The uri package

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Abstract

This package allows to automatically hyperlink uris of type arXiv, ASIN, DOI, HDL, NBN, OCLC, OID, PubMed, TINY, TINY with preview, and WebCite in such a way that they are resolved to an address understood by web browsers without native support or add-ons for such types of uri and provides commands `\citeurl`, `\mailto`, `\ukoeln`, and `\uref`.

Disclaimer for web links: The author is not responsible for any contents referred to in this work unless if having full knowledge of illegal contents. If any damage occurs by the use of information presented there, only the author of the respective pages might be liable, not the one who has referred to these pages.
Save per page about 200 ml water, 2 g CO_2 and 2 g wood: Therefore please print only if this is really necessary.

Contents

1 Introduction

Diverse types of URIs exists. While every web browser should know how to handle an uri like https://www.ctan.org/, there are probably quite a few web browsers which cannot handle e. g. arXiv:math/9201303 (just test it by clicking the hyperlink). There are four types of solution:

1. Change the programme code of the web browser to recognise the uri.
2. Use/write a plug-in for the browser to resolve the uri.
3. Use only the full, expanded uri. Then they can be reliable accessed by everybody, but those uris usually become quite long, which is not really nice (and line breaks have their own problems).
4. (a) Write the short uri (arXiv:math/9201303), but link to the long, expanded one. This combines reliability and aesthetics, but can be cumbersome to write, especially when a lot of those addresses are used.

   (b) Do as described at (a), but automatically. This is the way this package can be used.

2 Usage

Just load the package placing

```
\usepackage[<options>]{uri}
```

in the preamble of your LaTeX 2ε source file (preferably after calling the url and hyperref package). For the different types of uri and available options see the documented code below.

3 Alternatives

There are similar packages, which do (or do not) similar things. Here is a list of some possible alternatives:

`aurl`

- The aurl package "[e]xtends the hyperref package with a mechanism for hyperlinked URLs abbreviated with prefixes", i. e. similar to this package here.

`doi`

- The doi package "contains a user-level command `\doi{}`, which takes a doi number, and creates a hyperlink from it. The format of the doi can be controlled by redefining the `\doitext` command" (from the doi package `ReadMe`). It does not handle other types of uris, naturally.

`doipubmed`

- The doipubmed package handles `DOI` as well as `PubMed` uris.

(You programmed or found another alternative, which is available at https://www.CTAN.org? OK, send an e-mail to me with the name, location at CTAN, and a short notice, and I will probably include it in the list above.)

About how to get those packages, please see subsection 6.1.

