Cross-referencing technical Documents with `crossreference`

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January 1, 2007

Abstract

This is the instruction manual for using `crossreference`.

1 Introduction

This package allows authors to maintain a crossreference section in technical documents easily and efficiently without having to worry about reordering, removing or otherwise altering the crossreference numbers because they are automatically generated.

This package was originally designed to maintain the crossreference section of software requirements document and a software design document.

2 Documentation Driver

This code will generate the documentation. Since it is the first peice of code in this file, the documentation can obtained by simply processing this file with LaTeX 2$_\varepsilon$

```
1 ⟨∗driver⟩
2 \documentclass{ltxdoc}
3 \EnableCrossrefs
4 \CodelineIndex
5 \RecordChanges
6 \begin{document}
7     \DocInput{crossreference.dtx}    \PrintIndex    \PrintChanges
8 \end{document}
9 ⟨/driver⟩
```

3 User Interface

This section defines everything that an average user should know.

```
10 ⟨∗crossreference⟩
11 \NeedsTeXFormat{LaTeX2e}
12 \ProvidesPackage{crossreference}[\filedate\space\fileversion\space
13 Crossreferencing for technical documents (V. Filby)]
14 \newcounter{xref}
```

`\crossreferences` The command `\crossreferences` will print out the crossreference table. The format is simple and uses the "list of figures" table of contents style. You can change the format of the table by changing this macro. If you choose to use a tabular format you will have to change the output lines to include &'s.

```
15 \newcommand\crossreferences{%
16 \if@twocolumn
17 \@restonecoltrue\onecolumn
18 \else
19 \@restonecolfalse
20 \fi
21 \@starttoc{xref}
22 \if@restonecol\twocolumn\fi
23 }
```

`\addxref` The command `\addxref` will add a a line to the crossreference table containing the number, label and section label.

```
24 \newcommand{\addxref}[1]{%
25 \protected@write{\@auxout}{}{\protect\@writefile{xref}{
26 \string\contentsline{figure}{\string\numberline {\thexref}{\string\ignorespaces{#1}}}{\@curren
27 }}
28 \xreflabel{#1}
29 \stepcounter{xref}
30 }
```

`\xref` The command `\xref` can be used to refer to an item that has been added to the crossreference table.

```
31 \newcommand{\xref}[1]{~[REF \pageref{#1}]}
```

4   Definitions

This section contains the internal counters and macros that are used to keep track of the crossreference labels.

```
32 \def\G@refundefinedtrue{%
33   \gdef\@refundefined{%
34     \@latex@warning@no@line{There were undefined references}}}
35 \let\@refundefined\relax
36
37 \def\@setref#1#2#3{%
38   \ifx#1\relax
39   \protect\G@refundefinedtrue
40   \nfss@text{\reset@font\bfseries ??}%
41   \@latex@warning{Reference '#3' on page \thepage \space
42         undefined}%
43   \else
44   \expandafter#2#1\null
45   \fi}
46
47 \def\ref#1{\expandafter\@setref\csname r@#1\endcsname\@firstoftwo{#1}}
48
49 \def\pageref#1{\expandafter\@setref\csname r@#1\endcsname
50                                    \@secondoftwo{#1}}
51 \def\@newl@bel#1#2#3{%
52   \@ifundefined{#1@#2}%
```

```
53      \relax
54      {\gdef \@multiplelabels {%
55          \@latex@warning@no@line{There were multiply-defined labels}}%
56        \@latex@warning@no@line{Label '#2' multiply defined}}%
57    \global\@namedef{#1@#2}{#3}}
58
59 \def\newlabel{\@newl@bel r}
60 \@onlypreamble\@newl@bel
61
62 \let \@multiplelabels \relax
63
64 \def\xreflabel#1{\@bsphack
65    \protected@write\@auxout{}%
66          {\string\newlabel{#1}{{#1}{\thexref}}}%
67    \@esphack}
68
69 \def\refstepcounter#1{\stepcounter{#1}%
70      \protected@edef\@currentlabel
71          {\csname p@#1\endcsname\csname the#1\endcsname}%
72 }
73
74 \def\@currentlabel{}
75 ⟨/crossreference⟩
```

5   Example Document

This is a sample document to show how to use the crossreference system when you unpacked the dtx it should have generated this file called xrefexample.tex

```
76 ⟨*example⟩
77 \documentclass{article}
78
79 \usepackage{crossreference}
80
81 \begin{document}
82
83 \section{Animals}
84 \addxref{Animals}
85 Animals can eat other animals\xref{Animals} or plants\xref{Plants}.
86
87 \section{Plants}
88 \addxref{Plants}
89 Plants are mostly green and are eaten by Animals\xref{Animals}.
90
91 \section{Books and Writings}
92 \addxref{Books and Writings}
93 Books and writings are general not read by animals\xref{Animals} or plants\xref{Plants}.
94
95 \section{Humans}
96 Humans can read books and writings\xref{Books and Writings}.
97 \newpage
98 \section{Cross-References}
99 \crossreferences
100
```

```
101 \end{document}
102 \endinput
103 ⟨/example⟩
```