

# The `latex-lab-firstaid` package

## Temporary patches to external packages needed for the tagging project

L<sup>A</sup>T<sub>E</sub>X Project\*  
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### Abstract

## 1 Introduction

The followings contains small temporary changes to external packages to avoid errors with the new tagging code.

Similar to the main `firstaid` package the goal is to remove the patches once the packages have been updated.

## 2 Implementation

```
1 <*package>
2 <@@=tag>
3 \ProvidesPackage {latex-lab-testphase-firstaid} [%
4   \ltlabfirstaiddatetime\space v\ltlabfirstaiddatetime\space
5   Temporary patches to external packages needed for the tagging project]
```

### 2.1 `ams` classes

The `amsart` and `amsbook` classes do not use `\@author` to store the author list but a command `\authors`. To be able to nevertheless use the authors in the `xmp-metadata` we map `\@author` to this new command.

```
6 \AddToHook{class/amsart/after}
7   {\def\@author{\authors}}
8 \AddToHook{class/amsbook/after}
9   {\def\@author{\authors}}
```

---

\*Initial implementation done by Ulrike Fischer

## 2.2 verse

The `verse` package has its own definition of the `verse` environment, which would tag correctly, except that it is overwritten by the block code in the hook `begindocument/before`. So the simplest way to make tagging work is to reinstall the package version afterwards, which is what we are doing here.

```

10 \AddToHook{package/verse/after}[latex-lab-firstaid]{%
11   \FirstAidNeededT{verse}{sty}{2014/05/10 v2.4b verse typesetting}%
12   {%
13     \AtBeginDocument{%
14       \renewenvironment{verse}[1][\linewidth]{%
15         \stepcounter{verse@envctr}%
16         \setcounter{poemline}{0}\refstepcounter{poemline}%
17         \setcounter{vslineno}{1}%
18         \let\=\@vscentercr
19         \list{}{\itemsep \z@
20           \itemindent -\vindent
21           \listparindent\itemindent
22           \parsep \stanzaskip
23           \ifdim #1 < \linewidth
24             \rightmargin \z@
25             \setlength{\leftmargin}{\linewidth}%
26             \addtolength{\leftmargin}{-#1}%
27             \addtolength{\leftmargin}{-0.5\leftmargin}%
28           \else
29             \rightmargin \leftmargin
30             \fi
31             \addtolength{\leftmargin}{\vindent}}%
32         \item[]%
33       }%
34     {\endlist}%
35   }%
36 }%
37 }

```

Of course, this means that the optional argument of the environment then only accepts a length value and not any more a key value list for altering the environment settings.

A more elaborate version could be something like this that allows key/val and legacy interface. Or one could extend the list template to support a `list-width` key.

```

\ExplSyntaxOn
\cs_new_protected:Npn \ExtractAndDropKey #1#2#3#4#5 {
  \tl_set_eq:NN #4 \c_novalue_tl % or empty?
  \keys_define:nn { #1 } { #2 .code:n = \tl_set:Nn #4{##1} }
  \keys_set_known:nnN { #1 } { #3 } #5
}
\ExplSyntaxOff

```

```

% Change the env definition for verse matching verse.sty
% This keeps the verse.sty interface as it is and only adjusts the
% main environment to use the basic list env with the verse.sty
% specific settings.
\makeatletter

