

The `isodate` package*

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Abstract

This package provides commands to switch between different date formats (standard, ISO, numeric, L^AT_EX package). They are used by the `\today` command, by the `\printdate` and `\printdateTeX` commands that print any date, and by the `\daterange` command that prints a date range. At the moment this package supports German (old and new rules, Austrian), British English, US English, French, Danish, Swedish, and Norwegian.

The idea for this package was taken from the `akletter` class.

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Requirements

The package `isodate` needs the package `substr.sty` which can be obtained from `CTAN:macros/latex/contrib/supported/substr/`.

1 Commands

1.1 Switching the date format

This package provides five commands to switch the output format of all commands that print dates (described later):

	<code>\isodate</code>	date format described in ISO 8601 and DIN 5008 [1] (yyyy-mm-dd)
	<code>\numdate</code>	numeric date format with four digits of the year
	<code>\shortdate</code>	short numeric date format with two digits of the year
<code>\isodate</code>	<code>\TeXdate</code>	date format used for version description of packages (yyyy/mm/dd)
<code>\numdate</code>	<code>\origdate</code>	original L ^A T _E X format
<code>\shortdate</code>	<code>\shortorigdate</code>	original L ^A T _E X format with two instead of four digits of the year
<code>\TeXdate</code>		
<code>\origdate</code>		
<code>\shortorigdate</code>		

The numeric and short numeric format change their behaviour depending on the current language:

German, nGerman	<code>dd.\,mm.\,yyyy</code>	resp.	<code>dd.\,mm.\,yy</code>
US English	<code>mm/dd/yyyy</code>	resp.	<code>mm/dd/yy</code>
other languages	<code>dd/mm/yyyy</code>	resp.	<code>dd/mm/yy</code>

This package supports German (old and new rules, Austrian), US English, French, Danish, Swedish, and Norwegian. Switching the language by using `\selectlanguage` does *not* switch back to the original date format. So the current date format stays active when changing the language.

The change of the date format works locally. So it is possible to change it locally inside a group. E.g.

```
\today, {\origdate\today}, \today
```

leads to “2003-07-29, 29th July 2003, 2003-07-29”.

1.2 Printing today’s date

`\today` As usual the command `\today` prints the date of today. Its appearance is influenced by the current date format

1.3 Printing any date

`\printdate` The command `\printdate{#1}` prints any date in the current format. The argument may be a date in German, British English, or ISO format, e.g.

```
\printdate{24.12.2000}
\printdate{24/12/2000}
\printdate{2000-12-24}
```

`\printdateTeX` The command `\printdateTeX{#1}` prints any date in the actual format. The argument must be in the L^AT_EX format `yyyy/mm/dd`, e.g.

```
\printdateTeX{2000/12/24}
```

This command is useful for printing version information stored in a macro. For example the version of this documentation is stored in the macro `\docdate` (“2002/05/06”). To print it with the actual date format you can use the command `\printdateTeX{\docdate}` which leads to e.g. “2002-05-06” or “6th May 2002”.

1.4 Printing date ranges

`\daterange` The command `\daterange{#1}{#2}` prints a date range in the current format. The arguments may be a date in German, British English, or ISO format (see above). But there is a limitation: Both arguments must have the same input format.

Depending on the language and date format this commands lets out some of the data. The simplest way to understand it is to watch some examples:

```
{\isodate
```

```

\daterange{1999-05-03}{1999-05-31} → 1999-05-03 to 31
\daterange{1999-05-03}{1999-11-03} → 1999-05-03 to 11-03
\daterange{1999-05-03}{2000-04-07} → 1999-05-03 to 2000-04-07
}
{\origdate
\daterange{1999-05-03}{1999-05-31} → 3rd to 31st May 1999
\daterange{1999-05-03}{1999-11-03} → 3rd May to 3rd November 1999
\daterange{1999-05-03}{2000-04-07} → 3rd May 1999 to 7th April 2000
}

```

1.5 Changing the ISO format

`\isodash` The ISO norm says that the date format is “yyyy-mm-dd” or “yyyymmdd” [1]. By default I use the hyphen “-” as separator. You can change this using the `\isodash`¹ command, e.g.

```

\printdate{24/12/2000},
\isodash{--}%
\printdate{24/12/2000},
\isodash{}%
\printdate{24/12/2000}

```

leads to “2000-12-24, 2000–12-24, 20001224”. Or for example

```

\isodash{$\cdot$}
\printdate{24/12/2000}

```

leads to “2000·12·24”.

1.6 Changing the short original format

`\shortyears sign`

The short original format normally prints the year with two digits, e.g. “19th May 01”. Some people want to add an additional sign before the year, e.g. “19th May ’01”. This can be achieved by using the command `\shortyears sign`, e.g.

```

\printdate{24/12/2000},
\shortyears sign{'}%
\printdate{24/12/2000}

```

leads to “24 december 00, 24 december ’00” in English.

This only effects the **shortorig** format. The **short** numerical format stays unchanged.

¹The name “isodash” is a little bit confusing and was chosen due to my limited knowledge in English. It should be named “isoseparator” or “isosep”. But for compatibility reasons I will not change it.

1.7 Changing the German format

The spacings for the numerical formats in the German language (24. 12. 2000 resp. 24. 12. 00) were taken from the Duden [2] and are the defaults when using one of the German derivatives. Some people want to use different spacings. Thus from version 2.03 on it is possible to change them. You can change the spacing between the day and the month using the command `\daymonthsepgerman`. Using the command `\monthyearsepgerman` you can change the spacing between the month and the year for the long and the short format, e.g.

`\daymonthsepgerman`
`\monthyearsepgerman`

```
\daymonthsepgerman{\quad}%
\monthyearsepgerman{\qquad}{\quad}%
{\numdate\printdate{24.12.2000}}, {\shortdate\printdate{24.12.2000}}
```

leads to “24. 12. 2000, 24. 12. 00”.

2 Calling the package

The package is called using the `\usepackage` command:
`\usepackage[option]{isodate}`.

The possible package options can be seen in table 1.

Table 1: Package options

option	function
<code>iso</code>	start with ISO date format
<code>num</code>	start with numeric date format with 4 digits of the year
<code>short</code>	start with numeric date format with 2 digits of the year
<code>TeX</code>	start with L ^A T _E X numeric date format (yyyy/mm/dd)
<code>orig</code>	start with normal L ^A T _E X date format (default ²)
<code>shortorig</code>	start with short normal L ^A T _E X date format (2 digits)
<code>american</code>	support American English date format
<code>austrian</code>	support Austrian date format
<code>danish</code>	support Danish date format
<code>english</code>	support British English date format
<code>french</code>	support French date format
<code>german</code>	support German date format
<code>naustrian</code>	support new Austrian date format
<code>ngerman</code>	support new German date format
<code>norsk</code>	support Norwegian date format
<code>norwegian</code>	support Norwegian date format
<code>swedish</code>	support Swedish date format

Be aware that at least one language option must be set when calling isodate.
The last language in the option list is the default language.

The package `isodate` works well together with `babel.sty`, `german.sty`, or `ngerman.sty`. Maybe it also works together with other language packages like e.g. `french.sty`, but this has not been tested. It does not matter if `isodate` is loaded before or after the used language package.

It is also possible to use `isodate` without one of the language packages. Then it is not possible to switch between languages using the `\selectlanguage` command.³ Then the default language is the last one in the option list. If an error occurs when using `isodate` without one of the packages `babel.sty`, `german.sty`, and `ngerman.sty` please run `tstlang.tex` through latex and send the file `tstlang.log` to the address `h.harders@tu-bs.de`.

If using `isodate` together with `babel` it can be useful to put the language options as global options into the optional parameters of the `\documentclass` command. Then automatically the available languages are the same for the text and the dates, and the default language is also the same. For example:

```
\documentclass[english,german]{article}
\usepackage{babel}
\usepackage[num]{isodate}
```

3 Add new languages to the package

The easiest way to add new languages to the package is to copy one of the simple language files `danish.idf` or `french.idf` to the new language name, e.g. `plattdeutsch.idf`, and change it as necessary.

This new file can be used without changing `isodate.sty` if you use its name explicitly in the optional parameter of the `\usepackage` command. If you have added support for a new language please mail me.

4 Solvable problems

4.1 Redefinition of language dependent names

If someone wants to change one of the language dependent names (e.g. `\contentsname`, `\figurename`, ...) many people just write (e.g. in the language `ngerman`)

```
\renewcommand{\contentsname}{Inhalt}
```

in the preamble of the document. If they are using `german.sty`, `ngerman.sty`, or no language package (and not `isodate.sty`) this approach works. But when using `babel.sty` and/or `isodate.sty` the default (“Inhaltsverzeichnis”) results.

³Yes, there is a way to change the date language, but it is a little bit tricky:

```
\makeatletter
\def\iso@languagename{german}%
\dategerman%
\makeatother
```

This is due to the fact that these packages call the command `\selectlanguage` at the `\begin{document}`.

