

A L^AT_EX reference manual

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Abstract

The L^AT_EX Reference Manual summarizes the features of L^AT_EX 2_ε. It can be a valuable resource for authors using L^AT_EX and deserves to be better known.

1 Introduction

The L^AT_EX Reference Manual, `latexrefman`, aims to provide a freely available document summarizing the commands and environments of L^AT_EX 2_ε. It is unofficial, not associated with the L^AT_EX project.

You can see a current copy, in a variety of formats, either at the project home page¹ or on CTAN².

This work brings together an array of L^AT_EX sources and documentation and organizes that material into a reference format. Its base language is English; presently, there are French and Spanish translations.

This project deserves to be better known, among both potential users and potential contributors.

2 For potential users

`latexrefman` is a resource that can be valuable to L^AT_EX authors while they are writing.

2.1 Why more documentation?

There are many works on L^AT_EX: tutorial and advanced, online and on paper, in many languages and at many levels of sophistication.

The chief distinction of `latexrefman` is that it is a reference manual. If, for instance, you can't remember the specifics of the syntax of a command then you can go directly to that command's entry. There will be a complete description, including all of the salient technical points as well as an overview, and hyperlinks to related entries.

An example of the difference between a reference and other works is that here each entry assumes whatever level of reader sophistication is needed to cover the topic. For instance, an entry might specify that the argument of a command is typeset in LR mode, which a tutorial is likely not to state.

In addition, `latexrefman` is organized by command. For instance, the major L^AT_EX environments each get a separate entry.

`latexrefman` now covers the commonly-used commands and environments. The entries work to make fine distinctions clear. They also give the values

¹ <http://home.gna.org/latexrefman/>

² <https://ctan.org/pkg/latex2e-help-texinfo>

of various parameters in the standard L^AT_EX classes. It is online so it can be easily accessed and so that searches and hyperlinks are also easy.

In short, the document is written with a focus on being useful to a working L^AT_EX author who is typing, who runs across an issue, and who wants a convenient way to see all the information needed to resolve the issue, presented in one place.

2.2 Sources

The information in this manual is available from other L^AT_EX sources and documentation, but is scattered. Besides the ultimate reference of the L^AT_EX 2_ε source code, and books such as [1] and [2], there are also many reputable online sources including the *Comprehensive Symbols List*³ and the *Users Guide for amsmath*⁴. The work of this project is to bring these diverse sources together and synthesize the information into a reference form.

This project has an advantage over reference manuals for other subjects: the existence of online forums. The T_EX family has a long history and is also blessed with a helpful community so there are a number of long-lived forums, including the Usenet group `comp.text.tex`,⁵ the mailing list `texhax`,⁶ the T_EX-L^AT_EX Stack Exchange,⁷ and the Reddit subgroup `/r/LaTeX`.⁸ This great body of material not only provides authors of a reference with answers that may be hard to find elsewhere but, just as importantly, provides those authors with questions showing what gives users trouble. If online research reveals a question about a topic that has puzzled L^AT_EX users over a long time then we can increase the value of the reference by including explanation or examples specifically addressing that question.

2.3 Coverage

At present, `latexrefman` covers the most-used commands and environments of core L^AT_EX 2_ε.

We do not plan to ever cover a broad, let alone complete, range of packages from CTAN. Instead, the plan is to exhaustively cover all of core L^AT_EX 2_ε. That goal remains rather distant; thus, additional project contributors would be most welcome.

³ <https://ctan.org/pkg/comprehensive/>

⁴ <ftp://ftp.ams.org/pub/tex/doc/amsmath/amsl.doc.pdf>

⁵ <https://groups.google.com/forum/#!forum/comp.text.tex>

⁶ <http://lists.tug.org/texhax>

⁷ <http://tex.stackexchange.com/>

⁸ <http://www.reddit.com/r/latex>

3 For potential contributors

This is a project where a person looking for a way to give back to the community can make a real contribution without a lot of initial effort. You can start off small by finding some improvement on an existing entry, or a missing one, and submitting a suggestion or a patch.

You could submit that improvement via the mailing list. You can also download the document source. You can reach both at the project's home page.⁹

The document source is in Texinfo.¹⁰ To give a feel for this, here are parts of the source of the entry on L^AT_EX's *quotation* and *quote* environments.

It begins with the syntax of the two:

Synopsis:

```
@example
\begin@{quotation@}
@var{text}
\end@{quotation@}
@end example
```

or

```
@example
\begin@{quote@}
@var{text}
\end@{quote@}
@end example
```

The most obvious difference from writing in L^AT_EX is that the at sign @ takes the place of backslash as the escape character, including the escaping used in @example and @end but also including escaping the braces as @{ and @}. There is (intentionally) little in the way of macros so writing is relatively straight-ahead—a person used to L^AT_EX does not need to ramp up much to start working with the source.

Here is a little more, later in the same entry:

```
To compare the two: in the
@code{quotation} environment, paragraphs
are indented by 1.5@dmn{em} and the space
between paragraphs is small,
@code{0pt plus 1pt}. In the @code{quote}
environment, paragraphs are not indented
and there is vertical space between paragraphs
(it is the rubber length @code{\parsep}).
```

We see here that, as discussed earlier, there is a focus on the working L^AT_EX author. The body addresses the question of when to choose one environment or the other.

⁹ <http://home.gna.org/latexrefman>

¹⁰ <https://www.gnu.org/software/texinfo/>

In addition, you can see that the reference manual strives to give precise default values, as actually defined, rather than vague circumlotions. These numbers come from the L^AT_EX 2_ε source files. So this is an example of a way that a person can make a useful contribution back to the community: spend a little time tracking down values that are not yet specified.

Finally, that entry closes with an example that is short but is also cut-and-pasteable. That is, this example is designed to be one that would get our hypothesized L^AT_EX author started.

```
@example
\begin@{quotation@}
\it Four score and seven years ago
... shall not perish from the earth.
\hspace@{1em plus 1fill@}---Abraham Lincoln
\end@{quotation@}
@end example
```

There are other things in the source file not shown here, notably cross-reference information. In addition, the source is in a Subversion repository. But both are easy to get used to.

3.1 History of contributions

This project has been around, in various forms, for a long time. George Greenwade started it as help files for VMS. It was updated for L^AT_EX 2.09 by Stephen Gilmore and for L^AT_EX 2_ε by Torsten Martinsen. Today, active contributors are Vincent Belaïche, Karl Berry, and Jim Hefferon. Vincent also maintains the French translation and has made some updates to the Spanish translation, but reports that Spanish needs a new maintainer. Translations to more languages would be most welcome.

4 Summary

The L^AT_EX Reference Manual aims to provide a freely available document summarizing the features of L^AT_EX 2_ε. In its current state it can be a useful resource for L^AT_EX authors. Give it a try!

It plans eventually to cover all of the commands of core L^AT_EX 2_ε. Contributors are very welcome.

References

- [1] Leslie Lamport. *L^AT_EX: A Document Preparation System*. Addison-Wesley, second edition, 1986.
- [2] Frank Mittelbach, Michel Goossens, Johannes Braams, David Carlisle, and Chris Rowley. *The L^AT_EX Companion (Tools and Techniques for Computer Typesetting)*. Addison-Wesley, second edition, 2004.

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