texlinks.sty

—

TEX-Related Links for hyperref, blog.sty (and maybe more)*

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Abstract

texlinks.sty provides a couple of shorthands for making hyperlinks with hyperref's[1] `\href` command, linking to URLs that one often refers to in discussing TEX-related material. URLs for TUG material (including texhax postings and TUGboat articles) and CTAN pages (package descriptions, directories, Catalogue), the UK FAQ, the LATEX and the TEX Wikibook, and Wikipedia (where much TEX-related software is described in a visually appealing manner) are generated from minimal identifiers by pure expansion. I have used them for documenting my packages (PDF) as well as for HTML overviews generated with blog.sty. They may furthermore be useful with better known (and better developed) TEX → HTML software such as tex4ht[2] or LaTeX2HTML[3] (I don't know, doubt latter).

Related packages: uri, url

Contents

*This document describes version v0.83 of texlinks.sty as of 2015/07/20.

†http://contact-ednotes.sty.de.vu

[1] http://ctan.org/pkg/hyperref

[2] http://ctan.org/pkg/tex4ht

[3] http://ctan.org/pkg/latex2html

1 Related Packages

- Martin Münch's uri provides links for scientific online publications.
- Donald Arseneau's url is about *typesetting* URLs, especially allowing linebreaks. It becomes relevant for texlinks in Section 4.4.

2 Usage

The file texlinks.sty is provided ready, installation only requires putting it somewhere where TEX finds it (which may need updating the filename data base).[4]

Below the `\documentclass` line(s) and above `\begin{document}`, you load texlinks.sty (as usually) by

```
\usepackage{texlinks}
```

Package options and user commands are described near their definitions below in the implementation section.

3 Preliminaries

3.1 Package File Header (Legalese)

```
\NeedsTeXFormat{LaTeX2e}[1994/12/01] %% \newcommand* etc.
\ProvidesPackage{texlinks}[2015/07/20 v0.83 TeX-related links (UL)]
%% copyright (C) 2011 2012 2013 2015 Uwe Lueck,
%% http://www.contact-ednotes.sty.de.vu
%% -- author-maintained in the sense of LPPL below.
%%
%% This file can be redistributed and/or modified under
%% the terms of the LaTeX Project Public License; either
%% version 1.3c of the License, or any later version.
%% The latest version of this license is in
%%    http://www.latex-project.org/lppl.txt
%% We did our best to help you, but there is NO WARRANTY.
%%
%% Please report bugs, problems, and suggestions via
%%
%%   http://www.contact-ednotes.sty.de.vu
%%
```

3.2 `\newlet`

`\newlet`⟨*cmd*⟩⟨*cnd*⟩ is a guarded `\let`:

```
\providecommand*{\newlet}[2]{\@ifdefinable#1{\let#1#2}}
```

[4] http://www.tex.ac.uk/FAQ-inst-wlcf.html

4 Links in General

4.1 Outline

The link macros of texlinks are based on macros `\httpref` and `\httpsref`. For use of texlinks with blog.sty, the latter provides definitions of `\httpref` and `\httpsref` suitable for HTML, where a choice of opening a new tab or window—or not—is relevant.

For use with hyperref (or . . .?), texlinks may provide definitions of `\httpref` and `\httpsref` based on `\href`. The decision to do so or not may happen at `\begin{document}`. blog.sty generates HTML without using the `{document}` environment, so we might assume that when `\begin{document}` is found, we are running hyperref, or just *something* that provides a useful `\href`. We might then execute a definition of `\httpref` in terms of `\href`. Well, not sure . . .

Moreover, a PDF file with links may be *printed*, and klicking the links on the paper may fail. URLs in main text, on the other hand, sometimes are troublesome. I consider it a good idea to present links with their URL as the displayed text in *footnotes* (or endnotes). It may even be useful with HTML to present the URLs displayed in some "appendix."—This idea has been resumed in v0.2 only, `\urlfoot` (Section 4.6.3).

4.2 Package Options

Somebody may want to suppress a definition of `\httpref` at `\begin{document}` . . . [2011/01/24, TODO]

v0.3: Package option `[blog]` suppresses *any* `\AtBeginDocument` actions—fine for use with blog.sty.

```
19  \DeclareOption{blog}{\let\AtBeginDocument\@gobble}
```

This option may be improved, and another option may be useful for different purposes than running blog.sty.

```
20  \ProcessOptions
```

4.3 Obvious Shorthands

`\htm`, `\html`, and `\pdf` for typical filename extensions save a few tokens in macro definitions (v0.83):

```
21  \newcommand*{\htm}{.htm}
22  \newcommand*{\html}{\htm l}     %% 2012/12/08 below previously
23  \newcommand*{\pdf}{.pdf}
```

`\DoubleArg{`⟨*cmd-maybe-args*⟩`}{`⟨*arg*⟩`}` (v0.83) works like

⟨*cmd-maybe-args*⟩`{`⟨*arg*⟩`}{`⟨*arg*⟩`}`

It replaces `\@double@first@arg` from v0.8; it may also be useful as a user command. It differs from LaTeX's `\@dblarg` that adds a missing optional argument:

```
24  \newcommand*{\DoubleArg}[2]{#1{#2}{#2}}
```

4.4 Formatting URLs and File/Package Names

This section "provides" markup for displaying URLs (`\urlfmt`), file names (`\filenamefmt`—thinking of single files that may be found in the internet or on your computer—, and "packages" (`\pkgnamefmt`). For the latter two, in certain files I use shorthands `\file` and `\pkg`, resp., ... `\providecommand` will be used so that the user may choose the style before loading texlinks. (Once I may provide a variant of `\providecommand` that postpones the "provision" to the "beginning" of the "document", even with blog.sty TODO)

It is usual to use the same font as with `\texttt` for formatting TEX code ("verbatim", `\verb` etc.). It may also be common to use `\texttt` for file names, perhaps even for URLs. Therefore we provide `\urlfmt{⟨url⟩}` as follows:

```
25  \providecommand*{\urlfmt}{\texttt}
```

The user may (later) choose a more advanced treatment by loading url.sty and

```
\renewcommand{\urlfmt}{\url}
```

The file name format `\filenamefmt{⟨file-name⟩}` may differ from the format for URLs—if somebody wants/adjusts it, *here* it is the *same:*

```
26  \providecommand*{\filenamefmt}{\texttt}
```

... I favor `\code` over `\texttt` as "logical markup," inspired by the `<code>` element in HTML, but it is too difficult to provide this right now here ...

(TODO 2012/12/29: This section seems to be relevant for Section 4.6.2 only and might move there.)

`\pkgnamefmt{⟨package-name⟩}` displays the name of a "package". Using `\textsf` for `\pkgnamefmt` seems to conform to common practice today—implemented here. The following code may later be suppressed at some package options, as with the choice for `\httpref`:

```
27  % \@ifdefinable\pkgnamefmt {\let\pkgnamefmt\@firstofone}
28  % \AtBeginDocument          {\let\pkgnamefmt\textsf}
```

← This was here until v0.7, makes a difference for PDF vs. blog/HTML. [Cf. Section 4.2!? TODO]—Now we choose the same as with `\urlfmt`:

```
29  \providecommand*{\pkgnamefmt}{\textsf}
```

Indeed, the same day we are providing `\textsf` in blog.sty. However, the rationale of the earlier solution was that web pages use sans-serif as the *normal* font ...

4.5 Providing \httpref and \httpsref

`\httpref{⟨host-path[#frag]⟩}{⟨text⟩}`

should display ⟨*text*⟩ as a link to `http://`⟨*host-path[#frag]*⟩;

`\httpsref{⟨host-path[#frag]⟩}{⟨text⟩}`

is the obvious analogue for `https:` URLs. In case `\begin{document}` is found with a definition of `\href` present, we provide definitions of `\httpref` and `\httpsref` in terms of `\href` there:

```
\AtBeginDocument{%
    \@ifundefined{href}{%
%         \PackageError ... TODO!? 2011/01/24
      }{\newcommand*{\httpref} [1]{\href {http://#1}}%
        \newcommand*{\httpsref}[1]{\href{https://#1}}}}
```

4.6 Variants of \httpref and \httpsref

`\NormalHTTPref` may be used as an alias for `\httpref` in situations where the latter has been redefined (as in Section 4.6.3):

```
\AtBeginDocument{\newlet\NormalHTTPref\httpref}  %% TODO: sec:opt
```

`\ithttpref{`⟨*url*⟩`}{`⟨*text*⟩`}` displays ⟨*text*⟩ in italics:

```
% \newcommand*{\ithttpref}[2]{\NormalHTTPref{#1}{\textit{#2}}}
```

However, I seem never to have used it. And I would now prefer `\metahttpref` TODO ...

4.6.1 Protocol Prefix

`\httpprefix` is an idea that was missing in blog.sty up to v0.3. It may be used to determine generally whether a display of an URL should include `http://`. I choose as default what was default in blog.sty (i.e., "don't include"):

```
\newlet\httpprefix\@empty                    %% \newlet 2015/05/25
```

`\let\httpprefix\relax` would be bad for blog.sty (would display `\relax`), while it would be somewhat more efficient.