Depending on the used package different solutions have to be used.

Using `babel.sty` the redefinition of the name has to be added to the language extras:

```
\addto{\extrasngerman}{\renewcommand{\contentsname}{Inhalt}}
```

Using `german.sty` or `ngerman.sty` this approach does not work. Instead, the `\selectlanguage` command has to be redefined. First, the original command has to be copied via the `\let` command. Then the `\selectcommand` is redefined using the original command:

```
\let\origselectlanguage=\selectlanguage
\def\selectlanguage#1{\origselectlanguage{#1}%
  \iflanguage{ngerman}{\renewcommand{\contentsname}{Inhalt}}{%
    \iflanguage{german}{\renewcommand{\contentsname}{Inhalt}}{}}
\selectlanguage{ngerman}
```

These commands should be placed shortly before the `\begin{document}` command.

A Licence

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B Known errors

- The `\printdate` and `\printdateTeX` commands are not very good in checking the argument for correct syntax.
- The language definition files `french.idf` and `german.idf` are not yet commented.
- `Isodate` and `draftcopy` do not work together.

C Planned features and changes

- Of course eliminate the errors.
- Add other languages. Please help me with this topic. I don't know the date formats in other languages.
- Add a command that prints only the month and the year of a date.

References

- [1] International Standard: ISO 8601. <http://www.iso.ch/markete/8601.pdf>, 1988-06-15.
- [2] DUDEN Band 1. Die deutsche Rechtschreibung. 21. Auflage, Dudenverlag, Mannheim, Germany, 1996.

D The implementation

D.1 Package file isodate.sty

Heading of the package:

```
1 \NeedsTeXFormat{LaTeX2e}
2 \ProvidesPackage{isodate}[\filedate\space v\fileversion
3   Change the output format of dates (HH)]
4 \RequirePackage{ifthen}
5 \RequirePackage{calc}
6 \IfFileExists{substr.sty}{\RequirePackage{substr}}%
7 }{\PackageError{isodate.sty}{Package file substr.sty not found}
8   {This version of isodate.sty needs the package substr.sty.^^J%
9     You can download it from
10      CTAN:/macros/latex/contrib/supported/substr/^^J%
11      E.g. one CTAN node is ftp.dante.de.
12      Install substr.sty into your TeX tree.}}
```

Declare the options for the default date format.

```
13 \DeclareOption{iso}{\AtEndOfPackage{\isodate}}
14 \DeclareOption{num}{\AtEndOfPackage{\numdate}}
15 \DeclareOption{short}{\AtEndOfPackage{\shortdate}}
16 \DeclareOption{TeX}{\AtEndOfPackage{\TeXdate}}
17 \DeclareOption{orig}{\AtEndOfPackage{\origdate}}
18 \DeclareOption{shortorig}{\AtEndOfPackage{\shortorigdate}}
```

Declare the options for language support.

```
19 \DeclareOption{austrian}{\input{german.idf}}
20 \DeclareOption{english}{\input{english.idf}}
21 \DeclareOption{german}{\input{german.idf}}
22 \DeclareOption{american}{\input{english.idf}}
23 \DeclareOption{naustrian}{\input{german.idf}}
24 \DeclareOption{ngerman}{\input{german.idf}}
25 \DeclareOption{UKenglish}{\input{english.idf}}
26 \DeclareOption{USenglish}{\input{english.idf}}
27 \DeclareOption{danish}{\input{danish.idf}}
28 \DeclareOption{norsk}{\input{norsk.idf}}
29 \DeclareOption{norwegian}{\input{norsk.idf}}
30 \DeclareOption{french}{\input{french.idf}}
```

Make it possible to load language definition files that are not known by this package.

```

31 \DeclareOption*{%
32   \InputIfFileExists{\CurrentOption.idf}{\}%
33   \PackageError{isodate}{%
34     Isodate definition file \CurrentOption.idf not found}{%
35     Maybe you misspelled the language option?}}%
36 }
Set default option to orig.
37 \ExecuteOptions{orig}
Process the options.
38 \ProcessOptions*
Handle the case that no language was given. Throw an error message. Each
language definition file *.idf must contain a line
\let\iso@languageloaded\active

```

that defines the command \iso@languageloaded.

```

39 \ifx\iso@languageloaded\@undefined
40   \PackageError{isodate}{%
41     You haven't specified a language option}{%
42     You need to specify a language, either as a global
43     option\MessageBreak
44     or as an optional argument to the \string\usepackage\space
45     command.\MessageBreak
46     If you have used the old isodate package (version <=1.06) you can
47     change the\MessageBreak
48     usepackage command to \protect\usepackage{isodate}.\MessageBreak
49     You shouldn't try to proceed from here, type x to quit.}
50 \fi

```

\printnumber Prints a number. If the optional parameter is used the number has two digits and it is filled by “0”.

Examples: `\printnumber{4}` → 4, `\printnumber[g]{4}` → 04.

```

51 \newcommand{\printnumber}[2][\@empty]{%
52   \ifthenelse{\equal{#1}{\@empty}}{\}%
53   \ifthenelse{\number#2<10}{0}{\}\number#2}%

```

\iso@yeartwo Prints the argument of the command with two digits.

Example: `\iso@yeartwo{1873}` → 73.

```

54 \newcounter{iso@yeartwo}%
55 \newcommand{\iso@yeartwo}[1]{%
56   \setcounter{iso@yeartwo}{\number#1}%
57   \whiledo{\theiso@yeartwo>99}{%
58     \setcounter{iso@yeartwo}{\theiso@yeartwo-100}}}%
59   \ifthenelse{\number\theiso@yeartwo<10}{0}{\}\theiso@yeartwo}%

```

\iso@dateformat In this command the current active date format ist stored. Possible values are: numeric, short, iso, orig, shortorig, TeX.

```

60 \def\iso@dateformat{numeric}

```

`\numdate` Switches to long numerical date format.
61 `\DeclareRobustCommand*{\numdate}{\def\iso@dateformat{numeric}}%`

`\shortdate` Switches to short numerical date format.
62 `\DeclareRobustCommand*{\shortdate}{\def\iso@dateformat{short}}%`

`\isodate` Switches to ISO date format.
63 `\DeclareRobustCommand*{\isodate}{\def\iso@dateformat{iso}}%`

`\origdate` Switches to the original date format.
64 `\DeclareRobustCommand*{\origdate}{\def\iso@dateformat{orig}}%`

`\shortorigdate` Switches to the short original date format.
65 `\DeclareRobustCommand*{\shortorigdate}{\def\iso@dateformat{shortorig}}%`

`\TeXdate` Switches to L^AT_EX date format.
66 `\DeclareRobustCommand*{\TeXdate}{\def\iso@dateformat{TeX}}%`

`\isodash` Changes the dash in the ISO date format. The default is “-”.
67 `\def\iso@isodash{-}%`
68 `\DeclareRobustCommand*{\isodash}[1]{\def\iso@isodash{#1}}%`

Define the sign that is printed before a two digit year in the short original format.
Default is nothing.

`\shortyears sign`
69 `\def\iso@twodigitsign{}`
70 `\DeclareRobustCommand*{\shortyears sign}[1]{\def\iso@twodigitsign{#1}}%`

`\isorangesign` Defines the sign or word that is printed between the two dates in a date range.
E.g. in English the default is “to”.
71 `\def\iso@rangesign{\csname iso@rangesign@\iso@language name\endcsname}%`
72 `\DeclareRobustCommand*{\isorangesign}[1]{\def\iso@rangesign{#1}}%`

`\iso@printdate` Defines the command `iso@printdate` which takes three arguments (year, month, day) and prints the date by using the `\today` command.
73 `\newcommand{\iso@printdate}[3]{%`
74 `\begingroup%`
75 `\def\year{#1}%`
76 `\def\month{#2}%`
77 `\def\day{#3}%`
78 `\today%`
79 `\endgroup%`
80 `}`

`\printdate` Prints a date that is given as one argument in one of these formats: yyyy-mm-dd, dd/mm/yyyy, dd.mm.yyyy.
81 `\DeclareRobustCommand*{\printdate}[1]{%`

Define `\iso@date` command to expand the argument #1.

```
82 \edef\iso@date{#1}%
```

Count appearances of “/”, “-”, and “.” in the argument.

```
83 \SubStringsToCounter{iso@slash}{/}{\iso@date}%
```

```
84 \SubStringsToCounter{iso@minus}{-}{\iso@date}%
```

```
85 \SubStringsToCounter{iso@dot}{.}{\iso@date}%
```

If number of “.” in the argument is equal to 2 then the German format `dd.mm.yyyy` is used.

```
86 \ifthenelse{\equal{\theiso@dot}{2}}{%
```

```
87   \expandafter\iso@input@german\iso@date\@empty}{%
```

