

The `isodate` package*

Harald Harders
h.harders@tu-bs.de

File Date 2001-05-04, Printed 2001-05-17

Abstract

This package provides commands to switch between different date formats (standard, ISO, numeric, \LaTeX 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, and Norwegian.

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

Contents

1	Commands	2
1.1	Switching the date format	2
1.2	Printing today's date	3
1.3	Printing any date	3
1.4	Printing date ranges	3
1.5	Changing the ISO format	3
1.6	Changing the German format	4
2	Calling the package	4
3	Add new languages to the package	5
4	Solvable problems	6
4.1	Redefinition of language dependent names	6
A	Licence	6
B	Known errors	6
C	Planned features and changes	7
D	Literature	7

*This file has version 2.04 last revised 2001-05-04, documentation dated 2001-05-17.

E	The implementation	7
E.1	Package file isodate.sty	7
E.2	Language definition file danish.idf	13
E.3	Language definition file english.idf	15
E.4	Language definition file french.idf	20
E.5	Language definition file german.idf	21
E.6	Language definition file norsk.idf	24

Acknowledgements

First of all I have to thank Axel Kielhorn who wrote the package `akletter` which inspired me to write `isodate`. The help of Heiko Oberdiek was necessary to handle characters in substrings which resulted in the package `substr`. David Sanderson found the bug which disabled `isodate` to work without `babel`. He also helped me to improve the documentation and sent me a link to the ISO 8601 norm [1]. Svend Tollak Munkejord has added the norwegian language.

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>\isodate</code>	<code>\shortdate</code>	short numeric date format with two digits of the year
<code>\numdate</code>	<code>\TeXdate</code>	date format used for version description of packages (yyyy/mm/dd)
<code>\shortdate</code>	<code>\origdate</code>	original L ^A T _E X format
<code>\TeXdate</code>		
<code>\origdate</code>		

The numeric and short numeric format change their behaviour depending on the actual 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, 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 “2001-05-17, 17th May 2001, 2001-05-17”.

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` (“2001/05/17”). To print it with the actual date format you can use the command `\printdateTeX{\docdate}` which leads to e.g. “2001-05-17” or “17th May 2001”.

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 German format

The spacings for the numerical formats in the German language (24.12.2000 resp. 24.12.00) was taken from the Duden [2] and is the default spacing when using one of the German derivatives. Some people want to use different spacings. Thus from version 2.03 on it will be possible to change it. 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{\qqquad}{\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.

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.

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.

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)
<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

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.² 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.

²Yes, there is a way to change the date language, but it is a little bit tricky:

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

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. 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

Copyright 2000 Harald Harders

This program can be redistributed and/or modified under the terms of the LaTeX Project Public License Distributed from CTAN archives in directory `macros/latex/base/lppl.txt`; either version 1 of the License, or any later version.

B Known errors

- The `\printdate` and `\printdateTeX` commands are not very good in checking the argument for correct syntax.
- I don't know the French word that should be used in a date range. So I have taken `~--~` (“ – ”).
- The language definition files `french.idf` and `german.idf` are not yet commented.

C Planned features and changes

- Of course eliminate the errors.
- Add other languages than German, new German, English, US English, French, Danish, and Norwegian. Please help me with this topic. I don't know the date formats in other languages.

D Literature

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.

E The implementation

E.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}{\AtBeginDocument{\isodate}}
14 \DeclareOption{num}{\AtBeginDocument{\numdate}}
15 \DeclareOption{short}{\AtBeginDocument{\shortdate}}
16 \DeclareOption{TeX}{\AtBeginDocument{\TeXdate}}
17 \DeclareOption{orig}{\AtBeginDocument{\origdate}}
```

Declare the options for language support.

```
18 \DeclareOption{austrian}{\input{german.idf}}
19 \DeclareOption{english}{\input{english.idf}}
20 \DeclareOption{german}{\input{german.idf}}
21 \DeclareOption{american}{\input{english.idf}}
22 \DeclareOption{naustrian}{\input{german.idf}}
23 \DeclareOption{ngerman}{\input{german.idf}}
24 \DeclareOption{UKenglish}{\input{english.idf}}
25 \DeclareOption{USenglish}{\input{english.idf}}
```

```

26 \DeclareOption{danish}{\input{danish.idf}}
27 \DeclareOption{norsk}{\input{norsk.idf}}
28 \DeclareOption{norwegian}{\input{norsk.idf}}
29 \DeclareOption{french}{\input{french.idf}}

```

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

```

30 \DeclareOption*{%
31   \InputIfFileExists{CurrentOption.idf}{}{%
32     \PackageError{isodate}{%
33       Isodate definition file \CurrentOption.idf not found}{%
34       Maybe you misspelled the language option?}}%
35 }

```

Set default option to orig.

```
36 \ExecuteOptions{orig}
```

Process the options.

```
37 \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.

```

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

```

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

```

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

Example: `\iso@yeartwo{1873}` → 73.

```

53 \newcounter{iso@yeartwo}%
54 \newcommand{\iso@yeartwo}[1]{%
55   \setcounter{iso@yeartwo}{\number#1}%
56   \whiledo{\theiso@yeartwo>99}{%
57     \setcounter{iso@yeartwo}{\theiso@yeartwo-100}}{%
58   \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`, `TeX`.

```
59 \def\iso@dateformat{numeric}
```

`\numdate` Switches to long numerical date format.

```
60 \DeclareRobustCommand*\numdate{\def\iso@dateformat{numeric}}%
```

`\shortdate` Switches to short numerical date format.

```
61 \DeclareRobustCommand*\shortdate{\def\iso@dateformat{short}}%
```

`\isodate` Switches to ISO date format.

```
62 \DeclareRobustCommand*\isodate{\def\iso@dateformat{iso}}%
```

`\origdate` Switches to the original date format.

```
63 \DeclareRobustCommand*\origdate{\def\iso@dateformat{orig}}%
```

`\TeXdate` Switches to L^AT_EX date format.

```
64 \DeclareRobustCommand*\TeXdate{\def\iso@dateformat{TeX}}%
```

`\isodash` Changes the dash in the ISO date format. The default is “-”.

```
65 \def\iso@isodash{-}%
66 \DeclareRobustCommand*\isodash[1]{\def\iso@isodash{#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 ”.

