The chletter Document Class *

Boris Oriet
http://boris.oriet.net

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Contents

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1 Introduction

The chletter class is suited for typesetting letters with letterhead corresponding to the swiss norm SN 010130.

The default letterhead is set according to Swiss rules. It fits into both right and left windowed ISO 269 C5 and C6/5 envelopes.

This class is mostly compatible with the standard LaTeX 2_ε classes. It is not limited to letters and may be used as a generic document class.

Its basic usage is very simple and user friendly. It is appropriate to quickly typeset casual documents and letters.

It is however highly configurable and may be used within complex setups to provide automated letters composition.

2 Usage

The following examples describe the regular usage of the chletter class. Basically, this class behaves in a similar way to a standard class and accepts the regular letter commands, including the dedicated `letter` environment. Much like with standard classes, the only mandatory commands are `\documentclass` and the `document` environment (`\begin{document}` and `\end{document}`).

2.1 A basic letter

This example shows the plain usage of the chletter class.

`\author`, `\address` and `\date` are markup commands which store global values used to build the letterhead. The `letter` environment actually creates the letter with its letterhead and all the needed layout. `\opening`, `\closing`, `\encl` and `\cc` are mainly formatting commands. To have multiple lines in a field, one may use `\newline` (shortcut `\\` as in this example) or `\par` (shortcut is an empty line).

Please note that this example would also compile straightforward with the standard letter class (giving a somewhat different output).

```
\documentclass{chletter}

\author{My name}
\address{My address\\My city}
\date{Location, \today}

\begin{document}
 \begin{letter}{Name\\Address\\City}
  \opening{Salutation,}
  Hello World!
  \closing{Valediction.}
  \encl{enclosures}
  \cc{other recipients}
 \end{letter}
\end{document}
```

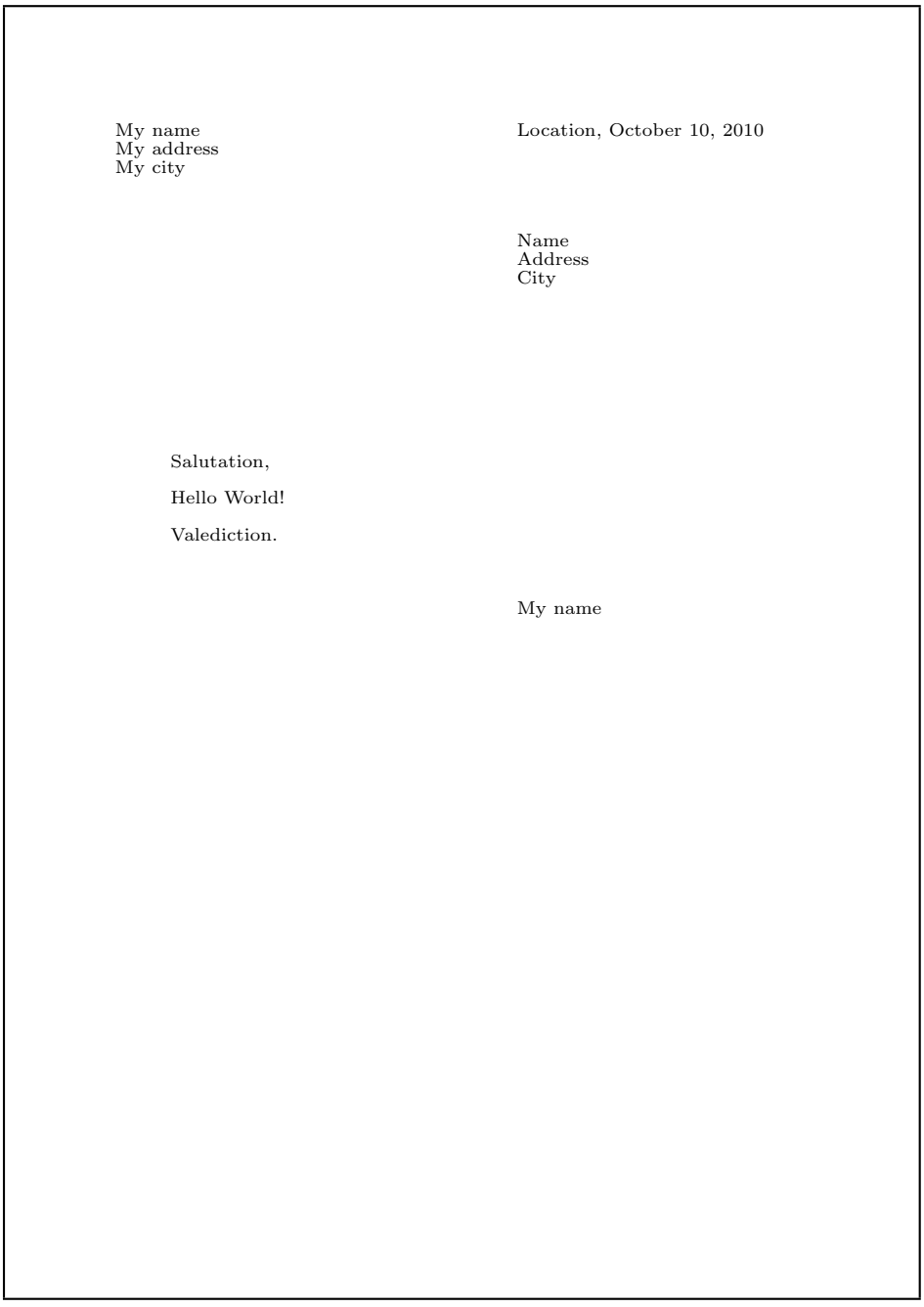

Figure 1: Standard letter output by chletter.

2.2 A customized letter

This example provides a good overview of the different class options and macros.

The `leftwin` option is to be used with a left windowed envelope, inverting the sender's and recipient's addresses. The `leftsig` option places the signature against the left body margin. The `foldmark` option will include a thin line to help folding of C6/5 letters. The `footfill` option will throw the letter foot against the document footer, for refined vertical balancing.

`\makelabels` creates an addtional envelope page with only the recipient's address and the sender's return address. `\addresswidth` adjusts the letterhead layout (here it is computed to right align the date field, mimicking the standard letter class behaviour). `\location`, `\name`, `\return` and `\telephone` are supplementary markup commands. `\object` and `\ps` are extra layout commands. `\longindentation` (which is also provided by the standard letter class) enables alignement of the text with the addresses.

Please note that lines with a comment (`%`) should be removed to allow compilation with the standard letter class.

```
\documentclass[leftwin,leftsig,foldmark,footfill]{chletter}

\settowidth\addresswidth{\today} %

\makelabels

\location{Our Company}
\name{My name}
\return{\fromlocation, My address, My city} %
\address{My address\\My city}
\telephone{My phone\\My email}
\signature{My signature\\\footnotesize My position}
\title{\textbf{About the \textsf{chletter} document class}}

\begin{document}
 \begin{letter}{Name\\Address\\City}
  \object %
  \opening{Dear \toname,}
  Body text.
  \closing{Yours truly,}
  \encl{Enclosures}
  \cc{Other recipients}
  \ps{P. S.}{Don't forget\par\hspace{\longindentation}long indentation!}
 \end{letter}
\end{document}
```

