in the count `\insert@countR`.

```

658 \newcount\insert@countR
659 %

```

- #2, a sequence of other line-list-file commands, executed to determine the ending line-number. This may also include other `\@ref` commands, corresponding to uses of `\edtext` within the first argument of another instance of `\edtext`.

`\@ref` itself is defined in `reledmac`. It calls `\ref@reg` or `\ref@regR`, depending whether we are in left or right side. Here, we define only `\ref@regR`, `\ref@reg` is already defined in `reledmac`.

The first thing `\@ref@regR` itself does is to add the specified number of items to the `\insertlines@listR` list.

```

660 \newcommand*{\@ref@regR}[2]{%
661   \global\advance\@edtext@level by 1%
662   \global\insert@countR=#1\relax
663   \loop\ifnum\insert@countR>\z@
664     \xright@appenditem{\the\absline@numR}\to\insertlines@listR
665     \global\advance\insert@countR \m@ne
666   \repeat
667   %

```

Next, process the second argument to determine the page and line numbers for the end of this lemma. We temporarily equate `\@ref` to a different macro that just executes its argument, so that nested `\@ref` commands are just skipped this time. Some other macros need to be temporarily redefined to suppress their action.

```

668 \begingroup
669   \let\@ref=\dummy@ref
670   \let\@lopR@\gobble
671   \let\page@action=\relax
672   \let\sub@action=\relax
673   \let\set@line@action=\relax
674   \let\@lab=\relax
675   \let\@lemma=\relax
676   \let\@sw\@gobblethree%
677   #2
678   \global\endpage@num=\page@numR
679   \global\endline@num=\line@numR
680   \global\endsubline@num=\subline@numR
681 \endgroup
682 %

```

Now store all the information about the location of the lemma's start and end in `\line@list@R`.

```

683 \xright@appenditem%
684   {\the\page@numR|\the\line@numR}%
685   \ifsublines@R \the\subline@numR \else 0\fi}%
686   \the\endpage@num|\the\endline@num}%
687   \ifsublines@R \the\endsubline@num \else 0\fi}\to\line@listR
688 %

```

Create a list which will store all the second argument of each `\@sw` in this lemma, at this level.

```

689 \expandafter\list@create\expandafter{\csname sw@list@edtext@tmp@\the\
@edtext@level\endcsname}%
690 %

```

And now, call `\@ref@reg@parseargR`, which can be also called by `\@ref@later`

```

691 \@ref@reg@parseargR{#2}%
692 %

```

Decrease edtext level counter.

```

693 \global\advance\@edtext@level by -1%
694 }
695 %

```

```

\@ref@reg@parseR% \newcommand{\@ref@reg@parseR}[1]{%
697 %

```

Declare and init boolean for lemma in this level.

```

698 \providebool{lemmacommand@the\@edtext@level}%
699 \boolfalse{lemmacommand@the\@edtext@level}%
700 %

```

Execute the second argument of \@ref again, to perform for real all the commands within it.

```

701 #1%
702 % Now, we store the list of \protect\cs{sw} of this current \protect\cs{
edtext} as an element of
703 % the global list of list of \protect\cs{sw} for a \protect\cs{edtext}
depth.
704 % \begin{macrocode}
705 \ifnum\@edtext@level>0%
706 \def\create@this@edtext@level{\expandafter\list@create\expandafter{
csname sw@list@edtextR@the\@edtext@level\endcsname}}%
707 \ifcsundef{sw@list@edtextR@the\@edtext@level}{\
create@this@edtext@level}{}%
708 \letcs{\@tmp}{sw@list@edtextR@the\@edtext@level}%
709 \letcs{\@tmpp}{sw@list@edtext@tmp@the\@edtext@level}%
710 \xright@appenditem{\expandonce\@tmpp}\to\@tmp%
711 \global\cslet{sw@list@edtextR@the\@edtext@level}{\@tmp}%
712 \fi%
713 }%
714 %

```

\@pend \@pend{<num>} adds its argument to the \linesinpar@listL list, and analogously
\@pendR for \@pendR. If needed, it resets line number. Both are defined in reledmac, but they are empty. They are really defined only in reledpar.

```

715 \renewcommand*{\@pend}[1]{%
716 \ifbypstart@global\line@num=0\fi%
717 \xright@appenditem{#1}\to\linesinpar@listL}
718 \renewcommand*{\@pendR}[1]{%
719 \ifbypstartR@global\line@numR=0\fi
720 \xright@appenditem{#1}\to\linesinpar@listR}
721
722 %

```

\@pstart \@pstart and cs@pstartR allows us to know, when using \nomaxlines option in which
\@pstartR page we should start a pstart, and also how many empty lines we should let before starting this pstart at the beginning of the page

```

723 \newcommand{\@pstart}[3]{%
724   \ifcsdef{minpage@pstart@#1}%
725     {\ifnumgreater{#2}{\csuse{minpage@pstart@#1}}%
726       {\csnumgdef{minpage@pstart@#1}{#2}}%
727     }%
728   }%
729   {\csnumgdef{minpage@pstart@#1}{#2}}
730 \csnumgdef{afterlines@pstart@#1L}{#3}%
731 }%
732
733 \newcommand{\@pstartR}[3]{%
734   \numdef{\@tmp}{#2-1}%Because we have not to know in which page the pstart
735   starts, but in which pair of facing page
736   \ifcsdef{minpage@pstart@#1}%
737     {\ifnumgreater{\@tmp}{\csuse{minpage@pstart@#1}}%
738       {\csnumgdef{minpage@pstart@#1}{\@tmp}}%
739     }%
740   {\csnumgdef{minpage@pstart@#1}{\@tmp}}
741   \csnumgdef{afterlines@pstart@#1R}{#3}%
742 }%
743 %

```

`\@lopL` `\@lopL{<num>}` adds its argument to the `\linesonpage@listL` list, and analogously for `\@lopR`. Both are defined in `reledmac`, but they are empty. They are really defined only in `reledpar`.

```

744 \renewcommand*\@lopL[1]{%
745   \xright@appenditem{#1}\to\linesonpage@listL}
746 \renewcommand*\@lopR[1]{%
747   \xright@appenditem{#1}\to\linesonpage@listR}
748
749 %

```

IV.10 Writing to the line-list file

We have now defined all the counters, lists, and commands involved in reading the line-list file at the start of a section. Now we will cover the commands that `reledmac` uses within the text of a section to write commands out to the line-list.

`\linenum@outR` The file for right texts will be opened on output stream `\linenum@outR`.

```

750 \newwrite\linenum@outR
751 %

```

`\iffirst@linenum@out@R` Once any file is opened on this stream, we keep it open forever, or else switch to another file that we keep open.
`\first@linenum@out@Rtrue`
`\first@linenum@out@Rfalse`

```

752 \newif\iffirst@linenum@out@R
753 \first@linenum@out@Rtrue
754 %

```

\line@list@stuffR This is the right text version of the `\line@list@stuff{<file>}` macro. It is called by `\beginnumberingR` and performs all the line-list operations needed at the start of a section. Its argument is the name of the line-list file.

```

755 \newcommand*{\line@list@stuffR}[1]{%
756   \read@linelist{#1}%
757   \iffirst@linenum@out@R
758     \immediate\closeout\linenum@outR
759     \global\first@linenum@out@Rfalse
760     \immediate\openout\linenum@outR=\l@auxdir#1%
761     \immediate\write\linenum@outR{\string\line@list@version{\
this@line@list@version}}%
762     \ifl@dpaging%
763       \immediate\write\linenum@outR{\string\@par@sync@option{\
@par@this@sync@option}}%
764     \fi%
765   \else
766     \if@minipage%
767       \leavevmode%
768     \fi%
769     \closeout\linenum@outR%
770     \openout\linenum@outR=\l@auxdir#1%
771   \fi}
772 %
773 %

```

\new@lineL The `\new@lineL` macro sends the `\@nl` command to the left text line-list file, to mark the start of a new text line.

```

774 \newcommand*{\new@lineL}{%
775   \write\linenum@out{\string\@nl[\the\c@page][\thepage]}}
776 %

```

\new@lineR The `\new@lineR` macro sends the `\@nl` command to the right text line-list file, to mark the start of a new text line.

```

777 \newcommand*{\new@lineR}{%
778   \write\linenum@outR{\string\@nl[\the\c@page][\thepage]}}
779 %

```

\flag@start We enclose a lemma marked by `\edtext` in `\flag@start` and `\flag@end`: these send the `\@ref` command to the line-list file. They are both defined in `reledmac`.

\startsub **\endsub** `\startsub` and `\endsub` turn sub-lineation on and off, by writing appropriate instructions to the line-list file. There are both defined in `reledmac`.

- `\advanceline` You can use `\advanceline{<num>}` in running text to advance the current visible line-number by a specified value, positive or negative. It is defined in `reledmac`.
- `\setline` You can use `\setline{<num>}` in running text (i.e., within `\pstart... \pend`) to set the current visible line-number to a specified positive value. It is defined in `reledmac`.
- `\setlinenum` You can use `\setlinenum{<num>}` before a `\pstart` to set the visible line-number to a specified positive value. It writes a `\l@d@set` command to the line-list file. It is defined in `reledmac`.
- `\startlock` You can use `\startlock` or `\endlock` in running text to start or end line number locking at the current line. They decide whether line numbers or sub-line numbers are affected, depending on the current state of the sub-lineation flags. They are defined in `reledmac`.
- `\endlock`
- `\skipnumbering`

V Marking text for notes

The `\edtext` macro is used to create all footnotes and endnotes, as well as to print the portion of the main text to which a given note or notes is keyed. The idea is to have that lemma appear only once in the `.tex` file: all instances of it in the main text and in the notes are copied from that one appearance.

- `\critext`
`\edtext`
`\set@line` The `\set@line` macro is called by `\edtext` to put the line-reference field and font specifier for the current block of text into `\l@d@nums`. It is defined in `reledmac`.

V.1 Specific hooks and commands for notes

The `reledmac \newseries@` initializes commands which are linked to notes series. However, to keep `reledmac` as light as possible, it does not define commands which are specific to `reledpar`. This is what does `\newseries@par`. The specific hooks are also defined here.

```
\newseries@par80 \newcommand{\newseries@par}[1]{%
781 %
```

V.1.1 Notes to be printed on one side only

`reledpar` allows notes to be printed on one side only. We need to declare these options. We also need box to store temporary the footnote not printed. We check the `nofamiliar` and `nocritical` `reledmac` options.

```

782 \unless\ifnofamiliar@%
783   \csgdef{onlysideX@#1}{}%
784   \newnamebox{footins#1@kept}%
785   \fi%
786 \unless\ifnocritical@%
787   \csgdef{Xonlyside@#1}{}%
788   \newnamebox{#1footins@kept}%
789   \fi%
790 %

```

V.1.2 Tools specific to familiar footnotes

```

791 \unless\ifnofamiliar@%
792 %

```

Managing correct number One problem with using familiar footnotes in parallel typesetting is the fact that the order of reading notes is not the same as the order they are typeset, because \LaTeX reads first all the notes on one side, then all the notes on the other side. Then, however, \LaTeX alternates between typesetting left-side note and right-side notes. Consequently, if we do nothing special, the note numbers are sorted in the reading order, not in the typesetting order. So we could obtain something like 1,3,2,5,4.

To prevent this problem, we use a two new counters by series. Every note, in parallel typesetting, has three associated counters.

1. A \LaTeX counter `footnoteX`. This the only one manipulated by user, and the only one finally printed.
2. A \TeX counter `footnoteX@reading`. Its value is incremented when reading the `\footnoteX` command in left or right side environments. It is used to get the correct footnote number from the `.aux` file to be typeset in the main text. This counter is already defined in `reledmac`, as it is also used for hyperlink.
3. A \LaTeX counter `footnoteX@typeset`. Its value is increased when inserting footnotes files to be used on the next run for the main text.

So here, we only defined the new counter.

```

793 \newcounter{footnote#1@typeset}%
794 %

```

Familiar footnotes without marks The `\footnoteXnomk` commands are for notes which are printed on the left side, while they are called in the right side. Basically, they set first toggle `\nomark@` to true, then call the `\footnoteX`. and finally add the footnote counter in the footnote counter list.

First, check the `nofamiliar` option of `reledmac`.

So declare the list.

```

795 \expandafter\list@create\csname footnote#1@mk\endcsname%
796 %

```

Then, declare the `\footnoteXnomk` command.

```
797 \expandafter\newcommand\csname footnote#1nomk\endcsname[1]{%
798 %
```

First step: just call the normal `\footnoteX`, saying that we do not want to print the mark.

```
799 \toggletrue{nomk}%
800 \csuse{footnote#1}{##1}%
801 \togglefalse{nomk}%
802 %
```

Second, and last, step: store the footnote counter in the footnote counters list. We use some `\let`, because `\xright@appenditem` is difficult to use with `\expandafter`.

```
803 \letcs{\@tmp}{footnote#1@mk}%
804 \numdef\@tmpa{\csuse{c@footnote#1}}%
805 \global\xright@appenditem{\@tmpa}\to\@tmp%
806 \global\cslet{footnote#1@mk}{\@tmp}%
807 }%
808 %
```

Then, declare the command which inserts the footnotemark in the right side.

```
809 \expandafter\newcommand\csname footnote#1mk\endcsname{%
810 %
```

Get the first element of the footnote mark list. As `\gl@p` is difficult to use with dynamic name macro, we use `\let` commands.

```
811 \letcs{\@tmp}{footnote#1@mk}%
812 \gl@p\@tmp\to\@tmpa%
813 \global\cslet{footnote#1@mk}{\@tmp}%
814 %
```

Set the footnote counter with it. For the sake of security, we make a backup of the previous value.

```
815 \letcs{\old@footnote}{c@footnote#1}%
816 \setcounter{footnote#1}{\@tmpa}%
817 %
```

Define the footnote mark and print it

```
818 \protected@csxdef{\theftnmark#1}{\csuse{thefootnote#1}}%
819 \csuse{@footnotemark#1}%
820 %
```

Restore previous footnote counter and finally add space.

```
821 \setcounter{footnote#1}{\old@footnote}%
822 \xspace%
823 }%
824 %
```

End of tools specific to familiar notes.

```

825 \fi
826 %
      End of \newseries@par.
827 }%
828 %

```

V.1.3 Get correct footnote number

`\get@familiarfootnote@number` As users can insert footnotes between two `\Pairs` or `\Pages` commands, we have to set the `\+footnoteX@typeset+` counter to the last value of the `footnoteX` counter at the beginning of these two commands.

```

829 \newcommand{\save@familiarfootnote@number}{%
830   \unless\ifnofamiliar@%
831     \def\do##1{\csxdef{saved@footnote##1}{\the\csname c@footnote##1\endcsname}}%
832     \dolistloop{\@series}%
833     \fi%
834     \xdef\saved@footnote{\the\c@footnote}%
835   }
836 \newcommand{\get@familiarfootnote@number}{%
837   \unless\ifnofamiliar@%
838     \def\do##1{\setcounter{footnote##1@typeset}{\csuse{saved@footnote##1}}}%
839     \dolistloop{\@series}%
840     \fi%
841     \setcounter{footnote@typeset}{\saved@footnote}%
842   }
843   %

```

V.2 Create hooks

Read the `reledmac` code handbook about `\newhookcommand@series`. Here, we create hooks which are specific to `reledpar`.

```

844 \unless\ifnocritical@%
845   \newhookcommand@series{Xonlyside}%
846   \fi%
847 \unless\ifnofamiliar@%
848   \newhookcommand@series{onlysideX}%
849   \fi
850
851
852 %

```

V.3 Init standards series (A,B,C,D,E,Z)

`\init@series@par` `\newseries@par` is called by `\newseries`. However, this last command is called before `reledpar` is loaded. Thus, we need to initiate a specific series hook for `reledpar`.

```

853 \newcommand{\init@series@par}{%
854   \def\do##1{\newseries@par{##1}}%
855   \dolistloop{\@series}%
856 }%
857 \init@series@par%
858 %

```

V.4 Tools specific to \LaTeX 's classical footnotes

As users can use classical footnotes of \LaTeX (`\footnote`) in parallel texts, we must integrate the same tools to get correct number as for `reledmac`' footnotes (V.1.2 p. 50).

```

\footnote@reading59 \newcount\footnote@reading%
\footnote@typeset60 \newcounter{footnote@typeset}%
861 %

```

VI Pstart numbers dumping and restoration

While in `reledmac` the footnotes are inserted at the same time as the `\pstart... \pend` are read, in `reledpar` they are inserted when the `\Columns` or `\Pages` commands are called. Consequently, if we do nothing, the value of the `PstartL` and `PstartR` counters are not the same in the main text and in the notes. To solve this problem, we dump the values in two list (one by side) when processing `\pstart` and restore these at each `\pstart` when calling `\Columns` or `\Pages`. We also dump and restore the value of the boolean `\ifnumberpstart`.

So, first step, creating the lists. Here, “pc” means “public counters”.

```

\list@pstartL@pc62 \list@create{\list@pstartL@pc}%
\list@pstartR@pc63 \list@create{\list@pstartR@pc}%
864 %

```

Two commands to dump current pstarts. We prefer two commands to one with argument indicating the side, because the commands are short, and so we save one test (or a `\csname` construction).

```

\dump@pstartL@pc65 \def\dump@pstartL@pc{%
\dump@pstartR@pc66   \xright@appenditem{\the\c@pstartL}{\to\list@pstartL@pc}%
867   \global\cslet{numberpstart@L\the\l@dumpstartsL}{\ifnumberpstart}%
868 }%
869
870 \def\dump@pstartR@pc{%

```

```

871 \xright@appenditem{\the\c@pstartR}\to\list@pstartR@pc%
872 \global\cslet{numberpstartR\the\l@dnumpstartsR}{\ifnumberpstart}%
873 }%
874
875 %

```

`\restore@pstartL@pc` And so, the commands to restore them.

`\restore@pstartR@pc`

```

876 \def\restore@pstartL@pc{%
877   \ifx\list@pstartL@pc\empty\else%
878     \gl@p\list@pstartL@pc\to\@temp%
879     \global\c@pstartL=\@temp%
880   \fi%
881 }%
882 \def\restore@pstartR@pc{%
883   \ifx\list@pstartR@pc\empty\else%
884     \gl@p\list@pstartR@pc\to\@temp%
885     \global\c@pstartR=\@temp%
886   \fi%
887 }%
888 %

```

VII Parallel environments

The initial set up for parallel processing is deceptively simple.
pairs pages

`chapterinpages` The pairs environment is for parallel columns and the pages environment for parallel pages.

```

889 \newenvironment{pairs}{%}
890   \l@dpairingtrue
891   \l@dpagingfalse
892   \initnumbering@quote
893   \save@familiarfootnote@number%
894   \if@ledgroup%
895     \get@familiarfootnote@number%
896   \fi%
897   \save@section@number%
898   \at@begin@pairs%
899 }{%
900   \l@dpairingfalse
901 }
902
903 %

```

`\AtBeginPairs` The `\AtBeginPairs` macro just define a `\at@begin@pairs` macro, called at the beginning of each pairs environments.

```

904 \newcommand{\AtBeginPairs}[1]{\gdef\at@begin@pairs{#1}}%
905 \def\at@begin@pairs{}%
906
907 %

```

The `pages` environment additionally sets the ‘column’ widths to the `\textwidth` (as known at the time the package is called). In this environment, there are two text in parallel on 2 pages.

```

908 \newenvironment{pages}{%
909   \l@dpairingtrue
910   \l@dpagingtrue
911   \initnumbering@quote
912   \save@familiarfootnote@number%
913   \if@ledgroup%
914     \get@familiarfootnote@number%
915   \fi%
916   \save@section@number%
917   \setlength{\Lcolwidth}{\textwidth}%
918   \setlength{\Rcolwidth}{\textwidth}%
919 }{%
920   \l@dpairingfalse
921   \l@dpagingfalse
922   \global\setlength{\Lcolwidth@pages}{\Lcolwidth}%
923   \global\setlength{\Rcolwidth@pages}{\Rcolwidth}%
924 }
925
926 %

```

`ifinstanzaL` These boolean tests are switched by the `\stanza` command, using either the left or right side.

```

927 \newif\ifinstanzaL
928 \newif\ifinstanzaR
929 %

```

Leftside Within the `pairs` and `pages` environments the left and right hand texts are within `Leftside` and `Rightside` environments, respectively. The `Leftside` environment is simple, indicating that right text is not within its purview and using some particular macros.

```

930 \newenvironment{Leftside}{%
931   \expandafter\ifvoid\csname l@dLcolrawbox1\endcsname\else%
932     \led@err@Leftside@PreviousNotPrinted%
933   \fi%
934   \ledRcolfalse
935   \setcounter{pstartL}{1}
936   \let\pstart\pstartL
937   \let\thepstart\thepstartL
938   \let\pend\pendL

```

```

939 \let\memorydump\memorydumpL
940 \Leftsidehook
941 \let\old@startstanza\@startstanza%
942 \def\@startstanza[##1][##2]{\global\instanzaLtrue\old@startstanza
[##1][##2]}%
943 }{
944 \expandafter\ifvoid\csname l@dLcolrawbox1\endcsname%
945 \led@error@missing@numbering{Leftside}%
946 \fi%
947 \Leftsidehookend}
948 %

```

`\Leftsidehook` Hooks into the start and end of the Leftside and Rightside environments. These are initially empty.

```

\Leftsidehookend
\Rightsidehook
\Rightsidehookend
949 \newcommand*\Leftsidehook{}
950 \newcommand*\Leftsidehookend{}
951 \newcommand*\Rightsidehook{}
952 \newcommand*\Rightsidehookend{}
953
954 %

```

Rightside The Rightside environment is only slightly more complicated than the Leftside. Apart from indicating that right text is being provided it ensures that the right right text code will be used.

```

955 \newenvironment{Rightside}{%
956 \expandafter\ifvoid\csname l@dRcolrawbox1\endcsname\else%
957 \led@err@Rightside@PreviousNotPrinted%
958 \fi%
959 \ledRcoltrue
960 \let\beginnumbering\beginnumberingR
961 \let\endnumbering\endnumberingR
962 \let\pausenumbering\pausenumberingR
963 \let\resumenumbering\resumenumberingR
964 \let\memorydump\memorydumpR
965 \let\thepstart\thepstartR
966 \let\pstart\pstartR
967 \let\pend\pendR
968 \let\ledpb\ledpbR
969 \let\lednopb\lednopbR
970 \let\lineation\lineationR
971 \Rightsidehook
972 \let\old@startstanza\@startstanza%
973 \def\@startstanza[##1][##2]{\global\instanzaRtrue\old@startstanza
[##1][##2]}%
974 }{%
975 \ledRcolfalse
976 \expandafter\ifvoid\csname l@dRcolrawbox1\endcsname%
977 \led@error@missing@numbering{Rightside}%

```



```

978 \fi%
979 \Rightsidehookend
980 }
981
982 %

```

VIII Paragraph decomposition and reassembly

In order to be able to count the lines of text and affix line numbers, we add an extra stage of processing for each paragraph. We send the paragraph into a box register, rather than straight onto the vertical list, and when the paragraph ends we slice the paragraph into its component lines; to each line we add any notes or line numbers, add a command to write to the line-list, and then at last send the line to the vertical list. This section contains all the code for this processing.

VIII.1 Boxes, counters, \pstart and \pend

\num@linesR Here are numbers and flags that are used internally in the course of the paragraph decomposition.

\one@lineR When we first form the paragraph, it goes into a box register, \l@dLcolrawbox or \l@dRcolrawbox for right text, instead of onto the current vertical list. The \ifnumberedpar@ flag will be true while a paragraph is being processed in that way.