```

```

\AddToHook{package/verse/after}{%
  \AtBeginDocument{%
    \RenewDocumentEnvironment{verse}={={verse-width}!0{\linewidth}}%
      {%
        \stepcounter{verse@envctr}%
        \setcounter{poemline}{0}\refstepcounter{poemline}%
        \setcounter{vslineno}{1}%
        \let\=\@vscentercr
      }%
    %
    \ExtractAndDropKey{verse}{verse-width}{#1}\@vswidth\@vsremainingkvlist
    % If other keys have been specified but not verse-width we have no
    % default for \@vswidth and need to set it again
    \ExpandArgs{o}\IfNoValueT \@vswidth
      {\def\@vswidth{\linewidth}}%
    %
    % This is a bit ugly but we can't stick \cs{@vsremainingkvlist} into
    % the instance argument as keys are expected to be visible on
    % top-level not hidden inside a macro. The alternative is to push
    % in \verb=#1= but then the key/value \verb/verse-width=.../ is
    % passed into the instance which is not known there (not harmful as
    % it will get ignored but noticeably more and unnecessary
    % processing).
    %
    \def\next##1{%
      \UseInstance{blockenv}{list}%
      {%
        item-indent =-\vindent,%
        parindent   =-\vindent,%
        par-skip    =\stanzaskip,%
        item-skip   =0pt,%
        leftmargin  = (\linewidth-\@vswidth)/2+\vindent,%
        rightmargin = \ifdim\@vswidth<\linewidth Opt
                      \else (\linewidth-\@vswidth)/2\fi,%
        ##1%
      }%
      \ExpandArgs{o}\next\@vsremainingkvlist
      \item\relax
    }\endblockenv}%
  }%
}
\makeatother

```

### 2.3 blindtext

The blindtext package generates lists with nested \loop command. The inner loop introduces a group around the list which error when lists are tagged as \@doendpe is lost.

```

38 \AddToHook{file/blindtext.sty/after}[latex-lab-firstaid]{%
39   \FirstAidNeededT{blindtext}{sty}{\blindfiledate\space\blindfileversion\space%
40     blindtext-Package}%

```

```

41  {%
42  \renewcommand{\blind@items}{%
43    \setcounter{blind@listcount}{1}%
44    \loop
45    \ifblind@optional
46    \ifblind@long
47    \item[\blindtext@countitem] \blindtext@text
48    \else
49    \item[\blindtext@count] \blindtext@item
50    \fi
51    \else % \blind@optionalfalse
52    \ifblind@long
53    \item \blindtext@text
54    \else
55    \item \blindtext@countitem
56    \fi
57    \fi % \ifblind@optional
58  {%
59    \loop
60    \ifnum\value{blindlistlevel}>\value{blindlist@level}%
61    \stepcounter{blind@levelcount}%
62    \blind@list[\value{blindlist}]\relax
63    \addtocounter{blind@levelcount}{-1}%
64    \setcounter{blind@listcount}{1}%
65    \repeat
66    \expandafter\if@endpe\@doendpe\fi % <-----changed
67    \ifnum\value{blind@listcount}<\value{blindlist}%
68    \stepcounter{blind@listcount}%
69    \repeat
70  }
71  }%
72  }

```

## 2.4 cleveref

The cleveref package redefines `\@makefnmark` and this means that the patches in the new footnote code fails. We use a hook instead

```

73 \AddToHook{package/cleveref/after}
74 {
75   \let\@makefnmark\cref@old@makefnmark
76   \AddToHook{cmd/@makefnmark/before}{%
77     \cref@constructprefix{footnote}{\cref@result}%
78     \protected@edef\cref@currentlabel{%
79       [footnote][\arabic{footnote}][\cref@result]%
80     \p@footnote\@thefnmark}}

```

The second problem is that it redefines `\refstepcounter` to use an argument. In itself this isn't a problem but as the new definition doesn't grab the arguments directly it fails over the generic hook inserted at the end of the definition

```

81 \RenewDocumentCommand\refstepcounter{om}{%
82   \IfNoValueTF{#1}%
83   {\refstepcounter@noarg{#2}}%
84   {\refstepcounter@optarg{#1}{#2}}%
85 }%

```

```
86 }
87 </package>
88 <*latex-lab>
89 \ProvidesFile{firstaid-latex-lab-testphase.ltx}
90     [\ltmlabfirstaiddate\space v\ltmlabfirstaidversion\space
91     latex-lab wrapper firstaid]
92
93 \RequirePackage{latex-lab-testphase-firstaid}
94
95 </latex-lab>
```