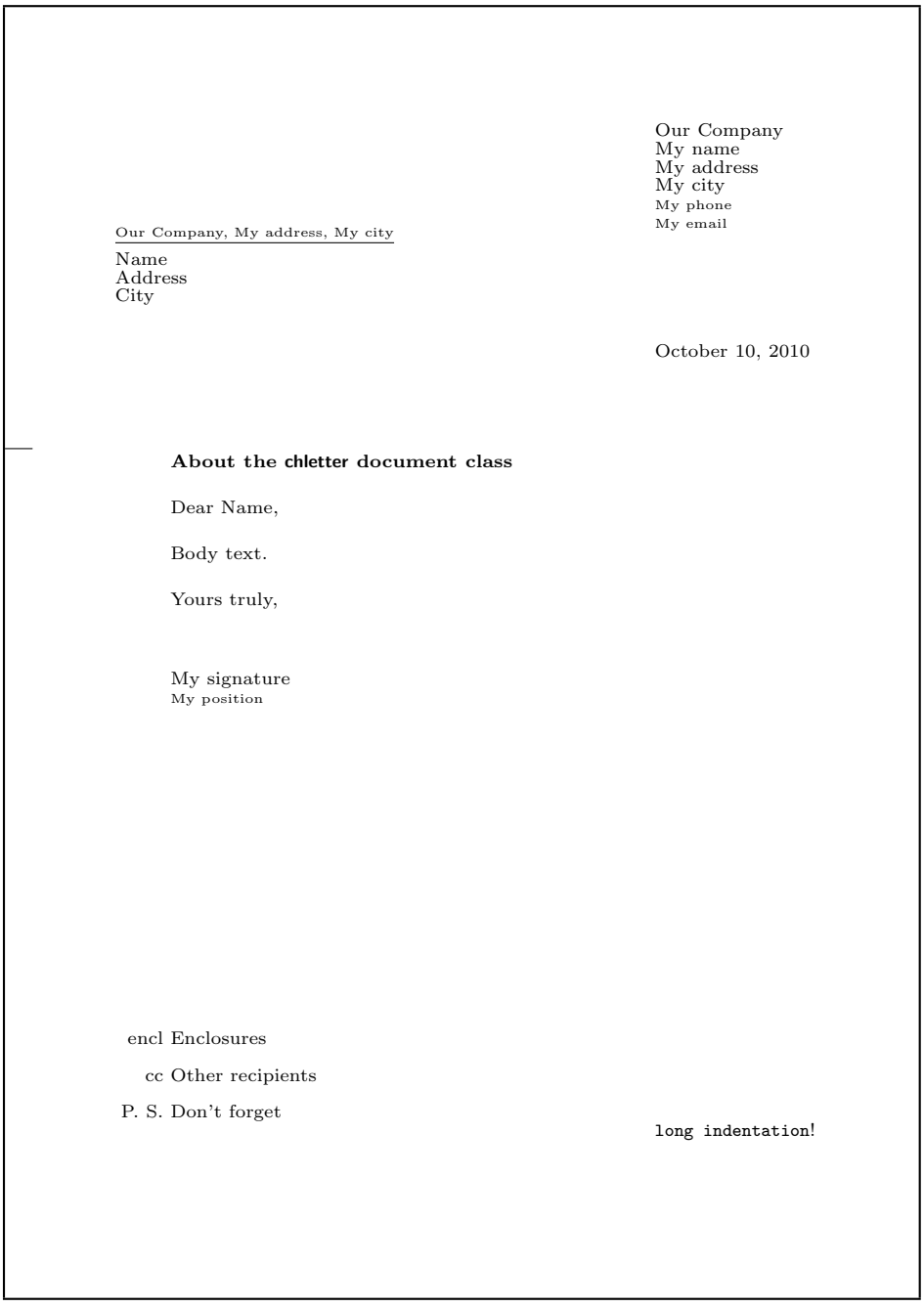

Figure 2: Customized letter output by chletter.

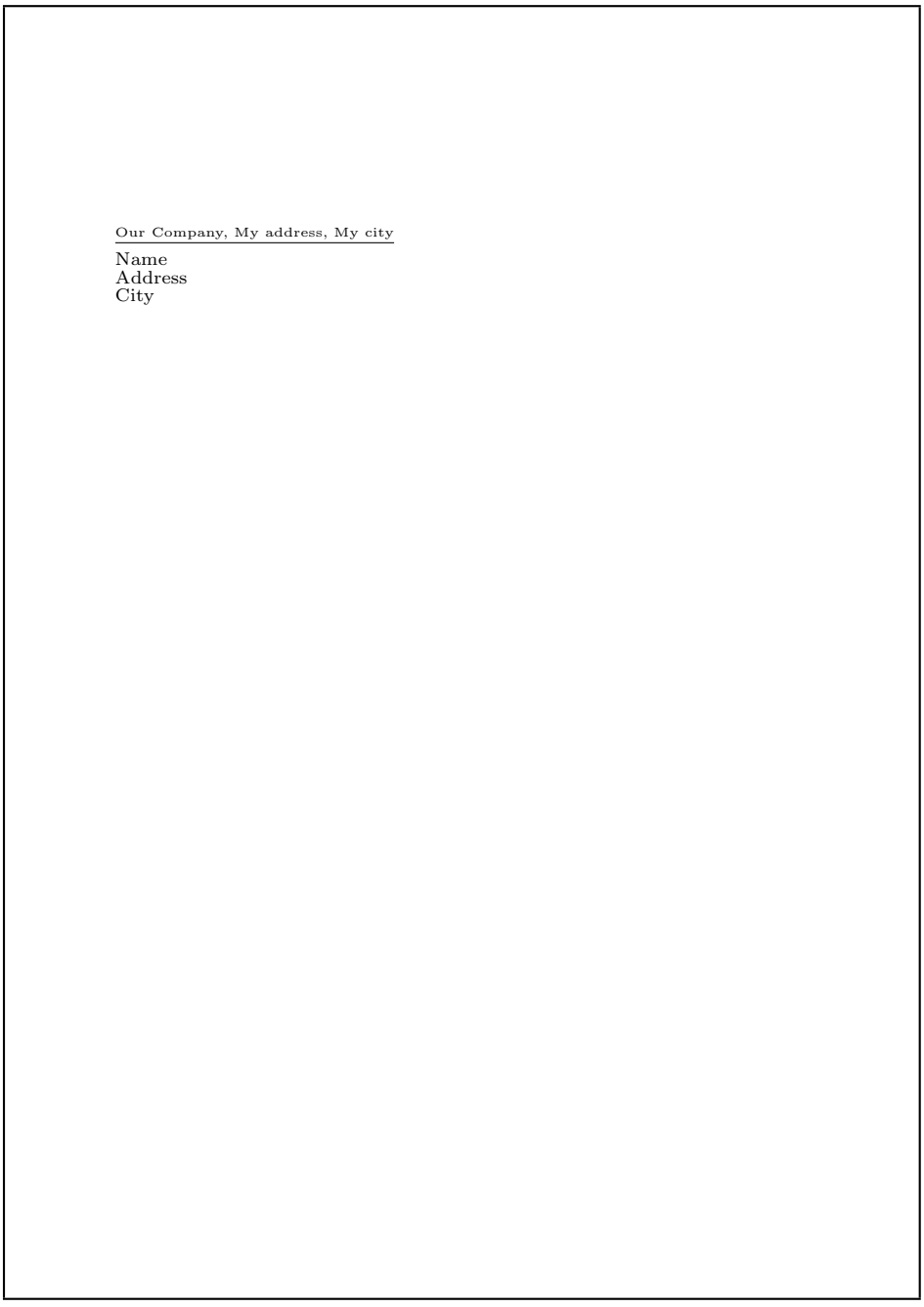

Figure 3: Cover page output by chletter.

3 Compatibility

The chletter class is based upon the standard classes of the LaTeX 2_ε distribution. Many documents founded on these classes will also compile with chletter.

3.1 With the LaTeX 2_ε letter class

The chletter class is 'source compatible' (ascending) with the standard letter class. For the most part a file which compiles with letter will recompile straightforward with chletter. There are however some functional differencies, which are described in the following sections.

3.2 With other LaTeX 2_ε classes

The chletter class is largely 'source compatible' (ascending) with other standard LaTeX 2_ε classes. It doesn't implement the sectioning mecanism, but accepts the related commands (`\section` for example). Some commands behave differently (`\maketitle` for example). Obvsiously, any command specific to the chletter class will prevent compilation with other classes.