```
67 \def\iso@rangesign{\csname iso@rangesign@iso@language\endcsname}%
68 \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.

```
69 \newcommand\iso@printdate[3]{%
70   \begingroup%
71   \def\year{#1}%
72   \def\month{#2}%
73   \def\day{#3}%
74   \today%
75   \endgroup%
76 }
```

`\printdate` Prints a date that is given as one argument in one of these formats: `yyyy-mm-dd`, `dd/mm/yyyy`, `dd.mm.yyyy`.

```
77 \DeclareRobustCommand*\printdate[1]{%
78   \edef\iso@date{#1}%
79   \SubStringsToCounter{iso@slash}{/}{\iso@date}%
80   \SubStringsToCounter{iso@minus}{-}{\iso@date}%
81   \SubStringsToCounter{iso@dot}{.}{\iso@date}%
82   \ifthenelse{\equal{\theiso@dot}{2}}{%
83     \expandafter\iso@input@german\iso@date\@empty}{%
```

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

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

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

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

```
84 \ifthenelse{\equal{\theiso@minus}{2}}{%
85 \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.

```
86 \ifthenelse{\equal{\theiso@slash}{2}}{%
87 \expandafter\iso@input@english\iso@date\@empty}{%
```

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

```
88 ????\iso@isodash ??\iso@isodash ???%
89 \PackageError{isodate}{unrecognized date format}{Use one of
90 the following formats as macro argument:^^J%
91 \space\space dd.mm.yyyy^^J%
92 \space\space dd/mm/yyyy^^J%
93 \space\space yyyy-mm-dd^^J%
94 Don't use any spaces or commands like \protect, or
95 \protect~ inside the argument.}%
96 }}}%
97 }
```

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

```
98 \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`.

```
99 \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`.

```
100 \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.

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

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

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

Count appearances of “/” in the argument.

```
103 \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.

```
104 \ifthenelse{\equal{\theiso@slash}{2}}{%
105 \expandafter\iso@input@TeX\iso@date\@empty}{%
```

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

```
106 ????\iso@isodash ??\iso@isodash ???%
107 \PackageError{isodate}{unrecognized date format}{Use one of
108 the following formats as macro argument:^^J%
109 \space\space dd.mm.yyyy^^J%
110 \space\space dd/mm/yyyy^^J%
111 \space\space yyyy-mm-dd^^J%
```

```

112     Don't use any spaces or commands like \protect\, or
113     \protect~ inside the argument.}%
114     }}

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

\daterange Prints a date range.
116 \DeclareRobustCommand*\daterange}[2]{%
Define \iso@date and \iso@@date commands to expand the argument #1 and #2.
Define \iso@@@date which contains both arguments devided by a komma.
117 \edef\iso@date{#1}%
118 \edef\iso@@date{#2}%
119 \edef\iso@@@date{\iso@date,\iso@@date}%
Count appearances of “/”, “-”, and “.” in the arguments.
120 \SubStringsToCounter{iso@slash}{/}{\iso@date}%
121 \SubStringsToCounter{iso@minus}{-}{\iso@date}%
122 \SubStringsToCounter{iso@dot}{.}{\iso@date}%
123 \SubStringsToCounter{iso@@slash}{/}{\iso@@date}%
124 \SubStringsToCounter{iso@@minus}{-}{\iso@@date}%
125 \SubStringsToCounter{iso@@dot}{.}{\iso@@date}%
If number of “.” in both arguments is equal to 2 then the German format
dd.mm.yyyy is used.
126 \ifthenelse{\equal{\theiso@dot}{2}\and\equal{\theiso@@dot}{2}}{%
127 \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.
128 \ifthenelse{\equal{\theiso@minus}{2}\and\equal{\theiso@@minus}{2}}{%
129 \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.
130 \ifthenelse{\equal{\theiso@slash}{2}\and%
131 \equal{\theiso@@slash}{2}}{%
132 \expandafter\iso@range@input@english\iso@@@date\@empty}{%
Else no of the formats above is used an thus an error message is thrown.
133     ????\iso@isodash ??\iso@isodash ???%
134     \PackageError{isodate}{unrecognized date format}{Use one of
135     the following formats as macro argument:^^J%
136     \space\space dd.mm.yyyy^^J%
137     \space\space dd/mm/yyyy^^J%
138     \space\space yyyy-mm-dd^^J%
139     Don't use any spaces or commands like \protect\, or
140     \protect~ inside the argument.^^J
141     Use the same format for both arguments.}%
142     }}}%
143 }

```

```

\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.
144 \def\iso@range@input@iso#1-#2-#3,#4-#5-#6\@empty{%
145   \csname iso@daterange@\iso@languagename\endcsname{%
146     #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.
147 \def\iso@range@input@german#1.#2.#3,#4.#5.#6\@empty{%
148   \csname iso@daterange@\iso@languagename\endcsname{%
149     #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.
150 \def\iso@range@input@english#1/#2/#3,#4/#5/#6\@empty{%
151   \csname iso@daterange@\iso@languagename\endcsname{%
152     #3}{#2}{#1}{#6}{#5}{#4}}

Define the counters for counting the appearances of “.”, “-”, and “/” in the arguments.
153 \newcounter{iso@slash}
154 \newcounter{iso@minus}
155 \newcounter{iso@dot}
156 \newcounter{iso@@@slash}
157 \newcounter{iso@@@minus}
158 \newcounter{iso@@@dot}

The command \iso@languagename 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 \languagename. So this is the indication
that none of the above packages is loaded.
159 \AtBeginDocument{%
160   \ifthenelse{\not\equal{\languagename}{nohyphenation}}{%

The language is not equal “nohyphenation”. So one of the language packages is
loaded. Replace the internal language name \iso@languagename by the global
language name \languagename.
161   \gdef\iso@languagename{\languagename}%

Reload language to surely switch to new date format. The languagename gets first
expanded because of errors that would occur otherwise.
162   \edef\iso@tmplang{\languagename}%
163   \expandafter\selectlanguage\expandafter{\iso@tmplang}%
164   }{%

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.
165   \csname date\iso@languagename\endcsname%
166   }
167 }

The end of the package.

```

E.2 Language definition file danish.idf

Heading of the file:

```
168 \ProvidesFile{danish.idf}[\filedate\space v\fileversion\space
169   Danish support from the isodate package]
```

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

```
170 \let\iso@language@loaded\active
```

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