Now you may customize `\httpprefix` by

```
\renewcommand{\httpprefix}{http://}
```

—or by `\let\httpprefix\theHTTPprefix`:

```
\newcommand*{\theHTTPprefix}{http://}
```

With `\urlhttpsref{`⟨*url*⟩`}`, we *force* displaying '`https://`':

```
\newcommand*{\urlhttpsref}[1]{\httpsref{#1}{\urlfmt{https://#1}}}
```

4.6.2 The URL (or a Part) as the Link Text Phrase

With `\urlhttpref{⟨url⟩}`, that URL ⟨*url*⟩ is displayed:

```
40 \newcommand*{\urlhttpref}[1]{%
41     \NormalHTTPref{#1}{\urlfmt{\httpprefix#1}}}
```

In blog.sty (as of 2010/05/26), there was a command `\urlref` instead of `\urlhttpref`. It did not provide `\urlfmt`.

`\domainref{⟨domain⟩}{⟨path⟩}` is similar, but is intended to show the domain part ⟨*domain*⟩ of the URL ⟨*domain*⟩`/`⟨*path*⟩ only. This may be useful when the entire URL does not look nice, while the domain name is a kind of logo, and when comparing what different web portals have to say about the same matter, such as the web versions of newspapers or magazines. So you may compare how `www.ctan.org` and `tug.ctan.org` display the top-level `macros` directory of the TEX archive.

```
42 \newcommand*{\domainref}[2]{\httpref{#1/#2}{\urlfmt{#1}}}
```

Note that on some domains only domain, an article ID and maybe the `.html` suffix and/or a "category" between domain and ID is required for a working URL, as opposed to an URLthat is displayed in the browser's address line and contains a kind of transcription of the article's title—e.g., `tex.stackexchange.com/questions/84878`.

v0.83 adds `\prefixref{⟨prefix⟩}{⟨suffix⟩}{⟨text⟩}` just as an alias for `\domainref` because the same function may be useful in some cases when ⟨*domain*⟩`/`⟨*path*⟩, for some code strings ⟨*prefix*⟩ and ⟨*suffix*⟩, is the same as ⟨*prefix*⟩⟨*suffix*⟩ and ⟨*prefix*⟩ for some ⟨*category*⟩, is the same as ⟨*domain*⟩`/`⟨*category*⟩:

```
43 \newlet\prefixref\domainref
```

Then you may compair how

`www.ctan.org/tex-archive`

and

`tug.ctan.org/tex-archive`

display the `generic` subdirectory of the `macros` directory.

4.6.3 Linking URLs in Footnotes

`\foothttpurlref{⟨url⟩}` just is like `\footnote{\urlhttpref{⟨url⟩}}`:

```
44 \newcommand*{\foothttpurlref}[1]{\footnote{\urlhttpref{#1}}}
```

`\urlfoot{⟨short⟩}{⟨id⟩}` redefines `\httpref` so that you can use all the shorthand macros based on `\httpref` to get the according URL display (as provided by `\urlhttpref`) in a footnote without the need to include the entire URL in

your source code. `\urlfoot` is available with ⟨*short*⟩ and ⟨*id*⟩ when a shorthand `\⟨short⟩{⟨id⟩}{⟨text⟩}` has been defined where \⟨*short*⟩ is the macro name and ⟨*id*⟩ is the target identifier (usually part of the URL generated from ⟨*id*⟩) according to the syntax declaration of \⟨*short*⟩.

```
45  \newcommand*{\urlfoot}[2]{{%
46      \let\httpref\foothttpurlref
47      \let\httpprefix\theHTTPprefix   %% TODO customizable!?
48      \csname #1\endcsname{#2}{}}}
```

Example:

`\CtanPkgRef{morehype}{MoreHype}` and `\ctanpkgref{morehype}`

are provided in Section 7.1.9 for linking to `http://ctan.org/pkg/morehype`.

- `\CtanPkgRef{morehype}{MoreHype}` yields MoreHype
- `\urlfoot{CtanPkgRef}{morehype}` yields [5]
- `\ctanpkgref{morehype}` yields morehype
- `\urlfoot{ctanpkgref}{morehype}` yields [6]morehype

The lonely 'morehype' you see there above demonstrates that it doesn't work with `ctanpkgref` because `\ctanpkgref` doesn't have separate arguments for ⟨*id*⟩ and ⟨*text*⟩, it actually doubles ⟨*id*⟩. A local `\let\ctanpkgref\CtanPkgRef` could help, but right now I prefer waiting for a better idea. [TODO]

v0.3: Now that using `\urlfoot` and `ctanpkgref` together is so clumsy, while I use it quite often, we get `\urlpkgfoot{⟨package-id⟩}`, abbreviating `\urlfoot{CtanPkgRef}{⟨package-id⟩}`:

```
49  \newcommand* {\urlpkgfoot} {\urlfoot{CtanPkgRef}}
```

4.6.4 URL Bases

We typically refer to many web pages under a certain domain, or in certain subdirectories there. Before v0.6, I made many definitions like

`\newcommand*{\myref}[1]{\httpref{⟨my-base⟩/#1}}`

for this purpose. Storing the definition of such a `\myref` uses 8 tokens in addition to those from ⟨*my-base*⟩. With

`\newcommand*{\myref}{\httpbaseref{⟨my-base⟩}}`

we need 5 tokens instead, using `\httpbaseref{⟨base⟩}{⟨rest⟩}{⟨text⟩}` defined as follows:

[5] `http://ctan.org/pkg/morehype`
[6] `http://ctan.org/pkg/morehype`

```
50  \newcommand*{\httpbaseref}[2]{\httpref{#1/#2}}
```

Then `\myref{`⟨*rest*⟩`}{`⟨*text*⟩`}` will work like

`\httpref{`⟨*my-base*⟩`/`⟨*rest*⟩`}{`⟨*text*⟩`}`

We change many definitions in ensuing sections accordingly—and with v0.82 we add a shorthand for definitions like the avove one for `\myref`.

`\MakeBasedHref{`⟨*cmd*⟩`}{`⟨*base*⟩`}`

may be applied as

`\MakeBasedHref{\myref}{`⟨*my-base*⟩`}`

above. In the general situation, ⟨*cmd*⟩`{`⟨*path*⟩`}{`⟨*text*⟩`}` will work like

`\httpref{`⟨*base*⟩`/`⟨*path*⟩`}{`⟨*text*⟩`}`

v0.83 extends this to `https` (has been tested in `texblog.fdf` for more than a year):

```
51  \newcommand*{\httpsbaseref}[2]{\httpsref{#1/#2}}        %% 2014/03/21
```

provides `\httpsbaseref{`⟨*base*⟩`}{`⟨*rest*⟩`}{`⟨*text*⟩`}`.

```
52  \newcommand*{\MakeBasedHref}[3][http]{%                 %% 2014/03/21
53      \ifx#2\@undefined \else \ifx#2\relax     %% was \ifx#1 2014/12/23
54          \PackageWarning{texlinks}{Redefining \string#2.}%
55      \fi                     \fi
56      \expandafter\def\expandafter#2\expandafter{%
```

... or `\DefExpandStart` from dowith.sty TODO ...

```
57          \csname#1baseref\endcsname{#3}}%
58  }
```

This also provides an optional argument for choosing `https` instead of `http`:

`\MakeBasedHref[https]{`⟨*cmd*⟩`}{`⟨*base*⟩`}`

Now `\newcommand*{\mysecureref}{\httpsbaseref{`⟨*my-secure-base*⟩`}}` may be replaced by

`\MakeBasedHref{\mysecureref}{`⟨*my-base*⟩`}`

– However, `\MakeBasedHref` does not act like `\newcommand` when ⟨*cmd*⟩ has been defined earlier, it rather resembles `\DeclareRobustCommand`, in that it just *warns* in such a case. I don't actually make ⟨*cmd*⟩ robust because I guess it is anyway: The reason for allowing redefinitions has been application to cases where the user should be able to customize commands (Section 7.1.6)—well, I could have `\NewBasedHref` and `\RenewBasedHref` some time TODO[7]; TODO: `\@onlypreamble`?

[7] And for sections 6.2 and 7.7, an optional argument would have been nice.

The situation is similar with (many) anchors of a (large) web page. With v0.6, we introduce

`\httpancref{`⟨*page-url*⟩`}{`⟨*anchor*⟩`}`

—*perhaps*, with `\mirrorctanref` (Section 7.1.8) etc.? TODO

```
% \newcommand*{\httpancref}[2]{\httpref{#1\##2}}
```

5 Google

`\googleref{`⟨*keywords*⟩`}{`⟨*text*⟩`}` generates a Google search page with keywords from ⟨*keywords*⟩ in which they are separated by '`+`', as in

```
\googleref{tex+friends}{\TeX~\&␣friends}
```

which results in (I'm curious ...) TEX & friends:

```
\newcommand*{\googlecom}{google.com/}
% \newcommand*{\googleref}[1]{\httpref{\googlecom\#q=#1}}
```

... correct link has been very different since 2012:

```
\newcommand*{\googleref}[1]{\httpref{\googlecom/search?q=#1}}
```

`\googlemapsref{`⟨*keywords*⟩`}{`⟨*text*⟩`}` generates a Google map from the ⟨*keywords*⟩. ⟨*keywords*⟩ may compose an address for a TEX users' meeting, so Google may show them their way.