3.3 With older versions of chletter

The chletter class has been completely overhauled between versions `1.0` and `2.0`. The new code is far more compact and efficient, so is its usage (the commands no more have a plethora of optional arguments). The versions of the class are mostly 'source compatible,' given the deprecated commands are not used: `\conc` (replaced by `\object`), `\letterindent`, `\letterskip`, `\fromheight` (replaced by `\titletopheight`, `\toheight` (replaced by `\titlemidheight`) and `\stockheight` (replaced by `\titlebotheight`). To add a 'compilability layer', the following code can be inserted in the preamble:

```
\newcommand\conc[2]{\object{#2}}
\let\letterindent\parindent
\let\letterskip\parskip
\let\fromheight\titletopheight
\let\toheight\titlemidheight
\let\stockheight\titlebotheight
```

3.4 With upcoming versions of chletter

The chletter class is now considered mature and won't evolve further (the code is frozen). The class has been thoroughly tested, and there are no known deficiencies.

3.5 With other packages

The chletter class is generic in the sense that it doesn't rely on anything but the LaTeX 2_ε kernel. There is no known command clash with any package.

Please note that a chextras companion package is available (but not mandatory). It simplifies the preparation of documents and letters by loading and setting up font, linguistic and other common packages. It also implements a 'glue code' for full source compatibility with older chletter v1.0 documents.

4 Configuration

The default values used by the chletter class are balanced for casual writing of simple articles (the class can eventually replace the standard article class) and letters (of course). Nevertheless this class is highly configurable and customizable.

4.1 Class options

The chletter class accepts the options provided by the LaTeX 2_ε default classes. These options are: `a4paper`, `a5paper`, `b5paper`, `letterpaper`, `legalpaper`, `executivepaper`, `landscape`, `10pt`, `11pt`, `12pt`, `oneside`, `twoside`, `draft`, `final`, `leqno`, `fleqn`, `onecolumn`, `twocolumn`. The defaults are: `a4paper`, `10pt`, `oneside`, `final`, `onecolumn`. Additionally, the chletter class provides four extra options (described just below) to adjust the general layout of the letters.

`leftwin` `leftsig` `foldmark` `footfill`

`leftwin` places the recipient's address to the left of the letterhead rather than to the right. `leftsig` aligns the signature with the left body margin rather than with the right address. `foldmark` puts a thin line to help folding of C6/5 letters. `footfill` adds an infinite glue between the signature and the letter foot.

4.2 Page layout

The default page layout provided by the chletter class, while generic enough, leaves more place for the text than the standard classes do.

`\textwidth` `\textheight` `\oddsidemargin` `\evensidemargin`

In a single sided document, the space between the top left corner of the page and the main text is (`1in + 36pt`, `1in + 36pt`); `36pt` are left for the header and the footer, along with `72pt` for the right and bottom margins. For A4 paper, the defaults are the following (values in inches and centimeters are rounded):

```
\textwidth       416pt [5.75in or 14.5cm]
\textheight      630pt [8.75in or 22cm]
\oddsidemargin   36pt  [.5in or 1.25cm]
\evensidemargin  0pt
```

`\titlehead` `\titletopheight` `\titlemidheight` `\titlebotheight` `\titlemargin` `\titlewidth` `\addressmargin` `\addresswidth`

These values are used for the letterhead layout. They are related to the TeX origin, which is (`1in`, `1in`) from the top left corner of the page. Please remember that `1in = 72.27pt`. `\titlehead` controls the vertical placement of the first baseline of the letterhead. `\titlemargin` and `\titlewidth` control the horizontal position and width of the letterhead. `\addressmargin` is where the title is split in two. `\addresswith` is the width of the right address fields. The title is built by opening a `letter` environment or by calling directly `\maketitle`. For A4 paper, the defaults are the following (values in inches and centimeters are rounded):

```
\titlehead       12pt [.16in or .4cm]
\titletopheight  72pt [1in or 2.5cm]
\titlemidheight  72pt [1in or 2.5cm]
\titlebotheight  72pt [1in or 2.5cm]
\titlemargin     0pt
\titlewidth      452pt [6.25in or 16 cm]
\addressmargin   262pt [3.625in or 9.25cm]
\addresswidth    190pt [2.625in or 6.75cm]
```

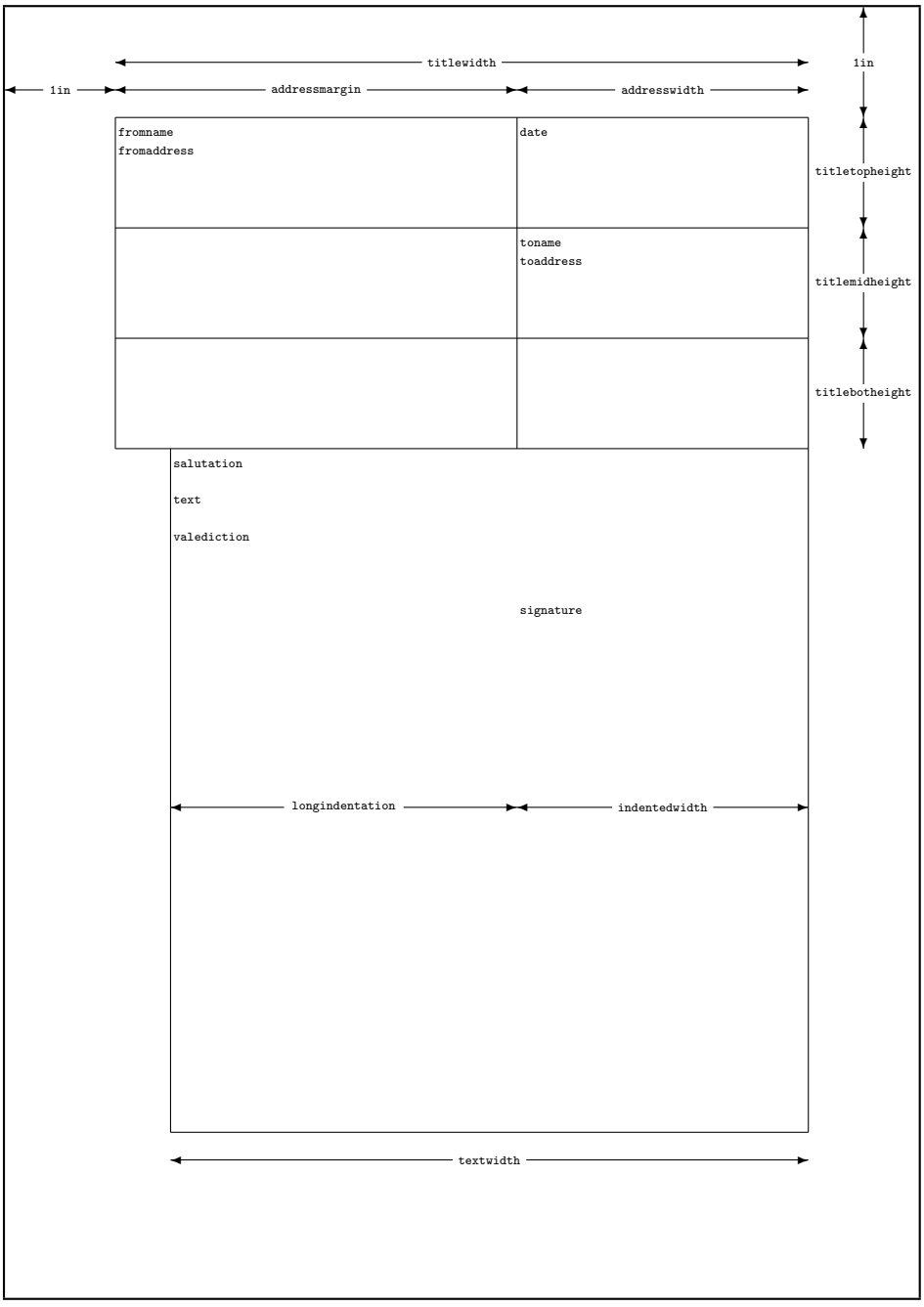

Figure 4: The default chletter layout.