\par@lineR \num@lines(R) will store the number of lines in the paragraph when it is complete. When we chop it up into lines, each line in turn goes into the \one@line or \one@lineR register, and \par@line(R) will be the number of that line within the paragraph.

```

983 \newcount\num@linesR
984 \newbox\one@lineR
985 \newcount\par@lineR
986 %

```

\pstartL \pstart starts the paragraph by clearing the \inserts@list list and other relevant variables, and then arranges for the subsequent text to go into the appropriate box.

\pstartR \pstart needs to appear at the start of every paragraph that is to be numbered.

Beware: everything that occurs between \pstart and \pend is happening within a group; definitions must be global if you want them to survive past the end of the paragraph.

We have to have specific left and right \pstart when parallel processing; among other things because of potential changes in the linewidth.

```

987
988 \newcounter{pstartL}
989 \renewcommand{\thepstartL}{\bfseries\@arabic\c@pstartL}. }
990 \newcounter{pstartR}
991 \renewcommand{\thepstartR}{\bfseries\@arabic\c@pstartR}. }
992
993 \newcommandx*\pstartL[2][1,2,usedefault]{%

```

```

994 \if@nbreak%
995   \let\oldnbreak\@nbreaktrue%
996 \else%
997   \let\oldnbreak\@nbreakfalse%
998 \fi%
999   \@nbreaktrue%
1000 \ifluatex%
1001   \xdef\l@luatextextdir@L{\the\textdir}%
1002   \xdef\l@luatexpardir@L{\the\pardir}%
1003   \xdef\l@luatexbodydir@L{\the\bodydir}%
1004 \fi%
1005 \ifnumbering \else%
1006   \led@err@PstartNotNumbered%
1007   \beginnumbering%
1008 \fi%
1009 \ifnumberedpar@%
1010   \led@err@PstartInPstart%
1011   \pend%
1012 \fi%
1013 %

```

If this is the first `\pstart` in a numbered section, clear any inserts and set `\ifpst@rtedL` to FALSE.

```

1014 \ifpst@rtedL\else%
1015   \list@clear{\inserts@list}%
1016   \global\let\next@insert=\empty%
1017   \global\pst@rtedLtrue%
1018 \fi%
1019 \begingroup\everypar{}%
1020 %

```

When parallel processing we check that we have not exceeded the maximum number of chunks. In any event we grab a box for the forthcoming text.

```

1021 \global\advance\l@dnumpstartsL \@ne%
1022 \ifnum\l@dnumpstartsL>\l@dc@maxchunks%
1023   \led@err@TooManyPstarts%
1024   \global\l@dnumpstartsL=\l@dc@maxchunks%
1025 \fi%
1026 \global\setnamebox{\l@dLcolrawbox\the\l@dnumpstartsL}=\vbox\bgroup%
1027 %

```

We set all the usual interline penalties to zero; this ensures that there will be no large interline penalties to prevent us from slicing the paragraph into pieces. These penalties revert to the values that you set when the group for the `\vbox` ends.

```

1028 \l@dzeropenalties%
1029 \ifautopar\else%
1030   \ifnumberpstart%
1031     \ifsidepstartnum%
1032     \else%

```

```

1033     \thepstartL%
1034     \fi%
1035     \fi%
1036     \fi%
1037 \@at@start@every@pstart%
1038 \hsize=\Lcolwidth%
1039 \numberedpar@true%
1040 \iflabelpstart\protected@edef\@currentlabel%
1041     {\p@pstartL\thepstartL}\fi%
1042 %

```

Dump the optional arguments

```

1043 \providetoggle{before@pstartL@the\l@dnumpstartsL @par}%
1044 \ifboolexpr{%
1045     test {\ifstrempy{#1}}%
1046     and test {\ifstrempy{#2}}%
1047 }%
1048 {%
1049     \ifat@every@pstart@star@%
1050     \global\togglefalse{before@pstartL@the\l@dnumpstartsL @par}%
1051     \else%
1052     \global\toggletrue{before@pstartL@the\l@dnumpstartsL @par}%
1053     \fi%
1054     \csgdef{before@pstartL@the\l@dnumpstartsL}{\at@every@pstart}%
1055 }%
1056 {%
1057     \ifstrempy{#1}{}%
1058     \global\toggletrue{before@pstartL@the\l@dnumpstartsL @par}%
1059     \csgdef{before@pstartL@the\l@dnumpstartsL}{\noindent#1}%
1060     }%
1061     \ifstrempy{#2}{}%
1062     {%
1063     \csgdef{before@pstartL@the\l@dnumpstartsL}{#2}%
1064     \global\togglefalse{before@pstartL@the\l@dnumpstartsL @par}%
1065     }%
1066     }%
1067 \at@every@pstart@call%
1068 %

```

Gobble following space (automatically done if there is no optional argument)

```

1069 \ignorespaces%
1070 %

```

```

1071 }
1072 %

```

The same for right side.

```

1073 \newcommandx*{\pstartR}[2][1,2,usedefault]{%
1074     \if@nobreak%

```

```

1075 \let\@oldnobreak\@nobreaktrue%
1076 \else%
1077 \let\@oldnobreak\@nobreakfalse%
1078 \fi%
1079 \@nobreaktrue%
1080 \ifluatex%
1081 \xdef\l@luatextextdir@R{\the\textdir}%
1082 \xdef\l@luatexpardir@R{\the\pardir}%
1083 \xdef\l@luatexbodydir@R{\the\bodydir}%
1084 \fi%
1085 \ifnumberingR \else%
1086 \led@err@PstartNotNumbered%
1087 \beginnumberingR%
1088 \fi%
1089 \ifnumberedpar@%
1090 \led@err@PstartInPstart%
1091 \pendR%
1092 \fi%
1093 \ifpst@rtedR\else%
1094 \list@clear{\inserts@listR}%
1095 \global\let\next@insertR=\empty%
1096 \global\pst@rtedRtrue%
1097 \fi%
1098 \begingroup\everypar{}%
1099 \global\advance\l@dnumpstartsR \@ne%
1100 \ifnum\l@dnumpstartsR>\l@dc@maxchunks%
1101 \led@err@TooManyPstarts%
1102 \global\l@dnumpstartsR=\l@dc@maxchunks%
1103 \fi%
1104 \global\setnamebox{\l@dRcolrawbox\the\l@dnumpstartsR}=\vbox\bgroup%
1105 \l@dzeropenalties%
1106 \ifautopar\else%
1107 \ifnumberpstart%
1108 \ifsidepstartnum\else%
1109 \thepstartR%
1110 \fi%
1111 \fi%
1112 \fi%
1113 \@at@start@every@pstart%
1114 \hsize=\Rcolwidth%
1115 \numberedpar@true%
1116 \iflabelpstart\protected@edef\@currentlabel%
1117 {\p@pstartR\thepstartR}\fi%
1118 \providetoggle{before@pstartR@the\l@dnumpstartsR @par}%
1119 \ifboolexpr{%
1120 test {\ifstrempy{#1}}%
1121 and test {\ifstrempy{#2}}%
1122 }%
1123 {%
1124 \ifat@every@pstart@star@%

```

```

1125 \global\togglefalse{before@pstartR@the\l@dumpstartsR @par}%
1126 \else%
1127 \global\toggletrue{before@pstartR@the\l@dumpstartsR @par}%
1128 \fi%
1129 \csgdef{before@pstartR@the\l@dumpstartsR}{\at@every@pstart}%
1130 }%
1131 {%
1132 \ifstrepty{#1}{}%
1133 \global\toggletrue{before@pstartR@the\l@dumpstartsR @par}%
1134 \csgdef{before@pstartR@the\l@dumpstartsR}{\noindent#1}%
1135 }%
1136 \ifstrepty{#2}{}%
1137 {%
1138 \csgdef{before@pstartR@the\l@dumpstartsR}{#2}%
1139 \global\togglefalse{before@pstartR@the\l@dumpstartsR @par}%
1140 }%
1141 }%
1142 \at@every@pstart@call%
1143 \ignorespaces%
1144 }
1145 %

```

\pendL \pend must be used to end a numbered paragraph. Again we need a version that knows about left parallel texts.

```

1146 \newcommandx*{\pendL}[2][1,2,usedefault]{%
1147 \ifnumbering \else%
1148 \led@err@PendNotNumbered%
1149 \fi%
1150 \ifnumberedpar@ \else%
1151 \led@err@PendNoPstart%
1152 \fi%
1153 %

```

We immediately call \endgraf to end the paragraph; this ensures that there will be no large interline penalties to prevent us from slicing the paragraph into pieces.

```

1154 \at@end@every@pend%
1155 \endgraf\global\num@lines=\prevgraf\egroup%
1156 \global\par@line=0%
1157 %

```

End the group that was begun in the \pstart.

```

1158 \endgroup%
1159 \ignorespaces%
1160 \@oldnobreak%
1161 \dump@pstartL@pc%
1162 \ifnumberpstart%
1163 \addtocounter{pstartL}{1}%
1164 \fi
1165 \parledgroup@beforenotes@save{L}%

```

```

1166 %
Dump content of the optional argument.
1167 \providetoggle{after@pendL@the\l@dnumstartsL @par}%
1168 \ifboolexpr{%
1169   test {\ifstrempy{#1}}%
1170   and test {\ifstrempy{#2}}%
1171 }%
1172 {%
1173   \ifat@every@pend@star@%
1174   \global\togglefalse{after@pendL@the\l@dnumstartsL @par}%
1175   \else%
1176   \global\toggletrue{after@pendL@the\l@dnumstartsL @par}%
1177   \fi%
1178   \csgdef{after@pendL@the\l@dnumstartsL}{\at@every@pend}%
1179 }%
1180 {%
1181   \ifstrempy{#1}{%
1182     \global\toggletrue{after@pendL@the\l@dnumstartsL @par}%
1183     \csgdef{after@pendL@the\l@dnumstartsL}{\noindent#1}%
1184   }%
1185   \ifstrempy{#2}{%
1186     {%
1187       \csgdef{after@pendL@the\l@dnumstartsL}{#2}%
1188       \global\togglefalse{after@pendL@the\l@dnumstartsL @par}%
1189     }%
1190   }%
1191 }%
1192 %

```

\pendR The version of \pend needed for right texts.

```

1193 \newcommandx*{\pendR}[2][1,2,usedefault]{%
1194   \ifnumberingR \else%
1195     \led@err@PendNotNumbered%
1196   \fi%
1197   \ifnumberedpar@ \else%
1198     \led@err@PendNoPstart%
1199   \fi%
1200   \@at@end@every@pend%
1201   \endgraf\global\num@linesR=\prevgraf\egroup%
1202   \global\par@lineR=0%
1203   \endgroup%
1204   \ignorespaces%
1205   \@oldnobreak%
1206   \dump@pstartR@pc%
1207   \ifnumberpstart%
1208     \addtocounter{pstartR}{1}%
1209   \fi%
1210   \parledgroup@beforenotes@save{R}%

```

```

1211 \providetoggle{after@pendR@the\l@dnumpstartsR @par}%
1212 \ifbool{expr{%
1213   test {\ifstrempy{#1}}}%
1214   and test {\ifstrempy{#2}}}%
1215 }%
1216 {%
1217   \ifat@every@pend@star@%
1218   \global\togglefalse{after@pendR@the\l@dnumpstartsR @par}%
1219   \else%
1220   \global\toggletrue{after@pendR@the\l@dnumpstartsR @par}%
1221   \fi%
1222   \csgdef{after@pendR@the\l@dnumpstartsR}{\at@every@pend}}%
1223 {%
1224   \ifstrempy{#1}{%
1225     \csgdef{after@pendR@the\l@dnumpstartsR}{\noindent#1}%
1226     \global\toggletrue{after@pendR@the\l@dnumpstartsR @par}%
1227   }%
1228   \ifstrempy{#2}{%
1229     \csgdef{after@pendR@the\l@dnumpstartsR}{#2}%
1230     \global\togglefalse{after@pendR@the\l@dnumpstartsR @par}%
1231   }%
1232 }%
1233 }
1234
1235 %

```

\AtEveryPstartCall The `\AtEveryPstartCall` argument is called when the `\pstartL` or `\pstartR` is called. That is different of `\AtEveryPstart` the argument of which is called when the `\pstarts` are printed.

```

1236 \newcommand{\AtEveryPstartCall}[1]{\gdef\at@every@pstart@call{#1}}%
1237 \gdef\at@every@pstart@call{}%
1238 %

```

\ifprint@last@after@pendL Two booleans set to true, when the time is to print the last optional argument of a `\pend`.
\ifprint@last@after@pendR

```

1239 \newif\ifprint@last@after@pendL%
1240 \newif\ifprint@last@after@pendR%
1241 %

```

VIII.2 Processing one line

For parallel texts we have to be able to process left and right lines independently. For sequential text we happily use the original `\do@line`. Otherwise ...

\l@dleftbox A line of left text will be put in the box `\l@dleftbox`, and analogously for a line of right
\l@drightbox text.

```

1242 \newbox\l@leftbox
1243 \newbox\l@rightbox
1244
1245 %

```

\countLline We need to know the number of lines processed.

```

\countRline
1246 \newcount\countLline
1247 \countLline \z@
1248 \newcount\countRline
1249 \countRline \z@
1250
1251 %

```

\@donereallinesL We need to know the number of ‘real’ lines output (i.e., those that have been input by the user), and the total lines output (which includes any blank lines output for synchronisation).

\@donetotallinesL

\@donereallinesR

\@donetotallinesR

```

1252 \newcount\@donereallinesL
1253 \newcount\@donetotallinesL
1254 \newcount\@donereallinesR
1255 \newcount\@donetotallinesR
1256
1257 %

```

\do@lineL The **\do@lineL** macro is called to do all the processing for a single line of left text.

```

1258 \newcommand*{\do@lineL}{%
1259 \letcs{\ifnumberpstart}{numberpstart@L\the\l@dpscl}%
1260 \advance\countLline \@ne%
1261 \ifvbox\namebox{1@dLcolrawbox\the\l@dpscl}%
1262 {\vbadness=10000%
1263 \splittopskip=\z@%
1264 \do@lineLhook%
1265 \l@demtyd@ta%
1266 \global\setbox\one@line=\vsplit\namebox{1@dLcolrawbox\the\l@dpscl}%
1267 to\baselineskip}%
1268 \IfStrEq{\splitfirstmarks\parledgroup@}{begin}{\
parledgroup@notes@startL}{}%
1269 \unvbox\one@line \global\setbox\one@line=\lastbox%
1270 \@writepageofparL%
1271 \getline@numL%
1272 \ifnum\@lock>\@ne%
1273 \inserthangingsymboltrue%
1274 \else%
1275 \inserthangingsymbolfalse%
1276 \fi%
1277 \setbox\l@leftbox%
1278 \hb@xt@ \lcolwidth{%

```



```

1279 \ifl@dhidenumber%
1280 \global\l@dhidenumberfalse%
1281 \f@x@l@cks%
1282 \else%
1283 \affixline@num%
1284 \fi%
1285 \xifinlist{\the\l@dpscl}{\eled@sections@@}%
1286 {%
1287 \if@firstlineofpage%
1288 \set@Xtxtbeforenotes%
1289 \set@txtbeforenotesX%
1290 \global\@firstlineofpagefalse%
1291 \fi%
1292 \ifdefstring{\ms@data@position}{msdata-regular}{%
1293 \insert@msdata%
1294 \add@inserts%
1295 \add@Xgroupbyline%
1296 }{%
1297 \add@inserts%
1298 \add@Xgroupbyline%
1299 \insert@msdata%
1300 }%
1301 \affixside@note%
1302 }%
1303 {\print@lineL}%
1304 }%
1305 \add@penaltiesL%
1306 \global\advance\@donereallinesL\@ne%
1307 \global\advance\@donetotallinesL\@ne%
1308 \else%
1309 \iflinenumberLevenifblank
1310 \new@lineL%
1311 \l@emptyd@ta%
1312 \getline@numL%
1313 \affixline@num%
1314 \setbox\l@dleftbox \hb@xt@ \Lcolwidth{%
1315 \l@dld@ta%
1316 \hspace*{\Lcolwidth}%
1317 \ledrlfill\l@drd@ta%
1318 }%
1319 \else%
1320 \setbox\l@dleftbox \hb@xt@ \Lcolwidth{\hspace*{\Lcolwidth}}%
1321 \fi%
1322 \global\advance\@donetotallinesL\@ne%
1323 \fi%
1324 }%
1325
1326
1327 %

```

`\print@lineL` `\print@lineL` is for lines without a sectioning command. See `reledmac` definition of `\print@line` for handbook.

```

1328 \def\print@lineL{%
1329   \affixpstart@numL%
1330   \l@dld@ta%
1331   \if@firstlineofpage%
1332     \set@Xtxtbeforenotes%
1333     \set@txtbeforenotesX%
1334     \global\@firstlineofpagefalse%
1335   \fi%
1336   \ifdefstring{\ms@data@position}{msdata-regular}{%
1337     \insert@msdata%
1338     \add@inserts%
1339     \add@Xgroupbyline%
1340   }{%
1341     \add@inserts%
1342     \add@Xgroupbyline%
1343     \insert@msdata%
1344   }%
1345   \affixside@note%
1346   \l@dlsn@te%
1347   \do@insidelineLhook%
1348   \hb@xt@ \Lcolwidth{\ledllfill\hb@xt@ \wd\one@line{%
1349     \ifluatex%
1350       \texdir\l@luatextextdir@L%
1351     \fi%
1352     \new@lineL%
1353     \inserthangingsymbolL%
1354     \l@dunhbox@line{\one@line}}\ledrlfill\l@drd@ta%
1355   \l@drsn@te}}%
1356
1357 %

```

`\print@eledsectionL` `\print@eledsectionL` is for line with macro code.

```

1358 \def\print@eledsectionL{%%
1359   \addtocounter{pstartL}{-1}%
1360   \ifdefstring{\@eledsectnotoc}{L}{\ledsectnotoc}{%
1361   \ifdefstring{\@eledsectmark}{L}{\ledsectnomark}{%
1362     \numdef{\temp@}{\l@dpscL-1}%
1363     \xifinlist{\temp@}{\eled@sections@@}{\@nobreaktrue}{\@nobreakfalse}%
1364     \@eled@sectioningtrue%
1365   \bgroup%
1366     \ifluatex%
1367       \texdir\l@luatextextdir@L%
1368       \pardir\l@luatexpardir@L%
1369       \bodydir\l@luatexbodydir@L%
1370       \ifdefstring{\l@luatextextdir@L}{TRT}{\@RTLtrue}{%
1371     \fi%

```

```

1372 \csuse{eled@sectioning@the\l@dpscl}%
1373 \egroup%
1374 \@eled@sectioningfalse%
1375 \global\csundef{eled@sectioning@the\l@dpscl}%
1376 \if@RTL%
1377 \hspace{-3\paperwidth}%
1378 {\hbox{\l@dunhbox@line{\one@line}} \new@line}%
1379 \else%
1380 \hspace{3\paperwidth}%
1381 {\new@line \hbox{\l@dunhbox@line{\one@line}}}%
1382 \fi%
1383 \vskip@eledsection@correcting@skip%
1384 }
1385
1386 %

```

\dolineLhook These high-level commands just redefine the low-level commands. They have to be used by user, without `\makeatletter`.

\dolineRhook

```

1387 \newcommand*{\dolineLhook}[1]{\gdef\do@lineLhook{#1}}%
1388 \newcommand*{\dolineRhook}[1]{\gdef\do@lineRhook{#1}}%
1389 \newcommand*{\doinsidelineLhook}[1]{\gdef\do@insidelineLhook{#1}}%
1390 \newcommand*{\doinsidelineRhook}[1]{\gdef\do@insidelineRhook{#1}}%
1391
1392 %

```

\do@lineLhook Hooks, initially empty, into the respective `\do@line(L/R)` macros.

\do@lineRhook

```

1393 \newcommand*{\do@lineLhook}{}
1394 \newcommand*{\do@lineRhook}{}
1395 \newcommand*{\do@insidelineLhook}{}
1396 \newcommand*{\do@insidelineRhook}{}
1397
1398 %

```

\do@lineR The `\do@lineR` macro is called to do all the processing for a single line of right text.

```

1399 \newcommand*{\do@lineR}{%
1400 \let\linenumrepL\linenumrep%
1401 \let\sublinenumrepL\sublinenumrep%
1402 \let\linenumrep\linenumrepR%
1403 \let\sublinenumrep\sublinenumrepR%
1404 \letcs{\ifnumberpstart}{numberpstart@R\the\l@dpscl}%
1405 \ledRcol@true%
1406 \advance\countRline \@ne%
1407 \ifvbox\namebox{\l@dRcolrawbox\the\l@dpscl}%
1408 {\vbadness=10000%
1409 \splittopskip=\z@%
1410 \do@lineRhook%

```

```

1411 \l@emptyd@ta%
1412 \global\setbox\one@lineR=\vsplit\namebox{l@dRcolrawbox\the\l@dpscR}%
1413 to\baselineskip}%
1414 \IfStrEq{\splitfirstmarks\parledgroup@}{begin}{\
parledgroup@notes@startR}{}%
1415 \unvbox\one@lineR \global\setbox\one@lineR=\lastbox%
1416 \@writepageofparR%
1417 \getline@numR%
1418 \ifnum\@lockR>\@ne%
1419 \inserthangingsymbolRtrue%
1420 \else%
1421 \inserthangingsymbolRfalse%
1422 \fi%
1423 \setbox\l@drightbox%
1424 \hb@xt@ \Rcolwidth{%
1425 \ifl@dhiddenumber%
1426 \global\l@dhiddenumberfalse%
1427 \f@x@l@cksR%
1428 \else%
1429 \affixline@numR%
1430 \fi%
1431 \xifinlist{\the\l@dpscR}{\eled@sectionsR@@}%
1432 {%
1433 \if@firstlineofpageR%
1434 \set@Xtxtbeforenotes%
1435 \set@txtbeforenotesX%
1436 \global\@firstlineofpageRfalse%
1437 \fi%
1438 \ifdefstring{ms@data@position}{msdata-regular}{%
1439 \insert@msdata%
1440 \add@insertsR%
1441 \add@Xgroupbyline%
1442 }{%
1443 \add@insertsR%
1444 \add@Xgroupbyline%
1445 \insert@msdata%
1446 }%
1447 \affixside@noteR%
1448 }%
1449 {\print@lineR}%
1450 }%
1451 \add@penaltiesR%
1452 \global\advance\@donereallinesR\@ne%
1453 \global\advance\@donetotallinesR\@ne%
1454 \else%
1455 \iflinenumberRevenifblank%
1456 \new@lineR
1457 \l@emptyd@ta%
1458 \getline@numR%
1459 \setbox\l@drightbox \hb@xt@ \Rcolwidth{%

```

```

1460     \affixline@numR%
1461     \l@dld@ta%
1462     \hspace*{\Rcolwidth}%
1463     \ledrlfill\l@drd@ta%
1464   }%
1465   \else%
1466     \setbox\l@drightbox \hb@xt@ \Rcolwidth{\hspace*{\Rcolwidth}}%
1467   \fi%
1468   \global\advance\@donetotallinesR\@ne%
1469 \fi%
1470 \ledRcol@false%
1471 \let\linenumrep\linenumrepL%
1472 \let\sublinenumrep\sublinenumrepL%
1473 }
1474
1475
1476 %