⟨*keywords*⟩ = '`munich+offenbachstrasse+21`'

results in where this has been written.

```
\newcommand*{\googlemapsref}[1]{\httpref{maps.\googlecom maps?q=#1}}
```

6 Wikipedia

6.1 Overview

The present section on links to Wikipedia articles starts with the rather obvious

`\wikilangref{`⟨*language-code*⟩`}{`⟨*lemma*⟩`}{`⟨*text*⟩`}`

but then gets somewhat technical. Section 6.5 may please the user again by

`\Wikiref{`⟨*lemma*⟩`}`

where the language version of the Wikipedia is chosen according to a macro `\langcode` expanding to '`en`' by default. On `tex.stackexchange.com`, I have posted the following "minimal working example:"

```
\documentclass{minimal}
\usepackage{hyperref,texlinks}
\begin{document}
    Look up \wikiref{Charlie Bucket}{Wikipedia}
        for \Wikiref{Charlie Bucket}.
\end{document}
```

You may find it as `wiki_mwe.tex` with outcome `wiki_mwe.pdf`. See Section 6.5 for more examples.

Apart from `\langcode`, more advanced things are *disambiguation* (Section 6.2), "piped links" (Section 6.3), and special characters in URLs (Section 6.6).

Starting in spring 2015, the morehype bundle offers an additional package wikimed.sty that includes Wikipedias "sister projects" like Wiktionary and provides a variant of URL encoding, converting punctuation and things like umlauts for valid URLs.

6.2 Backbones

As of v0.6, we have a backbone macro

`\wikilangref{`⟨*language-code*⟩`}{`⟨*lemma*⟩`}{`⟨*text*⟩`}`

for links to Wikipedia. (It was `\wikiref` before, starting with v0.4—sorry!) ⟨*language-code*⟩ consists of two characters like '`de`' for German Wikipedia articles or '`en`' for English ones. ⟨*lemma*⟩ is the identifier of the article, and ⟨*text*⟩ is displayed as the link:

```
64  % \newcommand*{\wikilangref}[2]{\httpref{#1.wikipedia.org/wiki/#2}}
```

← 2012/03/09 etc. with Section 4.6.4 →

```
65  \newcommand*{\wikilangref}[1]{\httpbaseref{#1.wikipedia.org/wiki}}
```

There is `\Wikilangref{`⟨*language-code*⟩`}{`⟨*lemma*⟩`}` for the case that ⟨*lemma*⟩ and ⟨*text*⟩ are the same. With v0.7 however, this command becomes more powerful, see Section 6.3.

```
66  % \newcommand*{\Wikilangref}[2]{\wikilangref{#1}{#2}{#2}}
```

`\wikilangref{`⟨*lang*⟩`}[`⟨*lemma*⟩`]{`⟨*text*⟩`}` would be nicer; however, the present code is to work with blog.sty which does not support optional arguments.

Quite often, programs share their names with movies, biological species, etc., then lemma disambiguation is required. Usually, we don't want to display the disambiguation.

`\Wikilangdisambref{`⟨*language-code*⟩`}{`⟨*term*⟩`}{`⟨*tag*⟩`}`

will link to

`http://`⟨*language-code*⟩`.wikipedia.org/wiki/`⟨*term*⟩`_(`⟨*tag*⟩`)`

```
\newcommand*{\Wikilangdisambref}[3]{\wikilangref{#1}{#2 (#3)}{#2}}
```

There was something like a more general variant `\wikidisambref`, now I doubt its usefulness and omit it in order to see where it occurs (2011/05/13).

For **anchors**, '`#`' can be used with blog.sty—and even with hyperref.

Example: `\wikilangref{en}{TeX#History}{history}` for history

6.3 Piped Links

v0.7 emulates Wikipedia's piped links as with Wikipedia source code

```
[[Pipeline|Pipe]]
```

to get a link to article 'Pipeline' with displayed text 'Pipe'. The same syntax (double brackets) is actually supported by blog.sty with markblog.sty, while otherwise only

`\Wikilangref{`⟨*language-code*⟩`}{`⟨*lemma*⟩`|`⟨*text*⟩`}`

works—with settings more below something like `\Wikiref{`⟨*lemma*⟩`|`⟨*text*⟩`}`—which admittedly is not much better than the equivalent

`\wikiref{`⟨*lemma*⟩`}{`⟨*text*⟩`}`

Even Wikipedia's feature that empty ⟨*text*⟩ removes the disambiguation term as with `[[Pipe␣(computing)|]]` resulting in 'Pipe' is supported.

```
\newcommand*{\Wikilangref}[2]{%
    \@wikilpref{#1}#2\BiteSep|\@nnil\BiteSep\@nil{#2}}
```

I have introduced `\BiteSep` and this kind of parsing in the bitelist [8] package.

```
\def\@wikilpref#1#2|#3\BiteSep#4\@nil#5{%
    \ifx\@nnil#3\@empty
        \wikilangref{#1}{#5}{#5}%
    \else
        \wikilangref{#1}{#2}{%
            \ifx\@three#3\@three
                \wiki@noparen#2\@nil%
            \else
                #3%
            \fi}%
    \fi}
\def\wiki@noparen#1 (#2\@nil{#1}
```

(Removing bitelist considerations 2015/05/22 ...

[8] http://ctan.org/pkg/bitelist

6.4 English and German

The next macros just save you from typing braces around the language codes for English and German: `\wikienref{⟨lemma⟩}{⟨text⟩}` refers to the English Wikipedia, `\wikideref{⟨lemma⟩}{⟨text⟩}` refers to the German one.

```
\newcommand*{\wikideref}{\wikilangref{de}}
\newcommand*{\wikienref}{\wikilangref{en}}
```

`\Wikideref{⟨lemma⟩}` refers to article ⟨*lemma*⟩ in the German Wikipedia and displays ⟨*lemma*⟩ as ⟨*text*⟩:

```
\newcommand*{\Wikideref}{\Wikilangref{de}}
```

`\Wikienref{⟨lemma⟩}` is `\Wikideref`'s analogue for English:

```
\newcommand*{\Wikienref}{\Wikilangref{en}}
```

`\Wikidedisambref{⟨lemma⟩}{⟨tag⟩}` chooses a disambiguation according to ⟨*tag*⟩ for the German Wikipedia, `\Wikiendisambref{⟨lemma⟩}{⟨tag⟩}` for the English one:

```
\newcommand*{\Wikidedisambref}{\Wikilangdisambref{de}}
\newcommand*{\Wikiendisambref}{\Wikilangdisambref{en}}
```

6.5 "Implicit" Choice of Language

With v0.6, `\wikiref{⟨lemma⟩}{⟨text⟩}` works like

`\wikilangref{⟨lc⟩}{⟨lemma⟩}{⟨text⟩}`

when `\langcode` expands to ⟨*lc*⟩ (the two-letter language code according to ISO 639-1). The default for ⟨*lc*⟩ is '`en`' for English. It can be overridden even before loading texlinks (e.g., by an earlier `\newcommand\langcode{de}`):

```
\providecommand*{\langcode}{en}
```

For the German versions, use `\renewcommand{\langcode}{de}`. The langcode package provides a command `\uselangcode{⟨lc⟩}` that works like `\renewcommand*{\langcode}{⟨lc⟩}` and adjusts a number of other settings.

```
\newcommand*{\wikiref}{\wikilangref\langcode}
```

`\Wikiref{⟨lemma⟩}` and `\Wikidisambref{⟨term⟩}{⟨add⟩}` are the obvious analogues (cf. Section 6.2):

```
\newcommand*{\Wikiref}{\Wikilangref\langcode}
\newcommand*{\Wikidisambref}{\Wikilangdisambref\langcode}
```

Examples

Code:	**clickable:**
`\Wikiref{LaTeX}`	LaTeX
`\wikiref{LaTeX}{\LaTeX}`	LaTeX
`\Wikidisambref{Latex}{disambiguation}`	Latex

6.6 Blanks and Umlauts in URLs and Anchors

`\underscorechar` seemed to be useful in macro definitions. The name was inspired by LaTeX's `\@backslashchar` and `\@percentchar`. However, I am now trying what happens without it. It occurred in `blog.tex` for the documentation of the blog package, but `\string_` seems to be a good replacement.

```
% \newcommand \underscorechar {}
% {\@makeother\_ \gdef\underscorechar{_}}
```

Anyway, in my notes I have a more elegant macro for providing "other" versions of special characters.

Guessing what `\underscorechar` was good for (2011-05-17): Wikipedia lemmas and anchors often or even *typically* contain *blank spaces*. The Wikipedia software usually converts them into underscore characters. Blank spaces in *lemmas* seem *not* to need treatment here in texlinks. However, Wikipedia also creates *anchors* from *section headings*, which typically contain blank spaces. This has been more difficult ...