4.3 The `letter` environment

The `letter` environment performs some special actions in the scope of writing letters. At its beginning, it generates the letterhead according to its arguments and some previously defined values (see below). The `letter` environment takes in account some global options, for example `twocolumn`... so yes, it is possible to write two column letters! At its closing, the `letter` environment generates a cover page if needed (see below).

`letter` The `letter` environment takes one 'mandatory' argument : the recipient's address. The address should be formatted with newline markers (`\\`) as in the standard `letter` class. The argument is 'tokenized' into `\toname` and `\toaddress`, which can be used in the letter body. The 'token separator' is the first encountered `\\`. Please note that an invocation of the `letter` environment without argument will retrieve previously defined `\toname` and `\toaddress` values (empty by default).

There is an optional argument to specify if the letter is to be indented `[i]` or not `[n]` where `[n]` is the default. Please note that this option will alter the formatting of general LaTeX lists and chletter `\ps`, `\cc` and `\encl` commands (see below).

It is possible to open multiple `letter` environments within a single document. Global values may be shared between each letter (see next page). Please remember that environments involve some locality; for example a length value altered within a `letter` environment will recover its initial value outside of the environment.

An ordinary usage would be:

```
\begin{letter}[i]{Toname\\ToAddressFirstLine\\...\\ToAddressLastLine}
...
\end{letter}
```

4.3.1 Cover page

`\makelabels` Unlike the standard letter class, this macro doesn't involve a complex mecanism using the `.aux` file to build a labels page (the main reason why the standard class is fragile). Anyway, the chletter class provides a way to generate dedicated cover pages. The `\makelabels` command will set a flag which is checked at the closing of the `letter` environment. The default behaviour is to put the recipient's address and, as requested by the Swiss post, the return address above it, separated by a line. `\makelabels` doesn't take any argument.

4.3.2 Page breaking

These commands are intended to (try to) control the place where a page break occur. They may be used anywhere in a document.

`\stopbreaks` `\stopbreaks` will try to prevent all page breaks after its invocation.

`\startbreaks` `\startbreaks` cancels the behaviour of `\stopbreaks`.

4.3.3 Letter counter

`\theletter` At each new `letter` environment opened, this counter is incremented. Please note that `thepage` and `thefootnote` counters are reset at the same time.

4.3.4 Letter markup

The commands described here are usually put in the preamble, but they may be called from anywhere in the document. They store their argument in associated values which will be retrieved by the `letter` environment, for example to build the letterhead. They are common to a bunch of letter classes.

`\name` `\address` `\location` `\telephone` `\return`

The values stored by these commands are respectively: `\fromname`, `\fromaddress`, `\fromlocation`, `\telephonenum` and `\returnaddress`. `\telephone` and `\return` will format their output (respectively small text and underlined superscript text). Please note that `\return` is not defined in the standard letter class. These values are used to build the expeditor's address fields:

```
\name{My Name}
\address{My Street\\My City}
\return{My Return Address}
```

`\date`

The date field (stored by kernel `\@date` value) can be customized by, for example:

```
\date{Here, \today}
```

`\signature`

The value stored by this macro is `\fromsig`, which is used by the `\closing` command to output the signature field (see below).

Please note that `\fromname` and `\fromsig` values default to `\@author` (initialized by LaTeX, modified by the standard `\author` command). The `\@date` field defaults to `\today`, which will be localized by a linguistic package (babel or polyglossia).

To prevent any value from appearing, it has to be emptied by the corresponding command, for example: `\date{}`.

These macros can contain anything that fits in a `\parbox`, including some special stuff (using dedicated packages): `\location{\includegraphics{mylogo.pdf}}`

Any of the values stored by these commands can be retrieved anywhere in the letter (given the corresponding value is accessible, `\@author` and `\@date` requiring a `\makeatletter`): `I, \fromname, declare...`

4.3.5 Letter body

These commands are mostly used within a letter environment, but they may be called at document level for special purpose. Their foremost intend is formatting, although they are able to retrieve or store their value at will.

`\object`

This command will simply output the text given in its argument, followed by a `\bigskip`. The `\object` command stores its argument in `\@title` and actually outputs it. If the argument is either empty or null, then the `\object` command will output the value of `\@title` previously set by a `\title` command. Remember that the default `\@title` value is an error (set by the LaTeX kernel):

```
\title{Answer to your previous letter}
...
\begin{document}
\begin{letter}{...}
\object
```

Please note that the following code is functionally equivalent (the `\@title` value set by both methods is global (available outside of the current letter environment):

```
\begin{document}
\begin{letter}{...}
\object{Answer to your previous letter}
```

`\opening` This command outputs the text given in its argument (adding a `\medskip` vertical space after it):

```
\opening{Dear Sir,}
```

It stores its argument in `\salutation` for further use. `\salutation` can also be defined previously and be recalled by an `\opening` with an empty or null argument:

```
\renewcommand{\salutation}{Dear Sir,}
...
\begin{document}
\begin{letter}{...}
\opening
```

`\closing` This command issues a `\medskip`, outputs the text given in its argument and generates the signature field, which should provide its own vertical spacing (by default it is `4\bigskip` above the signature and `2\bigskip` below):

```
\closing{Yours sincerely,}
```

The signature field placement can be altered by invocation of `leftsig` as a class option. The signature field will contain the value defined by:

— `\fromsig` (set by `\signature{...}`) in the first place;

— `\fromname` (set by `\name{...}`) if no `\signature` given;

— `\@author` (set by `\author{...}`) if no `\name` given (eventually empty).

The `\closing` macro stores its argument in `\valediction` for later use. As usual, the `\valediction` value can also be defined before and be output by an invocation of `\closing` with an empty or null argument:

```
\renewcommand{\valediction}{Yours sincerely,}
\begin{document}
\begin{letter}{...}
...
\closing{}
```

Depending on the class option `footfill`, an extra vertical glue will be added after the signature, in order to balance the appearance of the letter foot. `footfill` pushes the letter foot text against the document footer (usually the the letter foot is filled by the `\ps`, `\encl` and `\cc` commands). Please note that for a weaker balance a `\vfil` could be manually added after the `\closing` command.

Be aware of the locality of macros. `\salutation` and `\valediction` values are local to the current `letter` environment if defined within the environment (usually by `\opening` and `\closing` commands), global otherwise. Please look at the LaTeX documentation for further explanations.

4.3.6 Letter foot

Some formatting commands are intended to be used at the end of the letter (although they can be used anywhere in the document, even outside of a letter environment—just as any formatting command provided by the chletter class).

\ps This command is generic in the sense that it is nothing but a shortcut for a LaTeX list. It takes two mandatory arguments. The text contained in the arguments is output as an indented paragraph. The indentation margin is set by the standard LaTeX `\leftmargin` value (which defaults to `18pt` at document level, `0pt` after the `\closing` of a default letter and `36pt` after the `\closing` of an indented `[i]` letter). Here is an example use:

```
\ps{P.S.}{This is a post scriptum}
```

\encl This command is a shortcut for `\ps{\enclname}{...}` and takes one mandatory argument. Regular use is:

```
\encl{1. Your previous letter\\2. My Curriculum Vit\ae}
```

\cc This command is a shortcut for `\ps{\ccname}{...}` and takes one mandatory argument. Regular use is:

```
\cc{1. First other recipient\\2. Second other recipient}
```

`\enclname` and `\ccname` are set to `{encl}`, respectively `{cc}` by default. They will be adjusted by a linguistic package (babel or polyglossia).