```
171 \def\month@danish{\ifcase\month\or
172   januar\or februar\or marts\or april\or maj\or juni\or
173   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.

```
174 \def\iso@printmonthday@danish#1#2{%
  Numeric and short date format: dd/mm/
175   \ifthenelse{\equal{\iso@dateformat}{numeric}\or%
176     \equal{\iso@dateformat}{short}}{%
177     \printnumber[10]{#2}/\printnumber[10]{#1}/}%
  ISO date format: -mm-dd
178   \ifthenelse{\equal{\iso@dateformat}{iso}}{%
179     \iso@isodash\printnumber[10]{#1}%
180     \iso@isodash\printnumber[10]{#2}}{%
  LATEX date format: /mm/dd
181   \ifthenelse{\equal{\iso@dateformat}{TeX}}{%
182     /\printnumber[10]{#1}/\printnumber[10]{#2}}{%
  Original date format: d. mmm
183   \ifthenelse{\equal{\iso@dateformat}{orig}}{%
184     \printnumber{#2}.~\beginingroup
185     \edef\lmonth{#1}\def\month{\lmonth}%
186     \month@danish%
187     \endgroup
188     }{}}}%
189 }
```

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

```
190 \def\iso@printdate@danish#1#2#3{%
  ISO or LATEX date format: yyyy\iso@printmonthday@danish
191   \ifthenelse{\equal{\iso@dateformat}{iso}\or%
192     \equal{\iso@dateformat}{TeX}}{\number#1}{}%
193   \iso@printmonthday@danish{\number#2}{\number#3}%
  numeric date format: \iso@printmonthday@danish yyyy
194   \ifthenelse{\equal{\iso@dateformat}{numeric}}{\number#1}{%
  original date format: \iso@printmonthday@danish~yyyy
195   \ifthenelse{\equal{\iso@dateformat}{orig}}{\number#1}{%
```

```

short date format: \iso@printmonthday@danish yy
196     \ifthenelse{\equal{\iso@dateformat}{short}}{%
197     \iso@yeartwo{\number#1}}{%
198     }}}%
199   }

```

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

```

200   \def\iso@datedanish{%
201     \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.

```

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

```

ISO or L^AT_EX date format.

```

203   \ifthenelse{\equal{\iso@dateformat}{iso}\or%
204     \equal{\iso@dateformat}{TeX}}{%

```

Print the start date.

```

205     \csname iso@printdate@iso@language\endcsname{%
206       #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.

```

207     \ifthenelse{\equal{\number#1}{\number#4}}{%
208       \ifthenelse{\equal{\number#2}{\number#5}}{\printnumber[10]{#6}%
209         }{\iso@printmonthday@danish{#5}{#6}}{%
210       \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.

```

211     \ifthenelse{\equal{\number#1}{\number#4}}{%
212       \ifthenelse{\equal{\number#2}{\number#5}}{%
213         \ifthenelse{\equal{\iso@dateformat}{orig}}{%
214           \printnumber{#3}.\printnumber[10]{#3}}%
215         }{\iso@printmonthday@danish{#2}{#3}}{%
216       \csname iso@printdate@iso@language\endcsname{%
217         #1}{#2}{#3}}%

```

Print the end date.

```

218     \iso@rangesign\csname iso@printdate@iso@language\endcsname{%
219       #4}{#5}{#6}%
220   }{%
221   }%
222 }

```

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

```

223 \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.

```
224 \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.  
  
225 \AtBeginDocument{%  
226   \ifx\undefined\iso@datedanish\else  
227     \def\datedanish{\iso@datedanish}%  
228   \fi  
229 }
```

The end of the file.

E.3 Language definition file `english.idf`

Heading of the file:

```
230 \ProvidesFile{english.idf}[\filedate\space v\fileversion\space  
231   English support from the isodate package]
```

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

```
232 \let\iso@language\active
```

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

```
233 \def\month@english{\ifcase\month\or  
234   January\or February\or March\or April\or May\or June\or  
235   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.

```
236 \ifthenelse{\equal{\CurrentOption}{english}\or%  
237   \equal{\CurrentOption}{UKenglish}}{%
```

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

```
238 \def\day@english{\ifcase\day\or  
239   1st\or 2nd\or 3rd\or 4th\or 5th\or  
240   6th\or 7th\or 8th\or 9th\or 10th\or  
241   11th\or 12th\or 13th\or 14th\or 15th\or  
242   16th\or 17th\or 18th\or 19th\or 20th\or  
243   21st\or 22nd\or 23rd\or 24th\or 25th\or  
244   26th\or 27th\or 28th\or 29th\or 30th\or  
245   31st\fi}
```

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

```
246 \def\iso@printmonthday@english#1#2{%  
   Numeric and short date format: dd/mm/  
247   \ifthenelse{\equal{\iso@dateformat}{numeric}\or%  
248     \equal{\iso@dateformat}{short}}{%  
249     \printnumber[10]{#2}/\printnumber[10]{#1}/}%
```

```

ISO date format: mm-dd
250     \ifthenelse{\equal{\iso@dateformat}{iso}}{%
251     \printnumber[10]{#1}\iso@isodash\printnumber[10]{#2}}{%
LATEX date format: mm/dd
252     \ifthenelse{\equal{\iso@dateformat}{TeX}}{%
253     \printnumber[10]{#1}/\printnumber[10]{#2}}{%
Original date format: ddd mmm
254     \ifthenelse{\equal{\iso@dateformat}{orig}}{%
255     \begingroup
256     \edef\lday{#2}\def\day{\lday}%
257     \edef\lmonth{#1}\def\month{\lmonth}%
258     \day@english~\month@english%
259     \endgroup
260     }{}}}%
261     }

```

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

```

262     \def\iso@printdate@english#1#2#3{%
ISO date format: yyyy-\iso@printmonthday@english
263     \ifthenelse{\equal{\iso@dateformat}{iso}}{\number#1\iso@isodash}{%
LATEX date format: yyyy/\iso@printmonthday@english
264     \ifthenelse{\equal{\iso@dateformat}{TeX}}{\number#1/}{}}%
265     \iso@printmonthday@english{\number#2}{\number#3}%
Numeric date format: \iso@printmonthday@english yyyy
266     \ifthenelse{\equal{\iso@dateformat}{numeric}}{\number#1}{%
Original date format: \iso@printmonthday@english~yyyy
267     \ifthenelse{\equal{\iso@dateformat}{orig}}{\~\number#1}{%
Short date format: \iso@printmonthday@english yy
268     \ifthenelse{\equal{\iso@dateformat}{short}}{%
269     \iso@yeartwo{\number#1}}{%
270     }}}%
271     }

```

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

```

272     \def\iso@printdate@UKenglish{\iso@printdate@english}

```

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

```

273     \def\iso@dateenglish{%
274     \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.

```

275 \def\iso@daterange@english#1#2#3#4#5#6{%
ISO or LATEX date format.
276 \ifthenelse{\equal{\iso@dateformat}{iso}\or%
277 \equal{\iso@dateformat}{TeX}}{%

```


Print the start date.

```
278 \csname iso@printdate@iso@language\endcsname{%  
279 #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.