4 Example

```
⟨*example⟩
\documentclass[british]{article}[2014/09/29]% v1.4h
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
\PassOptionsToPackage{hyphens}{url}% url is loaded internally by hyperref
\usepackage{hyperref}[2011/02/07]% v6.82b
\hypersetup{%
 extension=pdf,%
 plainpages=false,%
 pdfpagelabels=true,%
 hyperindex=false,%
 pdflang={en},%
 pdftitle={uri package example},%
 pdfauthor={Hans-Martin Muench},%
 pdfsubject={Example for the uri package},%
 pdfkeywords={LaTeX, uri, Hans-Martin Muench},%
 pdfview=Fit,%
 pdfstartview=Fit,%
 pdfpagelayout=SinglePage,%
 bookmarksopen=false%
}
\usepackage{uri}[2018/09/06]% v2.0b
\RequirePackage{amsmath}
\RequirePackage{relsize}
\gdef\doialternative{%
  \hbox{\text{\fontfamily{lmss}\selectfont{\smaller{%
  DO\hspace{-0.025em}I\raisebox{0.24ex}{:}}}\kern-0.01em}}\allowbreak%
  }% used later for demonstration of \urisetup
\renewcommand*{\thesubsection}{\arabic{subsection}}
\listfiles
\begin{document}
```

```
\pagenumbering{arabic}

\section*{Example for uri}
This example demonstrates the use of package\newline
\textsf{uri}, v2.0b as of 2018/09/06 (HMM).\newline
No options were given, thereby the default options were used.\newline
For more details please see the documentation!

\subsection{Supported types of uri\label{uritypes}}
The \textsf{uri} package allows to hyperlink (with the
\textsf{hyperref} package of \textsc{Heiko Ober\-diek}) uris of type
\begin{itemize}
\item[--] arXiv (\url{https://www.arXiv.org/}), e.\,g. \arxiv{math/9201303}.

\item[--] ASIN %
  (\url{https://www.amazon.co.uk/gp/help/customer/display.html/277-3416785-8259466?ie=UTF8&nodeId=898182}), %
  (that one is a good example for using a TINY url: \tinyuri{y7ju25ln}) %
  e.\,g. \asin{0201134489}.

\item[--] DOI (\url{https://www.doi.org/index.html}), e.\,g. \doi{10.1000/182} or\linebreak%
  \doi{10.1111/coin.12165}. For DOIs also \url{http://www.shortdoi.org/} %
  should be mentioned, which provides \doi{10/b8xfbg} as synonym for that long doi %
  given in \hyperref[relaxation]{\ref*{relaxation} Stress test} %
  (and also synonyms for all other DOIs).

\item[--] HDL (\url{https://www.handle.net/index.html}), e.\,g. \hdl{2128/2486}.

\item[--] NBN (\url{http://nbn-resolving.de/urn:nbn:de:1111-200606309}),\newline%
  e.\,g. \nbn{urn:nbn:de:bsz:mit1-opus-3145}.

\item[--] OCLC (the global library cooperative %
  \href{https://www.oclc.org/en/about.html}{OCLC} maintains %
```

```
  \href{https://www.worldcat.org/whatis/default.jsp}{WorldCat}), %
  e.\,g. \oclc{935889548}.

\item[--] OID (\url{http://www.oid-info.com/#oid}), e.\,g. \oid{2.16.840}.

\item[--] PubMed (\url{https://www.ncbi.nlm.nih.gov/pubmed/}),\newline%
  e.\,g. \pubmed{24925405}.

\item[--] TINY (\url{https://tinyurl.com/}), e.\,g. \tinyuri{MST19-105603}\newline%
  (uses \verb|\tinyuri| instead of \verb|\tiny|, because that command already existed).

\item[--] TINY with preview (\url{https://preview.tinyurl.com/}), %
  e.\,g. \tinypuri{MST19-105603}.

\item[--] WebCite (\url{https://www.webcitation.org/}), e.\,g. \wc{71dxjl73I},
  which is short for \wc{query?url=http%3A%2F%2Fctan.org&date=2018-08-13}{%
  }.

\item[--] XMPP (\url{https://xmpp.org/about/}) changed, for example
  \verb|URN:XMPP:time| was moved from \url{https://xmpp.org/protocols/urn:xmpp:time/}
  to\linebreak \url{https://xmpp.org/extensions/xep-0202.html}. Therefore
  \verb|\xmpp| is no longer provided by this package. For backward compatibility
  \verb|\xmpp{...}| gives an error message and links to
  \url{https://xmpp.org/extensions/}.
\end{itemize}

\subsection{Pre/post text, \texttt{\textbackslash urisetup}}
\noindent Text before (e.\,g. \textsf{DOI:}) and after (well, no example)
the uri to be displayed can be adapted by the package options.
After loading the package it is possible (even somewhere within the document's body)
to change these \hbox{\ldots \verb|pre|} (and \hbox{\ldots \verb|post|)} texts
by \verb|\urisetup|, e.\,g.\newline
```

```
\verb|\urisetup{arxivpre={\textsf{\scshape arXiv:}\hspace{.2em}}}|.\newline
This command can also be used in the preamble to define pre/post texts
which otherwise are not understood by \LaTeX. -- Compare
\arxiv{0905.0105v2} to
\urisetup{arxivpre={\textsf{\scshape arXiv:}\hspace{.2em}}}
\arxiv{0905.0105v2} or
\doi{10.1000/182} to
\urisetup{doipre={\doialternative}}% \doialternative was defined in the example's preamble.
\doi{10.1000/182}.

\subsection{\texttt{\textbackslash citeurl}, \texttt{\textbackslash mailto}, %
            \texttt{\textbackslash ukoeln}, and \texttt{\textbackslash uref}}
Additionally some commands are provided by the uri package:
\begin{itemize}
\item[--] \verb|\citeurl| similar to the command of the \textsf{doipubmed} package,\newline%
  \citeurl{https://ctan.org/pkg/doipubmed}.

\item[--] \verb|\mailto| for e-mail addresses (optionally with e-mail subject), e.\,g.\newline%
\mailto{spam@example.org} or with subject %
\mailto[Some subject of the e-mail]{spam@example.org}.

\item[--] \verb|\ukoeln| for short University of Cologne (Universit\"{a}t zu K\"{o}ln, %
  U~Koeln; Germany; \url{https://www.portal.uni-koeln.de/8911.html?&L=1})
  ad-\linebreak dresses, e.\,g. \ukoeln{PDGKL}.

\item[--] \verb|\uref| takes two arguments, the first gives the target of the hyperlink, %
  the second gives the text to be displayed for it, e.\,g. information about the %
  \uref{https://ctan.org/pkg/uri}{uri package}, similar to \verb|\href|. %
  When \textsf{hyperref} was not loaded, \newline%
  \verb|\uref{first argument}{second argument}| %
  defaults to\newline
  \verb|\url{second argument}|.
```

```
\end{itemize}


\subsection{Stress test\label{relaxation}}
Even \verb|\doi{1.2/3-.(5):<>;%A\8!$~&{}#X}|
would work (if that DOI would exist; same for the other types of uri):
\doi{1.2/3-.(5):<>;%A\8!$~&{}#X}{%
} (In the error message at doi.org the \verb|#X| is not included,
because it is interpreted as \textquotedblleft anchor X\textquotedblright{} at
page \verb|1.2/3-.(5):<>;%A\8!$~&{}|, which already is not found.)\newline
Adding \verb|opening bracket percent-sign line break closing bracket|\newline
(please see the source code of the example)
makes programs happy, which check for bracket pairs and take the
first percent sign as the start of a comment and therefore miss
the closing bracket (but therefore also the following opening one).
And this real DOI works:\newline
\doi{10.1002/1097-4636(200108)56:2<282::AID-JBM1096>3.0.CO;2-5}\newline
(short: \doi{10/b8xfbg}, see DOI in %
\hyperref[uritypes]{\ref*{uritypes} Supported types of uri}).
\pagebreak

\subsection{Name-to-Thing resolver}
It is also possible to resolve a lot of identifiers by
the Name-to-Thing resolver by just appending the identifier to
\url{https://n2t.net/}, e.\,g. \newline%
\url{https://n2t.net/arXiv:math/9201303}, \newline%
\url{https://n2t.net/ASIN:0201134489}, \newline%
\url{https://n2t.net/DOI:10.1111/coin.12165}, \newline%
\url{https://n2t.net/HDL:2128/2486}, \newline%
\url{https://n2t.net/urn:nbn:de:bsz:mit1-opus-3145}, \newline%
\url{https://n2t.net/OCLC:935889548}, \newline%
\url{https://n2t.net/PubMed:24925405}, and also \newline%
```

```
\url{https://n2t.net/ISBN:9783638922005} and \newline%
\url{https://n2t.net/ARK:12148/bpt6k15385d}.\newline%
(And for resolving OIDs like OID:2.16.840 instead of %
\url{http://www.oid-info.com/cgi-bin/display?oid=2.16.840&submit=Display&action=display} %
it is possible to use %
\url{https://identifiers.org/OID:2.16.840}.)\newline%
Disadvantages: It is longer and requires \href{https://n2t.net/}{n2t.net} to work %
(or \href{https://identifiers.org/}{identifiers.org} for OID).\newline%
Advantage: Anybody reading the printed document can just enter %
the url as given into their browser without thinking about how to resolve %
that type of uri.


\subsection{Disclaimer for web links}
The author is not responsible for any contents referred
to in this work unless if having full knowledge of illegal contents. If any damage
occurs by the use of information presented there, only the author of the respective
pages might be liable, not the one who has referred to these pages.
\end{document}
⟨/example⟩
```