4.4 Sectioning

section
subsection
subsubsection
paragraph
subparagraph

The class is intended to output short documents (mainly letters!), so the sectioning mecanism is minimalist (no index nor table of contents generation). The stock sectioning commands are here: `section`, `subsection`, `subsubsection`, `paragraph`, `subparagraph`, but are merely formating commands which select some text style and vertical space. As usual, these commands take one mandatory argument.

4.5 Environments

description
verse
quotation
quote

These environments are available and behave as ordinary in the chletter class. The default list values (at document level) are:`\labelsep6pt`, `\labelwidth12pt`, `\leftmargin18pt`. Please note that `\labelwidth` and `\labelsep` are redefined by a `\closing` command to `\leftmargin2\parindent`, `\labelwidth3\labelwidth`.

4.6 Paragraphing

\parindent
\parskip

`\parindent` and `\parskip` respectively default to `18pt` and `9pt` at document level. If a `letter` environment is called with the `[i]` option, `\parindent` is kept at its previous value. With the default `[n]` option, `\parindent` is locally set to `0` (zero).

Please note that the actual value of `\parindent` while a `\closing` command is issued will alter the layout of LaTeX lists (in fact `\ps`, `\encl` and `\cc` are lists): the `leftmargin` value (which defaults to `18pt`) is then defined as three times the value of `\parindent` (thus `0pt` for a default letter and `36pt` for an indented letter).

5 Implementation

The chletter code is fairly compact (less than 300 lines) and highly optimized (it relies on TEX primitives wherever practical), dropping the obsolete legacy (namely LATEX 2.09) for the sake of efficiency.

Appart from the options described until now, it is possible (and allowed!) to 'hook' into certain pieces of the class code. This enables a degree of customization and extensibility. It would be quite straightforward to add, for example, mail merging features through a dedicated package.

5.1 Initial code

```
1 ⟨*chletter.cls⟩
2 \NeedsTeXFormat{LaTeX2e}
3 \ProvidesClass{chletter}[2010/10/10 v2.0 Swiss letter document class]
```

5.1.1 Declaring options

leftwin
leftsig
foldmark
footfill

There are four specific options: `leftwin`, `leftsig`, `foldmark` and `footfill`, corresponding to the format of the letter (left envelope window, left signature, folding mark for C6/5 covers, letter foot balancing). The default is to not set any of these options. All other options are borrowed from the standard classes.

```
4 \DeclareOption{a4paper}{\paperheight297mm\paperwidth210mm}
5 \DeclareOption{a5paper}{\paperheight210mm\paperwidth148mm}
6 \DeclareOption{b5paper}{\paperheight250mm\paperwidth176mm}
7 \DeclareOption{letterpaper}{\paperheight11in\paperwidth8.5in}
8 \DeclareOption{legalpaper}{\paperheight14in\paperwidth8.5in}
9 \DeclareOption{executivepaper}{\paperheight10.5in\paperwidth7.25in}
10 \DeclareOption{landscape}
11 {\@tempdima\paperheight\paperheight\paperwidth\paperwidth\@tempdima}
12 \DeclareOption{10pt}{\def\@ptsize{0}}
13 \DeclareOption{11pt}{\def\@ptsize{1}}
14 \DeclareOption{12pt}{\def\@ptsize{2}}
15 \DeclareOption{oneside}{\@twosidefalse\@mparswitchfalse}
16 \DeclareOption{twoside}{\@twosidetrue\@mparswitchtrue}
17 \DeclareOption{draft}{\overfullrule5\p@}
18 \DeclareOption{final}{\overfullrule\z@}
19 \DeclareOption{leqno}{\input{leqno.clo}}
20 \DeclareOption{fleqn}{\input{fleqn.clo}}
21 \DeclareOption{onecolumn}{\@twocolumnfalse\@leftsigfalse}
22 \DeclareOption{twocolumn}{\@twocolumntrue\@leftsigtrue}
23 \DeclareOption{leftwin}{\@leftwintrue}
24 \DeclareOption{leftsig}{\@leftsigtrue}
25 \DeclareOption{foldmark}{\@foldmarktrue}
26 \DeclareOption{footfill}{\@footfilltrue}
```

These booleans will be evaluated at the end of the class code. They are `false` until the associated option is selected.

```
27 \newif\if@leftwin
28 \newif\if@leftsig
29 \newif\if@foldmark
30 \newif\if@footfill
```

5.1.2 Executing options

Swiss letters are written on A4 paper. Default font size is `10pt`, like in other standard classes. Other switches are set at kernel level.

```
\ExecuteOptions{a4paper,10pt}
\ProcessOptions\relax
```

Loading this `.clo` file leads to a lot of redundancy. But we want compatibility.

```
\input{size1\@ptsize.clo}
```

5.1.3 Loading packages

The chletter class does not load additional packages.

5.2 Document layout

This class tries to provide quite a universal layout, not only suitable for letters, but also for other types of short documents. There are anyway some values specific to letters, principally the letterhead values.

5.2.1 Letter counter

`theletter` Each time a letter is created by a `letter` environment, this counter is incremented.

```
\newcounter{letter}
```

5.2.2 Letter dimensions

These dimensions concern the letterhead, where `\titlehead` is the absolute position of its first baseline. The title matter is vertically stacked in three strips, each one with its own height. `\titlemargin` is the absolute position of the letterhead margin, to which the letterhead matter is relative. `\longindentation` and `\indentedwidth` are to be used within a `letter` environment and will be computed on the fly by `\maketitle`, along with `\addressmargin` or `\addresswidth`.

```
\newdimen\titlehead
\newdimen\titletopheight
\newdimen\titlemidheight
\newdimen\titlebotheight
\newdimen\titlemargin
\newdimen\titlewidth
\newdimen\addressmargin
\newdimen\addresswidth
\newdimen\longindentation
\newdimen\indentedwidth
```

5.2.3 Paragraphing

We prefer inter paragraph skips in a letter. Swiss letters are rarely indented but the `letter` environement offers an option to do so. Indentation is still enabled at document level. Setting `\normallineskip` to zero prevents layout inconsistencies.

```
\parskip9\p@
\parindent18\p@
\normallineskip\z@
```

5.2.4 Page layout

All dimensions are measured from a point `1in` from the top left corner of the page. Remember that `1in = 72.27pt = 2.54cm` = `72bp` and `1pt` = `65536sp`.

Regarding the header, `12pt` (more or less one line) are reserved, plus `24pt` spacing before the main text. The footer space is `36pt`, including body to footer gap.

```
\headheight12\p@
\headsep24\p@
\footskip36\p@
```

Regarding the text dimensions, we remove approximately `1in` at each side, plus `36pt` horizontally (corresponding to the margin, see below) and `72pt` vertically (corresponding to the header and footer, see above). The trick in the definition of `\textwidth` and `\textheight` is to have integer values for A4 paper.

```
\textwidth\paperwidth
\advance\textwidth-9536004sp
\titlewidth\textwidth
\advance\textwidth-36\p@
\textheight\paperheight
\advance\textheight-14093310sp
```

The left margin of the odd pages is set to `1in + 36pt` (more or less `4cm`). Sizes of the marginal notes are adapted to quite small margins. Top margin is set to zero.

```
\oddsidemargin36\p@
\evensidemargin\z@
\marginparwidth48\p@
\marginparsep6\p@
\marginparpush6\p@
\topmargin\z@
```

The footnotes values are somewhat larger than the default.

```
\footnotesep12\p@
\skip\footins12\p@
```

5.2.5 Title layout

What we call 'title' here is the letterhead, with the addresses fields and all this kind of stuff. Title is always placed on an odd page at an absolute position.