```
280 \ifthenelse{\equal{\number#1}{\number#4}}{%  
281 \ifthenelse{\equal{\number#2}{\number#5}}{\printnumber[10]{#6}%  
282 }\iso@printmonthday@english{#5}{#6}}{%  
283 \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.

```
284 \ifthenelse{\equal{\number#1}{\number#4}}{%  
285 \ifthenelse{\equal{\number#2}{\number#5}}{%  
286 \ifthenelse{\equal{\iso@dateformat}{orig}}{%  
287 \begingroup  
288 \edef\lday{#3}\def\day{\lday}%  
289 \day@english\endgroup}{\printnumber[10]{#3}}%  
290 }\iso@printmonthday@english{#2}{#3}}{%  
291 \csname iso@printdate@iso@language\endcsname{#1}{#2}{#3}}%
```

Print the end date.

```
292 \iso@rangesign\csname iso@printdate@iso@language\endcsname{%  
293 #4}{#5}{#6}%  
294 }{%  
295 }%  
296 }
```

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

```
297 \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.

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

The end of the British section.

Second handle American English.

```
299 }{%
```

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

```
300 \def\iso@printmonthday@american#1#2{%  
Numeric and short date format: mm/dd/  
301 \ifthenelse{\equal{\iso@dateformat}{numeric}}\or%  
302 \equal{\iso@dateformat}{short}}{%  
303 \printnumber[10]{#1}/\printnumber[10]{#2}/}%
```

```

ISO date format: mm-dd
304     \ifthenelse{\equal{\iso@dateformat}{iso}}{%
305     \printnumber[10]{#1}\iso@isodash\printnumber[10]{#2}}{%
LATEX date format: mm/dd
306     \ifthenelse{\equal{\iso@dateformat}{TeX}}{%
307     \printnumber[10]{#1}/\printnumber[10]{#2}}{%
Original date format: mmm d
308     \ifthenelse{\equal{\iso@dateformat}{orig}}{%
309     \begingroup%
310     \edef\lmonth{#1}%
311     \def\month{\lmonth}\month@english%
312     \endgroup
313     ~\printnumber{#2}%
314     }{}}}%
315     }

```

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

```

316     \def\iso@printdate@american#1#2#3{%
ISO date format: yyyy-\iso@printmonthday@american
317     \ifthenelse{\equal{\iso@dateformat}{iso}}{\number#1\iso@isodash}{%
LATEX date format: yyyy/\iso@printmonthday@american
318     \ifthenelse{\equal{\iso@dateformat}{TeX}}{\number#1/}{}}%
319     \iso@printmonthday@american{\number#2}{\number#3}%
Numeric date format: \iso@printmonthday@american yyyy
320     \ifthenelse{\equal{\iso@dateformat}{numeric}}{\number#1}{%
Original date format: \iso@printmonthday@american,~yyyy
321     \ifthenelse{\equal{\iso@dateformat}{orig}}{,~\number#1}{%
Short date format: \iso@printmonthday@american yy
322     \ifthenelse{\equal{\iso@dateformat}{short}}{%
323     \iso@yeartwo{\number#1}}{}}}%
324     }

```

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

```

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

```

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

```

326     \def\iso@dateamerican{%
327     \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.

```

328 \def\iso@daterange@american#1#2#3#4#5#6{%
ISO or LATEX date format.
329 \ifthenelse{\equal{\iso@dateformat}{iso}\or%
330 \equal{\iso@dateformat}{TeX}}{%

```

Print the start date.

```
331 \csname iso@printdate@iso@languagename\endcsname{#1}{#2}{#3}%  
332 \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.

```
333 \ifthenelse{\equal{\number#1}{\number#4}}{%  
334 \ifthenelse{\equal{\number#2}{\number#5}}{\printnumber[10]{#6}%  
335 }{\iso@printmonthday@american{#5}{#6}}}%  
336 \csname iso@printdate@iso@languagename\endcsname{%  
337 #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.

```
338 \ifthenelse{\equal{\iso@dateformat}{orig}}{%  
339 \ifthenelse{\equal{\number#1}{\number#4}}{%  
340 \ifthenelse{\equal{\number#2}{\number#5}}{%  
341 \iso@printmonthday@american{#2}{#3}\iso@rangesign%  
342 \printnumber{#6},~\number#4}}{%  
343 \iso@printmonthday@american{#2}{#3}\iso@rangesign%  
344 \csname iso@printdate@iso@languagename\endcsname{%  
345 #4}{#5}{#6}}}%  
346 \csname iso@printdate@iso@languagename\endcsname{#1}{#2}{#3}%  
347 \iso@rangesign%  
348 \csname iso@printdate@iso@languagename\endcsname{%  
349 #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.

```
350 \ifthenelse{\equal{\number#1}{\number#4}}{%  
351 \iso@printmonthday@american{#2}{#3}}{%  
352 \csname iso@printdate@iso@languagename\endcsname{#1}{#2}{#3}}%
```

Print the end date.

```
353 \iso@rangesign\csname iso@printdate@iso@languagename\endcsname{%  
354 #4}{#5}{#6}}%  
355 }%  
356 }
```

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

```
357 \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 `\languagename` that will always return the current used language.

```
358 \def\iso@languagename{american}%
```

The end of the American section.

```
359 }
```

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.

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

```

360 \AtBeginDocument{%
361   \ifx\undefined\iso@dateenglish\else
362     \def\dateenglish{\iso@dateenglish}%
363     \def\dateUKenglish{\iso@dateenglish}%
364   \fi
365   \ifx\undefined\iso@dateamerican\else
366     \def\dateamerican{\iso@dateamerican}%
367     \def\dateUSenglish{\iso@dateamerican}%
368   \fi
369 }
```

The end of the file.

E.4 Language definition file `french.idf`

Heading of the file:

```

370 \ProvidesFile{french.idf}[\filedate\space v\fileversion\space
371   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.