If number of “-” in the argument is equal to 2 then the ISO format `yyyy-mm-dd` is used.

```
88   \ifthenelse{\equal{\theiso@minus}{2}}{%
```

```
89     \expandafter\iso@input@iso\iso@date\@empty}{%
```

If number of “/” in the argument is equal to 2 then the British English format `dd/mm/yyyy` is used.

```
90   \ifthenelse{\equal{\theiso@slash}{2}}{%
```

```
91     \expandafter\iso@input@english\iso@date\@empty}{%
```

Else no of the formats above is used and thus an error message is thrown.

```
92     ????\iso@isodash ??\iso@isodash ??%
```

```
93     \PackageError{isodate}{unrecognized date format}{Use one of
```

```
94       the following formats as macro argument:^^J%
```

```
95       \space\space dd.mm.yyyy^^J%
```

```
96       \space\space dd/mm/yyyy^^J%
```

```
97       \space\space yyyy-mm-dd^^J%
```

```
98       Don't use any spaces or commands like \protect\, or
```

```
99       \protect~ inside the argument.}%
```

```
100   }%}
```

```
101 }
```

`\iso@input@iso` Converts a string with the format `yyyy-mm-dd` to three arguments `{#1}{#2}{#3}` and calls `\iso@printdate`.

```
102 \def\iso@input@iso#1-#2-#3\@empty{\iso@printdate{#1}{#2}{#3}}
```

`\iso@input@german` Converts a string with the format `dd.mm.yyyy` to three arguments `{#3}{#2}{#1}` and calls `\iso@printdate`.

```
103 \def\iso@input@german#1.#2.#3\@empty{\iso@printdate{#3}{#2}{#1}}
```

`\iso@input@english` Converts a string with the format `dd/mm/yyyy` to three arguments `{#3}{#2}{#1}` and calls `\iso@printdate`.

```
104 \def\iso@input@english#1/#2/#3\@empty{\iso@printdate{#3}{#2}{#1}}
```

`\printdateTeX` Prints a date that is given as one argument in the format `yyyy/mm/dd`.

```
105 \DeclareRobustCommand*\printdateTeX[1]{%
```

Define `\iso@date` command to expand the argument #1.

```

106 \edef\iso@date{#1}%

```

Count appearances of “/” in the argument.

```

107 \SubStringsToCounter{iso@slash}{/}{\iso@date}%

```

If number of “/” in the argument is equal to 2 then the L^AT_EX format yyyy/mm/dd is used.

```

108 \ifthenelse{\equal{\theiso@slash}{2}}{%
109   \expandafter\iso@input@TeX\iso@date\@empty}{%

```

Else no of the formats above is used and thus an error message is thrown.

```

110   ????\iso@isodash ??\iso@isodash ??%
111   \PackageError{isodate}{unrecognized date format}{Use one of
112     the following formats as macro argument:^^J%
113     \space\space dd.mm.yyyy^^J%
114     \space\space dd/mm/yyyy^^J%
115     \space\space yyyy-mm-dd^^J%
116     Don't use any spaces or commands like \protect~, or
117     \protect~ inside the argument.}%
118   }%

```

`\iso@input@TeX` Converts a string with the format yyyy/mm/dd to three arguments {#1}{#2}{#3} and calls `\iso@printdate`.

```

119 \def\iso@input@TeX#1/#2/#3\@empty{\iso@printdate{#1}{#2}{#3}}

```

`\daterange` Prints a date range.

```

120 \DeclareRobustCommand*{\daterange}[2]{%

```

Define `\iso@date` and `\iso@@date` commands to expand the argument #1 and #2.

Define `\iso@@@date` which contains both arguments divided by a komma.

```

121 \edef\iso@date{#1}%
122 \edef\iso@@date{#2}%
123 \edef\iso@@@date{\iso@date,\iso@@date}%

```

Count appearances of “/”, “-”, and “.” in the arguments.

```

124 \SubStringsToCounter{iso@slash}{/}{\iso@date}%
125 \SubStringsToCounter{iso@minus}{-}{\iso@date}%
126 \SubStringsToCounter{iso@dot}{.}{\iso@date}%
127 \SubStringsToCounter{iso@@@slash}{/}{\iso@@@date}%
128 \SubStringsToCounter{iso@@@minus}{-}{\iso@@@date}%
129 \SubStringsToCounter{iso@@@dot}{.}{\iso@@@date}%

```

If number of “.” in both arguments is equal to 2 then the German format dd.mm.yyyy is used.

```

130 \ifthenelse{\equal{\theiso@dot}{2}\and\equal{\theiso@@dot}{2}}{%
131   \expandafter\iso@range@input@german\iso@@@date\@empty}{%

```

If number of “-” in both arguments is equal to 2 then the ISO format yyyy-mm-dd is used.

```

132 \ifthenelse{\equal{\theiso@minus}{2}\and\equal{\theiso@@minus}{2}}{%
133   \expandafter\iso@range@input@iso\iso@@@date\@empty}{%

```

If number of “/” in both arguments is equal to 2 then the British English format dd/mm/yyyy is used.

```

134 \ifthenelse{\equal{\theiso@slash}{2}}{\and%
135 \equal{\theiso@@slash}{2}}{%
136 \expandafter\iso@range@input@english\iso@@@date\@empty}{%
Else no of the formats above is used and thus an error message is thrown.
137 ????\iso@isodash ??\iso@isodash ??%
138 \PackageError{isodate}{unrecognized date format}{Use one of
139 the following formats as macro argument:^^J%
140 \space\space dd.mm.yyyy^^J%
141 \space\space dd/mm/yyyy^^J%
142 \space\space yyyy-mm-dd^^J%
143 Don't use any spaces or commands like \protect\, or
144 \protect~ inside the argument.^^J
145 Use the same format for both arguments.}%
146 }}}%
147 }
```

`\iso@range@input@iso` Converts a string with the format yyyy-mm-dd,yyyy-mm-dd to six arguments `{#1}{#2}{#3}{#4}{#5}{#6}` and calls `\iso@daterange@language`.

```

148 \def\iso@range@input@iso#1-#2-#3,#4-#5-#6\@empty{%
149 \csname iso@daterange@\iso@language\endcsname{%
150 #1}{#2}{#3}{#4}{#5}{#6}}
```

`\iso@range@input@german` Converts a string with the format dd.mm.yyyy,dd.mm.yyyy to six arguments `{#3}{#2}{#1}{#6}{#5}{#4}` and calls `\iso@daterange@language`.

```

151 \def\iso@range@input@german#1.#2.#3,#4.#5.#6\@empty{%
152 \csname iso@daterange@\iso@language\endcsname{%
153 #3}{#2}{#1}{#6}{#5}{#4}}
```

`\iso@range@input@english` Converts a string with the format dd/mm/yyyy,dd/mm/yyyy to six arguments `{#3}{#2}{#1}{#6}{#5}{#4}` and calls `\iso@daterange@language`.

```

154 \def\iso@range@input@english#1/#2/#3,#4/#5/#6\@empty{%
155 \csname iso@daterange@\iso@language\endcsname{%
156 #3}{#2}{#1}{#6}{#5}{#4}}
```

Define the counters for counting the appearances of “.”, “-”, and “/” in the arguments.

```

157 \newcounter{iso@slash}
158 \newcounter{iso@minus}
159 \newcounter{iso@dot}
160 \newcounter{iso@@slash}
161 \newcounter{iso@@minus}
162 \newcounter{iso@@dot}
```

The command `\iso@language` is defined to be able to use this package without loading one of the language packages `babel.sty`, `german.sty`, or `ngerman.sty`.

If neither babel.sty nor german.sty nor ngerman.sty is loaded my computer returns “nohyphenation” when using \language. So this is the indication that none of the above packages is loaded.

```

163 \AtBeginDocument{%
164   \ifthenelse{\not\equal{\language}{nohyphenation}}{%
The language is not equal “nohyphenation”. So one of the language packages is
loaded. Replace the internal language name \iso@language by the global
language name \language.
165   \gdef\iso@language{\language}%
Reload language to surely switch to new date format. The language gets first
expanded because of errors that would occur otherwise.
166   \edef\iso@tmplang{\language}%
167   \expandafter\selectlanguage\expandafter{\iso@tmplang}%
168 }{%
At the end of the preamble still none of the language packages are loaded. So
no language switching is possible. Set the date language manually to the last
language that was loaded for isodate.
169   \csname date\iso@language\endcsname%
170 }
171 }

```

The end of the package.

