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Using Latexdiff For Marking Changes To Tex Documents

Lately, I have been working on tex projects that involve a few collaborators. I find it hard to keep track of all the changes the contributors make because it's easy to miss a few changed words in text-heavy document. I was hoping to find a feature in tex similar to "Track changes" found in Microsoft Word. **latexdiff** was the solution to my problem.

latexdiff is an invaluable utility that makes it easy to markup and view changes made to the document. It definitely reduced my burden of having to read through two files simultaneously where it would be easy to overlook subtle changes like word substitutions and changing numbers or signs in an equation.

Acquiring *latexdiff*

latexdiff is a Perl script and requires an installation of Perl 5.8 or higher.

If you are a **Windows** user, you will have to go through the following setup to get *latexdiff* working on your machine:

1. Install Perl from [Perl - Download](#)
2. Download *latexdiff* from [CTAN](#)
3. Unzip the *latexdiff* files and copy them to the Perl > bin folder (default installation in C: drive)
4. Enjoy *latexdiff*!

Mac OS X includes an installation of Perl and no additional setup is required. *latexdiff* can be found in any CTAN repository in TeX Live Utility.

Usage

To compare two documents simply run *latexdiff* in the command line like so:

```
latexdiff draft.tex revision.tex > diff.tex
```

where "draft.tex" and "revision.tex" are original and changed versions of your document, and "diff.tex" is where the markup is stored.

The above command provides *latexdiff* with the two comparison files and the filename for the resulting marked tex file. If the two input files you provide are valid tex files, the resulting "diff.tex" will also be a tex file. This marked file can now be compiled with your choice of tex compiler (PDFLatex, LaTeX, etc.).

Out of the box, any removed words are crossed out with a single line and colored red, whereas any added words are underlined with a squiggle and colored blue. When equations are changed, additions are marked with a blue font and removals are marked with a red.

Example Output

I compared two documents with default *latexdiff* settings, and I was very impressed with the results:

~~Draft~~ Revision Title

Pratik Patel and Another Author

February 9, 2013

This is an example of a ~~draft~~ revision article. These are some types of changes to ~~expect~~ be expected. Here is how it deals with equations:

$$y = \int (x^2 + 32) dx \quad (1)$$

When you do not include your collaborator's name in the document, they might get upset with you. But inclusion of their name in the final version will settle all scores.

Unlike Microsoft Word, where the changes are simply highlighted and the notes are off to the side, all changes are clearly marked where they happen!

For those of you who do not want a cluttered document with lots of strikethrough text, the CTRADITIONAL option is way to go. Simply specify the option to *latexdiff*:

```
latexdiff -t CTRADITIONAL draft.tex revision.tex > diff.tex
```

All the deleted text appear as footnotes and added text appear in blue.

~~[..*]~~ Revision Title

Pratik Patel and Another Author

February 9, 2013

This is an example of a ~~[..1]~~ revision article. These are some types of changes to ~~[..2]~~ be expected. Here is how it deals with equations:

$$y = \int (x^2 + [..3]2) dx \quad (1)$$

When you do not include your collaborator's name in the document, they might get upset with you. But inclusion of their name in the final version will settle all scores.

latexDiff Options

You can include various to suit your needs for a visual markup style. Some options (taken from the [documentation](#)) include:

- UNDERLINE – Added text is wavy-underlined and blue, discarded text is struck out and red
- CTRADITIONAL – Added text is blue and set in sans-serif, and a red footnote is created for each discarded piece of text
- TRADITIONAL – Like CTRADITIONAL but without the use of color
- CFONT – Added text is blue and set in sans-serif, and discarded text is red and very small size
- FONTSTRIKE – Added text is set in sans-serif, discarded text small and struck out
- CHANGEBAR – Added text is blue, and discarded text is red. Additionally, the changed text is marked with a bar in the margin

For more information on latexdiff check out the [official documentation](#).

Posted by on 16 Feb 2013