

Temporary output patches for tagging and better link support

Frank Mittelbach Ulrike Fischer

February 16, 2022

1 Introduction

This package contains a few patches of internal L^AT_EX needed to support paragraph tagging across page boundaries (in pdfT_EX) and improve the behaviour of links across page breaks.

Until this get properly integrated with the kernel code this has to be taken as a prototype and code, interfaces as well as behavior may change without notice and certainly without any backwards compatibility!

2 The Implementation

```
1 <*package>
2 \ProvidesPackage{output-patches-tmp-ltx}
3     [2021-08-20 v0.95 Temporary patches of output commands]
4 \RequirePackage{etoolbox}
```

2.1 Patching the OR

This add hooks around header and footer, in `\@makecol` and in `multicol`. At first initialize some of the hooks. We use `providecommand` to avoid problems if the kernel changes here and provides them directly.

```
5 \providecommand\@kernel@before@head{}
6 \providecommand\@kernel@before@foot{}
7 \providecommand\@kernel@after@head{}
8 \providecommand\@kernel@after@foot{}
9 \providecommand\@mult@ptagging@hook{}% multicol
10
11 \patchcmd\@outputpage
12   {\vfil\color@hbox\normalcolor\hb@xt@\textwidth{\@thehead}\color@endbox}
13   {\vfil\@kernel@before@head\color@hbox\normalcolor\hb@xt@\textwidth{\@thehead}\color@endbox\@kernel@after@head}
14   {\typeout{Patching header in \string\@outputpage}}{\PATCHerror }
15
16
17 \patchcmd\@outputpage
18   {\color@hbox\normalcolor\hb@xt@\textwidth{\@thefoot}\color@endbox}
19   {\@kernel@before@foot\color@hbox\normalcolor\hb@xt@\textwidth{\@thefoot}\color@endbox\@kernel@after@foot}
20   {\typeout{Patching footer in \string\@outputpage}}{\PATCHerror }
```

`\@makecol` We have to patch `\@makecol` in two places:

- update 255 up front to add missing tmb/tme if necessary
- update the `\footins` stream if that one got split

If the new latex-lab file for the output routine is loaded it will do the right thing. In the other case we patch `\@makecol` manually.

```

21 \ifpackageloaded{latex-lab-testphase-new-or}
22 {}
23 {
24   \providecommand\@kernel@before@footins{}
25   \providecommand\@kernel@before@cclv{}
26
27   \patchcmd\@makecol
28     {\vskip\skip\footins}
29     {\vskip\skip\footins\@kernel@before@footins}
30     {\typeout{Patching \string\@makecol\space for tagging}}{\PATCHError }
31
32 % for some reason patching with etoolbox only works in this order ...
33
34   \pretocmd\@makecol{\@kernel@before@cclv}
35   {\typeout{Patching \string\@makecol\space for tagging}}{\PATCHError }
36 }

```

(End definition for \@makecol. This function is documented on page ??.)

2.2 multicol adjustments

The patches for `pkgmulticol` are fairly minimal:

- At the start of the environment anything already on the page is picked up and stored in `\partial@page`, we may need to add a TMB to that (it should have a proper TME). This has to happen in the “main” stream context.

-
-

```

37 \AddToHook{package/multicol/after}
38   {% multicol needs later loading
39
40   \patchcmd\page@sofar
41     {\setbox\z@\hbox{p}\global\dimen\tw@\dp\z@}%
42     {%
43       \setbox\z@\hbox{p}\global\dimen\tw@\dp\z@
44       \mult@ptagging@hook
45     }%
46     {\typeout{Patching \string\page@sofar\space for tagging}}{\PATCHError}%

```

2.3 Interrupt hooks

This requires the `l3pdfannot` module! We add the code here an not in `hyperref`, as it should also work with links created directly with the `l3pdfannot` commands. The file is only loaded by the `pdfmanagement`, so no need to test if the commands exist.

```

47 \ExplSyntaxOn
48 \def\@kernel@before@head{\pdfannot_link_off:}
49 \def\@kernel@before@foot{\pdfannot_link_off:}
50 \def\@kernel@after@head {\pdfannot_link_on:}
51 \def\@kernel@after@foot {\pdfannot_link_on:}
52 \ExplSyntaxOff

53 \endinput
54 \</package>

```

Index

The italic numbers denote the pages where the corresponding entry is described, numbers underlined point to the definition, all others indicate the places where it is used.

A	\ProvidesPackage 2
\AddToHook 37	
D	\RequirePackage 4
\def 48, 49, 50, 51	
\dimen 40, 42	
\dp 40, 42	
E	S
\endinput 53	\setbox 40, 42
\ExplSyntaxOff 52	\skip 28, 29
\ExplSyntaxOn 47	\space 30, 35, 45
	\string 14, 20, 30, 35, 45
F	T
\footins 2, 28, 29	T_EX and L^AT_EX 2_ε commands:
G	\@ifpackageloaded 21
\global 40, 42	\@kernel@after@foot 8, 19, 51
H	\@kernel@after@head 7, 13, 50
\hbox 40, 42	\@kernel@before@ccclv 25, 34
N	\@kernel@before@foot 6, 19, 49
\normalcolor 12, 13, 18, 19	\@kernel@before@footins 24, 29
P	\@kernel@before@head 5, 13, 48
\patchcmd 11, 17, 27, 39	\@makecol 1, 2, 21
\PATCHerror 14, 20, 30, 35, 45	\@mult@ptagging@hook 9, 43
pdfannot commands:	\@outputpage 11, 14, 17, 20
\pdfannot_link_off: 48, 49	\@thefoot 18, 19
\pdfannot_link_on: 50, 51	\@thehead 12, 13
\pretocmd 34	\color@endbox 12, 13, 18, 19
\providecommand 5, 6, 7, 8, 9, 24, 25	\color@hbox 12, 13, 18, 19
	\hb@xt@ 12, 13, 18, 19
	\page@sofar 39, 45
	\partial@page 2
	\tw@ 40, 42
	\z@ 40, 42

<code>\textwidth</code>	12, 13, 18, 19	V	
			<code>\vfil</code> 12, 13
<code>\typeout</code>	14, 20, 30, 35, 45	<code>\vskip</code> 28, 29