D.2 Language definition file danish.idf

Heading of the file:

```

172 \ProvidesFile{danish.idf}[\filedate\space v\fileversion\space
173   Danish support from the isodate package]

\iso@languageloaded Define the command \iso@languageloaded in order to enable isodate.sty to
determine if at least one language is loaded.
174 \let\iso@languageloaded\active

\month@danish Prints the name of today’s month in the long form for the original date format.
175 \def\month@danish{\ifcase\month\or
176   januar\or februar\or marts\or april\or maj\or juni\or
177   juli\or august\or september\or oktober\or november\or december\fi}

\iso@printmonthday@danish Prints the month and the day given as two arguments ({mm}{dd}) in the current
date format.
178 \def\iso@printmonthday@danish#1#2{%
Numeric and short date format: dd/mm/
179   \ifthenelse{\equal{\iso@dateformat}{numeric}}{\or%
180     \equal{\iso@dateformat}{short}}{%
181     \printnumber[10]{#2}/\printnumber[10]{#1}/}%

```

ISO date format: -mm-dd

```
182     \ifthenelse{\equal{\iso@dateformat}{iso}}{%
183         \iso@isodash\printnumber[10]{#1}%
184         \iso@isodash\printnumber[10]{#2}}{%
```

L^AT_EX date format: /mm/dd

```
185     \ifthenelse{\equal{\iso@dateformat}{TeX}}{%
186         /\printnumber[10]{#1}/\printnumber[10]{#2}}{%
```

Original date format: d. mmm

```
187     \ifthenelse{\equal{\iso@dateformat}{orig}\or
188         \equal{\iso@dateformat}{shortorig}}{%
189         \printnumber{#2}.\~\begingroup
190         \edef\lmonth{#1}\def\month{\lmonth}%
191         \month@danish%
192         \endgroup
193         }{}}}%
194 }
```

`\iso@printdate@danish` Prints the date given as three arguments (`{yyyy}{mm}{dd}`) in the actual date format

```
195 \def\iso@printdate@danish#1#2#3{%
    ISO or LATEX date format: yyyy\iso@printmonthday@danish
196 \ifthenelse{\equal{\iso@dateformat}{iso}\or%
197 \equal{\iso@dateformat}{TeX}}{\number#1}{%
198 \iso@printmonthday@danish\number#2}{\number#3}%
    numeric date format: \iso@printmonthday@danish yyyy
199 \ifthenelse{\equal{\iso@dateformat}{numeric}}{\number#1}{%
    original date format: \iso@printmonthday@danish~yyyy
200 \ifthenelse{\equal{\iso@dateformat}{orig}}{\~\number#1}{%
    short original date format: \iso@printmonthday@danish~yy
201 \ifthenelse{\equal{\iso@dateformat}{shortorig}}{%
202 \~\iso@twodigitsign\iso@yeartwo{\number#1}}{%
    short date format: \iso@printmonthday@danish yy
203 \ifthenelse{\equal{\iso@dateformat}{short}}{%
204 \iso@yeartwo{\number#1}}{%
205 }}}}%
206 }
```

`\iso@datedanish` This command redefines the `\today` command to print in the actual date format.

```
207 \def\iso@datedanish{%
208 \def\today{\iso@printdate@danish{\year}{\month}{\day}}}%
```

`\iso@daterange@danish` This command takes six arguments (`{yyyy1}{mm1}{dd1}{yyyy2}{mm2}{dd2}`) and prints the corresponding date range in the actual date format.

```
209 \def\iso@daterange@danish#1#2#3#4#5#6{%
```

ISO or L^AT_EX date format.

```
210 \ifthenelse{\equal{\iso@dateformat}{iso}}{or%
211 \equal{\iso@dateformat}{TeX}}{%
```

Print the start date.

```
212 \csname iso@printdate@\iso@language\endcsname{%
213 #1}{#2}{#3}\iso@rangesign%
```

If year and month are equal, only print the day of the end date. If only the year is equal, only print month and day of the end date. Otherwise print the whole end date.

```
214 \ifthenelse{\equal{\number#1}{\number#4}}{%
215 \ifthenelse{\equal{\number#2}{\number#5}}{\printnumber[10]{#6}%
216 }{\iso@printmonthday@danish{#5}{#6}}}%
217 \csname iso@printdate@\iso@language\endcsname{#4}{#5}{#6}}}%

```

Numeric, short, or original date format.

If year and month are equal, only print the day of the start date. If only the year is equal, only print month and day of the start date. Otherwise print the whole start date.

```
218 \ifthenelse{\equal{\number#1}{\number#4}}{%
219 \ifthenelse{\equal{\number#2}{\number#5}}{%
220 \ifthenelse{\equal{\iso@dateformat}{orig}}{%
221 \printnumber{#3}.}{\printnumber[10]{#3}}%
222 }{\iso@printmonthday@danish{#2}{#3}}}%
223 \csname iso@printdate@\iso@language\endcsname{%
224 #1}{#2}{#3}}%
```

Print the end date.

```
225 \iso@rangesign\csname iso@printdate@\iso@language\endcsname{%
226 #4}{#5}{#6}%
227 }{%
228 }%
229 }
```

`\iso@rangesign@danish` Sets the word between start and end date in a date range to “til”.

```
230 \def\iso@rangesign@danish{~til~}
```

Define the language name that will be the active language for isodate if none of the packages babel.sty, german.sty, and ngerman.sty is loaded and if this is the last language that is used for isodate. If one of the above packages is used this definition will be overridden by the command `\language` that will always return the current used language.

```
231 \def\iso@language{danish}%

```

Redefine the command `\datedanish` that is used by babel to switch to the original Danish date format to enable the use of different date formats. This has to be done after the preamble in order to ensure to overwrite the babel command.

```
232 \AtBeginDocument{%
233 \ifx\undefined\iso@datedanish\else

```

```

234 \def\datedanish{\iso@datedanish}%
235 \fi
236 }

```

The end of the file.

D.3 Language definition file english.idf

Heading of the file:

```

237 \ProvidesFile{english.idf}[\filedate\space v\fileversion\space
238 English support from the isodate package]

```

`\iso@languageloaded` Define the command `\iso@languageloaded` in order to enable `isodate.sty` to determine if at least one language is loaded.

```

239 \let\iso@languageloaded\active

```

`\month@english` Prints the name of today's month in the long form for the original date format.

```

240 \def\month@english{\ifcase\month\or
241 January\or February\or March\or April\or May\or June\or
242 July\or August\or September\or October\or November\or December\fi}

```

British and American English dates are very different. So handle them separately. It might have been easier to put them in different files but I wanted to organize my files analogous to babel.

First handle British English.

```

243 \ifthenelse{\equal{\CurrentOption}{english}\or%
244 \equal{\CurrentOption}{UKenglish}}{%

```

`\day@english` Prints today's day for the original date format.

```

245 \def\day@english{\ifcase\day\or
246 1st\or 2nd\or 3rd\or 4th\or 5th\or
247 6th\or 7th\or 8th\or 9th\or 10th\or
248 11th\or 12th\or 13th\or 14th\or 15th\or
249 16th\or 17th\or 18th\or 19th\or 20th\or
250 21st\or 22nd\or 23rd\or 24th\or 25th\or
251 26th\or 27th\or 28th\or 29th\or 30th\or
252 31st\fi}

```

`\iso@printmonthday@english` Prints the month and the day given as two arguments (`{mm}{dd}`) in the current date format.

```

253 \def\iso@printmonthday@english#1#2{%
Numeric and short date format: dd/mm/
254 \ifthenelse{\equal{\iso@dateformat}{numeric}\or%
255 \equal{\iso@dateformat}{short}}{%
256 \printnumber[10]{#2}/\printnumber[10]{#1}/}%
ISO date format: mm-dd
257 \ifthenelse{\equal{\iso@dateformat}{iso}}{%
258 \printnumber[10]{#1}\iso@isodash\printnumber[10]{#2}}%

```

L^AT_EX date format: mm/dd

```
259      \ifthenelse{\equal{\iso@dateformat}{TeX}}{%
260          \printnumber[10]{#1}/\printnumber[10]{#2}}{%
```

Original date format: ddd mmm

```
261      \ifthenelse{\equal{\iso@dateformat}{orig}\or
262          \equal{\iso@dateformat}{shortorig}}{%
263          \begingroup
264          \edef\lday{#2}\def\day{\lday}%
265          \edef\lmonth{#1}\def\month{\lmonth}%
266          \day@english~\month@english%
267          \endgroup
268          }{}}}%
269      }
```

`\iso@printdate@english` Prints the date given as three arguments (`{yyyy}{mm}{dd}`) in the actual date format.

```
270      \def\iso@printdate@english#1#2#3{%
      ISO date format: yyyy-\iso@printmonthday@english
271      \ifthenelse{\equal{\iso@dateformat}{iso}}{\number#1\iso@isodash}{%
      LATEX date format: yyyy/\iso@printmonthday@english
272      \ifthenelse{\equal{\iso@dateformat}{TeX}}{\number#1/}{}}%
273      \iso@printmonthday@english{\number#2}{\number#3}%
      Numeric date format: \iso@printmonthday@english yyyy
274      \ifthenelse{\equal{\iso@dateformat}{numeric}}{\number#1}{%
      Original date format: \iso@printmonthday@english~yyyy
275      \ifthenelse{\equal{\iso@dateformat}{orig}}{\~\number#1}{%
      Short original date format: \iso@printmonthday@english~yy
276      \ifthenelse{\equal{\iso@dateformat}{shortorig}}{%
277          ~\iso@twodigitsign\iso@yeartwo{\number#1}}{%
      Short date format: \iso@printmonthday@english yy
278      \ifthenelse{\equal{\iso@dateformat}{short}}{%
279          \iso@yeartwo{\number#1}}{%
280          }}}}
281      }
```