5 The implementation

We start off by checking that we are loading into LaTeX 2$_\varepsilon$ and announcing the name and version of this package.

179 ⟨*package⟩

```
180 \NeedsTeXFormat{LaTeX2e}[2015/01/01]
181 \ProvidesPackage{uri}[2018/09/06 v2.0b
182    Hyperlinks URIs like DOI,HDL,NBN,PubMed (HMM)]
183
```

A short description of the uri package:

```
184 %% Allows to automatically hyperlink uris of types
185 %% arXiv, ASIN, DOI, HDL, NBN, OCLC, OID, PubMed, TINY, TINY with preview,
186 %% and WebCite
187 %% in such a way that they are resolved to an address understood by browsers
188 %% independent of native support or add-ons for such types of uri
189 %% and provides commands \citeurl, \mailto, \ukoeln, and \uref.
```

For the handling of the options we need the kvoptions package of Heiko Oberdiek (see subsection 6.1):

```
190 \RequirePackage{kvoptions}[2011/06/30]% v3.11
```

We need the url package of Donald Arseneau and Robin Fairbairns (see subsection 6.1):

```
191 \RequirePackage{url}[2013/09/16]% v3.4
192
```

When spaces shall be kept, `\usepackage[obeyspaces]{url}` should be used in the document (and `\ ` in the options), and for using special characters even `\usepackage[obeyspaces,T1]{url}` could be a good idea. - When the hyperref package has been loaded, we hyperlink the uris, otherwise we do not do this.

So, if you want hyperlinks, load uri after hyperref, otherwise before (or no hyperref at all, of course).

