**AcroTEX.Net**

# The AeB Pro Package:
# Proofing rollovers on paper

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The LATEX source file for this AeB Blog is attached to this document. Click `proofing_rollovers.tex` to save the source file.

## 1. Introduction

Rollovers were introduced in the article *The AeB Pro Package: Layers, Rollovers, and Anime.* When preparing a document that has a lot of rollovers, it would be nice to proofread – in additional to the text of the document – the rollover text as well. There are two types of rollovers, ones created by `\texHelp` that use OCGs, and ones that use `\pdfHelp` that uses the tooltip feature of a form field.

If you anticipate proofing a number of rollovers using a paper document, use the commands `\texPrintHelp` and `\pdfPrintHelp`, instead of `\texHelp` and `\pdfHelp`, respectively.

First, place the following commands in the preamble,

```
%\turnProofingOff
\turnProofingOn
\proofRollovers
```

'Proofing-mode' is activated by a Boolean switch (whose name is unimportant) that is turned on (made `true`) by `\turnProofingOn` and turned off with `\turnProofingOff`. When `\turnProofingOff` is in force (the default), `\proofRollovers` does nothing. When `\turnProofingOn` is expanded, `\proofRollovers` does special things, described below.

## 2. Concerning PDF help messages

Let's start with `\pdfHelp`, for that is the easiest to explain. We use `\pdfPrintHelp` not `\pdfHelp`. The author[?] of this document is a very nice fellow. This document is compiled with the settings seen above, though the later command does nothing here. As you can see in the margin, the keyword 'author' is listed, followed by a colon separator and then the text help message of the rollover ('Dr. D. P. Story'). The format makes it easy to match up the help message with the keyword. This is useful if a paragraph has several rollovers. The format for the `\marginpar` is determined by the command

```
\newcommand\pdfPHProof[3]{\small\raggedright\texttt{#3}: #2}
```

This command may be redefined as desired. The three parameters described: `#1` is the name of the underlying form field (`theauthor`) in this example; `#2` is the tooltip or help message ('Dr. D. P. Story'); and `#3` is the key word that is marked as a rollover ('`author`').

When `\turnProofingOff` is in effect, the marginal notes do not appear.

There is another matter to discuss concerning the preview. The string that the PDF viewer displays may not be typeset by TeX. For example, if you enter a line break (`\r` or `\n`), typesetting one of these tends to stop the TeX compile. This problem was first brought to my attention by Jürgen,[?] we use the `hyperref` command `\texorpdfstring` to offer two versions `\texorpdfstring{\\}{\r}`, the first argument is used when compiling the typeset content, the second is passed to the underlying

author: Dr. D. P. Story

Jürgen: Jürgen, l'évangéliste d'AcroTeX

form field. You can also use `\texorpdfstring` (or `\rollormarstring`) in the third argument. The their argument of this last rollover is 'Jürgen,'; the comma ,) normally appears in the margin, but I've enclosed it as `texorpdfstring{,}{}`. Now the comma typesets in the body, but does not appear in the margins.

## 3. Concerning OCG help messages

To create OCG help messages that can be 'proofed' on paper, that is, that print out, follow these steps:

1. Create your message and assign it a layer name using the `\defineRC` command, like so,

```
\defineRC{pthm1}{%
For a right triangle with sides $a$, $b$, and $c$, where $c$ is
the length of the hypotenuse, the \textbf{Pythagorean Theorem}
states that $$ \boxed{a^2 + b^2 = c^2}$$}
```

2. Place your rollover, with formatting in the `rollover` environment:

```
\begin{rollover}
\begin{textblock*}{.67\linewidth}[.5,.5]
    (.5\paperwidth,.5\paperheight)
\xBld{pthm1}\fcolorbox{red}{cornsilk}{\parbox{\linewidth}
{\insertRC{pthm1}}}\eBld
\end{textblock*}
\end{rollover}
```

For an OCG that *takes up no space*, this involves enclosing it in a `textblock*`, with appropriate arguments for placing it on the page. Also included in this is the `\xBld`/`\eBld` pair using a layer name (The layer name does not have to match the argument of the `\defineRC`. but it is most convenient to do so.) Also within this `textblock*` is any special effects such as colored boxes, graphics, PSTricks, etc.

The `rollover` environment is a 'comment' environment, created by the `comment` package. By executing `\excludecomment{rollover}` you can turn off this environment, enabling you to see the content when viewing the page with a DVI previewer. If you do this, don't forget to comment out the statement or delete it when you create your PDF; otherwise no rollovers.

3. Another comment environment is the `printRollover` environment. The content of the `rollowver` environment may not lend itself to printing on a page, for example, it is possible for the OCG of a help message to actually contain an animation, which does not print well. As a result, place the 'print' version of your OCG message in the `printRollover` environment:

```
\definePR{pthm1}{\parbox{.75\linewidth}{\insertRC{pthm1}}}
\begin{printRollover}
\textcolor{gray}{\insertPR{pthm1}}%
    \marginpar{\fbox{\small\texttt{pthm1}}}
\end{printRollover}
```

Notice, there is no need for the `\xBld`/`\eBld` pair, which creates a layer, when producing something for a sheet of paper. Colors and other elements may not be needed; perhaps it is only desired to the text of the message.

The `\insertRC` command inserts the content of the earlier `\insertRC` declaration. Similarly, the content for the print version is declared using the command `\definePR` without any fanciness, and `\insertPR` to insert content of the declaration into the `printRollover` environment. I've added a `\marginpar` with the name of the layer in an `\fbox`

In the final production version of the document, it is important to get the `rollover` environment on the same page as the occurrence of the `\texHelp` or `\texPrintHelp` that references it, not so with the paper version in or out of proofing mode.