```

`\print@lineR`
`\print@eledsectionR`

VIII.3 Line and page number computation

`\getline@numR` The `\getline@numR` macro determines the page and line numbers for the right text line we are about to send to the vertical list. The `\getline@numL` is the same for left text.

```

1477 \newcommand*{\getline@numR}{%
1478   \global\advance\absline@numR \@ne
1479   \do@actionsR
1480   \do@ballastR
1481   \ifledgroupnotesR\else
1482     \ifnumberline
1483       \ifsublines@R
1484         \ifnum\sub@lockR<\tw@
1485           \global\advance\subline@numR \@ne
1486         \fi
1487       \else
1488         \ifnum\@lockR<\tw@
1489           \global\advance\line@numR \@ne
1490           \global\subline@numR \z@
1491         \fi
1492       \fi
1493     \fi
1494   \fi
1495 }
1496 \newcommand*{\getline@numL}{%
1497   \global\advance\absline@num \@ne
1498   \do@actions
1499   \do@ballast
1500   \ifledgroupnotesL\else
1501     \ifnumberline

```

```

1502         \ifsublines@
1503         \ifnum\sub@lock<\tw@
1504             \global\advance\subline@num \@ne
1505         \fi
1506         \else
1507             \ifnum\@lock<\tw@
1508                 \global\advance\line@num \@ne
1509                 \global\subline@num \z@
1510             \fi
1511         \fi
1512     \fi
1513 }
1514
1515
1516
1517 %

```

`\do@ballastR` The real work in the line macros above is done in `\do@actions`, but before we plunge into that, let us get `\do@ballastR` out of the way.

```

1518 \newcommand*{\do@ballastR}{\global\ballast@count=\z@
1519 \begingroup
1520 \advance\absline@numR \@ne
1521 \ifnum\next@actionlineR=\absline@numR
1522     \ifnum\next@actionR>-1001
1523         \global\advance\ballast@count by -\c@ballast
1524     \fi
1525 \fi
1526 \endgroup}
1527 %

```

`\l@dskipversenumberR` The `\do@actionsR` macro looks at the list of actions to take at particular right text absolute line numbers, and does everything that is specified for the current line.
`\do@actionsR`
`\do@actions@fixedcodeR` It may call itself recursively and we use tail recursion, via `\do@actions@nextR` for this.
`\do@actions@nextR`

```

1528
1529 \newif\ifl@dskipversenumberR
1530 \newcommand*{\do@actions@fixedcodeR}{%
1531     \ifcase\l@dskipversenumberR
1532     \or% % 1001 = starting sublineation
1533         \global\sublines@Rtrue
1534     \or% % 1002 = ending sublineation
1535         \global\sublines@Rfalse
1536     \or% % 1003 = starting locking number
1537         \global\@lockR=\@ne
1538     \or% % 1004 = ending locking number
1539         \ifnum\@lockR=\tw@
1540             \global\@lockR=\thr@@
1541         \else

```

```

1542 \global\@lockR=\z@
1543 \fi
1544 \or% % 1005 = starting locking subnumber
1545 \global\sub@lockR=\@ne
1546 \or% % 1006 = ending locking subnumber
1547 \ifnum\sub@lockR=\tw@
1548 \global\sub@lockR=\thr@@
1549 \else
1550 \global\sub@lockR=\z@
1551 \fi
1552 \or% % 1007 = skipping numbering
1553 \l@dskipnumbertrue
1554 \or% % 1008 = skipping numbering in stanza
1555 \l@dskipversenumberRtrue%
1556 \or% % 1009 = hiding number
1557 \l@dhidenumbertrue%
1558 \or% % 1010 = inserting msdata
1559 \add@msdata%
1560 \else%
1561 \led@warn@BadAction
1562 \fi%
1563 }
1564
1565
1566 \newcommand*{\do@actionsR}{%
1567 \global\let\do@actions@nextR=\relax
1568 \@l@dttempcntb=\absline@numR
1569 \ifnum\@l@dttempcntb<\next@actionlineR\else
1570 \ifnum\next@actionR>-1001\relax
1571 \@firstlineofpageRtrue%
1572 \global\page@numR=\next@actionR
1573 \ifbypage@R
1574 \global\line@numR \z@ \global\subline@numR \z@
1575 \fi
1576 \add@msdata@firstlineofpage%
1577 \else
1578 \ifnum\next@actionR<-4999\relax % 9/05 added relax here
1579 \@l@dttempcnta=-\next@actionR
1580 \advance\@l@dttempcnta by -5001\relax
1581 \ifsublines@R
1582 \global\subline@numR=\@l@dttempcnta
1583 \else
1584 \global\line@numR=\@l@dttempcnta
1585 \fi
1586 \else
1587 \@l@dttempcnta=-\next@actionR
1588 \advance\@l@dttempcnta by -1000\relax
1589 \do@actions@fixedcodeR
1590 \fi
1591 \fi

```

```

1592 \ifx\actionlines@listR\empty
1593   \gdef\next@actionlineR{1000000}%
1594   \else
1595     \glp\actionlines@listR\to\next@actionlineR
1596     \glp\actions@listR\to\next@actionR
1597     \global\let\do@actions@nextR=\do@actionsR
1598   \fi
1599 \fi
1600 \do@actions@nextR}
1601
1602 %

```

VIII.4 Line number printing

`\l@dcalcnm` `\affixline@numR` is the right text version of the `\affixline@num` macro.

```

\ch@cksub@l@ckR
\ch@ck@l@ckR
\fx@l@ckR
\affixline@numR
1603 \newcommand*\l@dcalcnm}[3]{%
1604   \ifnum #1 > #2\relax
1605     \l@dttempcnta = #1\relax
1606     \advance\l@dttempcnta by -#2\relax
1607     \divide\l@dttempcnta by #3\relax
1608     \multiply\l@dttempcnta by #3\relax
1609     \advance\l@dttempcnta by #2\relax
1610   \else
1611     \l@dttempcnta=#2\relax
1612   \fi}
1613
1614 \newcommand*\ch@cksub@l@ckR{%
1615   \ifcase\sub@lockR
1616   \or
1617     \ifnum\sublock@disp=\@ne
1618       \l@dttempcntb \z@ \l@dttempcnta \@ne
1619     \fi
1620   \or
1621     \ifnum\sublock@disp=\tw@
1622     \else
1623       \l@dttempcntb \z@ \l@dttempcnta \@ne
1624     \fi
1625   \or
1626     \ifnum\sublock@disp=\z@
1627       \l@dttempcntb \z@ \l@dttempcnta \@ne
1628     \fi
1629   \fi}
1630
1631 \newcommand*\ch@ck@l@ckR{%
1632   \ifcase\@lockR
1633   \or
1634     \ifnum\lock@disp=\@ne
1635

```



```

1636 \l@dttempcntb \z@ \l@dttempcnta \@ne
1637 \fi
1638 \or
1639 \ifnum\lock@disp=\tw@
1640 \else
1641 \l@dttempcntb \z@ \l@dttempcnta \@ne
1642 \fi
1643 \or
1644 \ifnum\lock@disp=\z@
1645 \l@dttempcntb \z@ \l@dttempcnta \@ne
1646 \fi
1647 \fi}
1648
1649 \newcommand*{\f@x@l@cksR}{%
1650 \ifcase\@lockR
1651 \or
1652 \global\@lockR \tw@
1653 \or \or
1654 \global\@lockR \z@
1655 \fi
1656 \ifcase\sub@lockR
1657 \or
1658 \global\sub@lockR \tw@
1659 \or \or
1660 \global\sub@lockR \z@
1661 \fi}
1662
1663
1664 \let\linenumberlistR\empty%
1665 \newcommand*{\affixline@numR}{%
1666 \ifledgroupnotesR\else\ifnumberline
1667 \ifl@dskipnumber
1668 \global\l@dskipnumberfalse
1669 \else
1670 \ifsublines@R
1671 \l@dttempcntb=\subline@numR
1672 \l@dcalcnum{\subline@numR}{\c@firstsublinenumR}{\c@sublinenumincrementR
}%
1673 \ch@cksub@l@ckR
1674 \else
1675 \l@dttempcntb=\line@numR
1676 \ifx\linenumberlistR\empty%
1677 \l@dcalcnum{\line@numR}{\c@firstlinenumR}{\c@linenumincrementR}%
1678 \else
1679 \l@dttempcnta=\line@numR
1680 \edef\rem@inderR{\linenumberlistR,\number\line@numR,%
1681 \edef\sc@n@list{\def\noexpand\sc@n@list
1682 ###1,\number\l@dttempcnta,###2|{\def\noexpand\rem@inderR{###2}}}%
%
1683 \sc@n@list\expandafter\sc@n@list\rem@inderR|%
```

```

1684 \ifx\rem@inderR\empty\advance\@l@tempcnta\@ne\fi%
1685 \fi
1686 \ch@ck@l@ckR
1687 \fi
1688 \ifnum\@l@tempcnta=\@l@tempcntb
1689 \ifl@dskipversenumberR\else
1690 \if@twocolumn
1691 \if@firstcolumn
1692 \gdef\l@dld@ta{\llap{\leftlinenumR}}}%
1693 \else
1694 \gdef\l@drd@ta{\rlap{\rightlinenumR}}}%
1695 \fi
1696 \else
1697 \ifboolexpr{bool {l@dprintingcolumns} and test {\ifnumgreater{\
line@margin@columnsR}{\m@ne}}}%
1698 {\@l@tempcntb=\line@margin@columnsR}%
1699 {\@l@tempcntb=\line@marginR}%
1700 \ifnum\@l@tempcntb>\@ne
1701 \advance\@l@tempcntb by\page@numR
1702 \fi
1703 \ifodd\@l@tempcntb
1704 \gdef\l@drd@ta{\rlap{\rightlinenumR}}}%
1705 \else
1706 \gdef\l@dld@ta{\llap{\leftlinenumR}}}%
1707 \fi
1708 \fi
1709 \fi
1710 \fi
1711 \f@x@l@cksR
1712 \fi
1713 \fi
1714 \fi}
1715 %

```

VIII.5 Pstart number printing in side

The printing of the pstart number is like in reledmac, with two differences :

- Some commands have versions suffixed by R or L.
- The `\affixpstart@num` and `\affixpstart@numR` commands are called in the `\Pages` command. Consequently, the `pstartL` and `pstartR` counters must be reset at the beginning of this command.

```

\affixpstart@numL16
\affixpstart@numR17 \newcommand*{\affixpstart@numL}{%
\leftpstartnumR18 \ifsidepstartnum
\rightpstartnumR19 \if@twocolumn
\leftpstartnumL20 \if@firstcolumn
\rightpstartnumL
\ifpstartnumR

```

```

1721 \gdef\l@dld@ta{\llap{\leftpstartnumL}}}%
1722 \else
1723 \gdef\l@drd@ta{\rlap{\rightpstartnumL}}}%
1724 \fi
1725 \else
1726 \ifboolexpr{bool {l@dprintingcolumns} and test {\ifnumgreater{\
line@margin@columns}{\m@ne}}}%
1727 {\@l@tempcntb=\line@margin@columns}%
1728 {\@l@tempcntb=\line@margin}%
1729 \ifnum\@l@tempcntb>\@ne
1730 \advance\@l@tempcntb \page@num
1731 \fi
1732 \ifodd\@l@tempcntb
1733 \gdef\l@drd@ta{\rlap{\rightpstartnumL}}}%
1734 \else
1735 \gdef\l@dld@ta{\llap{\leftpstartnumL}}}%
1736 \fi
1737 \fi
1738 \fi
1739 }
1740 \newcommand*{\affixpstart@numR}{%
1741 \ifsidepstartnum
1742 \if@twocolumn
1743 \if@firstcolumn
1744 \gdef\l@dld@ta{\llap{\leftpstartnumR}}}%
1745 \else
1746 \gdef\l@drd@ta{\rlap{\rightpstartnumR}}}%
1747 \fi
1748 \else
1749 \ifboolexpr{bool {l@dprintingcolumns} and test {\ifnumgreater{\
line@margin@columnsR}{\m@ne}}}%
1750 {\@l@tempcntb=\line@margin@columnsR}%
1751 {\@l@tempcntb=\line@marginR}%
1752 \ifnum\@l@tempcntb>\@ne
1753 \advance\@l@tempcntb \page@numR
1754 \fi
1755 \ifodd\@l@tempcntb
1756 \gdef\l@drd@ta{\rlap{\rightpstartnumR}}}%
1757 \else
1758 \gdef\l@dld@ta{\llap{\leftpstartnumR}}}%
1759 \fi
1760 \fi
1761 \fi
1762 }
1763
1764 \newcommand*{\leftpstartnumL}{%
1765 \ifpstartnum
1766 \thepstartL
1767 \kern\linenumsep\global\pstartnumfalse\fi
1768 }

```

```

1769 \newcommand*{\rightpstartnumL}{
1770 \ifpstartnum\kern\linenumsep
1771 \thepstartL
1772 \global\pstartnumfalse\fi
1773 }
1774 \newif\ifpstartnumR
1775 \pstartnumRtrue
1776 \newcommand*{\leftpstartnumR}{
1777 \ifpstartnumR
1778 \thepstartR
1779 \kern\linenumsep\global\pstartnumRfalse\fi
1780 }
1781 \newcommand*{\rightpstartnumR}{
1782 \ifpstartnumR\kern\linenumsep
1783 \thepstartR
1784 \global\pstartnumRfalse\fi
1785 }
1786 %

```

VIII.6 Add insertions to the vertical list

`\inserts@listR` `\inserts@listR` is the list macro that contains the inserts that we save up for one right text paragraph.

```

1787 \list@create{\inserts@listR}
1788 %

```

`\add@insertsR` The right text version.
`\add@inserts@nextR`

```

1789 \newcommand*{\add@insertsR}{%
1790 \global\let\add@inserts@nextR=\relax
1791 \ifx\inserts@listR\empty \else
1792 \ifx\next@insertR\empty
1793 \ifx\insertlines@listR\empty
1794 \global\noteschanged@true
1795 \gdef\next@insertR{100000}%
1796 \else
1797 \gl@p\insertlines@listR\to\next@insertR
1798 \fi
1799 \fi
1800 \ifnum\next@insertR=\absline@numR
1801 \gl@p\inserts@listR\to\@insertR
1802 \@insertR
1803 \global\let\@insertR=\undefined
1804 \global\let\next@insertR=\empty
1805 \global\let\add@inserts@nextR=\add@insertsR
1806 \fi
1807 \fi
1808 \add@inserts@nextR}

```

1809
1810 %

VIII.7 Penalties

`\add@penaltiesL` `\add@penaltiesL` is the last macro used by `\do@lineL`. It adds up the club, widow, and interline penalties, and puts a single penalty of the appropriate size back into the paragraph; these penalties get removed by the `\vsplit` operation. `\displaywidowpenalty` and `\brokenpenalty` are not restored, since we have no easy way to find out where we should insert them.

In the code below, which is a virtual copy of the original `\add@penalties`, `\num@lines` is the number of lines in the whole paragraph, and `\par@line` is the line we are working on at the moment. The count `\@l@dttempcnta` is used to calculate and accumulate the penalty; it is initially set to the value of `\ballast@count`, which has been worked out in `\do@ballast`. Finally, the penalty is checked to see that it does not go below -10000 .

```
\newcommand*{\add@penaltiesR}{\@l@dttempcnta=\ballast@count
\ifnum\num@linesR>\@ne
\global\advance\par@lineR \@ne
\ifnum\par@lineR=\@ne
\advance\@l@dttempcnta by \clubpenalty
\fi
\@l@dttempcntb=\par@lineR \advance\@l@dttempcntb \@ne
\ifnum\@l@dttempcntb=num@linesR
\advance\@l@dttempcnta by \widowpenalty
\fi
\ifnum\par@lineR<\num@linesR
\advance\@l@dttempcnta by \interlinepenalty
\fi
\fi
\ifnum\@l@dttempcnta=z@
\relax
\else
\ifnum\@l@dttempcnta>-10000
\penalty\@l@dttempcnta
\else
\penalty -10000
\fi
\fi}
```

This is for a single chunk. However, as we are probably dealing with several chunks at a time, the above is not really relevant. Peter Wilson thinks that it is likely with parallel text that there is no real need to add back any penalties; even if there was, they would have to match across the left and right lines. So, Peter Wilson ends up with the following.

1811 `\newcommand*{\add@penaltiesL}{}`

```

1812 \newcommand*{\add@penaltiesR}{%
1813
1814 %

```

VIII.8 Printing leftover notes

`\flush@notesR` The `\flush@notesR` macro is called after the entire right text has been sliced up and sent on to the vertical list.

```

1815 \newcommand*{\flush@notesR}{%
1816   \@xloop
1817   \ifx\inserts@listR\empty \else
1818     \glp\inserts@listR\to\@insertR
1819     \@insertR
1820     \global\let\@insertR=\undefined
1821   \repeat}
1822
1823 %

```

IX Footnotes

IX.1 Footnotes output specific to `\Pages`

`\print@Xnotes@forpages` The `\Xonlyside` and `\onlysideX` hooks for `\Pages` allow notes to be printed either in left or right pages only. The implementation of such features is delegated to `\print@Xnotes@forpages`, which replaces `\print@Xnotes` inside `\Pages`. Here is how we proceed⁶:

`\correct@Xfootins@box`
`\print@notesX@forpages`
`\correct@footinsX@box`

- If notes are to be printed in both sides, we just proceed the usual way: print the foot starts for the series, then the foot group.
- If notes are to be printed in the left side, we do these prints only for even pages ; if notes are to be printed in the right side, we do these prints only for odd pages.
- However, that is not enough. Because the problem does not only consists in printing notes in any particular page. It is also not to put aside room for notes in the pages where we do not want to print them. To take an example: if some note in the left side is too long by 160pt to be printed in full in the left page, we do not want to put aside 160pt a space for it in the following right page.
- To solve this problem, we change the magnification factor associated with notes before going to the next page. If we start a page where no notes are supposed to be printed, the magnification counter is set to 0. The dimension associated to footnote is set to `\maxdimen`, and so we can keep all the notes we want, without any break inside We also set the note skip to 0pt. Before starting a new page where these notes are supposed to be printed, we reset these counter and skip to

⁶See <http://tex.stackexchange.com/a/230332/7712>.

their default values. (About these counter, dimension and skip, read *The TeXbook* p. 122-125).

- In the output macro of the page where notes must NOT be printed, we store the content of the footnote box produced by T_EX to a temporary box.
- After going to the next page, before typesetting any thing in this page, we put the content of this temporary box the footnote insert box.

The code to print critical notes, when processing \Pages, called in the output routine.

```
1824 \newcommand\print@Xnotes@forpages[1]{%
1825 %
```

First case: notes are for both sides. Just print the note start and the note group

```
1826 \ifcempty{Xonlyside@#1}{%
1827 \csuse{#1footstart}{#1}%
1828 \csuse{#1footgroup}{#1}%
1829 }%
1830 %
```

Second case: notes are for one side only. First test if we are in a page where they must be printed.

```
1831 {%
1832 \ifboolexpr{%
1833 ((test {\ifcsstring{Xonlyside@#1}{L}} and not test{\ifnumodd{\c@page
1834 }})%
1835 or%
1836 (test {\ifcsstring{Xonlyside@#1}{R}} and test{\ifnumodd{\c@page}})%
1837 }%
1838 %
```

If we are in a page where notes must be printed, print the notes.

```
1838 {%
1839 \csuse{#1footstart}{#1}%
1840 \csuse{#1footgroup}{#1}%
1841 %
```

Then, set to not to keep room for notes in the next page. Also set to that, in the next page, notes are not to be split, using \maxdimen.

```
1842 \global\count\csuse{#1footins}=\z@%
1843 \global\skip\csuse{#1footins}=\z@%
1844 \global\dimen\csuse{#1footins}=\maxdimen%
1845 }%
1846 %
```

In case we are on a page where notes must NOT be printed. First restore expected rooms for notes on the next page. Also reset expected vertical size allowed to notes.

```

1847 {%
1848   \global\count\csuse{#1footins}=\csuse{default@#1footins}%
1849   \global\skip\csuse{#1footins}=\csuse{Xbeforenotes@#1}%
1850   \bgroup%
1851     \csuse{Xnotefontsize@#1}%
1852     \global\dimen\csuse{#1footins}=\csuse{Xmaxhnotes@#1}%
1853   \egroup%
1854 %

```

Then, save the current insert box to a temporary insert box.

```

1855   \global\setnamebox{#1footins@kept}=\box\namebox{#1footins}%
1856 }%
1857 %

```

End of \print@Xnotes@forpages.

```

1858 }%
1859 }%
1860 %

```

And now, the same for familiar footnotes.

```

1861 \newcommand\print@notesX@forpages[1]{%
1862   \ifcempty{onlysideX@#1}{%
1863     \csuse{footstart#1}{#1}%
1864     \csuse{footgroup#1}{#1}%
1865   }%
1866   {%
1867     \ifboolexpr{%
1868       ((test {\ifcsstring{onlysideX@#1}{L}} and not test{\ifnumodd{\c@page
1869     or%
1870       (test {\ifcsstring{onlysideX@#1}{R}} and test{\ifnumodd{\c@page}}))%
1871     }%
1872     {%
1873       \csuse{footstart#1}{#1}%
1874       \csuse{footgroup#1}{#1}%
1875       \global\count\csuse{footins#1}=\z@%
1876       \global\skip\csuse{footins#1}=\z@%
1877       \global\dimen\csuse{footins#1}=\maxdimen%
1878     }%
1879     {%
1880       \global\count\csuse{footins#1}=\csuse{default@footins#1}%
1881       \global\skip\csuse{footins#1}=\csuse{beforenotesX@#1}%
1882       \bgroup%
1883         \csuse{Xnotefontsize@#1}%
1884         \global\dimen\csuse{footins#1}=\csuse{maxhnotesX@#1}%
1885       \egroup%
1886       \global\setnamebox{footins#1@kept}=\box\namebox{footins#1}%
1887     }%
1888   }%

```



```

1889 }%
1890 }%
1891 %

```

`\insert@notes@for@onlyside` `\insert@notes@for@onlyside` is everytime `\Pages` go to the next side. It just reinsert the notes note printed on the previous side because of `Xonlyside` or `\onlysideX` setting.

```

1892 \newcommand{\insert@notes@for@onlyside}{%
1893 \def\do##1{%
1894 \unless\ifnocritical@%
1895 \ifvoid\csuse{##1footins@kept}\else%
1896 \expandafter\insert\csname ##1footins\endcsname%
1897 \bgroup%
1898 \unvnamebox{##1footins@kept}%
1899 \egroup%
1900 \fi%
1901 \fi%
1902 \unless\ifnofamiliar@%
1903 \ifvoid\csuse{footins##1@kept}\else%
1904 \expandafter\insert\csname footins##1\endcsname%
1905 \bgroup%
1906 \unvnamebox{footins##1@kept}%
1907 \egroup%
1908 \fi%
1909 \fi%
1910 }%
1911 \dolistloop{\@series}%
1912 }%
1913 %

```

IX.2 Critical footnote printed in right side

`\edtext@later` `\edtextlater` and `\edtextnow` are used to print critical footnotes on the right side, while referring to the text on the left side. First, we create two counters, one for `\edtextlater` and the other for `\edtextnow`.

```

\edtextnow
1914 \newcount\edtext@now%
1915 \newcount\edtext@later%
1916 %

1917 \newcommand{\edtextlater}[2]{%#1 lemma, #2 critical notes
1918 %

```

First, increase the `\edtext@later` counter.

```

1919 \global\advance\edtext@later by \@ne%
1920 %

```

```

1921 % As we are in a pseudo-\cs{edtext}, we now need to get the \cs{sameword}
data stored in the auxiliary file for this \cs{edtextlater}.
1922 \advance\@edtext@level by \@ne%
1923 \ifcsvoid{sw@list@edtext@\the\@edtext@level}%
1924     {\global\let\sw@inthisedtext\empty}%
1925     {\expandafter\gl@p\csname sw@list@edtext@\the\@edtext@level\
endcsname\to\sw@inthisedtext}%
1926 %

```

The main feature of `\edtextlater` is to create a macro which will be called on the equivalent `\edtextnow`.

```

1927 %
1928 \csxdef{edtext@later@\the\edtext@later}{%
1929 %

```

`\edtextnow` will insert a empty `\edtext`.

```

1930     \noexpand\edtext{%
1931     }%
1932 %

```

With a `\lemma` and `\linenum` defined by the current `\edtextlater`. Also with `\sameword` data gotten from the current `\edtextlater`

```

1933     {%
1934     \unexpanded{%
1935     \lemma{\no@expands #1}%
1936     }%
1937     \noexpand\xxref{start:edtext:later:\the\edtext@later}{end:edtext:
later:\the\edtext@later}%
1938     \noexpand\linenum{||||\edfont@info}%
1939     \unexpanded{\def\sw@inthisedtext}{\expandonce{\sw@inthisedtext}}}%
1940 %

```

As the `\edtextnow` is generally called on the other side than the corresponding `\edtextlater`, we need to store the side for a proper formatting of the footnote.

```

1941     \ifledRcol%
1942     \unexpanded{\appto\@beforeinsertofthisedtext{\ledRcol@true}}%
1943     \else%
1944     \unexpanded{\appto\@beforeinsertofthisedtext{\ledRcol@false}}%
1945     \fi%
1946 %

```

And the footnote command of this `\edtextlater`.

```

1947     \unexpanded{#2}%
1948     }%
1949     }%
1950 %

```

And now, we print the current lemma data. But we save the beginning and the starting line using the crossref mechanism. We also store information in the auxiliary file about the existence of a `\edtextlater` and, if required, about the use of a `\lemma`

```

1951 \edlabel{start:edtext:later:\the\edtext@later}%
1952 \flag@start@later%
1953 \bgroup%
1954 \def\lemma##1{%
1955     \ifledRcol%
1956         \write\linenum@outR{\string\@lemma}%
1957     \else%
1958         \write\linenum@out{\string\@lemma}%
1959     \fi%
1960 }%
1961 \renewcommand{\do}[1]{\expandafter\renewcommandx\csname ##1footnote\
endcsname[2][1,usedefault]{}\unskip}%\unskip because of a spurious space in
\newcommandx
1962 \dolistloop{\@series}%
1963 #2%
1964 \egroup%
1965 \showlemma{#1}%
1966 \edlabel{end:edtext:later:\the\edtext@later}%
1967 \flag@end@later%
1968 %

```

We decrease the counter increased at the beginning.

```

1969 \advance\@edtext@level by -\@ne%
1970 }%
1971 %

```

\edtextnow just calls the command defined as is, reading the \edtext@later list.

```

1972 \newcommand{\edtextnow}[0]{%
1973     \global\advance\edtext@now by \@ne
1974     \csuse{edtext@later@\the\edtext@now}%
1975 }%
1976 %

```

X Cross referencing

\labelref@listR Set up a new list, \labelref@listR, to hold the page, line and sub-line numbers for each label in right text.

```

1977 \list@create{\labelref@listR}
1978
1979 %

```

\edlabel This command is defined only one time in reledmac, including features for reledpar.

