

uchanges.sty and latexchanges.pl

Dominique Unruh

Contents

1 Quick start	1
2 What is uchanges.sty?	2
3 How to use uchanges.sty?	2
3.1 I wish to add/remove/replace some text fragment	3
3.2 I wish to leave some note for my coauthors in the text	3
3.3 I wish to acknowledge some change/message (and not see the highlighting any more)	4
3.4 I wish to temporarily hide all highlighting from the document . .	4

1 Quick start

You are reading this because you got a strange error message saying that `whoami.txt` does not exist. You do not wish to know what's going on; you only wish to compile the document without errors as quickly as possible.

In this case, follow the following steps:

- Find out your user key: There should be lines similar to

```
\ChangesSetUserColor[Speedy Gonzales]{X}{red}
```

in the main file of the document you are compiling. Look for the line containing your name in the comment. The first argument of `\ChangesSetUserColor` is your user key (a single letter; in this example: `X`). (There might also be a table of user keys and colors on the first page of the document.)

- Create a file `whoami.txt` containing a single line

```
\iam X
```

where `X` should be your user key.

- Do *not* add `whoami.txt` to the SVN!

If in doubt, ask whoever added the `\usepackage[...]{uchanges}` call to the document (probably Dominique Unruh).

2 What is `uchanges.sty`?

`uchanges.sty` is a package that provides several macros allowing to highlight changes while editing a LaTeX document. It is targeted for the situation where several authors work on the same document accessed through a version control system. It provides the following features:

- Each user marks his changes while editing. For example, if the user `X` wishes the word “test” in a document, he writes `\NEWX{test}`.
- The changes of different users are highlighted in different colors. This makes it easy to see which user did what change.
- Different users can have different views of the document. More precisely, a user does not see the highlighting of his own changes, and a users `X` can mark other users’ changes as “acknowledge”, in which case these changes are not highlighted any more. (But all other users will still see the highlighting.)

Having different views on the document allows for a more asynchronous editing process. If you change some parts of the document (possibly editing a part written by another author), you do not need to notify the other authors about each of the changes separately. Instead, your changes will be highlighted until the other author finds time to look at them and to acknowledge them. (Or, in case there is a disagreement, to contact you and to discuss the changes.)

- A command for adding todos to the document is also provided; it uses the same color scheme as the change highlighting.
- There is an option that hides all highlighting and all to-dos in the document. This is useful when there are still unacknowledged changes, but a clean version of the document needs to be sent out (e.g., submitted to a conference).
- A simple Perl script (`latexchanges.pl`) is provided that automatically removes the highlighting that has been acknowledged by all users. However, this script is not needed for compiling the LaTeX source nor for adding or acknowledging changes. It is sufficient if one of the authors runs the script regularly. Thus the packages can also be used if not all authors can run Perl scripts.
- Note: The package does not automatically detect changes (using, e.g., `diff`). Changes need to be manually marked at the time of writing.

3 How to use `uchanges.sty`?

Here, I list standard use-cases and how to solve them.

3.1 I wish to add/remove/replace some text fragment

If you wish to add some text fragment `new text` and you are user `X`, just write `\NEWX{new text}`. If you wish to delete some text fragment `old text`, just replace `old text` by `\REMOVEX{old text}`. If you wish to replace `old text` by `new text`, replace `old text` by `\REPLACEX{old text}{new text}`.

Example: You find the following text in the document:

An orange cup stands on the table.

You might change this into

```
A\REMOVEX{n} \REPLACEX{orange}{blue} cup
stands on the \NEWX{four-legged} table.
```

Your coauthors will see: “A_[n] blue cup stands on the four-legged table.” (The actual color may depend on the configuration.)

3.2 I wish to leave some note for my coauthors in the text

There are two commands to do this. If you are user `X`, you can write use the commands `\TODOX{text}` or `\MESSAGEX{text}`. The two commands have different semantics and different behaviour.