Likewise with umlauts: text encoding suffices for *lemmas* (my `\urluml` is not needed for this purpose). But umlauts in *anchors* generated from *section headings* are different. While umlauts in *lemmas* are represented by sequences starting with a *percent* character, the anchors use a *dot* instead of the percent character. Therefore now `\ancuml{`⟨*char*⟩`}` is provided:

```
\newcommand*{\ancuml}[1]{\csname ancuml:#1\endcsname}
\@namedef{ancuml:a}{.C3.A4}
\@namedef{ancuml:o}{.C3.B6}
\@namedef{ancuml:u}{.C3.BC}
\@namedef{ancuml:s}{.C3.9F}

% \newcommand*{\itwikideref}[2]{\wikideref{#1}{\textit{#2}}}

% \newcommand*{\itwikienref}[2]{\wikienref{#1}{\textit{#2}}}

% \newcommand*{\urluml}[1]{\csname urluml:#1\endcsname}
% \@namedef{urluml:a}{\#C3\#A4}
% \@namedef{urluml:o}{\#C3\#B6}
% \@namedef{urluml:u}{\#C3\#BC}
% \@namedef{urluml:s}{\#C3\#9F}           %% 2010/08/09
```

7 TEX-related

7.1 CTAN

7.1.1 Personal motivation

When I created `texlinks.sty` originally, referring to CTAN material seemed simple to me. Well, what is CTAN? Please don't ask me, see the Wikipedia article and/or its major "home page" `www.ctan.org`—or CTAN introducing itself on `ctan.org/ctan`—or the UK FAQ!—Well, in order to generate URLs from

human-readable or memorizable input and to document my macros that try to serve this purpose, I must guess what a domain or CTAN has in mind when they provide URLs, while they don't seem to tell us what they have in mind and what rules they follow. So I am just reporting what I observed and what I guess, and I am trying to introduce two technical terms ... The "discovery" section (Section 7.1.2) may be confusing, then I hope that the "summarizing section" (Section 7.1.3) will help by its tables.—The present CTAN section (Section 7.1) became especially difficult in December 2012 (cf. CTAN announcement) and January 2013 when some URLs stopped to work or changed their behavior—several times very much within a few days—and I struggled to follow.

7.1.2 CTANology: kinds of CTAN URLs (archives, bases)

One thing are **files** that have been **contributed** to the **CTAN archive** so that **users** can download them in order to run TEX on their computers, especially for new features that have been made available only in recent months. Such files are submitted to the/a CTAN archive, available through certain URLs over the internet.

It seems that after some years it became difficult to understand what features have been provided by so many contributors and how to find them. For a while, the `help` subtree of a CTAN archive tried to help here (especially the *TEX catalogue*) ... but eventually only experts could understand the abundance. So a starting page just for providing tools for **exploring** the TEX archive became useful and was provided—over certain URLs. Here I have called pages available by such URLs as "CTAN **description**" pages or so—**second thing**.

In order to save internet capacity (per time, and to save users' patience), **web mirror**s of both archive and description pages have been established and maintained—copies of the central directory structure.

I have seen two kinds of **URLs** interesting here:

- **domains** ending on `ctan.org`
- URLs ending on `/tex-archive`

TEX **archive** URLs show (only) a list of top-level directories `biblio...`, `dviware`, `fonts`, `graphics`, `help`, `indexing`, `info`, `install`, `language...`, `macros`, `obsolete`, `support`, `systems`, `tds`, `usergrps`, and `web`. This is what characterizes TEX *archives* or their *roots*, as opposed to *description* pages, by their **content** (as opposed to characterization by the form of **URLs**). Including deeper subdirectories, the directory structures of all TEX archives are the same ("mirrors"). They change by new contributions, but within 24 hours, other TEX archives copy the changes of the first one.—There are several **designs** of archive root pages, varying between archive *mirrors.*

CTAN **description** pages have *roots* as well, and texlinks previously has chosen macro names containing `ctanorgbase` for accessing them, so there is an idea to call those roots **CTAN bases**. In spring 2015, all bases I know have the same **design**, and they actually *combine* archive and description: an upper

section shows the archive top-level directories, the remaining page offers the description/exploring tools. To compare bases with archives in terms of top-level subdirectories, I know of CTAN base subdirectories `pkg`, `author`, `topic`, and `tex-archive`.

7.1.3 Summary tables with macro names

In the following tables, a macro in the right-hand column is just *one* to access paths under the corresponding URL in the left-hand column, so the list of macros probably is not complete here, it just is to give an *idea* for the following sections. The `\nullctan...` macros keep some `\ctan...` control sequences free so the latter are available as shorthands for accessing the users' favorite domains.

The first table is a list of URLs resolving to CTAN description bases according to the previous subsection (Section 7.1.2) I know of. (It shrinked and changed much after some very recent discoveries of mine.) Sections starting at Section 7.1.9 tell about many more macros for accessing description pages.

CTAN bases for package descriptions	
URL	**macro**
`www.ctan.org`	`\wwwctanorgbaseref{`⟨*path*⟩`}{`⟨*text*⟩`}`
`ctan.org`	`\nullctanorgbaseref{`⟨*path*⟩`}{`⟨*text*⟩`}`
`dante.ctan.org`	—

Remarks: (a) `www.ctan.org` and `ctan.org` have the same functionality.

(b) `\nullctanorgbaseref` appears here rather than `\ctanorgbaseref` because the latter is used as an alias for either `\wwwctanorgbaseref` or `\nullctanorgbaseref`, by default for `\ctanorgbaseref`, cf. Section 7.1.9.

(c) `dante.ctan.org` just redirects to `www.ctan.org`.

The second table is a list of URLs resolving to CTAN TEX archives according to the previous subsection (Section 7.1.2) I know of. Macros are described from Section 7.1.5 onwards.

CTAN archives	
URL	**macro**
`www.ctan.org/tex-archive`	`\wwwctanref{`⟨*path*⟩`}{`⟨*text*⟩`}`
`ctan.org/tex-archive`	`\nullctanref{`⟨*path*⟩`}{`⟨*text*⟩`}`
`tug.ctan.org/tex-archive`	—
`tug.ctan.org`	`\tugctanref{`⟨*path*⟩`}{`⟨*text*⟩`}`
`dante.ctan.org/tex-archive`	`\dantectanref{`⟨*path*⟩`}{`⟨*text*⟩`}`
`ctan.sciserv.eu`	`\sciservref{`⟨*path*⟩`}{`⟨*text*⟩`}`
`mirror.ctan.org`	`\mirrorctanref{`⟨*path*⟩`}{`⟨*text*⟩`}`
⟨*domain*⟩`/`⟨*path*⟩`tex-archive`	TODO
⟨*domain*⟩`/`⟨*path*⟩`ctan/`	TODO
⟨*domain*⟩	TODO

Remarks: (a) `\nullctanref` rather than `\ctanref` appears here because the latter is used as an alias for one of the other `ctanref` commands, by default for `\mirrorctanref`, cf. Section 7.1.5.

(b) `tug.ctan.org/tex-archive`, `tug.ctan.org`, `dante.ctan.org/tex-archive`, and `ctan.sciserv.eu` have the same functionality; which includes (i) that they show the same page of its own design and (z) that this page includes a few lines of links to the basic functions of `www.ctan.org`. The design is much less heavy than the design of `www.ctan.org` with respect to (α) graphics and to (β) the number of columns. At its bottom, the page describes itself as "experimental" and as dating from February 2015 (observed in May 2015).

(c) **Examples** for `⟨domain⟩/⟨path⟩/tex-archive`, `⟨domain⟩/⟨path⟩ctan` and `⟨domain⟩` (as listed below `mirror.ctan.org`) are **mirrors** of `ctan.org/tex-archive` or `www.ctan.org/tex-archive` and appear as (somewhat random) resolutions of `mirror.ctan.org`. ⟨*path*⟩ may be empty. `tug.ctan.org` and `ctan.sciserv.eu` listed earlier actually are examples of the last entry, and `dante.ctan.org/tex-archive` exemplifies the other lower entry. The file `in` the root directory of any TEX archive should contain all the example URLs to which `mirror.ctan.org` resolves. However, my intention (which failed) for the final table entries was that they exemplify mirrors with rather *simple* directory designs, as opposed to the URLs listed in the upper part of the table.

7.1.4 Some CTAN Domains

`\ctanorg` saves a few tokens, using `\nullctanorg` for `ctan.org` (latter new with v0.83, keeping ultimate expansion of `\ctanorg` from prior versions).

```
\newcommand*{\nullctanorg}{ctan.org}
\newcommand*{\ctanorg}{.\nullctanorg}
```

`\nullctanorg` and `\wwwctanorg` are useful both for description pages and TEX archives:

```
\newcommand*{\wwwctanorg}{www\ctanorg}
```

Referring to **"description"** pages according to Section 7.1.2 (`\httpbaseref` from Section 4.6.4):

`\wwwctanorgbaseref{⟨path⟩}{⟨text⟩}` links to `www.ctan.org`:

```
\newcommand*{\wwwctanorgbaseref}{\httpbaseref\wwwctanorg}
```

`\nullctanorgbaseref{⟨path⟩}{⟨text⟩}` is like the previous command without `www.`:

```
\newcommand*{\nullctanorgbaseref}{\httpbaseref\nullctanorg}
```

`\metactan@ref{⟨sub⟩}{⟨ref-cmd⟩}` for some "null" vs. `www`-commands that are defined in Section 7.1.9:

```
\newcommand*{\metactan@ref}[3]{#2{#1/#3}}
```

7.1.5 Fixed Macros for Paths in Various TEX Archives

Shorthands for paths. `\texarchive` saves a few tokens:

```
112 \newcommand*{\texarchive}{/tex-archive}
```

Typically, LaTeX macro packages in `macros/latex/contrib/` are discussed, so here is `\ltxcontrib` saving both characters and tokens (no starting slash so it can be used with `\httpbaseref`; likewise no final one—hopefully only used in present demos before v0.83):

```
113 \newcommand*{\ltxcontrib}{macros/latex/contrib}
```

We now proceed along the second table of Section 7.1.3:

Advanced design of directories. TEX archive directories on `www.ctan.org` and `ctan.org` show an advanced design, as compared with mirror TEX archives. They can be accessed by

- `\wwwctanref{`⟨*path*⟩`}{`⟨*text*⟩`}` and
- `\nullctanref{`⟨*path*⟩`}{`⟨*text*⟩`}` respectively

(⟨*path*⟩ without starting slash):

```
114 \MakeBasedHref{\wwwctanref} {\wwwctanorg/\texarchive}
115 \MakeBasedHref{\nullctanref}{\nullctanorg/\texarchive}
```

Examples

Code:	**clickable:**
`\wwwctanref{}{Archive root}`	Archive root
`\wwwctanref{macros/generic}{generic macros}`	generic macros
`\nullctanref{macros/generic}{generic macros}`	generic macros
`\nullctanref{\ltxcontrib/morehype}{hypertext}`	hypertext

In the final example, you see that the "directory" design even includes something like the corrsponding **package description**—especially the "README" is displayed in a "frame."