```

372 \let\iso@languageloaded\active

373 \def\month@french{\ifcase\month\or
374   janvier\or f\evrier\or mars\or avril\or mai\or juin\or
375   juillet\or ao\ut\or septembre\or octobre\or novembre\or
376   d\ecembre\fi}

377 \def\iso@printmonthday@french#1#2{%
378   \ifthenelse{equal{\iso@dateformat}{numeric}}\or%
379   \equal{\iso@dateformat}{short}}{%
380     \printnumber[10]{#2}/\printnumber[10]{#1}/}%
381   \ifthenelse{equal{\iso@dateformat}{iso}}{%
382     \iso@isodash\printnumber[10]{#1}\iso@isodash%
383     \printnumber[10]{#2}}{%
384     \ifthenelse{equal{\iso@dateformat}{TeX}}{%
385       /\printnumber[10]{#1}/\printnumber[10]{#2}}{%
386       \ifthenelse{equal{\iso@dateformat}{orig}}{%
387         \begingroup
388         \edef\lday{#2}\edef\day{\lday}%
389         \edef\lmonth{#1}\def\month{\lmonth}%
390         \number\day\ifnum1=\day \noexpand\ier\fi~\month@french%
391       \endgroup
392       }{}}}%
393   }

394 \def\iso@printdate@french#1#2#3{%
395   \ifthenelse{equal{\iso@dateformat}{iso}}\or%
396   \equal{\iso@dateformat}{TeX}}{\number#1}{%
397   \iso@printmonthday@french{\number#2}{\number#3}%
398   \ifthenelse{equal{\iso@dateformat}{numeric}}{\number#1}{%

```

```

399     \ifthenelse{\equal{\iso@dateformat}{orig}}{\sim\number#1}{%
400       \ifthenelse{\equal{\iso@dateformat}{short}}{%
401         \iso@yeartwo{\number#1}}{}}}%
402   }
403   \def\iso@datefrench{%
404     \def\today{\iso@printdate@french{\year}{\month}{\day}}}%
405 \def\iso@daterange@french#1#2#3#4#5#6{%
406   \ifthenelse{\equal{\iso@dateformat}{iso}\or%
407     \equal{\iso@dateformat}{TeX}}{%
408     \csname iso@printdate@iso@language\endcsname{#1}{#2}{#3}%
409     \iso@rangesign%
410     \ifthenelse{\equal{\number#1}{\number#4}}{%
411       \ifthenelse{\equal{\number#2}{\number#5}}{\printnumber[10]{#6}%
412         }{\iso@printmonthday@french{#5}{#6}}}{%
413       \csname iso@printdate@iso@language\endcsname{#4}{#5}{#6}}}{%
414     \ifthenelse{\equal{\number#1}{\number#4}}{%
415       \ifthenelse{\equal{\number#2}{\number#5}}{%
416         \ifthenelse{\equal{\iso@dateformat}{orig}}{%
417           \begingroup
418             \edef\lday{#3}\edef\day{\lday}%
419             \number\day\ifnum1=\day \noexpand\ier\fi
420             \endgroup}{\printnumber[10]{#3}}}%
421       }{\iso@printmonthday@french{#2}{#3}}}{%
422     \csname iso@printdate@iso@language\endcsname{#1}{#2}{#3}}%
423   \iso@rangesign\csname iso@printdate@iso@language\endcsname{#
424     #4}{#5}{#6}%
425 }{%
426   }%
427 }
428 \def\iso@rangesign@french{~--~}

```

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.

```

429 \def\iso@language{french}%

```

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

```

430 \AtBeginDocument{%
431   \ifx\undefined\iso@datefrench\else
432     \def\datefrench{\iso@datefrench}%
433     \def\datefrenchb{\iso@datefrench}%
434   \fi
435 }

```

The end of the file.

E.5 Language definition file `german.idf`

Heading of the file:

```

436 \ProvidesFile{german.idf}[\filedate\space v\fileversion\space
437   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.
438 \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].
439 \def\iso@dmsepgerman{\,%
440 \def\iso@mylongsepgerman{~}%
441 \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.
442 \DeclareRobustCommand*\daymonthsepgerman[1]{\def\iso@dmsepgerman{#1}}
443 % \begin{macrocode}
444 % \end{macro}
445 % \begin{macro}{\monthyearsepgerman}
446 % Change space between month and year in numeric date formats for the
447 % German language. The first parameter is the new spacing for the long
448 % format and the second for the short format.
449 % \begin{macrocode}
450 \DeclareRobustCommand*\monthyearsepgerman[2]{%
451 \def\iso@mylongsepgerman{#1}%
452 \def\iso@myshortsepgerman{#2}}

453 \def\month@german{\ifcase\month\or
454 Januar\or Februar\or M"arz\or April\or Mai\or Juni\or
455 Juli\or August\or September\or Oktober\or November\or Dezember\fi}
456 \def\month@ngerman{\month@german}
457 \def\month@austrian{\ifnum1=\month
458 J"anner\else \month@german\fi}
459 \def\month@naustrian{\month@austrian}

460 \@namedef{iso@printmonthday@\CurrentOption}#1#2{%
461 \ifthenelse{equal{\iso@dateformat}{numeric}\or%
462 \equal{\iso@dateformat}{short}}{%
463 \printnumber[10]{#2}.\iso@dmsepgerman\printnumber[10]{#1}.)}%
464 \ifthenelse{equal{\iso@dateformat}{iso}}{%
465 \printnumber[10]{#1}\iso@isodash\printnumber[10]{#2}}{%
466 \ifthenelse{equal{\iso@dateformat}{TeX}}{%
467 \printnumber[10]{#1}/\printnumber[10]{#2}}{%
468 \ifthenelse{equal{\iso@dateformat}{orig}}{%
469 \printnumber{#2}.\~\begingroup
470 \edef\lmonth{#1}%
471 \def\month{\lmonth}\csname month@\iso@languagenam\endcsname%
472 \endgroup
473 }{}}}%
474 }

475 \@namedef{iso@printdate@\CurrentOption}#1#2#3{%
476 \ifthenelse{equal{\iso@dateformat}{iso}}{\number1\iso@isodash}{%
477 \ifthenelse{equal{\iso@dateformat}{TeX}}{\number1/}{}}%
478 \csname iso@printmonthday@\iso@languagenam\endcsname{%
479 \number2}{\number3}%
480 \ifthenelse{equal{\iso@dateformat}{numeric}}{%

```

```

481 \iso@mylongsepgerman\number#1}{%
482 \ifthenelse{\equal{\iso@dateformat}{orig}}{~\number#1}{%
483 \ifthenelse{\equal{\iso@dateformat}{short}}{%
484 \iso@myshortsepgerman\iso@yeartwo{\number#1}}{}}}%
485 }