`\iso@printdate@UKenglish` Just a second name for `\iso@printdate@UKenglish`.

```
282      \def\iso@printdate@UKenglish{\iso@printdate@english}
```

`\iso@dateenglish` This command redefines the `\today` command to print in the actual date format.

```
283      \def\iso@dateenglish{%
284          \def\today{\iso@printdate@english{\year}{\month}{\day}}}%

```

`\iso@daterange@english` This command takes six arguments (`{yyyy1}{mm1}{dd1}{yyyy2}{mm2}{dd2}`) and prints the corresponding date range in the actual date format.

```
285      \def\iso@daterange@english#1#2#3#4#5#6{%
```

ISO or L^AT_EX date format.

```
286 \ifthenelse{\equal{\iso@dateformat}{iso}}{or%
287 \equal{\iso@dateformat}{TeX}}{%
```

Print the start date.

```
288 \csname iso@printdate@\iso@language\endcsname{%
289 #1}{#2}{#3}\iso@rangesign%
```

If year and month are equal, only print the day of the end date. If only the year is equal, only print month and day of the end date. Otherwise print the whole end date.

```
290 \ifthenelse{\equal{\number#1}{\number#4}}{%
291 \ifthenelse{\equal{\number#2}{\number#5}}{\printnumber[10]{#6}%
292 }{\iso@printmonthday@english{#5}{#6}}{%
293 \csname iso@printdate@\iso@language\endcsname{#4}{#5}{#6}}{%
```

Numeric, short, or original date format.

If year and month are equal, only print the day of the start date. If only the year is equal, only print month and day of the start date. Otherwise print the whole start date.

```
294 \ifthenelse{\equal{\number#1}{\number#4}}{%
295 \ifthenelse{\equal{\number#2}{\number#5}}{%
296 \ifthenelse{\equal{\iso@dateformat}{orig}}{%
297 \begingroup
298 \edef\lday{#3}\def\day{\lday}%
299 \day@english\endgroup}{\printnumber[10]{#3}}%
300 }{\iso@printmonthday@english{#2}{#3}}{%
301 \csname iso@printdate@\iso@language\endcsname{#1}{#2}{#3}}%
```

Print the end date.

```
302 \iso@rangesign\csname iso@printdate@\iso@language\endcsname{%
303 #4}{#5}{#6}%
304 }{%
305 }%
306 }
```

`\iso@daterange@english` Sets the word between start and end date in a date range to “to”.

```
307 \def\iso@rangesign@english{~to~}
```

Define the language name that will be the active language for isodate if none of the packages babel.sty, german.sty, and ngerman.sty is loaded and if this is the last language that is used for isodate. If one of the above packages is used this definition will be overridden by the command `\language` that will always return the current used language.

```
308 \def\iso@language{english}%
```

The end of the British section.

Second handle American English.

```
309 }{%
```

`\iso@printmonthday@american` Prints the month and the day given as two arguments (`{mm}{dd}`) in the current date format.

```

310 \def\iso@printmonthday@american#1#2{%
    Numeric and short date format: mm/dd/
311 \ifthenelse{\equal{\iso@dateformat}{numeric}}{\or%
312 \equal{\iso@dateformat}{short}}{%
313 \printnumber[10]{#1}/\printnumber[10]{#2}/}%
    ISO date format: mm-dd
314 \ifthenelse{\equal{\iso@dateformat}{iso}}{%
315 \printnumber[10]{#1}\iso@isodash\printnumber[10]{#2}}%
    LATEX date format: mm/dd
316 \ifthenelse{\equal{\iso@dateformat}{TeX}}{%
317 \printnumber[10]{#1}/\printnumber[10]{#2}}%
    Original date format: mmm d
318 \ifthenelse{\equal{\iso@dateformat}{orig}\or
319 \equal{\iso@dateformat}{shortorig}}{%
320 \begingroup%
321 \edef\lmonth{#1}%
322 \def\month{\lmonth}\month@english%
323 \endgroup
324 ~\printnumber{#2}%
325 }{}}}%
326 }
```

`\iso@printdate@american` Prints the date given as three arguments (`{yyyy}{mm}{dd}`) in the actual date format.

```

327 \def\iso@printdate@american#1#2#3{%
    ISO date format: yyyy-\iso@printmonthday@american
328 \ifthenelse{\equal{\iso@dateformat}{iso}}{\number#1\iso@isodash}{%
    LATEX date format: yyyy/\iso@printmonthday@american
329 \ifthenelse{\equal{\iso@dateformat}{TeX}}{\number#1/}{}}%
330 \iso@printmonthday@american{\number#2}{\number#3}%
    Numeric date format: \iso@printmonthday@american yyyy
331 \ifthenelse{\equal{\iso@dateformat}{numeric}}{\number#1}{%
    Original date format: \iso@printmonthday@american,~yyyy
332 \ifthenelse{\equal{\iso@dateformat}{orig}}{\,~\number#1}{%
    Short original date format: \iso@printmonthday@american,~yyyy
333 \ifthenelse{\equal{\iso@dateformat}{shortorig}}{%
334 ,~\iso@twodigitsign\iso@yeartwo{\number#1}}{%
    Short date format: \iso@printmonthday@american yy
335 \ifthenelse{\equal{\iso@dateformat}{short}}{%
336 \iso@yeartwo{\number#1}}{}}}%
337 }
```

`\iso@printdate@USenglish` Just a second name for `\iso@printdate@UKamerican`.

```

338 \def\iso@printdate@USenglish{\iso@printdate@american}

\iso@dateamerican This command redefines the \today command to print in the actual date format.
339 \def\iso@dateamerican{%
340 \def\today{\iso@printdate@american{\year}{\month}{\day}}}%

\iso@daterange@american This command takes six arguments ({yyyy1}{mm1}{dd1}{yyyy2}{mm2}{dd2})
and prints the corresponding date range in the actual date format.
341 \def\iso@daterange@american#1#2#3#4#5#6{%
ISO or LATEX date format.
342 \ifthenelse{\equal{\iso@dateformat}{iso}}{\or%
343 \equal{\iso@dateformat}{TeX}}{%
Print the start date.
344 \csname iso@printdate@\iso@language\endcsname{#1}{#2}{#3}%
345 \iso@rangesign%
If year and month are equal, only print the day of the end date. If only the year is
equal, only print month and day of the end date. Otherwise print the whole end
date.
346 \ifthenelse{\equal{\number#1}{\number#4}}{%
347 \ifthenelse{\equal{\number#2}{\number#5}}{\printnumber[10]{#6}%
348 }{\iso@printmonthday@american{#5}{#6}}}%
349 \csname iso@printdate@\iso@language\endcsname{%
350 #4}{#5}{#6}}}%
Original date format.
If year and month are equal, print mmm d1 to d2, yyyy. If only the year is
equal, print mmm1 d1 to mmm2 d2, yyyy. Otherwise print the whole start and
end date.
351 \ifthenelse{\equal{\iso@dateformat}{orig}}{%
352 \ifthenelse{\equal{\number#1}{\number#4}}{%
353 \ifthenelse{\equal{\number#2}{\number#5}}{%
354 \iso@printmonthday@american{#2}{#3}\iso@rangesign%
355 \printnumber{#6},~\number#4}{%
356 \iso@printmonthday@american{#2}{#3}\iso@rangesign%
357 \csname iso@printdate@\iso@language\endcsname{%
358 #4}{#5}{#6}}}%
359 \csname iso@printdate@\iso@language\endcsname{#1}{#2}{#3}%
360 \iso@rangesign%
361 \csname iso@printdate@\iso@language\endcsname{%
362 #4}{#5}{#6}}}%
Numeric or short date format.
If year and month are equal, only print the day of the end date. Otherwise
print the whole end date.
363 \ifthenelse{\equal{\number#1}{\number#4}}{%
364 \iso@printmonthday@american{#2}{#3}}{%
365 \csname iso@printdate@\iso@language\endcsname{#1}{#2}{#3}}%
```

Print the end date.

```
366 \iso@rangesign\csname iso@printdate@\iso@language\endcsname{%
367 #4}{#5}{#6}}%
368 }%
369 }
```

`\iso@rangesign@american` Set the word between start and end date in a date range to “to”.

```
370 \def\iso@rangesign@american{~to~}
```

Define the language name that will be the active language for `isodate` if none of the packages `babel.sty`, `german.sty`, and `ngerman.sty` is loaded and if this is the last language that is used for `isodate`. If one of the above packages is used this definition will be overridden by the command `\language` that will always return the current used language.

```
371 \def\iso@language{american}%
```

The end of the American section.

```
372 }
```

Redefine the command `datelanguage` that is used by `babel.sty`, `german.sty`, and `ngerman.sty` to switch to the original English/American date format to enable the use of different date formats. This has to be done after the preamble in order to ensure to overwrite the `babel` command.