Advanced root page design. Next, there are archive roots showing a special *starting page*, while subdirectories show a rather simple design.

- `\tugctanref{`⟨*path*⟩`}{`⟨*text*⟩`}`,
- `\dantectanref{`⟨*path*⟩`}{`⟨*text*⟩`}`, and
- `\sciservref{`⟨*path*⟩`}{`⟨*text*⟩`}`

make ⟨*text*⟩ a link to a TEX Archive directory or file ⟨*path*⟩ on the corresponding domain:

```
116 \MakeBasedHref{\tugctanref}{tug\ctanorg}
```

(`tug.ctan.org` once behaved like `alan.smcvt.edu`, Jim Hefferon's former CTAN interface.)

```
117 \MakeBasedHref{\dantectanref}{dante\ctanorg/\texarchive}
118 \MakeBasedHref{\sciservref}{dante\ctanorg}
```

Using the *empty* ⟨*path*⟩ may be most interesting for that starting page; otherwise they may simply serve as (known) *nearby mirrors*—speed preferred over design.

Examples

Code:	**clickable:**
`\tugctanref{}{Archive root}`	Archive root
`\tugctanref{info}{Info}`	Info

Random mirrors. For speed, saving energy (i.e., the *world*), and certain servers from overload, using `mirror.ctan.org` is recommended, which automatically chooses a CTAN *mirror*.

`\mirrorctanref{`⟨*path*⟩`}{`⟨*text*⟩`}`.

is provided for this purpose:

```
119 \MakeBasedHref{\mirrorctanref}{mirror\ctanorg}
```

Resulting design may be poor ...

Examples

Code:	**clickable:**
`\mirrorctanref{}{Archive root}`	Archive root
`\mirrorctanref{help}{Help}`	Help

7.1.6 `\ctanref` for Favourite Mirror, Customizing

`\ctanref` should work like one out of

- `\wwwctanref`, `\nullctanref`,
- `\tugctanref`, `\dantectanref`, `\sciservctanref`, and
- `\mirrorctanref`,

(as listed in the second table of Section 7.1.3) depending on which out of

- `\usewwwctan`, `\usenullctan`,
- `\usetugctan`, `\usedantectan`, `\usesciservctan`, and
- `\usemirrorctan`,

appeared most recently. By **default**, `\ctanref` works like `\mirrorctanref`. So in any case its syntax is

`\ctanref{`⟨*path*⟩`}{`⟨*text*⟩`}`.

The idea is that it is a shorthand to access the user's favourite CTAN mirror, or just to save the `www` in `\wwwctanref`, for instance. It may also be modified directly using

`\MakeBasedHref{\ctanref}{`⟨*ctan-mirror*⟩`}`

where ⟨*ctan-mirror*⟩ is a URL of a root of a CTAN mirror (imitate code from Section 7.1.5—TODO: more URLs in Section 7.1.4?), or by

`\renewcommand{\ctanref}{\`⟨*prefix*⟩`ctanref}`

```
120  \newcommand*{\let@ctanref}{\let\ctanref}          %% v0.83 2015/05/22
121  \newcommand*{\usemirrorctan}{\let@ctanref\mirrorctanref
122      %% v0.83 rm. reminiscence of \let\ctanfileref
123  }
```

`\usemirrorctan` *sets* the **default** meaning for `\ctanref` as announced (so it uses `mirror.ctan.org`):

```
124  \usemirrorctan
125  \RequirePackage{domore}
126  \setdo[2]{\newcommand*#1{\let@ctanref#2}}
```

TODO `\DoDoWithMore`?

```
127  \DoWithMore\do{\usewwwctan     \wwwctanref  }
128                {\usenullctan    \nullctanref }
129                {\usetugctan     \tugctanref  }
130                {\usedantectani  \dantectanref}
131                {\usesciservctan \sciservref  }\StopDoing
```

v0.83 drops `\myctanref`, while it might be useful for the user's preferred mirror. However, Section 7.1.5 should show how to set up `\myctanref` then, and

`\renewcommand*{\ctanref}{\myctanref}`

could replace the `\usemyctan` I haven't put here.

7.1.7 Opening/Downloading Files from an Archive

You may actually want to *open* a file ⟨*file-name*⟩ in ⟨*path*⟩ of a TEX archive by clicking on ⟨*file-name*⟩ (which is formatted by `\filenamefmt` from Section 4.4)—or to *offer* this opportunity to readers of your document. In this case, the formatting of CTAN pages (directories) doesn't matter at all, so a randomly chosen archive mirror should do: `\mirrorctanfileref{`⟨*path*⟩`}{`⟨*file-name*⟩`}`

```
132 \newcommand*{\CTANfileref[3]{#1{#2/#3}{\filenamefmt{#3}}}
133 \newcommand*{\mirrorctanfileref}{\CTANfileref\mirrorctanref}
```

`\ctanfileref{`⟨*path*⟩`}{`⟨*file-name*⟩`}` is provided as an alias or shorthand for `\mirrorctanfileref`:

```
134 \newlet\ctanfileref\mirrorctanfileref
```

Examples

Code:	**clickable:**
`\ctanfileref{\ltxcontrib/filedate/doc}{filedate.pdf}`	filedate.pdf
`\ctanfileref{\ltxcontrib/filedate}{README}`	README
`\ctanfileref{\ltxcontrib}{filedate.zip}`	filedate.zip

`\mirrorctanfileref` should not be changed, while the user might

`\renewcommand*{\ctanfileref}{\CTANfileref`⟨*archive-ref*⟩`}`

with ⟨*archive-ref*⟩ from the previous section or the second table in Section 7.1.3 (immitate the earlier definition of `\mirrorctanfiler`), or s(h)e might

`\newcommand*{\myctanfileref}{\CTANfileref`⟨*archive-ref*⟩`}`

and (temporarily)

`\renewcommand*{\ctanfileref}{\myctanfileref}`

(`\filectanref` that I earlier offered for customizing is dropped with v0.83.)

It may be psychologically useful to have an *opposite* to `\ctanfileref` that can easily be recognized as such, while `\ctanref` may be unclear. I offer `\dirctanref{`⟨*path*⟩`}{`⟨*text*⟩`}` ... as a kind of alias for `\ctanref`—you might change that by `\renewcommand`:

```
135 \newcommand*{\dirctanref}{\ctanref}
```

Note: Links for opening CTAN files with a different link text than the filename can be generated by `ctanref` commands discribed earlier.

7.1.8 The TEX Catalogue OnLine

Before v0.8, only Jürgen Fenn's Topical Index of the Catalogue was supported. v0.8 adds package descriptions displayed by the Catalogue. The following shorthand `\catalogueref{⟨path[#frag]⟩}{⟨text⟩}` is an auxiliary for both of them (and other ⟨*path*⟩s the user might want). With empty ⟨*path*⟩, it generates an URL of a root in a CTAN mirror of *The TEX Catalogue OnLine*:

```
136 \newcommand*{\catalogueref}[1]{\mirrorctanref{help/Catalogue/#1}}
```

The user may modify this by

```
\renewcommand*{\catalogueref}[1]{\myctanref{help/Catalogue/#1}}
```

or by

```
\MakeBasedHref{\catalogueref}{texcatalogue\ctanorg}
```

—cf. `texcatalogue.ctan.org`.

Some mirrors seem to display the Catalogue's root directory only this way, while others display the "Welcome" page. `\cataloguestartref{⟨text⟩}` accesses the **Welcome** (**start**) page surely:

```
137 \newcommand*{\cataloguestartref}{\catalogueref{index\html}}
```

`\bytopicref{⟨anchor⟩}{⟨text⟩}` makes ⟨*text*⟩ a link to ⟨*anchor*⟩ of **Jürgen Fenn's Topical Index** of the TEX Catalogue. You find the ⟨*anchor*⟩ by clicking at the respective TOC entry on top of the page and then read the URL from the browser's navigation display.

```
138 \newcommand*{\bytopicref}[1]{\catalogueref{bytopic\html\##1}}
```

Example: `\bytopicref{html}{\TeX~to HTML}` for TEX to HTML

`\catpkgref{⟨pkg-name⟩}` makes ⟨*pkg-name*⟩ a link to the description of the **package** ⟨*pkg-name*⟩ in *The TEX Catalogue Online*.