486 \@namedef{iso@daterange@\CurrentOption}#1#2#3#4#5#6{%
487 \ifthenelse{\equal{\iso@dateformat}{iso}\or%
488 \equal{\iso@dateformat}{TeX}}{%
489 \csname iso@printdate@\iso@language\endcsname{#1}{#2}{#3}%
490 \iso@rangesign%
491 \ifthenelse{\equal{\number#1}{\number#4}}{%
492 \ifthenelse{\equal{\number#2}{\number#5}}{\printnumber[10]{#6}%
493 }{\csname iso@printmonthday@\iso@language\endcsname{#5}{#6}}}{%
494 \csname iso@printdate@\iso@language\endcsname{#4}{#5}{#6}}}{%
495 \ifthenelse{\equal{\number#1}{\number#4}}{%
496 \ifthenelse{\equal{\number#2}{\number#5}}{%
497 \ifthenelse{\equal{\iso@dateformat}{orig}}{%
498 \printnumber{#3}}{\printnumber[10]{#3}}.%
499 }{\csname iso@printmonthday@\iso@language\endcsname{#
500 #2}{#3}}}{%
501 \csname iso@printdate@\iso@language\endcsname{#1}{#2}{#3}}%
502 \iso@rangesign\csname iso@printdate@\iso@language\endcsname{#
503 #4}{#5}{#6}}%
504 }%
505 }

506 \@namedef{iso@rangesign@\CurrentOption}{~bis~}
507 \ifthenelse{\equal{\CurrentOption}{german}}{%
508 \def\iso@dategerman{%
509 \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.

510 \def\iso@language{german}%
511 }{%

512 \ifthenelse{\equal{\CurrentOption}{ngerman}}{%
513 \def\iso@datengerman{%
514 \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.

515 \def\iso@language{ngerman}%
516 }{%

517 \ifthenelse{\equal{\CurrentOption}{austrian}}{%
518 \def\iso@dateaustrian{%
519 \def\today{\iso@printdate@austrian{\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.

```
520 \def\iso@language{austrian}%
521 }{%
522 \ifthenelse{\equal{\CurrentOption}{naustrian}}{%
523 \def\iso@datenaustrian{%
524 \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.

```
525 \def\iso@language{naustrian}%
526 }{%
527 }}}
528 \AtBeginDocument{%
529 \ifx\undefined\iso@dategerman\else
530 \def\dategerman{\iso@dategerman}%
531 \fi
532 \ifx\undefined\iso@datengerman\else
533 \def\datengerman{\iso@datengerman}%
534 \fi
535 \ifx\undefined\iso@dateaustrian\else
536 \def\dateaustrian{\iso@dateaustrian}%
537 \fi
538 \ifx\undefined\iso@datenaustrian\else
539 \def\datenaustrian{\iso@datenaustrian}%
540 \fi
541 }
```

The end of the file.

E.6 Language definition file norsk.idf

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

Heading of the file:

```
542 %% Endret til norsk, 2001-04-30, STM
543 \ProvidesFile{norsk.idf}[\filedate\space v\fileversion\space
544 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.

```
545 \let\iso@languageloaded\active
```

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

```
546 \def\month@norsk{\ifcase\month\or
547 januar\or februar\or mars\or april\or mai\or juni\or
548 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.
549 \def\iso@printmonthday@norsk#1#2{%
Numeric and short date format: dd/mm/
550 \ifthenelse{\equal{\iso@dateformat}{numeric}\or%
551 \equal{\iso@dateformat}{short}}{%
552 \printnumber[10]{#2}/\printnumber[10]{#1}/}%
ISO date format: -mm-dd
553 \ifthenelse{\equal{\iso@dateformat}{iso}}{%
554 \iso@isodash\printnumber[10]{#1}\iso@isodash\printnumber[10]{#2}}{%
LATEX date format: /mm/dd
555 \ifthenelse{\equal{\iso@dateformat}{TeX}}{%
556 /\printnumber[10]{#1}/\printnumber[10]{#2}}{%
Original date format: d. mmm
557 \ifthenelse{\equal{\iso@dateformat}{orig}}{%
558 \printnumber{#2}.~\begingroup
559 \edef\lmonth{#1}\def\month{\lmonth}%
560 \month@norsk%
561 \endgroup
562 }{}}}%
563 }

\iso@printdate@norsk Prints the date given as three arguments ({yyyy}{mm}{dd}) in the actual date
format
564 \def\iso@printdate@norsk#1#2#3{%
ISO or LATEX date format: yyyy\iso@printmonthday@norsk
565 \ifthenelse{\equal{\iso@dateformat}{iso}\or%
566 \equal{\iso@dateformat}{TeX}}{\number#1}{%
567 \iso@printmonthday@norsk{\number#2}{\number#3}%
numeric date format: \iso@printmonthday@norsk yyyy
568 \ifthenelse{\equal{\iso@dateformat}{numeric}}{\number#1}{%
original date format: \iso@printmonthday@norsk~yyyy
569 \ifthenelse{\equal{\iso@dateformat}{orig}}{\~\number#1}{%
short date format: \iso@printmonthday@norsk yy
570 \ifthenelse{\equal{\iso@dateformat}{short}}{%
571 \iso@yeartwo{\number#1}}{%
572 }}}%
573 }

\iso@datenorsk This command redefines the \today command to print in the actual date format.
574 \def\iso@datenorsk{%
575 \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 corosponding date range in the actual date format.
576 \def\iso@daterange@norsk#1#2#3#4#5#6{%

```

ISO or L^AT_EX date format.

```
577 \ifthenelse{\equal{\iso@dateformat}{iso}}{or}%  
578 \equal{\iso@dateformat}{TeX}}{%
```

Print the start date.

```
579 \csname iso@printdate@iso@languagename\endcsname{#1}{#2}{#3}%  
580 \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.

```
581 \ifthenelse{\equal{\number#1}{\number#4}}{-%  
582 \ifthenelse{\equal{\number#2}{\number#5}}{\printnumber[10]{#6}%  
583 }{\iso@printmonthday@norsk{#5}{#6}}}{-%  
584 \csname iso@printdate@iso@languagename\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.

```
585 \ifthenelse{\equal{\number#1}{\number#4}}{-%  
586 \ifthenelse{\equal{\number#2}{\number#5}}{-%  
587 \ifthenelse{\equal{\iso@dateformat}{orig}}{-%  
588 \printnumber{#3}.}{\printnumber[10]{#3}}}{-%  
589 }{\iso@printmonthday@norsk{#2}{#3}}}{-%  
590 \csname iso@printdate@iso@languagename\endcsname{#1}{#2}{#3}}{%
```

Print the end date.

```
591 \iso@rangesign\csname iso@printdate@iso@languagename\endcsname{#  
592 #4}{#5}{#6}%  
593 }{-%  
594 }%  
595 }
```

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

```
596 \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 `\languagename` that will always return the current used language.