\l@dmake@labelsR This is the right text version of \l@dmake@labels, taking account of \@Rlineflag.

```

1980 \def\l@make@labelsR#1|#2|#3|#4|#5|#6{%
1981   \expandafter\ifx\csname the@label\cuse{XR@prefix}#6\endcsname%
1982     \relax%
1983   \else%
1984     \led@warn@DuplicateLabel{\cuse{XR@prefix}#6}%
1985   \fi%
1986   \expandafter\gdef\csname the@label\cuse{XR@prefix}#6\endcsname
1987     {#1|#2|#3|#4|#5|\@Rlineflag}%
1988   \global\providetoggle{label@#6@ledRcol}%False is the default value of
1989   this toggle, which tell us if a label is linked to a right or a left side
1990   \global\toggletrue{label@#6@ledRcol}%
1991   \ignorespaces}
1992 \AtBeginDocument{%
1993   \def\l@make@labelsR#1|#2|#3|#4|#5|#6{%
1994     %

```

\@lab The \@lab command, which appears in the \linenum@out file, appends the current values of page, line and sub-line to the \labelref@list. These values are defined by the earlier \@page, \@nl, and the \sub@on and \sub@off commands appearing in the \linenum@out file.

It is defined on reledmac.

XI Side notes

Regular \marginpars do not work inside numbered text — they do not produce any note but do put an extra unnumbered blank line into the text.

\sidenote@marginR Specifies which margin sidenotes can be in.

\sidenotemargin*

\sidenotemarginR

```

1995 \WithSuffix\newcommand\sidenotemargin*[1]{%
1996   \l@dgetsidenote@margin{#1}
1997   \global\sidenote@marginR=\@l@tempcntb
1998   \global\sidenote@margin=\@l@tempcntb
1999 }
2000 \newcommand{\sidenotemarginR}[1]{%
2001   \l@dgetsidenote@margin{#1}%
2002   \global\sidenote@marginR=\@l@tempcntb%
2003 }%
2004 \newcount\sidenote@marginR
2005 \global\sidenote@marginR=\@ne%
2006
2007 \ifmovecolumnspostiononrightpage%
2008   \sidenotemargin{inner}%
2009   \sidenotemarginR{outer}%
2010 \fi%
2011
2012 %

```

`\affixside@noteR` The right text version of `\affixside@note`.

```

2013 \newcommand*{\affixside@noteR}{%
2014   \prepare@edindex@for@note{\the\page@numR|\the\line@numR|\the\
subline@numR|\the\page@numR|\the\line@numR|\the\subline@numR|}%
2015   \def\sidenotecontent@{%
2016     \numgdef{\itemcount@}{0}%
2017     \def\do##1{%
2018       \ifnumequal{\itemcount@}{0}%
2019         {%
2020           \appto\sidenotecontent@{##1}}% Not print not separator before
the 1st note
2021         {\appto\sidenotecontent@{\@sidenotesep ##1}%
2022         }%
2023       \numgdef{\itemcount@}{\itemcount@+1}%
2024     }%
2025     \dolistloop{\l@dcsnotetext}%
2026     \ifnumgreater{\itemcount@}{1}{\led@err@ManySidenotes}{}%
2027   \gdef\@templ@d{%
2028     \gdef\@templ@n{\l@dcsnotetext\l@dcsnotetext@1\l@dcsnotetext@r}%
2029     \ifx\@templ@d\@templ@n \else%
2030       \if@twocolumn%
2031         \if@firstcolumn%
2032           \setl@dlp@rbox{##1}{\sidenotecontent@}%
2033         \else%
2034           \setl@drp@rbox{\sidenotecontent@}%
2035         \fi%
2036       \else%
2037         \l@dttempcntb=\sidenote@marginR%
2038         \ifnum\l@dttempcntb>\@ne%
2039           \advance\l@dttempcntb by\page@numR%
2040         \fi%
2041         \ifodd\l@dttempcntb%
2042           \setl@drp@rbox{\sidenotecontent@}%
2043           \gdef\sidenotecontent@{%
2044             \numdef{\itemcount@}{0}%
2045             \dolistloop{\l@dcsnotetext@1}%
2046             \ifnumgreater{\itemcount@}{1}{\led@err@ManyLeftnotes}{}%
2047             \setl@dlp@rbox{\sidenotecontent@}%
2048           \else%
2049             \setl@dlp@rbox{\sidenotecontent@}%
2050             \gdef\sidenotecontent@{%
2051               \numdef{\itemcount@}{0}%
2052               \dolistloop{\l@dcsnotetext@r}%
2053               \ifnumgreater{\itemcount@}{1}{\led@err@ManyRightnotes}{}%
2054               \setl@drp@rbox{\sidenotecontent@}%
2055             \fi%
2056           \fi%
2057         \fi%
2058       \advance\@edindex@for@note@m@ne%

```

```

2059 }
2060
2061 %

```

XII Verse

Like in `reledmac`, the insertion of `hangingsymbol` is base on `\ifinserthangingsymbol`, and, for the right side, on `\ifinserthangingsymbolR`. Both commands also include the hanging space, to be sure the `\one@line` of hanging lines has the same width that the `\one@line` of normal lines and to prevent the column separator from shifting.

```

\inserthangingsymbolL%2 \newif\ifinserthangingsymbolR
\inserthangingsymbolR%3 \newcommand{\inserthangingsymbolL}{%
2064 \ifinserthangingsymbol%
2065 \ifinstanzaL%
2066 \hskip \@ifundefined{sza@00}{0}{\expandafter%
2067 \noexpand\csname sza@00\endcsname}\stanzaindentbase%
2068 \@hangingsymbol%
2069 \fi%
2070 \fi%
2071 }%
2072 \newcommand{\inserthangingsymbolR}{%
2073 \ifinserthangingsymbolR%
2074 \ifinstanzaR%
2075 \hskip \@ifundefined{sza@00}{0}{\expandafter%
2076 \noexpand\csname sza@00\endcsname}\stanzaindentbase%
2077 \@hangingsymbol%
2078 \fi%
2079 \fi%
2080 }%
2081 %

```

Before we can define the main stanza macros we need to be able to save and reset the category code for `&`. To save the current value we use `\next` from the `\loop` macro.

```

2082 \chardef\next=\catcode`&
2083 \catcode`&=\active
2084
2085 %

```

`astanza` This is roughly an environmental form of `\stanza`, which treats its stanza-like contents as a single chunk.

```

2086 \newenvironment{astanza}[2][1,2,usedefault]{%
2087 \catcode`&\active
2088 \global\stanza@count\@ne\stanza@modulo\@ne
2089 \ifnum\usenamecount{sza@00}=\z@
2090 \let\stanza@hang\relax
2091 \let\endlock\relax

```

```

2092 \else
2093   \rightskip\z@ plus 1fil\relax
2094 \fi
2095 \ifnum\usernamecount{szp@0@}=\z@
2096   \let\sza@penalty\relax
2097 \fi
2098 \def&{%
2099   \endlock\mbox{}%
2100   \sza@penalty
2101   \global\advance\stanza@count\@ne
2102   \@astanza@line}%
2103 \def\&{\@stopastanza}%
2104 \ifboolexpr{%
2105   not test{\ifdefvoid{\@at@every@stanza}}%
2106   and test{\ifstrempy{#1}}%
2107   and test{\ifstrempy{#2}}}%
2108   {\pstart[][\@at@every@stanza]\@at@start@every@stanza}%
2109   {\pstart[#1][#2]\@at@start@every@stanza}%
2110   \@astanza@line
2111   \let\par\relax\ignorespaces%No paragraph in verses
2112 }{}
2113
2114 %

```

\@stopastanza This command is called by `\&` in astanza environment. It allows optional arguments.

```

2115 \newcommandx{\@stopastanza}[2][1,2,usedefault]{%
2116   \endlock\mbox{}%
2117   \ifboolexpr{%
2118     not test{\ifdefvoid{\@at@every@stop@stanza}}%
2119     and test{\ifstrempy{#1}}%
2120     and test{\ifstrempy{#2}}%
2121   }%
2122   {\before@every@stop@stanza\pend[][\@at@every@stop@stanza]}%
2123   {\before@every@stop@stanza\pend[#1][#2]}%
2124 }%
2125 %

```

\@astanza@line This gets put at the start of each line in the environment. It sets up the paragraph style — each line is treated as a paragraph.

```

2126 \newcommand*{\@astanza@line}{%
2127   \ifnum\value{stanzaindentrepetition}=0
2128     \ifcsdef{sza@\number\stanza@count @}%
2129       {%
2130         \parindent=\csname sza@\number\stanza@count @\endcsname\
2131         stanzaindentbase%
2132       }%
2133       \led@err@StanzaIndentNotDefined%
2134     }%

```

```

2134 \else
2135     \ifcsdef{sza@number\stanza@modulo @}{%
2136         \parindent=\csname sza@number\stanza@modulo @\endcsname\
stanzaindentbase%
2137         \managestanza@modulo%
2138     }%
2139     {%
2140         \led@err@StanzaIndentNotDefined%
2141     }%
2142 \fi
2143 \endgraf
2144 \stanza@hang%
2145 \ignorespaces}
2146
2147 %

```

Lastly reset the modified category codes.

```

2148 \catcode`\&=\next
2149
2150 %

```

`\thestanzaL` And now, the left and right stanza counter.

```

\thestanzaR
2151 \newcounter{stanzaL}
2152 \newcounter{stanzaR}
2153 \renewcommand{\thestanzaL}{%
2154     \textbf{\arabic{stanzaL}}%
2155 }
2156 \renewcommand{\thestanzaR}{%
2157     \textbf{\arabic{stanzaR}}%
2158 }
2159 %
2160 %

```

XIII Fixing babel and polyglossia

With parallel texts there is the possibility that the two sides might use different languages via `babel`. On the other hand, `nor babel` nor `polyglossia` might not be called at all (even though it might be already built into the format).

With the normal sequential text each line is initially typeset in the current language environment, and then it is output at which time its attachments are typeset (in the same language environment. In the parallel case lines are typeset in their current language but an attachment might be typeset outside the language environment of its line if the left and right side languages are different. To counter this, we have to make sure that the correct language is used at the proper times.

```

\ifl@dusedbabel A flag for checking if babel has been used as a package.
\l@dusedbabelfalse
\l@dusedbabeltrue

```



```

2161 \newif\ifl@dusedbabel
2162 %

```

`\l@dchecklang`

`\bbl@set@language` In babel the macro `\bbl@set@language{⟨lang⟩}` does the work when the language `⟨lang⟩` is changed via `\selectlanguage`. Unfortunately for us, if it is given an argument in the form of a control sequence it strips off the `\` character rather than expanding the command. We need a version that accepts an argument in the form `\lang` without it stripping the `\`.

```

2163 \patchcmd{\bbl@set@language}%
2164   {\select@language{\language}}%
2165   {\edef\language{#1}\select@language{\language}}%
2166   {}%
2167   {}%
2168
2169 %

```

The rest of the setup has to be postponed until the end of the preamble when we know if babel or polyglossia have been used or not. However, for now assume that it has not been used.

`\selectlanguage` `\selectlanguage` is a babel command. `\theledlanguageL` and `\theledlanguageR`
`\l@duselanguage` are the names of the languages of the left and right texts. `\l@duselanguage` is similar
`\theledlanguageL` to `\selectlanguage`.
`\theledlanguageR`

```

2170 \newcommand*{\l@duselanguage}[1]{%
2171   \gdef\theledlanguageL{#1}%
2172   \gdef\theledlanguageR{#1}%
2173
2174 %

```

Now do the babel or polyglossia fix or, if necessary.

```

2175 \AtBeginDocument{%
2176   \ifundefined{xpg@main@language}{%
2177     \ifundefined{bbl@main@language}{%
2178 %

```

Either babel has not been used or it has been used with no specified language.

```

2179   \l@dusedbabelfalse
2180 }{%
2181 %

```

Here we deal with the case where babel has been used. `\selectlanguage` has to be redefined to use our version of `\bbl@set@language` and to store the left or right language.

```

2182 \l@dusedbabeltrue
2183 \let\l@doldselectlanguage\selectlanguage
2184 \let\l@doldbbl@set@language\bbl@set@language
2185 \renewcommand{\selectlanguage}[1]{%
2186   \l@doldselectlanguage{#1}%
2187   \ifledRcol \gdef\theledlanguageR{#1}%
2188   \else      \gdef\theledlanguageL{#1}%
2189   \fi}
2190 %

```

\l@duselanguage simply calls the original \selectlanguage so that \theledlanguageL and \theledlanguageR are unaltered.

```

2191 \renewcommand*{\l@duselanguage}[1]{%
2192   \expandafter\l@doldselectlanguage\expandafter{#1}}
2193 %

```

Lastly, initialise the left and right languages to the current babel one.

```

2194 \gdef\theledlanguageL{\bbl@main@language}%
2195 \gdef\theledlanguageR{\bbl@main@language}%
2196 }%
2197 }
2198 %

```

If use polyglossia

```

2199 { \let\old@otherlanguage\otherlanguage%
2200   \renewcommand{\otherlanguage}[2][]{%
2201     \selectlanguage{#1}{#2}%
2202     \ifledRcol \gdef\theledlanguageR{#2}%
2203     \else      \gdef\theledlanguageL{#2}%
2204     \fi}%
2205   \renewcommand{\l@duselanguage}[1]{%
2206     \csuse{no\language@name @numbers}\select@language{#1}%
2207   }%
2208   \gdef\theledlanguageL{\xpg@main@language}%
2209   \gdef\theledlanguageR{\xpg@main@language}%
2210 %

```

That is it.

```

2211 }}
2212 %

```

XIV Counts and boxes for parallel texts

In sequential text, each chunk (that enclosed by \pstart ...\pend) is put into a box called \raw@text and then immediately printed, resulting in the box being emptied and ready for the next chunk. For parallel processing multiple boxes are needed as printing is delayed. We also need extra counters for various things.

`\maxchunks` The maximum number of chunk pairs before printing has to be called for. The default is
`\l@dc@maxchunks` 5120 chunk pairs.

```
2213 \newcount\l@dc@maxchunks
2214 \newcommand{\maxchunks}[1]{\l@dc@maxchunks=#1}
2215 \maxchunks{5120}
2216
2217 %
```

`\l@dnumpstartsL` The numbers of left and right chunks. `\l@dnumpstartsL` is defined in `eledmac`.
`\l@dnumpstartsR`

```
2218 \newcount\l@dnumpstartsR
2219
2220 %
```

`\l@dpscl` A couple of scratch counts for use in left and right texts, respectively.

`\l@dpscr`

```
2221 \newcount\l@dpscl
2222 \newcount\l@dpscr
2223
2224 %
```

`\l@dsetuprawboxes` This macro creates `\maxchunks` pairs of boxes for left and right chunks. The boxes are called `\l@dLcolrawbox1`, `\l@dLcolrawbox2`, etc.

```
2225 \newcommand*\l@dsetuprawboxes{%
2226 \l@l@tempcntb=\l@dc@maxchunks
2227 \loop\ifnum\l@l@tempcntb>\z@
2228 \newnamebox{\l@dLcolrawbox\the\l@l@tempcntb}
2229 \newnamebox{\l@dRcolrawbox\the\l@l@tempcntb}
2230 \advance\l@l@tempcntb \m@ne
2231 \repeat}
2232
2233 %
```

`\l@dsetupmaxlinecounts` To be able to synchronise left and right texts we need to know the maximum number of text lines there are in each pair of chunks. `\l@dsetupmaxlinecounts` creates `\maxchunks` new counts called `\l@dmaxlinesinpar1`, etc., and `\l@dzeromaxlinecounts` zeroes all of them.

```
2234 \newcommand*\l@dsetupmaxlinecounts{%
2235 \l@l@tempcntb=\l@dc@maxchunks
2236 \loop\ifnum\l@l@tempcntb>\z@
2237 \newnamecount{\l@dmaxlinesinpar\the\l@l@tempcntb}
2238 \advance\l@l@tempcntb \m@ne
2239 \repeat}
2240 \newcommand*\l@dzeromaxlinecounts{%
2241 \begingroup
2242 \l@l@tempcntb=\l@dc@maxchunks
2243 \loop\ifnum\l@l@tempcntb>\z@
```

```

2244 \global\usernamecount{l@dmxlinesinpar\the\l@dttempcntb}=\z@
2245 \advance\l@dttempcntb \m@ne
2246 \repeat
2247 \endgroup}
2248
2249 %

```

Make sure that all these are set up. This has to be done after the user has had an opportunity to change \maxchunks.

```

2250 \AtBeginDocument{%
2251 \l@dssetuprawboxes
2252 \l@dssetupmaxlinecounts
2253 \l@dzeromaxlinecounts
2254 \l@dnumpstartsL=\z@
2255 \l@dnumpstartsR=\z@
2256 \l@dpscL=\z@
2257 \l@dpscR=\z@}
2258
2259 %

```

XV Checking text to be processed

```

\if@pstarts \check@pstarts returns \@pstartstrue if there are any unprocessed chunks.
\@pstartstrue
\@pstartsfalse
\check@pstarts
2260 \newif\if@pstarts
2261 \newcommand*{\check@pstarts}{%
2262 \@pstartsfalse
2263 \ifnum\l@dnumpstartsL>\l@dpscL
2264 \@pstartstrue
2265 \else
2266 \ifnum\l@dnumpstartsR>\l@dpscR
2267 \@pstartstrue
2268 \fi
2269 \fi
2270 }
2271
2272 %

```

```

\ifaraw@text \checkraw@text checks whether the current Left or Right box is void or not. If
\araw@texttrue one or other is not void it sets \araw@texttrue, otherwise both are void and it sets
\araw@textfalse \araw@textfalse.
\checkraw@text
2273 \newif\ifaraw@text
2274 \newcommand*{\checkraw@text}{%
2275 \araw@textfalse
2276 \ifvbox\namebox{l@dLcolrawbox\the\l@dpscL}
2277 \araw@texttrue
2278 \else

```

```

2279 \ifvbox\namebox{l@dRcolrawbox\the\l@dpscR}
2280 \araw@texttrue
2281 \fi
2282 \fi
2283 }
2284
2285 %

```

`\@writelinesinparL` These write the number of text lines in a chunk to the section files, and then afterwards
`\@writelinesinparR` zero the counter.

```

2286 \newcommand*\@writelinesinparL{%
2287 \edef\next{%
2288 \write\linenum@out{\string\@pend[\the\@donereallinesL]}}%
2289 \next
2290 \global\@donereallinesL \z@}
2291 \newcommand*\@writelinesinparR{%
2292 \edef\next{%
2293 \write\linenum@outR{\string\@pendR[\the\@donereallinesR]}}%
2294 \next
2295 \global\@donereallinesR \z@}
2296
2297 %

```

`\@writepageofparL` These write the pages where start the first line of a chunk.

```

\@writepageofparR
2298 \newcommand*\@writepageofparL[0]{%
2299 \ifnum\@donereallinesL=\z@%
2300 \edef\next{%
2301 \write\linenum@out{\string\@pstart{\the\l@dpscL}{\the\c@page}{\the\
numpagelinesL}}%
2302 }%
2303 \next%
2304 \fi%
2305 }%
2306 \newcommand*\@writepageofparR[0]{%
2307 \ifnum\@donereallinesR=\z@%
2308 \edef\next{%
2309 \write\linenum@outR{\string\@pstartR{\the\l@dpscR}{\the\c@page}{\the\
numpagelinesR}}%
2310 }%
2311 \next%
2312 \fi%
2313 }%
2314 %

```

XVI Parallel columns

`\@eledsectionL` The parbox `\@eledsectionL` and `\@eledsectionR` will keep the sections' title.
`\@eledsectionR`

```

2315 \newsavebox{\@eledsectionL}%
2316 \newsavebox{\@eledsectionR}%
2317 %

```

\Columns The `\Columns` command results in the previous Left and Right texts being typeset in matching columns. There should be equal numbers of chunks in the left and right texts.

```

2318 \newcommand*{\Columns}{%
2319   \ifl@dpairing%
2320     \led@err@Columns@InsideEnv%
2321   \fi%
2322   \ifboolexpr{test{\ifcsboxvoid{l@dRcolrawbox1}} or test{\ifcsboxvoid{
l@dLcolrawbox1}}}{%
2323     \ifcsboxvoid{l@dRcolrawbox1}{%
2324       \ifcsboxvoid{l@dLcolrawbox1}%
2325       {\led@err@Columns@WithoutEnv}%
2326       {\led@err@Columns@WithoutRightside}%
2327     }%
2328     {\led@err@Columns@WithoutLeftside}%
2329   }{%
2330     \global\l@dprintingcolumnstrue%
2331     \eledsection@correcting@skip=-\baselineskip% Correction for sections'
titles
2332     \ifnum\l@dnumpstartsL=\l@dnumpstartsR\else
2333       \led@err@BadLeftRightPstarts{\the\l@dnumpstartsL}{\the\l@dnumpstartsR}%
2334     \fi
2335   }%