`\CatPkgRef{⟨name⟩}{⟨Name⟩}`

is a variant for the cases where authors have a special idea ⟨*Name*⟩ using some capital letters when they describe their packages (ASCII versions of "logos" such as `BibTeX`) while the identifier ⟨*name*⟩ doesn't allow capital letters. Also, ⟨*Name*⟩ may be a package from a *bundle* ⟨*name*⟩ where ⟨*name*⟩ has a description page while ⟨*Name*⟩ doesn't have its *own* description page ...

Example: `\CatPkgRef{morehype}{texlinks}` for texlinks

```
139 \newcommand*{\catpkgref}{\DoubleArg\CatPkgRef}
140 %\newcommand*{\CatPkgRef}[1]{%
141 %   \cat@ctan@pkg@ref\catalogueref{entries/#1\html}}
```

← v0.83 2015/05/20 →

```
\newcommand*{\CatPkgRef}{\cat@ctan@pkg@ref\catpkggenref}
```

v0.83 introduces `\catpkggenref{⟨pkg-name⟩}{⟨text⟩}` where formatting ⟨*text*⟩ is up to the user (or not special formatting required):

```
\newcommand*{\catpkggenref}[1]{\catalogueref{entries/#1\html}}
```

`\cat@ctan@pkg@ref⟨cmd⟩{⟨path⟩}{⟨text⟩}` ensures that ⟨*Name*⟩ is typeset as the argument of `\pkgnamefmt` (Section 4.4). It is used in Section 7.1.9 again:

```
\newcommand*{\cat@ctan@pkg@ref}[3]{#1{#2}{\pkgnamefmt{#3}}}
```

Example: `\catpkgref{morehype}` for morehype

7.1.9 Single Packages without The TEX Catalogue

v0.83 introduces a way to refer to a package description without telling a package's name. `\wwwctanpkggenref{⟨id⟩}{⟨text⟩}` does not coerce ⟨*text*⟩ into a special format:

```
\newcommand*{\metactan@pkgref}{\metactan@ref{pkg}}
\newcommand*{\wwwctanpkggenref}{\metactan@pkgref\wwwctanorgbaseref}
```

Example:

```
\wwwctanpkggenref{morehype}{an awesome bundle}
```

for an awesome bundle

`\nullctanpkggenref{⟨id⟩}{⟨text⟩}` similarly without `www.`:

```
\newcommand*{\nullctanpkggenref}{\metactan@pkgref\nullctanorgbaseref}
```

`\wwwctanpkgref{⟨pkg-name⟩}` makes ⟨*pkg-name*⟩ a link to a package info page for the package ⟨*pkg-name*⟩ on `www.ctan.org`. ⟨*pkg-name*⟩ is displayed and formatted by `\pkgnamefmt{⟨pkg-name⟩}`. `\WwwCtanPkgRef{⟨name⟩}{⟨Name⟩}` is a variant of `\wwwctanpkgref` relating to the latter as `\CatPkgRef` relates to `\catpkgref` (Section 7.1.8):

```
\newcommand*{\wwwctanpkgref}{\DoubleArg\wwwCtanPkgRef}
\newcommand*{\WwwCtanPkgRef}{\cat@ctan@pkg@ref\wwwctanpkggenref}
% %% Using '\cat@ctan@pkg@ref' from \secref{texcat}:
% \newcommand*{\Ct@nPkgRef}[2]{\cat@ctan@pkg@ref#1{pkg/#2}}
```

`\wwwctanpkgstyref{⟨name⟩}` adds '`.sty`' to the package name:

```
\newcommand*{\wwwctanpkgstyref}[1]{\wwwCtanPkgRef{#1}{#1.sty}}
```

Likewise `\nullctanpkgstyref{⟨name⟩}` etc.:

```
\newcommand*{\nullctanpkgstyref}[1]{\nullCtanPkgRef{#1}{#1.sty}}
\newcommand*{\nullctanpkgref}{\DoubleArg\nullCtanPkgRef}
\newcommand*{\NullCtanPkgRef}{\cat@ctan@pkg@ref\nullctanpkggenref}
```

Command names \ctanpkgstyref, \ctanpkgref, \CtanPkgRef, and \ctanpkggenref interrelate analogously. I expect these ones are mainly used. Their exact behavior can be chosen from the \nullctan..., \wwwctan... things, they even can use the TEX catalogue:

```
\newcommand*{\ctanpkgstyref}[1]{\CtanPkgRef{#1}{#1.sty}}
\newcommand*{\ctanpkgref}{\DoubleArg\CtanPkgRef}
\newcommand*{\CtanPkgRef}{\cat@ctan@pkg@ref\ctanpkggenref}
\newcommand*{\ctanpkggenref}{\metactan@pkgref\ctanorgbaseref}
```

v0.83 abolishes tugctanorgbaseref as tug.ctan.org no longer has a pkg toplevel subdirectory:

```
% \newcommand*{\useTUGpkgpages}{\let\CtanPkgRef\TugCtanPkgRef}
```

After \useWWWpkgpages, the package descriptions from www.ctan.org are used:

```
\newcommand*{\let@ctanobref}{\let\ctanorgbaseref}
\newcommand*{\useWWWpkgpages}{\let@ctanobref\wwwctanorgbaseref}
```

After \useOpkgpages, \CtanPkgRef and \ctanpkgref use the package descriptions from ctan.org. This command and the previous \useOpkgpages also decide whether author (Section 7.1.10), topic, and search pages (Section 7.1.11) have www. in their URL or not:

```
\newcommand*{\useOpkgpages}{\let@ctanobref\nullctanorgbaseref}
```

And the latter is the **default:**

```
\useOpkgpages
```

After \useCATpkgpages, \CtanPkgRef and \ctanpkgref use the TEX Catalogue to display package informations. The content should be much the same as with [www.]ctan.org, the same database is used, it is the design that differs:

```
\newcommand*{\useCATpkgpages}{\let\CtanPkgRef\CatPkgRef}
```

Finally, we provide experimental

\AllPkgRefs{⟨*name*⟩}{⟨*Name*⟩} and \allpkgrefs{⟨*name*⟩}

offering choice between the two interfaces for each package. 'c' will stand for The TEX Catalogue and 'w' for www.ctan.org. After \useALLpkgpages, this is what \CtanPkgRef and \ctanpkgref offer:

```
\newcommand*{\AllPkgRefs}[2]{%
    \pkgnamefmt{#2}\,[\CatPkgRef{#1}{c}\textbar
    %                 \TugCtanPkgRef{#1}{t}\textbar %% rm. v0.83
                      \WwwCtanPkgRef{#1}{w}]}
\newcommand*{\allpkgrefs}{\DoubleArg\AllPkgRefs}
\newcommand*{\useALLpkgpages}{\let\CtanPkgRef\AllPkgRefs}
```

Example: `\allpkgrefs{morehype}` for morehype [c|w]

(With blog.sty, this requires some `\def\textbar{|}` TODO.)

7.1.10 Package Author Pages

`\wwwctanpkgauref{`⟨*id*⟩`}{`⟨*description*⟩`}` creates a link to the list of packages somebody described by ⟨*description*⟩ maintains:

```
\newcommand*{\metactan@auref}{\metactan@ref{author}}
\newcommand*{\wwwctanpkgauref}{\metactan@auref\wwwctanorgbaseref}
```

Example: `\wwwctanpkgauref{lueck}{mine}` for mine

`\nullctanpkgauref{`⟨*id*⟩`}{`⟨*description*⟩`}` removes `www.`:

```
\newcommand*{\nullctanpkgauref}{\metactan@auref\nullctanorgbaseref}
```

`\ctanpkgauref{`⟨*id*⟩`}{`⟨*description*⟩`}` chooses from the former possibilities according to the `\use...` commands in the previous Section 7.1.9:

```
\newcommand*{\ctanpkgauref}{\metactan@auref\ctanorgbaseref}
```

7.1.11 Other Ways to Search for Packages

`\wwwctanpkgtopicref{`⟨*topic-id*⟩`}{`⟨*text*⟩`}` accesses a list of packages belonging to the "topic" with identifier ⟨*topic-id*⟩.

```
\newcommand*{\metactan@topicref}{\metactan@ref{topic}}
\newcommand*{\wwwctanpkgtopicref}{%
    \metactan@topicref\wwwctanorgbaseref}
```

Example:

`\wwwctanpkgtopicref{cvt-html}{make HTML}`

for make HTML

`\nullctanpkgtopicref{`⟨*topic-id*⟩`}{`⟨*text*⟩`}` without `www.`:

```
\newcommand*{\nullctanpkgtopicref}{%
    \metactan@topicref\nullctanorgbaseref}
```

`\nullctanpkgsearch{`⟨*text*⟩`}` and `\wwwctanpkgsearch{`⟨*text*⟩`}` create links to a page for searching packages with several options for search criteria:

```
\newcommand*{\metactan@searchref}[1]{#1{search}}
\newcommand*{\nullctanpkgsearchref}{%
    \metactan@searchref\nullctanorgbaseref}
```

Example: `\ctanpkgsearchref{CTAN~search}` for CTAN search

```
\newcommand*{\wwwctanpkgsearchref}{%
    \metactan@searchref\wwwctanorgbaseref}
```

`\ctanpkgtopicref` and `\ctanpkgsearchref` choose according to the `\use...` commands in Section 7.1.9:

```
\newcommand*{\ctanpkgtopicref}{\metactan@topicref\ctanorgbaseref}
\newcommand*{\ctanpkgsearchref}{\metactan@searchref\ctanorgbaseref}
```

The TEX Catalogue OnLine has offered searching as well, yet today this search page is just the same as the one you get by .