For a right triangle with sides $a$, $b$, and $c$, where $c$ is the length of the hypotenuse, the **Pythagorean Theorem** states that

$$a^2 + b^2 = c^2$$

<div style="text-align: right">`pthm1`</div>

Let's now create a rollover; recall the **Pythagorean Theorem**[⊘] states an relationship between the lengths of its sides. Here, we use the print version `\texPrintHelp`, this version supports the print proofing version of `\texHelp`. The proofing version of the rollover help message is shown above in gray, with the layer name in a `\fbox` in the margin.

<div style="text-align: right">pthm1: Pythagorean Theorem</div>

The formatting you see in the margins across from the **Pythagorean Theorem** rollover is determined by,

```
\newcommand\texPHProof[2]{\small\raggedright\texttt{#1}: #2}
```

where `#1` is the layer name and `#2` is the rollover word.

For the sake of completeness, below is the verbatim listing of the OCG rollover

```
\defineRC{pthm1}{%
For a right triangle with sides $a$, $b$, and $c$, where $c$ is
the length of the hypotenuse, the \textbf{Pythagorean Theorem}
states that $$ \boxed{a^2 + b^2 = c^2}$$}
\definePR{pthm1}{\parbox{.75\linewidth}{\insertRC{pthm1}}}%
\begin{rollover}
\strut\vskip-\baselineskip \vskip\lineskip\vskip\lineskiplimit
\begin{textblock*}{.67\linewidth}[.5,.5]
```

```
      (.5\paperwidth,.5\paperheight)
\xBld{pthm1}\fcolorbox{red}{cornsilk}{\parbox{\linewidth}
{\insertRC{pthm1}}}\eBld
\end{textblock*}
\vskip-\parskip
\end{rollover}
\begin{printRollover}
\smallskip\noindent\textcolor{gray}{\insertPR{pthm1}}%
\marginpar{\fbox{\small\texttt{pthm1}}}
\end{printRollover}
```

It's best to insert a `textblock*` at the top of the page before any content of the page is typeset for `textblock*` seems to effect the vertical space between paragraphs. This `textblock*` is between paragraphs at the location of the rollover preview above, in gray. In the above `textblock*`, I've played around with some line parameters so that the text block does not change the spacing between paragraphs.

As with PDF rollovers, the OCG rollovers have special formatting problems when proofing them. The issue here is the second argument. That argument is typeset in the body and the margins. You may want a punctuation mark in the body that you don't want in the margins, for example, "The **Pythagorean Theorem,**$^{\circlearrowright}$ you'll recall, is a fundamental tool for working with right triangles." In this sentence, a comma (,) appears after 'Theorem' in the body but it does not appear in the margins; this is done using `\rollormargstring{,}{}` (or you can use `\texorpdfstring`).

pthm1: Pythagorean Theorem

## 4. Final summary

Back to the preamble where we have the commands `\turnProofingOn` and `\proofRollovers`, the latter may only appear in the preamble. It is important to note that `\turnProofingOn` must appear before the command `\proofRollovers` because the expansion of the latter depends on the proofing setting.

- If none of these commands appear, or they are are all commented out,

  `%\turnProofingOn\proofRollovers`

  The document compiles under 'normal' conditions, there is not proofing of the rollovers, those the rollovers themselves work.

- If the setting is

  `\turnProofingOn\proofRollovers`

  The proofing feature, including the proofing of the OCG rollovers are displayed. These is how this document was compiled.

- If the setting is

> `\turnProofingOn`
>
> that is, `\proofRollovers` either does not appear, or is commented out, the proofing of the rollovers appears in the margins, but not the proofing of the OCGs, that is, the grayed content that represents the help message shown above, *does not appear.*

Try compiling this document under different assumptions, paper versus screen, in conjunction with these three combinations above.

The following is a listing of the commands and environments referenced here.

## PDF rollovers

```
\pdfHelp{⟨fldname⟩}{⟨help_msg⟩}{⟨text⟩}
\pdfPrintHelp{⟨fldname⟩}{⟨help_msg⟩}{⟨text⟩}
\pdfHelp*{⟨help_msg⟩}{⟨text⟩}
\pdfPrintHelp*{⟨help_msg⟩}{⟨text⟩}
\texorpdfstring{⟨tex_str⟩}{⟨pdf_str⟩} % used in second arg
\rollormargstring{⟨roll_str⟩}{⟨margin_str⟩} % used in third arg
\pdfPHProof % format command for margin, must be redefined
```

The star-versions of `\pdfHelp` and `\pdfPrintHelp` automatically assign the ⟨*fldname*⟩ argument. In this way, you don't have to make of field names for each rollover. The `\pdfPrintHelp*` was used in Section 2.

## OCG rollovers

```
\texHelp{⟨layer_name⟩}{⟨text⟩}
\texPrintHelp{⟨layer_name⟩}{⟨text⟩}
\rollormargstring{⟨roll_str⟩}{⟨margin_str⟩} % used in second arg
\texPHProof % format command for margin, must be redefined
\defineRC{⟨layer_name⟩}{⟨help_msg⟩} % rollover content
\insertRC{⟨layer_name⟩} % expands to second arg of \defineRC
\begin{rollover}⟨content⟩\end{rollover} % an OCG, use \xBld
\definePR{⟨layer_name⟩}{⟨p_help_msg⟩} % print rollover version
\insertPR{⟨layer_name⟩} % expands to second arg of \definePR
\begin{printRollover}⟨p_content⟩\end{printRollover}% print content
```

That's it for now, now back to my retirement.