```
597 \def\iso@languagename{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.

```
598 \AtBeginDocument{%  
599 \ifx\undefined\iso@datenorsk\else  
600 \def\datenorsk{\iso@datenorsk}%  
601 \fi  
602 }
```

The end of the file.

Change History

2.00	General: Total reimplementa- tion of the package. The old package has renamed to isodateo.	1	2.02	General: Added Norwegian lan- guage by Svend Tollak Munke- jord	24
2.01	General: For the case that none of the packages babel, german, and ngerman is loaded there is a new macro <code>\iso@languagename</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	4, 22
	Handle case of not loaded lan- guage package babel, german and ngerman	12	2.04	General: Added section for solvable problems.	6
				Changed the umlauts to normal TeX commands to be able to use German dates without ger- man.sty or babel.sty.	22
				Fixed a bug in the French lan- guage that caused not to switch to it correctly on startup. . . .	21

Index

Numbers written in *italic* refer to the page where the corresponding entry is described, the ones underlined to the code line of the definition, the rest to the code lines where the entry is used.

Symbols	218, 278, 283,	<code>\dateUKenglish</code>	363
<code>\"</code>	291, 292, 331,	<code>\dateUSenglish</code>	367
<code>\'</code>	336, 344, 346,	<code>\day</code> 73, 201, 238, 256,	
<code>\@namedef</code>	348, 352, 353,	274, 288, 327,	
. 460, 475, 486, 506	408, 413, 422,	388, 390, 404,	
<code>\@undefined</code>	423, 471, 478,	418, 419, 509,	
<code>\^</code>	489, 493, 494,	514, 519, 524, 575	
	499, 501, 502,	<code>\day@english</code>	
A	579, 584, 590, 591	. . . . <u>238</u> , 258, 289	
<code>\active</code>	<code>\CurrentOption</code> 31, 33,	<code>\daymonthsepgerman</code> .	
232, 372, 438, 545	236, 237, 460,	. . . . .	4, <u>442</u>
<code>\and</code>	475, 486, 506,	<code>\DeclareOption</code> . .	13–30
<code>\AtBeginDocument</code> . .	507, 512, 517, 522	<code>\DeclareRobustCommand</code>	
13–17, 159, 225,		. . . . .	60–
360, 430, 528, 598	D	64, 66, 68, 77,	
B	<code>\dateamerican</code>	101, 116, 442, 450	
<code>\begin</code>	366		
443, 445, 449	<code>\dateaustrian</code>		
<code>\begingroup</code> . 70, 184,	536	E	
255, 287, 309,	<code>\datedanish</code>	<code>\else</code> . 226, 361, 365,	
387, 417, 469, 558	227	431, 458, 529,	
C	<code>\dateenglish</code>	532, 535, 538, 599	
<code>\csname</code>	362	<code>\end</code>	444
67, 145,	<code>\datefrench</code>	<code>\endcsname</code> . 67, 145,	
148, 151, 165,	<code>\datefrenchb</code>	148, 151, 165,	
205, 210, 216,	<code>\dategerman</code>	205, 210, 216,	
	<code>\datenaustrian</code>	218, 278, 283,	
	539		
	<code>\datengerman</code>		
	533		
	<code>\datenorsk</code>		
	600		
	<code>\daterange</code>		
	<u>3</u> , <u>116</u>		

291, 292, 331,	235, 245, 364,	461, 462, 464,
336, 344, 346,	368, 376, 390,	466, 468, 476,
348, 352, 353,	419, 434, 455,	477, 480, 482,
408, 413, 422,	458, 531, 534,	483, 487, 488,
423, 471, 478,	537, 540, 548, 601	497, 550, 551,
489, 493, 494,	\filedate ... 2, 168,	553, 555, 557,
499, 501, 502,	230, 370, 436, 543	565, 566, 568–
579, 584, 590, 591	\fileversion . 2, 168,	570, 577, 578, 587
\endgroup .. 75, 187,	230, 370, 436, 543	\iso@datefrench ...
259, 289, 312,		.... 403, 431–433
391, 420, 472, 561		\iso@dategerman ...
\equal 51,	I	.... 508, 529, 530
82, 84, 86, 104,	\ier 390, 419	\iso@datenaustrian .
126, 128, 130,	\ifcase ... 171, 233,	.... 523, 538, 539
131, 160, 175,	238, 373, 453, 546	\iso@datengerman ..
176, 178, 181,	\IfFileExists 6	.... 513, 532, 533
183, 191, 192,	\ifnum 390, 419, 457	\iso@datenorsk
194–196, 203,	\ifx ... 38, 226, 361,	.... <u>574</u> , 599, 600
204, 207, 208,	365, 431, 529,	\iso@daterange@american
211–213, 236,	532, 535, 538, 599	..... <u>328</u>
237, 247, 248,	\input 18–29	\iso@daterange@danish
250, 252, 254,	\InputIfFileExists . 31	..... <u>202</u>
263, 264, 266–	\iso@@@date 119, 127, 129, 132	\iso@daterange@english
268, 276, 277,	\iso@@@date 118, 119, 123–125	..... <u>275</u> , <u>297</u>
280, 281, 284–	\iso@date 78–81, 83,	\iso@daterange@french
286, 301, 302,	85, 87, 102, 103,	..... 405
304, 306, 308,	105, 117, 119–122	\iso@daterange@norsk
317, 318, 320–	\iso@dateamerican .	..... <u>576</u>
322, 329, 330,	.... <u>326</u> , 365–367	\iso@dmsepgerman ..
333, 334, 338–	\iso@dateaustrian .	.... 439, 442, 463
340, 350, 378,	.... 518, 535, 536	\iso@input@english .
379, 381, 384,	\iso@datedanish ...	..... 87, <u>100</u>
386, 395, 396,	.... <u>200</u> , 226, 227	\iso@input@german 83, <u>99</u>
398–400, 406,	\iso@dateenglish ..	\iso@input@iso .. 85, <u>98</u>
407, 410, 411,	.... <u>273</u> , 361–363	\iso@input@TeX 105, <u>115</u>
414–416, 461,	\iso@dateformat ...	\iso@isodash ... 65,
462, 464, 466,	.... <u>59</u> , 60–64,	66, 88, 106, 133,
468, 476, 477,	175, 176, 178,	179, 180, 251,
480, 482, 483,	181, 183, 191,	263, 305, 317,
487, 488, 491,	192, 194–196,	382, 465, 476, 554
492, 495–497,	203, 204, 213,	\iso@languageloaded
507, 512, 517,	247, 248, 250,	..... 38, <u>170</u> ,
522, 550, 551,	252, 254, 263,	<u>232</u> , <u>372</u> , <u>438</u> , <u>545</u>
553, 555, 557,	264, 266–268,	\iso@languagename .
565, 566, 568–	276, 277, 286,	.. 67, 145, 148,
570, 577, 578,	301, 302, 304,	151, 161, 165,
581, 582, 585–587	306, 308, 317,	205, 210, 216,
\ExecuteOptions ... 36	318, 320–322,	218, 224, 278,
\expandafter 83, 85, 87, 105,	329, 330, 338,	283, 291, 292,
127, 129, 132, 163	378, 379, 381,	298, 331, 336,
	384, 386, 395,	344, 346, 348,
	396, 398–400,	352, 353, 358,
F	406, 407, 416,	408, 413, 422,
\fi ... 49, 173, 228,		423, 429, 471,