```

Start a group and zero counters, etc.

```

2336 \begingroup
2337   \l@dzeropenalties
2338   \endgraf\global\num@lines=\prevgraf
2339   \global\num@linesR=\prevgraf
2340   \global\par@line=\z@
2341   \global\par@lineR=\z@
2342   \global\l@dpscL=\z@
2343   \global\l@dpscR=\z@
2344   \get@familiarfootnote@number%
2345 %

```

Check if there are chunks to be processed, and process them two by two (left and right pairs).

```

2346 \check@pstarts
2347 \loop\if@pstarts
2348   \global\pstartnumtrue
2349   \global\pstartnumRtrue
2350 %

```

Increment `\l@dpscL` and `\l@dpscR` which here count the numbers of left and right chunks. Also restore the value of the public `pstart` counters.

```

2351 \global\advance\l@dpscl \@ne
2352 \global\advance\l@dpscr \@ne
2353 \restore@pstartL@pc%
2354 \restore@pstartR@pc%
2355 %

```

We print the optional argument of \pstart or the argument of \AtEveryPstart.

```

2356 \Columns@print@before@pstart%
2357 %

```

Check if there is text yet to be processed in at least one of the two current chunks, and also whether the left and right languages are the same

```

2358 \checkraw@text
2359 { \loop\ifaraw@text
2360 %

```

Grab the next pair of left and right text lines and output them, swapping languages if they differ, adding section title if needed.

```

2361 \l@duselanguage{\theledlanguageL}%
2362 \do@lineL
2363 \xifinlist{\the\l@dpscl}{\eled@sections@@}
2364 {%
2365 \ifdefstring{\@eledsectmark}{L}%
2366 {\csuse{eled@sectmark@\the\l@dpscl}%
2367 }{}%
2368 \global\csundef{eled@sectmark@\the\l@dpscl}%
2369 \savebox{\@eledsectionL}{\parbox[t]{}[t]{\Lcolwidth}{\vbox
2370 {} \print@eledsectionL}}}%\vbox{}-> prevent alignment troubles with RTL
2371 language
2372 }%
2373 {}%
2374 \l@duselanguage{\theledlanguageR}%
2375 \do@lineR
2376 \xifinlist{\the\l@dpscr}{\eled@sectionsR@@}
2377 {%
2378 \ifdefstring{\@eledsectmark}{R}%
2379 {\csuse{eled@sectmark@\the\l@dpscr R}%
2380 }{}%
2381 \global\csundef{eled@sectmark@\the\l@dpscr R}%
2382 \savebox{\@eledsectionR}{\parbox[t]{}[t]{\Rcolwidth}{\vbox
2383 {} \print@eledsectionR}}}%\vbox{}-> prevent alignment troubles with RTL
2384 language
2385 }%
2386 {}%
2387 \hb@xt@ \hsize{%
2388 \ifdefstring{\columns@position}{L}{\hfill }%
2389 \print@leftcolumn%
2390 \print@columnseparator%
2391 \print@rightcolumn%
2392 \ifdefstring{\columns@position}{R}{\hfill }%

```

```

2388     }%
2389     \checkraw@text
2390     \checkverseL
2391     \checkverseR
2392     \checkpb@columns
2393     \repeat}
2394 %

```

Having completed a pair of chunks, write the number of lines in each chunk to the respective section files. Increment `pstart` counters and reset line numbering if it is by `pstart`.

```

2395     \@writelinesinparL
2396     \@writelinesinparR
2397     \check@pstarts
2398     \ifbypstart@%
2399         \write\linenum@out{\string\@set[1]}
2400         \resetprevline@
2401     \fi
2402     \ifbypstart@R
2403         \write\linenum@outR{\string\@set[1]}
2404         \resetprevline@
2405     \fi
2406     \Columns@print@after@pend%
2407     \repeat
2408 %

```

Having output all chunks, make sure all notes have been output, then zero counts ready for the next set of texts. The boolean tests for stanza are switched to false.

```

2409     \flush@notes
2410     \flush@notesR
2411     \endgroup
2412 %

2413     \global\l@dpscL=\z@
2414     \global\l@dpscR=\z@
2415     \global\l@dnumpstartsL=\z@
2416     \global\l@dnumpstartsR=\z@
2417     \global\l@dprintingcolumnsfalse%
2418     \ignorespaces
2419     \global\instanzaLfalse%
2420     \global\instanzaRfalse%
2421 }%
2422 }%
2423
2424 %

```

`\print@columnseparator` `\print@columnseparator` prints the column separator, with surrounding spaces (as the user has set them). We use the \TeX `\ifdim` instead of `etoolbox` to avoid having `\hfill` in a `{}`, which deletes some space (but not much).


```

2425 \def\print@columnseparator{%
2426   \ifdim\beforecolumnseparator<0pt%
2427     \hfill%
2428   \else%
2429     \hspace{\beforecolumnseparator}%
2430   \fi%
2431   \columnseparator%
2432   \ifdim\aftercolumnseparator<0pt%
2433     \hfill%
2434   \else%
2435     \hspace{\aftercolumnseparator}%
2436   \fi%
2437 }%
2438 %

```

`\print@leftcolumn` and `\print@rightcolumn` print the line number of the left or right column respectively. Normally, it is defined by the content of the `Leftside` or `Rightside` environments. But if `\movecolumnspostiononrightpage` is set to `TRUE`, it also depends on the page number.

```

2439 \newcommand{\print@leftcolumn}{%
2440   \if\page@num>\page@numR%
2441     \@l@tempcntb=\page@num%
2442   \else%
2443     \@l@tempcntb=\page@numR%
2444   \fi%
2445   \ifboolexpr{%
2446     not bool {movecolumnspostiononrightpage}%
2447     or test {\ifnumodd{\@l@tempcntb}}%
2448   }%
2449   {%
2450     \unhbox\l@leftbox%
2451     \ifhbox\@eledsectionL%
2452       \usebox{\@eledsectionL}%
2453     \fi%
2454   }%
2455   {%
2456     \unhbox\l@rightbox%
2457     \ifhbox\@eledsectionR%
2458       \usebox{\@eledsectionR}%
2459     \fi%
2460   }%
2461 }%
2462
2463
2464 \newcommand{\print@rightcolumn}{%
2465   \if\page@num>\page@numR%
2466     \@l@tempcntb=\page@num%
2467   \else%
2468     \@l@tempcntb=\page@numR%

```

```

2469 \fi%
2470 \ifboolexpr{%
2471     not bool {movecolumnspostiononrightpage}%
2472     or test {\ifnumodd{\@l@dttempcntb}}%
2473 }%
2474 {%
2475     \unhbox\l@drightbox%
2476     \ifhbox\@eledsectionR%
2477     \usebox{\@eledsectionR}%
2478     \fi%
2479 }%
2480 {%
2481     \unhbox\l@leftbox%
2482     \ifhbox\@eledsectionL%
2483     \usebox{\@eledsectionL}%
2484     \fi%
2485 }%
2486 }%
2487 %

```

\checkpb@columns \checkpb@columns prevent or make pagebreaking in columns, depending of the use of \ledpb or \lednopb.

```

2488
2489 \newcommand{\checkpb@columns}{%
2490     \newif\if@pb
2491     \newif\if@nopb
2492     \IfStrEq{\led@pb@setting}{before}{
2493         \numdef{\next@absline}{\the\absline@num+1}%
2494         \numdef{\next@abslineR}{\the\absline@numR+1}%
2495         \xifinlistcs{\next@absline}{l@prev@pb}{\@pbtrue}{}%
2496         \xifinlistcs{\next@abslineR}{l@prev@pbR}{\@pbtrue}{%
2497         \xifinlistcs{\next@absline}{l@prev@nopb}{\@nopbtrue}{}%
2498         \xifinlistcs{\next@abslineR}{l@prev@nopbR}{\@nopbtrue}{%
2499         }{}
2500         \IfStrEq{\led@pb@setting}{after}{
2501             \xifinlistcs{\the\absline@num}{l@prev@pb}{\@pbtrue}{}%
2502             \xifinlistcs{\the\absline@numR}{l@prev@pbR}{\@pbtrue}{%
2503             \xifinlistcs{\the\absline@num}{l@prev@nopb}{\@nopbtrue}{}%
2504             \xifinlistcs{\the\absline@numR}{l@prev@nopbR}{\@nopbtrue}{%
2505             }{}
2506         \if@nopb\nopagebreak[4]\enlargethispage{\baselineskip}\fi
2507         \if@pb\pagebreak[4]\fi
2508     }
2509 }%

```

\columnseparator The separator between line pairs in parallel columns is in the form of a vertical rule extending a little below the baseline and with a height slightly greater than the **\baselineskip**. The width of the rule is **\columnrulewidth** (initially 0pt so the rule is invisible).

```

2510 \newcommand*{\columnseparator}{%
2511   \smash{\rule[-0.2\baselineskip]{\columnrulewidth}{1.05\baselineskip}}}
2512 \newdimen\columnrulewidth
2513   \columnrulewidth=\z@
2514
2515 %

```

`\columnspan` The position of the `\Columns` in a page. Default value is R. Stored in `\columns@position`.

```

\columns@position
2516 \newcommand*{\columnspan}[1]{%
2517   \xdef\columns@position{#1}%
2518 }%
2519 \xdef\columns@position{R}%
2520 %

```

`\beforecolumnseparator` `\aftercolumnseparator` and `\aftercolumnseparator` lengths are defined to -1pt.
`\aftercolumnseparator` If user changes them to a positive length, the lengths are used to define blank spaces before / after the column separator, instead of `\hfill`.

```

2521 \newlength{\beforecolumnseparator}%
2522 \setlength{\beforecolumnseparator}{-2pt}%
2523
2524 \newlength{\aftercolumnseparator}%
2525 \setlength{\aftercolumnseparator}{-2pt}%
2526
2527 %

```

`\setwidthliketwocolumns@L` The `\setwidth...` macros are called in `\beginnumbering` in a **non-parallel** typesetting context, to fix the width of the lines to be vertically aligned with parallel columns. They are also called at the beginning of a note's group, if some options are enabled. The `\setposition...` macros are called in `\beginnumbering` in a **non-parallel** typesetting context to fix the position of the lines. The `\setnoteposition...` macros are called in `\xxxfootstart` in a **non-parallel** typesetting context to fix the position of notes block.

```

2528 \newcommand{\setwidthliketwocolumns@L}{%
2529   % Temporary dimension, initially equal to the standard hsize, i.e. text
2530   width
2531   % \begin{macrocode}
2532   \newdimen\temp%
2533   \temp=\hsize%
2534 %

```

Hsize : Left + Right width

```

2534 \hsize=\Lcolwidth%
2535 \advance\hsize\Rcolwidth%
2536 %

```

Now, calculating the remaining space

```

2537 \advance\temp-\hsize%
2538 %

```

And multiply the hsize by 2/3 of this space

```

2539 \multiply\temp by 2%
2540 \divide\temp by 3%
2541 \advance\hsize\temp%
2542 }%
2543
2544 \newcommand{\setpositionliketwocolumns@L}{%
2545 \renewcommand{\ledrlfill}{\hfill}%
2546 }%
2547
2548 \newcommand{\setnotespositionliketwocolumns@L}{%
2549 }%
2550
2551 %
2552 %
2553 \newcommand{\setwidthliketwocolumns@C}{%
2554 % Temporary dimension, initially equal to the standard hsize, i.e. text
2555 % width
2556 %
2557
2558 \newdimen\temp%
2559 \temp=\hsize%
2560 % Hsize : Left + Right width
2561 %
2562
2563 \hsize=\Lcolwidth%
2564 \advance\hsize\Rcolwidth%
2565 % Now, calculating the remaining space
2566 %
2567
2568 \advance\temp-\hsize%
2569 %
2570
2571 And multiply the hsize by 1/2 of this space
2572
2573 \divide\temp by 2%
2574 \advance\hsize\temp%
2575 }%
2576
2577 \newcommand{\setpositionliketwocolumns@C}{%
2578 \doinsidelinehook{\hfill}%
2579 \renewcommand{\ledrlfill}{\hfill}%
2580 }%
2581
2582 \newcommand{\setnotespositionliketwocolumns@C}{%
2583 \newdimen\temp%
2584 \newdimen\tempa%
2585 \temp=\hsize%
2586 \tempa=\Lcolwidth%

```

```

2580 \advance\tempa\Rcolwidth%
2581 \advance\temp-\tempa%
2582 \divide\temp by 2%
2583 \leftskip=\temp%
2584 \rightskip=-\temp%
2585 }%
2586
2587 \newcommand{\setwidthliketwocolumns@R}{%
2588 %

```

Temporary dimension, initially equal to the standard hsize, i.e. text width

```

2589 \newdimen\temp%
2590 \temp=\hsize%
2591 %

```

Hsize : Left + Right width

```

2592 \hsize=\Lcolwidth%
2593 \advance\hsize\Rcolwidth%
2594 %

```

Now, calculating the remaining space

```

2595 \advance\temp-\hsize%
2596 %

```

And multiply the hsize by 2/3 of this space

```

2597 \multiply\temp by 2%
2598 \divide\temp by 3%
2599 \advance\hsize\temp%
2600 }%
2601
2602 \newcommand{\setpositionliketwocolumns@R}{%
2603 \doinsidelinehook{\hfill}%
2604 }%
2605
2606 \newcommand{\setnotespositionliketwocolumns@R}{%
2607 \newdimen\temp%
2608 \newdimen\tempa%
2609 \temp=\hsize%
2610 \tempa=\Lcolwidth%
2611 \advance\tempa\Rcolwidth%
2612 \advance\temp-\tempa%
2613 \divide\temp by 2%
2614 \leftskip=\temp%
2615 \rightskip=-\temp%
2616 }%
2617
2618 %

```

`\Columns@print@before@pstart` and `\Columns@print@after@pend` print the content of the optional argument of `\pstart` / `\pend`. If this content is not empty, it also print the separator.

```

2619 \newcommand{\Columns@print@before@pstart}{%
2620   \ifboolexpr{%
2621     test{\ifcsstring{before@pstartL@the\l@dpscl}{\at@every@pstart}}%
2622     and test {\ifcsstring{before@pstartR@the\l@dpscr}{\at@every@pstart}}%
2623     and test {\ifdefempty{\at@every@pstart}}}%
2624     {%
2625     \ifboolexpr{not togl{before@pstartR@the\l@dpscr @par} and not togl{
before@pstartL@the\l@dpscl @par}}{%
2627       \csuse{before@pstartL@the\l@dpscl}%
2628       \csuse{before@pstartR@the\l@dpscr}%
2629     }{%
2630       \hb@xt@ \hsize{%
2631         \ifdefstring{\columns@position}{L}{\hfill }%
2632         \par\parbox[t] [] [t]{\Lcolwidth}{%
2633           \csuse{before@pstartL@the\l@dpscl}%
2634         }%
2635         \print@columnseparator%
2636         \parbox[t] [] [t]{\Rcolwidth}{%
2637           \set@sectcountR%
2638           \csuse{before@pstartR@the\l@dpscr}%
2639         }%
2640         \ifdefstring{\columns@position}{R}{\hfill}%
2641       }%
2642     }%
2643   }%
2644   \global\csundef{before@pstartL@the\l@dpscl}%
2645   \global\csundef{before@pstartR@the\l@dpscr}%
2646 }%
2647 \newcommand{\Columns@print@after@pend}{%
2648   \ifboolexpr{%
2649     test{\ifcsstring{after@pendL@the\l@dpscl}{\at@every@pend}}%
2650     and test {\ifcsstring{after@pendR@the\l@dpscr}{\at@every@pend}}%
2651     and test {\ifdefempty{\at@every@pend}}}%
2652     {%
2653     \ifboolexpr{not togl{after@pendR@the\l@dpscr @par} and not togl{
after@pendL@the\l@dpscl @par}}{%
2655       \csuse{after@pendL@the\l@dpscl}%
2656       \csuse{after@pendR@the\l@dpscr}%
2657     }{%
2658       \hb@xt@ \hsize{%
2659         \ifdefstring{\columns@position}{L}{\hfill }%
2660         \parbox[t] [] [t]{\Lcolwidth}{%
2661           \csuse{after@pendL@the\l@dpscl}%
2662         }%

```

```

2663 \print@columnseparator%
2664 \parbox[t] [] [t]{\Rcolwidth}{%
2665 \set@sectcountR%
2666 \csuse{after@pendR@the\l@dpscR}%
2667 }%
2668 \ifdefstring{\columns@position}{R}{\hfill}%
2669 }%
2670 }%
2671 }%
2672 \global\csundef{after@pendL@the\l@dpscL}%
2673 \global\csundef{after@pendR@the\l@dpscR}%
2674 }%
2675 %

```

XVII Parallel pages

This is considerably more complicated than parallel columns.

XVII.1 Specific counters

`\numpagelinesL` Counts for the number of lines on a left or right page, and the smaller of the number of
`\numpagelinesR` lines on a pair of facing pages.
`\l@dminpagelines`

```

2676 \newcount\numpagelinesL
2677 \newcount\numpagelinesR
2678 \newcount\l@dminpagelines
2679
2680 %

```

XVII.2 Main macro

`\Pages` The `\Pages` command results in the previous Left and Right texts being typeset on matching facing pages. There should be equal numbers of chunks in the left and right texts.

```

2681 \newcommand*{\Pages}[1][1,usedefault]{%
2682 \ifl@dpairing%
2683 \led@err@Pages@InsideEnv%
2684 \fi%
2685 \ifboolexpr{test{\ifcsboxvoid{l@dRcolrawbox1}} or test{\ifcsboxvoid{
l@dLcolrawbox1}}}{%
2686 \ifcsboxvoid{l@dRcolrawbox1}{%
2687 \ifcsboxvoid{l@dLcolrawbox1}%
2688 {\led@err@Pages@WithoutEnv}%
2689 {\led@err@Pages@WithoutRightside}%
2690 }%
2691 {\led@err@Pages@WithoutLeftside}%
2692 }{%

```

```

2693 \ifstrequal{#1}{mainmatter}{\Pages@mainmattertrue}{\Pages@mainmatterfalse
}%
2694 \eledsection@correcting@skip=-2\baselineskip% line correcting for section
titles.
2695 \parledgroup@notespacing@set@correction%
2696 \typeout{}%
2697 \typeout{***** PAGES *****}%
2698 \ifnum\l@dnumstartsL=\l@dnumstartsR\else%
2699 \led@err@BadLeftRightPstarts{\the\l@dnumstartsL}{\the\l@dnumstartsR}%
2700 \fi%
2701 %

```

Get onto an empty even (left) page, then initialise counters, etc.

```

2702 \cleartol@evenpage%
2703 \global\l@dprintingpagetrue%
2704 \begingroup%
2705 %

```

As `\Pages` must be called outside of the pages environment, we have to redefine the `\Lcolwidth` and `\Rcolwidth` lengths, to prevent false overfull hboxes.

```

2706 \setlength{\Lcolwidth}{\Lcolwidth@pages}%
2707 \setlength{\Rcolwidth}{\Rcolwidth@pages}%
2708 %
2709 \l@dzeropenalties%
2710 \endgraf\global\num@lines=\prevgraf%
2711 \global\num@linesR=\prevgraf%
2712 \global\par@line=\z@%
2713 \global\par@lineR=\z@%
2714 \global\l@dpscL=\z@%
2715 \global\l@dpscR=\z@%
2716 \writtenlinesLfalse%
2717 \writtenlinesRfalse%
2718 \get@familiarfootnote@number%
2719 %

```

The footnotes are printed in a different way from expected in `reledmac`, as we may want to print the notes on one side only.

```

2720 \let\print@Xnotes\print@Xnotes@forpages%
2721 \let\print@notesX\print@notesX@forpages%
2722 %

```

Check if there are chunks to be processed.

```

2723 \check@pstarts%
2724 \loop\if@pstarts%
2725 %

```

Loop over the number of chunks, incrementing the chunk counts (`\l@dpscL` and `\l@dpscR` are chunk (box) counts.)


```

2726 \global\advance\l@dpscL \@ne%
2727 \global\advance\l@dpscR \@ne%
2728 %

```

Calculate the maximum number of real text lines in the chunk pair, storing the result in the relevant \l@dmaxlinesinpar.

```

2729 \getlinesfromparlistL%
2730 \getlinesfromparlistR%
2731 \l@dcalc@maxoftwo{\@cs@linesinparL}{\@cs@linesinparR}%
2732 {\usernamecount{\l@dmaxlinesinpar\the\l@dpscL}}%
2733 \check@pstarts%
2734 \repeat%
2735 %

```

Zero the counts again, ready for the next bit.

```

2736 \global\l@dpscL=\z@%
2737 \global\l@dpscR=\z@%
2738 %

```

Get the number of lines on the first pair of pages and store the minimum in \l@dminpagelines.

```

2739 \getlinesfrompagelistL%
2740 \getlinesfrompagelistR%
2741 \l@dcalc@minoftwo{\@cs@linesonpageL}{\@cs@linesonpageR}%
2742 {\l@dminpagelines}%
2743 %

```

Now we start processing the left and right chunks (\l@dpscL and \l@dpscR count the left and right chunks), starting with the first pair.

```

2744 \check@pstarts%
2745 \if@pstarts%
2746 %

```

Increment the chunk counts to get the first pair. Restore also the value of public pstart counters.

```

2747 \global\advance\l@dpscL \@ne%
2748 \global\advance\l@dpscR \@ne%
2749 \restore@pstartL@pc%
2750 \restore@pstartR@pc%
2751 %

```

We have not processed any lines from these chunks yet, so zero the respective line counts.

```

2752 \global\@donereallinesL=\z@%
2753 \global\@donetotallinesL=\z@%
2754 \global\@donereallinesR=\z@%
2755 \global\@donetotallinesR=\z@%
2756 %

```

Start a loop over the boxes (chunks).

```

2757 \checkraw@text%
2758 %
2759 % \begingroup
2760 { \loop\ifaraw@text%
2761 %

```

See if there is more that can be done for the left page and set up the left language.

```

2762 \checkpageL%
2763 \l@duselanguage{\theledlanguageL}%
2764 { \loop\ifl@dsamepage%
2765 %

```

Process the next (left) text line, adding it to the page. Eventually, adds the optional argument of pstart.

```

2766 \ifdefstring{\@eledsectnotoc}{L}{\ledsectnotoc}{}%
2767 \csuse{before@pstartL@the\l@dpscL}%
2768 \global\csundef{before@pstartL@the\l@dpscL}%
2769 \do@lineL%
2770 \xifinlist{the\l@dpscL}{\eled@sections@@}
2771 { \print@eledsectionL}%
2772 {}%
2773 \advance\numpagelinesL \@ne%
2774 %

```

When using shiftedpstarts option, a \l@dleftbox with a null height is not printed. That means we do not insert blank lines at the end of a left chunk lower than the corresponding right chunk. However, a \l@dleftbox with a null height will advance the \pagetotal in any case. Because if we do not do this, the \checkpageL could let \ifl@pagefull to false, and consequently a \@lopL equal to 1000 could be written in the numbered file, even if all the lines actually needed for the current page have been printed. \l@dleftbox

```

2775 \ifshiftedpstarts%
2776 \ifdim\ht\l@dleftbox>0pt%
2777 \parledgroup@correction@notespacing{L}%
2778 \hb@xt@ \hsize{\ledstrutL\unhbox\l@dleftbox}%
2779 \else%
2780 \unless\ifadvancedshiftedpstarts%
2781 \dimen0=\pagetotal%
2782 \advance\dimen0 by \baselineskip%
2783 \global\pagetotal=\dimen0%
2784 \else%
2785 \ifnomaxlines%
2786 \numdef{\@tmp}{the\l@dpscL+1}%
2787 \ifcsdef{minpage@pstart@\@tmp}{%
2788 \ifnumless{the\c@page}{\csuse{
minpage@pstart@\@tmp}}}%
2789 {\dimen0=\pagetotal%
2790 \advance\dimen0 by \baselineskip%