`\TODOX{text}` is used to add some comment that requires some action (a to-do). The to-do will remain in the document (visible to all users) until someone manually removes the to-do. It is intended that one only removes a to-do if whatever it is to be done has been done.

`\MESSAGEX{text}` is an informative message for the other users. Such a message does not require any action on the part of the other users. It is usually used to add clarifying remarks next to changes one has performed in the document. `\MESSAGEX` is treated like the change highlighting `\NEWX` `\REMOVEX` `\REPLACEX`: Each user can decide to acknowledge a message; that message will then be hidden from that user (but still visible to the other users).

Example: We have the following text.

We call an adversary ubersexual if he performs more than $\$q\$$ queries.

Author `X` finds the term “ubersexual” offensive. He changes it:

```
We call an adversary \REPLACEX{ubersexual}{normal}
if he performs more than \$q\$ queries.\MESSAGEX{Ubersexual is misleading.}
\TODOX{Replace all other occurrences of ubersexual.}
```

Later author `Y` replaces all other occurrences of “ubersexual”. He can either just remove the to-do, or notify the others that the to-do is done.

```
We call an adversary \REPLACEX{ubersexual}{normal}
if he performs more than \$q\$ queries.\MESSAGEX{Ubersexual is misleading.}
\REMOVEY{\TODOX{Replace all other occurrences of ubersexual.}}
```

3.3 I wish to acknowledge some change/message (and not see the highlighting any more)

In order to be able to do this, it is necessary that the script `latexchanges.pl` has been invoked at least once since the change was performed/the message was added. If this is not the case, either run it, or complain to the author that introduced the `uchanges` package and thus is responsible (usually: Dominique Unruh).

Assuming that `latexchanges.pl` has been invoked, you will notice that the macros `\NEWX`, `\REMOVEX`, `\REPLACEX`, and `\MESSAGEX` have been replaced by `\NEWXfor{YZ}`, `\REMOVEXfor{YZ}`, `\REPLACEXfor{YZ}`, and `\MESSAGEXfor{YZ}`. Assume you are user Y. Then you simply remove the letter Y from the first argument of these macros.

Example (you are user Y):

```
Our contribution is new \NEWXfor{YZ}{100830}{and exiting}.
```

When rendering the document, you see “Our contribution is new **and exiting**.” (The actual color may depend on the configuration.) You like the change, so you modify the source:

```
Our contribution is new \NEWXfor{Z}{100830}{and exiting}.
```

Rendering gives: “Our contribution is new **and exiting**.” User Z still sees the red text. So he also removes his user key:

```
Our contribution is new \NEWXfor{}{100830}{and exiting}.
```

Now the highlighting is gone for everyone. The next time `latexchanges.pl` is run, the source is automatically cleaned up:

```
Our contribution is new and exiting.
```

Hint: To replace a lot of changes, it is often useful to do search and replace, e.g., `for{YZ} → for{Z}` and `for{Y} → for{}`. But be careful not to accidentally replace the wrong things or to remove someone else’s highlighting.

Alternatively, you (being user X) can run `latexchanges.pl -removeuser X` to remove all highlighting from your view.

3.4 I wish to temporarily hide all highlighting from the document

This might be the case if you wish to submit the paper or send a preliminary version of it to someone, but you did not find time to go through all changes yet.

In this case, just add the option `hide` to the package `uchanges`. That is, in the main document you change

```
\usepackage[users=XYZ]{uchanges}
```

into

```
\usepackage[users=XYZ,hide]{uchanges}
```

Do not forget to remove the `hide` flag afterwards. Otherwise your coauthors will not see their highlighting any more.

(There is also a useful automatism: If a flag `\ifdraft` is defined in your preamble, then by default the `hide`-flag is automatically added if `\ifdraft` is disabled (by `\draftfalse`). Use `hide=true` or `hide=false` to override this behaviour.)