For each supported uri type there are two options, `...pre` and `...post`, e. g. `doipre` and `doipost`. For example the option `doipre={DOI:\ }` results in "DOI: " (without the quotation marks, of course) to be written before the DOIs.
(There are more brackets and braces then necessary here, but better save than sorry, i. e. make it robust.)

```
\SetupKeyvalOptions{family = uri, prefix = uri@}

\DeclareStringOption[arXiv:]{arxivpre}[arXiv:]
\DeclareStringOption[]{arxivpost}[]

\DeclareStringOption[ASIN:]{asinpre}[ASIN:]
\DeclareStringOption[]{asinpost}[]

\DeclareStringOption[DOI:]{doipre}[DOI:]
\DeclareStringOption[]{doipost}[]

\DeclareStringOption[HDL:]{hdlpre}[HDL:]
\DeclareStringOption[]{hdlpost}[]

\DeclareStringOption[]{nbnpre}[]
\DeclareStringOption[]{nbnpost}[]

\DeclareStringOption[OCLC:]{oclcpre}[OCLC:]
\DeclareStringOption[]{oclcpost}[]

\DeclareStringOption[URN:OID:]{oidpre}[URN:OID:]
\DeclareStringOption[]{oidpost}[]

\DeclareStringOption[PubMed:]{pubmedpre}[PubMed:]
\DeclareStringOption[]{pubmedpost}[]

```

The commands are `tinyuri` and `tinypuri`, thus the according options are tinyuripre, tinyuripre, tinyuripost, tinypuripost, and tinypuripre. In older versions they were tinypre, tinypre, tinypost, tinyppost, and tinyppre. For backward compatibility we need to define and handle them:

```
\def\uri@tiny@pre@default{TINY:}
\def\uri@tiny@post@default{}

```

```
\def\uri@tinyp@pre@default{TINY:P:}
\def\uri@tinyp@post@default{}

\DeclareStringOption[\uri@tiny@pre@default]{tinypre}[\uri@tiny@pre@default]
\DeclareStringOption[\uri@tiny@post@default]{tinypost}[\uri@tiny@post@default]

\DeclareStringOption[\uri@tinyp@pre@default]{tinyppre}[\uri@tinyp@pre@default]
\DeclareStringOption[\uri@tinyp@post@default]{tinyppost}[\uri@tinyp@post@default]

\DeclareStringOption[\uri@tiny@pre@default]{tinyuripre}[\uri@tiny@pre@default]
\DeclareStringOption[\uri@tiny@post@default]{tinyuripost}[\uri@tiny@post@default]

\DeclareStringOption[\uri@tinyp@pre@default]{tinypuripre}[\uri@tinyp@pre@default]
\DeclareStringOption[\uri@tinyp@post@default]{tinypuripost}[\uri@tinyp@post@default]

\DeclareStringOption[WC:]{wcpre}[WC:]
\DeclareStringOption[]{wcpost}[]

\DeclareStringOption[URN:XMPP:]{xmpppre}[]
\DeclareStringOption[]{xmpppost}[]

\DeclareStringOption[<]{citeurlpre}[<]
\DeclareStringOption[>]{citeurlpost}[>]

\DeclareStringOption[mailto:]{mailtopre}[mailto:]
\DeclareStringOption[]{mailtopost}[]

\DeclareStringOption[http://UKoeln.de/]{ukoelnpre}[http://UKoeln.de/]
\DeclareStringOption[]{ukoelnpost}[]

\ProcessKeyvalOptions*

```

To set options with more complicated/problematic content, `\urisetup` is needed. With this the user can set the according option(s) after loading this package (please see the example file).

```
\gdef\urisetup{\kvsetkeys{uri}}