478, 489, 493,	353, 409, 423,	<code>\numdate</code> 2, 14, 60
494, 499, 501,	490, 502, 580, 591	
502, 510, 515,	<code>\iso@rangesign@american</code>	O
520, 525, 579,	..... 357	<code>\or</code> 171–173,
584, 590, 591, 597	<code>\iso@rangesign@danish</code>	175, 191, 203,
<code>\iso@mylongsepgerman</code>	..... 223	233–236, 238–
.... 440, 451, 481	<code>\iso@rangesign@english</code>	244, 247, 276,
<code>\iso@myshortsepgerman</code>	..... 297	301, 329, 373–
.... 441, 452, 484	<code>\iso@rangesign@french</code>	375, 378, 395,
<code>\iso@printdate</code> . . . . .	..... 428	406, 453–455,
.. 69 , 98–100, 115	<code>\iso@rangesign@norsk</code>	461, 487, 546–
<code>\iso@printdate@american</code>	..... 596	548, 550, 565, 577
.... 316 , 325, 327	<code>\iso@tmplang</code> .. 162, 163	<code>\origdate</code> 2, 17, 63
<code>\iso@printdate@austrian</code>	<code>\iso@yeartwo</code>	P
..... 519	.. 53 , 197, 269,	<code>\PackageError</code> ... 7,
<code>\iso@printdate@danish</code>	323, 401, 484, 571	32, 39, 89, 107, 134
..... 190 , 201	<code>\isodash</code> 3 , 65	<code>\printdate</code> 3 , 77
<code>\iso@printdate@english</code>	<code>\isodate</code> 2, 13, 62	<code>\printdateTeX</code> ... 3 , 101
.... 262 , 272, 274	<code>\isorangesign</code> 67	<code>\printnumber</code>
<code>\iso@printdate@french</code>		.. 50 , 177, 179,
..... 394, 404	L	180, 182, 184,
<code>\iso@printdate@german</code>	<code>\language</code> . 160–162	208, 214, 249,
..... 509	<code>\lday</code> . 256, 288, 388, 418	251, 253, 281,
<code>\iso@printdate@naustrian</code>	<code>\lmonth</code> 185,	289, 303, 305,
..... 524	257, 310, 311,	307, 313, 334,
<code>\iso@printdate@ngerman</code>	389, 470, 471, 559	342, 380, 382,
..... 514		383, 385, 411,
<code>\iso@printdate@norsk</code>	M	420, 463, 465,
..... 564 , 575	<code>\MessageBreak</code>	467, 469, 492,
<code>\iso@printdate@UKenglish</code>	.... 42, 44, 46, 47	498, 552, 554,
..... 272	<code>\month</code> . 72, 171, 185,	556, 558, 582, 588
<code>\iso@printdate@USenglish</code>	201, 233, 257,	<code>\ProcessOptions</code> ... 37
..... 325	274, 311, 327,	<code>\protect</code> . 47, 94, 95,
<code>\iso@printmonthday@american</code>	373, 389, 404,	112, 113, 139, 140
.... 300 , 319,	453, 457, 471,	<code>\ProvidesFile</code> . 168,
335, 341, 343, 351	509, 514, 519,	230, 370, 436, 543
<code>\iso@printmonthday@danish</code>	524, 546, 559, 575	<code>\ProvidesPackage</code> ... 2
.. 174 , 193, 209, 215	<code>\month@austrian</code> 457, 459	
<code>\iso@printmonthday@english</code>	<code>\month@danish</code> . 171 , 186	R
.. 246 , 265, 282, 290	<code>\month@english</code>	<code>\RequirePackage</code> ... 4–6
<code>\iso@printmonthday@french</code>	.... 233 , 258, 311	S
.. 377, 397, 412, 421	<code>\month@french</code> . 373, 390	<code>\selectlanguage</code> ... 163
<code>\iso@printmonthday@norsk</code>	<code>\month@german</code>	<code>\shortdate</code> ... 2, 15, 61
.. 549 , 567, 583, 589	.... 453, 456, 458	<code>\string</code> 43
<code>\iso@range@input@english</code>	<code>\month@naustrian</code> .. 459	<code>\SubStringsToCounter</code>
..... 132, 150	<code>\month@ngerman</code> 456	..... 79–
<code>\iso@range@input@german</code>	<code>\month@norsk</code> .. 546 , 560	81, 103, 120–125
..... 127, 147	<code>\monthyearsepgerman</code>	
<code>\iso@range@input@iso</code>	..... 4, 445, 450	T
..... 129, 144		<code>\TeXdate</code> 2, 16, 64
<code>\iso@rangesign</code>	N	<code>\theiso@dot</code> 126
67, 68, 206, 218,	<code>\NeedsTeXFormat</code> 1	<code>\theiso@minus</code> 128
279, 292, 332,	<code>\noexpand</code> 390, 419	<code>\theiso@slash</code> 131
341, 343, 347,	<code>\not</code> 160	<code>\theiso@dot</code> 82, 126

<code>\theiso@minus</code> .. 84, 128	514, 519, 524, 575	<code>\usepackage</code>	43, 47
<code>\theiso@slash</code>			
..... 86, 104, 130			
<code>\theiso@yeartwo</code> . 56-58	U	Y	
<code>\today</code> 3, 74, 201, 274,	<code>\undefined</code> 226, 361,	<code>\year</code> .. 71, 201, 274,	
327, 404, 509,	365, 431, 529,	327, 404, 509,	
	532, 535, 538, 599	514, 519, 524, 575	