```

```

2791             \global\pagetotal=\dimen0%
2792             }%
2793             {}%
2794             }{}%
2795             \fi%
2796             \fi%
2797             \fi%
2798         \else%
2799             \parledgroup@correction@notespacing{L}%
2800             \hb@xt@ \hsizel{\ledstrutL\unhbox\l@dleftbox}%
2801             \fi%
2802 %

```

Perhaps we have to move to the next (left) box. Check if we have got all we can onto the page. If not, repeat for the next line. Check if we have to print the optional argument of the last pend. Check if the page is full. Check if the verse is split in two subsequent pages. Check there is any forced page breaks. Reset the verse skipnumber boolean

```

2803         \get@nextboxL%
2804         \global\l@dskipversenumberfalse%
2805         \ifprint@last@after@pendL%
2806             \csuse{after@pendL@the\l@dpscL}%
2807             \global\csundef{after@pendL@the\l@dpscL}%
2808             \fi%
2809         \checkpageL%
2810         \checkverseL%
2811         \checkpbL%
2812         \repeat%
2813 %

```

That (left) page has been filled. Output the number of real lines on the page — if the page break is because the page has been filled with lines, use the actual number, otherwise the page has been ended early in order to synchronise with the facing page so use an impossibly large number.

```

2814         \ifl@dpagfull%
2815             \@writelinesonpageL{\the\numpagelinesL}%
2816         \else%
2817             \@writelinesonpageL{1000}%
2818         \fi%
2819 %

```

Reset to zero the left-page line count, clear the page to get onto the facing (odd, right) page, and reinitialize the accumulated dimension of interline correction for notes in parallel ledgroup.

```

2820         \numpagelinesL \z@%
2821         \parledgroup@correction@notespacing@init%
2822         \clearl@dleftpage }%
2823 %

```

Now do the same for the right text.

```

2824 \checkpageR%
2825 \l@duselanguage{\theledlanguageR}%
2826 {
2827   \loop\ifl@dsamepage%
2828     \set@sectcountR%
2829     \ifdefstring{\@eledsectnotoc}{R}{\ledsectnotoc}{}%
2830     \csuse{before@pstartR@the\l@dpscR}%
2831     \global\csundef{before@pstartR@the\l@dpscR}%
2832     \do@lineR%
2833     \xifinlist{the\l@dpscR}{\eled@sectionsR@@}%
2834     {\print@eledsectionR}%
2835     {}%
2836     \advance\numpagelinesR \@ne%
2837     \ifshiftedpstarts%
2838       \ifdim\ht\l@drightbox>0pt%
2839         \parledgroup@correction@notespacing{R}%
2840         \hb@xt@ \hsize{\ledstrutR\unhbox\l@drightbox}%
2841       \else%
2842         \unless\ifadvancedshiftedpstarts%
2843           \dimen0=\pagetotal%
2844           \advance\dimen0 by \baselineskip%
2845           \global\pagetotal=\dimen0%
2846         \else%
2847           \ifnomaxlines%
2848             \numdef{\@tmp}{the\l@dpscR+1}%
2849             \ifcsdef{minpage@pstart@\@tmp}{%
2850               \ifnumless{the\c@page}{\csuse{
2851                 minpage@pstart@\@tmp}}}%
2852                 {\dimen0=\pagetotal%
2853                 \advance\dimen0 by \baselineskip%
2854                 \global\pagetotal=\dimen0%
2855                 }%
2856                 {}%
2857               }%
2858             \fi%
2859             \fi%
2860             \fi%
2861             \parledgroup@correction@notespacing{R}%
2862             \hb@xt@ \hsize{\ledstrutR\unhbox\l@drightbox}%
2863             \fi%
2864             \get@nextboxR%
2865             \global\l@dskipversenumberRfalse%
2866             \ifprint@last@after@pendR%
2867               \csuse{after@pendR@the\l@dpscR}%
2868               \global\csundef{after@pendR@the\l@dpscR}%
2869             \fi%
2870             \checkpageR%
2871             \checkverseR%
2872             \checkpbR%
2873             \repeat%

```

```

2873         \ifl@dpagfull%
2874             \@writelinesonpageR{\the\numpagelinesR}%
2875         \else%
2876             \@writelinesonpageR{1000}%
2877         \fi%
2878         \numpagelinesR=\z@%
2879         \parledgroup@correction@notespacing@init%
2880 %

```

The page is full, so move onto the next (left, odd) page and repeat left text processing.

```

2881         \clearl@drighthouse}%
2882 %

```

More to do? If there is we have to get the number of lines for the next pair of pages before starting to output them.

```

2883         \checkraw@text%
2884         \ifraw@text%
2885             \getlinesfrompagelistL%
2886             \getlinesfrompagelistR%
2887             \l@dcalc@minoftwo{\@cs@linesonpageL}{\@cs@linesonpageR}%
2888                                 {\l@dminpagelines}%
2889         \fi%
2890         \repeat}%
2891 %

```

We have now output the text from all the chunks.

```

2892         \fi%
2893 %

```

Make sure that there are no inserts hanging around.

```

2894         \flush@notes%
2895         \flush@notesR%
2896         \endgroup%
2897 %

```

Zero counts ready for the next set of left/right text chunks. The boolean tests for stanza are switched to false.

```

2898         \global\l@dpscL=\z@%
2899         \global\l@dpscR=\z@%
2900         \global\l@dnumpstartsL=\z@%
2901         \global\l@dnumpstartsR=\z@%
2902         \global\instanzaLfalse%
2903         \global\instanzaRfalse%
2904         \global\l@dprintingpagesfalse%
2905 %

```

Check the consistency of \edtext@later and \edtext@now

```

2906         \ifnum\edtext@later=\edtext@now%
2907         \else%

```

```

2908 \led@error@edtext@later@now%
2909 \fi%
2910 \global\edtext@later=\z@%
2911 \global\edtext@now=\z@%
2912 %

```

Prevent final notes from overlapping the line number

```

2913 \finish@Pages@notes%
2914 \ignorespaces}}%
2915
2916
2917 %

```

XVII.3 Ensure all notes are printed at the end of parallel pages

`\finish@Pages@notes` This macro ensures that all long notes are printed at the end of `\Pages` typesetting, and that there are no more long notes left for the next pages.

```

2918 \newcommand{\finish@Pages@notes}{%
2919 \def\do##1{%
2920 %

```

First, declare footnote box if there was no previous declared. E.g. if familiar or critical notes were disabled by `reledmac`'s options.

```

2921 \ifnocritical@%
2922 \global\newnamebox{##1footins}%
2923 \fi
2924 \ifnofamiliar@%
2925 \global\newnamebox{footins##1}%
2926 \fi
2927 %

```

And now, add a `\newpage` if there is no more footnote to print.

```

2928 \ifvoid\csuse{##1footins}%
2929 \ifvoid\csuse{footins##1}\else%
2930 \newpage\null%
2931 \listbreak%
2932 \fi%
2933 \else%
2934 \newpage\null%
2935 \listbreak%
2936 \fi%
2937 }%
2938 \dolistloop{@series}%
2939 }%
2940 %

```

XVII.4 Struts

`\ledstrutL` Struts inserted into leftand right text lines.

```
\ledstrutR
2941 \newcommand*\ledstrutL{}
2942 \newcommand*\ledstrutR{}
2943
2944 %
```

XVII.5 Page clearing

`\cleartoevenpage` `\cleartoevenpage`, which is defined in the memoir class, is like `\clear(double)page` except that we end up on an even page. `\cleartol@evenpage` is similar except that it first checks to see if it is already on an empty page.

```
2945 \providecommand{\cleartoevenpage}[1][\@empty]{%
2946   \clearpage
2947   \ifodd\c@page\hbox{ }#1\clearpage\fi
2948
2949 \newcommand*\cleartol@evenpage{%
2950   \ifdim\pagetotal<\topskip% on an empty page
2951   \else
2952     \clearpage
2953     \Pages@mainmatter%
2954   \fi
2955   \ifodd\c@page%
2956     \ifprevpgnotnumbered%
2957       \addtocounter{par@page}{-1}%
2958     \fi%
2959     \ifdef{\prevpgstyle}{\thispagestyle{\prevpgstyle}}{%
2960       \hbox{ }\clearpage%
2961     \fi%
2962   }%
2963   %
```

`\clearl@dleftpage` `\clearl@dleftpage` and `\clearl@drightrightpage` get us onto an odd and even page, respectively, checking that we end up on the subsequent page. Both commands use `\newpage` and not `\clearpage`. Because `\clearpage` prints all footnotes before the next page, even if it has to add new empty pages, while `\newpage` does not. And as we want notes started in the left page continue in the right page and *vice-versa*, we must use `\newpage` and not `\clearpage`

```
2964 \newcommand*\clearl@dleftpage{%
2965   \ifdim\pagetotal=0pt\hbox{ }\fi%
2966   \newpage%
2967   \insert@notes@for@onlyside%
2968   \ifodd\c@page\else
2969     \led@err@LeftOnRightPage
2970     \hbox{ }%
2971   \cleardoublepage
```

```

2972 \fi}
2973
2974 \newcommand*{\clearl@drighthouse}{%
2975 \ifdim\pagetotal=0pt\hbox{}\fi%
2976 \newpage%
2977 \insert@notes@for@onlyside%
2978 \ifodd\c@page
2979 \led@err@RightOnLeftPage
2980 \hbox{}\fi%
2981 \cleartoevenpage
2982 \fi}
2983
2984 %

```

XVII.6 Lines managing

`\getlinesfromparlistL` `\getlinesfromparlistL` gets the next entry from the `\linesinpar@listL` and puts it into `\@cs@linesinparL`; if the list is empty, it sets `\@cs@linesinparL` to 0. Similarly `\getlinesfromparlistR` for `\getlinesfromparlistR`.

```

\@cs@linesinparL
2985 \newcommand*{\getlinesfromparlistL}{%
2986 \ifx\linesinpar@listL\empty
2987 \gdef\@cs@linesinparL{0}%
2988 \else
2989 \gl@p\linesinpar@listL\to\@cs@linesinparL
2990 \fi}
2991 \newcommand*{\getlinesfromparlistR}{%
2992 \ifx\linesinpar@listR\empty
2993 \gdef\@cs@linesinparR{0}%
2994 \else
2995 \gl@p\linesinpar@listR\to\@cs@linesinparR
2996 \fi}
2997
2998 %

```

`\getlinesfrompagelistL` `\getlinesfrompagelistL` gets the next entry from the `\linesonpage@listL` and puts it into `\@cs@linesonpageL`; if the list is empty, it sets `\@cs@linesonpageL` to 1000. Similarly for `\getlinesfrompagelistR`.

```

\@cs@linesonpageR
2999 \newcommand*{\getlinesfrompagelistL}{%
3000 \ifx\linesonpage@listL\empty
3001 \gdef\@cs@linesonpageL{1000}%
3002 \else
3003 \gl@p\linesonpage@listL\to\@cs@linesonpageL
3004 \fi}
3005 \newcommand*{\getlinesfrompagelistR}{%
3006 \ifx\linesonpage@listR\empty
3007 \gdef\@cs@linesonpageR{1000}%
3008 \else

```



```

3009 \gl@p\linesonpage@listR\to\@cs@linesonpageR
3010 \fi}
3011
3012 %

```

`\@writelinesonpageL` These macros output the number of lines on a page to the section file in the form of `\@lopL` or `\@lopR` macros.

```

3013 \newcommand*{\@writelinesonpageL}[1]{%
3014 \edef\next{\write\linenum@out{\string\@lopL{#1}}}%
3015 \next}
3016 \newcommand*{\@writelinesonpageR}[1]{%
3017 \edef\next{\write\linenum@outR{\string\@lopR{#1}}}%
3018 \next}
3019
3020 %

```

`\l@dcalc@maxoftwo` `\l@dcalc@maxoftwo{<num>}{<num>}{<count>}` sets `<count>` to the maximum of the two `<num>`.

`\l@dcalc@minoftwo` `\l@dcalc@minoftwo{<num>}{<num>}{<count>}` sets `<count>` to the minimum of the two `<num>`.

```

3021 \newcommand*{\l@dcalc@maxoftwo}[3]{%
3022 \ifnum #2>#1\relax
3023 #3=#2\relax
3024 \else
3025 #3=#1\relax
3026 \fi}
3027 \newcommand*{\l@dcalc@minoftwo}[3]{%
3028 \ifnum #2<#1\relax
3029 #3=#2\relax
3030 \else
3031 #3=#1\relax
3032 \fi}
3033
3034 %

```

XVII.7 Page break managing

`\ifl@dsamepage` `\checkpageL` tests if the space and lines already taken on the page by text and footnotes is less than the constraints. If so, then `\ifl@dpagfull` is set FALSE and `\l@dsamepagetrue` is set TRUE. If the page is spatially full then `\ifl@dpagfull` is set TRUE and `\ifl@dsamepage` is set FALSE. If it is not spatially full but the maximum number of lines have been output then both `\ifl@dpagfull` and `\ifl@dsamepage` are set FALSE.

```

\checkpageL
\checkpageR
3035 \newif\ifl@dsamepage
3036 \l@dsamepagetrue
3037 \newif\ifl@dpagfull

```

```

3038
3039 \newcommand*{\checkpageL}{%
3040   \l@dpagfulltrue
3041   \l@dsamepagetrue
3042   \check@goal
3043   \ifdim\pagetotal<\ledthegoal
3044     \ifnum\numpagelinesL<\l@dminpagelines
3045       \else
3046         \ifnomaxlines%
3047         \else%
3048           \l@dsamepagefalse%
3049           \l@dpagfullfalse%
3050         \fi%
3051       \fi
3052     \else
3053       \l@dsamepagefalse
3054       \l@dpagfulltrue
3055     \fi%
3056     \ifprint@last@after@pendL%
3057       \l@dpagfullfalse%
3058       \l@dsamepagefalse%
3059       \print@last@after@pendLfalse%
3060     \fi%
3061   }%
3062
3063 \newcommand*{\checkpageR}{%
3064   \l@dpagfulltrue
3065   \l@dsamepagetrue
3066   \check@goal
3067   \ifdim\pagetotal<\ledthegoal
3068     \ifnum\numpagelinesR<\l@dminpagelines
3069       \else
3070         \ifnomaxlines%
3071         \else%
3072           \l@dsamepagefalse%
3073           \l@dpagfullfalse%
3074         \fi%
3075       \fi
3076     \else
3077       \l@dsamepagefalse
3078       \l@dpagfulltrue
3079     \fi%
3080     \ifprint@last@after@pendR%
3081       \l@dpagfullfalse%
3082       \l@dsamepagefalse%
3083       \print@last@after@pendRfalse%
3084     \fi%
3085   }%
3086
3087 %

```

`\checkpbL` `\checkpbL` and `\checkpbR` are called after each line is printed, and after the page is checked. These commands correct page breaks depending on `\ledpb` and `\lednopb`.

```

3088 \newcommand{\checkpbL}{
3089   \IfStrEq{\led@pb@setting}{after}{
3090     \xifinlistcs{\the\absline@num}{l@prev@pb}{\l@dpagfulltrue\
l@dsamepagefalse}{
3091     \xifinlistcs{\the\absline@num}{l@prev@nopb}{\l@dpagfullfalse\
l@dsamepagetrue}{
3092   }{
3093   \IfStrEq{\led@pb@setting}{before}{
3094     \numdef{\next@absline}{\the\absline@num+1}
3095     \xifinlistcs{\next@absline}{l@prev@pb}{\l@dpagfulltrue\
l@dsamepagefalse}{
3096     \xifinlistcs{\next@absline}{l@prev@nopb}{\l@dpagfullfalse\
l@dsamepagetrue}{
3097   }{
3098 }
3099
3100 \newcommand{\checkpbR}{
3101   \IfStrEq{\led@pb@setting}{after}{
3102     \xifinlistcs{\the\absline@numR}{l@prev@pbR}{\l@dpagfulltrue\
l@dsamepagefalse}{
3103     \xifinlistcs{\the\absline@numR}{l@prev@nopbR}{\l@dpagfullfalse\
l@dsamepagetrue}{
3104   }{
3105   \IfStrEq{\led@pb@setting}{before}{
3106     \numdef{\next@abslineR}{\the\absline@numR+1}
3107     \xifinlistcs{\next@abslineR}{l@prev@pbR}{\l@dpagfulltrue\
l@dsamepagefalse}{
3108     \xifinlistcs{\next@abslineR}{l@prev@nopbR}{\l@dpagfullfalse\
l@dsamepagetrue}{
3109   }{
3110 }
3111 %

```

`\checkverseL` `\checkverseL` and `\checkverseR` are called after each line is printed. They prevent page break inside line of verse.

```

3112 \newcommand{\checkverseL}{
3113 \ifinstanzaL
3114   \iflednopbinverse
3115   \ifinserthangingsymbol
3116     \numgdef{\prev@abslineverse}{\the\absline@num-1}
3117     \IfStrEq{\led@pb@setting}{after}{\lednopbnum{\prev@abslineverse}}{
3118     \IfStrEq{\led@pb@setting}{before}{\ifnum\numpagelinesL<3\ledpbnum{\
prev@abslineverse}\fi}{
3119   \fi
3120   \fi
3121 \fi

```

```

3122 }
3123 \newcommand{\checkverseR}{
3124 \ifinstanzaR
3125   \iflednopbinverse
3126     \ifinserthangingsymbolR
3127       \numgdef{\prev@abslineverse}{\the\absline@numR-1}
3128       \IfStrEq{\led@pb@setting}{after}{\lednopbnumR{\prev@abslineverse}}{}
3129       \IfStrEq{\led@pb@setting}{before}{\ifnum\numpagelinesR<3\ledpbnumR{\
prev@abslineverse}\fi}{}
3130     \fi
3131   \fi
3132 \fi
3133 }
3134 %

```

\setgoalfraction \ledthegoal is the amount of space allowed to taken by text and footnotes on a page before a forced pagebreak. This can be controlled via \@goalfraction. \ledthegoal is calculated via \check@goal.

```

\check@goal
3135 \newdimen\ledthegoal
3136 \ifshiftedpstarts
3137   \newcommand*{\@goalfraction}{0.95}
3138 \else
3139   \newcommand*{\@goalfraction}{0.9}
3140 \fi
3141
3142 \newcommand*{\check@goal}{%
3143   \ledthegoal=\@goalfraction\pagegoal}
3144 \newcommand{\setgoalfraction}[1]{%
3145   \xdef\@goalfraction{#1}%
3146 }
3147 %

```

\ifwrittenlinesL Booleans for whether line data has been written to the section file.

```

\ifwrittenlinesL
3148 \newif\ifwrittenlinesL
3149 \newif\ifwrittenlinesR
3150
3151 %

```

XVII.8 Getting boxes content

\if@getnextbox The \if@getnextbox boolean is switched to true if we can get the next chunk in a page after finished previous chunk. That is:

- If we use the nosyncpstarts option, in any case
- If we do not use it, only when the number or real or blank line of the current chunk is equal or greater to the maximum number of line in the current pair of chunks.

```

3152 \newif\if@getnextbox%
3153 %

```

\get@nextboxL If the current box is not empty (i.e., still contains some lines) nothing is done. Otherwise
\get@nextboxR if and only if a synchronisation point is reached the next box is started.

```

3154 \newcommand*{\get@nextboxL}{%
3155   \ifvbox\namebox{1@dLcolrawbox\the\l@dpscl}% box is not empty
3156 %

```

The current box is not empty; do nothing.

```

3157   \else%                               box is empty
3158 %

```

The box is empty. By default, we can get the next box

```

3159   \@getnextboxtrue%Should be local, but be cautious
3160 %

```

But not when sufficient lines for this page have been generated (except when we don't do any synchronization whatsoever). output.

```

3161   \ifnum\usenamecount{1@dmaxlinesinpar\the\l@dpscl}>\@donetotallinesL
3162   \parledgroup@notes@endL%
3163   \unless\ifnosyncpstarts%
3164   \@getnextboxfalse%
3165 %

```

If we use the nomaxlines option, we will start at new page, but we take count of the lines to be typeset for the actual right chunk on the right page, before starting new chunk on the left page.

```

3166   \ifnomaxlines%
3167   \ifdim\pagetotal<\ledthegoal%
3168   \numdef{\@tmp}{\l@dpscl+1}%
3169   \ifcsdef{afterlines@pstart@\@tmp R}{%
3170   \ifnumless{\numpagelinesL}{\csuse{afterlines@pstart@\@tmp R}}
3171 %
3172   {%
3173   {\ifcsdef{minpage@pstart@\@tmp}%
3174   {\ifnumless{\the\c@page}{\csuse{minpage@pstart@\@tmp}}%
3175   {\ifnum\numpagelinesL=1@dminpagelines%
3176   \@getnextboxtrue%
3177   \fi%
3178   }%
3179   {\@getnextboxtrue}}}%
3180   }%
3181   }%
3182   }%
3183   \fi%
3184   \fi%

```

```

3185     \fi%
3186   \else%
3187     \ifnomaxlines%
3188       \numdef{\@tmp}{\the\l@dpscl+1}%
3189       \ifcsdef{minpage@pstart@\@tmp}{%
3190         \ifnumless{\the\c@page}{\csuse{minpage@pstart@\@tmp}}%
3191         {\ifdimgreater{\pagetotal}{\ledthegoal}%
3192           {\@getnextboxtrue}%
3193           {\@getnextboxfalse}%
3194         }%
3195         {\@getnextboxtrue}%
3196       }%
3197     \fi%
3198   \fi%
3199 %

```

Sufficient lines have been output.

```

3200   \if@getnextbox%
3201     \ifnum\usernamecount{1@dmaxlinesinpar\the\l@dpscl}=\@donetotallinesL
3202     \parledgroup@notes@endL
3203   \fi
3204   \ifwrittenlinesL\else
3205 %

```

Write out the number of lines done, and set the boolean so this is only done once.

```

3206     \@writelinesinparL
3207     \writtenlinesLtrue
3208   \fi
3209   \ifnum\l@dnumstartsL>\l@dpscl
3210 %

```

There are still unprocessed boxes. Recalculate the maximum number of lines needed, and move onto the next box (by incrementing `\l@dpscl`). If needed, restart the line numbering.

```

3211     \writtenlinesLfalse
3212     \ifbypstart@
3213       \global\line@num=0%
3214       \resetprevline@%
3215     \fi
3216 % Add the content of the optional argument of the previous \protect\cs{pend
3217 %   \begin{macrocode}
3218     \csuse{after@pendL@\the\l@dpscl}%
3219     \global\csundef{after@pendL@\the\l@dpscl}%
3220 %

```

Check the number of lines

```

3221     \l@dcalcc@maxoftwo{\the\usernamecount{1@dmaxlinesinpar\the\l@dpscl}}%
3222     {\the\@donetotallinesL}%

```

```

3223             {\usernamecount{l@dmaxlinesinpar\the\l@dpscL}}}%
3224             \global\@donetotallinesL \z@
3225 %

Go to the next pstart

3226             \global\advance\l@dpscL \@ne
3227             \global\pstartnumtrue%
3228             \restore@pstartL@pc%
3229 %

Add notes of parallel ledgroup.

3230             \parledgroup@notes@endL
3231             \parledgroup@correction@notespadding@final{L}
3232             \else
3233 %

3234             \print@last@after@pendLtrue%
3235             \fi
3236         \fi
3237     \fi}
3238 %

3239 \newcommand*{\get@nextboxR}{%
3240     \ifvbox\namebox{l@dRcolrawbox\the\l@dpscR}% box is not empty
3241     \else% box is empty
3242         \@getnextboxtrue%
3243         \ifnum\usernamecount{l@dmaxlinesinpar\the\l@dpscR}>\@donetotallinesR
3244             \parledgroup@notes@endR
3245             \unless\ifnosyncpstarts%
3246                 \@getnextboxfalse%
3247                 \ifnomaxlines%
3248                     \ifdim\pagetotal<\ledthegoal%
3249                         \numdef{\@tmp}{\l@dpscR+1}%
3250                         \ifcsdef{afterlines@pstart@\@tmp L}{%
3251                             \ifnumless{\numpagelinesL}{\csuse{afterlines@pstart@\@tmp L}}
3252                             {}%
3253                             {\ifcsdef{minpage@pstart@\@tmp}%
3254                                 {\ifnumless{\the\c@page}{\csuse{minpage@pstart@\@tmp}}%
3255                                     {\ifnum\numpagelinesR=\l@dminpagelines%
3256                                         \@getnextboxtrue%
3257                                         \fi%
3258                                     }%
3259                                 {\@getnextboxtrue}}}%
3260                             {\@getnextboxtrue}}%
3261                             }%%
3262                         }%
3263                     {}%
3264                 \fi%
3265             \fi%

```

```

3266 \fi%
3267 \else%
3268 \ifnomaxlines%
3269 \numdef{\@tmp}{\the\l@dpscR+1}%
3270 \ifcsdef{minpage@pstart@\@tmp}{%
3271 \ifnumless{\the\c@page}{\csuse{minpage@pstart@\@tmp}}%
3272 {\ifdimgreater{\pagetotal}{\ledthegoal}%
3273 {\@getnextboxtrue}%
3274 {\@getnextboxfalse}%
3275 }%
3276 {\@getnextboxtrue}%
3277 }{}
3278 \fi%
3279 \fi%
3280 \if@getnextbox%
3281 \ifnum\usernamecount{1@dmaxlinesinpar\the\l@dpscR}=\@donetotallinesR
3282 \parledgroup@notes@endR
3283 \fi
3284 \ifwrittenlinesR\else
3285 \@writelinesinparR
3286 \writtenlinesRtrue
3287 \fi
3288 \ifnum\l@dnumpstartsR>\l@dpscR
3289 \writtenlinesRfalse
3290 \ifbypstart@R
3291 \global\line@numR=0%
3292 \resetprevline@%
3293 \fi
3294 \csuse{after@pendR@\the\l@dpscR}%
3295 \global\csundef{after@pendR@\the\l@dpscR}%
3296 \l@dcalc@maxoftwo{\the\usernamecount{1@dmaxlinesinpar\the\l@dpscR}}%
3297 {\the\@donetotallinesR}%
3298 {\usernamecount{1@dmaxlinesinpar\the\l@dpscR}}%
3299 \global\@donetotallinesR \z@
3300 \global\advance\l@dpscR \@ne
3301 \global\pstartnumRtrue%
3302 \restore@pstartR@pc%
3303 \parledgroup@notes@endR
3304 \parledgroup@correction@notes@spacing@final{R}
3305 \else
3306 \print@last@after@pendRtrue%
3307 \fi
3308 \fi
3309 \fi}
3310
3311 %

```


XVIII Page numbering

XVIII.1 Global options

The `sameparallelpagnumber` option allows the same page number on both left and right side. The `prevpgnotnumbered` option allows an empty (not numbered) right-side page before `\Pages`.