Do this only if `\iso@datelanguage` is defined.

```
373 \AtBeginDocument{%
374 \ifx\undefined\iso@dateenglish\else
375 \def\dateenglish{\iso@dateenglish}%
376 \def\dateUKenglish{\iso@dateenglish}%
377 \fi
378 \ifx\undefined\iso@dateamerican\else
379 \def\dateamerican{\iso@dateamerican}%
380 \def\dateUSenglish{\iso@dateamerican}%
381 \fi
382 }
```

The end of the file.

D.4 Language definition file `french.idf`

Heading of the file:

```
383 \ProvidesFile{french.idf}[\filedate\space v\fileversion\space
384 French support from the isodate package]
```

`\iso@languageloaded` Define the command `\iso@languageloaded` in order to enable `isodate.sty` to determine if at least one language is loaded.

```
385 \let\iso@languageloaded\active
```

```
386 \def\month@french{\ifcase\month\or
387 janvier\or f\evrier\or mars\or avril\or mai\or juin\or
388 juillet\or ao\ut\or septembre\or octobre\or novembre\or
389 d\ecembre\fi}
```

```

390 \def\iso@printmonthday@french#1#2{%
391   \ifthenelse{\equal{\iso@dateformat}{numeric}}{or%
392     \equal{\iso@dateformat}{short}}{%
393     \printnumber[10]{#2}/\printnumber[10]{#1}/}%
394   \ifthenelse{\equal{\iso@dateformat}{iso}}{%
395     \iso@isodash\printnumber[10]{#1}\iso@isodash%
396     \printnumber[10]{#2}}{%
397     \ifthenelse{\equal{\iso@dateformat}{TeX}}{%
398       /\printnumber[10]{#1}/\printnumber[10]{#2}}{%
399       \ifthenelse{\equal{\iso@dateformat}{orig}}{or
400         \equal{\iso@dateformat}{shortorig}}{%
401         \begingroup
402         \edef\lday{#2}\edef\day{\lday}%
403         \edef\lmonth{#1}\def\month{\lmonth}%
404         \number\day\ifnum1=\day \noexpand\ier\fi~\month@french%
405         \endgroup
406         }{}}}%
407   }
408 \def\iso@printdate@french#1#2#3{%
409   \ifthenelse{\equal{\iso@dateformat}{iso}}{or%
410     \equal{\iso@dateformat}{TeX}}{\number#1}{}%
411   \iso@printmonthday@french{\number#2}{\number#3}%
412   \ifthenelse{\equal{\iso@dateformat}{numeric}}{\number#1}{%
413     \ifthenelse{\equal{\iso@dateformat}{orig}}{~\number#1}{%
414       \ifthenelse{\equal{\iso@dateformat}{shortorig}}{%
415         ~\iso@twodigitsign\iso@yeartwo{\number#1}}{%
416         \ifthenelse{\equal{\iso@dateformat}{short}}{%
417           \iso@yeartwo{\number#1}}{}}}%
418   }
419 \def\iso@datefrench{%
420   \def\today{\iso@printdate@french{\year}{\month}{\day}}}%
421 \def\iso@daterange@french#1#2#3#4#5#6{%
422   \ifthenelse{\equal{\iso@dateformat}{iso}}{or%
423     \equal{\iso@dateformat}{TeX}}{%
424     \csname iso@printdate@\iso@language\endcsname{#1}{#2}{#3}%
425     \iso@rangesign%
426     \ifthenelse{\equal{\number#1}{\number#4}}{%
427       \ifthenelse{\equal{\number#2}{\number#5}}{\printnumber[10]{#6}%
428         }{\iso@printmonthday@french{#5}{#6}}}%
429     \csname iso@printdate@\iso@language\endcsname{#4}{#5}{#6}}}%
430   \ifthenelse{\equal{\number#1}{\number#4}}{%
431     \ifthenelse{\equal{\number#2}{\number#5}}{%
432       \ifthenelse{\equal{\iso@dateformat}{orig}}{%
433         \begingroup
434         \edef\lday{#3}\edef\day{\lday}%
435         \number\day\ifnum1=\day \noexpand\ier\fi
436         \endgroup}{\printnumber[10]{#3}}%
437     }{\iso@printmonthday@french{#2}{#3}}}%

```

```

438     \csname iso@printdate@iso@language\endcsname{#1}{#2}{#3}}%
439     \iso@rangesign\csname iso@printdate@iso@language\endcsname{%
440         #4}{#5}{#6}%
441 }{%
442     }%
443 }

```

```

444 \def\iso@rangesign@french{~au~}

```

Define the language name that will be the active language for isodate if none of the packages babel.sty, german.sty, and ngerman.sty is loaded and if this is the last language that is used for isodate. If one of the above packages is used this definition will be overridden by the command `\language` that will always return the current used language.

```

445 \def\iso@language{french}%

```

`\datefrenchb` has to be defined additionally because babel starts with language frenchb instead of french.

```

446 \AtBeginDocument{%
447     \ifx\undefined\iso@datefrench\else
448         \def\datefrench{\iso@datefrench}%
449         \def\datefrenchb{\iso@datefrench}%
450     \fi
451 }

```

The end of the file.

D.5 Language definition file german.idf

Heading of the file:

```

452 \ProvidesFile{german.idf}[\filedate\space v\fileversion\space
453     German support from the isodate package]

```

`\iso@languageloaded` Define the command `\iso@languageloaded` in order to enable `isodate.sty` to determine if at least one language is loaded.

```

454 \let\iso@languageloaded\active

```

Define spaces between day and month resp. month and year. `dm` stands for day-month and `my` for month-year. The defaults are taken from the Duden [2].

```

455 \def\iso@dmsepgerman{,}%
456 \def\iso@mylongsepgerman{~}%
457 \def\iso@myshortsepgerman{,}%

```

`\daymonthsepgerman` Change space between day and month in numeric date formats for the German language. The only parameter is the new spacing.

```

458 \DeclareRobustCommand*\daymonthsepgerman[1]{\def\iso@dmsepgerman{#1}}
459 %     \begin{macrocode}
460 % \end{macrocode}
461 % \begin{macrocode}{\monthyearsepgerman}
462 % Change space between month and year in numeric date formats for the

```

```

463 % German language. The first parameter is the new spacing for the long
464 % format and the second for the short format.
465 % \begin{macrocode}
466 \DeclareRobustCommand*{\monthyearsepgerman}[2]{%
467 \def\iso@mylongsepgerman{#1}%
468 \def\iso@myshortsepgerman{#2}}

469 \def\month@german{\ifcase\month\or
470 Januar\or Februar\or M\"arz\or April\or Mai\or Juni\or
471 Juli\or August\or September\or Oktober\or November\or Dezember\fi}
472 \def\month@ngerman{\month@german}
473 \def\month@austrian{\ifnum1=\month
474 J\"anner\else \month@german\fi}
475 \def\month@naustrian{\month@austrian}

476 \@namedef{iso@printmonthday@\CurrentOption}#1#2{%
477 \ifthenelse{equal{\iso@dateformat}{numeric}}{or%
478 \equal{\iso@dateformat}{short}}{%
479 \printnumber[10]{#2}.\iso@dmsepgerman\printnumber[10]{#1}.}%
480 \ifthenelse{equal{\iso@dateformat}{iso}}{%
481 \printnumber[10]{#1}\iso@isdash\printnumber[10]{#2}}{%
482 \ifthenelse{equal{\iso@dateformat}{TeX}}{%
483 \printnumber[10]{#1}/\printnumber[10]{#2}}{%
484 \ifthenelse{equal{\iso@dateformat}{orig}}{or
485 \equal{\iso@dateformat}{shortorig}}{%
486 \printnumber{#2}.\~\begingroup
487 \edef\lmonth{#1}%
488 \def\month{\lmonth}\csname month@iso@languagename\endcsname%
489 \endgroup
490 }{}}}%
491 }

492 \@namedef{iso@printdate@\CurrentOption}#1#2#3{%
493 \ifthenelse{equal{\iso@dateformat}{iso}}{\number#1\iso@isdash}{%
494 \ifthenelse{equal{\iso@dateformat}{TeX}}{\number#1/}{}}%
495 \csname iso@printmonthday@iso@languagename\endcsname{%
496 \number#2}{\number#3}%
497 \ifthenelse{equal{\iso@dateformat}{numeric}}{%
498 \iso@mylongsepgerman\number#1}{%
499 \ifthenelse{equal{\iso@dateformat}{orig}}{\~\number#1}{%
500 \ifthenelse{equal{\iso@dateformat}{shortorig}}{%
501 \~\iso@twodigitsign\iso@yeartwo{\number#1}}{%
502 \ifthenelse{equal{\iso@dateformat}{short}}{%
503 \iso@myshortsepgerman\iso@yeartwo{\number#1}}{}}}%
504 }

505 \@namedef{iso@daterange@\CurrentOption}#1#2#3#4#5#6{%
506 \ifthenelse{equal{\iso@dateformat}{iso}}{or%
507 \equal{\iso@dateformat}{TeX}}{%
508 \csname iso@printdate@iso@languagename\endcsname{#1}{#2}{#3}%
509 \iso@rangesign%