7.2 Mailing Lists

This section mainly provides tools for referring to pages of or postings to the CTAN announcments (Section 7.3) and texhax (Section 7.5.1) mailing lists. v0.7 relies on package langcode for `\enmonthname{`⟨*month-number*⟩`}` and `\demonthname{`⟨*month-number*⟩`}`, for tricks with language codes extending those in Section 6.5:

```
\RequirePackage{langcode}
```

The next definitions are backbones for generating links to web pages about TEX mailing lists. `\TL@piper@parse`⟨*year*⟩`-`⟨*month-number*⟩`-`⟨*id*⟩ will be used for referring to single postings:

```
\def\TL@piper@parse#1-#2-#3/{#1-\enmonthname{#2}/#3}
```

`\texlistyearmonthref`⟨*list-ref*⟩`{`⟨*2-digits*⟩`-`⟨*month-no*⟩`}`

will generate ⟨*list-ref*⟩`{`⟨*path*⟩`}` for linking to the list of postings of the ⟨*month-no*⟩th month in the year 20⟨*2-digits*⟩:

```
\newcommand*{\texlistyearmonthref}[2]{\texlist@yearmonthref#1#2\@nil}
\def\texlist@yearmonthref#1#2-#3\@nil{#1{20#2-\enmonthname{#3}}}
```

'⟨*path*⟩' will be '20⟨*2-digits*⟩`-`⟨*month*⟩', and ⟨*month*⟩ will be the *English* name of the ⟨*month-no*⟩th month of the year.

`\texlanglistmonthref`⟨*month-cmd*⟩⟨*list-ref*⟩`{`⟨*2-digits*⟩`-`⟨*month-no*⟩`}`

will generate ⟨*list-ref*⟩`{`⟨*path*⟩`}{`⟨*month*⟩`}` where ⟨*month*⟩ is determined from ⟨*month-no*⟩ by ⟨*month-cmd*⟩:

```
\newcommand*{\texlanglistmonthref}[3]{\texlanglistm@nthref#1#2#3\@nil}
\def\texlanglistm@nthref#1#2#3-#4\@nil{%
    #2{20#3-\enmonthname{#4}}{#1{#4}}}
```

`\detexlistmonthref`⟨*list-ref*⟩`{`⟨*2-digits*⟩`-`⟨*month-no*⟩`}` now could be used for ⟨*list-ref*⟩`{`⟨*path*⟩`}{`⟨*month*⟩`}` *German* ⟨*month*⟩ ...

```
\newcommand*{\detexlistmonthhref}{\texlanglistmonthhref\demonthname}
```

... as could be `\entexlistmonthhref{⟨list-ref⟩}{⟨2-digits⟩-⟨month-no⟩}` for *English* ⟨*month*⟩ ...

```
\newcommand*{\entexlistmonthhref}{\texlanglistmonthhref\enmonthname}
```

With proper use of langcode however,

`\texlistmonthhref{⟨list-ref⟩}{⟨2-digits⟩-⟨month-no⟩}`

automatically chooses between English and German ⟨*month*⟩ (according to intention ...):

```
\newcommand*{\texlistmonthhref}{\texlanglistmonthhref\monthname}
```

7.3 CTAN Announcements

`\ctanannref{⟨id⟩}{⟨text⟩}` makes ⟨*text*⟩ a link to the DANTE web page displaying a CTAN announcement. You find ⟨*id*⟩ by searching

`https://lists.dante.de/pipermail/ctan-ann/`

and then reading the URL. ⟨*id*⟩ is composed as

⟨*year*⟩`-`⟨*month*⟩`/`⟨*6-digits*⟩`.html`

where ⟨*year*⟩ consists of 4 digits and ⟨*month*⟩ is an *English* month name:

```
\newcommand*{\ctanannref}[1]{%
    \httpsref{lists.dante.de/pipermail/ctan-ann/#1}}
```

`\ctanannpref{⟨id-code⟩}{⟨text⟩}` is a variant of `\ctanannref` where in place of ⟨*id*⟩ you only type the third and fourth digit of the year (⟨*2-digits*⟩), then a '`-`', then the (arabic) number ⟨*month-no*⟩ of the month (cf. Section 7.2 so far), then another '`-`', and then the actual internal identifier ⟨*running-no*⟩ (a number of six digits preceding '`.html`' of the URL). I.e., '⟨*id-code*⟩' is '⟨*2-digits*⟩`-`⟨*month-no*⟩`-`⟨*running-no*⟩'.

```
\newcommand*{\ctanannpref}[1]{%
    \ctanannref{20\TL@piper@parse#1/\html}}          %% '20' 2012/12/08
```

`\ctanannyearmonthref{⟨2-digits⟩-⟨month-no⟩}`

generates `\ctanannref{`⟨*path*⟩`}` from '⟨*2-digits*⟩`-`⟨*month-no*⟩'—⟨*path*⟩ as in Section 7.2 ...

```
\newcommand*{\ctanannyearmonthref}{\texlistyearmonthref\ctanannref}
```

`\ctanannmonthref{⟨2-digits⟩-⟨month-no⟩}`

generates `\ctanannref{`⟨*path*⟩`}{`⟨*month*⟩`}` where ⟨*month*⟩ obeys `\langcode` ...

```
\newcommand*{\ctanannmonthref}{\texlistmonthref\ctanannref}
```

7.4 ...stack... Forums

`\stackexref{⟨id-no⟩}{⟨text⟩}` shows exchange about Question No. ⟨*id-no*⟩ on `tex.stackexchange.com`. ⟨*id-no*⟩ is the number following '`/questions/`' in the URL (the part of the URL reflecting the caption are not needed). See an example from ⟨*id-no*⟩ = 84878 in Section 6.1.

```
\newcommand*{\stackexref}{\stackquestionref{tex.stackexchange}}
\newcommand*{\stackquestionref}[2]{\httpref{#1.com/questions/#2}}
```

Likewise, `\stackoverref{⟨id-no⟩}{⟨text⟩}` links to `stackoverflow.com` (⟨*id-no*⟩ = 2118972 is about file dates):

```
\newcommand*{\stackoverref}{\stackquestionref{stackoverflow}}
```

7.5 TUG

`\tugref{⟨path⟩}{⟨text⟩}` makes ⟨*text*⟩ a link to ⟨*path*⟩ on domain `tug.org`:

```
\MakeBasedHref{\tugref}{tug.org}
```

7.5.1 texhax

`\texhaxref{⟨id⟩}{⟨text⟩}` makes ⟨*text*⟩ a link to the TUG web page displaying a texhax posting. You find ⟨*id*⟩ by searching `tug.org/pipermail/texhax/` and then reading the URL. ⟨*id*⟩ is composed as ⟨*year*⟩`-`⟨*month*⟩`/`⟨*6-digits*⟩`.html`.

```
\newcommand*{\texhaxref}[1]{\tugref{pipermail/texhax/#1}}
```

`\THref{⟨id⟩}` saves you from choosing ⟨*text*⟩ and uses `texhax` instead.

```
\newcommand*{\THref}[1]{\texhaxref{#1}{texhax}}
```

(It was `\prg{texhax}` in blog.sty, to have something logo-like, without a good idea how to implement it.)

`\texhaxpref{⟨id-code⟩}{⟨text⟩}` is a variant of `\texhaxref` where in place of ⟨*id*⟩ you only type the third and fourth digit of the year, then a `-`, then the (arabic) number of the month, then another `-`, and then the actual internal identifier (a number of six digits preceding `.html` of the URL). I made this macro because I prefer typing to copying from the URL.

```
\newcommand*{\texhaxpref}[1]{%                          %% 2010/09/07
    \texhaxref{20\TL@piper@parse#1/\html}}              %% 2011/05/03
```

`\THpref{⟨id-code⟩}` is a variant of `\THref` using ⟨*id-code*⟩ as with `\texhaxpref`:

```
\newcommand*{\THpref}[1]{\texhaxpref{#1}{texhax}}       %% 2011/03/24
```

TODO: `\texhaxPref#1` searches list of offsets to determine year/month from id ...