`\titlehead` The vertical position of the title is controled by the `\titlehead` value (by analogy with `\headheight` which sets the first baseline of the running head). Please note that letterhead position is not altered by anything but `\titlehead` (for example it is independant from the `\topmargin` value).

```
\titlehead12\p@
```

`\titletopheight` `\titlemidheight` `\titlebotheight` The title (letterhead or cover) field is divided into three strips, each one containing some material. For example, the first field could contain the sender's address, the second one the recipient's address and the third one the letter's date. Obviously the total letterhead height is the sum of these three values (`216pt` by default).

```
\titletopheight72\p@
\titlemidheight72\p@
\titlebotheight72\p@
```

\titlemargin
\titlewidth

The horizontal position of the title is controlled by \titlemargin which is set to 0pt by default. \titlewidth has already been set as \textwidth + 36pt.

\addressmargin
\addresswidth

These values are to be computed on the fly by \maketitle depending on user input and actual \titlewidth value. If \addressmargin is defined by the user, then the formula \titlewidth = \addressmargin + \addresswidth will be applied to \addresswidth, otherwise it will be applied to \addressmargin.

```
\addresswidth190\p@
```

5.2.6 Page styles

The default page styles are here, but their layout differ from the standard classes.

```
\def\ps@plain%
{\let\@oddhead\@empty
 \let\@evenhead\@empty
 \def\@oddfoot{\footnotesize\hfil\pagename~\thepage}
 \def\@evenfoot{\footnotesize\pagename~\thepage\hfil}}
```

```
\def\ps@firstpage%
{\let\@oddhead\@empty
 \let\@evenhead\@empty
 \def\@oddfoot{\footnotesize\leftmark\hfil\rightmark}
 \def\@evenfoot{\footnotesize\rightmark\hfil\leftmark}}
```

```
\def\ps@headings%
{\def\@oddhead{\footnotesize\headtoname~\toname\hfil\pagename~\thepage}
 \def\@evenhead{\footnotesize\pagename~\thepage\hfil}
 \def\@oddfoot{\footnotesize\leftmark\hfil\rightmark}
 \def\@evenfoot{\footnotesize\rightmark\hfil\leftmark}}
```

```
\def\ps@myheadings%
{\def\@oddhead{\footnotesize\leftmark\hfil\rightmark}
 \def\@evenhead{\footnotesize\rightmark\hfil\leftmark}
 \def\@oddfoot{\footnotesize\hfil\pagename~\thepage}
 \def\@evenfoot{\footnotesize\pagename~\thepage\hfil}}
```

5.3 Document markup

These user commands are common to all usual letter classes.

5.3.1 Global declarations

\name
\signature
\address
\location
\telephone
\return

These macros work exactly the same way as with the standard letter class. They don't output anything, but just define an associated word containing their argument. The layout of \telephonenum (small text) and \returnaddress (underlined small text) is specific to this class and somewhat tricky, intended to manage the best possible appearance. Please note that the default contents of the associated words will be defined later.

```
\long\def\name#1{\def\fromname{#1}}
\long\def\signature#1{\def\fromsig{#1}}
\long\def\location#1{\def\fromlocation{#1}}
\long\def\address#1{\def\fromaddress{#1}}
\long\def\telephone#1{\def\telephonenum{\vtop{\footnotesize#1}}}
\long\def\return#1{\def\returnaddress{\underbar{\textsuperscript{#1}}}}
```

\makelabels
\startlabels

The \makelabels command defines a \startlabels macro, which causes cover pages to be added at the end of each letter. See next page for more information.

```
\def\makelabels%
{\def\startlabels%
 {\let\titletopmatter\@empty
  \let\titlebotmatter\@empty
  \let\foldmark\@empty}}
```

\maketitle

This artful piece of code actually outputs the letterhead stuff. \maketitle is always called at the opening of the letter environment, and at its closing if the \startlabels flag is not \@null. It outputs the content of \titletopmatter, \titlemidmatter, \titlebotmatter in three horizontal strips stacked vertically. These strips have respective heights of \titletopheight, \titlemidheight, \titlebotheight and are always placed on a new odd page at an absolute position given by \titlehead and \titlemargin. The width of the strips is given by \titlewidth. \longindentation and \indentedwidth are computed here, so are \addressmargin and \addresswidth which are used by \splitfield. Some dedicated mecanism deals with the \twoside and \twocolumns cases (the letterhead is always issued on a clear odd page), executing the \@maketitle auxiliary macro. The \foldmark macro is called at the end of the letterhead.

```
\def\maketitle%
{\ifdim\addressmargin=\z@
  \addressmargin\titlewidth
  \advance\addressmargin-\addresswidth
 \else
  \addresswidth\titlewidth
  \advance\addresswidth-\addressmargin\fi
 \longindentation\titlemargin
 \advance\longindentation-\oddsidemargin
 \clearpage
 \if@twoside\ifodd\c@page
 \else\thispagestyle{empty}\hb@xt@\z@{}\clearpage\fi\fi
 \if@twocolumn\twocolumn[\@maketitle\leavevmode\vskip-\topskip]
 \else\vbox{\@parboxrestore\@maketitle}\vskip-\parskip\fi
 \advance\longindentation\addressmargin
 \indentedwidth\textwidth
 \advance\indentedwidth-\longindentation}
```

```
\def\@maketitle%
{\vskip-\topmargin\vskip-\baselineskip
 \vskip\titlehead\vskip-\headheight\vskip-\headsep
 \leftskip\longindentation\rightskip\textwidth
 \advance\rightskip-\paperwidth
 \advance\rightskip-\titlemargin
 \parbox[t][\titletopheight]{\titlewidth}
 {\hb@xt@\z@{}\titletopmatter\strut}\par
 \parbox[t][\titlemidheight]{\titlewidth}
 {\hb@xt@\z@{}\titlemidmatter\strut}\par
 \parbox[t][\titlebotheight]{\titlewidth}
 {\hb@xt@\z@{}\titlebotmatter\strut}\par
 \leftskip-\oddsidemargin\advance\leftskip-1in
 \parbox[b][\z@]{\paperwidth}{\foldmark}\par}
```

5.3.2 The `letter` environment

`letter` The `letter` environment is the foremost part of a letter. It takes the recipient's address as mandatory argument and `[i]` (default is `[n]`) as optional argument to set the `\parindent` value within the group represented by the environment. The first part of the code manages these arguments. It is sturdier than the standard LaTeX `\newenvironment` in the sense that, for example, the mandatory argument is not... mandatory! At its opening, the `letter` environment tokenizes its mandatory argument into two fields, `\toname` and `\toaddress` (token separator is the first encountered `\\`). If the argument is null (`\begin{letter}{}` or `\begin{letter}`), these values won't be modified and thus may be defined before the opening of the environment, hence the easy mail merging extension. Then `\maketitle` is called to output the letterhead (the first page of the letter is always issued on a clear odd page, leaving a blank page if necessary in two sided documents). The `\pagestyle` of the first letter page is set to `firstpage` and the `letter` counter is incremented, while the `page` and `footnote` counters are reset.

```
\def\letter{\futurelet\@let@token\ch@let}\def\ch@let%
{\ifx\@let@token[\expandafter\@letter\else\expandafter\ch@lea\fi}
\long\def\ch@lea#1 {\@letter[n]{#1} }

\long\def\@letter[#1]#2
{\ifx#1n\parindent\z@\fi\ifx\@null#2\else\@processto#2\\@@@
  \ifx\@empty\toaddress\else\@processto#2@@@\fi\fi
 \maketitle\thispagestyle{firstpage}
 \global\c@page\@ne\global\c@footnote\z@\global\advance\c@letter\@ne}

\long\def\@processto#1\\#2@@@{\def\toname{#1}\def\toaddress{#2}}
```