We cannot implement these two options by changing the value of the page counter, since its value is used by many \TeX features to determine whether a page is left (even-numbered) or right (odd-numbered). Consequently, we have to do it by patching `\thepage`, in order to use the value of the `par@page` counter instead of value of page counter.

This counter will be increased in a patched version of the \TeX 's `\@outputpage` macro, as is the page counter in this macro. However, this increase will take account of the options.

`\par@patch@thepage` and `\par@patch@pagenumbering` patch `\thepage` in order to use the value of `par@page` counter and not the value of `par@page`. It must be called after any redefinition of `\thepage`. That is why we insert it at the end of the \TeX macro `\pagenumbering`, which is called by some `\xxxmatter` commands. In cases when we are using the memoir class, we insert it at the end of `\@mempnum`. When using `\pagenumbering`, we also need to restart `par@page` counter. Consequently, we have wrapped `\par@patch@thepage` and counter restart in `\par@patch@pagenumbering`. We also call `\par@patch@thepage` it at the beginning of the document.

```

3312
3313 \newcommand{\par@patch@thepage}{%
3314   \ifboolexpr{%
3315     bool{sameparallelpagnumber}%
3316     or bool{prevpgnotnumbered}%
3317   }%
3318   {%
3319     \patchcmd{\thepage}%
3320       {page}{par@page}%
3321       {}%
3322       {\led@error@fail@patch@thepage}%
3323   }{}%
3324 }%
3325
3326 \newcommand{\par@patch@pagenumbering}{%
3327   \ifboolexpr{%
3328     bool{sameparallelpagnumber}%
3329     or bool{prevpgnotnumbered}%
3330   }%
3331   {%
3332     \setcounter{par@page}{1}%
3333   }%
3334   {}%
3335   \par@patch@thepage%

```

```

3336 }%
3337
3338 \ifl@dmemoir%
3339   \apptocmd{\@mempnum}%
3340     {\par@patch@pagenumbering}%
3341     {}%
3342     {\led@error@fail@patch@@mempnum}%
3343
3344 \else%
3345   \apptocmd{\pagenumbering}%
3346     {\par@patch@pagenumbering}%
3347     {}%
3348     {\led@error@fail@patch@pagenumbering}%
3349 \fi%
3350
3351 \AtBeginDocument{\par@patch@thepage}%
3352 %

```

\@outputpage As its name says, \@outputpage is a \TeX 's macro called in the output routine. It is this macro which increases the page counter.. We patch it in order to increase, conditionally, the par@page counter.

```

3353 \AtBeginDocument{%
3354   \apptocmd{\@outputpage}{%
3355     \ifsameparallelpagenumber%
3356       \ifl@dprintingpages%
3357         \ifodd\c@page\else%
3358           \stepcounter{par@page}%
3359         \fi%
3360       \else%
3361         \stepcounter{par@page}%
3362       \fi%
3363     \else%
3364       \stepcounter{par@page}%
3365     \fi%
3366   }%
3367   {}%
3368   {\led@error@fail@patch@@@outputpage}%
3369 }
3370 %

```

\thepar@page And now, initialize par@page counter.

```

3371 \newcounter{par@page}%
3372 \setcounter{par@page}{1}%
3373 %

```

XVIII.2 mainmatter option of \Pages

The optional argument of \Pages could be equal to mainmatter. In this case the boolean \ifPages@mainmatter is set to true, and some special things are done in \Pages@mainmatter, called by \cleartol@devenpage.

```

\ifPages@mainmatter 3374 \newif\ifPages@mainmatter
\Pages@mainmatter 3375 \newcommand{\Pages@mainmatter}{%
3376     \ifPages@mainmatter%
3377     \pagenumbering{arabic}%
3378     \addtocounter{page}{1}%
3379     \addtocounter{par@page}{-1}%
3380     \patchcmd{\thepage}{page}{par@page}{}{}%
3381     \fi%
3382 }
3383 %

```

XIX Sections' titles' commands

As switching from left to right pages does not clear the page since v1.13.0, but only creates new pages, no \vbox{} is inserted, and consequently parallel chapters are misaligned.

So we patch the \chapter command in order to prevent this problem.

```

\chapter 3384 \pretocmd{\chapter}{%
3385     \ifl@drprintingpages%
3386     \vbox{}%
3387     \fi%
3388 }%
3389 {}%
3390 {}%
3391 %

```

\eledsectnotoc \eledsectnotoc just saves its content \@eledsectnotoc, which will be tested where sectioning commands will be printed.

```

3392 \newcommand{\eledsectnotoc}[1]{\xdef\@eledsectnotoc{#1}}
3393 \eledsectnotoc{R}
3394 %

```

\eledsectmark \eledsectmark just saves its content \@eledsectmark, which will be tested where sectioning commands will be printed.

```

3395 \newcommand{\eledsectmark}[1]{\xdef\@eledsectmark{#1}}
3396 \eledsectmark{L}
3397 %

```

`\eledsection@correcting@skip` Because the vertical correction needed after inserting a title in parallel depends whether we are in parallel columns or parallel pages, we stock its length in `\eledsection@correcting@skip`.

```
3398 \newskip\eledsection@correcting@skip
3399 %
```

`\eled@sectioningR@out` We save the sectioning commands of the right side in the `\eled@sectioningR@out` file.

```
3400 \newwrite\eled@sectioningR@out
3401 %
```

XX Page break/no page break, depending on the specific line

We need to adapt the macro of the homonym section of `eledmac` to `eledpar`.

`\prev@pbR` The `\l@prev@pbR` macro is a `etoolbox`'s list, which contains the lines in which page breaks occur (before or after). The `\l@prev@nopbR` macro is a `etoolbox` list, which contains the lines in which NO page breaks occur (before or after).

```
3402 \def\l@prev@pbR{}
3403 \def\l@prev@nopbR{}
3404 %
```

`\ledpbR` The `\ledpbR` macro writes the call to `\led@pbR` in line-list file. The `\ledpbnumR` macro writes the call to `\led@pbnumR` in line-list file. The `\lednopbR` macro writes the call to `\led@nopbR` in line-list file. The `\lednopbnumR` macro writes the call to `\led@nopbnumR` in line-list file.

```
3405 \newcommand{\ledpbR}{\write\linenum@outR{\string\led@pbR}}
3406 \newcommand{\ledpbnumR}[1]{\write\linenum@outR{\string\led@pbnumR{#1}}}
3407 \newcommand{\lednopbR}{\write\linenum@outR{\string\led@nopbR}}
3408 \newcommand{\lednopbnumR}[1]{\write\linenum@outR{\string\led@nopbnumR{#1}}}
3409 %
```

`\led@pbR` The `\led@pbR` add the absolute line number in the `\prev@pbR` list. The `\led@pbnumR` add the argument in the `\prev@pbR` list. The `\led@nopbR` add the absolute line number in the `\prev@nopbR` list. The `\led@nopbnumR` add the argument in the `\prev@nopbR` list.

```
3410 \newcommand{\led@pbR}{\listxadd{\l@prev@pbR}{\the\absline@numR}}
3411 \newcommand{\led@pbnumR}[1]{\listxadd{\l@prev@pbR}{#1}}
3412 \newcommand{\led@nopbR}{\listxadd{\l@prev@nopbR}{\the\absline@numR}}
3413 \newcommand{\led@nopbnumR}[1]{\listxadd{\l@prev@nopbR}{#1}}
3414 %
```

XXI Parallel ledgroup

`\parledgroup@` The marks `\parledgroup@` contains information about the beginnings and endings of notes in a parallel ledgroup. `\parledgroup@series` contains the footnote series.
`\parledgroup@type` `\parledgroup@type` contains the type of the footnote: critical (Xfootnote) or familiar (footnoteX).

```
3415 \newmarks\parledgroup@
3416 \newmarks\parledgroup@series
3417 \newmarks\parledgroup@type
3418 %
```

`\parledgroup@notes@startL` `\parledgroup@notes@startL` and `\parledgroup@notes@startR` are used to mark the beginning of a note series in a parallel ledgroup.

```
3419 \newcommand{\parledgroup@notes@startL}{%
3420   \ifnum\usenamecount{1@dmaxlinesinpar\the\l@dpscL}>0%
3421     \IfStrEq{\splitfirstmarks\parledgroup@type}{footnoteX}{\csuse{
3422       bhooknoteX@\splitfirstmarks\parledgroup@series}}{ }%
3423     \IfStrEq{\splitfirstmarks\parledgroup@type}{Xfootnote}{\csuse{
3424       bhookXnote@\splitfirstmarks\parledgroup@series}}{ }%
3425     \fi%
3426   \global\ledgroupnotesL@true%
3427   \insert@noterule@ledgroup{L}%
3428 }
3429 \newcommand{\parledgroup@notes@startR}{%
3430   \ifnum\usenamecount{1@dmaxlinesinpar\the\l@dpscR}>0%
3431     \IfStrEq{\splitfirstmarks\parledgroup@type}{footnoteX}{\csuse{
3432       bhooknoteX@\splitfirstmarks\parledgroup@series}}{ }%
3433     \IfStrEq{\splitfirstmarks\parledgroup@type}{Xfootnote}{\csuse{
3434       bhookXnote@\splitfirstmarks\parledgroup@series}}{ }%
3435     \fi%
3436   \global\ledgroupnotesR@true%
3437   \insert@noterule@ledgroup{R}%
3438 }
3439 %
```

`\parledgroup@notes@endL` `\parledgroup@notes@endL` and `\parledgroup@notes@endR` are used to mark the end of a note series in a parallel ledgroup.

```
3436 \newcommand{\parledgroup@notes@endL}{%
3437   \global\ledgroupnotesL@false%
3438 }
3439 \newcommand{\parledgroup@notes@endR}{%
3440   \global\ledgroupnotesR@false%
3441 }
3442 %
```

`\insert@noterule@ledgroup` A `\vskip` is not used when the boxes are constructed. So we insert it before ledgroup note series when parallel lines are constructed. This is the goal of `\insert@noterule@ledgroup`

```

3443 \newcommand{\insert@noterule@ledgroup}[1]{
3444   \IfStrEq{\splitbotmarks\parledgroup@}{begin}{%
3445     \IfStrEq{\splitbotmarks\parledgroup@type}{Xfootnote}{
3446       \csuse{ifledgroupnotes#1@}
3447       \vskip\skip\csuse{mp\splitbotmarks\parledgroup@series footins}
3448       \csuse{\splitbotmarks\parledgroup@series footnoterule}
3449     \fi
3450   }
3451   {}
3452   \IfStrEq{\splitbotmarks\parledgroup@type}{footnoteX}{
3453     \csuse{ifledgroupnotes#1@}
3454     \vskip\skip\csuse{mpfootins\splitbotmarks\parledgroup@series}
3455     \csuse{footnoterule\splitbotmarks\parledgroup@series}
3456     \fi
3457   }{}
3458 }
3459 {}
3460 }
3461 %

```

`\@parledgroupnotespacing` `\@parledgroupnotespacing` can be redefined by the user to change the interline spacing of ledgroup notes.

```

3462 \newcommand{\setparledgroupnotespacing}[1]{\gdef\@parledgroupnotespacing
3463   {#1}}
3464 \newcommand{\@parledgroupnotespacing}{}
3465 %

```

`\parledgroup@notespacing@correction` `\parledgroup@notespacing@correction` is the difference between a normal line skip and a line skip in a note. It is set by `\parledgroup@notespacing@set@correction`, called at the beginning of `\Pages`.

```

3465 \dimdef{\parledgroup@notespacing@correction}{0pt}
3466 \newcommand{\parledgroup@notespacing@set@correction}{%
3467   {\@getfirstseries\csuse{Xnotefontsize@\@firstseries}%We suppose all the
3468   series has the same footnote size setup
3469   \@parledgroupnotespacing\dimgdef{\temp@spacing}{\baselineskip}}%
3470   \dimgdef{\parledgroup@notespacing@correction}{\baselineskip-\temp@spacing}
3471   }%
3472 }
3473 %

```

`\parledgroup@correction@notespacing@init` `\parledgroup@correction@notespacing@init` sets the value of accumulated corrections of note spacing to 0 pt. It is called at the beginning of each pages AND at the end of each ledgroup.

```

3472 \newcommand{\parledgroup@correction@notespacing@init}{
3473   \dimdef{\parledgroup@notespacing@correction@accumulated}{0pt}
3474   \dimdef{\parledgroup@notespacing@correction@modulo}{0pt}
3475 }

```

```

3476 \parledgroup@correction@notespacing@init
3477 %

```

`\parledgroup@correction@notespacing@final` adds the total space deleted because of correction for notes, in a parallel ledgroup. It also adds the space needed by the other side spaces between note rules and notes. It is called after the print of each `pstart/pend`.

```

3478 \newcommand{\parledgroup@correction@notespacing@final}[1]{
3479   \ifparledgroup
3480   \vspace{\parledgroup@notespacing@correction@accumulated}
3481   \parledgroup@correction@notespacing@init%
3482   \ifstrequal{#1}{L}{
3483     \numdef{\@checking}{\the\l@dpscl-1}
3484   }{
3485     \numdef{\@checking}{\the\l@dpscr-1}
3486   }
3487   \dimdef{\@beforenotes@current@diff}{\csuse{@parledgroup@beforenotes@
3488     \@checking L}-\csuse{@parledgroup@beforenotes@\@checking R}}%
3489   \ifstrequal{#1}{L}{
3490     {% Left
3491       \ifdimgreater{\@beforenotes@current@diff}{0pt}{\vspace{-\
3492         \@beforenotes@current@diff}}%
3493     }%
3494     {% Right
3495       \ifdimgreater{\@beforenotes@current@diff}{0pt}{\vspace{\
3496         \@beforenotes@current@diff}}%
3497     }%
3498   }
3499   \fi
3500 }
3501 %

```

`\parledgroup@correction@notespacing` is used before each printed line. If it is a line of notes in parallel ledgroup, the space `\parledgroup@notespacing@correction` is decreased, to make interline space correct. The decreased space is added to `\parledgroup@notespacing@correction` and `\parledgroup@notespacing@correction@modulo`. If `\parledgroup@notespacing@correction@modulo` is equal or greater than `\baselineskip`:

- It is decreased by `\baselineskip`.
- The total of line number in the current page is decreased by one.

For example, suppose an normal interline of 24 pt and interline for note of 12 pt. That means that the two lines of notes take the place of one normal line. For every two lines of notes, the line total for the current place is decreased by one.

```

3498 \newcommand{\parledgroup@correction@notespacing}[1]{%
3499   \csuse{ifledgroupnotes#1@}%
3500   \vspace{-\parledgroup@notespacing@correction}%

```

```

3501 \dimdef{\parledgroup@notespacing@correction@accumulated}{\
parledgroup@notespacing@correction@accumulated+
parledgroup@notespacing@correction}%
3502 \dimdef{\parledgroup@notespacing@correction@modulo}{\
parledgroup@notespacing@correction@modulo+
parledgroup@notespacing@correction}%
3503 \ifdimless{\parledgroup@notespacing@correction@modulo}{\baselineskip
}{\advance\numpagelinesL -\@ne%
3504 \dimdef{\parledgroup@notespacing@correction@modulo}{\
parledgroup@notespacing@correction@modulo-\baselineskip}%
3505 }% mean greater than equal
3506 \fi%
3507 }
3508 %

```

`\parledgroup@beforenotesL` `\parledgroup@beforenotesL` and `\parledgroup@beforenotesR` store the total of space before notes in the current parallel ledgroup.

```

3509 \dimdef\parledgroup@beforenotesL{0pt}
3510 \dimdef\parledgroup@beforenotesR{0pt}
3511 %

```

`\parledgroup@beforenotes@save` The macro `\parledgroup@beforenotes@save` dumps the space before notes of the current parallel ledgroup in a macro named with the current pstart number.

```

3512 \newcommand{\parledgroup@beforenotes@save}[1]{
3513 \ifparledgroup
3514 \csdimgdef{@parledgroup@beforenotes@the\csuse{1@dnumstarts#1}#1}{\
csuse{\parledgroup@beforenotes#1}}
3515 \csdimgdef{\parledgroup@beforenotes#1}{0pt}
3516 \fi
3517 }
3518 %

```

XXII Compatibility with eledmac

Here, we define some command for the eledmac-compat option.

```

3519 \ifeledmaccompat%
3520
3521
3522 \unless\ifnocritical@
3523 \let\onlyXside\Xonlyside
3524 \fi
3525 \fi
3526 %

```


XXIII The End

</code>

Appendix A Some things to do when changing version

Appendix A.1 Migration to eledpar 1.4.3

Version 1.4.3 corrects a bug added in version 0.12, which made hanging verse always flush right, despite the value of the first element in the `\setstanzaindent` command.

However, if you want to return to automatic flushright margins for verses with hanging indents, you have to redefine the `\hangingsymbol` command.

```
\renewcommand{\hangingsymbol}{\protect\hfill}
```

See the following two examples:

With standard `\hangingsymbol`:

A very long verse should sometimes be hanging. The position of the hanging verse is fixed.

With the modification of the `hangingsymbol`:

A very long verse should sometimes be hanging. And we can see that a hanging verse is flush right.

Appendix A.2 Migration from eledpar to reledpar

As for migration from eledmac to reledmac:

- One option has been removed because it is deprecated.
- Some of the customizations previously made by `\renewcommand` have been replaced with commands.
- Some command names have been changed in order to have a more logical and uniform pattern.

Appendix A.2.1 Deprecated options

The `shiftedverses` option has been removed. Use the general `shiftedpstart` option instead.

Appendix A.2.2 `\renewcommand` replaced with command

Many uses of `\renewcommand` have been replaced with uses of specific commands. Please read the handbook about these particular commands.

<i>Deprecated <code>\renewcommand</code></i>	<i>Replaced with</i>
<code>\goalfraction</code>	<code>\setgoalfraction</code>
<code>\parledgroupnotespacing</code>	<code>\setparledgroupnotespacing</code>
<code>\Rlineflag</code>	<code>\setRlineflag</code>

Appendix A.2.3 Commands the names of which have changed

In order to ease the migration from eledpar to reledpar, you may load `reledmac` with `eledmac-compat` option. However, it is advised to change the command names.

<i>Old command</i>	<i>New command</i>
<code>\onlyXside</code>	<code>\Xonlyside</code>

Appendix A.3 Migration to reledpar 2.2.0

The *astanza* can take now an option argument. Consequently, if the first line of verse in a *astanza* environment starts with brackets [], you must precede them with a `\relax`. If you do not do it, the content of the brackets will be considered as an optional argument of the *astanza* environment.

Appendix A.4 Migration to reledpar 2.3.0

The line number style (alphabetic, numeric, etc.) for the notes of the right side are now defined by the value you set to `\linenumberstyleR` or `\linenumberstyle*`, and not by the value you set to `\linenumberstyle` which is kept for left side.

The same is true for sub-line number styles and `\sublinenumberstyleR` or `\sublinenumberstyle*`, which are distinct from `\sublinenumberstyle`.

Consequently, if you have changed line number representation in footnotes with `\linenumberstyle` and `\sublinenumberstyle`, check your settings for these control sequences.

Appendix A.5 Migration to reledpar 2.4.0

We have fixed a bug which which misaligned left and right sides when a line contained a dotted letter.

We have tested and saw no problem with this correction, but if you see a difference in alignment between version 2.3.0 and 2.4.0, please contact us.

Appendix A.6 Migration to reledpar 2.5.0

If you use either `\stanza` or *astanza* environment, please read Appendix A.12 p. 366.

Appendix A.7 Migration to reledpar 2.6.0

`\printlinenumR` was deleted. Use `\Xlineflag` instead.

Appendix A.8 Migration to reledpar 2.6.1

If you use `perpage` package to control footnote numbering, please read the handbook on 6.3.3 p. 14.

Appendix A.9 Migration to reledpar 2.14.0

The `\linenumberlist` command is reserved for the left side. For the equivalent feature on the right side, define `\linenumberlistR`.

Appendix A.10 Migration to reledpar 2.14.1

The execution of the code sent to `\doinsidelineLhook` and `\doinsidelineRhook` has been moved to a place where `\markboth` can work.

Normally, it should not interfere with your prior use of `\doinsidelineLhook` and `\doinsidelineRhook`.

Please contact us if that causes problems.

Appendix A.11 Migration to v. 2.17.2

If you change the `\Lcolwidth` and `\Rcolwidth` length inside the `pages` environment, the contents were aligned to right. Now, it is aligned to left. Please contact us if you need to keep the older behavior.