```

Handling of deprecated options tinypre, tinypre, tinypost, tinyppost, and tinyppre:

```
\def\uri@wrapper{\uri@tiny@pre@default}
\ifx\uri@tinypre\uri@wrapper%
\else%
  \ifx\uri@tinyuripre\uri@wrapper%
    \PackageWarning{uri}{Option tinypre deprecated.\MessageBreak%
      Please use tinyuripre instead!\MessageBreak%
      Transfering content of option tinypre to tinyuripre now;\MessageBreak%
      }%
    \let\uri@tinyuripre\uri@tinypre%
  \else%
    \PackageError{uri}{Conflicting options tinypre and tinyuripre used}{%
      Option tinypre deprecated.\MessageBreak%
      Please use ONLY option tinyuripre instead!\MessageBreak%
      Ignoring option tinypre now.\MessageBreak%
      }%
  \fi%
\fi%

\def\uri@wrapper{\uri@tiny@post@default}
\ifx\uri@tinypost\uri@wrapper%
\else%
  \ifx\uri@tinyuripost\uri@wrapper%
    \PackageWarning{uri}{Option tinypost deprecated.\MessageBreak%
      Please use tinyuripost instead!\MessageBreak%
      Transfering content of option tinypost to tinyuripost now;\MessageBreak%
      }%
```

```
    \let\uri@tinyuripost\uri@tinypost%
  \else%
    \PackageError{uri}{Conflicting options tinypost and tinyuripost used}{%
      Option tinypost deprecated.\MessageBreak%
      Please use ONLY option tinyuripost instead!\MessageBreak%
      Ignoring option tinypost now.\MessageBreak%
      }%
  \fi%
\fi%

\def\uri@wrapper{\uri@tinyp@pre@default}
\ifx\uri@tinyppre\uri@wrapper%
\else%
  \ifx\uri@tinypuripre\uri@wrapper%
    \PackageWarning{uri}{Option tinyppre deprecated.\MessageBreak%
      Please use tinypuripre instead!\MessageBreak%
      Transfering content of option tinyppre to tinypuripre now;\MessageBreak%
      }%
    \let\uri@tinypuripre\uri@tinyppre%
  \else%
    \PackageError{uri}{Conflicting options tinyppre and tinypuripre used}{%
      Option tinyppre deprecated.\MessageBreak%
      Please use ONLY option tinypuripre instead!\MessageBreak%
      Ignoring option tinyppre now.\MessageBreak%
      }%
  \fi%
\fi%

\def\uri@wrapper{\uri@tinyp@post@default}
\ifx\uri@tinyppost\uri@wrapper%
\else%
  \ifx\uri@tinypuripost\uri@wrapper%
```

```
    \PackageWarning{uri}{Option tinyppost deprecated.\MessageBreak%
      Please use tinypuripost instead!\MessageBreak%
      Transfering content of option tinyppost to tinypuripost now;\MessageBreak%
      }%
    \let\uri@tinypuripost\uri@tinyppost%
  \else%
    \PackageError{uri}{Conflicting options tinyppost and tinypuripost used}{%
      Option tinyppost deprecated.\MessageBreak%
      Please use ONLY option tinypuripost instead!\MessageBreak%
      Ignoring option tinyppost now.\MessageBreak%
      }%
  \fi%
\fi%

```

We disable the deprecated options. If not disabled, it would be possible to use `\urisetup` with them without error message, but this would not have any effect, because only the newer options tinyuripre, tinyuripre, tinyuripost, tinypuripost, and tinypuripre are regarded.

```
\DisableKeyvalOption[action={error},package=uri]{uri}{tinypre}
\DisableKeyvalOption[action={error},package=uri]{uri}{tinypost}
\DisableKeyvalOption[action={error},package=uri]{uri}{tinyppre}
\DisableKeyvalOption[action={error},package=uri]{uri}{tinyppost}