At its closing, the `letter` environment removes the last skip, then checks for the definition of `\startlabels`. If undefined, nothing but a `\clearpage` happens. If defined, its contents is executed (usually a redefinition of `\titletopmatter`, `\titlemidmatter` and `\titlebotmatter`) and the `\maketitle` macro is called, taking the `\twoside` case in account (which may produce additional empty pages), then issuing a new page (intended to be a cover) followed by a `\clearpage`.

```
\def\endletter{\removelastskip\ifx\startlabels\undefined\else%
 \startlabels\maketitle\thispagestyle{empty}\fi\clearpage}
```

5.3.3 Page breaking control

`\stopbreaks` `\startbreaks` When the command `\stopbreaks` is issued no page breaks should occur until `\startbreaks` is called. These macros are used by the `\closing` command.

```
\def\stopbreaks{\interlinepenalty\@M\def\par{\@@par\nobreak}}
\def\startbreaks{\interlinepenalty100\def\par{\@@par}}
```

5.3.4 The generic letter commands

`\opening` Unlike the standard letter class, the `\opening` command doesn't generate the letterhead (this is done at the opening of the `letter` environment or by a direct call of `\maketitle`). The content of `\salutation` is either locally filled with the mandatory argument or recalled if the argument is null (either `\opening{}` or `\opening` without argument, look at the neat argument handling code), then output. The `\medskipamount` value controls the vertical spacing.

```
\def\opening{\futurelet\@let@token\ch@ope}\def\ch@ope%
{\ifx\@let@token\bgroup\expandafter\ch@opa\else\expandafter\@opening\fi}
\def\ch@opa#1{\ifx\@null#1\else\def\salutation{#1}\fi\@opening}

\def\@opening{\par\salutation\par\medskip}
```

`\closing` The `\closing` command is to be called at the end of the letter body. It generates the valediction and the signature. Much like the `\opening` command, its argument either fills or retrieve a value, here `\valediction`. A `\medskip` is issued, page breaking is prevented and `\closingmatter` is added. `\closingmatter` is defined according to the class option `leftsig` and could be completely customized.

```
\def\closing{\futurelet\@let@token\ch@clo}\def\ch@clo%
{\ifx\@let@token\bgroup\expandafter\ch@cla\else\expandafter\@closing\fi}
\def\ch@cla#1{\ifx\@null#1\else\def\valediction{#1}\fi\@closing}

\def\@closing{\par\medskip\stopbreaks\valediction
 \samepage\par\closingmatter\par\startbreaks}
```

`\object` The `\object` macro outputs the content of `\@title`, either previously defined by a `\title` command or filled by a non empty argument (see `\opening` for an explanation of this behaviour). The `\bigskipamount` value controls the vertical spacing. Styling is left to user's preference, for example: `\object{\textbf{...}}`.

```
\def\object{\futurelet\@let@token\ch@obj}\def\ch@obj%
{\ifx\@let@token\bgroup\expandafter\ch@oba\else\expandafter\@object\fi}
\def\ch@oba#1{\ifx\@null#1\else\title{#1}\fi\@object}

\def\@object{\noindent\@title\par\bigskip}
```

`\ps` `\cc` `\encl` `\ps` is a shortcut for a simple LaTeX list, with its first argument as item label and its second argument as a item contents. `\cc` and `\encl` are further shortcuts, using respectively `\ccname` and `\enclname` as label. There is a trick involved here: the list behaviour is altered after a `\closing` command (see `\closingmatter`); by these means the letter foot benefit from the powerful list feature while the lists defaults are kept at convenient values for use within the letter body.

```
\long\def\ps#1#2{\begin{list}{}{}\item[#1]#2\end{list}}
\long\def\cc#1{\ps{\ccname}{#1}}
\long\def\encl#1{\ps{\enclname}{#1}}
```

5.3.5 Sections and paragraphs

Some sectioning commands are defined, but they are merely formatting commands. So there is no section numbering nor index and table of contents generation.

```
\long\def\subparagraph#1{\par\textbf{#1}\hskip\labelsep}
\long\def\paragraph#1{\par\noindent\textbf{#1}\hskip\labelsep}
\long\def\subsubsection#1{\par\noindent\textbf{#1}\par\nobreak}
\long\def\subsection#1{\smallskip\subsubsection{#1}}
\long\def\section#1{\medskip\subsubsection{#1}}
```

5.3.6 Environments

This code is borrowed from the standard classes. Please look at the LaTeX 2_ε documentation for further explanation. Remember that all these environments are lists which will be formatted according following the general lists parameters.

```
\def\description
{\list{}
 {\labelwidth\z@
  \itemindent-\leftmargin
  \let\makelabel\descriptionlabel}}\def\enddescription{\endlist}
\def\descriptionlabel#1{\hskip\labelsep\textbf{#1}}
\def\verse
{\let\\\@centercr
 \list{}
 {\itemsep\z@
  \itemindent-\parindent
  \listparindent\itemindent
  \rightmargin\leftmargin
  \advance\leftmargin\parindent}
 \item\relax}\def\endverse{\endlist}
\def\quotation
{\list{}
 {\listparindent\parindent
  \itemindent\listparindent
  \rightmargin\leftmargin}
 \item\relax}\def\endquotation{\endlist}
\def\quote
{\list{}
 {\rightmargin\leftmargin}
 \item\relax}\def\endquote{\endlist}
```

5.3.7 Lists

This code is borrowed from the standard classes. Please look at the LaTeX 2_ε documentation for further explanation. Please also note that list nesting is limited to four levels (seems to be enough for a letter).

```
\def\@listI{}
\let\@listi\@listI
\let\@listii\@listI
\let\@listiii\@listI
\let\@listiv\@listI
\def\theenumi{\@arabic\c@enumi}
\def\theenumii{\@alph\c@enumii}
\def\theenumiii{\@roman\c@enumiii}
\def\theenumiv{\@Alph\c@enumiv}
\def\labelenumi{\theenumi.}
\def\labelenumii{(\theenumii)}
\def\labelenumiii{\theenumiii.}
\def\labelenumiv{\theenumiv.}
\def\p@enumii{\theenumi}
\def\p@enumiii{\theenumi(\theenumii)}
\def\p@enumiv{\p@enumiii\theenumiii}
\def\labelitemi{\textbullet}
\def\labelitemii{\textbf{\textendash}}
\def\labelitemiii{\textasteriskcentered}
\def\labelitemiv{\textperiodcentered}
```

5.4 Default settings

As in other classes, some values are set here rather than at kernel level. The values used by the chletter class are as generic as possible.

5.4.1 Lists

\labelsep
\labelwith
\leftmargin

These default values are defined at document level and altered by `\closingmatter` (see next page) in the following manner: `\labelwidth3\labelsep` (usually `18pt`), `\leftmargin2\parindent` (`36pt` in an indented letter, `0pt` in a default letter).

```
\labelsep6\p@\labelwidth12\p@\leftmargin18\p@
\topsep\z@\partopsep3\p@\itemsep\z@\parsep3\p@
```

5.4.2 Environments

Exactly as in the standard classes.

```
\arraycolsep5\p@
\tabcolsep6\p@
\arrayrulewidth.4\p@
\doublerulesep2\p@
\tabbingsep\labelsep
\skip\@mpfootins=\skip\footins
\def\theequation{\@arabic\c@equation}
```

5.4.3 Framed boxes

\fboxsep
\fboxrule

Apart from their ordinary application, the values defined here are used by the default `\foldmark` macro defined by the `foldmark` class option.

```
\fboxsep3\p@
\fboxrule.4\p@
```

5.4.4 Footnotes

Light is right! This definition is minimalist, at the same time sensible.

```
\long\def\@makefntext#1{\noindent\hb@xt@\z@{\hss\@makefnmark}#1}
```

5.4.5 Letter

Some specific letter values are initialized here.

