Hall C Expert Howto

Creating Hall C Howto and Reference Documents

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March 19, 2003

Abstract

The Hall C documentation is provided as a set of short Howtos and References. This Howto describes how to find and use the LaTeX Howto template and class files to create a new Howto. The source code for this Howto also serves and an example howto.

1 Getting Started

To prepare a Hall C howto or reference, download the tar file
`http://hallcweb.jlab.org/document/howtos/chowto.tgz`
and unpack it into a working directory with with `tar -zxf chowto.tgz`, yielding the following files:

template.tex The template for writing Hall C howto and reference documents.

howtohowto.tex The LaTeX file for this document, provided as an example.

chowto.cls The LaTeX class (style) file for howto and reference documents.

chowto.bib The Hall C bibliography database in BibTeX format.

chowto.bst The Hall C bibliography database BibTeX style file. (A copy of `unsrt.bst` with the addition of the `URL` key.)

The file `template.tex` should be renamed to a filename unique and appropriate for it's content. In order to choose a unique filename, please see the list of existing howto filenames at `http://www.jlab.org/~saw/howto/howtolist.php`.

To compile a completed howto, use the following commands:

```
latex myhowto
bibtex myhowto
latex myhowto
latex myhowto
```

following by `xdvi` or `dvips` commands to view or print the results. If the document contains no citations, then it is sufficient t run LaTeX once (or perhaps twice).

Note: Compiling LaTeX Howto documents will work on JLab CUE[1] Linux machines such as `jlabl1`, `ifarmlX`, or `dlhXX`. It may also work on other systems with a recent LaTeX installation. If it doesn't work on one of these sytems, it is likely because of a missing `hthtml` package. If that is the case, download html.sty[2] and hthtml.sty[3] into the directory with your howto document and the chowto files.

2 Creating a Howto document

Hall C howtos and references use a simple custom LaTeX class that is derived from the article style. This class automatically loads several LaTeX packages and a bibliography style, so no options or new commands should be added before the `\begin{document}` line.

The commands `\title`, `\author`, `\howtotype`, `\category`, and `\date` should be edited. `\howtotype` must contain either `user`, `expert`, or `reference` to mark the document as a "User Howto", "Expert Howto", or "Reference".

[1] `http://cc.jlab.org/services/cue/`

[2] `http://www.jlab.org/~saw/howto/html.sty`

[3] `http://www.jlab.org/~saw/howto/hthtml.sty`

The required command `\category` will be used to group the howto documents into related topics making web navigation of the online copies of the Howtos easier. The arugment of the `\category` command must be one of the following:

Category	Description
hms	HMS detectors and other systems
sos	SOS detectors and other systems
magnet	SOS/HMS or other magnet systems
beamline	Beamline instrumentation/operation
daq	Data Acuisition and Online-Analysis
electronics	Trigger Electronics and Cabling
target	Cryo and Solid Target operation
general	General and Miscellaneous Hall C information

The `\maintainer` command can be used if the person maintaining or updating a document is different from the original author(s).

After the `\begin{document}` command, the author should write an abstract and then add `\begin{section}` and `\begin{subsection}` commands as needed.

2.1 References

Citatations to references shall be made with the standard `\cite` command. A number of references have been predefined in the master Hall C documentation bibiography file, `chowto.bib` which is included with the howto tar file. This file is in the BIBTEX[4] format.

References that are not already included in `chowto.bib` should be put into a file called `filename.bib` (Assuming that the LATEX file is `filename.tex`), also in BIBTEX format.

References to another howto document should be made with `\cite{howto:`*filename*`}`, where *filename* is the filename of another howto without the `.tex` extension. For example, a reference to this document [1] is written as `\cite{howto:howtohowto}`. The list of existing howto documents is available at `http://www.jlab.org/~saw/howto/howtolist.php`.

The `chowto.bib` file also contains entries for various vendor supplied user manuals that are being collected on the web at

[4]`http://www.ecst.csuchico.edu/~jacobsd/bib/formats/bibtex.html`

http://hallcweb.jlab.org/document/vendor_manuals/. That page lists the BibTeX keys that can be used to cite these manuals.

Web addresses (URLs) may be used in references by adding the BibTeX key `URL` to the definition of a reference. To put web addresses directly in the text, use the commands `\htlink` or `\hturl` from the hthtml[5] package. These commands will put the URLs directly in the text (or as a footnote) rather than in the bibliography when the document is processed with LaTeX. Furthermore, when the document is published to the web with LaTeX2html, web links will appear directly in the text.

2.2 Including Figures and Graphics

Either the epsfig, or the graphicx package may be used to include graphics and figures. The `\usepackage` command is not required to activate these packages. All included graphics files should have filenames that start with "*filename*-". Using this convention will help in the planned automated management of the howto documents.

3 The Bigger Picture

While a howto prepared as described above can be printed out as a standalone document, the goal is to provide a centrally maintained collection of short, up-to-date documents that can easily be viewed on the web. All the documents will be kept in the Hall C CVS repository which will keep a revision history of each document, and also allow branches of the entire document collection to be forked off for large experiments which require modified or custom documentation.

References

[1] Stephen A. Wood. Creating hall c howto and reference documents. http://hallcweb.jlab.org/document/howtos/HKS/howtohowto/. HKS Expert Howto.

[5] http://www.mathcs.emory.edu/~mic/latex2html/docs/hthtml/hthtml/