```

Now we define the commands, using `\tinyuri` instead of `\tiny`, because that command already existed before (and accordingly `\tinypuri`, even if `\tinyp` did not exist).

```
\@ifpackageloaded{hyperref}{%
\DeclareRobustCommand{\uref}[2]{\protect\href{#1}{\protect\nolinkurl{#2}}}%
%% arXiv
\DeclareUrlCommand\arxiv{\def\UrlLeft##1\UrlRight{\href{https://arxiv.org/abs/##1}{\uri@arxivpre##1\uri@arxivpost}}}%
%% ASIN
\DeclareUrlCommand\asin{\def\UrlLeft##1\UrlRight{\href{https://amzn.com/##1}{\uri@asinpre##1\uri@asinpost}}}%
%% DOI
```

```
\DeclareUrlCommand\doi{\def\UrlLeft##1\UrlRight{\href{https://dx.doi.org/##1}{\uri@doipre##1\uri@doipost}}}%
%% HDL
\DeclareUrlCommand\hdl{\def\UrlLeft##1\UrlRight{\href{https://hdl.handle.net/##1}{\uri@hdlpre##1\uri@hdlpost}}}%
%% NBN
\DeclareUrlCommand\nbn{\def\UrlLeft##1\UrlRight{\href{https://nbn-resolving.org/urn/resolver.pl?urn=##1}{\uri@nbnpre##1\uri@nbnpost}}}%
%% OCLC
\DeclareUrlCommand\oclc{\def\UrlLeft##1\UrlRight{\href{https://www.worldcat.org/oclc/##1}{\uri@oclcpre##1\uri@oclcpost}}}%
%% OID
\DeclareUrlCommand\oid{\def\UrlLeft##1\UrlRight{\href{http://www.oid-info.com/cgi-bin/display?oid=##1&submit=Display&action=display}{%
\uri@oidpre##1\uri@oidpost}}}%
%% PubMed
\DeclareUrlCommand\pubmed{\def\UrlLeft##1\UrlRight{%
\href{https://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=##1&dopt=Abstract}{\uri@pubmedpre##1\uri@pubmedpost}}}%
%% TINY
\DeclareUrlCommand\tinyuri{\def\UrlLeft##1\UrlRight{\href{https://tinyurl.com/##1}{\uri@tinyuripre##1\uri@tinyuripost}}}%
%% TINYP (tiny with preview)
\DeclareUrlCommand\tinypuri{\def\UrlLeft##1\UrlRight{\href{https://preview.tinyurl.com/##1}{\uri@tinypuripre##1\uri@tinypuripost}}}%
%% WebCite
\DeclareUrlCommand\wc{\def\UrlLeft##1\UrlRight{\href{https://www.webcitation.org/##1}{\uri@wcpre##1\uri@wcpost}}}%
%% XMPP
\DeclareUrlCommand\xmpp{%
  \PackageError{uri}{Command \string\xmpp\space deprecated}{%
    XMPP (https://xmpp.org/about/) changed, for example URN:XMPP:time\MessageBreak%
    was moved from https://xmpp.org/protocols/urn:xmpp:time/\MessageBreak%
    to https://xmpp.org/extensions/xep-0202.html. Therefore\MessageBreak%
    \string\xmpp\space is no longer provided by this package.\MessageBreak%
    For backward compatibility \string\xmpp\space links to\MessageBreak%
    https://xmpp.org/extensions/.\MessageBreak%
    Please replace \string\xmpp\space in your document by the appropriate url.\MessageBreak%
  }%
  \def\UrlLeft##1\UrlRight{\href{https://xmpp.org/extensions/}{\uri@xmpppre##1\uri@xmpppost}}%
  }%
```

```
%% citeurl
\DeclareUrlCommand\citeurl{\def\UrlLeft##1\UrlRight{\href{##1}{\uri@citeurlpre##1\uri@citeurlpost}}}%
%% mailto
\DeclareUrlCommand\mailto@{\def\UrlLeft##1\UrlRight{\href{mailto:##1\mailto@subject}{\uri@mailtopre##1\uri@mailtopost}}}%
\DeclareRobustCommand\mailto[1][]{\def\mailto@subject{?subject=#1}\mailto@}%
```

`\mailto` code provided by Frank Mittelbach (thanks!), making possible `\mailto{person@example.org}` as well as `\mailto[Some subject of the e-mail]{person@example.org}`, i. e. `mailto:person@example.org?subject=Some subject of the e-mail`.

```
%% ukoeln
\DeclareUrlCommand\ukoeln{\def\UrlLeft##1\UrlRight{\href{https://UKoeln.de/##1}{\uri@ukoelnpre##1\uri@ukoelnpost}}}%
}{% otherwise, i.e. if hyperref has not been loaded:
\DeclareRobustCommand{\uref}[1]{\url}%
%% arXiv
\DeclareUrlCommand\arxiv{\def\UrlLeft##1\UrlRight{\uri@arxivpre##1\uri@arxivpost}}%
%% ASIN
\DeclareUrlCommand\asin{\def\UrlLeft##1\UrlRight{\uri@asinpre##1\uri@asinpost}}%
%% DOI
\DeclareUrlCommand\doi{\def\UrlLeft##1\UrlRight{\uri@doipre##1\uri@doipost}}%
%% HDL
\DeclareUrlCommand\hdl{\def\UrlLeft##1\UrlRight{\uri@hdlpre##1\uri@hdlpost}}%
%% NBN
\DeclareUrlCommand\nbn{\def\UrlLeft##1\UrlRight{\uri@nbnpre##1\uri@nbnpost}}%
%% OCLC
\DeclareUrlCommand\oclc{\def\UrlLeft##1\UrlRight{\uri@oclcpre##1\uri@oclcpost}}%
%% OID
\DeclareUrlCommand\oid{\def\UrlLeft##1\UrlRight{\uri@oidpre##1\uri@oidpost}}%
%% PubMed
\DeclareUrlCommand\pubmed{\def\UrlLeft##1\UrlRight{\uri@pubmedpre##1\uri@pubmedpost}}%
%% TINY
\DeclareUrlCommand\tinyuri{\def\UrlLeft##1\UrlRight{\uri@tinyuripre##1\uri@tinyuripost}}%
%% TINYP (tiny with preview)
\DeclareUrlCommand\tinypuri{\def\UrlLeft##1\UrlRight{\uri@tinypuripre##1\uri@tinypuripost}}%
```

```
%% WebCite
\DeclareUrlCommand\wc{\def\UrlLeft##1\UrlRight{\uri@wcpre##1\uri@wcpost}}%
%% XMPP
\DeclareUrlCommand\xmpp{\def\UrlLeft##1\UrlRight{\uri@xmpppre##1\uri@xmpppost}}%
%% citeurl
\DeclareUrlCommand\citeurl{\def\UrlLeft##1\UrlRight{\uri@citeurlpre##1\uri@citeurlpost}}%
%% mailto
\DeclareUrlCommand\mailto@{\def\UrlLeft##1\UrlRight{\uri@mailtopre##1\uri@mailtopost}}%
\DeclareRobustCommand\mailto[1][]{\mailto@}%
%% ukoeln
\DeclareUrlCommand\ukoeln{\def\UrlLeft##1\UrlRight{\uri@ukoelnpre##1\uri@ukoelnpost}}%
}
```