```

```

510 \ifthenelse{\equal{\number#1}{\number#4}}{%
511 \ifthenelse{\equal{\number#2}{\number#5}}{\printnumber[10]{#6}%
512 }{\csname iso@printmonthday@iso@language\endcsname{#5}{#6}}}%
513 \csname iso@printdate@iso@language\endcsname{#4}{#5}{#6}}}%
514 \ifthenelse{\equal{\number#1}{\number#4}}{%
515 \ifthenelse{\equal{\number#2}{\number#5}}{%
516 \ifthenelse{\equal{\iso@dateformat}{orig}}{%
517 \printnumber{#3}}{\printnumber[10]{#3}}.%
518 }{\csname iso@printmonthday@iso@language\endcsname{#
519 #2}{#3}}}%
520 \csname iso@printdate@iso@language\endcsname{#1}{#2}{#3}}%
521 \iso@rangesign\csname iso@printdate@iso@language\endcsname{#
522 #4}{#5}{#6}%
523 }%
524 }

525 \@namedef{iso@rangesign@CurrentOption}{~bis~}

526 \ifthenelse{\equal{CurrentOption}{german}}{%
527 \def\iso@dategerman{%
528 \def\today{\iso@printdate@german{\year}{\month}{\day}}}%

Define the language name that will the active language for isodate if none of the
packages babel.sty, german.sty, and ngerman.sty is loaded and if this is the last
language that is used for isodate. If one of the above packages is used this definition
will be overridden by the command \language that will always return the
current used language.

529 \def\iso@language{german}%
530 }%

531 \ifthenelse{\equal{CurrentOption}{ngerman}}{%
532 \def\iso@datengerman{%
533 \def\today{\iso@printdate@ngerman{\year}{\month}{\day}}}%

Define the language name that will the active language for isodate if none of the
packages babel.sty, german.sty, and ngerman.sty is loaded and if this is the last
language that is used for isodate. If one of the above packages is used this definition
will be overridden by the command \language that will always return the
current used language.

534 \def\iso@language{ngerman}%
535 }%

536 \ifthenelse{\equal{CurrentOption}{austrian}}{%
537 \def\iso@dateaustrian{%
538 \def\today{\iso@printdate@austrian{\year}{\month}{\day}}}%

```

Define the language name that will the active language for isodate if none of the packages babel.sty, german.sty, and ngerman.sty is loaded and if this is the last language that is used for isodate. If one of the above packages is used this definition will be overridden by the command \language that will always return the current used language.

```

539 \def\iso@language{austrian}%
540 }{%
541 \ifthenelse{\equal{\CurrentOption}{naustrian}}{%
542 \def\iso@datenaustrian{%
543 \def\today{\iso@printdate@naustrian{\year}{\month}{\day}}}%

```

Define the language name that will be the active language for isodate if none of the packages babel.sty, german.sty, and ngerman.sty is loaded and if this is the last language that is used for isodate. If one of the above packages is used this definition will be overridden by the command `\language` that will always return the current used language.

```

544 \def\iso@language{naustrian}%
545 }{%
546 }}}}

```

Redefine the command `datelanguage` that is used by babel.sty, german.sty, and ngerman.sty to switch to the original German date format to enable the use of different date formats. This has to be done after the preamble in order to ensure to overwrite the babel command.

Do this only if `\iso@datelanguage` is defined.

```

547 \AtBeginDocument{%
548 \ifx\undefined\iso@dategerman\else
549 \def\dategerman{\iso@dategerman}%
550 \fi
551 \ifx\undefined\iso@datengerman\else
552 \def\datengerman{\iso@datengerman}%
553 \fi
554 \ifx\undefined\iso@dateaustrian\else
555 \def\dateaustrian{\iso@dateaustrian}%
556 \fi
557 \ifx\undefined\iso@datenaustrian\else
558 \def\datenaustrian{\iso@datenaustrian}%
559 \fi
560 }

```

The end of the file.

D.6 Language definition file norsk.idf

This file was provided by Svend Tollak Munkejord (svend.t.munkejord@energy.sintef.no).

Heading of the file:

```

561 %% Endret til norsk, 2001-04-30, STM
562 \ProvidesFile{norsk.idf}[\filedate\space v\fileversion\space
563 Norwegian support from the isodate package]

```

`\iso@languageloaded` Define the command `\iso@languageloaded` in order to enable `isodate.sty` to determine if at least one language is loaded.

```

564 \let\iso@languageloaded\active

```

`\month@norsk` Prints the name of today's month in the long form for the original date format.

```

565 \def\month@norsk{\ifcase\month\or
566     januar\or februar\or mars\or april\or mai\or juni\or
567     juli\or august\or september\or oktober\or november\or desember\fi}

```

`\iso@printmonthday@norsk` Prints the month and the day given as two arguments (`{mm}{dd}`) in the current date format.

```

568 \def\iso@printmonthday@norsk#1#2{%
    Numeric and short date format: dd/mm/
569     \ifthenelse{\equal{\iso@dateformat}{numeric}}\or%
570     \equal{\iso@dateformat}{short}}{%
571     \printnumber[10]{#2}/\printnumber[10]{#1}/}%
    ISO date format: -mm-dd
572     \ifthenelse{\equal{\iso@dateformat}{iso}}{%
573     \iso@isodash\printnumber[10]{#1}\iso@isodash\printnumber[10]{#2}}{%
    LATEX date format: /mm/dd
574     \ifthenelse{\equal{\iso@dateformat}{TeX}}{%
575     /\printnumber[10]{#1}/\printnumber[10]{#2}}{%
    Original date format: d. mmm
576     \ifthenelse{\equal{\iso@dateformat}{orig}}\or
577     \equal{\iso@dateformat}{shortorig}}{%
578     \printnumber{#2}.~\begingroup
579     \edef\lmonth{#1}\def\month{\lmonth}%
580     \month@norsk%
581     \endgroup
582     }{}}}%
583 }

```

`\iso@printdate@norsk` Prints the date given as three arguments (`{yyyy}{mm}{dd}`) in the actual date format

```

584 \def\iso@printdate@norsk#1#2#3{%
    ISO or LATEX date format: yyyy\iso@printmonthday@norsk
585     \ifthenelse{\equal{\iso@dateformat}{iso}}\or%
586     \equal{\iso@dateformat}{TeX}}{\number#1}{}%
587     \iso@printmonthday@norsk{\number#2}{\number#3}%
    numeric date format: \iso@printmonthday@norsk yyyy
588     \ifthenelse{\equal{\iso@dateformat}{numeric}}{\number#1}{%
    original date format: \iso@printmonthday@norsk~yyyy
589     \ifthenelse{\equal{\iso@dateformat}{orig}}{\number#1}{%
    short original date format: \iso@printmonthday@norsk~yyyy
590     \ifthenelse{\equal{\iso@dateformat}{shortorig}}{%
591     ~\iso@twodigitsign\iso@yeartwo{\number#1}}{%

```

```

short date format: \iso@printmonthday@norsk yy
592         \ifthenelse{\equal{\iso@dateformat}{short}}{%
593             \iso@yeartwo{\number#1}}{%
594             }}}}
595     }

```

`\iso@datenorsk` This command redefines the `\today` command to print in the actual date format.

```

596 \def\iso@datenorsk{%
597     \def\today{\iso@printdate@norsk{\year}{\month}{\day}}}%

```

`\iso@daterange@norsk` This command takes six arguments (`{yyyy1}{mm1}{dd1}{yyyy2}{mm2}{dd2}`) and prints the corresponding date range in the actual date format.

```

598 \def\iso@daterange@norsk#1#2#3#4#5#6{%

```

ISO or L^AT_EX date format.

```

599 \ifthenelse{\equal{\iso@dateformat}{iso}}{or%
600             \equal{\iso@dateformat}{TeX}}{%

```

Print the start date.

```

601     \csname iso@printdate@\iso@language\endcsname{#1}{#2}{#3}%
602     \iso@rangesign%

```

If year and month are equal, only print the day of the end date. If only the year is equal, only print month and day of the end date. Otherwise print the whole end date.

```

603     \ifthenelse{\equal{\number#1}{\number#4}}{%
604         \ifthenelse{\equal{\number#2}{\number#5}}{\printnumber[10]{#6}%
605             }{\iso@printmonthday@norsk{#5}{#6}}}%
606     \csname iso@printdate@\iso@language\endcsname{#4}{#5}{#6}}}%

```

Numeric, short, or original date format.