References

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\ifaraw@text	1
\ifcsboxvoid	1
\iffirst@linenum@out@R	1
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\ifinstanzaR	1
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\ifl@dpaging	1
\ifl@dpairing	1
\ifl@dsamepage	1
\ifl@dusedbabel	1
\ifledRcol	1
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\ifshiftedpstarts	1
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\insert@countR	1
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<code>\l@dcalc@maxoftwo</code>	1
<code>\l@dcalc@minoftwo</code>	1
<code>\l@dcalcnun</code>	1
<code>\l@dchecklang</code>	1
<code>\l@dleftbox</code>	1
<code>\l@dlinenumR</code>	1
<code>\l@dmake@labelsR</code>	1
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<code>\l@dnumpstartsL</code>	1
<code>\l@dnumpstartsR</code>	1
<code>\l@dpagefullfalse</code>	1
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<code>\l@dsamepagefalse</code>	1
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<code>\led@err@Columns@InsideEnv</code>	1
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<code>\led@err@Columns@WithoutLeftside</code>	1
<code>\led@err@Columns@WithoutRightside</code>	1
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<code>\led@err@Leftside@PreviousNotPrinted</code>	1
<code>\led@err@Pages@InsideEnv</code>	1
<code>\led@err@Pages@WithoutEnv</code>	1
<code>\led@err@Pages@WithoutLeftside</code>	1
<code>\led@err@Pages@WithoutRightside</code>	1
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<code>\led@err@Rightside@PreviousNotPrinted</code>	1
<code>\led@err@TooManyPstarts</code>	1
<code>\led@error@edtext@later@now</code>	1

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<code>\led@error@fail@patch@@outputpage</code>	1
<code>\led@error@fail@patch@pagenumbering</code>	1
<code>\led@error@fail@patch@thepage</code>	1
<code>\led@error@missing@numbering</code>	1
<code>\led@error@note@called@onleftside</code>	1
<code>\led@error@note@called@onrightside</code>	1
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<code>\led@nopbR</code>	1
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<code>\led@pbR</code>	1
<code>\led@warn@ChangeSyncOption</code>	1
<code>\led@warn@setting@in@rightside</code>	1
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\new@lineL	1
\new@lineR	1
\newnamebox	1
\newnamecount	1
\newseries@par	1
\notesXwidthliketwocolumns	9
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<code>\parledgroup@notespacing@set@correction</code>	1
<code>\parledgroupseries@</code>	1
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<code>\prev@nopbR</code>	1
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<code>\print@leftcolumn</code>	1
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Change History

v.2.15.0.

General: Fix bug with `\msdata` when using multiple
`\beginnumbering... \endnumbering` 1

v0.1.0.

General: First public release 1

v0.2.0.

`\Columns`: Added `\l@dchecklang` and `\l@duselanguage` to `\Columns` 95

`\Pages`: Added `\l@duselanguage` to `\Pages` 106

General: Added section of babel related code 88

Fix babel problems 1

v0.3.0.

`\Pages`: Added `\ledstrutL` to `\Pages` 106

Added `\ledstrutR` to `\Pages` 107

`\Rightsidehookend`: Added `\Leftsidehook`, `\Leftsidehookend`, `\Rightsidehook`
and `\Rightsidehookend` 56

`\affixline@numR`: Changed `\affixline@numR` to match new `eledmac` 72

`\do@actions@nextR`: Used `\do@actions@fixedcode` in `\do@actionsR` 70

`\do@lineL`: Added `\do@lineLhook` to `\do@lineL` 64

Simplified `\do@lineL` by using macros for some common code 64

`\do@lineR`: Changed `\do@lineR` similarly to `\do@lineL` 67

`\flag@end`: Removed extraneous spaces from `\flag@end` 48

`\ifledRcol`: Moved `\ifl@dpairing` to `eledmac` 26

`\ifpst@rtedR`: Moved `\ifpst@rtedL` to `eledmac` 30

`\l@dlinenumR`: Simplified `\leftlinenumR` and `\rightlinenumR` by introducing
`\l@dlinenumR` 39

`\l@dnumpstartsR`: Moved `\l@dnumpstartsL` to `eledmac` 91

`\ledstrutR`: Added `\ledstrutL` and `\ledstrutR` 111

`\sublinenumrepR`: Added `\linenumrepR` and `\sublinenumrepR` 38

General: Added `\do@lineLhook` and `\do@lineRhook` 67

Added hooks into Leftside environment 55

Reorganize for `ledarab` 1

v0.3.a.

`\line@marginR`: Do not just set `\line@marginR` in `\linenummargin` 35

General: Minor `\linenummargin` fix 1

v0.3.b.

`\Pages`: Added `\l@dminpagelines` calculation for succeeding page pairs 109

General: Improved parallel page balancing 1

v0.3.c.

General: Compatibilty with Polyglossia 1

v0.4.0.

General: No more `ledparpatch`. All patches are now in the main file. 1

v0.5.0.

General: Corrections about `\section` and other titles in numbered sections 1

v0.6.0.

General: Be able to use `\chapter` in parallel pages. 1

v0.7.0.

General: Option ‘`shiftedverses`’ which make there is no blank between two parallel
verses with inequal length. 1

v0.8.0.	
General: Possibility to have a symbol on each hanging of verses, like in the french typography. Redefine the commande <code>\hangingsymbol</code> to define the character. . . .	1
v0.9.0.	
<code>\ifledRcol</code> : Moved <code>\iflledRcol</code> and <code>\ifnumberingR</code> to <code>eledmac</code>	26
General: Possibility to number <code>\pstart</code>	17
Possibility to number the <code>pstart</code> with the commands <code>\numberpstarttrue</code>	1
v0.9.1.	
General: The numbering of the <code>pstarts</code> restarts on each <code>\beginnumbering</code>	1
v0.9.2.	
General: Debug : with <code>\Columns</code> , the hanging indentation now runs on the left columns and the hanging symbol is shown only when <code>\stanza</code> is used.	1
v0.9.3.	
General: <code>\thepstartL</code> and <code>\thepstartR</code> use now <code>\bfseries</code> and not <code>\bf</code> , which is deprecated and makes conflicts with <code>memoir</code> class.	1
v0.10.0.	
General: <code>\edlabel</code> commands on the right side are now correctly indicated.	1
<code>\edlabel</code> commands which start a paragraph are now put in the right place.	1
v0.11.0.	
<code>\Columns</code> : Line numbering by <code>pstart</code>	96
<code>\affixline@numR</code> : Changed <code>\affixline@numR</code> to allow to disable line numbering (like in <code>eledmac</code> 0.15).	72
<code>\get@nextboxR</code> : Change <code>\get@nextboxL</code> and <code>\get@nextboxR</code> to allow to disable line numbering (like in <code>eledmac</code> 0.15).	117
<code>Pstart</code> number can be printed in side	118
<code>\inserthangingsymbolR</code> : Prevent the column separator for hanging verse from shifting	86
General: Change <code>\do@lineL</code> and <code>\do@lineR</code> to allow line numbering by <code>pstart</code> (like in <code>eledmac</code> 0.15).	64
Lineation can be by <code>pstart</code> (like in <code>eledmac</code> 0.15).	34
New management of <code>hangingsymbol</code> insertion, preventing undesirable insertions. . .	86
v0.12.0.	
General: New management of <code>hangingsymbol</code> insertion, preventing undesirable insertions.	86
v1.0.0.	
General: Compatibility with <code>eledmac</code> . Change name to <code>eledpar</code>	1
Debug in lineation by <code>pstart</code>	34
v1.0.1.	
General: Correction on <code>\numberonlyfirstinline</code> with lineation by <code>pstart</code> or by page. .	1
v1.1.0.	
<code>\pstartR</code> : Add <code>\labelpstarttrue</code> (from <code>eledmac</code>).	57
General: <code>Shiftedverses</code> becomes <code>shiftedpstarts</code>	1
v1.1.1.	
<code>\pstartR</code> : Correct <code>\pstartR</code> bug introduced by 1.1.	57
v1.1.2.	
<code>\affixside@noteR</code> : Remove spurious space between line number and line content . .	85
v1.2.0.	
General: Support for <code>\led<section></code> commands in parallel texts.	1
v1.2.1.	
<code>\set@sectcountR</code> : For the right section, the counter is defined only once.	32

v1.3.0.	
\edtext: Manage RTL language.	49
v1.3.2.	
General: Debug with some classes.	1
v1.3.3.	
General: Debugging the left notes of the right column.	85
v1.3.4.	
General: Allow use of commands in sidenotes, as introduced by eledmac 1.0.	85
v1.4.0.	
General: Added \do@insidelineLhook and \do@insidelineRhook	67
v1.4.1.	
General: Enable the use of stanzaindentsrepetition within astanza environment.	86
v1.4.3.	
\inserthangingsymbolR: Hanging verse is no longer automatically flush right.	86
\pendL: Spurious spaces in \pendL.	61
\pendR: Spurious spaces in \pendR.	62
\pstartR: Spurious spaces in \pstartL and \pstartR.	57
General: Corrects a false hanging verse when a verse is exactly the length of a line.	1
v1.5.0.	
\sublinenumincrement*: Add starred version of \firstlinenum,	
\linenumincrement, \firstsublinenum, \sublinenumincrement to change	
both Left and Rightside.	37
General: Add, as in eledmac, features to manage page breaks.	1
v1.6.0.	
General: Add tool and documentation for parallel ledgroups	21
v1.7.0.	
General: Add, as in eledmac, features to make crossrefs with pstart numbers.	1
v1.8.0.	
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\pendR: As in eledmac, \pendR can have an optional argument.	62
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\sidenotemarginR: \sidenotemargin is now directly defined in eledmac to be able	
to manage eledpar.	84
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\theledlanguageR: Correct left/right language setting with polyglossia.	90
General: \beginnumbering is defined only on eledmac, not on eledpar.	30
\l@dlsnote, \l@drsnote and \l@dcsnote defined only one time, in eledmac.	85
Add \beforecolumnseparator and \aftercolumnseparator.	9
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Add, as in eledmac, new system of sectioning commands.	1
Add, as in eledmac, option to insert something after \pends / verses.	1
Add, as in eledmac, option to insert something between \pstarts / verse.	1

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Suppress <code>\ifl@dsamelang</code> which did not work and was not logical, because both columns could have the same language but not the main language of the document.	89
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<code>\do@lineL</code> : Fix a bug with critical notes at the beginning of a page, (maybe added by v1.8.0) (?).	64
<code>\do@lineR</code> : Fix a bug with critical notes at the beginning of a page, added by v1.8.0 (?).	67
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<code>\flag@end</code> : <code>\flag@start</code> and <code>\flag@end</code> are now defined only one time for <code>eledmac</code> and <code>eledpar</code>	48
<code>\lineation*</code> : Add <code>\lineation*</code>	35
<code>\reledpar@error</code> : Errors specific to <code>eledpar</code> send to <code>eledpar</code> handbook	26
General: Debug <code>\eledxxx</code> with some paper sizes	1
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v1.9.0.	
<code>\ifwidthliketwocolumns</code> : Added <code>widthliketwocolumns</code> option	25
<code>\theledlanguageR</code> : Debug left/right language switching with <code>polyglossia</code> . Do not write in <code>.aux</code> file when setting left/right lines.	90
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v1.9.1.	
<code>\ifledRcol</code> : Moved <code>\ifl@dpadding</code> to <code>eledmac</code>	26
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<code>\line@list@stuffR</code> : Revert modification of 1.4.2, which makes bugs with numbering. Leave vertical mode to solve spurious space before <code>minipage</code>	48
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<code>\edtext</code> : <code>\critext</code> and <code>\edtext</code> are now defined only in <code>eledmac</code>	49
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v1.12.0.	
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\Pages: Prevent false overfull hboxes when using \Pages outside of pages environment.	104
When using shiftedpstarts option, a \l@leftbox with a null height will advance the \pagetotal in any case.	103
\clearl@drighthouse: Use \newpage instead of \clearpage.	111
\ifledRcol: Remove false boolean settings which are not needed.	26
General: Enable the use of optional argument of & in astanza environment.	86
Fix bug in shiftedpstarts when size difference between pstarts is very important.	1
With parallel pages, long notes can now flow from the Left to the right side and from the Right to the left side.	1
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v1.14.0.	
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\do@actions@nextR: Add actions 1008 and 1009	70
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\lineationR: As \lineation, \lineationR automatically set the \pstartinfootnote.	34
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General: Add \AtEveryPstartCall.	1
Add sameparallelpagenumber option.	13
Fix vertical spurious space before right \eledchapter (bug added in v1.13.0).	1
Prevent vertical space when using \AtEveryPstart or \AtEveryPend with a command which prints nothing	1
v1.16.0.	
\newseries@par: Fix bug with \onlysideX.	49
General: Error message when calling \Pages inside 'pages' environment and \Columns inside 'pairs' environment.	1
Error message when starting a Leftside/a Rightside while the previous one has not been yet typeset.	1
Error message when using \beginnumbering...\endnumbering without \pstart.	1

Fix bug with <code>nofamiliar / nocritical</code> option of <code>eledmac</code>	1
New package option <code>sameparallelpagenum</code> to have the same page number for both left and right side.	1
v1.16.1.	
General: Write information about line-list file version in the correct file.	1
v1.16.2.	
General: Fix bug when adding empty lines before a <code>\pend</code> in combination with some specific penalties setting.	1
v1.17.0.	
General: Add compatibility of optional argument of <code>\pstart/\pend</code> and <code>\AtEveryPstart/\AtEveryPend</code> with two columns mode.	1
v1.21.0.	
General: Add <code>\hidenum</code>	17
v2.0.0.	
<code>\@adv</code> : <code>\@adv</code> defined only in <code>reledmac</code>	43
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<code>\@ref@regR</code> : <code>\@ref</code> defined only in <code>reledmac</code> , code specific to right side moved in <code>\ref@regR</code>	44
<code>\@set</code> : <code>\@set</code> defined only in <code>reledmac</code>	43
<code>\advanceline</code> : <code>\advanceline</code> defined only in <code>reledmac</code>	49
<code>\bbl@set@language</code> : Patch <code>\bbl@set@language</code> instead of redefining it	89
<code>\do@lockonR</code> : <code>\do@lockon</code> defined only in <code>reledmac</code>	43
<code>\endlock</code> : <code>\startlock</code> and <code>\endlock</code> defined only in <code>reledmac</code>	49
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<code>\fix@page</code> : <code>\fix@page</code> is defined only once in <code>reledmac</code>	42
<code>\l@d@set</code> : <code>\l@d@set</code> defined only in <code>reledmac</code>	43
<code>\line@marginR</code> : <code>\linenummargin</code> now defined only once time in <code>reledmac</code>	35
<code>\page@action</code> : <code>\page@action</code> defined only in <code>reledmac</code>	43
<code>\read@linelist</code> : <code>\read@linelist</code> is defined only once time in <code>\reledmac</code>	41
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<code>\set@line@action</code> : <code>\set@line@action</code> defined only in <code>reledmac</code>	43
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<code>\setlinenum</code> : <code>\setlinenum</code> defined only in <code>reledmac</code>	49
<code>\skip@lockoff</code> : <code>\do@lockoff</code> defined only in <code>reledmac</code>	44
<code>\sub@action</code> : <code>\sub@action</code> defined only in <code>reledmac</code>	43
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<code>\theledlanguageR</code> : Patch <code>\otherlanguage</code> instead of redefining it.	90
General: <code>\@nl</code> is now defined only in <code>reledmac</code>	41
<code>\ifbypage@</code> and <code>\ifbypstart@R</code> defined in <code>eledmac</code>	34
Fix some bugs with ‘ <code>sameparallelpagenum</code> ’ option.	1
Many code refactored and moved to <code>reledmac</code>	1
Package’s name becomes <code>reledpar</code>	1
Totally new implementation of ‘ <code>sameparallelpagenum</code> ’ option.	1
<code>chapterinpages</code> : Deleting the old system of managing parallel chapter, keep only the new one with <code>\patchcmd</code>	55
v2.1.0.	
General: Fix bug when using <code>\eledsection</code> and related on right pages when page width is short.	1
Fix bug when using <code>\pagenumbering</code> with <code>memoir</code> (bug added in v2.0.0).	1

Fix bug with <code>\setparledgroupnotespacing</code> with the <code>shiftedpstarts</code> option.	1
Fix incompatibility between optional argument of <code>\pstart</code> and <code>\numberpstarttrue</code>	1
Options to custom empty right page before <code>\Pages</code>	1
v2.2.0.	
General: <code>astanza</code> environment can take an optional argument, which will be the optional argument of <code>\pstart</code> started by this environment.	1
New tools to number stanza	1
v2.2.1.	
General: Fix bug with optional argument of last left <code>\pend</code>	1
v2.3.0.	
<code>\Pages</code> : Fix bug when calling <code>\Columns</code> after a <code>\Pages</code> (bug added in v1.13.0).	104
General: Change some internal codes in order to provide compatibility with \TeX release of october 2015	1
Fix bug with title number in parallel columns	1
New line setting command suffixed by R to set only the right side.	1
v2.4.0.	
<code>\ledstrutR</code> : Deleted <code>\ledstrutL</code> and <code>\ledstrutR</code>	111
Fix bug with dotted letter	111
General: New way of (not) synchronizing the parallel pages.	1
Option to switch to <code>\mainmatter</code> when calling <code>\Pages</code>	1
v2.5.0.	
General: Disable empty lines as paragraph in <code>astanza</code>	1
Fix bug introduced in v1.15.0 which made hanging indentation in verse not work anymore.	1
New commands <code>\linenummarginR</code> and <code>\linenummargin*</code>	1
v2.5.1.	
General: Fix spurious space when using optional argument of <code>astanza</code> environment (introduced in v2.5.0).	1
v2.5.2.	
General: Fix bug introduced in v2.5.0 with <code>\linenummargin</code> , <code>\firstlinenum</code> , <code>\linenumincrement</code> , <code>\firstsublinenum</code> , <code>\sublinenumincrement</code>	1
v2.6.0.	
<code>\l@dmake@labelsR</code> : <code>\@Rlineflag</code> is not stored directly after the line number, but as a fifth argument of <code>\the@labelX</code> . Can be retrieved by <code>\xflagref</code>	83
General: <code>\Xlineflag</code> and <code>\Xendlineflag</code> added	1
<code>\printlinesR</code> deleted	1
Error message when calling <code>\Pages</code> or <code>\Columns</code> without previous <code>pages</code> or <code>pairs</code> environment.	1
Fix bug with footnote numbering when using the same series of familiar footnotes on both sides.	1
Fix bug with right side title number when using title commands before <code>pages</code> or <code>columns</code> environments.	1
Fix compatibility with <code>babel</code> (broken in v2.0.0).	1
No error messages about ends of left / right page when using the <code>\syntaxonly</code> command of the <code>syntonly</code> package.	1
v2.6.1.	
General: Fix bug, introduced in v2.6.0, with footnote numbering when using <code>perpage</code> package.	1
v2.6.2.	
<code>\newseries@par</code> : The \TeX counter <code>\footnoteX@reading</code> is defined in <code>reledmac</code> . . .	50

General: Fix (again) bugs with footnote numbering in parallel typesetting while using <code>ledgroup</code> environments (bug added in v2.6.0).	1
Fix bug (added in v2.6.0) with footnote numbering in parallel typesetting while using <code>polyglossia</code> with specific numbering systems (like Greek).	1
v2.6.3.	
General: Fix spurious dot when using <code>\linenummargin</code> on right side (introduced in v2.5.0).	1
v2.7.0.	
General: <code>reledmac</code> cross-referencing can take advantage of <code>xr</code> package.	1
v2.7.1.	
General: Fix bug added in <code>reledmac</code> 2.8.2, when typesetting parallel text just after a sectioning command	1
v2.8.0.	
General: Allow continuing line numbering between normal text and parallel text, using <code>\pausenumbering</code> and <code>\resumenumbering</code> and the <code>continuousnumberingwithcolumns</code> options.	1
Add <code>\linenumberLevenifblanktrue</code> and <code>\linenumberRevenifblank</code> commands	1
Fix bug when the right line number style is not the same to the left line number style	1
v2.9.0.	
General: Add <code>\AtEveryStanza</code> and <code>\AtEveryStopStanza</code> .	1
More specific error messages.	1
v2.9.1.	
General: Prevent <code>\Xtxtbeforenotes</code> hook from causing notes to go beyond the bottom margin	1
v2.10.0.	
<code>\do@actions@nextR</code> : Add action 1010	70
General: Add new tools to make apparatuses of manuscripts	1
v2.11.0.	
<code>\correct@footinsX@box</code> : Clarification in the handbook about the use of <code>\Xonlyside</code> and <code>onlysideX</code> and error message if misuse.	78
New implementation of <code>\Xonlyside</code> and <code>\onlysideX</code> hooks, prevent trouble with vertical spacing.	78
General: Compatibility with <code>reledmac</code> 's <code>auxdir</code> option.	1
v2.12.0.	
General: Add <code>\edtextlater</code> and <code>\edtextnow</code> .	1, 81
Fix bug with <code>\AtBeginPairs</code> .	1
Fix bug with <code>\lineationR</code> .	1
v2.13.0.	
General: Compatibility with the new features of <code>reledmac</code> 2.15.0	1
v2.13.1.	
General: Simplification of the code concerning the sectioning command	1
v2.14.0.	
General: Add <code>\linenumberlistR</code> , equivalent to <code>\linenumberlist</code> for the right side.	1
Error message when left / right side are not defined.	1
More explicit error message when the stanza indentation is not defined.	1
New commands to have specific line margins for text running in parallel columns	1
When indexing texts in sidenotes with <code>\edtext</code> , referring to the line number where the sidenote is called.	1

v2.14.1.	
General: Fix bug when using <code>\markboth</code> on <code>\doinsidelineLhook</code> and <code>\doinsidelineRhook</code>	1
Fix bug with vertical space before sectioning command in optional argument of <code>\pstart</code> (bug added in v2.13.1).	1
v2.14.2.	
General: Fix spurious space with <code>\edtextlater</code>	1
v2.14.3.	
General: Fix bug in <code>\edtextnow</code>	1
v2.14.4.	
General: Take into account <code>\linenumberstyle</code> when using <code>\edlineref</code>	1
v2.15.0.	
General: Add <code>movecolumnspostiononrightpage</code> option.	1
Fix bug about space before sectioning commands after a <code>pairs</code> environment (bug added in v. 2.14.4).	1
Fix bug with page break when using <code>\columns</code> (bug added in v. 2.14.1).	1
New macro <code>\sidenotemarginR</code> , fix default value to right.	1
v2.16.0.	
General: Compatibility with <code>\setmsdataposition</code>	1
v2.16.1.	
General: Restore sidenotes on left side, deleted by mistake in v2.16.0	1
v2.16.2.	
General: Change log message when numbered files still don't exist, in order to improve compatibility with <i>latexmk</i>	1
v2.16.3.	
General: Fix bug when setting <code>\aftercolumnseparator</code>	1
v2.17.0.	
General: Change code for compatibility with <code>reledmac</code> 2.18.0	1
v2.17.1.	
General: Fix bug with <code>prevpgstyle</code> option when not using <code>prevpgnotnumbered</code>	1
v2.17.2.	
<code>\Pages</code> : Fix bug when changing <code>\Lcolwidth</code> and <code>\Rcolwidth</code> in <code>pages</code> environment.	104
v2.17.3.	
General: Fix bug when using multiple sidenotes on the same line, on right side.	1
v2.17.4.	
General: Fix bugs with sublines in parallel typesetting.	1
v2.18.0.	
General: Compatibility with v2.20.0 of <code>reledmac</code>	1
v2.19.0.	
General: Compatibility with v2.22.0 of <code>reledmac</code>	1