Note that you cannot create those addresses by this way, only link to existing ones.
That was already everything which was necessary.
(Once you get the syntax for the `\DeclareUrlCommand` right, it is straight forward. Emphasis is at "Once"...)

\AtBeginDocument

\AtBeginDocument it is checked whether any of the aurl, doi, or doipubmed packages are loaded.

```
\AtBeginDocument{%
  \@ifpackageloaded{aurl}%
    {\PackageWarning{uri}{Packages uri AND aurl detected.\MessageBreak%
       Results might depend on order of loading;\MessageBreak}%
    }{\relax}%
  \@ifpackageloaded{doi}%
    {\PackageWarning{uri}{Packages uri AND doi detected.\MessageBreak%
       Results will depend on order of loading!\MessageBreak%
       Consider using only one package.\MessageBreak%
       The uri package alone should be sufficient;\MessageBreak}%
    }{\relax}%
  \@ifpackageloaded{doipubmed}%
    {\PackageWarning{uri}{Packages uri AND doipubmed detected.\MessageBreak%
       Results will depend on order of loading!\MessageBreak%
       Consider using only one package.\MessageBreak%
       The uri package alone should be sufficient;\MessageBreak}%
    }{\relax}%
  }%
```

⟨/package⟩

6 Installation

6.1 Downloads

Everything is available on CTAN: https://www.ctan.org/pkg/ but may need additional packages themselves.

uri.dtx For unpacking the uri.dtx file and constructing the documentation it is required (newer versions should be OK):

- TEX Format LATEX 2ε, 2016/03/31, v2ε: https://www.CTAN.org
- document class ltxdoc, 2015/03/26, v2.0w, https://www.ctan.org/pkg/ltxdoc
- package pdflscape, 2008/08/11, v0.10, https://www.ctan.org/pkg/pdflscape
- package holtxdoc, 2012/03/21, v0.24, https://www.ctan.org/pkg/holtxdoc
- package hypdoc, 2011/08/19, v1.11, https://www.ctan.org/pkg/hypdoc

uri.sty The uri.sty for LATEX 2ε (i. e. all documents using the uri package) requires:

- TEX Format LATEX 2ε, 2016/03/31, v2ε: https://www.CTAN.org
- package kvoptions, 2011/06/30, v3.11, https://www.ctan.org/pkg/kvoptions
- package url, 2013/09/16, v3.4, https://www.ctan.org/pkg/url

uri-example.tex The uri-example.tex requires the same files as all documents using the uri package, especially:

- package hyperref, 2012/11/06, v6.83m, https://www.ctan.org/pkg/hyperref
  (not generally necessary but probably used most often)
- package uri, 2018/09/06, v2.0b, https://www.ctan.org/pkg/uri
  (Well, it is the example file for this package, and because you are reading the documentation for the uri package, it can be assumed that you already have some version of it – is it the current one?)

and additionally (for demonstration purposes)

- package amsmath, 2016/03/10, v2.15b, https://www.ctan.org/pkg/amsmath
- package relsize, 2013/03/29, v4.1, https://www.ctan.org/pkg/relsize

aurl
doi
doipubmed As possible alternatives to uri in section 3 there are listed

- package aurl, 2016/08/12, v?.?, https://www.ctan.org/pkg/aurl
- package doi, 2007/07/24, v?.?, https://www.ctan.org/pkg/doi
- package doipubmed, 2007/08/20, v1.01, https://www.ctan.org/pkg/doipubmed

Oberdiek
holtxdoc
kvoptions All packages of Heiko Oberdiek's bundle 'oberdiek' (especially holtxdoc and kvoptions) are also available in a TDS compliant ZIP archive: http://mirror.ctan.org/install/macros/latex/contrib/oberdiek.tds.zip. It is probably best to download and use this, because the packages in there should be both recent and compatible.

Münch A list of my packages can be found at https://www.ctan.org/author/muench-hm.