If year and month are equal, only print the day of the start date. If only the year is equal, only print month and day of the start date. Otherwise print the whole start date.

```

607     \ifthenelse{\equal{\number#1}{\number#4}}{%
608         \ifthenelse{\equal{\number#2}{\number#5}}{%
609             \ifthenelse{\equal{\iso@dateformat}{orig}}{%
610                 \printnumber{#3}.\}{\printnumber[10]{#3}}%
611             }{\iso@printmonthday@norsk{#2}{#3}}}%
612     \csname iso@printdate@\iso@language\endcsname{#1}{#2}{#3}}}%

```

Print the end date.

```

613     \iso@rangesign\csname iso@printdate@\iso@language\endcsname{#4}{#5}{#6}%
614     #4}{#5}{#6}%
615 }{%
616 }%
617 }

```

`\iso@rangesign@norsk` Sets the word between start and end date in a date range to “til”.

```

618 \def\iso@rangesign@norsk{~til~}

```

Define the language name that will be the active language for isodate if none of the packages babel.sty, german.sty, and ngerman.sty is loaded and if this is the last language that is used for isodate. If one of the above packages is used this definition will be overridden by the command `\language` that will always return the current used language.

```
619 \def\iso@language{norsk}%
```

Redefine the command `\datenorsk` that is used by babel to switch to the original Norsk date format to enable the use of different date formats. This has to be done after the preamble in order to ensure to overwrite the babel command.

```
620 \AtBeginDocument{%
621   \ifx\undefined\iso@datenorsk\else
622     \def\datenorsk{\iso@datenorsk}%
623   \fi
624 }
```

The end of the file.

D.7 Language definition file swedish.idf

This file was provided by Christian Schlauer (christian.schlauer@web.de).

Heading of the file:

```
625 \ProvidesFile{swedish.idf}[\filedate\space v\fileversion\space
626   Swedish support from the isodate package]
```

`\iso@language` Define the command `\iso@language` loaded in order to enable `isodate.sty` to determine if at least one language is loaded.

```
627 \let\iso@language\active
```

`\month@swedish` Prints the name of today's month in the long form for the original date format.

```
628 \def\month@swedish{\ifcase\month\or
629   januari\or februari\or mars\or april\or maj\or juni\or
630   juli\or augusti\or september\or oktober\or november\or december\fi}
```

`\iso@printmonthday@swedish` Prints the month and the day given as two arguments (`{mm}{dd}`) in the current date format.

```
631 \def\iso@printmonthday@swedish#1#2{%
  Numeric and short date format: dd/mm/
632   \ifthenelse{\equal{\iso@dateformat}{numeric}}{\or%
633     \equal{\iso@dateformat}{short}}{\%
634     \printnumber[10]{#2}/\printnumber[10]{#1}/}%
  ISO date format: -mm-dd
635   \ifthenelse{\equal{\iso@dateformat}{iso}}{\%
636     \iso@isodash\printnumber[10]{#1}%
637     \iso@isodash\printnumber[10]{#2}}{\%
  LATEX date format: /mm/dd
638   \ifthenelse{\equal{\iso@dateformat}{TeX}}{\%
639     /\printnumber[10]{#1}/\printnumber[10]{#2}}{\%
```

Original date format: d. mmm

```

640         \ifthenelse{\equal{\iso@dateformat}{orig}}\or
641             \equal{\iso@dateformat}{shortorig}}{%
642             \printnumber{#2}.\~\begingroup
643             \edef\lmonth{#1}\def\month{\lmonth}%
644             \month@swedish%
645             \endgroup
646             }{}}}%
647     }

```

\iso@printdate@swedish Prints the date given as three arguments ({yyyy}{mm}{dd}) in the actual date format

```

648     \def\iso@printdate@swedish#1#2#3{%
        ISO or LATEX date format: yyyy\iso@printmonthday@swedish
649     \ifthenelse{\equal{\iso@dateformat}{iso}}\or%
650         \equal{\iso@dateformat}{TeX}}{\number#1}{}%
651     \iso@printmonthday@swedish{\number#2}{\number#3}%
        numeric date format: \iso@printmonthday@swedish yyyy
652     \ifthenelse{\equal{\iso@dateformat}{numeric}}{\number#1}{%
        original date format: \iso@printmonthday@swedish~yyyy
653     \ifthenelse{\equal{\iso@dateformat}{orig}}{\~\number#1}{%
        short original date format: \iso@printmonthday@swedish~yy
654     \ifthenelse{\equal{\iso@dateformat}{shortorig}}{%
655         ~\iso@twodigitsign\iso@yeartwo{\number#1}}{%
        short date format: \iso@printmonthday@swedish yy
656     \ifthenelse{\equal{\iso@dateformat}{short}}{%
657         \iso@yeartwo{\number#1}}{%
658         }{}}}%
659     }

```

\iso@dateswedish This command redefines the \today command to print in the actual date format.

```

660     \def\iso@dateswedish{%
661         \def\today{\iso@printdate@swedish{\year}{\month}{\day}}}%

```

\iso@daterange@swedish This command takes six arguments ({yyyy1}{mm1}{dd1}{yyyy2}{mm2}{dd2}) and prints the corresponding date range in the actual date format.

```

662 \def\iso@daterange@swedish#1#2#3#4#5#6{%
        ISO or LATEX date format.
663     \ifthenelse{\equal{\iso@dateformat}{iso}}\or%
664         \equal{\iso@dateformat}{TeX}}{%
        Print the start date.
665     \csname iso@printdate@\iso@language\endcsname{%
666         #1}{#2}{#3}\iso@rangesign%

```

If year and month are equal, only print the day of the end date. If only the year is equal, only print month and day of the end date. Otherwise print the whole end date.

```

667 \ifthenelse{\equal{\number#1}{\number#4}}{%
668 \ifthenelse{\equal{\number#2}{\number#5}}{\printnumber[10]{#6}%
669 }{\iso@printmonthday@swedish{#5}{#6}}}%
670 \csname iso@printdate@iso@language\endcsname{#4}{#5}{#6}}}%

```

Numeric, short, or original date format.

If year and month are equal, only print the day of the start date. If only the year is equal, only print month and day of the start date. Otherwise print the whole start date.

```

671 \ifthenelse{\equal{\number#1}{\number#4}}{%
672 \ifthenelse{\equal{\number#2}{\number#5}}{%
673 \ifthenelse{\equal{\iso@dateformat}{orig}}{%
674 \printnumber{#3}.}{\printnumber[10]{#3}}%
675 }{\iso@printmonthday@swedish{#2}{#3}}}%
676 \csname iso@printdate@iso@language\endcsname{#
677 #1}{#2}{#3}}%

```

Print the end date.

```

678 \iso@rangesign\csname iso@printdate@iso@language\endcsname{%
679 #4}{#5}{#6}%
680 }{%
681 }%
682 }

```

`\iso@rangesign@swedish` Sets the word between start and end date in a date range to “till”.

```

683 \def\iso@rangesign@swedish{~till~}

```

Define the language name that will be the active language for `isodate` if none of the packages `babel.sty`, `german.sty`, and `ngerman.sty` is loaded and if this is the last language that is used for `isodate`. If one of the above packages is used this definition will be overridden by the command `\language` that will always return the current used language.

```

684 \def\iso@language{swedish}%

```

Redefine the command `\dateswedish` that is used by `babel` to switch to the original Swedish date format to enable the use of different date formats. This has to be done after the preamble in order to ensure to overwrite the `babel` command.

```

685 \AtBeginDocument{%
686 \ifx\undefined\iso@dateswedish\else
687 \def\dateswedish{\iso@dateswedish}%
688 \fi
689 }

```

The end of the file.

Change History

2.00	General: Total reimplementa- tion of the package. The old package has renamed to isodateo. 1	man.sty or babel.sty. 25
2.01	General: For the case that none of the packages babel, german, and ngerman is loaded there is a new macro <code>\iso@language</code> that contains the name of the last loaded language. If one of the packages is loaded it con- tains the current language. . . . 1	2.03 General: Allow change of spaces for German language 5, 24 Fixed a bug in the French lan- guage that caused not to switch to it correctly on startup. . . . 24
	Handle case of not loaded lan- guage package babel, german and ngerman 14	2.04 General: Added section for solvable problems. 6
2.02	General: Added Norwegian lan- guage by Svend Tollak Munke- jord 27	2.05 General: Added an original format with a two digit year. 2
	Changed the umlauts to normal TeX commands to be able to use German dates without ger-	Execute options at the end of the package instead of at the end of the preamble. 8
		2.06 General: Changed range sign for French language, thanks to Fe- lix Pütsch 24
		2.07 General: Added Swedish language by Christian Schlauer 30

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