\fromname
\fromsig
\fromaddress
\fromlocation
\telephonenum
\returnaddress

`\fromname` is not empty by default, so is `\fromsig`: they contain the `\@author` value, which is defined at kernel level to output nothing but a warning message (no author given). `\@author` will be modified by the LaTeX `\author` command. `\fromlocation` and `\fromaddress` are somewhat redundant, but they may be used for special purpose. `\returnaddress` should also output nothing by default, but it has to leave an empty line, hence the `\null` trick (actually an empty `\hbox`).

```
\def\fromname{\@author}
\def\fromsig{\@author}
\let\fromlocation\@empty
\let\fromaddress\@empty
\let\telephonenum\@empty
\def\returnaddress{\null}
```

\toname
\toaddress

These values retrieved or adjusted at the opening of a `letter` environment. They are initialized here to prevent an error in certain condition.

```
\let\toname\@empty
\let\toaddress\@empty
```

\salutation
\valediction

These values are retrieved or adjusted respectively by the `\opening` and `\closing` commands. They are initialized here to prevent an error in certain condition.

```
\let\salutation\@empty
\let\valediction\@empty
```

5.4.6 Words

\ccname
\enclname
\pagename
\headtoname

These words are common to the common letter classes. They will be adjusted by the linguistic packages (babel or polyglossia). `\ccname` and `\enclname` are used respectively by the `\cc` and `\encl` macros; while `\pagename` and `\headtoname` are used within `\pagestyle` layouts and some additional packages.

```
\def\ccname{cc}
\def\enclname{encl}
\def\pagename{Page}
\def\headtoname{To}
```

5.4.7 Date

\today

The `\@date` field, which appears in the letterhead, defaults to `\today`. The `\today` value will be adjusted by the linguistic packages (babel or polyglossia).

```
\def\today
{\ifcase\month\or
 January\or February\or March\or April\or May\or June\or
 July\or August\or September\or October\or November\or December\fi
 \space\number\day, \number\year}
```

5.4.8 Two column mode

\columnsep

This is tricky! The idea is to align the columns with the addresses. In a default (A4) letter, the second column will align with the recipient's address and the date.

```
\columnsep36\p@
```

5.4.9 The page style

We have `\pagetyle{plain}` pages in this document class (except the letterhead page which has `\thispagestyle{firspage}`). We use arabic page numbers.

```
\pagestyle{plain}
\pagenumbering{arabic}
```

5.5 Later initializations

This code handles the class options `leftwin`, `leftsig`, `foldmark`, `footfill` and `twocolumn` (retrieved by the associated booleans). It defines the default layout of the letter and would be very interesting for those who wish to completely customize the letter appearance by redefining the relevant macros.

5.5.1 Letterhead layout

\titletopmatter
\titlemidmatter
\titlebotmatter

The default layout of the letterhead is defined here, taking in account the class option `leftwin`. `\titletopmatter`, `\titlemidmatter` and `\titlebotmatter` are three strips of `\titletopheight`, `\titlemidheight` and `\titlebotheight` respective heights. Please note the usage of `\splitfield{...}{...}` which cuts a strip in two columns of `\adressmargin` and `\addresswidth` respective widths.

```
\if@leftwin
 \def\titletopmatter%
 {\splitfield
  {}{\fromlocation\par\fromname\par\fromaddress\par\telephonenum}}
 \def\titlemidmatter%
 {\returnaddress\par\toname\par\toaddress}
 \def\titlebotmatter%
 {\splitfield
  {}{\@date}}
\else
 \def\titletopmatter%
 {\splitfield
  {\fromlocation\par\fromname\par\fromaddress\par\telephonenum}{\@date}}
 \def\titlemidmatter%
 {\splitfield
  {}{\returnaddress\par\toname\par\toaddress}}
 \def\titlebotmatter%
 {}\fi
```

\splitfield

The letterhead is divided in three vertically stacked strips of `\titlewidth` width, named respectively `\titletopmatter`, `titlemidmatter` and `titlebotmatter` (see above). The purpose of this command is to divide a strip in two columns, the first one of `\addressmargin` width, the second one of `\addresswidth` width (computed on the fly by `\maketitle`, see above). The letterhead may contain graphics (a logo for example), so we have to cope with the relative vertical placement of text and imported pictures, hence the `\hbox` and `\strut` in the definitions of the parboxes.

```
\long\def\splitfield#1#2%
{\parbox[b][\baselineskip][t]{\addressmargin}{\hb@xt@\z@{}{#1}\strut}%
 \parbox[b][\baselineskip][t]{\addresswidth}{\hb@xt@\z@{}{#2}\strut}}
```

5.5.2 Signature layout

\closingmatter

`\closingmatter` is output by the `\closing` command and can contain any piece of text or code. `\fooftill` is an extra glue for better letter foot balancing (see below). Please note the crafty use of the `\ps` command. Also remember that `\leftmargin` and `\labelwidth` values are changed by this `\closingmatter`.

```
\if@leftsig
 \def\closingmatter%
 {\leftmargin2\parindent
  \vskip4\bigskipamount
  \ps{}{\fromsig}
  \vskip2\bigskipamount plus\footfill
  \labelwidth3\labelwidth
  \advance\labelwidth-\labelsep}
```

```
\else
 \def\closingmatter%
 {\leftmargin\longindentation
  \vskip4\bigskipamount
  \ps{}{\fromsig}
  \vskip2\bigskipamount plus\footfill
  \leftmargin2\parindent
  \labelwidth3\labelwidth
  \advance\labelwidth-\labelsep}\fi
```

5.5.3 Fold mark

`\foldmark` The `foldmark` class option alters the `\foldmark` macro, which causes a line to be added between the letterhead and the main text. Default is `\@empty`.

```
\if@foldmark\def\foldmark{\hrule\@width6\fboxsep\@height\fboxrule}
\else\let\foldmark\@empty\fi
```

5.5.4 Letter footer

`\footfill` A conditionnal definition of `\footfill` will alter the layout of `\closingmatter` (see above), adding an extra vertical glue after the signature. Default is `\@empty`.

```
\if@footfill\def\footfill{1fill}
\else\let\footfill\z@\fi
```

5.5.5 Two column mode

The column separator (`\columnsep`) is initialized earlier in the class code. Please note that in one column mode we reverse the position of the margin paragraphs.

```
\if@twocolumn\twocolumn\sloppy
\else\onecolumn\reversemarginpar\fi
```

5.6 Legacy

Unfortunately some widely spread packages still relie on this!

```
\DeclareOldFontCommand{\rm}{\normalfont\rmfamily}{\mathrm}
\DeclareOldFontCommand{\sf}{\normalfont\sffamily}{\mathsf}
\DeclareOldFontCommand{\tt}{\normalfont\ttfamily}{\mathtt}
\DeclareOldFontCommand{\bf}{\normalfont\bfseries}{\mathbf}
\DeclareOldFontCommand{\it}{\normalfont\itshape}{\mathit}
\DeclareOldFontCommand{\sl}{\normalfont\slshape}{\relax}
\DeclareOldFontCommand{\sc}{\normalfont\scshape}{\relax}
```

⟨/chletter.cls⟩

6 Letter template

The following LaTeX document is intended to be used as a template. It will also compile with the standard letter class and the older version of the chletter class.

Please note that the chextras companion package will simplify the preparation of Swiss documents by setting up linguistic packages, font encoding and document layout. Look at chextras documentation for further information.

1 ⟨*chlettmp.tex⟩

```
2 \documentclass{chletter}
3
4 %%\usepackage[english,black]{chextras}
5
6 \author{My name}
7 \address{My address\\My City}
8 \telephone{My phone\\My email}
9 \date{My location, \today}
10
11 \begin{document}
12 \begin{letter}{Name\\Address\\City}
13
14 \opening{Dear \toname,}
15
16 Body text.
17
18 \closing{Yours truly,}
19
20 \encl{Enclosures}
21 \cc{Other recipients}
22
23 \end{letter}
24 \end{document}
```

25 ⟨/chlettmp.tex⟩

Index

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