6.2 Package, unpacking TDS

Package. This package is available on https://www.CTAN.org.

http://mirror.ctan.org/macros/latex/contrib/uri/uri.dtx The source file.

http://mirror.ctan.org/macros/latex/contrib/uri/uri.pdf The documentation.

http://mirror.ctan.org/macros/latex/contrib/uri/uri-example.pdf The compiled example file, as it should look like.

http://mirror.ctan.org/macros/latex/contrib/uri/README The README file.

There is also a uri.tds.zip available:

http://mirror.ctan.org/install/macros/latex/contrib/uri.tds.zip
Everything in TDS compliant, compiled format.

which additionally contains

uri.ins	The installation file.
uri.drv	The driver to generate the documentation.
uri.sty	The `.sty`le file.
uri-example.tex	The example file.

For required other packages, see the preceding subsection.

Unpacking. The `.dtx` file is a self-extracting docstrip archive. The files are extracted by running the `.dtx` through plain TEX:

```
tex uri.dtx
```

About generating the documentation see paragraph 6.4 below.

TDS. Now the different files must be moved into the different directories in your installation TDS tree (also known as `texmf` tree):

```
uri.sty         → tex/latex/uri.sty
uri.pdf         → doc/latex/uri.pdf
uri-example.tex → doc/latex/uri-example.tex
uri-example.pdf → doc/latex/uri-example.pdf
uri.dtx         → source/latex/uri.dtx
```

If you have a `docstrip.cfg` that configures and enables docstrip's TDS installing feature, then some files can already be in the right place, see the documentation of docstrip.

6.3 Refresh file name databases

If your TEX distribution (TEX Live, mikTEX, teTEX, ...) relies on file name databases, you must refresh these. For example, teTEX users run `texhash` or `mktexlsr`.

6.4 Some details for the interested

Unpacking with LaTeX. The `.dtx` chooses its action depending on the format:

plain TeX: Run docstrip and extract the files.

LaTeX: Generate the documentation.

If you insist on using LaTeX for docstrip (really, docstrip does not need LaTeX), then inform the autodetect routine about your intention:

```
latex \let\install=y\input{uri.dtx}
```

Do not forget to quote the argument according to the demands of your shell.

Generating the documentation. You can use both the `.dtx` or the `.drv` to generate the documentation. The process can be configured by a configuration file `ltxdoc.cfg`. For instance, put the following line into this file, if you want to have A4 as paper format:

```
\PassOptionsToClass{a4paper}{article}
```

An example follows how to generate the documentation with pdfLaTeX:

```
pdflatex uri.drv
makeindex -s gind.ist uri.idx
pdflatex uri.drv
makeindex -s gind.ist uri.idx
pdflatex uri.drv
```

6.5 Compiling the example

The example file, uri-example.tex, can be compiled via
`(pdf)latex uri-example.tex`
but will need probably three compiler runs to get everything right.

7 Acknowledgements

I (H.-Martin Münch) would like to thank Heiko Oberdiek for providing a lot (!) of useful packages (from which I also got everything I know about creating a file in `dtx` format, ok, say it: copying), Frank Mittelbach for several bug reports and for code for improving the package, Volker RW Schaa for a bug report, everybody of the CTAN team for managing CTAN, and the news:comp.text.tex and news:de.comp.text.tex newsgroups and everybody at https://tex.stackexchange.com/ for their help in all things TeX.

8 History

[2011/03/04 v1.0a]

- First version of this package.

[2011 – 2018 v1.0...]

- Several versions, which where not officially published.

[2018/09/01 v2.0a]

- Now using the pdflscape package instead of lscape package.
- The holtxdoc package was fixed (recent: 2011/02/04, v0.21), therefore the warning in `drv` could be removed.– Adapted the style of this documentation to new OBERDIEK `dtx` style.
- Made `\newcommand`s robust.
- OCLC and WebCite added; alternative package aurl added, URLs and documentation updated.
- Name-to-Thing resolver added to the example.
- XMPP removed due to changes at XMPP.
- New `\urisetup` to be able to use complicated pre/post text (and change it mid-document!).
- Added an optional argument to `\mailto` for providing the e-mail's subject.
- Options tinypre, tinypre, tinypost, tinyppost, and tinyppre replaced by tinyuripre, tinyuripre, tinyuripost, tinypuripost, and tinypuripre, because the commands are `tinyuri` and `tinypuri`.
- Bugs fixed.

[2018/09/06 v2.0b]

- Bug fix: README file format, .tds placement, wrong word, OID not n2t, description.

When you find a mistake or have a suggestion for an improvement of this package, please send an e-mail to the maintainer, thanks! (Please see BUG REPORTS in the README.)

9 Index

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