

## **L<sup>A</sup>T<sub>E</sub>X Error Messages**

If there is something in the input file that doesn't make sense, L<sup>A</sup>T<sub>E</sub>X will produce an error message. There are actually three types of error messages: Errors, Warnings and Bad Boxes. You can tell whether there has been an error by looking at the L<sup>A</sup>T<sub>E</sub>X output, which is at the bottom of the TeXnicCenter window.

This output will tell you what line of the input file has caused an error. However the error messages sometimes don't give you much of a clue about what has gone wrong. Here is a list of some of the most common error messages and their translations

### **Errors**

#### **Undefined control sequence**

This is caused by an unknown command name. You probably misspelled a special function. Be careful as some functions have American spelling.

#### **Environment x undefined**

You have opened an environment that L<sup>A</sup>T<sub>E</sub>X doesn't recognise. You probably misspelled the name of the environment.

#### **Missing \$ inserted**

There is some maths that isn't surrounded by \$ signs, or is only begun but not ended by a \$ sign

#### **Bad math environment delimiter**

This is usually caused by a \$ sign within the `displaymath`, `equation` or `eqnarray` environments. You don't need \$ signs around maths when it is displayed.

#### **Extra }, or forgotten \$**

This is usually caused by curly braces `{}` not matching up with each other.

#### **\begin{x} ended by \end{y}**

You have opened an environment with `\begin{environment}` but forgotten to close it with `\end{environment}`. Alternatively you have closed the environment with the wrong environment name.

#### **Extra alignment tab has been changed to \cr**

This occurs within the `array` or `tabular` environments. Each column entry in an array or table is separated by a `&` symbol. This error

message occurs if there are more & symbols than columns. It may also mean you forgot the `\\` at the end of a row.

**Paragraph ended before x was complete**

This can be tricky to find. It may mean there is a blank line in an environment that doesn't allow blank lines. Alternatively there is a `{` somewhere with no `}` to close it.

**Something's wrong--perhaps a missing \item**

You probably have a list environment that doesn't contain any `\items`.

**Missing \begin{document}**

If you aren't using a template, have a look at one to see how to begin (and end) a typical `LATEX` document.

More often than not, one error will spawn several error messages. So fix the first error that `LATEX` finds and then build the file again, there may be many fewer errors.

Sometimes it's hard to find the line with the error. It can help to comment out lines with the `%` character in order to work out which line is causing the error. It also helps to periodically run `LATEX` on your input file as you write it. That way you will find errors before you have written too much new information.

## Warnings

Before you investigate any warnings, build the file again. Sometimes `LATEX` just needs to run a second time to get the cross-references right.

The following two warning messages occur when cross-referencing.

**Reference 'x' on page y undefined on input line z**

You have referred (using `\ref`) to a tag that does not exist. You possibly misspelled the name of the tag. Alternatively you forgot the `\label` command with that tag.

**Label 'x' multiply defined**

There are two `\label` commands with the same tag. All of your cross-referencing tags must have different and unique names.

## Bad Boxes

These messages tell you that `LATEX` wasn't happy with the way it justified a line, paragraph or page. Sometimes this is just `LATEX` being fussy. My advice is to find the location of the bad box and look at it in the pdf. If the output file still looks ok then ignore the message. If not, try rearranging your text to make the line break more attractive.