`\texhaxyearmonthref{⟨2-digits⟩-⟨month-no⟩}`

generates `\texhaxref{⟨path⟩}` from '⟨*2-digits*⟩`-`⟨*month-no*⟩'—⟨*path*⟩ as in Section 7.2 ...

```
213  \newcommand*{\texhaxyearmonthref}{\texlistyearmonthref\texhaxref}
```

`\texhaxmonthref{`⟨*2-digits*⟩`-`⟨*month-no*⟩`}`

generates `\texhaxref{`⟨*path*⟩`}{`⟨*month*⟩`}` where ⟨*month*⟩ obeys `\langcode` ...

```
214  \newcommand*{\texhaxmonthref}{\texlistmonthref\texhaxref}
```

7.5.2 Other

`\tugbartref{tb`⟨*vol*⟩`-`⟨*issue*⟩`/`⟨*filename-base*⟩`}{`⟨*text*⟩`}` makes ⟨*text*⟩ a link to the TUGboat article ⟨*filename-base*⟩`.pdf` in vol. ⟨*vol*⟩ and issue ⟨*issue*⟩:

```
215  % \newcommand*{\tugbartref}[1]{\tugref{TUGboat/Articles/#1\pdf}}
216  \newcommand*{\tugbartref}[1]{\tugref{TUGboat/#1.pdf}}
```

That `tb` can be dropped with

`\tugbArtref{`⟨*vol*⟩`-`⟨*issue*⟩`/`⟨*filename-base*⟩`}{`⟨*text*⟩`}`

after this definition:

```
217  \newcommand*{\tugbArtref}[1]{\tugbartref{tb#1}}
```

`\tugiref{`⟨*anchor*⟩`}{`⟨*text*⟩`}` makes ⟨*text*⟩ a link to an ⟨*anchor*⟩ on the TUG web page entitled 'TeX Resources on the Web' (e.g., ⟨*anchor*⟩ = '`web`' shows the section entitled 'TEX web projects'):

```
218  \newcommand*{\tugiref}[1]{\tugref{interest\html\##1}}
```

It was `\TUGIref` until v0.6, we keep this for compatibility (deprecated):

```
219  \newlet\TUGIref\tugiref
```

7.6 UK FAQ

`\ukfaqref{`⟨*label*⟩`}{`⟨*text*⟩`}` makes ⟨*text*⟩ a link to the UK TEX FAQ page with "label" = ⟨*label*⟩:

```
220  \newcommand*{\ukfaqref}[1]{\httpref{%
221  %   www.tex.ac.uk/cgi-bin/texfaq2html?label=#1}}
222      www.tex.ac.uk/FAQ-#1.html}}                    %% 2015/07/20
```

7.7 Wikibooks

`\wikilangbooksref{`⟨*language-code*⟩`}{`⟨*book*⟩`/`⟨*subject*⟩`}{`⟨*text*⟩`}`

```
223  \newcommand*{\wikilangbooksref}[1]{%        %% 'lang' 2012/01/06
224      \httpbaseref{#1.wikibooks.org/wiki}}
```

`\latexwikibookref{`⟨*subject*⟩`}{`⟨*text*⟩`}` refers to the (English) LATEX wikibook:

```
\newcommand*{\latexwikibookref}[1]{\wikilangbooksref{en}{LaTeX/#1}}
```

The German LaTeX-Kompendium is somewhat difficult, I leave it for now ...

`\texwikibookref{`⟨*subject*⟩`}{`⟨*text*⟩`}` refers to the *TEX* wikibook. E.g., ⟨*subject*⟩ may access a description of the TeX *primitive* \⟨*subject*⟩, such as `\texwikibookref{if}{\cs{if}}` for `\if`. However, some primitives have not been described yet, and the whole TeX wikibook largely is just a list of what needs to be done.

```
\newcommand*{\texwikibookref}[1]{\wikilangbooksref{en}{TeX/#1}}
```

8 Leaving and Version HISTORY

```
\endinput
```

VERSION HISTORY

```
v0.1    2011/01/24  new file, code from blog.sty v0.3
v0.2    2011/01/27  \urlfoot, \NormalHTTPref, \foothttpurlref,
                    "outline" adjusted;
                    more consistent use of \newcommand and
                    \@ifdefinable (TODO: guarded \let)
v0.3    2011/02/10  [blog]; \urlpkgfoot
v0.4    2011/04/27  doc. \tugbartref\ corrected
        2011/04/30  shortened link in \tugbartref
        2011/05/03  \TL@piper@parse, tried \ctanannref
        2011/05/13  reworking Wikipedia, arbitrary languages
        2011/06/27  doc.: \acro; \httpsref, \ctanannref
        2011/07/23  doc.: typo \acro{TUG}, 'Almost all', page breaks;
                    \Wikidisambref: different order of arg.s
        2011/08/18  doc.: \acro with UK; wikibooks
        2011/08/27  doc. \acro with URL and PDF;
                    more doc and code changes for https
uploaded with MOREHYPE r0.4 (not touched by r0.41)
v0.41   2011/09/03  doc.: more specific on \urluml/Wikipedia
        2011/10/06  \mirrorctanref, \tugctanfileref,
                    \mirrorctanfileref, \ltxcontrib
        2011/10/10  doc. formatting of previous
uploaded with MOREHYPE r0.5(1)
v0.5    2011/10/19  doc. fix LaTeX Wikibook
        2011/10/20  \urlfmt, \filenamefmt and \pkgnamefmt
                    changed and moved, modified doc. on them,
                    doc. uses \URL
        2011/10/21  re-order CTAN, \pagebreak's, \ctanref and
                    choice for it, doc. modified; rm. \ithttpref
uploaded with MOREHYPE r0.52
v0.6    2012/01/06  \wikilangref etc., \wikiref etc. depend on
                    \langcode
        2012/01/11  removed old comments for Wikipedia; (C)
        2012/03/09  "URL bases" (\httpbaseref etc.), applied;
```

```
                    \bytopicref uses \mirrorctanref
         2012/03/12 fixed \texhaxref
         2012/04/09 \ctanorgbaseref, \ctanpkgauref
         2012/04/10 makedoc link works!
         2012/05/13 example for \wikilangref corrected
uploaded with MOREHYPE r0.6
v0.7     2012/07/23 doc.: <text>
         2012/08/05 \tugiref
         2012/10/04 doc. wikibooks: ref
         2012/10/24 ...monthref... requiring ‘langcode.sty’, moving
                    links to mailing list pages from ‘texblog.fdf’
                    here; doc.: \pagebreak s, wikibooks: <book>...,
                    corr. args, \wikiref refers to ‘langcode.sty’,
                    ‘ref’, using \qtdcode (new in ‘makedoc.cfg’)
         2012/11/08 doc.: Jim corr.
         2012/11/27 \ctanpkgstyref from ’texblog.fdf’
         2012/11/28 [[...|...]]
uploaded with MOREHYPE r0.7
v0.7a    2012/12/01 link fix "Piped link"
         -> r0.7a
v0.7b    2012/12/06 there again: blogexec -> markblog, above entry ...
         -> r0.7b
v0.71    2012/12/08 \ctanannpref like \texhaxpref
         -> r0.71

v0.8     2012/12/15 \domainref from ‘texblog.fdf’
                    doc.: \secref, gathering first subsections in
                    new section "Links in General"
         2012/12/16 \texwikibooksref; \domainref 1 code line,
                    mod. doc. LaTeX wikibook
         2012/12/17 \google..., \stackexref, \catalogueref;
                    doc.: todo done + corr. in sec:bases,
                    wiki extended, suffix -> tag
         2012/12/18 \cataloguestartref, \html
         2012/12/19 \cat@ctan@pkg@ref, \@double@first@arg;
                    doc. uses {example}, \fbox, etc.
         2012/12/20 \ctanpkgtopicref
         -> r0.8
v0.81    2012/12/28 doc.: "fonts" \provide, corr. \pkgnamefmt,
                    reworked \urlfoot
         2012/12/29 \tugctanorg; doc.: TODO on "fonts",
                    more on Jim ... \tugctanorg
         2012/12/30 ... in sec:search-pkg; mod. doc. \ctanpkgauref,
                    more doc. wiki "overview", \simplecodefbox etc.,
         2012/12/31 doc. "the" Welcome ...
         -> r0.81
v0.82    2013/01/18  \tugctanorg -> alan.smcvt.edu
         2013/01/19  reworking doc. on CTAN; \pagebreak
         2013/01/20  updated (C), reworking doc. on CTAN
         2013/01/21  \MakeBasedHref, \wwwctanref, \usewwwctan,
```

```
311                     \newlet; doc.: typo fix, updated sec:x.ctan.org
312          2013/01/21 applying \newlet, \myctanref, \usemyctan,
313                     \ctanfileref reimplemented, \filectanref,
314                     \dirctanref; doc.: \ltxcontrib with {example}
315          -> r0.82
316  v0.83   2013/02/04 comment out code for alan.smcvt.edu and
317                     reduce doc. on it -- started
318          2013/02/20 \tugbArtref; sec. "Obvious Shorthands":
319                     \hmtl moves, \htm, \pdf, \DoubleArg;
320                     some adjustments for AZ's vanishing;
321                     doc. "Fonts for" -> "Formatting"
322          2014/05/25 updated Google search link
323          2015/03/27 doc. lines on "dropped" and "URL bases";
324          2015/05/16 short UK FAQ URL
325          2015/05/17f. new doc. CTAN: overview/summary
326          2015/05/18 rm. old doc. on Jim, reducing CTAN base cmd.s
327          2015/05/19 CTAN domains, description pages reworked
328          2015/05/20 more discovering, tidyingm and reworking
329                     w.r.t. CTAN
330          2015/05/21 doc. fix \dirctanref, ren. titles; \sciservref,
331                     fewer CTAN domains, \texarchive and reworked ...
332                     \awfulexample ... replaced
333          2015/05/22 rm. bitelist considerations/\pagebreaks,
334                     different titles
335          2015/05/23 typo fix; \nullctanorgbases, reduce table text;
336                     \paragraph -> again reworking early parts of
337                     CTAN section
338          2015/05/24 opening CTAN files ready; \prefixref;
339                     doc.: removing page breaks
340          2015/05/25 another \newlet; again reworking the CTAN
341                     tables section.
342          2015/05/26 doc. \cat@ctan...; \nullctanorgbaseref etc.
343                     -- finished CTAN section
344          2015/05/28 some more doc. on mailing lists; \THpref;
345                     rm. "short UK FAQ" -- did *not* work!
346          2015/06/14 rm. spurious section title
347          2015/07/20 another short URL for the UK FAQ
348
```